

# **UNIVERSITY PROGRAM MANAGEMENT INFORMATION SYSTEM**

**FY 2001**

**Prepared by:**

**Office of Human Resources and Education  
Education Division/FE**

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## **IMPORTANT NOTICE**

This report is compiled primarily from information obtained from two internal NASA sources:

1. "CASE Report on Support of Colleges and Universities" (NASA Form 1356).
2. "Individual Procurement Action Report" (NASA Form 507).

Therefore, other sources should be used for completing Forms 507 and 1356.

Information in this publication is reviewed and revised for accuracy. Should any differences exist between publications, the latest edition should take precedence over earlier ones.



# **NASA's UNIVERSITY PROGRAM**

## **ACTIVE PROJECTS**

FISCAL YEAR 2001

**Gary Gans, Project Manager**

**National Aeronautics and Space Administration  
Office of Human Resources and Education  
Education Division/FE  
Washington, DC 20546-0001**

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## FOREWORD

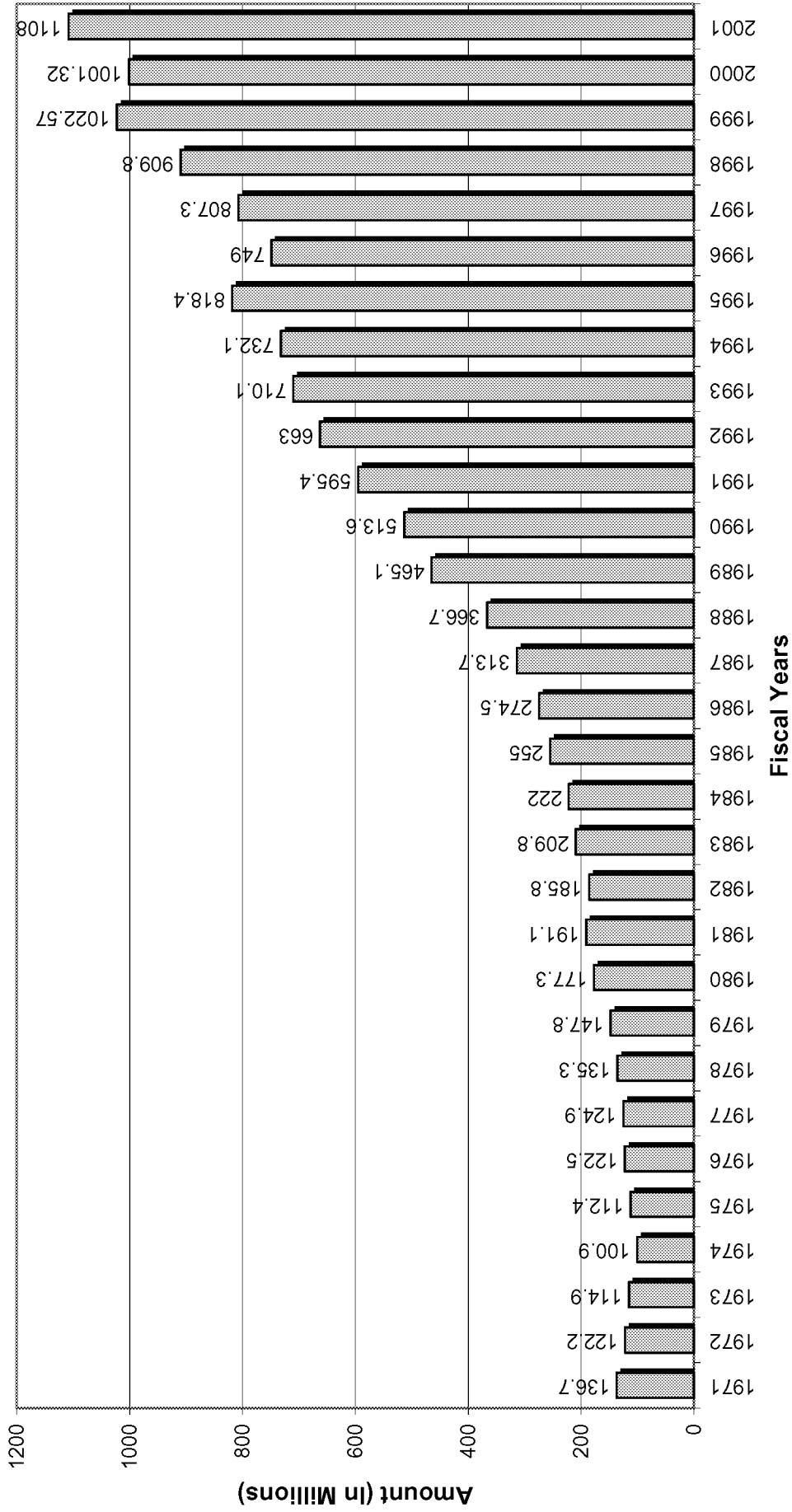
As basic policy, NASA believes that colleges and universities should be encouraged to participate in the nation's space and aeronautics program to the maximum extent practicable. Indeed, universities are considered as partners with government and industry in the nation's aerospace program. NASA's objective is to have them bring their scientific, engineering, and social research competence to bear on aerospace problems and on the broader social, economic, and international implications of NASA's technical and scientific programs. It is expected that, in so doing, universities will strengthen both their research and their educational capabilities to contribute more effectively to the national well-being.

This annual report is one means of documenting the NASA-university relationship, frequently denoted, collectively, as NASA's University Program. This report is consistent with agency accounting records, as the data is obtained from NASA's Financial and Contractual Status (FACS) System, operated by the Financial Management Division and the Procurement Office. However, in accordance with interagency agreements, the orientation differs from that required for financial or procurement purposes. Any apparent discrepancies between this report and other NASA procurement or financial reports stem from the selection criteria for the data.\*

This report was prepared by the Education Division/FE, Office of Human Resources and Education.

\* Agreements which meet active criteria definition and have deobligations may result in agreements having negative obligations in the body of this publication.

# NASA Obligations to Universities Fiscal Years 1971-2001



NOTE: Excludes awards to California Institute of Technology for operation of the Jet Propulsion Laboratory. This chart includes deobligations.

FY 1971 includes \$15.0M in awards to Draper Lab.

FY 1973 includes \$5.2M in awards to Draper Lab.

FY 1972 includes \$5.7M in awards to Draper Lab.

FY 1974 Draper Lab status changed from "university" to "nonprofit."

**FIFTY EDUCATIONAL INSTITUTIONS  
LISTED ACCORDING TO TOTAL OBLIGATIONS – FY 2001**

<b>TOTALS*</b>		<b>OBLIGATIONS</b>	<b>PERCENT</b>
		<b>1,108,005,020</b>	<b>100.00</b>
1	Johns Hopkins University .....	129,967,230 .....	11.73
2	Stanford University.....	54,331,156 .....	4.90
3	University of Colorado – Boulder .....	44,527,133 .....	4.02
4	University of Maryland – College Park.....	41,925,149 .....	3.78
5	Massachusetts Institute of Technology.....	31,363,846 .....	2.83
6	Baylor College of Medicine .....	28,374,818 .....	2.56
7	University of Alabama – Huntsville .....	28,288,990 .....	2.55
8	California Institute of Technology .....	26,538,386 .....	2.40
9	University of California – Berkeley.....	25,130,283 .....	2.27
10	Pennsylvania State University – University Park.....	17,730,315 .....	1.60
11	New Mexico State University – Las Cruces.....	16,833,405 .....	1.52
12	University of Arizona .....	15,774,105 .....	1.42
13	University of Missouri – Columbia .....	15,725,913 .....	1.42
14	University of Alaska – Fairbanks .....	14,287,061 .....	1.29
15	Columbia University .....	14,145,037 .....	1.28
16	University of Maryland – Baltimore County.....	13,649,552 .....	1.23
17	University of Hawaii – Honolulu .....	13,324,123 .....	1.20
18	University of Alabama – Birmingham.....	12,884,176 .....	1.16
19	University of California – San Diego .....	12,694,644 .....	1.15
20	University of Wisconsin – Madison .....	12,541,084 .....	1.13
21	University of Texas – Austin .....	11,193,695 .....	1.01
22	University of California – Los Angeles .....	9,761,626 .....	0.88
23	University of Washington .....	9,613,830 .....	0.87
24	Wheeling Jesuit University.....	9,393,640 .....	0.85
25	Montana State University.....	9,074,658 .....	0.82
26	University of Houston – Clear Lake .....	9,042,491 .....	0.82
27	Georgia Institute of Technology .....	8,533,057 .....	0.77
28	University of New Hampshire – Durham.....	8,273,330 .....	0.75
29	Mississippi State University .....	8,106,152 .....	0.73
30	Carnegie-Mellon University.....	8,098,657 .....	0.73
31	University of Michigan – Ann Arbor .....	8,072,957 .....	0.73
32	George Mason University .....	7,824,354 .....	0.71
33	Oklahoma State University .....	7,535,275 .....	0.68
34	University of California – Santa Barbara.....	7,390,397 .....	0.67
35	Texas A&M University – College Station.....	7,324,198 .....	0.66
36	Old Dominion University .....	7,188,074 .....	0.65
37	University of New Mexico – Albuquerque .....	6,887,204 .....	0.62
38	Hampton University.....	6,591,090 .....	0.59
39	San Jose State University.....	6,460,202 .....	0.58
40	Harvard University .....	6,458,917 .....	0.58
41	Oregon State University.....	6,420,974 .....	0.58
42	Utah State University .....	6,234,239 .....	0.56
43	University of California – Irvine .....	6,133,406 .....	0.55
44	University of Houston – Houston .....	5,996,646 .....	0.54
45	Cornell University.....	5,929,481 .....	0.54
46	University of Miami.....	5,507,678 .....	0.50
47	University of Illinois – Urbana .....	5,261,266 .....	0.47
48	Case Western Reserve.....	5,184,079 .....	0.47
49	University of Minnesota – Twin Cities.....	5,172,987 .....	0.47
50	Colorado State University .....	4,971,167 .....	0.45
	Other Colleges & Universities** .....	318,332,887 .....	28.73

\* Excludes awards to California Institute of Technology for operation of the Jet Propulsion Laboratory.  
Totals include de-obligations for this chart.

\*\* Includes both foreign and domestic universities and colleges.

**STATES AND U.S. TERRITORIES BY OBLIGATIONS  
FISCAL YEAR 2001 (October 1, 2000 through September 30, 2001)**

	STATE	OBLIGATIONS (WHOLE DOLLARS)	PERCENT
<b>TOTALS*</b>		<b>1,107,563,141</b>	<b>100.00</b>
1	Maryland .....	191,365,787	17.28
2	California .....	178,347,204	16.10
3	Texas .....	80,982,535	7.31
4	Massachusetts .....	52,441,476	4.73
5	Alabama .....	51,922,483	4.69
6	Colorado .....	50,896,932	4.60
7	New York .....	37,650,450	3.40
8	Virginia .....	34,523,643	3.12
9	Pennsylvania .....	32,357,715	2.92
10	Ohio .....	26,296,437	2.37
11	New Mexico .....	25,508,973	2.30
12	Florida .....	25,206,039	2.28
13	Arizona .....	21,686,898	1.96
14	Missouri .....	21,440,255	1.94
15	Georgia .....	18,670,276	1.69
16	West Virginia .....	14,734,682	1.33
17	Alaska .....	14,287,061	1.29
18	Mississippi .....	14,125,119	1.28
19	Montana .....	13,409,751	1.21
20	Wisconsin .....	13,340,450	1.20
21	Hawaii .....	13,323,984	1.20
22	Michigan .....	12,421,719	1.12
23	Illinois .....	12,105,363	1.09
24	New Jersey .....	11,000,768	0.99
25	Washington .....	10,689,480	0.97
26	New Hampshire .....	9,784,585	0.88
27	North Carolina .....	9,756,602	0.88
28	Oklahoma .....	9,458,473	0.85
29	Utah .....	8,878,640	0.80
30	District of Columbia .....	8,120,950	0.73
31	Tennessee .....	8,062,375	0.73
32	Oregon .....	7,907,481	0.71
33	Iowa .....	7,079,881	0.64
34	Louisiana .....	6,911,111	0.62
35	Indiana .....	6,158,303	0.56
36	South Carolina .....	5,308,808	0.48
37	Minnesota .....	5,227,958	0.47
38	Kansas .....	4,962,967	0.45
39	Connecticut .....	4,726,271	0.43
40	North Dakota .....	4,015,975	0.36
41	Puerto Rico .....	3,811,968	0.34
42	Rhode Island .....	3,770,546	0.34
43	Idaho .....	3,303,087	0.30
44	Nebraska .....	2,507,037	0.23
45	Kentucky .....	2,328,954	0.21
46	Nevada .....	1,899,440	0.17
47	South Dakota .....	1,412,937	0.13
48	Delaware .....	1,297,051	0.12
49	Maine .....	853,644	0.08
50	Vermont .....	449,324	0.04
51	Arkansas .....	420,285	0.04
52	Wyoming .....	413,008	0.04

\* Starting in FY 1993, Active Actions with de-obligations will be reported in this chart.

# TABLE OF CONTENTS

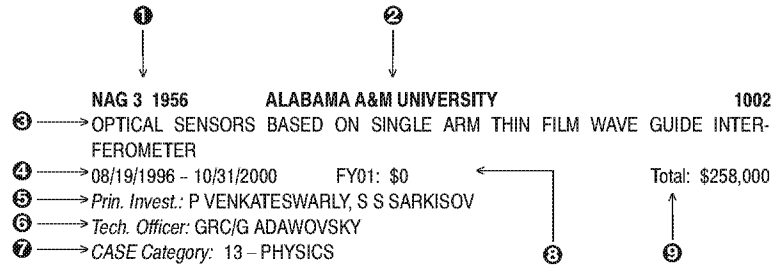
This report includes data on projects active during Fiscal Year 2001.

Alabama .....	1	Nebraska .....	340
Alaska .....	16	Nevada .....	341
Arizona .....	19	New Hampshire .....	343
Arkansas .....	40	New Jersey .....	350
California .....	41	New Mexico .....	360
Colorado .....	119	New York .....	367
Connecticut .....	144	North Carolina .....	394
Delaware .....	149	North Dakota .....	404
District of Columbia .....	152	Ohio .....	405
Florida .....	161	Oklahoma .....	428
Georgia .....	180	Oregon .....	430
Hawaii .....	191	Pennsylvania .....	435
Idaho .....	199	Rhode Island .....	457
Illinois .....	200	South Carolina .....	461
Indiana .....	214	South Dakota .....	466
Iowa .....	222	Tennessee .....	467
Kansas .....	227	Texas .....	474
Kentucky .....	230	Utah .....	501
Louisiana .....	233	Vermont .....	506
Maine .....	238	Virginia .....	507
Maryland .....	239	Washington .....	533
Massachusetts .....	276	West Virginia .....	544
Michigan .....	306	Wisconsin .....	546
Minnesota .....	320	Wyoming .....	555
Mississippi .....	326	Commonwealth of Puerto Rico .....	556
Missouri .....	329	Foreign Countries .....	558
Montana .....	337		
Appendix/Cross Index by Field of Science and Engineering .....			561

# USER'S GUIDE

The University Program Report provides current information and related statistics for each grant/contract/cooperative agreement active during the report period. The following guidance is provided as an aid to the reader in readily locating material of interest and in optimizing the use of this document.

## I. Typical Citation



### KEY

1. Agreement number\*
2. Institution name
3. Brief work description
4. Approximate period of performance
5. Principal investigator(s) at the educational institution
6. NASA Technical Officer(s) and organizational location
7. CASE Field of Science and Engineering code and name
8. Amount (if any) actually provided during the indicated fiscal year
9. Total amount actually provided during the indicated period of performance

\* Uniquely identifies project. Prefixes denote type of instrument as follows:

Grants: NAG, NAGW, NGF, NGT, NGL, NGR, NSG

Cooperative Agreements: NCC, NCCW

Contracts: DEN, NAS, NASR, NASW, NSR

Space Act Agreements: NCA



## II. NASA Installations

NASA installations are included in the citation as abbreviations (item 7). The following listing of installations will be useful to those desiring further information on specific projects.

Mr. Gary Gans Code FE <b>NASA Headquarters</b> Office of Human Resources and Education Washington, DC 20546-0001 Phone: (202) 358-1110	HQ	Mr. Gregg Buckingham Mail Stop XA-D1 <b>John F. Kennedy Space Center</b> Kennedy Space Center, FL 32899 Phone: (321) 867-8777 Fax: (321) 867-2097 E-mail: Gregg.Buckingham-1@ksc.nasa.gov	KSC
Mr. Donn James (Acting) Mail Stop 204-14 <b>Ames Research Center</b> Moffett Field, CA 94035-1000 Phone: (650) 604-4967 Fax: (650) 604-0971 E-mail: djames@mail.arc.nasa.gov	ARC	Mr. Roger A. Hathaway Mail Stop 400 <b>Langley Research Center</b> Hampton, VA 23681-2199 Phone: (757) 864-4000 Fax: (757) 864-8835 E-mail: r.a.hathaway@larc.nasa.gov	LARC
Dr. Kajal K. Gupta <b>NASA Dryden Flight Research Center</b> P.O. Box 273, Mail Stop D2701 Edwards, CA 93523-0273 Phone: (661) 258-3710 Fax: (661) 258-3744 E-mail: kajal.gupta@mail.dfrc.nasa.gov	DFRC	Dr. Francis J. Montegani Mail Stop 49-5 <b>NASA Glenn Research Center</b> 21000 Brookpark Road Cleveland, OH 44135 Phone: (216) 433-2956 Fax: (216) 433-3687 E-mail: fjm@grc.nasa.gov	GRC
Ms. Mablelene Burrell Mail Code 160.0 <b>NASA Goddard Space Flight Center</b> Greenbelt, MD 20771 Phone: (301) 286-1122 Fax: (301) 286-1610 E-mail: mburrell@pop100.gsfc.nasa.gov	GSFC	Dr. Shelia Nash-Stevenson <b>George C. Marshall Space Flight Center</b> Mail Stop CD60 MSFC, AL 35812 Phone: (256) 544-3435 Fax: (256) 544-8899 E-mail: Shelia.Nash-Stevenson@msfc.nasa.gov	MSFC
Dr. Donn G. Sickorez Mail Code AH <b>Lyndon B. Johnson Space Center</b> Houston, TX 77058 Phone: (281) 483-4724 Fax: (281) 483-4876 E-mail: donn.g.sickorez1@jsc.nasa.gov	JSC	Dr. Ramona E. Pelletier Travis <b>John C. Stennis Space Center</b> Code FA00 Stennis Space Center, MS 39529 Phone: (228) 688-3832 Fax: (228) 688-7499 E-mail: Ramona.Travis@ssc.nasa.gov	SSC

A full listing of the suffix letters and information on NASA's organizational structure may be found in the NASA Headquarters Telephone Directory. The directory is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

### **III. CASE**

The National Science Foundation (NSF) operates a government-wide system originally designed by the Committee on Academic Science and Engineering (CASE) of the Federal Council for Science and Technology. Participating agencies report annually to NSF, which in turn issues the statistical report, Federal Science and Engineering Support to Universities, Colleges and Nonprofit Institutions.

Since its inception, this survey system has been the sole source of data on Federal funding to individual institutions for Science and Engineering (S&E) activities.

### **IV. Cross-Index**

The cross-indexed Appendix provides rapid access to all projects in a particular area of endeavor, and is also easily used to determine the institutions and principal investigators conducting NASA projects.

**ALABAMA**

**NAG 2 1130**                      **ALABAMA A&M UNIV**                      **1000**  
 IRON-ION INDUCED LOW DOSE MUTAGENESIS  
 06/11/1997 - 06/30/2002      FY01: \$0                      Total: \$359,883  
*Prin. Invest.:* P G KALE  
*Tech. Officer:* ARC/B J COLLINS, ARC/P X CALLAHAN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 2 1175**                      **ALABAMA A&M UNIV**                      **1001**  
 NEURAL NETWORK ANALYSIS OF LEAF MULTISPECTRAL REFL ECTANCE  
 FOR DETECTION & DISCRIMINATION OF .....  
 02/03/1998 - 04/30/2002      FY01: \$0                      Total: \$299,752  
*Prin. Invest.:* C A BEYL  
*Tech. Officer:* ARC/M H KLISS, ARC/G S LEE  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 3 1956**                      **ALABAMA A&M UNIV**                      **1002**  
 OPTICAL SENSORS BASED ON SINGLE ARM THIN FILM WAVE GUIDE INTER-  
 FEROMETER  
 08/19/1996 - 10/31/2000      FY01: \$0                      Total: \$258,000  
*Prin. Invest.:* P VENKATESWARLY, S S SARKISOV  
*Tech. Officer:* GRC/G ADAWOVSKY  
*CASE Category:* 13 - PHYSICS

**NAG 3 2302**                      **ALABAMA A&M UNIV**                      **1003**  
 DEVELOPMENT OF IMPROVED HIGH TEMPERATURE SILICON C ARBIDE  
 SENSORS  
 12/13/1999 - 11/02/2001      FY01: \$99,568                      Total: \$199,136  
*Prin. Invest.:* D ILA, M A GEORGE  
*Tech. Officer:* GRC/D J LARKIN, GRC/R LAWRENCE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 9885**                      **ALABAMA A&M UNIV**                      **1004**  
 STUDENT REFLECTION GPS EXPERIMENT  
 08/24/2000 - 02/14/2002      FY01: \$0                      Total: \$100,000  
*Prin. Invest.:* A MANU  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10202**                      **ALABAMA A&M UNIV**                      **1005**  
 SPACE SCIENCE EDUCATION & THE SUN-EARTH CONNECTION  
 12/22/2000 - 12/31/2001      FY01: \$225,000                      Total: \$225,000  
*Prin. Invest.:* A TAN  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10721**                      **ALABAMA A&M UNIV**                      **1006**  
 CENTER FOR HYDROLOGY, SOIL CLIMATOLOGY, AND REMOTE SENSING  
 (HSCARS): CONTINUATION OF A GROUP 2 MINOR  
 04/20/2001 - 04/14/2002      FY01: \$759,171                      Total: \$759,171  
*Prin. Invest.:* T COLEMAN  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1335**                      **ALABAMA A&M UNIV**                      **1007**  
 R/S "AN INNOVATIVE APPROACH FOR VORTEX TUBE FLOW ANALYSIS AND  
 APPLICATION IN FILM COOLING"  
 03/26/1997 - 05/25/2001      FY01: \$0                      Total: \$300,000  
*Prin. Invest.:* K HE  
*Tech. Officer:* MSFC/A CHOW  
*CASE Category:* 13 - PHYSICS

**NAG 8 1390**                      **ALABAMA A&M UNIV**                      **1008**  
 R/S "BULK AND THIN FILM ORGANIC NONLINEAR OPTICAL CRYSTALS FOR  
 DEVICES AND MICROGRAVITY PROCESSING"  
 07/23/1997 - 07/22/2001      FY01: \$0                      Total: \$200,000  
*Prin. Invest.:* M D AGGARWAL  
*Tech. Officer:* MSFC/D FRAZIER, MSFC/W J LOVE  
*CASE Category:* 13 - PHYSICS

**NAG 8 1400**                      **ALABAMA A&M UNIV**                      **1009**  
 EFFECT OF DOPANTS ON THE GROWTH & PROPERTIES OF MIXED  
 ORGANIC CRYSTALS FOR NON-LINEAR OPTICAL APPS  
 09/19/1997 - 12/29/2000      FY01: -\$9,548                      Total: \$200,197  
*Prin. Invest.:* B PENN  
*Tech. Officer:* MSFC/B PENN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1497**                      **ALABAMA A&M UNIV**                      **1010**  
 COMPUTER MODEL OF THE TVC ELECTROMECHANICAL ACTUAT  
 OR  
 06/10/1999 - 05/31/2002      FY01: \$87,709                      Total: \$252,865  
*Prin. Invest.:* A BOND  
*Tech. Officer:* MSFC/J MONTENEGRO  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 8 1498**                      **ALABAMA A&M UNIV**                      **1011**  
 ELECTRO-OPTIC MODULATOR BASED ON ORGANIC PLANAR WAVEGUIDE  
 INTEGRATED WITH PRISM COUPLER.  
 06/24/1999 - 05/30/2002      FY01: \$0                      Total: \$240,000  
*Prin. Invest.:* S SARKISOV  
*Tech. Officer:* MSFC/B PENN  
*CASE Category:* 13 - PHYSICS

**NAG 8 1541**                      **ALABAMA A&M UNIV**                      **1012**  
 CYTOGENETIC INVESTIGATIONS INTO RADIOSENSITIVITY  
 07/17/1998 - 07/16/2002      FY01: \$0                      Total: \$204,804  
*Prin. Invest.:* D KALE  
*Tech. Officer:* MSFC/R C RICHMOND  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1560**                      **ALABAMA A&M UNIV**                      **1013**  
 MATHEMATICAL SAFETY ANALYSIS  
 09/30/1999 - 09/30/2002      FY01: \$79,956                      Total: \$199,912  
*Prin. Invest.:* M A ELSHAMY  
*Tech. Officer:* MSFC/D O FRAZIER  
*CASE Category:* 21 - MATHEMATICS

**NAG 8 1614**                      **ALABAMA A&M UNIV**                      **1014**  
 RESEARCH ENTITLED: INVESTIGATION OF STRUCTURAL PROPERTIES OF  
 COMPOSITE SMART MATERIALS .  
 09/09/1999 - 10/15/2002      FY01: \$98,582                      Total: \$197,216  
*Prin. Invest.:* A SHARMA  
*Tech. Officer:* MSFC/G MYERS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1620**                      **ALABAMA A&M UNIV**                      **1015**  
 FASAT REACTION SPATIAL-TEMPORAL LIGHT MODULATORS FOR OPTICAL  
 RECOGNITION AND IMAGE PROCESSING.  
 08/25/1999 - 08/25/2001      FY01: \$0                      Total: \$186,392  
*Prin. Invest.:* N KUKHATAREV, T KUHTEREVA  
*Tech. Officer:* MSFC/B G PENN  
*CASE Category:* 13 - PHYSICS

## ALABAMA

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1623**                    **ALABAMA A&M UNIV**                    **1016**  
 INNOVATIVE EXPLORATION OF SEMIORGANIC NONLINEAR OPTICAL  
 MATERIALS FOR OPTICAL PROCESSING APPLIC.  
 09/24/1999 - 09/23/2002      FY01: \$80,000                    Total: \$200,000  
*Prin. Invest.:* M D AGGARWAL  
*Tech. Officer:* MSFC/B PENN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1624**                    **ALABAMA A&M UNIV**                    **1017**  
 INVESTIGATION OF MICROBIAL LIFE IN PLAR ICE AND PERMA FROST  
 08/13/1999 - 09/14/2002      FY01: \$0                    Total: \$100,000  
*Prin. Invest.:* M G TADROS  
*Tech. Officer:* MSFC/R HOOVER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1626**                    **ALABAMA A&M UNIV**                    **1018**  
 RESEARCH ENTITLED: "HYPERSONIC NON-EQUILIBRIUM FLOWS WITH  
 LOW REYNOLDS EFFECT"  
 09/16/1999 - 05/31/2002      FY01: \$99,775                    Total: \$199,057  
*Prin. Invest.:* G S LIAW  
*Tech. Officer:* MSFC/L CHOU, MSFC/W J LOVE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1642**                    **ALABAMA A&M UNIV**                    **1019**  
 HIGH SCHOOL/HIGH-TECH CAREER DEVELOPMENT PROGRAM IN MATH-  
 EMATICS, SCIENCE ENGINEERING, ADN TECH.  
 09/30/1999 - 09/29/2002      FY01: \$106,361                    Total: \$195,360  
*Prin. Invest.:* B CADY  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 21 - MATHEMATICS

**NAG 8 1643**                    **ALABAMA A&M UNIV**                    **1020**  
 ENHANCEMENT OF STUDENTS IN SCIENCE, ENGINEERING, AND MATH-  
 EMATICS.  
 09/27/1999 - 03/26/2002      FY01: \$76,273                    Total: \$195,592  
*Prin. Invest.:* E TEMPLE  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 21 - MATHEMATICS

**NAG 8 1655**                    **ALABAMA A&M UNIV**                    **1021**  
 PRODUCTION OF ULTRA-LIGHT MIRRORS  
 03/20/2000 - 03/19/2003      FY01: \$0                    Total: \$213,819  
*Prin. Invest.:* D ILA  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1800**                    **ALABAMA A&M UNIV**                    **1022**  
 COMPUTATIONAL ANALYSIS OF ION TRAJECTORY IN PULSA MAGNETIC  
 FLUX COMPRESSION REACTION  
 06/07/2001 - 10/18/2001      FY01: \$29,719                    Total: \$29,719  
*Prin. Invest.:* E W ROTHE, G P RECK  
*Tech. Officer:* GRC/R C ANDERSON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1804**                    **ALABAMA A&M UNIV**                    **1023**  
 RESEARCH, "NUMERICAL PREDUCATION OF DRAG OF AJAX TYPE  
 VEHICLES  
 05/17/2001 - 03/14/2005      FY01: \$60,000                    Total: \$60,000  
*Prin. Invest.:* Z T DENG  
*Tech. Officer:* MSFC/A CHOW  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1808**                    **ALABAMA A&M UNIV**                    **1024**  
 RESEARCH, "WEAKLY IONIZED GAS CHARACTERISTICS AND EFFECT ON  
 THE SHOCK WAVE STRUCTURE.  
 05/02/2001 - 04/15/2004      FY01: \$95,000                    Total: \$95,000  
*Prin. Invest.:* KX HO  
*Tech. Officer:* MSFC/A CHOW  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1095**                    **ALABAMA A&M UNIV**                    **1025**  
 MICROBIAL VIABILITY AND BIOCIDES EFFICIENCY STUDIES FOR THE INTER  
 SPACE STATION  
 03/31/1999 - 03/31/2002      FY01: \$81,916                    Total: \$281,916  
*Prin. Invest.:* M TADROS  
*Tech. Officer:* JSC/D PIERSON, JSC/L AREMNDARIZ  
*CASE Category:* 13 - PHYSICS

**NAG10 245**                    **ALABAMA A&M UNIV**                    **1026**  
 MISSION PLANNING AND RISK MANAGEMENT  
 04/06/1998 - 05/15/2002      FY01: \$0                    Total: \$292,002  
*Prin. Invest.:* M ELSHAMY  
*Tech. Officer:* KSC/R TILLEY  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 3 736**                    **ALABAMA A&M UNIV**                    **1027**  
 ALL OPTICAL MICRO MOTORS BASED ON MOVING GRATING IN PHOTO  
 SENSITIVE MEDIA  
 09/30/1999 - 09/30/2002      FY01: \$93,564                    Total: \$187,128  
*Prin. Invest.:* D CURLEY  
*Tech. Officer:* GRC/G ADAMOVSKY  
*CASE Category:* 13 - PHYSICS

**NCC 8 140**                    **ALABAMA A&M UNIV**                    **1028**  
 R/S "CENTER FOR HYDROLOGY, SOIL CLIMATOLOGY AND REMOTE  
 SENSING (HSCARS)"  
 07/21/1997 - 12/31/2000      FY01: \$440,747                    Total: \$3,853,109  
*Prin. Invest.:* T L COLEMAN  
*Tech. Officer:* MSFC/R ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 8 211**                    **ALABAMA A&M UNIV**                    **1029**  
 STUDEN LAUNCH INITIATIVE  
 03/23/2001 - 10/31/2001      FY01: \$49,997                    Total: \$49,997  
*Prin. Invest.:* R B LAL, G SHARMA, M MANMOHAN  
*Tech. Officer:* MSFC/J R PRUITT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 8 52902**                    **ALABAMA A&M UNIV**                    **1030**  
 FABRICATION & OPTICAL AND ELECTRICAL CHARACTERIZA- TION OF THE  
 DIFFRACTIVE HOLOGRAPHIC OPTICAL ELEMN  
 05/25/2001 - 06/30/2004      FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* J C WANG  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 13 - PHYSICS

**NAG 3 2120**                    **AUBURN UNIV**                    **1031**  
 TIAL JOINING SCIENCE AND TECHNOLOGY FOR ADVANCED A EROPRO-  
 PULSION SYSTEM  
 02/11/1998 - 01/13/2002      FY01: \$0                    Total: \$238,491  
*Prin. Invest.:* W F GALE, J W FERGUS  
*Tech. Officer:* GRC/R D NOEBE, GRC/M V NATHAL  
*CASE Category:* 47 - METAL & MATERIALS ENGR

## NASA'S UNIVERSITY PROGRAM

ALABAMA

**NAG 3 2597**                      **AUBURN UNIV**                      **1032**  
 DAMPING AND CONTROL OF MULTI-DIRECTION COMPOSITE FLYWHEELS  
 04/27/2001 - 04/05/2003      FY01: \$61,044                      Total: \$61,044  
*Prin. Invest.:* D GOWAYED  
*Tech. Officer:* GRC/J TRUDELL  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2639**                      **AUBURN UNIV**                      **1033**  
 A STUDY OF THE EFFECTS OF GAMMA AND CHARGED PARTICLE RADIATION ON SILICON CARBIDE DIODES AND METAL-  
 06/22/2001 - 04/30/2002      FY01: \$87,203                      Total: \$87,203  
*Prin. Invest.:* J R WILLIAMS  
*Tech. Officer:* GRC/G E SCHWARZE  
*CASE Category:* 13 - PHYSICS

**NAG 5 8081**                      **AUBURN UNIV**                      **1034**  
 MAGNETIC RECONNECTION AND PARTICLE PRECIPITATION A CROSS THE MAGNETOPAUSE  
 01/21/1999 - 02/28/2002      FY01: \$60,593                      Total: \$169,914  
*Prin. Invest.:* D LIN  
*Tech. Officer:* GSFC/D EVANS/5  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11121**                      **AUBURN UNIV**                      **1035**  
 RADIATION EFFECTS IN SIGE HBT BICMOS TECHNOLOGY  
 07/13/2001 - 07/31/2002      FY01: \$65,000                      Total: \$65,000  
*Prin. Invest.:* J D CRESSLER  
*Tech. Officer:* GSFC/R REED  
*CASE Category:* 13 - PHYSICS

**NAG 8 1617**                      **AUBURN UNIV**                      **1036**  
 A SYSTEM STUDY FOR POWER WITHOUT WIRES UNDER NRA8- 23, SPACE SOLAR POWER  
 07/06/1999 - 09/30/2000      FY01: -\$27,118                      Total: \$258,921  
*Prin. Invest.:* H BRANDHORST, JR.  
*Tech. Officer:* MSFC/J HOWELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1717**                      **AUBURN UNIV**                      **1037**  
 HIGH POWER ELECTRIC PROPULSION RESEARCH  
 04/25/2000 - 02/05/2001      FY01: \$10,000                      Total: \$69,679  
*Prin. Invest.:* I HRBUD  
*Tech. Officer:* MSFC/C SHAFER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 8 1728**                      **AUBURN UNIV**                      **1038**  
 "GROUND SYSTEM-RECTENNA-SATELLITE INTERFACE ISSUES FOR SPACE SOLAR POW SYSTEMS"  
 06/09/2000 - 10/31/2000      FY01: \$0                              Total: \$54,474  
*Prin. Invest.:* S A MERRYMAN, NONE  
*Tech. Officer:* MSFC/J HOWELL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1806**                      **AUBURN UNIV**                      **1039**  
 RESEARCH, "X-33 ADVANCED GUIDANCE AND CONTROL PROJECT: SOFTWARE REFINEMENTS FOR VERIFICATION..."  
 04/25/2001 - 03/15/2002      FY01: \$32,188                      Total: \$32,188  
*Prin. Invest.:* A S HOEDEL  
*Tech. Officer:* MSFC/D R KRUP  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAS 3 99200**                      **AUBURN UNIV**                      **1040**  
 EFFECTS OF HYPERVELOCITY IMPACTS ON HIGH VOLTAGE SOLAR ARRAYS  
 09/17/1999 - 10/31/2000      FY01: \$0                              Total: \$124,781  
*Prin. Invest.:* H W BRANDHORST  
*Tech. Officer:* GRC/P J GEORGE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 8 98249**                      **AUBURN UNIV**                      **1041**  
 DEVELOPMENT AND PACKAGING OF SUPERCAPACITORS FOR LAUNCH VEHICLE APPLICATIONS  
 09/10/1998 - 07/06/2002      FY01: \$0                              Total: \$523,572  
*Prin. Invest.:* S A MERRYMAN, Z CHEN, NONE  
*Tech. Officer:* MSFC/D K HALL, MSFC/T M EDGE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 511**                      **AUBURN UNIV**                      **1042**  
 CENTER FOR THE COMMERCIAL DEVELOPMENT OF SPACE: SPACE POWER & ADVANCED ELECTRONICS  
 11/01/1996 - 10/31/2001      FY01: \$1,125,501                      Total: \$4,620,501  
*Prin. Invest.:* D W BRANDHORST, JR., M F ROSE  
*Tech. Officer:* GRC/J E DUDENHOEFER, GRC/R J SOVIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 864**                      **AUBURN UNIV**                      **1043**  
 COUPLED RADIATION/THERMOPHORESUS EFFECTS IN SOOTIN G MICROGRAVITY FLAMES  
 02/20/2001 - 12/20/2004      FY01: \$49,167                      Total: \$49,167  
*Prin. Invest.:* D W MACKOWSKI  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 5 333**                      **AUBURN UNIV**                      **1044**  
 SOIL ORGANIC MATTER FLUXES IN AMAZONIAN FORESTS: NATURAL VS INTENSIVELY MANAGED SYSTEMS  
 06/17/1998 - 12/31/2001      FY01: \$51,438                      Total: \$225,482  
*Prin. Invest.:* K MCNABB  
*Tech. Officer:* GSFC/D DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 459**                      **AUBURN UNIV**                      **1045**  
 CENTER FOR SPACE POWER AND ADVANCED ELECTRONICS  
 03/01/2000 - 01/31/2002      FY01: \$0                              Total: \$1,030,000  
*Prin. Invest.:* H W BRANDHORST  
*Tech. Officer:* GSFC/D BRUNNER  
*CASE Category:* 11 - ASTRONOMY

**NCC 8 128**                      **AUBURN UNIV**                      **1046**  
 FOR RESEARCH: "AUBURN COMMERCIAL SPACE CENTER FOR THE SOLIDIFICATION DESIGN/CASTNET PROGRAM"  
 01/28/1997 - 10/31/2001      FY01: \$2,400,000                      Total: \$8,322,924  
*Prin. Invest.:* R A OVERFELT  
*Tech. Officer:* MSFC/S LAMBING  
*CASE Category:* 47 - METAL & MATERIALS ENGR

## ALABAMA

## NASA'S UNIVERSITY PROGRAM

**NCC 8 151**                      **AUBURN UNIV**                      **1047**  
 GLOBAL CHANGE R/S EDUCATION & OUTREACH RELATED TO THE EARTH'S  
 SURFACE RESOURCES AND HYDROLOGIC CYCLE  
 06/30/1998 - 03/31/2003      FY01: \$90,158                      Total: \$493,343  
*Prin. Invest.:* U HATCH  
*Tech. Officer:* MSFC/J R ARNOLD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 1 52205**                      **AUBURN UNIV**                      **1048**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 09/04/1998 - 06/30/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* M L WALLER, T H SHUMPERT, S M RAO  
*Tech. Officer:* LARC/F B BECK, LARC/M C BAILEY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 8 52851**                      **AUBURN UNIV**                      **1049**  
 ADVANCED METHOD FOR VIBRATION ANALYSIS OF HIGH SPEED ROTOR  
 SYSTEMS  
 07/21/1998 - 12/31/2001      FY01: \$0                      Total: \$60,500  
*Prin. Invest.:* G T FLOWERS  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52870**                      **AUBURN UNIV**                      **1050**  
 OPTIMAL APPLICATION OF COMBUSTION TEST DATA TO FLAMABILITY  
 ASSESSMENT IN GASEOUS OXYGEN  
 07/27/1998 - 08/15/2002      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* P D JONES  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52904**                      **AUBURN UNIV**                      **1051**  
 CLOSED LOOP ROBUST CONTROL ALLOCATION FOR AEROSPACE VEHICLE  
 RELIABLE STABILITY AND PERFORMANCE  
 05/25/2001 - 06/30/2004      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* A S HODEL  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 8 1280**                      **BIRMINGHAM SOUTHERN COLLEGE**                      **1052**  
 JOVE RESEARCH  
 01/21/1997 - 08/31/2000      FY01: -\$2,321                      Total: \$22,679  
*Prin. Invest.:* K B BACHMANN  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 13 - PHYSICS

**NAG 8 1600**                      **OAKWOOD COLLEGE**                      **1053**  
 R/S THE DEVELOPMENT, ASSESSMENT, VALIDATION AND ENHANCEMENT  
 (DAVE) OF VIRTUAL REALITY FOR HUMAN...  
 01/22/1999 - 01/20/2000      FY01: \$0                      Total: \$93,168  
*Prin. Invest.:* K BENN-MARSHALL  
*Tech. Officer:* MSFC/G HAMILTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1653**                      **OAKWOOD COLLEGE**                      **1054**  
 MINORITY STUDENT DEVELOPMENT PROGRAM IN SCIENCE & ENGI-  
 NEERING  
 02/03/2000 - 02/04/2003      FY01: \$100,000                      Total: \$200,000  
*Prin. Invest.:* E GWEBU  
*Tech. Officer:* MSFC/W LOVE/A C BEAM  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1734**                      **OAKWOOD COLLEGE**                      **1055**  
 DEVELOPMENT OF ULTRA-LIGHT NORMAL INCIDENCE MIRROR ELEC-  
 TORCHEMICAL ASPECTS  
 08/18/2000 - 08/17/2003      FY01: \$0                      Total: \$100,000  
*Prin. Invest.:* A VOLKOV  
*Tech. Officer:* MSFC/W BRANTLEY  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1610**                      **TRENHOLM STATE TECHNICAL COLLEGE**                      **1056**  
 NASA HIGH SCHOOL SCIENCE ENRICHMENT PROGRAM (HSSEP)  
 06/07/1999 - 06/06/2002      FY01: \$100,000                      Total: \$300,000  
*Prin. Invest.:* C THOMPSON  
*Tech. Officer:* MSFC/W LOVE, MSFC/A C BEAM  
*CASE Category:* 21 - MATHEMATICS

**NAG 1 1865**                      **TUSKEGEE UNIV**                      **1057**  
 IDENTIFICATION OF SURFACE AND NEAR SURFACE DEFECTS AND  
 DAMAGE EVALUATION BY LASER SPECKLE  
 09/10/1996 - 09/09/2000      FY01: -\$5,870                      Total: \$286,765  
*Prin. Invest.:* J N BHUYAN  
*Tech. Officer:* LARC/R ROGOSKI  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 2 6049**                      **TUSKEGEE UNIV**                      **1058**  
 NASA'S SLSTP ACADEMIC PARTNER ALLIANCE (NSAPA)  
 04/16/2001 - 03/31/2002      FY01: \$180,691                      Total: \$180,691  
*Prin. Invest.:* W A HILL, C E MORRIS  
*Tech. Officer:* ARC/P X CALLAHAN, ARC/K A SOUZA  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 3 2127**                      **TUSKEGEE UNIV**                      **1059**  
 STUDY OF ELECTRICAL CONTACTS AND DEVICES IN ADVANCED SEMI-  
 CONDUCTORS  
 02/13/1998 - 07/31/2001      FY01: \$0                      Total: \$299,637  
*Prin. Invest.:* K K DAS  
*Tech. Officer:* GRC/S A ALTEROVITZ  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2347**                      **TUSKEGEE UNIV**                      **1060**  
 SPUTTERING EROSION IN THE ION THRUSTER SPUTTERING EROSION IN  
 THE ION THRUSTER  
 03/09/2000 - 10/31/2001      FY01: \$20,000                      Total: \$45,000  
*Prin. Invest.:* D KRAY, NONE  
*Tech. Officer:* GRC/M A MANTENIEKS  
*CASE Category:* 13 - PHYSICS

**NAG 3 2432**                      **TUSKEGEE UNIV**                      **1061**  
 POLYIMIDE BASED NANOCOMPOSITES FOR AFFORDABLE SPACE TRANS-  
 PORT  
 06/23/2000 - 04/16/2003      FY01: \$100,000                      Total: \$200,000  
*Prin. Invest.:* D DEAN  
*Tech. Officer:* GRC/S CAMPBELL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 4 169**                      **TUSKEGEE UNIV**                      **1062**  
 EFFECTS OF ABOVE REAL TIME TRAINING  
 05/17/1999 - 05/31/2001      FY01: \$0                      Total: \$68,711  
*Prin. Invest.:* S FIRASAT ALI  
*Tech. Officer:* DFRC/K A NORLIN, DFRC/R BINKLEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

## NASA'S UNIVERSITY PROGRAM

ALABAMA

**NAG 4 201**                      **TUSKEGEE UNIV**                      **1063**  
 DURABILITY ASSESSMENT OF AIRFRAME COMPOSITE REPAIR PATCHES  
 02/15/2000 - 09/30/2002      FY01: \$60,000                      Total: \$120,000  
*Prin. Invest.:* H A AGLAN  
*Tech. Officer:* DFRG/M W KEHOE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 203**                      **TUSKEGEE UNIV**                      **1064**  
 EFFECTS OF SELF-INSTRUCTIONAL METHODS AND ABOVE RE AL TIME  
 TRAINING (ARTT) FOR MANEUVERING TASKS ON  
 03/03/2000 - 02/28/2002      FY01: \$0                      Total: \$52,447  
*Prin. Invest.:* D ALI  
*Tech. Officer:* DFRG/K NORLIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10535**                      **TUSKEGEE UNIV**                      **1065**  
 SOY RESEARCH PILOT STUDY  
 03/08/2001 - 03/14/2002      FY01: \$20,000                      Total: \$20,000  
*Prin. Invest.:* R D PACE  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1246**                      **TUSKEGEE UNIV**                      **1066**  
 R/S ATOMIZATION IN IMPINGING-JET INJECTORS OF LIQUID-PROPELLANT  
 ROCKET ENGINES  
 10/31/1996 - 08/31/2001      FY01: \$0                      Total: \$252,147  
*Prin. Invest.:* D A IBRAHIM  
*Tech. Officer:* MSFC/H TRINH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG10 209**                      **TUSKEGEE UNIV**                      **1067**  
 SWEETPOTATO STEM CUTTING DATABASE IN PREPARATION FOR FLIGHT  
 09/01/1997 - 02/28/2002      FY01: \$0                      Total: \$295,346  
*Prin. Invest.:* D MARTLEY  
*Tech. Officer:* KSC/R WHEELER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG10 253**                      **TUSKEGEE UNIV**                      **1068**  
 EVAL OF FIRE EXTINGUISHING HALON COMPOUNDS  
 02/01/1999 - 12/31/2001      FY01: \$104,887                      Total: \$302,507  
*Prin. Invest.:* N VAHDAT  
*Tech. Officer:* KSC/M COLLINS  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG10 256**                      **TUSKEGEE UNIV**                      **1069**  
 TUSKEGEE UNIV GATEWAY ACHIEVEMENT PROGRAM  
 03/01/1999 - 03/01/2002      FY01: \$86,000                      Total: \$257,306  
*Prin. Invest.:* C DAVIS  
*Tech. Officer:* KSC/R MCKINNEY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 281**                      **TUSKEGEE UNIV**                      **1070**  
 NASA SPACEFLIGHT AND LIFE SCIENCES TRAINING PROGRA M  
 04/25/2000 - 03/07/2002      FY01: \$316,609                      Total: \$620,025  
*Prin. Invest.:* D HILL  
*Tech. Officer:* KSC/S POTTER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG10 298**                      **TUSKEGEE UNIV**                      **1071**  
 STARSAT 12000 TESTING TACTICS AND STRATEGIES STARSAT 12000  
 TESTING TACTICS AND STRATEGIES  
 04/27/2001 - 02/28/2002      FY01: \$100,000                      Total: \$100,000  
*Prin. Invest.:* H J FINDLAY  
*Tech. Officer:* KSC/C D BLACK  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NAG13 50**                      **TUSKEGEE UNIV**                      **1072**  
 NASA UNIV PARTNERSHIP AWARD WITH MINORITY INSTS PROGRAM  
 06/19/1997 - 06/30/2000      FY01: -\$6,185                      Total: \$361,379  
*Prin. Invest.:* E SHEPPARD  
*Tech. Officer:* SSC/B ST.CYR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 591**                      **TUSKEGEE UNIV**                      **1073**  
 HIGH TEMPERATURE FATGUE AND CREEP BEHAVIOR OF CERA MIC  
 MATRIX COMPOSITES FOR EXHAUST NOZZLE APPLICAT  
 03/11/1998 - 06/30/2001      FY01: \$0                      Total: \$362,435  
*Prin. Invest.:* A HAQUE, H MAHFUZ, U VAIDA  
*Tech. Officer:* GRC/M J VERILLE, GRC/J E GRADY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 726**                      **TUSKEGEE UNIV**                      **1074**  
 STUDY OF DESIGN PRINCIPLES AND SPARE PLASMA INTERA CTION ON  
 MODULAR HIGH VOLTAGE POWER DISTRIBUTION  
 08/05/1999 - 07/31/2000      FY01: -\$941                      Total: \$1,934  
*Prin. Invest.:* C V DORESWAMY  
*Tech. Officer:* GRC/D C FERGUSON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 346**                      **TUSKEGEE UNIV**                      **1075**  
 CENTER FOR LIDAR AND ATMOSPHERIC SCIENCES STUDENTS  
 07/01/1998 - 07/31/2003      FY01: \$0                      Total: \$1,488,578  
*Prin. Invest.:* N O EGIEBOR  
*Tech. Officer:* HQ/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 9 51**                      **TUSKEGEE UNIV**                      **1076**  
 CENTER FOR FOOD & ENVIRON SYS ...(CFESH)  
 07/31/1997 - 12/31/2001      FY01: \$1,225,000                      Total: \$5,225,000  
*Prin. Invest.:* W A HILL  
*Tech. Officer:* JSC/D BARTA  
*CASE Category:* 62 - PSYCHOLOGY SOCIAL ASPECTS

**NAG 2 1348**                      **UNIV OF ALABAMA - BIRMINGHAM**                      **1077**  
 MOLECULAR BASIS OF MECHANO-SIGNAL TRANSDUCTION IN VASCULAR  
 ENDOTHELIAL CELLS  
 07/23/1999 - 07/31/2000      FY01: -\$40,370                      Total: \$209,662  
*Prin. Invest.:* V D DARLEY-USMAR  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2560**                      **UNIV OF ALABAMA - BIRMINGHAM**                      **1078**  
 MAGNETICALLY ASSISTED COMBUSTION EXPERIMENT (MACE)  
 03/22/2001 - 01/17/2005      FY01: \$20,000                      Total: \$20,000  
*Prin. Invest.:* J BAKER  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

## ALABAMA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 4853 UNIV OF ALABAMA - BIRMINGHAM 1079**  
 FORMATION OF THE HYDROCARBONS OF CARBONACEOUS CHON  
 07/23/1997 - 03/31/2002 FY01: \$0 Total: \$130,412  
*Prin. Invest.:* D W DOWIAK  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6815 UNIV OF ALABAMA - BIRMINGHAM 1080**  
 INVESTIGATION OF THE CONTRIBUTION OF POLYCYCLIC AROMATIC  
 HYDROCARBONS TO INTERSTELLAR ULTRAVIOLET E  
 01/05/1998 - 12/31/2001 FY01: \$0 Total: \$76,492  
*Prin. Invest.:* T W DOWIAK  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7079 UNIV OF ALABAMA - BIRMINGHAM 1081**  
 REPEATING IMPACT TOOL FOR IN-SITU GEOLOGY INVESTIGATIONS  
 03/06/1998 - 03/31/2001 FY01: \$0 Total: \$109,902  
*Prin. Invest.:* T J W DOWIAK  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8786 UNIV OF ALABAMA - BIRMINGHAM 1082**  
 DEVELOPMENT OF HIGH AFFINITY SENSORS FOR BIOLOGICAL PATH-  
 OGENS  
 09/02/1999 - 09/30/2001 FY01: \$0 Total: \$800,000  
*Prin. Invest.:* L DELUCAS  
*Tech. Officer:* GSFC/E PAYLOR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8819 UNIV OF ALABAMA - BIRMINGHAM 1083**  
 THE IR EMITTING AROMATIC COMPONENT OF THE INTERSTELLAR AND  
 CIRCUMSTELLAR MEDIUMS  
 09/07/1999 - 07/31/2002 FY01: \$39,600 Total: \$115,460  
*Prin. Invest.:* T W DOWIAK  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9424 UNIV OF ALABAMA - BIRMINGHAM 1084**  
 TOF MS IN SITU PLANETARY SCIENCE AND EXOBIOLGY ON EUROPA  
 04/17/2000 - 04/29/2002 FY01: \$120,237 Total: \$248,738  
*Prin. Invest.:* T W DOWIAK  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10694 UNIV OF ALABAMA - BIRMINGHAM 1085**  
 NEAR-CRITICAL WATER AQUEOUS ALTERATION PROCESSES IN PLAN-  
 ETESIMALS  
 04/16/2001 - 04/14/2002 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* T W DOWIAK  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11146 UNIV OF ALABAMA - BIRMINGHAM 1086**  
 STRUCTURE-BASED DRUG DESIGN AND EVALUATION OF NATURAL  
 COMPOUNDS AGAINST CHAGAS DISEASE  
 08/09/2001 - 09/30/2002 FY01: \$997,800 Total: \$997,800  
*Prin. Invest.:* L J DELUCAS  
*Tech. Officer:* GSFC/L P CHAMBERS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11267 UNIV OF ALABAMA - BIRMINGHAM 1087**  
 DEVELOPMENT OF HIGH AFFINITY SENSORS FOR BIOLOGICAL PATH-  
 OGENS  
 09/26/2001 - 09/30/2002 FY01: \$9,000 Total: \$9,000  
*Prin. Invest.:* L DELUCAS, NONE  
*Tech. Officer:* GSFC/E PAYLOR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1228 UNIV OF ALABAMA - BIRMINGHAM 1088**  
 THE EFFECT OF CONVECTION ON MORPHOLOGICAL STABILITY  
 05/01/1996 - 11/30/2001 FY01: \$0 Total: \$420,000  
*Prin. Invest.:* J B ANDREWS  
*Tech. Officer:* MSFC/P DOTY, MSFC/R POWER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1678 UNIV OF ALABAMA - BIRMINGHAM 1089**  
 RESEARCH "CONTROLLED SYNTHESIS OF NANOPARTICLES USING BLOCK  
 COPOLYMERS: NANOREACTORS IN MICROGRAVITY  
 04/11/2000 - 10/10/2003 FY01: \$104,500 Total: \$154,500  
*Prin. Invest.:* J W MAYS  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 8 40189 UNIV OF ALABAMA - BIRMINGHAM 1090**  
 PROTEIN CRYSTAL GROWTH IN MICROGRAVITY  
 04/01/1994 - 06/30/2004 FY01: \$3,021,195 Total: \$22,629,136  
*Prin. Invest.:* L J DELUCAS  
*Tech. Officer:* MSFC/D K COLLINS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAS 8 99059 UNIV OF ALABAMA - BIRMINGHAM 1091**  
 R/S COUPLED GROWTH IN HYPERMONOTECTICS  
 01/22/1999 - 03/31/2003 FY01: \$268,957 Total: \$968,323  
*Prin. Invest.:* J B ANDREWS  
*Tech. Officer:* MSFC/R KING  
*CASE Category:* 13 - PHYSICS

**NCC 8 126 UNIV OF ALABAMA - BIRMINGHAM 1092**  
 FOR RES: "CONTINUATION OF SUPPORT FOR COMMERCIAL SPACE CTR,  
 CTR FOR MACROMOLECULAR CRYSTALLOGRAPHY"  
 01/27/1997 - 10/31/2005 FY01: \$8,015,204 Total: \$37,500,247  
*Prin. Invest.:* L J DELUCAS  
*Tech. Officer:* MSFC/S LIDE, MSFC/S LAMBIHG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 8 172 UNIV OF ALABAMA - BIRMINGHAM 1093**  
 "MICROGRAVITY CRYSTAL GROWTH STUDIES OF MEDICALLY RELEVANT  
 MACROMOLECULES"  
 02/11/1999 - 09/30/2002 FY01: \$290,085 Total: \$799,512  
*Prin. Invest.:* L J DELUCAS  
*Tech. Officer:* MSFC/T OWEN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 8 204 UNIV OF ALABAMA - BIRMINGHAM 1094**  
 STRUCTURAL FLUCTUATIONS & THERMOPHYSICAL PROPERTIES OF  
 MOLTEN II - IV COMPOUNDS  
 07/14/2000 - 11/30/2003 FY01: \$22,968 Total: \$42,969  
*Prin. Invest.:* R SCRIPA  
*Tech. Officer:* MSFC/C HUA SU  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER



**NGT 8 52845 UNIV OF ALABAMA - BIRMINGHAM 1095**  
 GRADUATE STUDENT RESEARCH PROGRAM FELLOWSHIP  
 09/12/1997 - 02/11/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* C M LAWSON  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 13 - PHYSICS

**NAG 1 2026 UNIV OF ALABAMA - HUNTSVILLE 1096**  
 AEROSOL RETRIEVALS FROM HIGH RESOLUTION BROADBAND ATMOS  
 SOLAR OCCULTATION SPECTRA  
 03/19/1998 - 12/31/2001 FY01: \$1 Total: \$201,001  
*Prin. Invest.:* M J NEWCHURCH  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2204 UNIV OF ALABAMA - HUNTSVILLE 1097**  
 OZONE TRENDS IN SAGE, HALOE, TOMS, UMKEHR, AND LIDAR  
 MEASUREMENTS (NRA-98-OES-04)  
 06/11/1999 - 06/30/2002 FY01: \$110,066 Total: \$275,066  
*Prin. Invest.:* M J NEWCHURCH  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01008 UNIV OF ALABAMA - HUNTSVILLE 1098**  
 NUMERICAL STUDY OF BLAST WAVES GENERATED DURING LAUNCH  
 VEHICLE TAKE-OFF & SUPPRESSION BY WATER ADD  
 02/06/2001 - 01/31/2004 FY01: \$54,637 Total: \$54,637  
*Prin. Invest.:* K FRENDE  
*Tech. Officer:* LARC/B A SINGER, LARC/R J SILCOX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2285 UNIV OF ALABAMA - HUNTSVILLE 1099**  
 STUDY OF THE STRUCTURE COMPOSITION AND ELECTRICAL PROPERTIES  
 OF SILICON CARBIDE EPI-TAXIAL FILMS FOR  
 08/04/1999 - 06/30/2002 FY01: \$0 Total: \$30,909  
*Prin. Invest.:* D A GEORGE  
*Tech. Officer:* GRC/D J LARKIN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 3675 UNIV OF ALABAMA - HUNTSVILLE 1100**  
 A STUDY OF TERRESTRIAL GAMMA-RAY FLASHES OBSERVED  
 01/02/1997 - 01/14/2000 FY01: -\$14 Total: \$33,987  
*Prin. Invest.:* R MALLOZZI  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4003 UNIV OF ALABAMA - HUNTSVILLE 1101**  
 AUTOMATED IDENTIFICATION OF MORPHOLOGICAL SIGNATUR IMAGES  
 03/06/1997 - 08/31/2000 FY01: -\$70 Total: \$326,930  
*Prin. Invest.:* D G RICHARDS  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 4027 UNIV OF ALABAMA - HUNTSVILLE 1102**  
 DIAGNOSTICS OF MASS MOTIONS IN SOLAR FLARES  
 03/26/1997 - 03/31/2000 FY01: \$0 Total: \$208,000  
*Prin. Invest.:* D EMSLIE  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 4111 UNIV OF ALABAMA - HUNTSVILLE 1103**  
 FAST SPECTROSCOPY OF Z SOURCES; OBSERVATIONS OF TH BURST  
 04/28/1997 - 04/14/2000 FY01: \$0 Total: \$26,000  
*Prin. Invest.:* W PACIESAS  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4268 UNIV OF ALABAMA - HUNTSVILLE 1104**  
 THERMAL STRUCTURE AND COMPOSITION OF THE INNER MAG  
 03/25/1997 - 05/14/2001 FY01: \$0 Total: \$189,325  
*Prin. Invest.:* D H COMFORT  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 4608 UNIV OF ALABAMA - HUNTSVILLE 1105**  
 ION ACCELERATION AND ABUNDANCE ENHANCEMENTS IN IMP  
 05/20/1997 - 09/30/2001 FY01: \$0 Total: \$105,000  
*Prin. Invest.:* P A MILLER  
*Tech. Officer:* GSFC/J A LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4893 UNIV OF ALABAMA - HUNTSVILLE 1106**  
 COUPLING OF MICRO-AND MESO-SCALE PROCESSES DURING IC REFI-  
 LING  
 06/20/1997 - 04/30/2000 FY01: -\$50 Total: \$69,950  
*Prin. Invest.:* N SINGH  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 4951 UNIV OF ALABAMA - HUNTSVILLE 1107**  
 ELECTRON ACCELERATION IN IMPULSIVE SOLAR FLARES  
 06/23/1997 - 02/29/2000 FY01: -\$1,321 Total: \$166,679  
*Prin. Invest.:* J A MILLER  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 5112 UNIV OF ALABAMA - HUNTSVILLE 1108**  
 DEVELOPMENT OF SIFTER WITH SIMULTANEOUS TRACKING AND  
 CALORIMETRY  
 02/12/1997 - 12/31/2000 FY01: -\$126 Total: \$277,874  
*Prin. Invest.:* G N PENDLETON  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5273 UNIV OF ALABAMA - HUNTSVILLE 1109**  
 PHASE 1 OF THOR PROJECT PHAS 1 OF THOR PROJECT  
 04/17/2000 - 04/13/2006 FY01: \$0 Total: \$281,000  
*Prin. Invest.:* J DIMMOCK  
*Tech. Officer:* GSFC/D L PIERCE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 5298 UNIV OF ALABAMA - HUNTSVILLE 1110**  
 SCINTILLATING FIBER TELESCOPE FOR ENERGETIC RADIATION,  
 GAMMA-RAY APPLICATIONS (SIFTER)  
 06/12/2000 - 12/31/2001 FY01: \$0 Total: \$130,000  
*Prin. Invest.:* PENDLETON  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

## ALABAMA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 6021 UNIV OF ALABAMA - HUNTSVILLE 1111**  
 ACCRETING BLACK HOLES - AN ALL OUT EFFORT  
 08/19/1997 - 08/14/2000 FY01: \$0 Total: \$207,336  
*Prin. Invest.:* J PACIESAS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6986 UNIV OF ALABAMA - HUNTSVILLE 1112**  
 QUANTIFICATION OF CHANGES IN THEMOSPHERIC O/N2 FRO M OBSERVA-  
 TIONS OF UV AIRGLOW AND AURORA  
 02/10/1998 - 03/31/2001 FY01: \$0 Total: \$228,256  
*Prin. Invest.:* G A GERMANY  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7269 UNIV OF ALABAMA - HUNTSVILLE 1113**  
 DERIVATION OF TROPOSPHERIC OZONE CLIMATOLOGY AND T RENDS  
 FROM TOMS DATA  
 05/07/1998 - 05/14/2002 FY01: \$0 Total: \$259,246  
*Prin. Invest.:* M NEWCHURCH  
*Tech. Officer:* GSFC/S CHANDRA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7270 UNIV OF ALABAMA - HUNTSVILLE 1114**  
 VALIDATION AND INTERCOMPARISON OF TOMS AEROSOL PRO DUCTS  
 USING SATELLITE AND GROUND BASED MEASUREMEN  
 04/22/1998 - 12/31/2001 FY01: \$23,000 Total: \$227,500  
*Prin. Invest.:* S A CHRISTOPHER  
*Tech. Officer:* GSFC/J R HERMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7494 UNIV OF ALABAMA - HUNTSVILLE 1115**  
 XTE PROPOSAL (30062) A VARYING KHZ PEAK SEPARATION IN 4U 1608-52?  
 06/29/1998 - 06/30/2000 FY01: -\$12 Total: \$7,013  
*Prin. Invest.:* W S PACIESAS  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7655 UNIV OF ALABAMA - HUNTSVILLE 1116**  
 REMOTE SENSING OF MAGNETOSPHERIC STRUCTURE USING ( U,B,K)  
 ANALYSIS OFISTP PARTICLE AND FIELD DAT  
 09/15/1998 - 08/31/2000 FY01: -\$168 Total: \$43,538  
*Prin. Invest.:* D SHELDON  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7772 UNIV OF ALABAMA - HUNTSVILLE 1117**  
 STUDY OF GAMMA-RAY BURST MONITOR FOR GLAST MISSION TO  
 FURTHER DEFINE THE ENGINEERING CHARACTERISTIC  
 10/28/1998 - 06/30/2000 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* D KIPPEN  
*Tech. Officer:* GSFC/M DIJOSEPH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 7809 UNIV OF ALABAMA - HUNTSVILLE 1118**  
 IMPROVED CHARACGTERIZATIN OF PAST AND FUTURE BATSE  
 GAMMA-RAY BURST LOCATIONS  
 11/10/1998 - 11/30/2000 FY01: \$0 Total: \$9,999  
*Prin. Invest.:* R KIPPEN  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7811 UNIV OF ALABAMA - HUNTSVILLE 1119**  
 A NEW GRB DURATION MEASURE AND ITS APPLICATIONS TO COSMOLOG-  
 ICALINVARIANT PARAMETERS  
 11/12/1998 - 11/30/2000 FY01: \$0 Total: \$15,000  
*Prin. Invest.:* R PREECE  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7844 UNIV OF ALABAMA - HUNTSVILLE 1120**  
 MODELING COUPLED KATABATIC/ICE/OCEAN PROCESSES REL ATED TO  
 THE ENERGY ANDCARBONBUDGET IN THE HIGH L  
 11/18/1998 - 05/31/2000 FY01: -\$4 Total: \$119,580  
*Prin. Invest.:* R T MCNIDER  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7927 UNIV OF ALABAMA - HUNTSVILLE 1121**  
 RELATIVISTIC ASTROPHYSICS IN BLACK HOLE AND LOW-MA SS NEUTRON  
 STAR X-RAY BINARIES\_ - LTSA98  
 01/12/1999 - 01/14/2002 FY01: \$32,851 Total: \$96,600  
*Prin. Invest.:* S ZHANG  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7972 UNIV OF ALABAMA - HUNTSVILLE 1122**  
 TESTING THE PHYSICAL MECHANISMS OF GAMMA-RAY BURST S WITH-  
 MULTI-INSTRUMENT TIME-RESOL  
 12/22/1998 - 12/31/2001 FY01: \$92,489 Total: \$267,013  
*Prin. Invest.:* M S BRIGGS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7979 UNIV OF ALABAMA - HUNTSVILLE 1123**  
 A SURVEY OF RING CURRENT DIRECT INJECTION EVENTS  
 01/13/1999 - 01/14/2001 FY01: \$0 Total: \$40,037  
*Prin. Invest.:* R SHELDON  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 7991 UNIV OF ALABAMA - HUNTSVILLE 1124**  
 AN EMPIRICAL MODEL OF CORONAL HEATING DEDUCED FROM SOHO  
 OBSERVATIONSOFT TRANSITION REGION DYNAM  
 01/05/1999 - 01/31/2002 FY01: \$0 Total: \$166,538  
*Prin. Invest.:* G EMSLIE  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8009 UNIV OF ALABAMA - HUNTSVILLE 1125**  
 GEOMAGNETIC CUTOFF RIGIDITY COMPUTER PROGRAM  
 01/13/1999 - 12/31/2000 FY01: \$0 Total: \$10,000  
*Prin. Invest.:* M SHEA  
*Tech. Officer:* GSFC/J H BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8011 UNIV OF ALABAMA - HUNTSVILLE 1126**  
 GROUND-LEVEL SOLAR COSMIC RAY DATA FROM SOLAR CYCLE 19  
 01/13/1999 - 12/31/2001 FY01: \$0 Total: \$57,000  
*Prin. Invest.:* M SHEA  
*Tech. Officer:* GSFC/J H BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8034 UNIV OF ALABAMA - HUNTSVILLE 1127**  
 UAH ANALYSIS OF TIDE/PSI DATA FOR ISTP SOLAR MAXIM UM EXTENDED MISSION  
 01/19/1999 - 01/31/2002 FY01: \$90,000 Total: \$307,862  
*Prin. Invest.:* H COMFORT  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8210 UNIV OF ALABAMA - HUNTSVILLE 1128**  
 TOWARDS AN UNDERSTANDING OF THE LUMINOUS SOFT EXCESS EMISSION FROM CLUSTERS OF GALAXIES (ADP9)  
 02/25/1999 - 02/28/2002 FY01: \$41,245 Total: \$118,486  
*Prin. Invest.:* R LIEU  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8234 UNIV OF ALABAMA - HUNTSVILLE 1129**  
 BASTE TRIGGERED MULTI-WAVELENGTH OBSERVATIONS OF THE GALACTIC SUPERLUMINAL SOURCES GRO J1655-40 AND  
 03/03/1999 - 02/14/2002 FY01: \$0 Total: \$23,779  
*Prin. Invest.:* C ROBINSON  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8303 UNIV OF ALABAMA - HUNTSVILLE 1130**  
 RESTORATION, ENHANCEMENT, AND DISTRIBUTION OF THE ATLAS-1 IMAGING SPECTROMETRIC OBSERVATORY (ISO)  
 03/05/1999 - 09/14/2001 FY01: \$0 Total: \$221,869  
*Prin. Invest.:* G A GERMANY  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8433 UNIV OF ALABAMA - HUNTSVILLE 1131**  
 ASCA PROPOSAL - X-RAY SPECTROSCOPY OF THE TWO GALACTIC SUPERLUMINAL SOURCES: GRO J1655-40 &  
 04/01/1999 - 01/31/2000 FY01: \$0 Total: \$19,000  
*Prin. Invest.:* S ZHANG  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8440 UNIV OF ALABAMA - HUNTSVILLE 1132**  
 BROAD BAND LONG TERM MONITORING OF X-RAY BURSTERS  
 04/01/1999 - 01/31/2001 FY01: \$0 Total: \$14,700  
*Prin. Invest.:* S ZHANG  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8480 UNIV OF ALABAMA - HUNTSVILLE 1133**  
 STOCHASTIC PARTICLE ACCELERATION IN IMPULSIVE SOLAR FLARES  
 04/29/1999 - 12/31/2000 FY01: \$0 Total: \$112,181  
*Prin. Invest.:* J J MILLER  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8523 UNIV OF ALABAMA - HUNTSVILLE 1134**  
 MULTI-WAVELENGTH EXAMINATION OF GALACTIC SUPERLUMINAL JET SOURCES (LTS A98)  
 05/27/1999 - 05/31/2002 FY01: \$77,090 Total: \$220,560  
*Prin. Invest.:* S ZHANG  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8606 UNIV OF ALABAMA - HUNTSVILLE 1135**  
 GRB AFTERGLOW OBSERVATIONS WITH THE WHIPPLE OBSERVATORY  
 06/07/1999 - 06/14/2000 FY01: -\$1 Total: \$9,985  
*Prin. Invest.:* W PACIESAS  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8620 UNIV OF ALABAMA - HUNTSVILLE 1136**  
 OBSERVATIONS OF BL LAC OBJECTS USING THE BATSE OCCULTATION TECHNIQUE  
 06/18/1999 - 06/14/2000 FY01: \$0 Total: \$14,994  
*Prin. Invest.:* W PACIESAS  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8646 UNIV OF ALABAMA - HUNTSVILLE 1137**  
 "STUDY OF THE EVOLUTION OF PRECIPITATION AND CLOUD STRUCTURES DURING THE LIFE CYCLES OF TROPICAL...  
 07/19/1999 - 07/31/2000 FY01: -\$394 Total: \$21,605  
*Prin. Invest.:* Q HAN  
*Tech. Officer:* GSFC/W B ROSSOW  
*CASE Category:* 13 - PHYSICS

**NAG 5 8690 UNIV OF ALABAMA - HUNTSVILLE 1138**  
 SYSTEMATIC STUDY OF PROPELLER EFFECTS IN NEUTRON STAR BINARIES  
 07/26/1999 - 07/31/2000 FY01: -\$17 Total: \$8,588  
*Prin. Invest.:* S N ZHANG  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8956 UNIV OF ALABAMA - HUNTSVILLE 1139**  
 SEARCH FOR UV EMISSION LINES FROM THE WARM INTRA CLUSTER MEDIUM - FUSE  
 01/24/2000 - 01/31/2002 FY01: \$0 Total: \$36,200  
*Prin. Invest.:* R LIEU  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9045 UNIV OF ALABAMA - HUNTSVILLE 1140**  
 STUDIES OF ACCRETING NEUTRON STARS WITH RXTE CYCLE 4 OBS. II: TOO OBSERVATIONS OF TRANSIENT LOW-MAS  
 02/25/2000 - 02/28/2001 FY01: \$9,949 Total: \$42,293  
*Prin. Invest.:* W PACIESAS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9183 UNIV OF ALABAMA - HUNTSVILLE 1141**  
 DIAGNOSING THE SOFT EXCESS EMISSION OF A1795 CLUSTER OF GALAXIES - BEPOSAX BROAD BAND IMAGING  
 03/07/2000 - 03/14/2002 FY01: \$0 Total: \$40,482  
*Prin. Invest.:* R LIEU  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9200 UNIV OF ALABAMA - HUNTSVILLE 1142**  
 INVESTIGATION OF THERMOSPHERIC & IONOSPHERIC CHANGES DURING IONOSPHERIC STORMS WITH SATELLITE  
 03/09/2000 - 03/14/2002 FY01: \$82,508 Total: \$157,408  
*Prin. Invest.:* P RICHARDS  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## ALABAMA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9244 UNIV OF ALABAMA - HUNTSVILLE 1143**  
 STUDIES OF ACCRETING NEUTRON STARS WITH RXTE (CYCLE 4  
 OBSERVATIONS), III: TOO OBSERVATIONS OF  
 03/13/2000 - 03/14/2001 FY01: \$0 Total: \$22,593  
*Prin. Invest.:* W PACIESAS  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9292 UNIV OF ALABAMA - HUNTSVILLE 1144**  
 STUDIES OF ACCRETING BLACK HOLES WITH RXTE (CYCLE 4 OBSERVA-  
 TIONS)-ADP99  
 03/20/2000 - 03/31/2001 FY01: \$0 Total: \$22,593  
*Prin. Invest.:* W PACIESAS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9397 UNIV OF ALABAMA - HUNTSVILLE 1145**  
 THREE-DIMENSIONAL KINETIC SIMULATIONS OF THE COMBI NED CROSS-  
 CURRENT AND TEARING MODE INSTABILITIES  
 04/05/2000 - 09/30/2001 FY01: \$0 Total: \$16,500  
*Prin. Invest.:* N SINGH  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9508 UNIV OF ALABAMA - HUNTSVILLE 1146**  
 ANALYSES OF EIT/LASCO OBSERVATIONS USING AVAILABLE MHD MODELS:  
 INVESTIGATION OF CME INITIATION  
 04/25/2000 - 05/31/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* S WU  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9585 UNIV OF ALABAMA - HUNTSVILLE 1147**  
 EARTH SCIENCE MARKUP LANGUAGE  
 05/19/2000 - 05/14/2002 FY01: \$175,000 Total: \$335,000  
*Prin. Invest.:* D GRAVES  
*Tech. Officer:* GSFC/J BEHNKE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 9598 UNIV OF ALABAMA - HUNTSVILLE 1148**  
 PRODUCTION OF LOOP-TOP HARD X-RAY EMISSION  
 05/15/2000 - 04/30/2002 FY01: \$51,521 Total: \$68,695  
*Prin. Invest.:* J K MILLER  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9686 UNIV OF ALABAMA - HUNTSVILLE 1149**  
 BATSE/SAX & BATSE/RXTE-ASM JOINT SPECTRAL STUDIES OF GRBS  
 06/05/2000 - 06/14/2001 FY01: \$0 Total: \$10,000  
*Prin. Invest.:* W PACIESAS  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9741 UNIV OF ALABAMA - HUNTSVILLE 1150**  
 PROPERTIES OF CUSP DIAMAGNETIC CAVITIES  
 06/21/2000 - 06/30/2002 FY01: \$0 Total: \$69,999  
*Prin. Invest.:* R SHELDON  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9923 UNIV OF ALABAMA - HUNTSVILLE 1151**  
 THERMAL & NONTHERMAL EMISSION FROM THE INTRACLUSTER ER  
 MEDIUM OF A 2199  
 09/05/2000 - 09/14/2001 FY01: \$0 Total: \$7,600  
*Prin. Invest.:* R LIEU  
*Tech. Officer:* GSFC/P M ATKINS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10009 UNIV OF ALABAMA - HUNTSVILLE 1152**  
 PULSARS OLD AND CLOSE IN SPACE: HOT POLAR-CAPS OR MAGNETO-  
 SPHERIC EMISSION  
 09/25/2000 - 09/30/2001 FY01: \$0 Total: \$8,600  
*Prin. Invest.:* S N ZHANG  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10012 UNIV OF ALABAMA - HUNTSVILLE 1153**  
 PROBING THE X-RAY EMISSION MECHANISMS OF RECYCLED- PULSARS:  
 PSRJ0034-0534  
 09/25/2000 - 09/30/2001 FY01: \$0 Total: \$6,600  
*Prin. Invest.:* S N ZHANG  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10099 UNIV OF ALABAMA - HUNTSVILLE 1154**  
 THE X-RAY PROPERTIES OF LOCAL GALAXIES: BRIDGING THE GAP TO  
 HIGH-Z  
 11/20/2000 - 11/30/2001 FY01: \$18,547 Total: \$18,547  
*Prin. Invest.:* E A RICHARDS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10134 UNIV OF ALABAMA - HUNTSVILLE 1155**  
 STUDY OF THE EVOLUTION OF PRECIPITATION AND CLOUD STRUCTURES  
 DURING THE LIFE CYCLE OF TROPICAL MEOSG  
 12/15/2000 - 07/31/2002 FY01: \$43,970 Total: \$43,970  
*Prin. Invest.:* Q HAN  
*Tech. Officer:* GSFC/W B ROSSOW  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10407 UNIV OF ALABAMA - HUNTSVILLE 1156**  
 ESML FOR EARTH SCIENCE DATA SET AND ANALYSIS.  
 04/02/2001 - 04/30/2002 FY01: \$300,000 Total: \$300,000  
*Prin. Invest.:* D GRAVES  
*Tech. Officer:* GSFC/K L MOE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10743 UNIV OF ALABAMA - HUNTSVILLE 1157**  
 ONLINE SEARCH AND METADATA VISUALIZATION TOOL  
 04/12/2001 - 04/30/2002 FY01: \$124,702 Total: \$124,702  
*Prin. Invest.:* G A GERMANY  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10782 UNIV OF ALABAMA - HUNTSVILLE 1158**  
 INVESTIGATING THE INTERACTION-STARBURST CONNECTION (ADP 2000)  
 04/23/2001 - 05/31/2001 FY01: \$0 Total: \$0  
*Prin. Invest.:* J W SULENTIC  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10785 UNIV OF ALABAMA - HUNTSVILLE 1159**  
 HISTORICAL EVIDENCE FOR MAJOR-SOLAR-TERRESTRIAL- OUTBURSTS  
 FOR PAST 150 YEARS FROM THE ANALYSIS OF  
 04/27/2001 - 04/30/2002 FY01: \$57,698 Total: \$57,698  
*Prin. Invest.:* M A SHEA  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10943 UNIV OF ALABAMA - HUNTSVILLE 1160**  
 CHANGES IN GEOMAGNETIC CUTOFF RIGIDITIES OVER A 400-YEAR  
 INTERVAL  
 05/15/2001 - 06/30/2002 FY01: \$34,608 Total: \$34,608  
*Prin. Invest.:* D F SMART  
*Tech. Officer:* GSFC/J F SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10949 UNIV OF ALABAMA - HUNTSVILLE 1161**  
 COMPTEL GRB SPECTRAL CATALOG (ADP 2000)  
 05/24/2001 - 05/31/2002 FY01: \$25,813 Total: \$25,813  
*Prin. Invest.:* M R KIPPEN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10965 UNIV OF ALABAMA - HUNTSVILLE 1162**  
 OZONE RETRIEVAL ERRORS ASSOCIATED WITH CLOUDS  
 06/01/2001 - 05/31/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* M NEWCHURCH  
*Tech. Officer:* GSFC/R MCPETERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11096 UNIV OF ALABAMA - HUNTSVILLE 1163**  
 CRITICAL ASSESSMENT OF TOMS-DERIVED TROPOSPHERIC OZONE:  
 COMPARISONS WITH OTHER MEASUREMENTS & MODEL  
 07/11/2001 - 08/31/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* M NEWCHURCH  
*Tech. Officer:* GSFC/R MCPETERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11100 UNIV OF ALABAMA - HUNTSVILLE 1164**  
 VALIDATING AIRS OZONE OBSERVATIONS WITH TOMS, DOBS ON, BREWER,  
 SAGE, MLS,HALOE AND OZONESONDE OBSERV  
 07/10/2001 - 08/31/2002 FY01: \$56,969 Total: \$56,969  
*Prin. Invest.:* M J NEWCHURCH  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11209 UNIV OF ALABAMA - HUNTSVILLE 1165**  
 EARLY BATSE GRB AFTERGLOWS (ADP 2000)  
 09/10/2001 - 08/31/2002 FY01: \$10,000 Total: \$10,000  
*Prin. Invest.:* V C CONNAUGHTON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11248 UNIV OF ALABAMA - HUNTSVILLE 1166**  
 OPTIMAL AEROSOL PARAMETERIZATION FOR REMOTE SENSIN G  
 RETRIEVALS  
 08/16/2001 - 08/14/2004 FY01: \$132,485 Total: \$132,485  
*Prin. Invest.:* M NEWCHURCH  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1229 UNIV OF ALABAMA - HUNTSVILLE 1167**  
 A THEORETICAL & EXPERIMENTAL INVESTIGATION OF VIBRATIONAL  
 CONTROL OF BRIDGMAN CRYSTAL GROWTH TEC  
 05/31/1996 - 11/30/2000 FY01: -\$36 Total: \$339,943  
*Prin. Invest.:* A FEDOSEYER  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1354 UNIV OF ALABAMA - HUNTSVILLE 1168**  
 R/S PROTEIN PRECIPITANT SPECIFIC CRITERIA FOR THE IMPACT OF  
 REDUCED GRAVITY ON CRYSTAL PEFECTION  
 06/04/1997 - 07/31/2001 FY01: \$0 Total: \$619,406  
*Prin. Invest.:* F ROSENBERGER  
*Tech. Officer:* MSFC/C R TALLEY, MSFC/J P DOWNEY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1355 UNIV OF ALABAMA - HUNTSVILLE 1169**  
 RESEARCH "INFRARED SIGNATURES FOR MAMMALIAN CELLS IN CULTURE"  
 06/26/1997 - 11/30/2001 FY01: \$0 Total: \$437,984  
*Prin. Invest.:* K CHITTUR  
*Tech. Officer:* JSC/N PELLIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1403 UNIV OF ALABAMA - HUNTSVILLE 1170**  
 THEORETICAL ANALYSIS FOR CONSTRUCTION OF A NON- GRAVITY  
 LABORATORY ON ORBIT  
 08/28/1997 - 12/31/2001 FY01: \$1,003 Total: \$86,000  
*Prin. Invest.:* L SMALLEY  
*Tech. Officer:* MSFC/J CAMPBELL  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1456 UNIV OF ALABAMA - HUNTSVILLE 1171**  
 GROUND BASED EXPERIMENTS IN SUPPORT OF MICRO- GRAVITY  
 RESEARCH RESULTS VAPOR GROWTH OF ORGANIC  
 03/31/1998 - 01/31/2002 FY01: \$85,500 Total: \$322,500  
*Prin. Invest.:* M T ZUGRAV  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 8 1464 UNIV OF ALABAMA - HUNTSVILLE 1172**  
 REDUCTION OF CONVECTION IN CLOSED TUBE VAPOR GROWTH EXPERI-  
 MENTS  
 03/24/1998 - 01/31/2002 FY01: \$0 Total: \$200,000  
*Prin. Invest.:* R J NAUMANN  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 8 1476 UNIV OF ALABAMA - HUNTSVILLE 1173**  
 THERMOPHYSICAL PROPERTY MEASUREMENTS OF TE-BASED II-VI SEMI-  
 CONDUCTOR COMPOUNDS  
 03/26/1998 - 09/30/2001 FY01: \$192,685 Total: \$637,935  
*Prin. Invest.:* M BANISH  
*Tech. Officer:* MSFC/S SPEARMAN  
*CASE Category:* 56 - MEDICL

## ALABAMA

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1548 UNIV OF ALABAMA - HUNTSVILLE 1174**  
 STUDY OF INSPECTION OF CRITICAL SURFACES AND AEROSPACE SYSTEMS  
 09/24/1998 - 12/04/2002 FY01: \$19,884 Total: \$151,884  
*Prin. Invest.:* G WORKMAN  
*Tech. Officer:* MSFC/S RUSSELL  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1577 UNIV OF ALABAMA - HUNTSVILLE 1175**  
 CONTROL OF TRANSPORT IN PROTEIN CRYSTAL USING RESTRICTIVE GEOMETRIES  
 12/16/1998 - 11/30/2002 FY01: \$29,451 Total: \$251,450  
*Prin. Invest.:* R J NAVMANN  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1598 UNIV OF ALABAMA - HUNTSVILLE 1176**  
 R/S SUPPORT OF G LIMIT FOR ISOLATION OF SPACE SCIENCE EXPERIMENTS  
 12/29/1998 - 12/31/2000 FY01: -\$1,372 Total: \$92,868  
*Prin. Invest.:* R D HAMPTON  
*Tech. Officer:* MSFC/D C ALHORN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 8 1786 UNIV OF ALABAMA - HUNTSVILLE 1177**  
 2001 SUMMER FACULTY FELLOWSHIP PROGRAM  
 04/25/2001 - 04/24/2002 FY01: \$771,141 Total: \$771,141  
*Prin. Invest.:* G KARR, M FREEMAN  
*Tech. Officer:* MSFC/J R PRUITT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1787 UNIV OF ALABAMA - HUNTSVILLE 1178**  
 IMPROVED RE-CONFIGURABLE SLIDING MODE CONTROLLER FOR REUSABLE LAUNCH VEHICLE OF SECOND GENERATION  
 01/24/2001 - 11/30/2001 FY01: \$31,378 Total: \$31,378  
*Prin. Invest.:* Y B SHTESSEL  
*Tech. Officer:* MSFC/K MCCALL  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 8 1790 UNIV OF ALABAMA - HUNTSVILLE 1179**  
 R/S ENTITLED, "EFFECTS OF CONVECTIVE TRANSPORT OF SOLUTE IMPURITIES ON DEFECT-CAUSING KINETICS..."  
 02/14/2001 - 01/31/2003 FY01: \$266,000 Total: \$266,000  
*Prin. Invest.:* P G VEKILOV  
*Tech. Officer:* MSFC/H K HIGGINBOTHAM  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1815 UNIV OF ALABAMA - HUNTSVILLE 1180**  
 OPTICAL AMPLIFIER BASED SPACE SOLAR POWER SYSTEMS  
 05/08/2001 - 11/07/2001 FY01: \$24,998 Total: \$24,998  
*Prin. Invest.:* R FORK  
*Tech. Officer:* MSFC/G W JOHNSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1816 UNIV OF ALABAMA - HUNTSVILLE 1181**  
 MACROMOLECULE NUCLEATION AND GROWTH RATE DISPERSION STUDIES  
 05/10/2001 - 12/31/2002 FY01: \$152,527 Total: \$152,527  
*Prin. Invest.:* R JUDGE  
*Tech. Officer:* MSFC/H K HIGGINBOTHAM  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1850 UNIV OF ALABAMA - HUNTSVILLE 1182**  
 NON-EQUILIBRIUM THERMODYNAMICS OF HGZNTMELTS  
 09/10/2001 - 12/31/2001 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* J BAIRD  
*Tech. Officer:* MSFC/C H SU  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 1 98131 UNIV OF ALABAMA - HUNTSVILLE 1183**  
 CLOUDS AND THE EARTH'S RADIANT ENERGY SYSTEM SCIENTIFIC INVESTIGATIONS  
 11/01/1998 - 10/27/2001 FY01: \$257,611 Total: \$772,819  
*Prin. Invest.:* R WELCH  
*Tech. Officer:* LARC/B A WIELICKI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 2 00102 UNIV OF ALABAMA - HUNTSVILLE 1184**  
 REFINEMENT AND TESTING OF AN XML BASED SENSOR MODEL LANGUAGE  
 11/20/2000 - 11/19/2002 FY01: \$312,648 Total: \$312,648  
*Prin. Invest.:* M BOTTS, A COOK  
*Tech. Officer:* ARC/S LAU, ARC/R CARVALHO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 2 01003 UNIV OF ALABAMA - HUNTSVILLE 1185**  
 AIST PROGRAM RESEARCH PROJECT ENTITLED: "EVE: AN ENVIRONMENT FOR ON-BOARD PROCESSING"  
 12/18/2000 - 12/18/2003 FY01: \$746,414 Total: \$746,414  
*Prin. Invest.:* S GRAVES  
*Tech. Officer:* ARC/S LAU, ARC/R CARVALHO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 5 31718 UNIV OF ALABAMA - HUNTSVILLE 1186**  
 EOS ASTER/HIRIS INVESTIGATION  
 01/09/1992 - 12/14/2001 FY01: \$169,408 Total: \$1,784,661  
*Prin. Invest.:* R WELCH  
*Tech. Officer:* GSFC/T BRAKE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 5 99179 UNIV OF ALABAMA - HUNTSVILLE 1187**  
 DEVELOPMENT OF HDF-EOS SUBSETTER SOFTWARE FOR ESDIS.  
 02/12/1999 - 12/31/2000 FY01: \$0 Total: \$453,628  
*Prin. Invest.:* M SUMMERLIN  
*Tech. Officer:* GSFC/R E HARBAUGH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 8 00118 UNIV OF ALABAMA - HUNTSVILLE 1188**  
 THE ADJUSTABLE FOCUS OPTICAL CORRECTION LENS  
 05/10/2000 - 05/09/2001 FY01: \$0 Total: \$205,000  
*Prin. Invest.:* B PETERS  
*Tech. Officer:* MSFC/J RAKOCZY, MSFC/W BRANTLY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 8 00180 UNIV OF ALABAMA - HUNTSVILLE 1189**  
 INTERNATIONAL SPACE STATION PROGRAM INDEPENDENT DATABASE ASSESSMENT  
 08/01/2000 - 07/31/2001 FY01: \$125,000 Total: \$185,000  
*Prin. Invest.:* S J GRAVES  
*Tech. Officer:* MSFC/G HULLETT-SMITH, MSFC/G A WOOD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 8 98226**      **UNIV OF ALABAMA - HUNTSVILLE**      **1190**  
 THE DESIGN AND DEVELOPMENT OF THE ORBITAL ARRAY OF WIDE ANGLE  
 LENSES MISSION OPTICAL SYSTEM  
 07/01/1998 - 09/30/2001      FY01: \$0      Total: \$845,000  
*Prin. Invest.:* Y TAKAHASHI  
*Tech. Officer:* MSFC/M WATSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 165**      **UNIV OF ALABAMA - HUNTSVILLE**      **1191**  
 TO SUPPORT RESEARCH ACTIVITIES UNDER THE NASA EXPE STIMULATE  
 COMPETITIVE RESEARCH (EPSCOR)  
 11/02/1996 - 02/28/2002      FY01: \$0      Total: \$2,269,998  
*Prin. Invest.:* J C GREGORY  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 391**      **UNIV OF ALABAMA - HUNTSVILLE**      **1192**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/13/1999 - 02/28/2002      FY01: \$0      Total: \$450,000  
*Prin. Invest.:* J GREGORY  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 580**      **UNIV OF ALABAMA - HUNTSVILLE**      **1193**  
 ALABAMA NASA EPSCOR PROGRAM  
 08/22/2001 - 07/31/2004      FY01: \$316,814      Total: \$316,814  
*Prin. Invest.:* J C GREGORY  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 65**      **UNIV OF ALABAMA - HUNTSVILLE**      **1194**  
 RESEARCH & APPLIED TECHNOLOGY & DEVELOPMENT OF FUTURE  
 PROGRAMS  
 02/15/1995 - 08/21/2000      FY01: \$56,017      Total: \$13,377,794  
*Prin. Invest.:* S T WU  
*Tech. Officer:* MSFC/U URBAN, MSFC/G J FISHMAN  
*CASE Category:* 13 - PHYSICS

**NCC 8 97**      **UNIV OF ALABAMA - HUNTSVILLE**      **1195**  
 SPACE AND GROUND BASED CRYSTAL GROWTH USING MAGNETICALLY  
 COUPLED BAFFLE  
 06/13/1996 - 09/29/2002      FY01: \$200,000      Total: \$796,247  
*Prin. Invest.:* A G OSTROGORSKY  
*Tech. Officer:* MSFC/D SCHAEFER  
*CASE Category:* 11 - ASTRONOMY

**NCC 8 99**      **UNIV OF ALABAMA - HUNTSVILLE**      **1196**  
 SELF-DIFFUSION IN LIQUID ELEMENTS  
 05/24/1996 - 12/31/2001      FY01: \$214,000      Total: \$1,596,612  
*Prin. Invest.:* F ROSENBERGER  
*Tech. Officer:* MSFC/S SPEARMAN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 8 132**      **UNIV OF ALABAMA - HUNTSVILLE**      **1197**  
 FOR RESEARCH: "CONSORTIUM FOR MATERIALS DEVELOP- MEFNT IN  
 SPACE."  
 01/29/1997 - 10/31/2001      FY01: \$2,586,964      Total: \$9,142,072  
*Prin. Invest.:* G WORKMAN  
*Tech. Officer:* MSFC/J PRESSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 8 141**      **UNIV OF ALABAMA - HUNTSVILLE**      **1198**  
 GLOBAL CHANGE RESEARCH RELATED TO THE EARTH'S ENERGY AND  
 HYDROLOGY CYCLE  
 09/22/1997 - 09/29/2002      FY01: \$23,308      Total: \$14,595,288  
*Prin. Invest.:* R MCNIDER  
*Tech. Officer:* MSFC/R GREENWOOD, MSFC/J SIMON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 8 146**      **UNIV OF ALABAMA - HUNTSVILLE**      **1199**  
 R/S INVESTIGATION OF SPACE BASED SOLID STATE COHERENT LIDAR  
 UNDER DR. FARZIN AMZAJERDIAN  
 10/02/1997 - 11/30/2001      FY01: \$0      Total: \$1,289,919  
*Prin. Invest.:* J DIMMOCK  
*Tech. Officer:* MSFC/S C JOHNSON, MSFC/B F JONES  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 8 178**      **UNIV OF ALABAMA - HUNTSVILLE**      **1200**  
 SUPPORT FOR THE NEW ACCOUNTING SYSTEM, SPECIFIC- ALLY THE  
 INTEGRATED FINANCIALMANAGEMENT SYSTEM.  
 04/05/1999 - 09/30/2000      FY01: -\$2,170      Total: \$249,600  
*Prin. Invest.:* W MORSE  
*Tech. Officer:* MSFC/F MAYHALL  
*CASE Category:* 29 - MATH/COMPUTERSCI, OTHER

**NCC 8 180**      **UNIV OF ALABAMA - HUNTSVILLE**      **1201**  
 INTERNATIONAL SPACE STATION MICROGRAVITY DATA AND INFORMATION  
 SYSTEMS  
 03/19/1999 - 02/28/2002      FY01: \$56,520      Total: \$384,520  
*Prin. Invest.:* S J GRAVES  
*Tech. Officer:* MSFC/C C LAPENTA  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 8 200**      **UNIV OF ALABAMA - HUNTSVILLE**      **1202**  
 RESEARCH AND DEVELOPMENT  
 08/10/2000 - 08/09/2005      FY01: \$19,062,523      Total: \$30,330,921  
*Prin. Invest.:* L R GREENWOOD, B J SCHROER, T D SHURTZ  
*Tech. Officer:* MSFC/S COLEMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 203**      **UNIV OF ALABAMA - HUNTSVILLE**      **1203**  
 INVESTIGATION OF INTER-AND INTRA- MOLECULAR INTER- ACTIONS OF  
 RECOMBINANT CANAVALLIN /E. COLI  
 07/20/2000 - 06/30/2002      FY01: \$0      Total: \$77,337  
*Prin. Invest.:* J D NG  
*Tech. Officer:* MSFC/M L PUSEY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 8 205**      **UNIV OF ALABAMA - HUNTSVILLE**      **1204**  
 STRUCTURAL FLUCTUATIONS & THERMOPHYSICAL PROPER- TIES OF  
 MOLTEN II - IV COMPOUNDS  
 09/08/2000 - 11/30/2003      FY01: \$0      Total: \$22,730  
*Prin. Invest.:* S FETH  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 8 207**      **UNIV OF ALABAMA - HUNTSVILLE**      **1205**  
 MECHANIZATIONS FOR THE CRYSTALLIZATION OF ZBLAN  
 07/24/2000 - 11/30/2003      FY01: \$27,716      Total: \$44,603  
*Prin. Invest.:* W KINKLER  
*Tech. Officer:* MSFC/E ETHRIDGE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## ALABAMA

## NASA'S UNIVERSITY PROGRAM

**NCC 8 209 UNIV OF ALABAMA - HUNTSVILLE 1206**  
 THEORETICAL INVESTIGATION OF ULTRASONIC PROCESSING FOR  
 DIRECTIONAL SOLIDIFICATION OF HYPERMONOTECTIC  
 12/01/2000 - 09/30/2001 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* A FEDOSEYEV  
*Tech. Officer:* MSFC/R N GRUGEL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 8 213 UNIV OF ALABAMA - HUNTSVILLE 1207**  
 STUDENT LAUNCH INITIATIVE  
 03/23/2001 - 12/31/2001 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* C R KARR  
*Tech. Officer:* MSFC/J R PRUITT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 9 109 UNIV OF ALABAMA - HUNTSVILLE 1208**  
 COOPERATIVE AGREEMENT  
 06/22/2000 - 07/01/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* J RUPERT  
*Tech. Officer:* JSC/N QQURAISHI, JSC/D SICKOREZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 52283 UNIV OF ALABAMA - HUNTSVILLE 1209**  
 EMBRYO DEVELOPMENT & HATCHING BEHAVIOR IN BOBWHITE &  
 COTUNIX QUAIL EXPOSED TO EARTH'S GRAVITY & HYP  
 08/09/2001 - 07/31/2002 FY01: \$20,650 Total: \$20,650  
*Prin. Invest.:* R F EATON  
*Tech. Officer:* ARC/A E RONCA, ARC/E HOTTON  
*CASE Category:* 51 - BIOLOGY(EXCLUDING ENVIR)

**NGT 5 30168 UNIV OF ALABAMA - HUNTSVILLE 1210**  
 IMPACT OF AEROSOLS ON THE CLEAR SKY SHORTWAVE RADIATIVE  
 FLUXES OVERBIOMASS BURNING REGIONS IN  
 09/01/1998 - 08/31/2000 FY01: -\$139 Total: \$43,861  
*Prin. Invest.:* D M WELCH, ZHANG  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NGT 5 40018 UNIV OF ALABAMA - HUNTSVILLE 1211**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 01/09/1997 - 01/31/2001 FY01: \$30,836 Total: \$1,983,762  
*Prin. Invest.:* J GREGORY  
*Tech. Officer:* GSFC/D E DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40077 UNIV OF ALABAMA - HUNTSVILLE 1212**  
 ALABAMA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2002 FY01: \$561,875 Total: \$561,875  
*Prin. Invest.:* J C GREGORY  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50163 UNIV OF ALABAMA - HUNTSVILLE 1213**  
 AN EMPIRICAL MODEL OF CORONAL HEATING DEDUCED FROM SOHO  
 OBSERVATIONS OF TRANSITION REGION DYNAMICS  
 06/02/1998 - 07/31/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* E EMSLIE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NGT 8 52863 UNIV OF ALABAMA - HUNTSVILLE 1214**  
 DETERMINATION OF H FROM THE INTERFEROMETRIC OBSERVATIONS OF  
 THE SUNYAEV-DEL DOVICH EFFECT  
 07/24/1998 - 06/22/2001 FY01: -\$13,136 Total: \$52,864  
*Prin. Invest.:* J V PARADIJS  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 13 - PHYSICS

**NGT 8 52874 UNIV OF ALABAMA - HUNTSVILLE 1215**  
 1999 SUMMER FACULTY FELLOWSHIP PROGRAM  
 04/12/1999 - 06/30/2001 FY01: \$0 Total: \$867,809  
*Prin. Invest.:* G R KARR  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52878 UNIV OF ALABAMA - HUNTSVILLE 1216**  
 ION CYCLOTRON RESONANCE HEATING OF A PLASMA BY HELICON WAVES  
 FOR THE GASEDYNAMICMIRROR FUSION...  
 08/31/1999 - 08/11/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* C HAWK  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52882 UNIV OF ALABAMA - HUNTSVILLE 1217**  
 GRADUATE STUDENT RESEARCH PROGRAM "OPTIMIZATION OF A  
 MAGNETIC MIRROR FUSION REACTOR FOR SPACE PROPUL  
 09/15/1999 - 08/14/2001 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* S WU  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 8 52886 UNIV OF ALABAMA - HUNTSVILLE 1218**  
 DIFFRACTION LIMITED GRAZING INCIDENCE OPTICS  
 05/17/2000 - 08/22/2003 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* W PACIESAS  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 8 52891 UNIV OF ALABAMA - HUNTSVILLE 1219**  
 INTERACTION OF EXPANDING PLASMA WITH A COMPRESSED MAGNETIC  
 FIELD  
 06/22/2000 - 07/31/2003 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* C HAWK  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52908 UNIV OF ALABAMA - HUNTSVILLE 1220**  
 CERAMIC MATRIX COMPOSITE DEV FOR SPACE TRANS APPLICATIONS  
 05/25/2001 - 07/01/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R CERRO  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 2 1290 UNIV OF ALABAMA - UNIV 1221**  
 AUTOMATED MINING OF AVIATION ACCIDENT DATABASES USING CARE  
 TECHNOLOGY  
 02/01/1999 - 12/31/2000 FY01: -\$6,894 Total: \$112,212  
*Prin. Invest.:* D B BROWN, A S PARRISH, B D DIXON  
*Tech. Officer:* ARC/I C STATLER  
*CASE Category:* 41 - AERONAUTICAL ENGR



**NAG 2 1499**                      **UNIV OF ALABAMA - UNIV**                      **1222**  
 CATECHOLAMINE REGULATION AND RESPONSE TO ENVIRONMENTAL  
 CHANGE IN DROSOPHILA MELANOGASTER  
 07/11/2001 - 06/30/2002                      FY01: \$107,541                      Total: \$107,541  
*Prin. Invest.:* J M O'DONNELL  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY(EXCLUDING ENVIR)

**NAG 3 2004**                      **UNIV OF ALABAMA - UNIV**                      **1223**  
 INTELLIGENT ENGINE CONTROL  
 01/10/1997 - 09/30/2000                      FY01: -\$2,005                      Total: \$182,977  
*Prin. Invest.:* K S KRISHNAKUMAR  
*Tech. Officer:* GRC/J R SAUS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 2574**                      **UNIV OF ALABAMA - UNIV**                      **1224**  
 ABUNDANCE GRADIENTS IN INTRACLUSTER GAS  
 04/12/1994 - 09/30/1999                      FY01: -\$1                      Total: \$73,908  
*Prin. Invest.:* R E WHITE III  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4346**                      **UNIV OF ALABAMA - UNIV**                      **1225**  
 PROJECT NOVA  
 05/01/1997 - 02/28/2001                      FY01: \$0                      Total: \$2,775,000  
*Prin. Invest.:* M FREEMAN  
*Tech. Officer:* HQ/D V GALLAWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6174**                      **UNIV OF ALABAMA - UNIV**                      **1226**  
 NUMERICAL AND THEORETICAL STUDIES OF THE INITIATION OF THE CORONAL  
 MASS EJECTIONS (CMES)  
 08/05/1997 - 05/31/2000                      FY01: -\$354                      Total: \$186,104  
*Prin. Invest.:* D WU  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 6314**                      **UNIV OF ALABAMA - UNIV**                      **1227**  
 FAR-WING LINE SHAPE: APPLICATION TO THE VENUSIAN  
 09/11/1997 - 09/30/2000                      FY01: -\$38                      Total: \$135,962  
*Prin. Invest.:* D TIPPING  
*Tech. Officer:* GSFC/S HOWARD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6934**                      **UNIV OF ALABAMA - UNIV**                      **1228**  
 ASCA PROPOSAL - A SEARCH FOR HOT GAS IN MERGING CLUSTERS  
 01/30/1998 - 01/14/2000                      FY01: -\$2,509                      Total: \$23,491  
*Prin. Invest.:* R E WHITE, II  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7702**                      **UNIV OF ALABAMA - UNIV**                      **1229**  
 ESTIMATE THE INDIRECT AEROSOL EFFECT AND RETRIEVAL OF RELATED  
 PARAMETERS FROM SATELLITE MEASUREMENT  
 09/23/1998 - 09/30/2001                      FY01: \$71,000                      Total: \$228,407  
*Prin. Invest.:* Q HAN  
*Tech. Officer:* GSFC/M MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8269**                      **UNIV OF ALABAMA - UNIV**                      **1230**  
 THEORETICAL CALCULATION OF CO2 FAR-WING LINE SHAPES  
 02/25/1999 - 12/31/2001                      FY01: \$0                      Total: \$123,700  
*Prin. Invest.:* R H TIPPING  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8407**                      **UNIV OF ALABAMA - UNIV**                      **1231**  
 MODELING AND COMPARISON OF FE + OPTICAL BALMER LINES (LTS 98)  
 03/15/1999 - 03/14/2001                      FY01: \$0                      Total: \$3,145  
*Prin. Invest.:* J W SULENTIC  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8959**                      **UNIV OF ALABAMA - UNIV**                      **1232**  
 NEARBY GALAXIES IN THE FAR-UV: TOWARD COMPARISON WITH HIGH-  
 REDSHIFT GALAXIES -FUSE  
 01/24/2000 - 01/31/2003                      FY01: \$0                      Total: \$29,600  
*Prin. Invest.:* W C KEEL  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9388**                      **UNIV OF ALABAMA - UNIV**                      **1233**  
 THE PROJECT NOVA CONSORTIUM  
 04/10/2000 - 03/31/2002                      FY01: \$1,047,690                      Total: \$2,092,690  
*Prin. Invest.:* L FREEMAN  
*Tech. Officer:* GSFC/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9855**                      **UNIV OF ALABAMA - UNIV**                      **1234**  
 TO EXPAND AND CONTINUE TO DISSEMINATE A HIGHER EDUCATION  
 MODEL FOR CREATING INPRE-SERVICE EDUCATION  
 08/07/2000 - 07/31/2001                      FY01: \$0                      Total: \$118,581  
*Prin. Invest.:* M FREEMAN  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10914**                      **UNIV OF ALABAMA - UNIV**                      **1235**  
 INVESTIGATING THE INTERACTION-STARBURST CONNECTION (ADP 2000)  
 05/18/2001 - 04/30/2002                      FY01: \$37,396                      Total: \$37,396  
*Prin. Invest.:* J W SULENTIC  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11204**                      **UNIV OF ALABAMA - UNIV**                      **1236**  
 SHOCKS IN GROUPS  
 08/08/2001 - 08/14/2002                      FY01: \$8,700                      Total: \$8,700  
*Prin. Invest.:* J W SULENTIC  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1422**                      **UNIV OF ALABAMA - UNIV**                      **1237**  
 MULTIPLE YEAR GRANT FOR THE PURPOSE OF AEROELASTICITY IN  
 MULTIDISCIPLINARY ANALYSIS AND DESIGN  
 10/28/1997 - 08/31/2000                      FY01: -\$10,919                      Total: \$95,026  
*Prin. Invest.:* T ZEILER, N D HENDRIX  
*Tech. Officer:* MSFC/C DILL  
*CASE Category:* 41 - AERONAUTICAL ENGR

## ALASKA

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1724**                    **UNIV OF ALABAMA - UNIV**                    **1238**  
 "2000 SUMMER FACULTY FELLOWSHIP PROGRAM"  
 06/22/2000 - 03/30/2002    FY01: \$18,500                    Total: \$733,392  
*Prin. Invest.:* L M FREEMAN  
*Tech. Officer:* MSFC/J R PRUITT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1753**                    **UNIV OF ALABAMA - UNIV**                    **1239**  
 RESEARCH THE APPLICATIONS THAT RESULTED IN SUCCESSFUL  
 PROJECT MANAGEMENT IN INDUSTRY.  
 11/28/2000 - 09/29/2001    FY01: \$67,514                    Total: \$67,514  
*Prin. Invest.:* P S RAY  
*Tech. Officer:* MSFC/A DUARTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1419**                    **UNIV OF ALABAMA - UNIV**                    **1240**  
 DESIGN OF AN INTERGRATED HYBRID SYSTEM  
 08/17/2000 - 08/17/2001    FY01: \$0                            Total: \$99,999  
*Prin. Invest.:* G P, P S ROY, D J FONSECA  
*Tech. Officer:* JSC/F Y KUO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG10 305**                    **UNIV OF ALABAMA - UNIV**                    **1241**  
 EVALUATION OF IONIC LIQUIDS FOR USE IN A PROPOSED LOW TEMPERA-  
 TURE ELECTROLYSIS CELL FOR THE PROCESSI  
 08/27/2001 - 08/31/2002    FY01: \$24,980                    Total: \$24,980  
*Prin. Invest.:* R D ROGERS  
*Tech. Officer:* KSC/D E LUECK  
*CASE Category:* 12 - CHEMISTRY

**NAS 8 00207**                    **UNIV OF ALABAMA - UNIV**                    **1242**  
 PARTICLE ENGULFMENT AND PUSHING BY SOLIDIFYING INT ERFACES  
 (PEP)  
 10/03/2000 - 09/30/2001    FY01: \$243,000                    Total: \$243,000  
*Prin. Invest.:* D M STEFANESCU  
*Tech. Officer:* MSFC/M PURVEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 8 39715**                    **UNIV OF ALABAMA - UNIV**                    **1243**  
 PARTICLE INGULFMENT AND PUSHING BY SOLIDIFYING INTE RFACES  
 02/17/1993 - 09/29/2000    FY01: \$0                            Total: \$1,236,938  
*Prin. Invest.:* D M STEFANESCU, P A CURRERI, B K DHINDAW  
*Tech. Officer:* MSFC/T DE LOACH  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 4 52403**                    **UNIV OF ALABAMA - UNIV**                    **1244**  
 GENETICS-BASED ADAPTIVE AGENTS FOR STRATEGY LEARNING IN  
 AEROSPACE APPLICATIONS  
 07/16/1996 - 08/01/2000    FY01: -\$1,623                    Total: \$64,377  
*Prin. Invest.:* R E SMITH  
*Tech. Officer:* DFRK/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50129**                    **UNIV OF ALABAMA - UNIV**                    **1245**  
 DETERMINING LYMPHOCYTE RESPONSIVENESS TO LOW GRAVI  
 09/09/1997 - 06/30/2000    FY01: \$0                            Total: \$66,000  
*Prin. Invest.:* M ~ LEWIS  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9085**                    **UNIV OF NORTH ALABAMA**                    **1246**  
 EARTH SYS SCIENCE ON-LINE COURSE: ON OPPURTUNITY IN  
 GEOGRAPHY EDUCATION  
 02/17/2000 - 01/31/2002    FY01: \$32,502                    Total: \$65,076  
*Prin. Invest.:* W R STRONG  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1397**                    **UNIV OF SOUTH ALABAMA**                    **1247**  
 R/S "DEVELOPMENT OF COUNTERMEASURES & EXERCISE PROTOCOLS  
 TO REDUCE THE EFFECT OF MICROGRAVITY  
 07/23/1997 - 08/31/2000    FY01: -\$225                        Total: \$37,689  
*Prin. Invest.:* P KULKARNI  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1282**                    **UNIV OF SOUTH ALABAMA**                    **1248**  
 MATHEMATICAL MODELING OF FOOD SUPPLY FOR LONG TERM SPACE  
 MISSIONS USING LIFE SUPPORT  
 02/12/2001 - 05/15/2001    FY01: \$12,228                    Total: \$12,228  
*Prin. Invest.:* J CRUTHIRDS  
*Tech. Officer:* JSC/N L KLOERIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 8 161**                    **UNIV OF SOUTH ALABAMA**                    **1249**  
 REGIONAL/INTERNATIONAL CHANGE ASSESSMENT STRATEGIES,  
 RESEARCH AND TECHNOLOGY  
 01/19/1999 - 01/18/2004    FY01: \$80,000                    Total: \$113,105  
*Prin. Invest.:* M CARPENTER  
*Tech. Officer:* MSFC/R ARNOLD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 8 52896**                    **UNIV OF SOUTH ALABAMA**                    **1250**  
 STRUCTURE DETERMINATION OF PP5, A SENSOR OF CELL CYCLE  
 CONTROL CHECKPOINTS AND A PROGNOSTIC INDICAT  
 05/25/2001 - 07/01/2004    FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* R HONKANEN  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

## ALASKA

**NAG 5 4068**                    **UNIV OF ALASKA - FAIRBANKS**                    **1251**  
 SAR, INTEREROMETRY, AND GACIER DYNAMICS IN NW NORT  
 03/20/1997 - 02/28/2000    FY01: -\$545                        Total: \$188,835  
*Prin. Invest.:* C LINGLE  
*Tech. Officer:* GSFC/S H GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4170**                    **UNIV OF ALASKA - FAIRBANKS**                    **1252**  
 CLIMATE SENSITIVITY OF THAW LAKE SYSTEMS  
 03/27/1997 - 12/31/2000    FY01: \$0                            Total: \$113,343  
*Prin. Invest.:* D JEFFRIES  
*Tech. Officer:* GSFC/R H THOMAS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4269 UNIV OF ALASKA - FAIRBANKS 1253**  
 UNIQUE SIMULTANEOUS OBSERVATIONS OF THE CONJUGATE HEMI-  
 SPHERES WITH THE DYNAMICS EXPLORER AND VIKING  
 03/25/1997 - 12/31/2001 FY01: \$0 Total: \$99,987  
*Prin. Invest.:* D D CRAVEN  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 13 - PHYSICS

**NAG 5 4981 UNIV OF ALASKA - FAIRBANKS 1254**  
 ELEVATION CHANGES, INTERANNUAL VARIABILITY, AND AN DYNAMICS  
 FROM ERS, GEOSTAT AND SEASAT RADA ALTIME  
 07/18/1997 - 07/14/2000 FY01: \$0 Total: \$193,055  
*Prin. Invest.:* C S LINGLE  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 5125 UNIV OF ALASKA - FAIRBANKS 1255**  
 GROUND AND BALLOON-BORNE OBSERVATIONS OF RED SPRITES AND  
 BLUE JETS  
 07/02/1997 - 01/31/2002 FY01: \$0 Total: \$343,690  
*Prin. Invest.:* E WESTCOTT  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5153 UNIV OF ALASKA - FAIRBANKS 1256**  
 AURORAL AIRCRAFT OBSERVATIONS CONJUGATE TO FAST FUNDING FOR  
 BASIC GRANT  
 01/14/1998 - 10/31/2000 FY01: -\$60 Total: \$342,061  
*Prin. Invest.:* H NIELSEN  
*Tech. Officer:* GSFC/W JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5218 UNIV OF ALASKA - FAIRBANKS 1257**  
 CODA: COUPLING OF DYNAMICS AND AURORA-A CO- INVESTIGATION  
 PROPOSAL WITH AEROSPACE PI COLLINS  
 01/15/1999 - 01/14/2002 FY01: \$15,470 Total: \$29,267  
*Prin. Invest.:* COLLINS  
*Tech. Officer:* GSFC/W JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5243 UNIV OF ALASKA - FAIRBANKS 1258**  
 FIRST YEAR OF A TWO YEAR EFFORT NAG5-5243 PI DR. RICHARD  
 COLLINS  
 03/29/1999 - 03/31/2002 FY01: \$0 Total: \$38,624  
*Prin. Invest.:* R COLLINS  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5316 UNIV OF ALASKA - FAIRBANKS 1259**  
 MAPPING THE E-REGION VERTICAL AND ZONAL WINDS NEAR A STABLE  
 AURORAL ARC USING A NEAR HORIZONTAL  
 02/14/2001 - 02/11/2004 FY01: \$215,855 Total: \$215,855  
*Prin. Invest.:* M CONDE  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6275 UNIV OF ALASKA - FAIRBANKS 1260**  
 THE ROLE OF LAND-COVER CHANGE IN HIGH LATITUDE ECO FOR THE  
 GLOBAL CARBON CYCLE  
 08/27/1997 - 08/31/2001 FY01: \$0 Total: \$520,000  
*Prin. Invest.:* D MCGUIRE  
*Tech. Officer:* GSFC/A JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6338 UNIV OF ALASKA - FAIRBANKS 1261**  
 VALIDATION OF MODIS SNOW & SEA ICE PRODUCTS IN THE SOUTHERN  
 OCEAN  
 10/02/1997 - 03/31/2002 FY01: \$82,221 Total: \$468,742  
*Prin. Invest.:* S LI  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6976 UNIV OF ALASKA - FAIRBANKS 1262**  
 COMBINED EFFECTS OF PHOTOELECTRONS, FIELD-ALIGNED CURRENTS,  
 PRECIPITATION, THE Ponderomotive and  
 03/31/1998 - 05/31/2001 FY01: -\$67,084 Total: \$145,021  
*Prin. Invest.:* G V KHAZANOV  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7299 UNIV OF ALASKA - FAIRBANKS 1263**  
 RADARSAT IN SUPPORT OF THE ANTARCTIC COASTAL POLYN YA PILOT  
 STUDY  
 04/24/1998 - 03/31/2001 FY01: \$0 Total: \$40,493  
*Prin. Invest.:* M O JEFFRIES  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7507 UNIV OF ALASKA - FAIRBANKS 1264**  
 JERS-1 NORTH AMERICAN BOREAL FOREST MAPPING STUDY TASK PLAN  
 UAF COMPONENT  
 06/26/1998 - 06/30/2001 FY01: \$18,500 Total: \$150,000  
*Prin. Invest.:* C L WILLIAMS  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7603 UNIV OF ALASKA - FAIRBANKS 1265**  
 THE INFLUENCE OF PROPAGATING EDDIES ON THE ENVIRONMENT OF  
 THE CONTINENTAL SHELF IN THE NORTHERN G  
 07/21/1998 - 07/31/2002 FY01: \$28,952 Total: \$71,973  
*Prin. Invest.:* S R OKKONEN  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7659 UNIV OF ALASKA - FAIRBANKS 1266**  
 SPACE GEODETIC CASE STUDIES OF RECENT VOLCANIC EVENTS IN  
 ALASKA'S ENH98-0028  
 09/09/1998 - 08/31/2002 FY01: \$40,000 Total: \$240,000  
*Prin. Invest.:* J T FREYMUELLER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7683 UNIV OF ALASKA - FAIRBANKS 1267**  
 MODELING OF THE ATMOSPHERE-MAGNETOSPHERE-IONOSPHERE  
 SYSTEM: BASELINE EFFORT  
 09/15/1998 - 09/30/2001 FY01: \$0 Total: \$335,010  
*Prin. Invest.:* M H REES  
*Tech. Officer:* GSFC/S A CURTIS  
*CASE Category:* 13 - PHYSICS

**NAG 5 7799 UNIV OF ALASKA - FAIRBANKS 1268**  
 A STUDY OF THE INSTANTANEOUS DISTRIBUTION OF BIRKLAND  
 CURRENTS USING POLAR UVI, SUPERDARN, IMP8  
 12/17/1998 - 09/30/2001 FY01: \$92,260 Total: \$275,081  
*Prin. Invest.:* W A BRISTOW  
*Tech. Officer:* GSFC/L ZANETTI  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8042 UNIV OF ALASKA - FAIRBANKS 1269**  
 THERMOSPHERIC NEUTRAL WIND RESPONSE TO THE AURORA AT HIGH  
 RESOLUTION; SIMULTANEOUS GROUND-BASED AN  
 01/07/1999 - 09/30/2001 FY01: \$0 Total: \$58,510  
*Prin. Invest.:* J D CRAVEN  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8614 UNIV OF ALASKA - FAIRBANKS 1270**  
 APPLICATION OF SATELLITE SAR IMAGERY IN MAPPING THE ACTIVE  
 LAYER OF ARCTIC PERMAFROST  
 06/14/1999 - 06/30/2002 FY01: \$66,393 Total: \$186,618  
*Prin. Invest.:* S LI  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8722 UNIV OF ALASKA - FAIRBANKS 1271**  
 RUSSIAN-US PARTNERSHIP TO STUDY THE 23-KM-DIAMETER EL'GY-  
 GYTGYN IMPACT CRATER, NORTHEAST RUSSIA  
 08/25/1999 - 08/14/2002 FY01: \$24,000 Total: \$70,000  
*Prin. Invest.:* V SHARPTON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9315 UNIV OF ALASKA - FAIRBANKS 1272**  
 MONITORING BOREAL LANDCOVER AND ECOSYSTEM DYNAMICS AT  
 REGIONAL SCALES USING INTEGRATED SPACEBORNE  
 03/28/2000 - 04/30/2001 FY01: \$11,000 Total: \$33,000  
*Prin. Invest.:* C WILLIAMS  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9457 UNIV OF ALASKA - FAIRBANKS 1273**  
 PLASMA PROCESSES AT THE EARTH'S MAGNETOSPHERIC BOUNDARY  
 AND CUSPS  
 04/24/2000 - 04/30/2002 FY01: \$54,829 Total: \$109,729  
*Prin. Invest.:* A OTTO  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9513 UNIV OF ALASKA - FAIRBANKS 1274**  
 PHOTOTROPHIC ORGANISMS AT HYDROTHERMAL VENTS  
 04/25/2000 - 04/30/2002 FY01: \$80,000 Total: \$160,000  
*Prin. Invest.:* G PLUMLEY  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9859 UNIV OF ALASKA - FAIRBANKS 1275**  
 APPLICATION OF THE TERRESTRIAL ECOSYSTEM MODEL TO SIMULATE  
 CARBON DYNAMICS OF THE BOREAS REGIO  
 08/07/2000 - 08/31/2001 FY01: \$0 Total: \$25,000  
*Prin. Invest.:* A D MCGUIRE  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9915 UNIV OF ALASKA - FAIRBANKS 1276**  
 RETROSPECTIVE ANALYSIS OF SEA ICE CONDITIONS IN THE BERING &  
 CHUKCHI SEAS: 1973 TO 1983  
 08/30/2000 - 08/31/2001 FY01: \$0 Total: \$20,447  
*Prin. Invest.:* L MCNUIT  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10069 UNIV OF ALASKA - FAIRBANKS 1277**  
 CEDAR/TIMED: THERMOSPHERIC VERTICAL WIND OBSERVATIONS FROM  
 THREE SITES IN THE NORTHERN AURORAL ZON  
 10/24/2000 - 02/28/2002 FY01: \$187,000 Total: \$187,000  
*Prin. Invest.:* M CONDE  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11142 UNIV OF ALASKA - FAIRBANKS 1278**  
 THE ROLE OF LAND-COVER CHANGE IN HIGH LATITUDE ECO SYSTEMS:  
 IMPLICATIONS FOR CARBON BUDGETS IN NORTH  
 07/31/2001 - 07/31/2002 FY01: \$87,359 Total: \$87,359  
*Prin. Invest.:* D MCGUIRE  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11213 UNIV OF ALASKA - FAIRBANKS 1279**  
 PERIGLACIAL GEOMORPHOLOGY ANALYSES ON UTOPIA PLANITIA  
 08/13/2001 - 08/31/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* K YOSHIKAWA  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11226 UNIV OF ALASKA - FAIRBANKS 1280**  
 INTERNATIONAL SYMPOSIUM ON FAST GLACIER FLOW  
 08/13/2001 - 08/31/2002 FY01: \$20,000 Total: \$20,000  
*Prin. Invest.:* C LINGLE  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 3 26401 UNIV OF ALASKA - FAIRBANKS 1281**  
 ACTS PROPAGATION EXPERIMENTS IN ALASKA  
 05/24/1993 - 09/01/2000 FY01: \$24 Total: \$916,676  
*Prin. Invest.:* C E MAYER  
*Tech. Officer:* GRC/R J GUNDERMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 5 01074 UNIV OF ALASKA - FAIRBANKS 1282**  
 MAINTENANCE/MISSION SUPPORT AT POKER FLAT RESERACH RANGE.  
 03/12/2001 - 03/11/2006 FY01: \$940,000 Total: \$940,000  
*Prin. Invest.:* G W WALKER, R SHEFCHIK  
*Tech. Officer:* GSFC/W F LAU  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 5 32206 UNIV OF ALASKA - FAIRBANKS 1283**  
 MAINTENANCE/MISSION SUPPORT OF POKER FLAT RESEARCH RANGE  
 10/31/1994 - 02/28/2001 FY01: \$251,098 Total: \$8,890,796  
*Prin. Invest.:* S SCHWATAL  
*Tech. Officer:* GSFC/M J FILLIS, GSFC/B J FLOWERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 98129 UNIV OF ALASKA - FAIRBANKS 1284**  
 OPERATION & MANAGEMENT OF ALASKA SAR FACILITY  
 03/30/1998 - 03/31/2003 FY01: \$10,943,305 Total: \$34,894,982  
*Prin. Invest.:* N AVAILBLE  
*Tech. Officer:* GSFC/P J ONDRUS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCA 5 112 UNIV OF ALASKA - FAIRBANKS 1285**  
 PROCESSING SYNTHETIC APERTURE RADAR DATA  
 04/27/1988 - 02/28/2002 FY01: \$900,000 Total: \$22,045,886  
*Prin. Invest.:* J MILLER, W F WEEKS, G WELLER  
*Tech. Officer:* GSFC/G H TROFFORD  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 379 UNIV OF ALASKA - FAIRBANKS 1286**  
 MODIS/SNOW MAPPING: IN-SITU MEASUREMENTS ON THE S ONW OF  
 INTERIOR& ARCTICALASKA  
 01/29/1999 - 09/30/2001 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* C S BENSON  
*Tech. Officer:* GSFC/S K HALL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30381 UNIV OF ALASKA - FAIRBANKS 1287**  
 GLACIAL UNLOADING: FORCINGS, RESPONSES & PROCESSES /CHRIS-  
 TOPHER LARSEN  
 08/13/2001 - 08/31/2004 FY01: \$21,984 Total: \$21,984  
*Prin. Invest.:* J FREYMUELLER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40014 UNIV OF ALASKA - FAIRBANKS 1288**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM  
 02/10/1997 - 02/28/2001 FY01: -\$10,953 Total: \$796,547  
*Prin. Invest.:* J G HAWKINS  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40100 UNIV OF ALASKA - FAIRBANKS 1289**  
 ALASKA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/28/2001 - 02/28/2002 FY01: \$223,453 Total: \$223,453  
*Prin. Invest.:* J G HAWKINS  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50191 UNIV OF ALASKA - FAIRBANKS 1290**  
 TIME-DEPENDENT TRANSPORT OF AURORAL ELECTRONS AND SMALL  
 SCALE AURORAL ARCS/STUDENT: LAURA PETICOLA  
 06/05/1998 - 06/30/2001 FY01: \$0 Total: \$41,537  
*Prin. Invest.:* D LUMMERZHEIM  
*Tech. Officer:* HQ/A NURRIDDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50324 UNIV OF ALASKA - FAIRBANKS 1291**  
 TREES, FIRE & CLIMATE: EVALUATING POTENTIAL FEED BACKS BETWEEN  
 DISTURBANCE REGIMEFOREST SUCCESSION  
 08/17/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* S F CHAPIN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7629 UNIV OF NORTH CAROLINA AT WILMINGTON 1292**  
 REMOTE SENSING AND MARINE ECOLOGY AT THE UNIVERSIT Y OF NORTH  
 CAROLINA AT WILMINGTON  
 08/28/1998 - 12/31/2000 FY01: \$0 Total: \$29,580  
*Prin. Invest.:* S D EMSLIE  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

ARIZONA

**NAG 1 1781 ARIZONA STATE UNIV 1293**  
 PENETRATION OF HIGH-INTENSITY RADIATED FIELDS INTO GENERAL  
 AVIATION AIRCRAFT  
 12/13/1995 - 12/31/2001 FY01: \$32,783 Total: \$641,878  
*Prin. Invest.:* C BALANIS, P TIRKAS  
*Tech. Officer:* LARC/T X NGUYEN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 1988 ARIZONA STATE UNIV 1294**  
 DEVELOPMENT OF COMPREHENSIVE MODELING TECHNIQUES FOR  
 SMART COMPOSITE STRUCTURES  
 01/06/1998 - 01/14/2001 FY01: \$1,554 Total: \$128,403  
*Prin. Invest.:* A CHATTOPADYAY  
*Tech. Officer:* LARC/C D WIESEMAN, LARC/A R MCGOWAN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2233 ARIZONA STATE UNIV 1295**  
 DETERM & USE OF SENSITIVITIES FOR REDESIGN/ANAL OF MISTUNED  
 BLADED DISKS - NRA 98-LARC-8  
 09/27/1999 - 07/31/2002 FY01: \$72,264 Total: \$153,439  
*Prin. Invest.:* M P MIGNOLET  
*Tech. Officer:* LARC/P W GOODE  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 1 2241 ARIZONA STATE UNIV 1296**  
 USING FORMAL APPROACH FOR REVERSE ENGR'G & DESIGN RECOVERY  
 TO SUPPORT SOFTWARE REUSE--NRA-98-LARC-8  
 09/27/1999 - 08/30/2002 FY01: \$96,604 Total: \$192,186  
*Prin. Invest.:* G C GANNOD  
*Tech. Officer:* LARC/B L DI VITO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 2283 ARIZONA STATE UNIV 1297**  
 A NONLINEAR THEORY FOR SMART COMPOSITE STRUCTURES  
 03/24/2000 - 03/14/2003 FY01: \$53,305 Total: \$98,305  
*Prin. Invest.:* A CHATTOPADHYAY  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 908 ARIZONA STATE UNIV 1298**  
 DEVELOPMENT OF A COMPOSITE TAILORING PROCEDURE FOR AIRPLANE  
 WING  
 06/15/1994 - 09/30/1999 FY01: -\$329 Total: \$174,688  
*Prin. Invest.:* A CHATTOPADHYAY, NONE  
*Tech. Officer:* ARC/H MIURA, ARC/A SHAHN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1461 ARIZONA STATE UNIV 1299**  
 CONTINUAL PLANNING IN METRIC/TEMPORAL DOMAINS  
 03/13/2001 - 02/28/2002 FY01: \$161,928 Total: \$161,928  
*Prin. Invest.:* S KAMBHAMPPATI  
*Tech. Officer:* ARC/R A MORRIS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2081 ARIZONA STATE UNIV 1300**  
 DECOUPLING THE ROLE OF INERTIA & GRAVITY ON PARTIC LE DISPERS-  
 ION LSN000850-(NRA-94-OLMSA)  
 09/26/1997 - 09/16/2001 FY01: \$0 Total: \$49,456  
*Prin. Invest.:* K D SQUIRES  
*Tech. Officer:* GRC/A CHAIT  
*CASE Category:* 41 - AERONAUTICAL ENGR

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG 3 2591**                      **ARIZONA STATE UNIV**                      **1301**  
 OPTIMIZATION OF ENGINEERED III-N MATERIAL FOR ELECTRON EMISSION DEVICES  
 04/16/2001 – 02/28/2002                      FY01: \$19,990                      Total: \$19,990  
*Prin. Invest.:* N NEWMAN  
*Tech. Officer:* GRC/I KRAINSKY  
*CASE Category:* 13 – PHYSICS

**NAG 5 3628**                      **ARIZONA STATE UNIV**                      **1302**  
 THERMAL-INFRARED LABORATORY STUDIES  
 02/25/1997 – 12/31/2001                      FY01: \$97,200                      Total: \$476,921  
*Prin. Invest.:* D R CHRISTENSEN  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 3783**                      **ARIZONA STATE UNIV**                      **1303**  
 DETERMINING THE COMPOSITION OF MARTIAN AND VENUSIAN INCHONDRITES  
 02/21/1997 – 12/31/2001                      FY01: \$73,000                      Total: \$361,350  
*Prin. Invest.:* D FINK  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 3908**                      **ARIZONA STATE UNIV**                      **1304**  
 STUDIES IN PLANETARY VOLCANOLOGY  
 02/12/1997 – 02/28/2002                      FY01: \$122,000                      Total: \$919,053  
*Prin. Invest.:* D GREELEY  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 3909**                      **ARIZONA STATE UNIV**                      **1305**  
 STUDIES OF MARTIAN AEOLIAN GEOLOGY  
 02/12/1997 – 02/28/2001                      FY01: \$0                      Total: \$347,877  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 4131**                      **ARIZONA STATE UNIV**                      **1306**  
 ORGANICS IN METEORITES  
 03/15/1997 – 09/14/2001                      FY01: \$0                      Total: \$345,000  
*Prin. Invest.:* D CRONIN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 – BIOLOGY (EXCLUDING ENVIR)

**NAG 5 4280**                      **ARIZONA STATE UNIV**                      **1307**  
 CHEMICAL CONSTRAINTS ON THE EARLY SOLAR NEBULA: MOLECULAR ABUNDANCES IN CLOUDS, DISKS, AND COMETS  
 04/30/1997 – 06/30/2000                      FY01: \$0                      Total: \$135,000  
*Prin. Invest.:* D WYCKOFF  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 4860**                      **ARIZONA STATE UNIV**                      **1308**  
 FOSSIL RECORD OF PRECAMBRIAN LIFE ON LAND  
 06/19/1997 – 05/31/2000                      FY01: \$0                      Total: \$154,560  
*Prin. Invest.:* P KNAUTH  
*Tech. Officer:* GSFC/M A MEYER  
*CASE Category:* 51 – BIOLOGY (EXCLUDING ENVIR)

**NAG 5 6741**                      **ARIZONA STATE UNIV**                      **1309**  
 SYSTEMATIC DETERMINATIONS OF ELEMENTAL ABUNDANCES FOR GALACTIC AND LMC NOVAE  
 12/19/1997 – 12/31/2001                      FY01: \$0                      Total: \$200,688  
*Prin. Invest.:* S STARRFIELD  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 7199**                      **ARIZONA STATE UNIV**                      **1310**  
 SEARCH FOR EXTRA-SOLAR PLANETS FROM SOUTHERN HEMISPHERE  
 04/17/1998 – 04/14/2000                      FY01: \$0                      Total: \$40,000  
*Prin. Invest.:* P A WEHINGER  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 7285**                      **ARIZONA STATE UNIV**                      **1311**  
 MINERALOGY AND MICROSTRUCTURES OF SHOCK-INDUCED METAL VEINS  
 04/29/1998 – 10/30/2000                      FY01: \$0                      Total: \$81,000  
*Prin. Invest.:* T G SHARP  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 7540**                      **ARIZONA STATE UNIV**                      **1312**  
 INVESTIGATION OF NEBULAR PROCESSES THROUGH OXYGEN ISOTOPIC ANALYSIS OF PRIMITIVE METEORITE MATERIAL  
 06/18/1998 – 03/31/2002                      FY01: \$31,000                      Total: \$121,100  
*Prin. Invest.:* L LESHIN  
*Prin. Invest.:* NONE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 7640**                      **ARIZONA STATE UNIV**                      **1313**  
 ISOTOPIC CONSTRAINTS ON THE GENESIS OF CARBONATES IN MARTIAN METEORITE ALH84001  
 09/23/1998 – 07/31/2000                      FY01: \$0                      Total: \$35,000  
*Prin. Invest.:* D A LESHIN  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 8158**                      **ARIZONA STATE UNIV**                      **1314**  
 MICROBEAM INVESTIGATIONS OF PRESOLAR AND EARLY SOLAR SYSTEM MATERIALS  
 02/04/1999 – 01/31/2002                      FY01: \$100,000                      Total: \$299,000  
*Prin. Invest.:* D R HUSS  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 8173**                      **ARIZONA STATE UNIV**                      **1315**  
 PRESOLAR GRAINS AS TRACERS OF NEBULAR PROCESSES  
 02/03/1999 – 10/14/2001                      FY01: \$0                      Total: \$38,000  
*Prin. Invest.:* D R HUSS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 8278**                      **ARIZONA STATE UNIV**                      **1316**  
 MULTIWAVELENGTH SPECTRAL SYNTHESSES OF NOVA ATMOSPHERES (ADP 98)  
 02/24/1999 – 02/28/2002                      FY01: \$0                      Total: \$98,991  
*Prin. Invest.:* S G STARRFIELD  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 8286**                    **ARIZONA STATE UNIV**                    **1317**  
 ACQUISITION OF A CAMECA IMS 6F SECONDARY ION MASS SPECTROMETER FOR APPLICATIONS IN COSMOCHEMISTRY  
 02/22/1999 - 02/28/2001                    FY01: \$0                    Total: \$489,500  
*Prin. Invest.:* L A LESHIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8453**                    **ARIZONA STATE UNIV**                    **1318**  
 ANALYSIS OF AEOLIAN FEATURES AND PROCESSES ON MARS  
 04/14/1999 - 04/14/2002                    FY01: \$80,000                    Total: \$234,000  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8481**                    **ARIZONA STATE UNIV**                    **1319**  
 FORMATION & EVOLUTION OF BINARY SYSTEMS CONTAINING COLLAPSED STARS (ATP 98)  
 04/29/1999 - 04/30/2002                    FY01: \$10,000                    Total: \$29,420  
*Prin. Invest.:* M POLITANO  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8721**                    **ARIZONA STATE UNIV**                    **1320**  
 SMALL IMPACTS ON MARS: ATMOSPHERIC EFFECTS  
 08/03/1999 - 08/14/2002                    FY01: \$24,000                    Total: \$70,500  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8805**                    **ARIZONA STATE UNIV**                    **1321**  
 PHASE-RESOLVED INVESTIGATION OF SUPERSOFT X-RAY BINARIES - FUSE  
 02/01/2000 - 02/14/2002                    FY01: \$0                    Total: \$23,900  
*Prin. Invest.:* A P COWLEY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8897**                    **ARIZONA STATE UNIV**                    **1322**  
 GEOLOGICAL STUDIES OF THE GALILEAN SATELLITES  
 01/13/2000 - 01/14/2002                    FY01: \$88,900                    Total: \$176,600  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8898**                    **ARIZONA STATE UNIV**                    **1323**  
 MECHANISMS, MANIFESTATION AND IMPLICATIONS OF CRYO MAGMATISM ON EUROPA  
 01/13/2000 - 01/14/2002                    FY01: \$42,700                    Total: \$83,700  
*Prin. Invest.:* S A FAGENTS  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8948**                    **ARIZONA STATE UNIV**                    **1324**  
 STUDIES OF MARTIAN AEOLIAN GEOLOGY  
 01/19/2000 - 02/28/2002                    FY01: \$93,000                    Total: \$181,350  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9070**                    **ARIZONA STATE UNIV**                    **1325**  
 MONITORING THE HAZARDS OF SILICIC VOLCANOES WITH REMOTE SENSING  
 02/27/2000 - 02/28/2002                    FY01: \$61,203                    Total: \$98,703  
*Prin. Invest.:* J FINK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9263**                    **ARIZONA STATE UNIV**                    **1326**  
 MULTIDIMENSIONAL STUDIES OF THE CONSEQUENCES OF THERMONUCLEAR RUNAWAYS ON ACCRETING WHITEDWARFS  
 03/13/2000 - 03/14/2002                    FY01: \$95,870                    Total: \$186,581  
*Prin. Invest.:* S STARRFIELD  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9352**                    **ARIZONA STATE UNIV**                    **1327**  
 COSMOCHEMISTRY & MINERALOGY OF PRIMITIVE METEORITE  
 03/30/2000 - 03/31/2002                    FY01: \$100,000                    Total: \$194,000  
*Prin. Invest.:* P R BUSECK  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9381**                    **ARIZONA STATE UNIV**                    **1328**  
 HIGH PRESSURE MINERALS IN SHOCKED METEORITES: CONSTRAINTS ON SHOCK CONDITIONS AND DURATION  
 04/03/2000 - 03/31/2002                    FY01: \$49,000                    Total: \$98,000  
*Prin. Invest.:* T G SHARP  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9395**                    **ARIZONA STATE UNIV**                    **1329**  
 FUSE OBSERVATIONS OF GALACTIC AND LMC NOVAE IN OUT BURST - FUSE  
 04/05/2000 - 04/14/2002                    FY01: \$0                    Total: \$9,084  
*Prin. Invest.:* S G STARRFIELD  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9430**                    **ARIZONA STATE UNIV**                    **1330**  
 ENVIRONMENTS OF EARLY EVOLUTION AND THE SEARCH FOR AN EXTRA-TERRESTRIAL FOSSIL RECORD  
 04/13/2000 - 05/31/2002                    FY01: \$100,000                    Total: \$192,316  
*Prin. Invest.:* P KNAUTH  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9451**                    **ARIZONA STATE UNIV**                    **1331**  
 CHIRAL ANALYSES OF ORGANIC COMPOUNDS IN CARBONACEOUS METEORITES  
 04/12/2000 - 04/14/2002                    FY01: \$110,000                    Total: \$213,620  
*Prin. Invest.:* S PIZZARELLO  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 12 - CHEMISTRY

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9507**                      **ARIZONA STATE UNIV**                      **1332**  
 MICROBIAL PALEONTOLOGY, MINERALOGY & GEOCHEMISTRY OF MODERN  
 & ANCIENT THERMAL SPRING DEPOSITS & THEI  
 05/23/2000 - 04/30/2002      FY01: \$124,000                      Total: \$240,992  
*Prin. Invest.:* J FARMER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 9773**                      **ARIZONA STATE UNIV**                      **1333**  
 GEOLOGY OF POTENTIAL LANDING SITES FOR MARTIAN SAM PLE  
 RETURNS  
 07/05/2000 - 06/30/2002      FY01: \$41,900                      Total: \$83,800  
*Prin. Invest.:* R GREELY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9838**                      **ARIZONA STATE UNIV**                      **1334**  
 RADIATION SCIENCE PROGRAM TRANSMISSION ELECTRON MI CROSCOPY  
 (TEM) STUDY OF SOUTHERN AFRICAN FIRE-ATM  
 11/20/2000 - 11/30/2001      FY01: \$124,000                      Total: \$124,000  
*Prin. Invest.:* P R BUSECK  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10077**                      **ARIZONA STATE UNIV**                      **1335**  
 CHEMICAL CONSTRAINTS ON THE EARLY SOLAR NEBULA: IRACING  
 MOLECULAR & ISOTOPIC ABUNDANCES FROM INTE  
 11/15/2000 - 11/14/2001      FY01: \$40,000                      Total: \$40,000  
*Prin. Invest.:* S WYCKOFF  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10214**                      **ARIZONA STATE UNIV**                      **1336**  
 THERMAL CONDUCTIVITY RELATIONSHIPS TO PHYSICAL PRO PERTIES OF  
 MARTIAN SURFICIAL MATERIALS: A TOOL FO  
 01/04/2001 - 01/14/2002      FY01: \$55,000                      Total: \$55,000  
*Prin. Invest.:* M A PRESLEY  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10268**                      **ARIZONA STATE UNIV**                      **1337**  
 RECENT VOLCANIC AND FLUVIAL ACTIVITY ON MARS  
 01/18/2001 - 04/30/2002      FY01: \$166,400                      Total: \$166,400  
*Prin. Invest.:* A S MCEWEN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10310**                      **ARIZONA STATE UNIV**                      **1338**  
 MAPPING MINERALOGY, ROCK ABUNDANCE, & THERMAL INER TIA USING  
 MGS THERMAL EMISSION SPECTROMETER (TES)  
 01/25/2001 - 01/31/2002      FY01: \$150,000                      Total: \$150,000  
*Prin. Invest.:* P R CHRISTIANSON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10316**                      **ARIZONA STATE UNIV**                      **1339**  
 OBSERVATIONS OF THE LISM WITH HOT WHITE DWARFS - FUSE - 2000  
 01/26/2001 - 01/31/2002      FY01: \$23,600                      Total: \$23,600  
*Prin. Invest.:* J B HOLBERG  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10449**                      **ARIZONA STATE UNIV**                      **1340**  
 PRESOLAR GRAINS: PROBES OF PROCESS IN INTERSTELLAR SPACE, IN  
 THE SOLAR NEBULA, & ON METEORITE PAREN  
 02/21/2001 - 02/28/2002      FY01: \$33,000                      Total: \$33,000  
*Prin. Invest.:* G HUSS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10460**                      **ARIZONA STATE UNIV**                      **1341**  
 REGIONAL PLANETARY IMAGE FACILITY-ARIZONA STATE UNIV  
 02/26/2001 - 02/28/2002      FY01: \$65,900                      Total: \$65,900  
*Prin. Invest.:* R GREELY  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10523**                      **ARIZONA STATE UNIV**                      **1342**  
 ISOTOPIC & PETROLOGIC INVESTIGATIONS OF EXTRATERRE STRIAL  
 MATERIALS: CONSTRAINTS ON NEBULAR, ASTEROI  
 03/06/2001 - 03/14/2002      FY01: \$100,000                      Total: \$100,000  
*Prin. Invest.:* L A LESHIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10524**                      **ARIZONA STATE UNIV**                      **1343**  
 ASU/MICHIGAN COLLABORATION: THE ABUNDANCE & ISOTOP IC  
 COMPOSITION OF HG IN EXTRATERRESTRIAL MATERIAL  
 03/05/2001 - 07/31/2001      FY01: \$3,158                      Total: \$3,158  
*Prin. Invest.:* D LAURETTA  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10689**                      **ARIZONA STATE UNIV**                      **1344**  
 THE EVOLUTIONARY DEVELOPMENT OF PHOTOSYNTHESIS & THE TRAN  
 SITION FROM AN ANAEROBIC TO AN AEROBIC  
 04/06/2001 - 03/31/2002      FY01: \$90,000                      Total: \$90,000  
*Prin. Invest.:* R BLANKENSHIP  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10753**                      **ARIZONA STATE UNIV**                      **1345**  
 CHEMICAL CONSTRAINTS ON THE EARLY SOLAR NEBULA  
 04/11/2001 - 04/14/2002      FY01: \$20,000                      Total: \$20,000  
*Prin. Invest.:* S WYCKOFF  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10899**                      **ARIZONA STATE UNIV**                      **1346**  
 THIRD INTERNATIONAL SYPMOSIUM ON ENVIRONMENTAL HYDRAULICS  
 05/04/2001 - 05/31/2002      FY01: \$15,000                      Total: \$15,000  
*Prin. Invest.:* D BOYER  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11199**                      **ARIZONA STATE UNIV**                      **1347**  
 ORIGINS OF SMALL VOLCANIC CONES: ERUPTION MECHANIS MS AND  
 IMPLICATIONS FOR WATER ON MARS  
 08/07/2001 - 08/14/2004      FY01: \$49,926                      Total: \$49,926  
*Prin. Invest.:* S FAGENTS  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY



## NASA'S UNIVERSITY PROGRAM

ARIZONA

**NAG 8 1353**                      **ARIZONA STATE UNIV**                      **1348**  
 R/S "CRYSTALLIZATION MECHANISMS OF MEMBRANE PROTEINS UNDER  
 THE DIRECTION OF DR. JAMES ALLEN"  
 05/19/1997 - 05/31/2001                      FY01: \$0                      Total: \$484,000  
*Prin. Invest.:* J ALLEN  
*Tech. Officer:* MSFC/B GUYNES, MSFC/J MAYO  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 815**                      **ARIZONA STATE UNIV**                      **1349**  
 DEVELOPE MICROFLOW BIOCHEMICAL SENSORS  
 08/07/1995 - 11/14/2000                      FY01: -\$77                      Total: \$567,923  
*Prin. Invest.:* B TOWE  
*Tech. Officer:* JSC/N R PELLIS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1331**                      **ARIZONA STATE UNIV**                      **1350**  
 GENESIS OF THE CRYSTALLIN HEMATITE DEPOSIT IN SINUS MERIDIANI  
 MARS  
 07/05/2001 - 06/28/2002                      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* P R CHRISTENSON  
*Tech. Officer:* JSC/R V MORRIS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1359**                      **ARIZONA STATE UNIV**                      **1351**  
 A MICROFLUID BIO REPORTER FOR EXPLORATORY BIO ENGI NEERING  
 07/27/2001 - 09/30/2004                      FY01: \$39,000                      Total: \$39,000  
*Prin. Invest.:* B C TOWE  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAS 1 00122**                      **ARIZONA STATE UNIV**                      **1352**  
 TO INVESTIGATE CONCEPTS FOR CONTROLLINGATTITUDE AN D  
 DYNAMICS OF OF SPACE SOLAR POWER SATELLITES  
 06/16/2000 - 11/15/2000                      FY01: \$85                      Total: \$115,151  
*Prin. Invest.:* B WIE  
*Tech. Officer:* LARC/C L MOORE, MSFC/C CARRINGTON  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAS 5 31371**                      **ARIZONA STATE UNIV**                      **1353**  
 EOS INVESTIGATION "ADVANCED SPACEBORNE THERMAL EMISSION AND  
 REFLECTION"  
 12/23/1991 - 12/22/2001                      FY01: \$119,564                      Total: \$1,676,837  
*Prin. Invest.:* P CHRISTENSEN  
*Tech. Officer:* GSFC/H BLODGET  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 1 01051**                      **ARIZONA STATE UNIV**                      **1354**  
 PENETRATION OF HIGH INTENSITY RADIATED FIELDS(HIRF) INTO  
 AIRCRAFT  
 05/29/2001 - 05/31/2004                      FY01: \$54,000                      Total: \$54,000  
*Prin. Invest.:* C BALANIS, NONE  
*Tech. Officer:* LARC/T X NGUYEN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 2 1051**                      **ARIZONA STATE UNIV**                      **1355**  
 EXPLORING THE LIVING UNIVERSE: ORIGIN, EVOLUTION AND DISTRIBU  
 TION OF LIFE IN THE SOLAR SYSTEM  
 09/22/1998 - 06/30/2003                      FY01: \$1,558,092                      Total: \$3,907,192  
*Prin. Invest.:* J D FARMER  
*Tech. Officer:* ARC/R A GRYMES, ARC/W W DOLCI  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1109**                      **ARIZONA STATE UNIV**                      **1356**  
 OPERATION OF THE PLANETARY AEOLIAN LABORATORY  
 04/02/1999 - 04/30/2002                      FY01: \$90,511                      Total: \$280,800  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* ARC/S G EDDLEMON, ARC/B F SMITH  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 2 1225**                      **ARIZONA STATE UNIV**                      **1357**  
 HEURISTIC CONTROL OF PLANNING & EXECUTION IN METRI C/TEMPORAL  
 DOMAINS  
 03/23/2001 - 02/28/2002                      FY01: \$48,000                      Total: \$48,000  
*Prin. Invest.:* S KAMBHAMPATI  
*Tech. Officer:* ARC/R MORRIS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1232**                      **ARIZONA STATE UNIV**                      **1358**  
 AGENT DEVELOPMENT & CONTROL VERIFICATION USING DUA L CHAR  
 ACTERIZATION  
 03/26/2001 - 11/30/2001                      FY01: \$75,000                      Total: \$75,000  
*Prin. Invest.:* C BARAL  
*Tech. Officer:* ARC/R MORRIS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5331**                      **ARIZONA STATE UNIV**                      **1359**  
 MINIATURIZED BIONSENSOR BASED ON LIGHT EMITTING DI ODE & PHOTO  
 DETECTOR ARRAY  
 07/14/1999 - 06/30/2001                      FY01: \$0                      Total: \$95,000  
*Prin. Invest.:* Y H ZHANG  
*Tech. Officer:* ARC/M MEYYAPPAN, ARC/T R GOVINDAN  
*CASE Category:* 13 - PHYSICS

**NCC 2 5362**                      **ARIZONA STATE UNIV**                      **1360**  
 TERA-HERTZ MODULATION OF QUANTUM WELL LASERS WILL AN ELEC  
 TRICAL FIELD  
 01/19/2000 - 12/14/2001                      FY01: \$0                      Total: \$47,000  
*Prin. Invest.:* Y ZHANG  
*Tech. Officer:* ARC/M MEYYAPPAN  
*CASE Category:* 13 - PHYSICS

**NCC 2 5411**                      **ARIZONA STATE UNIV**                      **1361**  
 ECOGENOMICS: MOLECULAR BIOLOGICAL ANALYSES OF HYPE RSALINE  
 BACTERIAL COMMUNITIES  
 11/22/2000 - 11/30/2001                      FY01: \$59,970                      Total: \$59,970  
*Prin. Invest.:* F G PICHEL  
*Tech. Officer:* ARC/D J DESMARAIS, ARC/B M BEBOUT  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 2 52284**                      **ARIZONA STATE UNIV**                      **1362**  
 THE PROTECTIVE ROLES OF THE ANTIOXIDANT EXZYMES SU PEROXIDE  
 DISMUTASE & CATALASE IN THE GREEN PHOTOS  
 08/09/2001 - 08/31/2002                      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* R E BLAKENSHIP  
*Tech. Officer:* ARC/L ROTHSCHILD, ARC/E P CONDON  
*CASE Category:* 51 - BIOLOGY(EXCLUDING ENVIR)

**NGT 5 30221**                      **ARIZONA STATE UNIV**                      **1363**  
 EFFECTS OF TECTONIC PROCESSES AND CLIMATIC FLUCTUA TIONS ON  
 LANDSCAPE DEVELOPMENT  
 08/26/1999 - 08/31/2001                      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* J R ARROWSMITH  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50077 ARIZONA STATE UNIV 1364**  
 INVESTIGATION OF AEOLIAN FEATURES USING RADAR DATA TS, & FIELD  
 WORK  
 08/26/1997 - 12/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* HQ/A NURRIDDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50276 ARIZONA STATE UNIV 1365**  
 PARTITIONING OF HIGHLY SIDEROPHILE ELEMENTS AT ELEVATED PRES-  
 SURE & TEMPERATURE: CONSTRAINTS ON  
 06/20/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* T SHARP  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 21 ARIZONA STATE UNIV 1366**  
 VESTIBULAT INFO IN EYE HEAD HAND COORDINATION  
 05/13/1997 - 12/31/2000 FY01: -\$3,011 Total: \$62,989  
*Prin. Invest.:* R D SEIDLER  
*Tech. Officer:* JSC/D G SICKCOREZ  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 2 6012 DINE COLLEGE (FORMERLY NAVAJO COMM COLL) 1367**  
 THE AMERICAN INDIAN NETWORK INFORMATION CENTER  
 07/24/1997 - 08/31/2000 FY01: \$0 Total: \$399,990  
*Prin. Invest.:* A SAM  
*Tech. Officer:* ARC/L K ALDERETE, ARC/G S LEE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10254 DINE COLLEGE (FORMERLY NAVAJO COMM COLL) 1368**  
 INTERNET-BASED EDUCATION & RESEARCH WITH ROBOTIC TELESCOPES  
 FOR NATIVEAMERICAN & HISPANIC  
 01/10/2001 - 01/14/2002 FY01: \$218,000 Total: \$218,000  
*Prin. Invest.:* S SEMKEN  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 968 DINE COLLEGE (FORMERLY NAVAJO COMM COLL) 1369**  
 STUDENT MATH & SCIENCE CAREERS INITIATIVES  
 09/24/1997 - 09/30/1999 FY01: -\$18,608 Total: \$373,704  
*Prin. Invest.:* M C BAUER  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 9 1172 DINE COLLEGE (FORMERLY NAVAJO COMM COLL) 1370**  
 SCIENCE ENRICHMENT ACTIVITIES  
 09/28/1999 - 09/29/2001 FY01: \$60,360 Total: \$200,000  
*Prin. Invest.:* M C BAUER  
*Tech. Officer:* JSC/L ARMEDARIZ  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG13 99028 DINE COLLEGE (FORMERLY NAVAJO COMM COLL) 1371**  
 EXPANDING THE POOL OF GIS PROFESSIONALS FOR THE NAVAJO NATION  
 09/02/1999 - 09/27/2001 FY01: \$76,540 Total: \$192,080  
*Prin. Invest.:* D ISELY  
*Tech. Officer:* JSC/R TRAVIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 6003 NORTHERN ARIZONA UNIV 1372**  
 PATHWAYS LEADING TO SUCCESS (PALS)  
 08/29/1994 - 12/31/1999 FY01: \$0 Total: \$149,685  
*Prin. Invest.:* G M BOYNE  
*Tech. Officer:* ARC/A R GROSS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 4995 NORTHERN ARIZONA UNIV 1373**  
 MARS FLUIDIZED EJECTA CRATER STUDIES  
 07/23/1997 - 07/14/2000 FY01: -\$4,252 Total: \$38,548  
*Prin. Invest.:* D BARNES  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6790 NORTHERN ARIZONA UNIV 1374**  
 INFRARED SPECTROSCOPY OF PLANETARY SATELLITES  
 02/10/1998 - 09/14/2001 FY01: \$0 Total: \$164,147  
*Prin. Invest.:* C A GRIFFITH  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7757 NORTHERN ARIZONA UNIV 1375**  
 A PHOTOMETRIC SURVEY OF TRANS-NEPTUNIAN OBJECTS  
 12/07/1998 - 09/30/2002 FY01: \$0 Total: \$126,030  
*Prin. Invest.:* S C TEGLER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8146 NORTHERN ARIZONA UNIV 1376**  
 SPECTROSCOPIC INVESTIGATIONS OF EXTRASOLAR PLANETS AND  
 BROWN DWARFS  
 02/04/1999 - 09/30/2002 FY01: \$28,000 Total: \$58,000  
*Prin. Invest.:* C A GRIFFITH  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8203 NORTHERN ARIZONA UNIV 1377**  
 X-RAY PROCESSING OF COMETARY ICE MIXTURES  
 02/08/1999 - 01/31/2002 FY01: \$35,000 Total: \$102,000  
*Prin. Invest.:* D M CORNELISON  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8525 NORTHERN ARIZONA UNIV 1378**  
 FROM GIANT PLANETS TO COOL STARS  
 05/13/1999 - 09/30/2000 FY01: \$0 Total: \$12,875  
*Prin. Invest.:* C GRIFFITH  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9214 NORTHERN ARIZONA UNIV 1379**  
 STRUCTURE AND COMPOSITION OF PLANETARY ATMOSPHERES  
 03/09/2000 - 03/14/2003 FY01: \$0 Total: \$80,000  
*Prin. Invest.:* R YELLE  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11078**                      **NORTHERN ARIZONA UNIV**                      **1380**  
 DYNAMICS, COMPOSITION, AND THERMAL STRUCTURE OF TITAN'S UPPER  
 ATMOSPHERE  
 08/06/2001 - 08/14/2004                      FY01: \$41,802                      Total: \$41,802  
*Prin. Invest.:* R YELLE  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 11239**                      **NORTHERN ARIZONA UNIV**                      **1381**  
 SPECTROSCOPIC INVESTIGATIONS OF TITAN'S ATMOSPHERE AND  
 SURFACE  
 08/15/2001 - 08/31/2004                      FY01: \$70,600                      Total: \$70,600  
*Prin. Invest.:* C GRIFFITH  
*Tech. Officer:* GSFC/J HILMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 5356**                      **NORTHERN ARIZONA UNIV**                      **1382**  
 STUDY OF THE HOST ROCKS OF CARBONACEOUS MATTER FROM IMPACT  
 DEPOSITS, METEORITES & EXPERIMENTAL PROD  
 09/29/1999 - 03/31/2001                      FY01: \$0                      Total: \$30,000  
*Prin. Invest.:* J H WITTKER  
*Tech. Officer:* ARC/M L FONDA, ARC/T E BUNCH  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5429**                      **NORTHERN ARIZONA UNIV**                      **1383**  
 AN UNSTEADY REYNOLDS-AVERAGED NAVIER-STOKES SIMULATION OF  
 THE FLOW AROUND AN UNCONFINED CUBOID AT H  
 03/22/2001 - 03/31/2002                      FY01: \$38,361                      Total: \$38,361  
*Prin. Invest.:* E P DUQUE  
*Tech. Officer:* ARC/C TUNG, ARC/R STRAWN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1409**                      **PRESCOTT COLLEGE**                      **1384**  
 STATE AND LOCAL GOVERNMENT APPLICATIONS PROGRAM  
 06/07/2000 - 12/31/2001                      FY01: \$442,000                      Total: \$872,000  
*Prin. Invest.:* W W ORR  
*Tech. Officer:* ARC/E P CONDON  
*CASE Category:* 13 - PHYSICS

**NAG 1 2023**                      **UNIV OF ARIZONA**                      **1385**  
 SATELLITE DATA STUDIES OF STRATOSPHERIC OZONE MY 1/3  
 03/18/1998 - 04/30/2001                      FY01: \$1                      Total: \$279,690  
*Prin. Invest.:* L L HOOD  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2041**                      **UNIV OF ARIZONA**                      **1386**  
 DEVELOPMENT OF ANALYSIS METHODS FOR DESIGNING WITH  
 COMPONENTS  
 03/31/1998 - 03/31/2001                      FY01: \$1                      Total: \$270,002  
*Prin. Invest.:* E MADENCI  
*Tech. Officer:* LARC/J H STARNES, LARC/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2052**                      **UNIV OF ARIZONA**                      **1387**  
 BOLTED DOUBLE-LAP JOINTS W/SANDWICH PANELS & LAMINATES UNDER  
 MECH & THERMAL LOADING  
 04/08/1998 - 04/07/2001                      FY01: \$1                      Total: \$155,176  
*Prin. Invest.:* E MADENCI  
*Tech. Officer:* LARC/S P WALKER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 2218**                      **UNIV OF ARIZONA**                      **1388**  
 IMPROVEMENT AND REFINEMENT OF THE GPS/MET (GLOBAL POSI-  
 TIONING SYS/METEOROLOGY) DATA ANAL ALGORITHM  
 08/10/1999 - 07/31/2001                      FY01: \$0                      Total: \$124,000  
*Prin. Invest.:* B M HERMAN, D S FENG  
*Tech. Officer:* LARC/V E DELNORE, LARC/J L RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2317**                      **UNIV OF ARIZONA**                      **1389**  
 TAILORING OF BONDED AND BOLTED LAP JOINTS AND PATCH REPAIR OF  
 DAMAGED COMPOSITE PANELS  
 06/28/2000 - 10/31/2002                      FY01: \$110,001                      Total: \$198,450  
*Prin. Invest.:* E MADENCI  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01124**                      **UNIV OF ARIZONA**                      **1390**  
 SAGE II AND SAGE III SATELLITE VALIDATION AND SCIENCE STUDIES  
 09/18/2001 - 03/31/2004                      FY01: \$43,700                      Total: \$43,700  
*Prin. Invest.:* B M HERMAN  
*Tech. Officer:* LARC/W P CHU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1187**                      **UNIV OF ARIZONA**                      **1391**  
 INFLUENCE OF UNWEIGHTING ON INSULIN SIGNAL TRANSDUCTION IN  
 MUSCLE  
 03/18/1998 - 04/30/2002                      FY01: \$0                      Total: \$425,994  
*Prin. Invest.:* M E TISCHLER, E J HENRISKSEN  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1369**                      **UNIV OF ARIZONA**                      **1392**  
 EFFECT OF MICROGRAVITY ON THE DEVELOPMENT OF THE IMMUNE  
 SYSTEM  
 08/02/1999 - 07/31/2002                      FY01: \$184,859                      Total: \$471,605  
*Prin. Invest.:* D DELUCA  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1446**                      **UNIV OF ARIZONA**                      **1393**  
 CONSTRUCTION METHODS FOR VERY LARGE FORMAT FARRINER  
 ARRAYS  
 09/28/2000 - 08/31/2001                      FY01: \$0                      Total: \$50,000  
*Prin. Invest.:* E T YOUNG  
*Tech. Officer:* ARC/C R MCCREIGHT, ARC/R E MCMURRAY  
*CASE Category:* 11 - ASTRONOMY

**NAG 3 1869**                      **UNIV OF ARIZONA**                      **1394**  
 AN EXPERIMENTAL STUDY OF RICHTMYER  
 05/09/1996 - 05/08/2002                      FY01: \$0                      Total: \$414,000  
*Prin. Invest.:* J JACOBS  
*Tech. Officer:* GRC/A T CHAI  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2154**                      **UNIV OF ARIZONA**                      **1395**  
 MODELING OF TRANSPORT PROCESSES IN A SOLID OXIDE ELECTROLYZED  
 GENERATING OXYGEN ON MARS  
 04/10/1998 - 01/31/2002                      FY01: \$118,750                      Total: \$343,750  
*Prin. Invest.:* K R SRIDHAR  
*Tech. Officer:* GRC/J S LING, GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG 3 2354**                      **UNIV OF ARIZONA**                      **1396**  
 RESONANCE EFFECTS IN SINGLE-AND DOUBLE-DIFFUSIVE S YSTEMS  
 UNDER GRAVITY MODULATION  
 03/15/2000 – 11/30/2003      FY01: \$95,000                      Total: \$145,000  
*Prin. Invest.:* C F CHEN  
*Tech. Officer:* GRC/C E NIEDERHAUS  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 5 637**                      **UNIV OF ARIZONA**                      **1397**  
 EUV SPECTRAL IMAGER  
 07/11/1986 – 09/30/2000      FY01: \$0                      Total: \$1,411,282  
*Prin. Invest.:* A L BROADFOOT  
*Tech. Officer:* GSFC/L J EARLY, GSFC/R H PLESS  
*CASE Category:* 13 – PHYSICS

**NAG 5 2962**                      **UNIV OF ARIZONA**                      **1398**  
 X-RAY SPECTRUM OF THE HIGH REDSHIFT QUASAR B1422+ 23  
 06/09/1995 – 06/14/2000      FY01: -\$1,197                      Total: \$53,744  
*Prin. Invest.:* J BECHTOLD  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 3436**                      **UNIV OF ARIZONA**                      **1399**  
 ABSOLUTE RADIOMETRIC CALIBRATION AND ATMOSPHERIC C ORRECTION  
 OF LANDSAT-7 THEMATIC MAPPER.  
 10/07/1996 – 06/30/2001      FY01: \$44,817                      Total: \$693,679  
*Prin. Invest.:* C J THOME  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 5 3631**                      **UNIV OF ARIZONA**                      **1400**  
 PLANET FORMATION AND EVOLUTION: COLLISIONAL AND  
 02/12/1997 – 09/30/2001      FY01: \$86,200                      Total: \$426,690  
*Prin. Invest.:* R GREENBERG  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 3640**                      **UNIV OF ARIZONA**                      **1401**  
 UTILIZATION OF EOS DATA IN QUANTIFYING THE PROCESS HYDROLOGIC  
 CYCLE IN ARID/SEMI-ARID REGIONS  
 02/12/1997 – 03/31/2002      FY01: \$168,706                      Total: \$2,809,008  
*Prin. Invest.:* S SOROOSHAIN  
*Tech. Officer:* GSFC/E Y WOOD  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 5 3785**                      **UNIV OF ARIZONA**                      **1402**  
 SUB-MILLIMETER SPECTROSCOPY OF ASTROPHYSICALLY-IMP G  
 MOLECULES  
 03/28/1997 – 11/30/2000      FY01: \$0                      Total: \$228,000  
*Prin. Invest.:* L M ZIURY  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 3791**                      **UNIV OF ARIZONA**                      **1403**  
 A STUDY OF DUST JET EVOLUTION IN COMET HALLEY  
 03/07/1997 – 02/28/2002      FY01: \$59,900                      Total: \$233,634  
*Prin. Invest.:* M M LARSON  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 5 3796**                      **UNIV OF ARIZONA**                      **1404**  
 RELATIVE ABUNDANCES OF 13C, 18O, 15N AND 2H ON TRI B  
 MEASUREMENTS AND REFLECTANCE SPECTROSCOPY  
 03/11/1997 – 03/14/2002      FY01: \$85,100                      Total: \$421,245  
*Prin. Invest.:* D H BROWN  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 3914**                      **UNIV OF ARIZONA**                      **1405**  
 SUPPORT FOR THE SPACE IMAGERY CENTER  
 02/21/1997 – 12/31/2000      FY01: \$0                      Total: \$78,601  
*Prin. Invest.:* R G STROM  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 3937**                      **UNIV OF ARIZONA**                      **1406**  
 PLANETARY SPECTROSCOPY  
 03/26/1997 – 07/31/2001      FY01: \$0                      Total: \$267,280  
*Prin. Invest.:* D FINK  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 4042**                      **UNIV OF ARIZONA**                      **1407**  
 STABILIZATION OF CCD QUANTUM EFFICIENCY IN THE ULT  
 04/07/1997 – 09/14/2000      FY01: -\$28                      Total: \$273,220  
*Prin. Invest.:* D P LESSER  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 4084**                      **UNIV OF ARIZONA**                      **1408**  
 GEOCHEMICAL EVOLUTION OF THE EARTH, MOON, IGNEOUS ERRESTRIAL  
 PLANETARY BODIES  
 03/10/1997 – 06/30/2000      FY01: -\$434                      Total: \$659,566  
*Prin. Invest.:* D J DRAKE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 12 – CHEMISTRY

**NAG 5 4124**                      **UNIV OF ARIZONA**                      **1409**  
 SAR INVESTIGATIONS OF LATE PLEISTOCENE PALEOFLOODS PALEOCLI-  
 MATES IN CENTRAL ASIA  
 03/05/1997 – 01/31/2001      FY01: -\$10                      Total: \$178,855  
*Prin. Invest.:* V R BAKER  
*Tech. Officer:* GSFC/R H THOMAS  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 5 4142**                      **UNIV OF ARIZONA**                      **1410**  
 INFRARED EMISSION SPECTROSCOPY OF ASTROPHYSICAL MO  
 04/22/1997 – 03/31/2000      FY01: -\$194                      Total: \$224,806  
*Prin. Invest.:* D F BERNATH  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 4166**                      **UNIV OF ARIZONA**                      **1411**  
 OBSERVATIONAL STUDIES OF PLANETARY ATMOSPHERES  
 03/15/1997 – 03/14/2000      FY01: -\$1                      Total: \$180,005  
*Prin. Invest.:* D M HUNTEN  
*Tech. Officer:* GSFC/W HUEBNER  
*CASE Category:* 11 – ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

ARIZONA

<b>NAG 5 4214</b>	<b>UNIV OF ARIZONA</b>	<b>1412</b>	<b>NAG 5 4984</b>	<b>UNIV OF ARIZONA</b>	<b>1421</b>
INTERIORS AND ATMOSPHERES OF THE OUTER PLANETS			MEASURING MARTIAN ATMOSPHERIC WATER VAPOR		
03/24/1997 - 12/31/2001	FY01: \$71,291	Total: \$336,648	06/26/1997 - 03/14/2000	FY01: -\$333	Total: \$192,734
<i>Prin. Invest.:</i> D B HUBBARD			<i>Prin. Invest.:</i> D L SPRAGUE		
<i>Tech. Officer:</i> GSFC/J BERGSTRALH			<i>Tech. Officer:</i> GSFC/W HUEBNER		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 4451</b>	<b>UNIV OF ARIZONA</b>	<b>1413</b>	<b>NAG 5 5143</b>	<b>UNIV OF ARIZONA</b>	<b>1422</b>
STUDIES IN PLANETARY RINGS			A TWO-DIMENSIONAL IMAGING FUV SPECTROGRAPH		
05/08/1997 - 06/30/2001	FY01: -\$22,474	Total: \$154,426	06/23/1997 - 10/31/2000	FY01: -\$19	Total: \$672,970
<i>Prin. Invest.:</i> D C PORCO			<i>Prin. Invest.:</i> J HOLBERG		
<i>Tech. Officer:</i> GSFC/PROGERS			<i>Tech. Officer:</i> GSFC/W JOHNSON		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 4559</b>	<b>UNIV OF ARIZONA</b>	<b>1414</b>	<b>NAG 5 5180</b>	<b>UNIV OF ARIZONA</b>	<b>1423</b>
THEORY OF CHARGED-PARTICLE TRANSPORT AND ASTROPHYS			COSMIC RAY TRANSPORT AND WAVES IN ASTROPHYSICAL PLASMAS		
06/02/1997 - 01/31/2001	FY01: -\$6,961	Total: \$151,339	03/09/1998 - 03/08/2001	FY01: \$0	Total: \$116,000
<i>Prin. Invest.:</i> J JOKIPII			<i>Prin. Invest.:</i> G M WEBB		
<i>Tech. Officer:</i> GSFC/M A FORMAN			<i>Tech. Officer:</i> GSFC/B A MERRITT		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 4598</b>	<b>UNIV OF ARIZONA</b>	<b>1415</b>	<b>NAG 5 5336</b>	<b>UNIV OF ARIZONA</b>	<b>1424</b>
LONG TERM DOPPLER SHIFT AND LINE PROFILE STUDIES O TARGET STARS			FULL FUNDING FOR THE 1ST YEAR OF THE GRANT FOR \$10 K, PI: G. G. WILLIAMS GRANT TITLE: LOTIS (W/ PARK		
05/20/1997 - 02/28/2002	FY01: \$0	Total: \$410,967	05/31/2001 - 03/31/2002	FY01: \$10,000	Total: \$10,000
<i>Prin. Invest.:</i> D S MCMILLAN			<i>Prin. Invest.:</i> G WILLIAMS		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> WFF/B MERRITT		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 4767</b>	<b>UNIV OF ARIZONA</b>	<b>1416</b>	<b>NAG 5 6339</b>	<b>UNIV OF ARIZONA</b>	<b>1425</b>
NOBLE GAS STUDIES OF EARLY SOLAR SYSTEM HISTORY			VALIDATION AND CORRECTION FOR THE MODIS SPATIAL RE SPONSE		
06/09/1997 - 05/31/2002	FY01: \$55,000	Total: \$228,000	10/02/1997 - 09/30/2001	FY01: \$106,615	Total: \$593,294
<i>Prin. Invest.:</i> D D SWINDLE			<i>Prin. Invest.:</i> R SCHOWENGERDT		
<i>Tech. Officer:</i> GSFC/D NAVA			<i>Tech. Officer:</i> GSFC/D O STARR		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 4832</b>	<b>UNIV OF ARIZONA</b>	<b>1417</b>	<b>NAG 5 6461</b>	<b>UNIV OF ARIZONA</b>	<b>1426</b>
COSMOGENIC 14C IN METEORITES AND LUNAR SAMPLES			LIS VALIDATION STUDIES USING LIGHTNING AT THE KSC- ER		
06/17/1997 - 05/31/2002	FY01: \$35,000	Total: \$175,000	10/14/1997 - 09/30/2000	FY01: \$0	Total: \$225,560
<i>Prin. Invest.:</i> D JULL			<i>Prin. Invest.:</i> P KRIDER		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GSFC/D O STARR		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 4834</b>	<b>UNIV OF ARIZONA</b>	<b>1418</b>	<b>NAG 5 6543</b>	<b>UNIV OF ARIZONA</b>	<b>1427</b>
TRANSPORT EQUATIONS OF COSMIC RAYS			IMPACT CRATERING AND THE EVOLUTION OF THE TERRESTR IAL PLANETS		
06/17/1997 - 11/30/2000	FY01: \$0	Total: \$201,585	12/08/1997 - 09/30/2001	FY01: \$150,000	Total: \$592,500
<i>Prin. Invest.:</i> M KOTA			<i>Prin. Invest.:</i> H MELOSH		
<i>Tech. Officer:</i> GSFC/M AFORMAN			<i>Tech. Officer:</i> GSFC/P ROGERS		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<b>NAG 5 4845</b>	<b>UNIV OF ARIZONA</b>	<b>1419</b>	<b>NAG 5 6611</b>	<b>UNIV OF ARIZONA</b>	<b>1428</b>
GAS-GRAIN INTERACTIONS			SPACEWATCH SURVEY OF THE SOLAR SYSTEM		
06/27/1997 - 10/31/2001	FY01: \$38,000	Total: \$151,900	02/12/1998 - 11/30/2000	FY01: \$0	Total: \$223,215
<i>Prin. Invest.:</i> D L HOOD			<i>Prin. Invest.:</i> R S MCMILLAN		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GSFC/T MORGAN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<b>NAG 5 4944</b>	<b>UNIV OF ARIZONA</b>	<b>1420</b>			
MINERALOGIC AND TRACE-ELEMENT STUDIES OF METEORITE IMPACTS					
06/23/1997 - 03/14/2001	FY01: \$0	Total: \$799,000			
<i>Prin. Invest.:</i> D V BOYNTON					
<i>Tech. Officer:</i> GSFC/D NAVA					
<i>CASE Category:</i> 11 - ASTRONOMY					

**NAG 5 6620**                      **UNIV OF ARIZONA**                      **1429**  
 THEORETICAL AND MODELLING SUPPORT FOR THE HELIOSPHERIC MISSIONS  
 11/18/1997 - 11/14/2000      FY01: -\$1,501                      Total: \$283,499  
*Prin. Invest.:* J JOKIPPI  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6779**                      **UNIV OF ARIZONA**                      **1430**  
 ANALYSIS OF ICE CORES FOR ESTIMATING ACCUMULATION PATTERNS AND PAST ATMOSPHERIC CHEMISTRY IN GREENLAND  
 01/14/1998 - 06/30/2001      FY01: \$0                      Total: \$465,595  
*Prin. Invest.:* R BALES  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7073**                      **UNIV OF ARIZONA**                      **1431**  
 A COMPREHENSIVE THEORY FOR M DWARFS, BROWN DWARFS, AND GIANT PLANETS-ATP  
 02/24/1998 - 02/14/2002      FY01: \$0                      Total: \$263,467  
*Prin. Invest.:* A S BURROWS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7083**                      **UNIV OF ARIZONA**                      **1432**  
 INFRARED OBSERVATIONS OF SMALL BODIES IN THE OUTER SOLAR SYSTEM  
 03/10/1998 - 03/31/2001      FY01: \$0                      Total: \$149,939  
*Prin. Invest.:* R H BROWN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7089**                      **UNIV OF ARIZONA**                      **1433**  
 STRUCTURE OF THE HELIOSPHERE INFERRED FROM VOYAGER UVS MEASUREMENTS  
 02/23/1998 - 01/31/2002      FY01: \$0                      Total: \$117,700  
*Prin. Invest.:* B R SANDEL  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7151**                      **UNIV OF ARIZONA**                      **1434**  
 THE PHYSICAL ORIGIN OF GALAXY MORPHOLOGIES AND SCALING LAWS-ATP  
 03/04/1998 - 03/14/2001      FY01: \$0                      Total: \$260,097  
*Prin. Invest.:* M STEINMETZ  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7211**                      **UNIV OF ARIZONA**                      **1435**  
 COUPLED PHYSICAL AND CHEMICAL EVOLUTION OF THE SOLAR NEBULA  
 03/26/1998 - 01/31/2001      FY01: \$0                      Total: \$115,000  
*Prin. Invest.:* J LUNINE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7215**                      **UNIV OF ARIZONA**                      **1436**  
 INCORPORATION OF NOBLE GASES INTO INTERSTELLAR ICE ANALOGS  
 03/31/1998 - 05/31/2001      FY01: \$0                      Total: \$87,300  
*Prin. Invest.:* T D SWINDLE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7257**                      **UNIV OF ARIZONA**                      **1437**  
 ALGORITHM FOR FUTURE OZONE PROFILING USING LIMB SCATTER MEASUREMENTS  
 04/14/1998 - 12/31/2001      FY01: \$0                      Total: \$262,000  
*Prin. Invest.:* B M HERMAN  
*Tech. Officer:* GSFC/R D MCPETERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7364**                      **UNIV OF ARIZONA**                      **1438**  
 THERMAL HISTORY OF PLANETARY MATERIALS: EXPERIMENTAL & THEORETICAL STUDIES, AND APPLICATIONS  
 04/29/1998 - 04/30/2001      FY01: \$0                      Total: \$179,000  
*Prin. Invest.:* J GANGULY  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7499**                      **UNIV OF ARIZONA**                      **1439**  
 THEORETICAL MODELS OF EXTRASOLAR GIANT PLANETS  
 06/01/1998 - 04/30/2001      FY01: \$0                      Total: \$145,000  
*Prin. Invest.:* A BURROWS  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7509**                      **UNIV OF ARIZONA**                      **1440**  
 METEORITE IMPACT AND GLOBAL CHANGE: A NUMERICAL STUDY OF THE RESPONSE OF THE EARTH'S CLIMATE TO L  
 06/30/1998 - 08/31/2000      FY01: -\$2,300                      Total: \$92,708  
*Prin. Invest.:* H MELOSH  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7533**                      **UNIV OF ARIZONA**                      **1441**  
 MOSAIC OF CCDs TO SURVEY FOR ASTEROIDS AND COMETS  
 06/11/1998 - 12/31/2001      FY01: \$0                      Total: \$730,006  
*Prin. Invest.:* R S MCMILLAN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7554**                      **UNIV OF ARIZONA**                      **1442**  
 PRECURSORY SIGNALS ASSOCIATED WITH REGIONAL AND INTERANNUAL VARIABILITY OF THE NORTH AMERICAN SUMMER  
 06/25/1998 - 06/30/2001      FY01: \$0                      Total: \$399,999  
*Prin. Invest.:* W SHUTTLEWORTH  
*Tech. Officer:* GSFC/E ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7716**                      **UNIV OF ARIZONA**                      **1443**  
 IMPROVING SATELLITE RAIN ESTIMATION ALGORITHMS USING COMBINATION OF TRMM INSTANTANEOUS PRECIPITATION  
 10/27/1998 - 10/31/2000      FY01: -\$4                      Total: \$307,701  
*Prin. Invest.:* S SOROOSHIAN  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7734**                      **UNIV OF ARIZONA**                      **1444**  
 HEAVY ELEMENT ABUNDANCES: CLUES TO THE EVOLUTION OF STARS  
 12/18/1998 - 10/31/2001      FY01: \$104,700                      Total: \$342,731  
*Prin. Invest.:* D GARNETT  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

ARIZONA

**NAG 5 7758** **UNIV OF ARIZONA** **1445**  
 2MASS ASTEROID AND COMET CATALOG  
 12/08/1998 - 09/30/2001 FY01: \$36,900 Total: \$110,700  
*Prin. Invest.:* M V SYKES  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7763** **UNIV OF ARIZONA** **1446**  
 NEXT GENERATION SPACE TELESCOPE (NGST) AD HOC SCIENCE  
 WORKING GROUP (ASWG) ACTIVITY  
 01/14/1999 - 12/31/1999 FY01: \$0 Total: \$10,000  
*Prin. Invest.:* M MEYER  
*Tech. Officer:* GSFC/E SMITH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7780** **UNIV OF ARIZONA** **1447**  
 WORKSHOP ON SUN-TERRESTRIAL CLIMATE CONNECTIONS  
 10/29/1998 - 07/31/2001 FY01: \$15,000 Total: \$84,017  
*Prin. Invest.:* W A SPRIGG  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7793** **UNIV OF ARIZONA** **1448**  
 THEORY AND MODELING OF ENERGETIC PARTICLE COMPOSIT ION  
 SPECTRA AND ANISOTROPIES AND TIME VARIA  
 12/10/1998 - 10/31/2001 FY01: \$104,688 Total: \$280,414  
*Prin. Invest.:* J GIACALONE  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7834** **UNIV OF ARIZONA** **1449**  
 A COMPARISON OF OBSERVATIONS AND GCM SIMULATIONS O F THE  
 QUASI-DECADAL OSCILLATION  
 12/14/1998 - 12/14/2000 FY01: \$0 Total: \$84,444  
*Prin. Invest.:* L L HOOD  
*Tech. Officer:* GSFC/R RIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7854** **UNIV OF ARIZONA** **1450**  
 SOLAR SYSTEM RESEARCH WITH THE SPACEWATCH 1.8-M TE LESCOPE  
 12/07/1998 - 11/30/2001 FY01: \$130,000 Total: \$382,450  
*Prin. Invest.:* D S MCMILLAN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7865** **UNIV OF ARIZONA** **1451**  
 ACTIVE VOLCANISM ON IO  
 01/12/1999 - 12/31/2000 FY01: -\$1 Total: \$129,999  
*Prin. Invest.:* D S MCEWEN  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7923** **UNIV OF ARIZONA** **1452**  
 HUBBLE SPACE TELESCOPE ASTRONOMY  
 12/14/1998 - 09/30/2001 FY01: -\$1,633,017 Total: \$5,683,316  
*Prin. Invest.:* R THOMPSON  
*Tech. Officer:* GSFC/J JELETIC  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7957** **UNIV OF ARIZONA** **1453**  
 TIDAL AND TECTONIC PROCESSES ON EUROPA  
 01/08/1999 - 12/31/2000 FY01: \$0 Total: \$88,184  
*Prin. Invest.:* D GREENBERG  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7966** **UNIV OF ARIZONA** **1454**  
 STUDY OF SOLAR AND HELIOSPHERIC ENERGETIC IONS VIA ENERGETIC  
 NEUTRALATOMS USING CELIAS/SOHO  
 12/15/1998 - 12/31/2001 FY01: \$45,261 Total: \$135,784  
*Prin. Invest.:* K HSIEH  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7994** **UNIV OF ARIZONA** **1455**  
 THE MARS LOWER AND UPPER ATMOSPHERE: DETAILED COUP LING  
 USING GENERALCIRCULATION MODELS  
 01/06/1999 - 01/14/2002 FY01: \$77,000 Total: \$249,896  
*Prin. Invest.:* S BOUGHER  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8006** **UNIV OF ARIZONA** **1456**  
 OBSERVATIONS OF TWO COMET-ASTEROID TRANSITION OBJ CTS  
 01/06/1999 - 01/14/2001 FY01: \$0 Total: \$16,283  
*Prin. Invest.:* D CAMPINS  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8015** **UNIV OF ARIZONA** **1457**  
 CATALINA NEO SKY SURVEY  
 01/13/1999 - 12/31/2000 FY01: \$0 Total: \$582,600  
*Prin. Invest.:* S LARSON  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8051** **UNIV OF ARIZONA** **1458**  
 GALILEO EUV OBSERVATIONS OF IO'S PLASMA TORUS AND JUPITER'S  
 ATMOSPHERE  
 01/13/1999 - 01/14/2001 FY01: \$0 Total: \$114,918  
*Prin. Invest.:* D HERBERT  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8095** **UNIV OF ARIZONA** **1459**  
 PRESERVATION AND ENHANCEMENT OF THE SPACEWATCH DAT A  
 ARCHIVES  
 01/29/1999 - 01/31/2002 FY01: \$36,700 Total: \$127,278  
*Prin. Invest.:* J A LARSEN  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8117** **UNIV OF ARIZONA** **1460**  
 COMBINED LIDAR AND RASSIVE SENSING TECHNIQUES FOR CHARACTER-  
 IZATION OF AEROSOL RADIATIVE EFFECTS  
 01/26/1999 - 01/31/2002 FY01: \$105,000 Total: \$314,862  
*Prin. Invest.:* J A REAGAN  
*Tech. Officer:* GSFC/M MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8152**                      **UNIV OF ARIZONA**                      **1461**  
 MARS GLOBAL SURVEYOR AEROBRACING: THERMOSPHERE- IONOSPHERE  
 TRENDS & MTGCM INTERPRETATION  
 02/11/1999 - 03/31/2001      FY01: \$0                      Total: \$125,300  
*Prin. Invest.:* S W BOUGHER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8157**                      **UNIV OF ARIZONA**                      **1462**  
 SUPPORT AN EXTENSION SPECIALIST IN GEOSPATIAL INFORMATION  
 TECHNOLOGY FOR THE STATE OF ARIZONA  
 02/05/1999 - 01/31/2002      FY01: \$149,400              Total: \$399,349  
*Prin. Invest.:* D YOUNG  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8185**                      **UNIV OF ARIZONA**                      **1463**  
 ANALYSIS OF THE CRUSTAL MAGNETIC FIELD OF MARS  
 02/17/1999 - 02/28/2002      FY01: \$42,000              Total: \$124,200  
*Prin. Invest.:* L L HOOD  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8214**                      **UNIV OF ARIZONA**                      **1464**  
 INFLUENCE OF SUBGRID-SCALE HETEROGENEITY ON REMOTELY  
 SENSED ESTIMATES OF THE AMAZONIAN SURFACE EN  
 03/01/1999 - 02/28/2002      FY01: \$20,276              Total: \$60,001  
*Prin. Invest.:* J W SHUTTLEWORTH  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8239**                      **UNIV OF ARIZONA**                      **1465**  
 A COMPREHENSIVE THEORETICAL STUDY OF THE INNER 10 PARSECS AT  
 THE GALACTIC CENTER (ATP98)  
 02/26/1999 - 02/28/2002      FY01: \$64,000              Total: \$182,404  
*Prin. Invest.:* F MELIA  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8308**                      **UNIV OF ARIZONA**                      **1466**  
 QUANTITATIVE INTERPRETATION OF VOLCANIC FEATURES IN MOC  
 IMAGES  
 03/03/1999 - 11/30/2001      FY01: \$0                      Total: \$94,300  
*Prin. Invest.:* L KESZTHELYI  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8340**                      **UNIV OF ARIZONA**                      **1467**  
 COLORIMETRY OF THE GALILEAN SATELLITES  
 04/07/1999 - 03/31/2001      FY01: \$0                      Total: \$74,784  
*Prin. Invest.:* D E GEISSLER  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8341**                      **UNIV OF ARIZONA**                      **1468**  
 MODELS AND MODES OF ENABLING THE USE OF NASA EARTH SCIENCE  
 AND DATA IN DECISION MAKING  
 04/07/1999 - 12/31/2001      FY01: \$240,000              Total: \$580,000  
*Prin. Invest.:* S E MARSH  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8349**                      **UNIV OF ARIZONA**                      **1469**  
 ACCURATE SPECTROPHOTOMETRY OF THE PATHFINDER LANDING SITE  
 02/26/1999 - 02/28/2001      FY01: \$0                      Total: \$145,000  
*Prin. Invest.:* P H SMITH  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8426**                      **UNIV OF ARIZONA**                      **1470**  
 MULTIWAVELENGTH DIAGNOSTICS OF GALAXY EVOLUTION AND STAR  
 FORMATION  
 04/26/1999 - 04/30/2002      FY01: \$125,168              Total: \$365,832  
*Prin. Invest.:* R C KENNICUTT  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8502**                      **UNIV OF ARIZONA**                      **1471**  
 SUPPORT OF ACTIVITIES AND OPERATION OF THE GLOBAL ENERGY AND  
 WATERCYCLE EXPERIMENT SCIENCE STATION  
 05/11/1999 - 05/14/2002      FY01: \$183,743              Total: \$507,641  
*Prin. Invest.:* S SOROSHIAN  
*Tech. Officer:* GSFC/R SCHIEFFER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8503**                      **UNIV OF ARIZONA**                      **1472**  
 AN INTEGRATED INFORMATION SYSTEM FOR MULTI-PURPOSE USER-  
 ADAPTIVE ACCESS TO LAND SURFACE HYDROLOGIC  
 05/11/1999 - 05/14/2002      FY01: \$500,127              Total: \$1,052,325  
*Prin. Invest.:* S SOROSHIAN  
*Tech. Officer:* GSFC/E WOOD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8509**                      **UNIV OF ARIZONA**                      **1473**  
 IMPLICATIONS OF VOLATILE ICE EMISSIONS FOR GASES AROUND  
 TRANS-NEPTUNIAN OBJECTS  
 06/02/1999 - 06/30/2000      FY01: -\$326                      Total: \$30,874  
*Prin. Invest.:* J STANSBERRY  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8660**                      **UNIV OF ARIZONA**                      **1474**  
 VALIDATION OF MODLAND PRODUCTS WITH LIGHT AIRCRAFT AT LBA AND  
 COMMUNITY SITES WITH EQUALS.  
 08/31/1999 - 08/31/2001      FY01: \$0                      Total: \$30,000  
*Prin. Invest.:* A HAUTE  
*Tech. Officer:* GSFC/J PRIVETTE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8686**                      **UNIV OF ARIZONA**                      **1475**  
 MEMBERSHIP TO THE AEROSOL RADIATIVE FORCING SCIENCE TEAM  
 07/16/1999 - 07/14/2002      FY01: \$13,053              Total: \$39,297  
*Prin. Invest.:* K J THOME  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8843**                      **UNIV OF ARIZONA**                      **1476**  
 THE PLANET-B NEUTRAL MASS SPECTROMETER: THERMOSPHERE-IONOSPHERE  
 STUDIES USING THE MTGCM  
 10/05/1999 - 10/14/2001      FY01: \$0                      Total: \$50,000  
*Prin. Invest.:* S W BOUGHER  
*Tech. Officer:* GSFC/J E RICHARDS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE



## NASA'S UNIVERSITY PROGRAM

ARIZONA

**NAG 5 8908**                      **UNIV OF ARIZONA**                      **1477**  
 COMPARATIVE PLANETARY GEOMORPHOLOGY  
 12/29/1999 - 12/31/2000      FY01: -\$113                      Total: \$19,887  
*Prin. Invest.:* V R BAKER  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8911**                      **UNIV OF ARIZONA**                      **1478**  
 COPERNICAN CRATERS AND THE PHANEROZOIC IMPACT FLUX  
 12/29/1999 - 01/31/2002      FY01: \$43,000                      Total: \$83,850  
*Prin. Invest.:* A S MCEWEN  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8916**                      **UNIV OF ARIZONA**                      **1479**  
 THE COMPOSITION OF HYDRATED M AND E-CLASS ASTEROID S: A  
 SEARCH FOR ANALOGS  
 01/05/2000 - 12/31/2000      FY01: -\$4                      Total: \$21,996  
*Prin. Invest.:* A RIVKIN  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8937**                      **UNIV OF ARIZONA**                      **1480**  
 NUMERICAL MODELING OF TECTONIC PROCESSES AND METEORITE  
 IMPACTS ON THE GALILEAN SATELLITES  
 01/13/2000 - 01/14/2002      FY01: \$45,000                      Total: \$85,000  
*Prin. Invest.:* E P TURTLE  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8941**                      **UNIV OF ARIZONA**                      **1481**  
 CYCLODIAL LINEAMENTS AND TIDAL TECTONICS ON EUROPA  
 01/13/2000 - 01/14/2002      FY01: \$55,000                      Total: \$105,000  
*Prin. Invest.:* R GREENBERG  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8949**                      **UNIV OF ARIZONA**                      **1482**  
 THEORETICAL STUDIES OF VOLATILE PROCESSES IN SOLAR SYSTEM  
 BODIES  
 01/19/2000 - 01/31/2002      FY01: \$30,000                      Total: \$58,260  
*Prin. Invest.:* J I LUNINE  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8952**                      **UNIV OF ARIZONA**                      **1483**  
 IO AND ITS PLASMA TORUS: ATMOSPHERE-MAGNETOSPHERE INTER-  
 ACTIONS  
 01/21/2000 - 12/31/2001      FY01: \$56,400                      Total: \$109,340  
*Prin. Invest.:* F HERBERT  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8970**                      **UNIV OF ARIZONA**                      **1484**  
 HYDROCARBONS IN JUPITER'S TROPOSPHERE  
 01/24/2000 - 01/14/2002      FY01: \$50,500                      Total: \$101,000  
*Prin. Invest.:* D HUNTEN  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8995**                      **UNIV OF ARIZONA**                      **1485**  
 THREE RELATED PROGRAMS ON WHITE DWARFS FUSE  
 01/24/2000 - 01/31/2001      FY01: \$0                      Total: \$37,700  
*Prin. Invest.:* J B HOLBERG  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9072**                      **UNIV OF ARIZONA**                      **1486**  
 AN ALL-METAL CASSEGRAIN TELESCOPE FOR SPACE APPLICATIONS  
 02/15/2000 - 02/14/2003      FY01: \$80,000                      Total: \$155,360  
*Prin. Invest.:* J HOLBERG  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9079**                      **UNIV OF ARIZONA**                      **1487**  
 ELECTRON TEMPERATURE IN THE IO PLASMA TORUS: THE KEY TO  
 UNDERSTANDING TORUS ENERGY FLOW  
 02/23/2000 - 02/28/2002      FY01: \$76,145                      Total: \$128,945  
*Prin. Invest.:* F L HERBERT  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9081**                      **UNIV OF ARIZONA**                      **1488**  
 NEO FOLLOWUP OBSERVATIONS TO THE NASA NEAR EARTH OBJECTS  
 OBSERVATIONS PROGRAM  
 02/16/2000 - 02/14/2002      FY01: \$56,000                      Total: \$142,664  
*Prin. Invest.:* S M LARSON  
*Tech. Officer:* GSFC/T H MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9100**                      **UNIV OF ARIZONA**                      **1489**  
 MICROMACHINING OF THZ WAVEGUIDE AND QUASI-OPTICAL  
 COMPONENTS FOR SUB-ORBITAL AND SPACE-BORNE DETE  
 02/24/2000 - 01/31/2002      FY01: \$125,000                      Total: \$303,000  
*Prin. Invest.:* C K WALKER  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9112**                      **UNIV OF ARIZONA**                      **1490**  
 EFFECTS OF LITHOLOGIES ON IMPACT CRATERING: NUMERICAL  
 MODELING OF KNOWN TERRESTRIAL CRATERS  
 02/28/2000 - 02/28/2002      FY01: \$42,000                      Total: \$81,900  
*Prin. Invest.:* E PIERAZZO  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9174**                      **UNIV OF ARIZONA**                      **1491**  
 PLANNING, COORDINATION, MATERIALS PREPARATION & MARKET SURVEY  
 FOR REGIONAL INFORMATIONAL WORKS  
 03/06/2000 - 12/31/2001      FY01: \$0                      Total: \$375,493  
*Prin. Invest.:* C F HUTCHINSON  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9176**                      **UNIV OF ARIZONA**                      **1492**  
 INVESTIGATION OF EXTREME TEMPERATURE VOLCANISM ON IO  
 03/08/2000 - 03/31/2002      FY01: \$0                      Total: \$47,500  
*Prin. Invest.:* L KESZTHELYI  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9181**                      **UNIV OF ARIZONA**                      **1493**  
 ESTABLISHMENT OF ABSOLUTE SPECTROPHOTOMETRIC STANDARD  
 STARS FROM 100 A TO 10,000 A - ADP99  
 03/07/2000 - 03/14/2002      FY01: \$38,412                      Total: \$86,434  
*Prin. Invest.:* J HOLBERG  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9182**                      **UNIV OF ARIZONA**                      **1494**  
 ANALYSIS OF THE IUE LOW DISPERSION SPECTRA OF THE WHITE DWARF  
 STARS ADP99  
 03/07/2000 - 03/14/2002      FY01: \$41,727                      Total: \$90,528  
*Prin. Invest.:* J HOLBERG, NONE  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9198**                      **UNIV OF ARIZONA**                      **1495**  
 AN IN SITU GEOCHRONOLOGY SYSTEM BASED ON LASER-INDUCED  
 BREAKDOWN SPECTROSCOPY & NOBLE GAS MA  
 03/09/2000 - 03/14/2003      FY01: \$215,688                      Total: \$415,884  
*Prin. Invest.:* T SWINDLE  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9205**                      **UNIV OF ARIZONA**                      **1496**  
 A MULTI-WAVELENGTH STUDY OF THE INNER 50 PC-REGION AT THE  
 GALACTIC CENTER (LTS99)  
 03/14/2000 - 03/14/2002      FY01: \$31,724                      Total: \$89,590  
*Prin. Invest.:* F MELIA  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9208**                      **UNIV OF ARIZONA**                      **1497**  
 LIS VALIDATION STUDIES USING LIGHTNING AT THE KSC- ER  
 03/23/2000 - 03/31/2002      FY01: \$0                      Total: \$99,754  
*Prin. Invest.:* P KRIDER  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9234**                      **UNIV OF ARIZONA**                      **1498**  
 MEASURING MARTIAN ATMOSPHERIC WATER VAPOR & CARBON DIOXIDE  
 03/23/2000 - 03/21/2001      FY01: \$0                      Total: \$45,000  
*Prin. Invest.:* A L SPRAGUE  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9293**                      **UNIV OF ARIZONA**                      **1499**  
 REMOTE SENSING FOR DEBRIS FLOODING HAZARD ASSESSMENT IN ARID  
 REGIONS.  
 03/24/2000 - 03/31/2002      FY01: \$93,750                      Total: \$150,000  
*Prin. Invest.:* V R BAKER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9306**                      **UNIV OF ARIZONA**                      **1500**  
 QUASARS AS PROBES (LTS99)  
 03/20/2000 - 03/31/2002      FY01: \$102,450                      Total: \$200,872  
*Prin. Invest.:* C D IMPEY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9325**                      **UNIV OF ARIZONA**                      **1501**  
 NGST AD HOC SCIENCE WORKING GROUP (ASWG) SUPPORT  
 03/22/2000 - 03/14/2001      FY01: \$0                      Total: \$15,150  
*Prin. Invest.:* M MEYER  
*Tech. Officer:* GSFC/E P SMITH  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 9405**                      **UNIV OF ARIZONA**                      **1502**  
 "PRECISION MINING" OF LARGE SPECTRAL DATA VOLUMES FOR RAPID  
 IDENTIFICATION OF PLANETARY RESOURCES  
 04/10/2000 - 10/14/2000      FY01: -\$119,299                      Total: \$65,001  
*Prin. Invest.:* E MERENYI  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9408**                      **UNIV OF ARIZONA**                      **1503**  
 A DATABASE OF THE WHITE DWARF STARS  
 04/11/2000 - 04/30/2002      FY01: \$125,200                      Total: \$274,500  
*Prin. Invest.:* J HOLBERG  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9425**                      **UNIV OF ARIZONA**                      **1504**  
 PENETRATOR-BASED SAMPLE COLLECTION OF COMETS AND OTHER  
 SMALL BODIES  
 04/17/2000 - 04/29/2002      FY01: \$240,116                      Total: \$432,791  
*Prin. Invest.:* W BOYNTON  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9435**                      **UNIV OF ARIZONA**                      **1505**  
 GEOCHEMICAL EVOLUTION OF THE EARTH, MOON, IGNEOUS METEORITES  
 & OTHER TERRESTRIAL PLANETARY BODIES  
 04/24/2000 - 12/31/2001      FY01: \$222,000                      Total: \$444,000  
*Prin. Invest.:* M J DRAKE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9465**                      **UNIV OF ARIZONA**                      **1506**  
 A SOUTHERN HEMISPHERE NEO SURVEY  
 04/18/2000 - 03/31/2003      FY01: \$113,000                      Total: \$213,323  
*Prin. Invest.:* S LARSON  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9549**                      **UNIV OF ARIZONA**                      **1507**  
 IMPROVING SATELLITE RAIN EST. ALGORITHMS USING A COMBO. OF  
 TRMM INSTANTANEOUS PRECIP. RETRIEVALS  
 06/19/2000 - 11/30/2001      FY01: \$107,000                      Total: \$163,110  
*Prin. Invest.:* S SOROOSHIAN  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9577**                      **UNIV OF ARIZONA**                      **1508**  
 INFRARED EMISSION SPECTROSCOPY OF ASTROPHYSICAL MOLECULES  
 05/17/2000 - 04/30/2001      FY01: \$0                      Total: \$20,000  
*Prin. Invest.:* D F BERNATH  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9609** **UNIV OF ARIZONA** **1509**  
 STUDY OF STAR AND PLANETARY SYSTEM FORMATION  
 05/18/2000 – 03/14/2002 FY01: \$19,712 Total: \$54,712  
*Prin. Invest.:* A CAMERON  
*Tech. Officer:* GSFC/J BOYCE/N  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9691** **UNIV OF ARIZONA** **1510**  
 A STUDY OF DUST IN AND AROUND GALAXIES  
 06/26/2000 – 11/14/2001 FY01: \$81,100 Total: \$181,283  
*Prin. Invest.:* D F ZARITSKY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9775** **UNIV OF ARIZONA** **1511**  
 CHARACTERIZATION OF THE MARTIAN SURFACE FOR FUTURE MISSIONS  
 06/30/2000 – 06/30/2002 FY01: \$37,800 Total: \$75,600  
*Prin. Invest.:* A S MCEWEN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9790** **UNIV OF ARIZONA** **1512**  
 IDENTIFICATION OF MARTIAN HYDROTHERMAL SITES: A GEOLOGIC  
 INVESTIGATION UTILIZING MULTIPLE DATASETS  
 07/11/2000 – 07/31/2002 FY01: \$60,000 Total: \$120,000  
*Prin. Invest.:* V R BAKER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9796** **UNIV OF ARIZONA** **1513**  
 REPRESENTING HETEROGENEOUS VEGETATION IN THE CPTEC ETA  
 MODELS  
 07/20/2000 – 09/30/2002 FY01: \$47,768 Total: \$93,586  
*Prin. Invest.:* W SHUTTLEWORTH  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 5 9803** **UNIV OF ARIZONA** **1514**  
 SO/GSFC SUPER-LOTIS PROJECT COLLABORATION  
 07/19/2000 – 07/31/2001 FY01: \$11,444 Total: \$31,444  
*Prin. Invest.:* B PETERSON  
*Tech. Officer:* GSFC/N GEHRELS  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9957** **UNIV OF ARIZONA** **1515**  
 XMM OBSERVATIONS OF ISOLATED ELLIPTICAL GALAXIES  
 09/13/2000 – 09/14/2002 FY01: \$17,500 Total: \$45,500  
*Prin. Invest.:* A I ZABLUDOFF  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10007** **UNIV OF ARIZONA** **1516**  
 ASSESSMENT OF GRANT PROGRAM UNDER CENTERS OF EXCELLENCE IN  
 APPLICATIONS OF REMOTE SENSING IN REGION  
 09/20/2000 – 09/30/2002 FY01: \$0 Total: \$59,410  
*Prin. Invest.:* M W WALLENDORF  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 5 10123** **UNIV OF ARIZONA** **1517**  
 SAR INVESTIGATIONS OF LATE PLEISTOCENE PALEOFLOODS PALEO-  
 LAKES, AND PALEOCLIMATE  
 11/28/2000 – 11/30/2001 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* V BAKER  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 10162** **UNIV OF ARIZONA** **1518**  
 SURFACE CHANGES ON IO  
 12/20/2000 – 12/31/2001 FY01: \$45,000 Total: \$45,000  
*Prin. Invest.:* P GEISSLER  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 10166** **UNIV OF ARIZONA** **1519**  
 OBSERVATIONS AND NUMERICAL MODELING OF TECTONIC PROCESSES  
 ON IO  
 01/04/2001 – 11/30/2001 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* E TURTLE  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 10167** **UNIV OF ARIZONA** **1520**  
 TIDAL TECTONIC PROCESSES ON EUROPA: DISPLACEMENTS, STRESS  
 AND CYCLOIDS  
 01/04/2001 – 11/30/2001 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* R TUFTS  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 10174** **UNIV OF ARIZONA** **1521**  
 IMPROVING REGIONAL AND GLOBAL RAINFALL ESTIMATES USING THE  
 COMBINATIONS OF TRMM SATELLITE OBSERVATIONS  
 12/21/2000 – 12/31/2001 FY01: \$77,500 Total: \$77,500  
*Prin. Invest.:* S SOROOSHIAN  
*Tech. Officer:* GSFC/A J NEGRI  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 5 10205** **UNIV OF ARIZONA** **1522**  
 INFRARED & NEAR INFRARED SPECTROSCOPY OF ASTROPHYSICAL  
 MOLECULES  
 12/28/2000 – 12/31/2001 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* P BERNATH  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 10245** **UNIV OF ARIZONA** **1523**  
 ACCRETION ONTO MAGNETIC WHITE DWARFS (FUSE 00)  
 02/12/2001 – 02/14/2002 FY01: \$7,455 Total: \$7,455  
*Prin. Invest.:* G SCHMIDT  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10264** **UNIV OF ARIZONA** **1524**  
 ANALYSIS OF ICE CORES FOR ESTIMATING ACCUMULATION PATTERNS  
 AND THE INFLUENCE OF ACCUMULATION ON ICE  
 01/09/2001 – 12/31/2001 FY01: \$149,978 Total: \$149,978  
*Prin. Invest.:* R BALES  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10267**                      **UNIV OF ARIZONA**                      **1525**  
 RETRIEVING BI-REFLECTANCE SPECTRA OF ROCKS ILLUMI- NATED BY  
 DIRECT SUNLIGHT & BRIGHT SKY:A RE-E  
 01/08/2001 – 12/31/2001                      FY01: \$114,200                      Total: \$114,200  
*Prin. Invest.:* P H SMITH  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10294**                      **UNIV OF ARIZONA**                      **1526**  
 EVOLUTION OF VOLATILES IN THE SOLAR SYSTEM  
 02/08/2001 – 02/14/2002                      FY01: \$30,000                      Total: \$30,000  
*Prin. Invest.:* J I LUNINE  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 10315**                      **UNIV OF ARIZONA**                      **1527**  
 A FUSE SEARCH FOR NITROGEN AND CARBON IN HOT WHITE DWARFS –  
 FUSE 2000  
 01/26/2001 – 01/31/2002                      FY01: \$46,300                      Total: \$46,300  
*Prin. Invest.:* J B HOLBERG  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10332**                      **UNIV OF ARIZONA**                      **1528**  
 SUPPORT FOR SPACE IMAGERY CENTER NASA REGIONAL PLANETARY  
 IMAGE FACILITY  
 01/30/2001 – 01/31/2002                      FY01: \$25,000                      Total: \$25,000  
*Prin. Invest.:* D KRING  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 10333**                      **UNIV OF ARIZONA**                      **1529**  
 SUB-MILLIMETER SPECTROSCOPY OF ASTROPHYSICALLY IMPORTANT  
 METAL-CONTAINING MOLECULES  
 01/30/2001 – 01/31/2002                      FY01: \$72,000                      Total: \$72,000  
*Prin. Invest.:* L ZIURYS  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 10346**                      **UNIV OF ARIZONA**                      **1530**  
 KUIPER BELT DYNAMICS  
 02/01/2001 – 02/14/2002                      FY01: \$40,000                      Total: \$40,000  
*Prin. Invest.:* R MALHOTRA  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 10441**                      **UNIV OF ARIZONA**                      **1531**  
 AN INFRARED STUDY OF SPACECRAFT TARGETED COMETS  
 02/16/2001 – 02/28/2002                      FY01: \$49,400                      Total: \$49,400  
*Prin. Invest.:* H CAMPINS  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10442**                      **UNIV OF ARIZONA**                      **1532**  
 2MASS ASTEROIDS, COMETS & SATELLITES  
 01/16/2001 – 02/28/2002                      FY01: \$30,900                      Total: \$30,900  
*Prin. Invest.:* M SYKES  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10446**                      **UNIV OF ARIZONA**                      **1533**  
 INFRARED OBSERVATIONS OF SMALL BODIES  
 02/20/2001 – 03/31/2002                      FY01: \$79,400                      Total: \$79,400  
*Prin. Invest.:* R BROWN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10447**                      **UNIV OF ARIZONA**                      **1534**  
 SPACEWATCH SURVEY OF THE SOLAR SYSTEM  
 02/20/2001 – 01/31/2002                      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* R MCMILLAN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10450**                      **UNIV OF ARIZONA**                      **1535**  
 COUPLED PHYSICAL & CHEMICAL PROCESSES IN THE SOLAR NEBULA &  
 EXTRASOLAR PLANETS  
 02/20/2001 – 01/31/2002                      FY01: \$40,000                      Total: \$40,000  
*Prin. Invest.:* J LUNINE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10452**                      **UNIV OF ARIZONA**                      **1536**  
 MINERALOGIC & TRACE-ELEMENT STUDIES OF METEORITES &  
 METEORITE IMPACTS  
 02/21/2001 – 02/28/2002                      FY01: \$180,000                      Total: \$180,000  
*Prin. Invest.:* W BOYNTON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10486**                      **UNIV OF ARIZONA**                      **1537**  
 THERMAL HISTORY OF PLANETARY MATERIALS: THEORY, EXPERIMENTS &  
 APPLICATIONS  
 03/05/2001 – 04/30/2002                      FY01: \$70,000                      Total: \$70,000  
*Prin. Invest.:* J GANGULY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 – CHEMISTRY

**NAG 5 10543**                      **UNIV OF ARIZONA**                      **1538**  
 SOUTHERN HEMISPHERE NEO SURVEY INSTRUMENTATION  
 03/14/2001 – 03/14/2002                      FY01: \$500,000                      Total: \$500,000  
*Prin. Invest.:* S LARSON  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 10592**                      **UNIV OF ARIZONA**                      **1539**  
 IMPACTS & ENVIRONMENTAL CATASTROPHES: A STUDY OF THE EFFECTS  
 OF IMPACT EVENTS ON THE CLIMATE SYST  
 03/21/2001 – 03/31/2002                      FY01: \$60,000                      Total: \$60,000  
*Prin. Invest.:* E PIERAZZO  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10629**                      **UNIV OF ARIZONA**                      **1540**  
 THE CLASSIFICATION AND DETECTABILITY OF SUBSTELLAR- MASS  
 OBJECTS  
 03/17/2001 – 03/31/2002                      FY01: \$45,000                      Total: \$45,000  
*Prin. Invest.:* A BURROWS  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10643**                      **UNIV OF ARIZONA**                      **1541**  
 CODES & DECODERS FOR BANDWIDTH-EFFICIENT COMMUNICATIONS IN  
 NEAR-EARTH MISSIONS.  
 03/21/2001 - 03/31/2002      FY01: \$87,273                      Total: \$87,273  
*Prin. Invest.:* W RYAN  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10660**                      **UNIV OF ARIZONA**                      **1542**  
 IMPROVED MARS UPPER ATMOSPHERE CLIMATOLOGY  
 05/10/2001 - 03/31/2002      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* S BOUGHER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10700**                      **UNIV OF ARIZONA**                      **1543**  
 TEMPERATURE, GRAVITY AND COMPOSITION OF DAO WHITE DWARFS -  
 FUSE 2000  
 04/13/2001 - 04/14/2002      FY01: \$18,300                      Total: \$18,300  
*Prin. Invest.:* J B HOLBERG  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10734**                      **UNIV OF ARIZONA**                      **1544**  
 INCORPORATION OF NOBLE GASES INTO ANALOGS FOR INTERSTELLAR  
 CARBONACEOUS AND METALLIC MATERIALS  
 04/18/2001 - 04/30/2002      FY01: \$20,000                      Total: \$20,000  
*Prin. Invest.:* T SWINDLE  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10749**                      **UNIV OF ARIZONA**                      **1545**  
 CAPTURING PLANETARY SCIENCE DATA FROM NASA SUPPORT ED  
 RESEARCH  
 04/13/2001 - 04/14/2002      FY01: \$126,000                      Total: \$126,000  
*Prin. Invest.:* M V SYKES  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10760**                      **UNIV OF ARIZONA**                      **1546**  
 THEORY OF BROWN DWARFS & GIANT PLANETS (ATP-2000)  
 04/23/2001 - 04/30/2002      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* A S BURROWS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10827**                      **UNIV OF ARIZONA**                      **1547**  
 THE SMALL SCALE STRUCTURE OF THE UNIVERSE (ATP 2000)  
 05/01/2001 - 05/14/2002      FY01: \$88,244                      Total: \$88,244  
*Prin. Invest.:* M STEINMETZ  
*Tech. Officer:* GSFC/R OLIVERSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10843**                      **UNIV OF ARIZONA**                      **1548**  
 RECALIBRATION OF THE NEAR INFRARED CAMERA & MULTI- OBJECT  
 SPECTROMETER (NICMOS) & ANALYSIS OF  
 05/04/2001 - 06/14/2002      FY01: \$1,127,294                      Total: \$1,127,294  
*Prin. Invest.:* R THOMPSON  
*Tech. Officer:* GSFC/J JELETIC  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10853**                      **UNIV OF ARIZONA**                      **1549**  
 OPERATION & OPTIMIZATION OF THE CATALINA SKY SURVEY FOR NEOS  
 05/02/2001 - 04/30/2002      FY01: \$456,500                      Total: \$456,500  
*Prin. Invest.:* S LARSEN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10884**                      **UNIV OF ARIZONA**                      **1550**  
 ENERGETIC PARTICLES AND THE EARTH'S ENVIRONMENT IN SPACE  
 05/03/2001 - 04/30/2002      FY01: \$96,451                      Total: \$96,451  
*Prin. Invest.:* J KOTA  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10893**                      **UNIV OF ARIZONA**                      **1551**  
 MODELING SUPPORT FOR SEC OBSERVATIONS  
 05/10/2001 - 05/31/2002      FY01: \$100,000                      Total: \$100,000  
*Prin. Invest.:* J JOKIPII  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10961**                      **UNIV OF ARIZONA**                      **1552**  
 INSTRUMENT UPGRADE: OFFNER SPECTROMETER VISIBLE UPGRADE &  
 EXTENSION DESIGN TO 2.5 MICR  
 05/23/2001 - 06/30/2002      FY01: \$74,200                      Total: \$74,200  
*Prin. Invest.:* U FINK  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10974**                      **UNIV OF ARIZONA**                      **1553**  
 WAVES, TURBULENCE AND ENERGETIC PARTICLES IN THE HELIOSPHERE  
 05/29/2001 - 05/31/2002      FY01: \$77,566                      Total: \$77,566  
*Prin. Invest.:* G M WEBB  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10990**                      **UNIV OF ARIZONA**                      **1554**  
 THEORY OF ENERGETIC PARTICLE TRANSPORT IN HELIO- SPHERIC &  
 SOLAR PLASMAS  
 06/05/2001 - 06/14/2002      FY01: \$75,000                      Total: \$75,000  
*Prin. Invest.:* J R JOKIPII  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11044**                      **UNIV OF ARIZONA**                      **1555**  
 MONITORING & PREDICTION OF WATER DISTRIBUTION/ AVAILABILITY IN  
 SEMI-ARID REGIONS  
 07/05/2001 - 06/14/2002      FY01: \$525,000                      Total: \$525,000  
*Prin. Invest.:* S SOROOSHIAN  
*Tech. Officer:* GSFC/M JASINSKI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11108**                      **UNIV OF ARIZONA**                      **1556**  
 CONSTRAINING THE DARK MATTER HALOS OF GIANT ELLIPTICAL  
 GALAXIES  
 07/13/2001 - 08/31/2002      FY01: \$99,861                      Total: \$99,861  
*Prin. Invest.:* A I ZABLUDOFF  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11153**                      **UNIV OF ARIZONA**                      **1557**  
 STUDIES OF COSMOGONIC PROCESSES  
 08/02/2001 - 07/31/2002                      FY01: \$25,000                      Total: \$25,000  
*Prin. Invest.:* A CAMERON  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11163**                      **UNIV OF ARIZONA**                      **1558**  
 ASSIMILATION OF GPS METEOROLOGICAL DATA INTO WEATHER AND CLIMATE ANALYSES.  
 08/07/2001 - 08/14/2002                      FY01: \$33,801                      Total: \$33,801  
*Prin. Invest.:* E KURINSKI  
*Tech. Officer:* GSFC/J JOINER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11166**                      **UNIV OF ARIZONA**                      **1559**  
 INTER-CALIBRATION AND UTILIZATION OF GROUND-BASED AND TES DATA TO STUDY MARTIAN WATER VAPOR  
 08/07/2001 - 08/14/2003                      FY01: \$67,500                      Total: \$67,500  
*Prin. Invest.:* A L SPRAGUE  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 11168**                      **UNIV OF ARIZONA**                      **1560**  
 PALEOMAGNETIC INVESTIGATION OF POLAR REORIENTATION ON MARS  
 08/07/2001 - 08/14/2004                      FY01: \$48,728                      Total: \$48,728  
*Prin. Invest.:* L L HOOD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11169**                      **UNIV OF ARIZONA**                      **1561**  
 MONITORING THE GEOLOGICAL ACTIVITY OF MARS  
 08/07/2001 - 08/14/2004                      FY01: \$54,000                      Total: \$54,000  
*Prin. Invest.:* P E GEISSLER  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11183**                      **UNIV OF ARIZONA**                      **1562**  
 MGS RADIO SCIENCE ELECTRON DENSITY PROFILES AND IMPLICATIONS FOR THE NEUTRAL ATMOSPHERE  
 08/13/2001 - 08/14/2003                      FY01: \$45,000                      Total: \$45,000  
*Prin. Invest.:* S W BOUGHER  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11188**                      **UNIV OF ARIZONA**                      **1563**  
 RETRIEVAL OF CLOUD PRESSURE FROM OMI MEASUREMENTS USING ROTATIONAL RAMAN SCATTERING  
 08/07/2001 - 08/14/2002                      FY01: \$29,000                      Total: \$29,000  
*Prin. Invest.:* D FLITTNER  
*Tech. Officer:* GSFC/J JOINER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11195**                      **UNIV OF ARIZONA**                      **1564**  
 COOPERATIVE CENTER FOR ATMOSPHERIC SCIENCE AND TECHNOLOGY  
 08/30/2001 - 09/30/2004                      FY01: \$91,223                      Total: \$91,223  
*Prin. Invest.:* R LOUGHMAN  
*Tech. Officer:* GSFC/W HOEY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11316**                      **UNIV OF ARIZONA**                      **1565**  
 USE OF AIRBORNE REMOTE SENSING FOR UNCERTAINTY ASSESSMENTS IN REGIONAL EXTRAPOLATIONS OF GROUND  
 09/17/2001 - 09/14/2004                      FY01: \$87,368                      Total: \$87,368  
*Prin. Invest.:* A R HUETE  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11339**                      **UNIV OF ARIZONA**                      **1566**  
 LANDSAT RADIOMETRIC CALIBRATION: TOWARDS A 20 YEAR RECORD OF CALIBRATED THEMATIC MAPPER CLASS DATA  
 09/14/2001 - 09/14/2004                      FY01: \$114,999                      Total: \$114,999  
*Prin. Invest.:* K THOME  
*Tech. Officer:* GSFC/B L MARKHAM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11348**                      **UNIV OF ARIZONA**                      **1567**  
 STEWARD OBSERVATORY'S GSFC GCN/SUPERLOTIS PROJECT COLLABORATION  
 09/26/2001 - 07/31/2002                      FY01: \$23,063                      Total: \$23,063  
*Prin. Invest.:* B PETERSON  
*Tech. Officer:* GSFC/S D BARTHELOMY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11355**                      **UNIV OF ARIZONA**                      **1568**  
 ASU/MICHIGAN COLLABORATION: THE ABUNDANCE & ISOTOPE COMPOSITION OF HG IN EXTRATERRESTRIAL MATERIALS  
 09/21/2001 - 02/28/2004                      FY01: \$16,842                      Total: \$16,842  
*Prin. Invest.:* D LAURETTA  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1234**                      **UNIV OF ARIZONA**                      **1569**  
 NON-EQUILIBRIUM PHASE TRANSFORMATION  
 04/25/1996 - 04/30/2000                      FY01: \$0                      Total: \$579,500  
*Prin. Invest.:* K A JACKSON  
*Tech. Officer:* MSFC/C R TALLEY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1469**                      **UNIV OF ARIZONA**                      **1570**  
 DEVELOPMENT OF SUPERIOR MATERIALS FOR LAYERED SOLID OXIDE ELECTROLYZERS BASED ON MECHANICAL  
 04/17/1998 - 01/31/2002                      FY01: \$71,250                      Total: \$268,750  
*Prin. Invest.:* J R SRIDHAR  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1520**                      **UNIV OF ARIZONA**                      **1571**  
 QUANTIFYING THE EFFECTS OF SUB-GRID TOPOGRAPHY & VEGETATION ON SEASONAL SNOW COVER, RELATED SNOWMELT  
 05/29/1998 - 03/31/2002                      FY01: \$0                      Total: \$347,829  
*Prin. Invest.:* Z YANG, R BALES, R E DICKINSON  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1523 UNIV OF ARIZONA 1572**  
 IMPROVING GCM MODELING THRU HYDROLOGICALLY REAL-ISTIC SUB-  
 GRID REPRESENTATION OF LAND-ATMOSPHERE  
 05/26/1998 - 05/31/2001 FY01: \$0 Total: \$519,764  
*Prin. Invest.:* S SOROOSHIAN, H GUPTA, X GAO  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1531 UNIV OF ARIZONA 1573**  
 INFLUENCE OF SUBGRID SCALE HETEROGENEITY ON REMOTELY SENSED  
 SURFACE TEMPERATURES  
 06/01/1998 - 12/31/2001 FY01: \$0 Total: \$600,000  
*Prin. Invest.:* W J SHUTTLEWORTH, J J TOTH  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1542 UNIV OF ARIZONA 1574**  
 ALDF NETWORK INSTALLATION IN SUPPORT OF LIS VALIDATION  
 07/22/1998 - 07/31/2001 FY01: \$0 Total: \$49,300  
*Prin. Invest.:* C D WEIDMAN  
*Tech. Officer:* MSFC/R J BLAKESLEE, MSFC/S J GOODMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1654 UNIV OF ARIZONA 1575**  
 MARS ATMOSPHERE AND DUST IN OPTICAL AND RADIO (MATADOR)  
 01/19/2000 - 09/30/2001 FY01: \$251,070 Total: \$328,175  
*Prin. Invest.:* P H SMITH  
*Tech. Officer:* MSFC/C A DARBY  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 8 1667 UNIV OF ARIZONA 1576**  
 GROWTH OF ROD EUTECTICS  
 05/24/2000 - 11/30/2003 FY01: \$85,500 Total: \$125,500  
*Prin. Invest.:* K J JACKSON  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1754 UNIV OF ARIZONA 1577**  
 A PHYSICALLY BASED INVESTIGATION OF TROPICAL CONVECTIVE  
 REGIMES  
 01/23/2001 - 01/29/2004 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* D J BOCCIPPIO  
*Tech. Officer:* MSFC/J D ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1775 UNIV OF ARIZONA 1578**  
 ATOM OPTICS IN CONTROLLED AND MICROGRAVITY ENVIRIONMNETS  
 04/24/2001 - 04/30/2005 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* P MEYSTRE  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 923 UNIV OF ARIZONA 1579**  
 POLYCRYSTALLINE ZIRCONIA ELEC CELL STACK FOR CO2 ELECTROLYSIS  
 01/29/1997 - 05/31/2002 FY01: \$0 Total: \$380,749  
*Prin. Invest.:* K R SRIDHAR  
*Tech. Officer:* JSC/R S BAIRD  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1175 UNIV OF ARIZONA 1580**  
 SIMULTANEOUS PRODUCTION OF OXYGEN AND METHANE USING  
 ZIRCONIA ELECTROLYSIS  
 11/03/1999 - 11/09/2001 FY01: \$0 Total: \$89,869  
*Prin. Invest.:* K R SRIDHAR  
*Tech. Officer:* JSC/R S BAIRD  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 9 1212 UNIV OF ARIZONA 1581**  
 ULTRA HIGH SPATIAL RESOLUTION HARD X-RAY DETECTORS  
 06/30/2000 - 06/30/2003 FY01: \$0 Total: \$99,919  
*Prin. Invest.:* H B  
*Tech. Officer:* JSC/L C SHACKELFORD  
*CASE Category:* 13 - PHYSICS

**NAG 9 1229 UNIV OF ARIZONA 1582**  
 DEFINITION PHASE STUDY REPORT FOR END TO END ISRU MARS FLIGHT  
 EXPERIMENT  
 05/10/2000 - 02/09/2001 FY01: \$0 Total: \$850,000  
*Prin. Invest.:* K R SRIDHAR  
*Tech. Officer:* JSC/J CONNOLLY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 9 1307 UNIV OF ARIZONA 1583**  
 SCANNING CHEMICAL MICROSCOPY USING SURFACE ENHANCED RAMAN  
 SCATTERING  
 05/23/2001 - 02/28/2003 FY01: \$222,000 Total: \$222,000  
*Prin. Invest.:* D SARID  
*Tech. Officer:* JSC/D MCKAY  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1378 UNIV OF ARIZONA 1584**  
 TESTING OF COMPACT & ROBUST HIGH INTENSITY WATER JACKETED  
 PLANT LIGHTING SYSTEM  
 08/24/2001 - 07/31/2004 FY01: \$10,550 Total: \$10,550  
*Prin. Invest.:* G GIACOMELLI  
*Tech. Officer:* JSC/D BARTA  
*CASE Category:* 55 - AGRICULTURE

**NAG10 255 UNIV OF ARIZONA 1585**  
 RESEARCH HYBRID SOLAR AND ARTIFICIAL LIGHTING FOR SPACE LIFE  
 SUPPORT  
 03/17/1999 - 03/15/2002 FY01: \$0 Total: \$212,031  
*Prin. Invest.:* J L CUELLO  
*Tech. Officer:* KSC/R WHEELER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG10 286 UNIV OF ARIZONA 1586**  
 STUDIES OF ATMOSPHERIC ELECTRICITY AT THE KENNEDY SPACE  
 CENTER AND EASTERN RANGE  
 06/05/2000 - 12/31/2001 FY01: \$113,638 Total: \$222,638  
*Prin. Invest.:* E KRIDER  
*Tech. Officer:* KSC/J MADURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG10 302 UNIV OF ARIZONA 1587**  
 SAFELY REDUCE THE IMPACT OF LIGHTNING ON GROUND PROCESSING,  
 LAUNCH, FLIGHT AND LANDING ON OPERATION  
 06/22/2001 - 06/30/2006 FY01: \$63,000 Total: \$63,000  
*Prin. Invest.:* E KRIDER  
*Tech. Officer:* KSC/J MADURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG13 99005 UNIV OF ARIZONA 1588**  
 NASA SOUTHWEST EARTH SCIENCE APPLICATIONS CENTER SAME  
 02/19/1999 - 02/18/2002 FY01: \$0 Total: \$1,499,981  
*Prin. Invest.:* R DAVIS  
*Tech. Officer:* SSC/C HILL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 1 18939 UNIV OF ARIZONA 1589**  
 SAGE III SCIENCE INVESTIGATION SUPPORT - P.I. - B. HERMAN  
 02/28/1990 - 01/31/2005 FY01: \$150,000 Total: \$1,074,500  
*Prin. Invest.:* B M HERMAN  
*Tech. Officer:* LARC/G L MADDREA JR, LARC/L R MCMASTER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 99055 UNIV OF ARIZONA 1590**  
 ACTIVE TROPOSPHERIC OZONE AND MOISTURE SOUNDER (ATOMS)  
 04/21/1999 - 05/31/2002 FY01: \$150,641 Total: \$462,641  
*Prin. Invest.:* B M HERMAN  
*Tech. Officer:* LARC/J R HILL, LARC/F PERI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 99102 UNIV OF ARIZONA 1591**  
 PICASSO-CENA SCIENCE TEAM SUPPORT FOR AEROSOL AND CLOUD  
 STUDIES  
 05/17/1999 - 05/16/2002 FY01: \$184,652 Total: \$257,302  
*Prin. Invest.:* J A REAGAN  
*Tech. Officer:* LARC/G GIBSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 2 00117 UNIV OF ARIZONA 1592**  
 RESEARCH PROJECT-DEVEL AND TEST ULTRA HIGH DENSITY FAST  
 READOUT OPTICAL STORAGE  
 10/31/2000 - 10/31/2003 FY01: \$660,834 Total: \$660,834  
*Prin. Invest.:* T MILSTER, F AKHAVAN  
*Tech. Officer:* ARC/S LAU, ARC/R CARVALLHO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 5 00197 UNIV OF ARIZONA 1593**  
 R & D TO SUPPORT GSFC'S SIMBIOS PROJECT  
 12/21/2000 - 11/30/2001 FY01: \$137,909 Total: \$137,909  
*Prin. Invest.:* J ZALEWSKI  
*Tech. Officer:* GSFC/C R MCCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 31364 UNIV OF ARIZONA 1594**  
 EOS/MODIS INVESTIGATION FROM DR. HUETE  
 01/24/1992 - 12/14/2001 FY01: \$437,000 Total: \$3,943,109  
*Prin. Invest.:* A HUETE  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 31717 UNIV OF ARIZONA 1595**  
 EOS INVESTIGATION  
 01/03/1992 - 12/14/2001 FY01: \$845,226 Total: \$8,457,134  
*Prin. Invest.:* P N SLATER  
*Tech. Officer:* GSFC/L STUART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 8 97309 UNIV OF ARIZONA 1596**  
 FABRICATION, TEST, AND DELIVERY OF PRIMARY MIRROR SYSTEM  
 DEMONSTRATOR.  
 07/17/1997 - 06/29/2001 FY01: \$967,299 Total: \$6,462,490  
*Prin. Invest.:* J H BURGE, NONE  
*Tech. Officer:* MSFC/D JACOBSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 9 97224 UNIV OF ARIZONA 1597**  
 MARS FLIGHT DEMONSTRATION OXYGEN GENERATORY SUBSYS  
 12/13/1997 - 09/30/2000 FY01: \$292 Total: \$1,252,893  
*Prin. Invest.:* K R SRIDHAR  
*Tech. Officer:* JSC/S BAIRD  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 2 5239 UNIV OF ARIZONA 1598**  
 DEVELOPMENT OF THE COUPLED LEAFMOD/SART CANOPY- LEVEL  
 RADIATIVE TRANSFER MODEL  
 09/15/1997 - 06/30/2000 FY01: -\$1 Total: \$49,999  
*Prin. Invest.:* B D GANAPOL  
*Tech. Officer:* ARC/D L PETERSON  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NCC 2 5316 UNIV OF ARIZONA 1599**  
 TECHNOLOGY DEVELOPMENT FOR ASTROBIOLOGY SAMPLE ACQ UISI-  
 TION, STORAGE & ANALYSIS  
 04/12/1999 - 12/31/2000 FY01: \$0 Total: \$74,711  
*Prin. Invest.:* K R SRIDHAR  
*Tech. Officer:* ARC/M H KAISS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5357 UNIV OF ARIZONA 1600**  
 ISRU TECHNOLOGIES FOR MARS LIFE SUPPORT  
 09/29/1999 - 09/30/2001 FY01: -\$15,711 Total: \$103,049  
*Prin. Invest.:* K R SRIDHAR  
*Tech. Officer:* ARC/J E FINN  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 5375 UNIV OF ARIZONA 1601**  
 DEVELOPMENT OF A SYSTEM FOR QUANTIFYING IN VIVO BONE STRAINS  
 IN RODENTS IN NORMAL AND ALTERED GRAVITY  
 03/31/2000 - 03/31/2001 FY01: \$0 Total: \$10,208  
*Prin. Invest.:* J SZIVEK  
*Tech. Officer:* ARC/J SCHONFELD/W LIN  
*CASE Category:* 56 - MEDICL

**NCC 2 5385 UNIV OF ARIZONA 1602**  
 SOLID STATE SENSORS FOR AEROASSIST TECHNOLOGY APPLICATIONS  
 06/01/2000 - 09/30/2002 FY01: \$25,800 Total: \$73,300  
*Prin. Invest.:* K R SRIDHAR  
*Tech. Officer:* ARC/G A RAICHE, ARC/P F WERCINSKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 355 UNIV OF ARIZONA 1603**  
 PROPOSAL FOR GRADUATE STUDENT SUPPORT UNDER CCAST. NOW  
 INCLUDES ADDITIONAL SUPP  
 08/04/1998 - 09/30/2001 FY01: \$144,288 Total: \$539,798  
*Prin. Invest.:* B M HERMAN  
*Tech. Officer:* GSFC/A J NEGRI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE



**NCC 5 460 UNIV OF ARIZONA 1604**  
 RADIOMETRIC CALIBRATION, SPATIAL CHARACTERIZATION, AND SPECTRAL EVALUATION OF THE ADVANCED LAND IMAG  
 03/03/2000 - 12/31/2001 FY01: \$231,026 Total: \$416,005  
*Prin. Invest.:* S F BIGGAR *Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 478 UNIV OF ARIZONA 1605**  
 INTER-SENSOR CALIBRATION OF VEGETATION INDICES FOR MONITORING AND CONTINUITY STUDIES  
 03/22/2000 - 12/31/2001 FY01: \$194,054 Total: \$285,624  
*Prin. Invest.:* A R HUETE  
*Tech. Officer:* GSFC/S G UNGER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 8 96 UNIV OF ARIZONA 1606**  
 COMPARISON OF STRUCTURE AND SEGREGATION IN ALLOYS  
 06/07/1996 - 05/31/2001 FY01: \$213,943 Total: \$843,943  
*Prin. Invest.:* D R POIRIER  
*Tech. Officer:* MSFC/M HUBBARD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 8 160 UNIV OF ARIZONA 1607**  
 REMOTE SENSING INVESTIGATION OF THE ANCIENT MAYA LANDSCAPE  
 12/08/1998 - 12/07/2001 FY01: \$77,380 Total: \$234,787  
*Prin. Invest.:* T P CULBERT  
*Tech. Officer:* MSFC/T SEVER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 1 52176 UNIV OF ARIZONA 1608**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 08/25/1997 - 07/31/2001 FY01: \$12,000 Total: \$88,000  
*Prin. Invest.:* J A REAGAN, M A RUBIE  
*Tech. Officer:* LARC/C A HOSTETLER, LARC/D M WINKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 1 52206 UNIV OF ARIZONA 1609**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 09/14/1998 - 12/31/2001 FY01: \$9,167 Total: \$75,167  
*Prin. Invest.:* H F FASEL, H F FASEL  
*Tech. Officer:* LARC/B A SINGER, LARC/B A SINGER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 2 52268 UNIV OF ARIZONA 1610**  
 ISRU TECHNOLOGIES FOR HUMAN MARS EXPLORATION  
 08/10/2000 - 07/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* K R SRIDHAR  
*Tech. Officer:* ARC/J E FINN, ARC/M H KLISS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 4 52408 UNIV OF ARIZONA 1611**  
 GSRP INVESTIGATION OF ACTUATORS USED IN ACTIVE FLOW CONTROL  
 06/18/1998 - 06/30/2001 FY01: -\$200 Total: \$65,800  
*Prin. Invest.:* H F FASEL, M LINNICK  
*Tech. Officer:* SSC/K GUPTA, SSC/L S VOELKER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 110 UNIV OF ARIZONA 1612**  
 CATASTROPHIC FLOODING ON ICELAND AND MARS STUDENT: DEVON M. BURR  
 06/20/2000 - 12/31/2000 FY01: \$0 Total: \$11,000  
*Prin. Invest.:* A S MCEWEN  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 5 111 UNIV OF ARIZONA 1613**  
 MINIATURE DOPPLER AEROSOL BACKSCATTER LIDAR FOR DETECTION OF ATMOSPHERIC WINDS/STUDENT: JEREMY DOB  
 07/07/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* J A REAGAN  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 13 - PHYSICS

**NGT 5 114 UNIV OF ARIZONA 1614**  
 CATASTROPHIC FLOODING ON ICELAND AND MARS (STUDENT : DEVON BURR)  
 05/31/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* A S MCEWEN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 5 30013 UNIV OF ARIZONA 1615**  
 A STUDY OF 1993 USA FLOOD MECHANISM ON REGIONAL AN USING CLIMATE MODELS AND REMOTE-SENSING  
 10/23/1996 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R E DICKSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30140 UNIV OF ARIZONA 1616**  
 ECOSYSTEM DEGRADATION AND HOUSEHOLD VULNERABILITY IN THE SEMI ARID REGION OF CHILE  
 08/27/1998 - 12/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* C HUTCHINSON  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30148 UNIV OF ARIZONA 1617**  
 SYNTHETIC LAHAR HAZARD MODELING USING ORBITAL DEM DATA/NASA EARTH SCI. SYSTEM PROGRAM/STUDENT: KLI  
 08/28/1998 - 03/31/2002 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* C E GLASS  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30386 UNIV OF ARIZONA 1618**  
 SEASONAL ACCUMULATION & NITROGEN DEPOSITION MAPPING ON THE GREENLAND ICESHEET/JOHNNY BURKHART  
 08/13/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R C BALES  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40026 UNIV OF ARIZONA 1619**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 12/30/1996 - 01/31/2001 FY01: -\$162,257 Total: \$1,654,616  
*Prin. Invest.:* E H LEVY  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

ARKANSAS

NASA'S UNIVERSITY PROGRAM

**NGT 5 40082 UNIV OF ARIZONA 1620**  
 ARIZONA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2002 FY01: \$649,132 Total: \$649,132  
*Prin. Invest.:* M J DRAKE  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50046 UNIV OF ARIZONA 1621**  
 ACHROMATIC NULLING BEAM COMBINER FOR A PLANET  
 07/17/1997 - 12/31/2000 FY01: -\$324 Total: \$65,676  
*Prin. Invest.:* M LLOYD-HART  
*Tech. Officer:* GSFC/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50190 UNIV OF ARIZONA 1622**  
 THEORETICAL & OBSERVATIONAL STUDY OF ORIGIN & EVOLUTION OF  
 PLANETS & PLANETARY SYSTEMS  
 06/05/1998 - 08/14/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* R H BROWN  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50243 UNIV OF ARIZONA 1623**  
 PHYSICAL STUDIES OF NEA & TNO OBJECTS USING SPECTR OPHOTO-  
 METRY STUDENT: RONALD FEVIG  
 06/02/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* U FINK  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50246 UNIV OF ARIZONA 1624**  
 DEVELOPMENT OF LASER MICROMACHINED COMPONENTS FOR SUBMILLI-  
 METER HETERODYNE RECEIVERS\_(STUDENT CHRIS  
 06/02/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* C WALKER  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50282 UNIV OF ARIZONA 1625**  
 SUBMILLIMETER LABORATORY AND OBSERVATIONAL STUDIES OF MOLEC-  
 ULAR ION CHEMISTRY IN PHOTON-DOMINATE  
 06/20/2000 - 07/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* L ZIURYS  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50283 UNIV OF ARIZONA 1626**  
 THE EVOLUTION OF GALAXIES IN 0.54  
 06/22/2000 - 07/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D MCCARTHY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50289 UNIV OF ARIZONA 1627**  
 THE COLLISIONAL EVOLUTION OF THE ASTEROID BELT: RECONCILING  
 CONTRADICTIONARY EVIDENCE-STUDENT DOBRIE  
 06/26/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* R GREENBERG  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50300 UNIV OF ARIZONA 1628**  
 NEUTRINO PROCESSES & R-PROCESS NUCLEOSYNTHESIS IN PROTO-  
 NEUTRON STAR WINDS/ STUDENT: TODD THOMPSON  
 06/28/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* A BURROWS  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50303 UNIV OF ARIZONA 1629**  
 THE EFFECTS OF MICROGRAVITY ON THE DEVELOPMENT OF THE IMMUNE  
 SYSTEM/STUDENT: CHRIS C. WOODS  
 07/06/2000 - 06/30/2002 FY01: \$21,423 Total: \$41,748  
*Prin. Invest.:* D DELUCA  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

ARKANSAS

**NAG 8 1284 ARKANSAS TECH UNIV 1630**  
 FOR RESEARCH "JOVE"  
 01/21/1997 - 09/28/2000 FY01: -\$9,710 Total: \$127,290  
*Prin. Invest.:* M CONNOR, R NELSON, S JORDAN  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 99016 HENDRIX COLLEGE 1631**  
 DETECTION OF SMALL MOLECULES IN HYBRID ROCKET MOTOR COMBUS-  
 TION BY N EAR IR ABSORPTION  
 05/24/1999 - 04/30/2002 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* M W TEAGUE  
*Tech. Officer:* SSC/B ST. CYR  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1061 UNIV OF ARKANSAS - LITTLE ROCK 1632**  
 EFFECTS OF RESISTANCE TRAINING  
 12/17/1998 - 07/31/2001 FY01: \$0 Total: \$532,137  
*Prin. Invest.:* P A TESCH  
*Tech. Officer:* JSC/C SAWIN  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG10 277 UNIV OF ARKANSAS - LITTLE ROCK 1633**  
 SYNTHESIS AND CHARACTERIZATION OF CROSS-LINKABLE W ATER-  
 BORNE CONDUCTING POLYMERS FOR CORROSION PROT  
 02/07/2000 - 01/18/2002 FY01: \$28,750 Total: \$115,000  
*Prin. Invest.:* T VISWANATHAN  
*Tech. Officer:* KSC/C J BRYAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 5 260 UNIV OF ARKANSAS - LITTLE ROCK 1634**  
 ARKANSAS EPSCOR PROGRAM - THE ARKANSAS PLAN FOR EN HANCE-  
 MENT OF AERO-SPACE RESEARCH AND ECONOMIC  
 01/07/1998 - 07/31/2002 FY01: \$0 Total: \$1,800,000  
*Prin. Invest.:* M HUDSON  
*Tech. Officer:* HQ/D DETROYE  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

CALIFORNIA

**NCC 5 404 UNIV OF ARKANSAS - LITTLE ROCK 1635**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/14/1999 - 02/28/2002 FY01: \$0 Total: \$450,000  
*Prin. Invest.:* K HUDSON  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 597 UNIV OF ARKANSAS - LITTLE ROCK 1636**  
 ARKANSAS NASA EPSCOR PROGRAM  
 09/28/2001 - 08/14/2004 FY01: \$125,000 Total: \$125,000  
*Prin. Invest.:* K HUDSON  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 52242 UNIV OF ARKANSAS - LITTLE ROCK 1637**  
 VIRTUAL REALITY SIMULATION OF PHYSIOLOGICAL EFFECTS OF  
 MICROGRAVITY  
 07/28/1998 - 12/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* C M COMPADRE  
*Tech. Officer:* ARC/J D SMITH  
*CASE Category:* 56 - MEDICAL

**NGT 5 40063 UNIV OF ARKANSAS - LITTLE ROCK 1638**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 03/24/1997 - 02/28/2001 FY01: \$0 Total: \$973,750  
*Prin. Invest.:* G M NORTHROP  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40119 UNIV OF ARKANSAS - LITTLE ROCK 1639**  
 ARKANSAS SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 03/14/2001 - 02/28/2002 FY01: \$256,250 Total: \$256,250  
*Prin. Invest.:* M HUDSON  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT13 52718 UNIV OF ARKANSAS - LITTLE ROCK 1640**  
 DESIGN OF HIGH TEMPERATURE PROBE FOR MASS SPECTROSCOPY OF  
 HYBRID ROCKET PLUME  
 07/13/1998 - 07/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* C MEADORS  
*Tech. Officer:* SSC/A JOYCE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT13 52724 UNIV OF ARKANSAS - LITTLE ROCK 1641**  
 INVESTIGATION OF METALLIC MOLECULAR BANDS IN HYBRID ROCKET  
 PLUMES  
 12/01/1999 - 07/31/2000 FY01: -\$5 Total: \$10,995  
*Prin. Invest.:* K MAXWELL  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 4317 UNIV OF ARKANSAS MAIN CAMP - FAYETTEVILLE 1642**  
 NATURAL THERMOLUMINESCENCE OF ANTARCTIC METEORITES  
 04/09/1997 - 02/28/2001 FY01: \$0 Total: \$150,000  
*Prin. Invest.:* D H BENOIT  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9496 UNIV OF ARKANSAS MAIN CAMP - FAYETTEVILLE 1643**  
 THERMOLUMINESCENCE STUDIES OF METEORITES  
 04/21/2000 - 04/30/2001 FY01: \$0 Total: \$43,000  
*Prin. Invest.:* P BENOIT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10736 UNIV OF ARKANSAS MAIN CAMP - FAYETTEVILLE 1644**  
 THERMOLUMINESCENCE STUDIES OF METEORITES  
 04/18/2001 - 04/30/2002 FY01: \$20,000 Total: \$20,000  
*Prin. Invest.:* P BENOIT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NCC 2 5360 UNIV OF ARKANSAS MAIN CAMP - FAYETTEVILLE 1645**  
 GROWTH OF METHANOGENS ON CARBON MONOXIDE  
 12/10/1999 - 11/30/2001 FY01: \$0 Total: \$15,000  
*Prin. Invest.:* T KRAL  
*Tech. Officer:* ARC/M J LEON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 52243 UNIV OF ARKANSAS MAIN CAMP - FAYETTEVILLE 1646**  
 METHANOGENIC METABOLISM: IMPLICATIONS FOR MARS & EARLY EARTH  
 07/28/1998 - 11/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* T A KRAL  
*Tech. Officer:* ARC/C P MCKAY  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

## CALIFORNIA

**NAG 1 1975 CALIFORNIA INST OF TECHNOLOGY 1647**  
 GLOBAL FAILURE MODES IN HIGH TEMPERATURE COMPOSITE STRUC-  
 TURES  
 11/25/1997 - 05/14/2001 FY01: \$0 Total: \$190,188  
*Prin. Invest.:* W G KNAUSS  
*Tech. Officer:* GSFC/J H STARNES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2151 CALIFORNIA INST OF TECHNOLOGY 1648**  
 CHEMISTRY AND TRANSPORT IN A MULTI-DIMENSIONAL MODEL  
 02/23/1999 - 12/31/2001 FY01: \$119,762 Total: \$354,542  
*Prin. Invest.:* Y L YUNG  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01038 CALIFORNIA INST OF TECHNOLOGY 1649**  
 ULTRADENSE SILICON CMOS-BASED MERGED MULTISPECTRAL IMAGER/  
 NONVOLATILE MEMORY DEVICE BASED ON INJECTN  
 08/24/2001 - 05/30/2004 FY01: \$228,800 Total: \$228,800  
*Prin. Invest.:* H A ATWATER  
*Tech. Officer:* LARC/C D ARMSTRONG  
*CASE Category:* 13 - PHYSICS

**NAG 2 1316 CALIFORNIA INST OF TECHNOLOGY 1650**  
 RASCAL CONTROL LAW DESIGN USING CONDUIT  
 04/02/1999 - 03/31/2001 FY01: -\$66 Total: \$9,933  
*Prin. Invest.:* D J BIEZAD  
*Tech. Officer:* ARC/M B TISCHLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

<p><b>NAG 2 1346 CALIFORNIA INST OF TECHNOLOGY 1651</b>  EVOLUTION OF NEURAL CREST &amp; PLACODES  07/21/1999 - 07/14/2002 FY01: \$161,363 Total: \$380,459  Prin. Invest.: M BRONNER-FRASER  Tech. Officer: ARC/M M AVERNER, ARC/R D MACELROY  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NAG 5 3911 CALIFORNIA INST OF TECHNOLOGY 1660</b>  MOLECULAR BEAM STUDIES OF STRATOSPHERIC PHOTOCHEMI  02/26/1997 - 12/31/2001 FY01: \$71,599 Total: \$262,937  Prin. Invest.: D OKUMURA  Tech. Officer: GSFC/M J KURYLO  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 2 1368 CALIFORNIA INST OF TECHNOLOGY 1652</b>  TRANSCRIPTIONAL REGULATION &amp; EVOLUTION OF BILATERAL BODY  PLANS  08/05/1999 - 07/31/2002 FY01: \$92,943 Total: \$554,324  Prin. Invest.: E M DAVIDSON  Tech. Officer: ARC/M M AVERNER, ARC/R D MACELROY  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NAG 5 4022 CALIFORNIA INST OF TECHNOLOGY 1661</b>  PALEOENVIRONMENT ON MARS  03/25/1997 - 09/30/1999 FY01: -\$2,473 Total: \$87,527  Prin. Invest.: D YUNG  Tech. Officer: GSFC/M A MEYER  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAG 2 1370 CALIFORNIA INST OF TECHNOLOGY 1653</b>  TRANSCRIPTION FACTOR EVOLUTION &amp; LYMPHOCYTE ORIGIN S  08/05/1999 - 09/30/2002 FY01: \$192,419 Total: \$385,362  Prin. Invest.: E V ROTHENBERG  Tech. Officer: ARC/M M AVERNER, ARC/R D MACELROY  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NAG 5 4076 CALIFORNIA INST OF TECHNOLOGY 1662</b>  GEOCHEMICAL AND ISOTOPIC INVESTIGATIONS OF LUNAR A  03/26/1997 - 11/14/1999 FY01: -\$4,479 Total: \$1,601,521  Prin. Invest.: D J WASSERBURG  Tech. Officer: GSFC/J BOYCE  CASE Category: 12 - CHEMISTRY</p>
<p><b>NAG 3 2166 CALIFORNIA INST OF TECHNOLOGY 1654</b>  INERTIAL EFFECTS IN SUSPENSION DYNAMICS  05/08/1998 - 02/10/2002 FY01: \$95,000 Total: \$370,000  Prin. Invest.: J F BRADY  Tech. Officer: GRC/F P CHIARAMONTE  CASE Category: 46 - MECHANICAL ENGR</p>	<p><b>NAG 5 4083 CALIFORNIA INST OF TECHNOLOGY 1663</b>  DEVELOPMENT AND APPLICATION OF THE ION MICROPROBE TERRESTRIAL  MATERIALS  03/10/1997 - 05/31/2001 FY01: \$0 Total: \$1,037,000  Prin. Invest.: D J WASSERBURG  Tech. Officer: HQ/J BOYCE  CASE Category: 12 - CHEMISTRY</p>
<p><b>NAG 3 2358 CALIFORNIA INST OF TECHNOLOGY 1655</b>  GRANULAR MATERIAL FLOWS WITH INTERSTITIAL FLUID EFFECTS  03/12/2000 - 11/30/2003 FY01: \$76,088 Total: \$126,185  Prin. Invest.: M L HUNT  Tech. Officer: GRC/J H AGUI  CASE Category: 49 - ENGINEERING, OTHER</p>	<p><b>NAG 5 4093 CALIFORNIA INST OF TECHNOLOGY 1664</b>  RESEARCH IN GRAVITATION ASTROPHYSICS  03/10/1997 - 12/31/2001 FY01: \$44,000 Total: \$183,500  Prin. Invest.: P LINDBLOM  Tech. Officer: GSFC/H HASAN  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 3239 CALIFORNIA INST OF TECHNOLOGY 1656</b>  STUDIES OF PERIODIC AND APERIODIC VARIABILITY IN ACCRETING  NEUTRON STAR BINARY SYSTEMS  05/21/1996 - 04/30/2001 FY01: \$0 Total: \$440,000  Prin. Invest.: T A PRINCE  Tech. Officer: GSFC/D WEST  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 4097 CALIFORNIA INST OF TECHNOLOGY 1665</b>  NOVEL, COMPACT UV/VIS &amp; VUV COHERENT LIGHT SOURCES SPECTROSCOPY  OF POTENTIAL DIB CARRIERS  03/10/1997 - 03/14/2000 FY01: \$0 Total: \$215,215  Prin. Invest.: P A BLAKE  Tech. Officer: GSFC/H HASAN  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 3466 CALIFORNIA INST OF TECHNOLOGY 1657</b>  INNOVATIVE RESEARCH PROGRAM. SILICON RADIATION DET  01/31/1997 - 07/31/2000 FY01: \$0 Total: \$265,049  Prin. Invest.: R A MEWALDT  Tech. Officer: GSFC/D HOLLAND  CASE Category: 12 - CHEMISTRY</p>	<p><b>NAG 5 4191 CALIFORNIA INST OF TECHNOLOGY 1666</b>  DYNAMICS OF PLANETARY ATMOSPHERES  06/27/1997 - 11/30/2001 FY01: \$70,000 Total: \$376,230  Prin. Invest.: D P INGERSOLL  Tech. Officer: GSFC/J BERGSTRALH  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 3560 CALIFORNIA INST OF TECHNOLOGY 1658</b>  ISO BLOCK GRANT SUPPORT  01/15/1997 - 12/31/1999 FY01: -\$14,918 Total: \$499,569  Prin. Invest.: B T SOIFER  Tech. Officer: GSFC/D K WEST  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 4196 CALIFORNIA INST OF TECHNOLOGY 1667</b>  DEVELOPMENT OF A SUBMILLIMETER-WAVELENGTH IMMERSION  03/17/1997 - 02/29/2000 FY01: -\$319 Total: \$174,164  Prin. Invest.: D SERABYN  Tech. Officer: GSFC/H THRONSON  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 3765 CALIFORNIA INST OF TECHNOLOGY 1659</b>  PLANETARY ORIGIN, EVOLUTION AND STRUCTURE  02/11/1997 - 04/30/2001 FY01: \$0 Total: \$349,514  Prin. Invest.: D J STEVENSON  Tech. Officer: GSFC/P G RODGERS  CASE Category: 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 4206 CALIFORNIA INST OF TECHNOLOGY 1668</b>  IMPACT CRATERING CALCULATIONS  03/15/1997 - 03/31/2000 FY01: -\$995 Total: \$223,005  Prin. Invest.: T J AHRENS  Tech. Officer: GSFC/J G GRANT  CASE Category: 32 - GEOLOGICAL SCIENCE</p>

**NAG 5 4318 CALIFORNIA INST OF TECHNOLOGY 1669**  
 EXPERIMENTAL STUDIES OF PHASE EQUILIBRIA OF METEOR INTERIORS  
 04/04/1997 - 02/28/2001 FY01: \$0 Total: \$588,000  
*Prin. Invest.:* D M STOLPER  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4319 CALIFORNIA INST OF TECHNOLOGY 1670**  
 EXPERIMENTAL AND ANALYTICAL STUDIES OF SOLAR SYSTE  
 04/04/1997 - 01/31/2002 FY01: \$125,000 Total: \$594,000  
*Prin. Invest.:* D S BURNETT  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4383 CALIFORNIA INST OF TECHNOLOGY 1671**  
 A LABORATORY AND OBSERVATIONAL STUDY OF THE CHEMIC STELLAR  
 NEBULAE  
 05/06/1997 - 02/28/2000 FY01: -\$922 Total: \$119,078  
*Prin. Invest.:* P A BLAKE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4437 CALIFORNIA INST OF TECHNOLOGY 1672**  
 PARTICIPATION OF D.O. MUHLEMAN AS A CO-INVESTIGATO OBSERVER  
 LASER ALTIMETER (MOLA) TEAM  
 04/28/1997 - 12/31/2001 FY01: \$26,290 Total: \$360,394  
*Prin. Invest.:* D O MUHLEMAN  
*Tech. Officer:* GSFC/D E SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4599 CALIFORNIA INST OF TECHNOLOGY 1673**  
 MILLIMETER INTERFEROMETRY OF PROTO-PLANETARY DISKS  
 06/06/1997 - 12/31/2000 FY01: \$0 Total: \$305,914  
*Prin. Invest.:* D I SARGENT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4692 CALIFORNIA INST OF TECHNOLOGY 1674**  
 LABORATORY STUDIES OF THE PHOTOPHYSICS AND PHOTOCHEMISTRY AND  
 PAH CATIONS  
 06/20/1997 - 12/31/1999 FY01: \$0 Total: \$114,000  
*Prin. Invest.:* P A BLAKE  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5052 CALIFORNIA INST OF TECHNOLOGY 1675**  
 GLOBAL MAPPING OF THE INTERSTELLAR MEDIUM IN THE FAR-UL-  
 TRAVIOLET  
 01/24/1996 - 06/30/2001 FY01: \$0 Total: \$1,281,913  
*Prin. Invest.:* C MARTIN  
*Tech. Officer:* GSFC/R H PLESS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5166 CALIFORNIA INST OF TECHNOLOGY 1676**  
 INTEGRATED-CIRCUIT READOUT FOR THE ACCESS SILICON ARRAY  
 03/26/1998 - 06/30/2001 FY01: \$20,090 Total: \$112,710  
*Prin. Invest.:* R A MEWALDT  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5203 CALIFORNIA INST OF TECHNOLOGY 1677**  
 ULTRA HEAVY AND HEAVY COSMIC-RAY MEASUREMENTS ON ACCESS  
 08/29/1998 - 02/28/2002 FY01: \$0 Total: \$119,067  
*Prin. Invest.:* R A MEWALDT  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 5207 CALIFORNIA INST OF TECHNOLOGY 1678**  
 TWO-DIMENSIONAL HILBERT-HUANG TRANSFORM METHOD FOR DATA  
 ANALYSIS  
 08/27/1998 - 09/30/2001 FY01: \$0 Total: \$96,988  
*Prin. Invest.:* T Y WU  
*Tech. Officer:* GSFC/S R LONG, GSFC/N E HUANG  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 5216 CALIFORNIA INST OF TECHNOLOGY 1679**  
 A PROPOSAL FOR CONVERSION OF THE TRANS-IRON GALACTIC  
 ELEMENT RECORDER (TIGER) PI STONE  
 12/01/1998 - 11/30/2001 FY01: \$0 Total: \$76,156  
*Prin. Invest.:* E C STONE  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5227 CALIFORNIA INST OF TECHNOLOGY 1680**  
 FIRST INCREMENTAL FUNDING FOR NAG5-5227 PI DR. EDWARD C. STONE  
 03/29/1999 - 11/30/2001 FY01: \$88,000 Total: \$480,200  
*Prin. Invest.:* E C STONE  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5228 CALIFORNIA INST OF TECHNOLOGY 1681**  
 FIRST YEAR FUNDING FOR NAG5-5228 PI DR. EDWARD C STONE  
 03/29/1999 - 11/30/2001 FY01: \$72,000 Total: \$215,632  
*Prin. Invest.:* E C STONE  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5286 CALIFORNIA INST OF TECHNOLOGY 1682**  
 HIGH SPECTRAL & SPATIAL RESOLUTION GE DETECTOR & READOUT  
 TECHNOLOGIES FOR NUCLEAR SPECTROSCOPIC IMG  
 05/31/2000 - 05/17/2002 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* S BOGGS  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5289 CALIFORNIA INST OF TECHNOLOGY 1683**  
 HIGH ENERGY FOCUSING TELESCOPE HIGH ENERGY FOCUSING TELE-  
 SCOPE  
 06/02/2000 - 05/25/2003 FY01: \$725,000 Total: \$1,405,000  
*Prin. Invest.:* F HARRISON  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5303 CALIFORNIA INST OF TECHNOLOGY 1684**  
 GLOBAL MAPPING OF THE COSMIC UV BACKGROUND GLOBAL MAPPING  
 OF THE COSMIC UV BACKGROUND  
 09/29/2000 - 09/27/2002 FY01: \$301,440 Total: \$301,440  
*Prin. Invest.:* C MARTIN  
*Tech. Officer:* WFF/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5322 CALIFORNIA INST OF TECHNOLOGY 1685**  
 THE PRESIDENTIAL EARLY CAREER AWARD (PECA)  
 03/21/2001 - 10/31/2006 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* F HARRISON  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5338 CALIFORNIA INST OF TECHNOLOGY 1686**  
 DETERMINATION OF THE CONFIDENCE LIMIT ON HHT RESULTS  
 07/09/2001 - 09/30/2002 FY01: \$30,992 Total: \$30,992  
*Prin. Invest.:* T WU  
*Tech. Officer:* WFF/S LONG  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6173 CALIFORNIA INST OF TECHNOLOGY 1687**  
 PRECISION SOLAR DISK PHOTOMETRY -- A TOOL FOR UNDE HE SUN'S LUMINOSITY  
 08/26/1997 - 05/31/2000 FY01: \$0 Total: \$134,912  
*Prin. Invest.:* D G LIBBRECHT  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6263 CALIFORNIA INST OF TECHNOLOGY 1688**  
 PHOTOCHEMICAL STUDIES OF CHEMISTRY IN OUTER SOLAR  
 08/21/1997 - 12/31/2001 FY01: \$82,000 Total: \$401,012  
*Prin. Invest.:* D L YUNG  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6402 CALIFORNIA INST OF TECHNOLOGY 1689**  
 5HE ORIGIN AND EVOLUTION OF NEUTRON STARS\_(LTSA)  
 10/15/1997 - 10/31/2001 FY01: \$109,000 Total: \$418,000  
*Prin. Invest.:* S KULKARNI  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6573 CALIFORNIA INST OF TECHNOLOGY 1690**  
 US PARTICIPATION IN PLANCK, HFI PORTION  
 11/18/1997 - 07/31/2001 FY01: \$0 Total: \$1,379,000  
*Prin. Invest.:* D E LANGE  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6816 CALIFORNIA INST OF TECHNOLOGY 1691**  
 SUBMILLIMETER WAVELENGTH SPECTROSCOPY AND IMAGING OF THE PLANETS  
 01/07/1998 - 12/31/2001 FY01: \$0 Total: \$137,405  
*Prin. Invest.:* E SERABYN, NONE  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6840 CALIFORNIA INST OF TECHNOLOGY 1692**  
 LOW-FREQUENCY GRAVITATIONAL-WAVE SOURCES AND THEIR IMPLICA- TIONS FOR FUTURE NASA MISSIONS  
 01/09/1998 - 12/31/2000 FY01: \$0 Total: \$200,000  
*Prin. Invest.:* K THORNE  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6912 CALIFORNIA INST OF TECHNOLOGY 1693**  
 MO&DA OF THE ADVANCED COMPOSITION EXPLORER MISSION  
 01/30/1998 - 01/31/2002 FY01: \$1,501,700 Total: \$13,828,115  
*Prin. Invest.:* E STONE  
*Tech. Officer:* GSFC/B WORRALL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6941 CALIFORNIA INST OF TECHNOLOGY 1694**  
 THE ACCRETION HISTORY OF EXTRATERRESTRIAL MATTER O VER GEOLOGIC TIME FROM THE SEAFLOOR SEDIMENTS  
 02/06/1998 - 03/31/2001 FY01: \$0 Total: \$130,138  
*Prin. Invest.:* K A FARLEY  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6981 CALIFORNIA INST OF TECHNOLOGY 1695**  
 BROWN DWARFS: DETECTION AND DETAILED STUDIES  
 02/06/1998 - 08/14/2001 FY01: \$0 Total: \$181,000  
*Prin. Invest.:* S KULKARNI  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7007 CALIFORNIA INST OF TECHNOLOGY 1696**  
 BLACK HOLE ASTROPHYSICS\_ - ATP  
 02/11/1998 - 08/31/2001 FY01: \$0 Total: \$257,591  
*Prin. Invest.:* R BLANDFORD  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7008 CALIFORNIA INST OF TECHNOLOGY 1697**  
 SPECTRAL ENERGY DISTRIBUTION OF T TAURI DISKS\_ - AT P  
 02/18/1998 - 08/31/2000 FY01: -\$10 Total: \$87,135  
*Prin. Invest.:* P M GOLDBREICH  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7034 CALIFORNIA INST OF TECHNOLOGY 1698**  
 ORIGIN AND EVOLUTION OF THE SPINS AND FIELDS OF WH ITE DWARFS, NEUTRON STARS AND BLACK HOLES - ATP  
 02/18/1998 - 08/14/2001 FY01: \$0 Total: \$243,017  
*Prin. Invest.:* E PHINNEY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7081 CALIFORNIA INST OF TECHNOLOGY 1699**  
 ADVANCED SPACE PARTICLE ANALYSIS SYSTEM  
 03/10/1998 - 03/31/2002 FY01: \$121,585 Total: \$376,096  
*Prin. Invest.:* J BEAUCHAMP  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7166 CALIFORNIA INST OF TECHNOLOGY 1700**  
 HIGHER FLUX FROM THE YOUNG SUN AS AN EXPLANATION F OR WARM TEMPERATURES FOR EARLY EARTH AND MARS  
 03/16/1998 - 10/14/2001 FY01: \$37,076 Total: \$236,261  
*Prin. Invest.:* I SACKMANN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7230 CALIFORNIA INST OF TECHNOLOGY 1701**  
 STUDY OF TROPOSPHERIC OZONE AND UV REFLECTIVITY USING TOMS  
 DATA  
 04/16/1998 - 05/31/2002 FY01: \$15,241 Total: \$222,474  
*Prin. Invest.:* Y L YUNG  
*Tech. Officer:* GSFC/E HILSEN RATH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7501 CALIFORNIA INST OF TECHNOLOGY 1702**  
 THE STELLAR POPULATIONS EMERGING FROM MOLECULAR CLOUDS AND  
 THEIR SURVIVAL TIMES OF (PROTOPLA  
 06/02/1998 - 05/31/2000 FY01: \$0 Total: \$31,100  
*Prin. Invest.:* D HILLENBRAND  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7680 CALIFORNIA INST OF TECHNOLOGY 1703**  
 VARIABILITY OF CLOUDS OVER A SOLAR CYCLE YEAR 1 OF A 3 YEAR  
 GRANT  
 09/17/1998 - 12/31/2001 FY01: \$0 Total: \$242,005  
*Prin. Invest.:* Y L YUNG  
*Tech. Officer:* GSFC/M CHOU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8049 CALIFORNIA INST OF TECHNOLOGY 1704**  
 ATMOSPHERIC DYNAMICS AND AURORAL PHENOMENA DERIVED FROM  
 GALILEO IMAGES  
 01/15/1999 - 01/14/2001 FY01: \$0 Total: \$126,368  
*Prin. Invest.:* D P INGERSOLL  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8217 CALIFORNIA INST OF TECHNOLOGY 1705**  
 STAR FORMATION IN GIANT MOLECULAR CLOUDS\_L TSA98  
 02/08/1999 - 02/14/2002 FY01: \$104,707 Total: \$206,841  
*Prin. Invest.:* J M CARPENTER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8251 CALIFORNIA INST OF TECHNOLOGY 1706**  
 GEOCHEMICAL AND ISOTOPIC INVESTIGATIONS OF LUNAR & PLANETARY  
 MATERIALS  
 02/10/1999 - 02/14/2002 FY01: \$345,000 Total: \$1,030,000  
*Prin. Invest.:* D A PAPANASTASSIOU  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8318 CALIFORNIA INST OF TECHNOLOGY 1707**  
 MILLISECOND PULSARS AND PLANETARY SYSTEMS  
 03/30/1999 - 09/30/2001 FY01: \$50,000 Total: \$145,000  
*Prin. Invest.:* S R KULKARNI  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8463 CALIFORNIA INST OF TECHNOLOGY 1708**  
 LONG TERM MONITORING OF THE IO PLASMA TORUS DURING THE  
 GALILEO ENCOUNTER PERIOD  
 04/19/1999 - 11/30/2000 FY01: \$0 Total: \$80,000  
*Prin. Invest.:* M E BROWN  
*Tech. Officer:* GSFC/D VEANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8535 CALIFORNIA INST OF TECHNOLOGY 1709**  
 HIGH RESOLUTION, HIGH ENERGY FOCUSING OPTICS FOR THE NEXT  
 GENERATION GAMMA RAY EXPLORER.  
 07/08/1999 - 07/14/2002 FY01: \$0 Total: \$541,664  
*Prin. Invest.:* F A HARRISON  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 13 - PHYSICS

**NAG 5 8576 CALIFORNIA INST OF TECHNOLOGY 1710**  
 NEW GRANT: YEAR 1 OF 2 FOR "A BEOWULF SYSTEM SOFTWARE  
 INITIATIVE"  
 05/27/1999 - 05/31/2001 FY01: \$0 Total: \$149,988  
*Prin. Invest.:* T STERLING  
*Tech. Officer:* GSFC/J FISCHER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8743 CALIFORNIA INST OF TECHNOLOGY 1711**  
 VERY HIGH SPECTRAL & SPATIAL RESOLUTION GEODETECTORS &  
 READOUT ELECTRONICS FOR HARD X-RAY ASTRONOMY  
 08/20/1999 - 08/31/2002 FY01: \$0 Total: \$221,519  
*Prin. Invest.:* S BOGGS  
*Tech. Officer:* GSFC/F A HERRERO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8822 CALIFORNIA INST OF TECHNOLOGY 1712**  
 SPECTROSCOPIC STUDIES OF PRE-BIOTIC CARBON CHEMISTRY  
 09/08/1999 - 08/31/2001 FY01: \$0 Total: \$106,520  
*Prin. Invest.:* G BLAKE  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 8907 CALIFORNIA INST OF TECHNOLOGY 1713**  
 IMPACT & COLLISIONAL PROCESSES IN THE SOLAR SYSTEM  
 12/29/1999 - 09/30/2000 FY01: \$0 Total: \$152,000  
*Prin. Invest.:* T J AHRENS  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8915 CALIFORNIA INST OF TECHNOLOGY 1714**  
 IMPACT CRATERING CALCULATIONS  
 01/05/2000 - 09/30/2000 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* T AHRENS  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8922 CALIFORNIA INST OF TECHNOLOGY 1715**  
 PARTICIPATION OF THE NITRIC ACID CIMS INSTRUMENT IN THE SAGE III  
 OZONE LOSS & VALIDATION EXPERIMENT  
 01/06/2000 - 12/31/2001 FY01: \$179,057 Total: \$408,557  
*Prin. Invest.:* P WENNBERG  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9307 CALIFORNIA INST OF TECHNOLOGY 1716**  
 CLOSEOUT OF "LABORATORY STUDIES OF THE PHOTOCHEMISTRY OF  
 PEROXYNITRIC ACID" ASSET FORTH IN THE ATT  
 03/22/2000 - 03/31/2002 FY01: \$53,125 Total: \$123,169  
*Prin. Invest.:* D O WENNBERG, NONE  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9344 CALIFORNIA INST OF TECHNOLOGY 1717**  
 BALLOON-BORNE OBSERVATIONS OF THE POLARIZATION OF THE COSMIC  
 MICROWAVE BACKGROUND  
 03/27/2000 - 03/31/2003 FY01: \$167,580 Total: \$310,150  
*Prin. Invest.:* A LANGE  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9434 CALIFORNIA INST OF TECHNOLOGY 1718**  
 THE PHYSICAL & CHEMICAL STRUCTURE OF CIRCUMSTELLAR DISKS &  
 ENVELOPES  
 04/24/2000 - 04/14/2001 FY01: \$0 Total: \$35,000  
*Prin. Invest.:* G A BLAKE  
*Tech. Officer:* GSFC/J BOYCE/SR  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9462 CALIFORNIA INST OF TECHNOLOGY 1719**  
 USE OF SATELLITE FIRE PRODUCTS AND MODELS TO INVESTIGATE THE  
 EFFECTS OF FIRE ON THE GLOBAL CARBON C  
 04/19/2000 - 04/30/2003 FY01: \$159,706 Total: \$283,253  
*Prin. Invest.:* J RANDERSON  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9471 CALIFORNIA INST OF TECHNOLOGY 1720**  
 ATMOSPHERIC TRACE GAS ABUNDANCES & STABLE ISOTOPE RATIOS VIA  
 INFRARED LASER INDUCED FLUORESCENCE (IR  
 04/14/2000 - 04/30/2002 FY01: \$166,500 Total: \$323,343  
*Prin. Invest.:* G BLAKE  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9482 CALIFORNIA INST OF TECHNOLOGY 1721**  
 KNOWLEDGE DISCOVERY AND DATABASE TECHNOLOGIES FOR DIGITAL  
 SKY SURVEYS AND VIRTUAL OBSERVATORIES  
 04/21/2000 - 04/30/2002 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* S DJORGOVSKI  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9487 CALIFORNIA INST OF TECHNOLOGY 1722**  
 INTERANNUAL VARIABILITY OF SNOW AND ICE AND IMPACT ON THE  
 CARBON CYCLE  
 04/25/2000 - 04/30/2002 FY01: \$169,917 Total: \$278,162  
*Prin. Invest.:* Y L YUNG  
*Tech. Officer:* GSFC/P HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9493 CALIFORNIA INST OF TECHNOLOGY 1723**  
 DEVELOPMENT OF SUBMILLIMETER SIS MIXERS AND BROAD BAND HEMT  
 AMPLIFIERS  
 04/18/2000 - 04/30/2003 FY01: \$170,000 Total: \$288,000  
*Prin. Invest.:* J ZMUIDZINAS  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9530 CALIFORNIA INST OF TECHNOLOGY 1724**  
 MILLIMETER-WAVE INTERFEROMETRY OF PROTO-PLANETARY DISKS  
 04/27/2000 - 04/30/2003 FY01: \$85,000 Total: \$170,000  
*Prin. Invest.:* S SARGENT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9601 CALIFORNIA INST OF TECHNOLOGY 1725**  
 MARTIAN ATMOSPHERIC CIRCULATION AND CLIMATE  
 05/17/2000 - 04/30/2002 FY01: \$67,100 Total: \$135,300  
*Prin. Invest.:* A P INGERSOL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9603 CALIFORNIA INST OF TECHNOLOGY 1726**  
 VIRTUAL OBSERVATORIES OF THE FUTURE  
 05/19/2000 - 05/14/2002 FY01: \$0 Total: \$25,000  
*Prin. Invest.:* S DJORGOVSKI  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9606 CALIFORNIA INST OF TECHNOLOGY 1727**  
 IMPLICATIONS OF MARTIAN NORTH-SOUTH POLAR DIFFERENCES  
 05/12/2000 - 05/14/2002 FY01: \$52,000 Total: \$100,700  
*Prin. Invest.:* B C MURRAY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9687 CALIFORNIA INST OF TECHNOLOGY 1728**  
 IN SITU CHEMICAL IMAGER  
 06/05/2000 - 05/31/2001 FY01: \$0 Total: \$94,150  
*Prin. Invest.:* J L KIRSCHVINK  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9821 CALIFORNIA INST OF TECHNOLOGY 1729**  
 COSMOLOGY & PARTICLE ASTROPHYSICS THEORY (ATP-98)  
 08/23/2000 - 04/30/2002 FY01: \$75,000 Total: \$190,107  
*Prin. Invest.:* M P KAMIONKOWSKI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9856 CALIFORNIA INST OF TECHNOLOGY 1730**  
 ROCKET-BORNE OBSERVATIONS OF SPATIAL FLUCTUATIONS IN THE  
 COSMIC NEAR INFRARED BACKGROUND  
 08/07/2000 - 08/14/2001 FY01: \$0 Total: \$94,200  
*Prin. Invest.:* A LANGE  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9919 CALIFORNIA INST OF TECHNOLOGY 1731**  
 THE HOT PHASE OF THE VIOLENT ISM OF NEARBY DWARF IRREGULAR  
 GALAXIES  
 09/05/2000 - 09/30/2002 FY01: \$17,000 Total: \$46,300  
*Prin. Invest.:* F WALTER  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9920 CALIFORNIA INST OF TECHNOLOGY 1732**  
 A DETAILED STUDY OF TWO OPTICALLY-SELECTED, HIGH-REDSHIFT  
 CLUSTERS OF GALAXIES  
 09/05/2000 - 11/30/2000 FY01: -\$28,595 Total: \$0  
*Prin. Invest.:* L M LUBIN  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 10047 CALIFORNIA INST OF TECHNOLOGY 1733**  
 MEASURING THE MAGNETIC FIELD AND RELATIVISTIC PARTICLES IN  
 RELIC RADIO GALAXIES  
 10/03/2000 – 09/30/2001 FY01: \$27,000 Total: \$27,000  
*Prin. Invest.:* F A HARRISON  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10189 CALIFORNIA INST OF TECHNOLOGY 1734**  
 PLANETARY ORIGIN, EVOLUTION AND STRUCTURE  
 01/03/2001 – 01/14/2002 FY01: \$88,400 Total: \$88,400  
*Prin. Invest.:* D J STEVENSON  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 10198 CALIFORNIA INST OF TECHNOLOGY 1735**  
 IMPACT PROCESSES IN THE SOLAR SYSTEM  
 01/04/2001 – 12/31/2001 FY01: \$218,600 Total: \$218,600  
*Prin. Invest.:* T AHRENS  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 10208 CALIFORNIA INST OF TECHNOLOGY 1736**  
 IMPACT CRATERING CALCULATIONS  
 01/02/2001 – 09/30/2001 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* T AHRENS  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10293 CALIFORNIA INST OF TECHNOLOGY 1737**  
 APPLICATION OF ISOTOPIC AND CHEMICAL ANALYSES TO UNDER-  
 STANDING THE ORIGIN OF EXTRATERRESTRIAL  
 02/06/2001 – 02/14/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* G J WASSERBURG  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10317 CALIFORNIA INST OF TECHNOLOGY 1738**  
 LARGE-FORMAT, ANTENNA-COUPLED, MULTI-FREQUENCY, BOLOMETRIC  
 (LAMB) FOCAL PLANE ARRAYS FOR MM & SUB  
 02/07/2001 – 01/31/2002 FY01: \$169,894 Total: \$169,894  
*Prin. Invest.:* A E LANGE  
*Tech. Officer:* GSFC/E J WOLLACK  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10358 CALIFORNIA INST OF TECHNOLOGY 1739**  
 DEVELOPMENT OF SUPERCONDUCTING DETECTOR WITH MULTIPLEXED  
 READOUTS-  
 02/01/2001 – 01/14/2002 FY01: \$218,870 Total: \$218,870  
*Prin. Invest.:* J ZMUIZINAS  
*Tech. Officer:* GSFC/C STAHLE  
*CASE Category:* 13 – PHYSICS

**NAG 5 10406 CALIFORNIA INST OF TECHNOLOGY 1740**  
 A NEOTECTONIC MAP OF THE EARTH: A PILOT STUDY OF SRTM DATA  
 04/02/2001 – 03/31/2002 FY01: \$75,000 Total: \$75,000  
*Prin. Invest.:* K E SIEH  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 10410 CALIFORNIA INST OF TECHNOLOGY 1741**  
 MINIATURE IRON BIOMINERAL DETECTOR FOR MARTIAN EXO BIOLOGY  
 04/10/2001 – 04/14/2002 FY01: \$166,514 Total: \$166,514  
*Prin. Invest.:* J KIRSCHVINK  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10423 CALIFORNIA INST OF TECHNOLOGY 1742**  
 EXPERIMENTAL STUDIES OF PHASE EQUILIBRIA OF METEORITES AND  
 PLANETARY BODIES  
 02/20/2001 – 02/28/2002 FY01: \$150,000 Total: \$150,000  
*Prin. Invest.:* E STOLPER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 – CHEMISTRY

**NAG 5 10467 CALIFORNIA INST OF TECHNOLOGY 1743**  
 THE STRUCTURE OF YOUNG STELLAR SYSTEMS: ESTABLISHING INITIAL  
 CONDITIONS FOR PLANET FORMATION  
 02/22/2001 – 02/28/2002 FY01: \$45,000 Total: \$45,000  
*Prin. Invest.:* G BLAKE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10470 CALIFORNIA INST OF TECHNOLOGY 1744**  
 TEMPORAL VARIABILITY IN THE ACCRETION RATE OF INTERPLANETARY  
 DUST USING THE ASA TRACER  
 02/27/2001 – 03/31/2002 FY01: \$48,900 Total: \$48,900  
*Prin. Invest.:* K A FARLEY  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 10558 CALIFORNIA INST OF TECHNOLOGY 1745**  
 BROWN DWARFS: DISCOVERY AND DETAILED STUDIES  
 03/13/2001 – 03/14/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* S KULKARNI  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10587 CALIFORNIA INST OF TECHNOLOGY 1746**  
 MARS INTERNAL EVOLUTION CONSTRAINED BY MGS DATA  
 03/13/2001 – 03/14/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* D STEVENSON  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10602 CALIFORNIA INST OF TECHNOLOGY 1747**  
 SUPPORT FOR THE 2001 GORDON RESEARCH CONFERENCE ON THE  
 ORIGINS OF SOLAR SYSTEMS  
 03/21/2001 – 02/28/2002 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* D STEVENSON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10618 CALIFORNIA INST OF TECHNOLOGY 1748**  
 PALEOMAGNETIC CONSTRAINTS ON PANSPERMIA AND THE ALH84001  
 MAGNETOFOSSELS  
 03/19/2001 – 03/31/2002 FY01: \$72,000 Total: \$72,000  
*Prin. Invest.:* J L KIRSCHVINK  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10707 CALIFORNIA INST OF TECHNOLOGY 1749**  
 SOURCES OF LOW FREQUENCY GRAVITATIONAL WAVES (ATP 2000)  
 04/23/2001 - 04/30/2002 FY01: \$128,000 Total: \$128,000  
*Prin. Invest.:* E PHINNEY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10724 CALIFORNIA INST OF TECHNOLOGY 1750**  
 CIRRUS CLOUDS ON MARS: DATA ANALYSIS AND GCM MODEL ING  
 04/12/2001 - 04/14/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* Y YUNG  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10761 CALIFORNIA INST OF TECHNOLOGY 1751**  
 UNDERSTANDING GAMMA-RAY BURSTS (ATP 2000)  
 04/23/2001 - 04/30/2002 FY01: \$28,373 Total: \$28,373  
*Prin. Invest.:* R SARI  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10804 CALIFORNIA INST OF TECHNOLOGY 1752**  
 CONCEPT STUDY FOR THE "THE HEAVY NUCLEI EXPLORER" (HNX)  
 MISSION AO-99-OSS-05  
 04/30/2001 - 04/30/2002 FY01: \$47,600 Total: \$47,600  
*Prin. Invest.:* D A MEWALDT  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10885 CALIFORNIA INST OF TECHNOLOGY 1753**  
 THE MULTI-WAVELENGTH EXTRAGALACTIC SKY (ADP 2000)  
 05/03/2001 - 05/14/2002 FY01: \$48,148 Total: \$48,148  
*Prin. Invest.:* R J BRUNNER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10901 CALIFORNIA INST OF TECHNOLOGY 1754**  
 A MECHANISM FOR SOLAR FORDING OF CLIMATE: DID THE MAUNDER  
 MINIMUM CAUSE THE LITTLE ICE AGE?  
 05/07/2001 - 05/14/2002 FY01: \$166,768 Total: \$166,768  
*Prin. Invest.:* Y L YUNG  
*Tech. Officer:* GSFC/J F SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10955 CALIFORNIA INST OF TECHNOLOGY 1755**  
 A STUDY OF EXTREMELY RED GALAXIES  
 05/30/2001 - 05/31/2002 FY01: \$64,879 Total: \$64,879  
*Prin. Invest.:* D THOMPSON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11157 CALIFORNIA INST OF TECHNOLOGY 1756**  
 LABORATORY STUDIES OF THE PHOTOCHEMISTRY OF PEROXY NITRIC  
 ACID  
 08/01/2001 - 07/31/2004 FY01: \$17,000 Total: \$17,000  
*Prin. Invest.:* P O WENNBERG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11214 CALIFORNIA INST OF TECHNOLOGY 1757**  
 OBSERVATIONAL AND MODELING STUDIES OF THE SOUTH PO LAR  
 RESIDUAL CAP  
 08/13/2001 - 08/14/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* A P INGERSOLL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11257 CALIFORNIA INST OF TECHNOLOGY 1758**  
 AEOLIAN TRANSPORT PROCESSES ON MARS: SURFACE OBSE RVATIONS  
 AND MESOSCALEMODELING  
 08/17/2001 - 08/31/2003 FY01: \$70,000 Total: \$70,000  
*Prin. Invest.:* A ALBEE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11273 CALIFORNIA INST OF TECHNOLOGY 1759**  
 THE EXPLORATION OF THE OUTER SOLAR SYSTEM  
 08/22/2001 - 09/30/2004 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* M BROWN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11288 CALIFORNIA INST OF TECHNOLOGY 1760**  
 DAILY WEATHER MAPS FROM MARS ORBITER IMAGES  
 08/20/2001 - 08/31/2004 FY01: \$71,900 Total: \$71,900  
*Prin. Invest.:* D F BRADY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1237 CALIFORNIA INST OF TECHNOLOGY 1761**  
 DISPERSION MICROSTRUCTURE AND RHEOBYG IN CERAMICS PROC-  
 ESSING  
 04/22/1996 - 01/31/2001 FY01: -\$398 Total: \$299,358  
*Prin. Invest.:* D F BRADY  
*Tech. Officer:* MSFC/P DOTY, MSFC/R POWER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1661 CALIFORNIA INST OF TECHNOLOGY 1762**  
 DISPERSION MICROSTRUCTURE AND PHEOLOGY IN CERAMICS PROC-  
 ESSING  
 05/16/2000 - 11/30/2003 FY01: \$76,000 Total: \$120,994  
*Prin. Invest.:* J BRADY, NONE  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1743 CALIFORNIA INST OF TECHNOLOGY 1763**  
 MEASUREMENT OF THERMOPHYSICAL PROPERTIES OF MOLTEN SILICON  
 AND GERMANIUM  
 09/27/2000 - 09/30/2003 FY01: \$47,500 Total: \$197,500  
*Prin. Invest.:* W K RHIM  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 8 1744 CALIFORNIA INST OF TECHNOLOGY 1764**  
 MEASUREMENT OF THERMOPHYSICAL PROPERTIES OF MOLTEN SILLICON  
 AND GERMANIUM  
 09/27/2000 - 09/30/2004 FY01: \$496,500 Total: \$596,500  
*Prin. Invest.:* W L JOHNSON  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 8 1763 CALIFORNIA INST OF TECHNOLOGY 1765**  
 THE CQ EXPERIMENT ENHANCED HEAT CAPACITY OF SUPERFLUID  
 HELIUM IN A HEAT FLUX  
 05/01/2001 - 06/30/2001 FY01: \$120,000 Total: \$120,000  
*Prin. Invest.:* D GOODSTEIN  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1785 CALIFORNIA INST OF TECHNOLOGY 1766**  
 BIOMIMETIC SELF-ASSEMBLY OF MESOSTRUCTURES IN MIRO  
 MICROGRAVITY: THE NATURE OF CAPILLARY BOND  
 04/30/2001 - 04/29/2005 FY01: \$68,000 Total: \$68,000  
*Prin. Invest.:* A PONCE  
*Tech. Officer:* MSFC/D S HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1013 CALIFORNIA INST OF TECHNOLOGY 1767**  
 GENESIS DISCOVERY MISSION PHASE B  
 05/13/1998 - 05/31/2002 FY01: \$163,800 Total: \$514,510  
*Prin. Invest.:* D S BURNETT  
*Tech. Officer:* JSC/E K STANSBERY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 5 98034 CALIFORNIA INST OF TECHNOLOGY 1768**  
 PHASE A STUDY FOR GALE X (GALAXY EVOLUTION EXPLORER) INVE-  
 TIGATION  
 12/05/1997 - 09/30/2004 FY01: \$16,640,000 Total: \$54,848,000  
*Prin. Invest.:* C MARTIN  
*Tech. Officer:* GSFC/F SNOW  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 98152 CALIFORNIA INST OF TECHNOLOGY 1769**  
 CONSTELLATION X-RAY MISSION  
 06/22/1998 - 12/15/2001 FY01: \$47,500 Total: \$424,470  
*Prin. Invest.:* F HARRISON  
*Tech. Officer:* GSFC/J GRADY  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 5431 CALIFORNIA INST OF TECHNOLOGY 1770**  
 ADJOINT ERROR ANALYSIS: IMPROVING THE ACCURACY & RELIABILITY  
 OF LIFT & DRAG ESTIMATES  
 03/28/2001 - 03/31/2002 FY01: \$29,335 Total: \$29,335  
*Prin. Invest.:* N A PIERRE  
*Tech. Officer:* ARC/J J RENTHER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 5 30096 CALIFORNIA INST OF TECHNOLOGY 1771**  
 THE ISOTOPIC COMPOSITION OF STATOSPHERIC AND UPPER\_ AS A  
 TRACER OF TROPOSPHER-STRATOSPHERE EXCHANGE/M  
 09/10/1997 - 08/31/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* Y L YUNG  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30138 CALIFORNIA INST OF TECHNOLOGY 1772**  
 CRUCIAL DESERTIFICATION PROCESSES FOR MONITORING ARID LANDS  
 08/27/1998 - 11/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* B C MURRAY, OKIN  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30393 CALIFORNIA INST OF TECHNOLOGY 1773**  
 VOLCANIC HAZARDS ASSESSMENT USING REMOTE SENSING, BAJA,  
 CALIFORNIA,MEXICO (STUDENT: JANE DMOCH  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J STOCK  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30407 CALIFORNIA INST OF TECHNOLOGY 1774**  
 THE SUBDUCTION ZONE EARTHQUAKE CYCLE AS CONSTRAINE D BY  
 SPACE GEODESY ANDSEISMOLOGY/STUDENT: MATTHE  
 08/15/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* M SIMONS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50200 CALIFORNIA INST OF TECHNOLOGY 1775**  
 LABORATORY STUDY OF REACTIONS IMPORTANT IN THE FOR MATION OF  
 TROPOSPHERIC OZONEAND THE DEVELOPMENT  
 06/24/1998 - 09/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* M OKUMURA  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 12 - CHEMISTRY

**NGT 5 50215 CALIFORNIA INST OF TECHNOLOGY 1776**  
 FROM EARTH TO ORBIT: UTILIZING THE DIGITIZED PALOM AR SKY SURVEY  
 IN NASA MISSIONS\_ (STUDENT: ROY GAL  
 07/22/1998 - 07/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* S G DJORGOVSKI  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50231 CALIFORNIA INST OF TECHNOLOGY 1777**  
 CHEMICAL PROCESSES IN CIRCUMSTELLAR ACCRETION DISKS (STUDENT:  
 JACQUELINE KESSLER  
 05/27/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* G BLAKE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50249 CALIFORNIA INST OF TECHNOLOGY 1778**  
 OBSERVATIONS OF CMB ANISOTROPIES WITH THE ARCMINUT E  
 COSMOLOGY BOLOMETRICARRAY RECEIVER (STUDENT: MA  
 06/04/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* A LANGE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50278 CALIFORNIA INST OF TECHNOLOGY 1779**  
 BOLOMETRIC POLARIMETRY FOR COSMOLOGY  
 06/20/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* A LANGE  
*Tech. Officer:* GSFC/L K SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50280 CALIFORNIA INST OF TECHNOLOGY 1780**  
 INVESTIGATION OF VACUUM ARC ION THRUSTER FOR SPACE PROPULSION APPLICATIONS--STUDENT: MICHA  
 06/20/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* F CULICK  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50308 CALIFORNIA INST OF TECHNOLOGY 1781**  
 DEVELOPMENT OF SUPERCONDUCTING CAVITY STABILIZED OSCILLATORS (SCSO) FOR FREQUENCY STANDARDS & PREC  
 07/06/2000 - 09/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* N YEH  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50339 CALIFORNIA INST OF TECHNOLOGY 1782**  
 GALAXY FORMATION AND EVOLUTION: MODELS FOR CURRENT AND FUTURE OBSERVATIONS (STUDENT: MICH  
 05/04/2001 - 08/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* M KAMIONKOWSKI  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 60003 CALIFORNIA INST OF TECHNOLOGY 1783**  
 A SUMMER RESEARCH PROGRAM OF NASA SUMMER FACULTY F  
 09/23/1997 - 08/31/2001 FY01: \$0 Total: \$1,365,527  
*Prin. Invest.:* A ALBEE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2293 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1784**  
 HIGHPOWER ROCKET DEMONSTRATOR OF A REUSABLE GLIDE- BACK BOOSTER  
 04/14/2000 - 09/01/2000 FY01: \$1 Total: \$3,798  
*Prin. Invest.:* D J DETURRIS  
*Tech. Officer:* LARC/T A TALAY  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 2327 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1785**  
 SUBSONIC GLIDEBACK ROCKET DEMONSTRATOR FLIGHT TESTING  
 09/08/2000 - 08/31/2001 FY01: \$18,000 Total: \$24,000  
*Prin. Invest.:* D DETURRIS  
*Tech. Officer:* LARC/T A TALAY  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 01099 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1786**  
 CONFIGURATION STUDIES OF PERSONAL AIR VEHICLE EXPLORATION  
 06/14/2001 - 01/13/2002 FY01: \$49,996 Total: \$49,996  
*Prin. Invest.:* D HALL, NONE  
*Tech. Officer:* LARC/M D MOORE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1169 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1787**  
 CONDUIT SPECIFICATIONS DEVELOPMENT FOR CRUSIE FLIG HT OPERATIONS  
 12/03/1997 - 10/31/1999 FY01: \$0 Total: \$70,000  
*Prin. Invest.:* D J BIEZAD  
*Tech. Officer:* ARC/M B TISCHLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1386 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1788**  
 POTENTIAL BENEFITS FROM TMA AND SMS INTEGRATION  
 11/01/1999 - 06/30/2002 FY01: \$0 Total: \$118,758  
*Prin. Invest.:* S HOCKADAY  
*Tech. Officer:* ARC/S ATKINS, ARC/L TOBIAS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 202 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1789**  
 INTEGRATING NASA DRYDEN RESEARCH ENDEAVORS INTO THE TEACHING-LEARNING OF MATHEMATICS IN THE K-12 C  
 02/22/2000 - 01/03/2002 FY01: \$13,978 Total: \$28,909  
*Prin. Invest.:* R A WARD, NONE  
*Tech. Officer:* DFRC/S YEE  
*CASE Category:* 21 - MATHEMATICS

**NAG 5 8674 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1790**  
 ADAPTIVE SAMPLING OF PHYTOPLANKTON RESPONSES TO EPISODIC PHYSICAL FORCING IN THE NEARSHORE COASTAL  
 07/08/1999 - 07/14/2002 FY01: \$84,747 Total: \$283,638  
*Prin. Invest.:* M A MOLINE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 1149 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1791**  
 DEVELOPMENT OF MULTIDISCIPLINARY FLIGHT CONTROL DESIGN PROCESSES USING CONDUIT  
 12/01/1999 - 07/31/2002 FY01: \$132,343 Total: \$242,343  
*Prin. Invest.:* D J BIEZAD  
*Tech. Officer:* ARC/M TISCHLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5392 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1792**  
 INNOVATIVE VERTICAL & SHORT TAKEOFF & LANDING CONCEPTS & SUPPORTING TECHNOLOGIES  
 08/16/2000 - 06/30/2002 FY01: \$25,000 Total: \$45,000  
*Prin. Invest.:* D W HALL  
*Tech. Officer:* ARC/J ZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5464 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1793**  
 MARS AIRPLANE MISSION AND TECHNOLOGY DEVELOPMENT  
 09/27/2001 - 08/31/2002 FY01: \$71,980 Total: \$71,980  
*Prin. Invest.:* D W HALL, D J BIEZAD  
*Tech. Officer:* ARC/L G LEMKE, ARC/A GONZALES  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 4 171 CALIFORNIA ST. POLYTECHNIC U-POMONA 1794**  
 ENHANCEMENT OF RESEARCH & DESIGN CAPABILITIES  
 09/30/1999 - 09/30/2002 FY01: \$74,888 Total: \$195,028  
*Prin. Invest.:* W E MORTENSEN  
*Tech. Officer:* DFRC/K GUPTA, DFRC/L VOEKLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 7 10 CALIFORNIA ST. POLYTECHNIC U-POMONA 1795**  
 ESTABLISHMENT OF A NEW BUSINESS INCUBATOR  
 08/06/1998 - 11/04/2001 FY01: \$0 Total: \$830,000  
*Prin. Invest.:* V H GARNER, E L BARNES  
*Tech. Officer:* NMO/T J LLOYD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 4 153 CALIFORNIA STATE UNIV - FRESNO 1796**  
 THERMO-MECHANICAL CHARACTERISTICS OF COMPOSITE MATERIALS  
 03/26/1998 - 10/31/2001 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* S MAHANTY  
*Tech. Officer:* DFRC/J BRADEN, DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 172 CALIFORNIA STATE UNIV - FRESNO 1797**  
 PARTNERSHIP PROJECT EXPLORE  
 09/30/1999 - 10/31/2001 FY01: \$75,000 Total: \$184,914  
*Prin. Invest.:* S MAHANTY, T MCCLANAHAN  
*Tech. Officer:* DFRC/K GUPTA, DFRC/L VOELKER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 4945 CALIFORNIA STATE UNIV - FULLERTON 1798**  
 METEORITE COMPACTION AGES: ANCIENT ENERGETIC PARTI DISSIPATION  
 IN THE EARLY SOLAR NEBULA  
 06/23/1997 - 12/31/1999 FY01: -\$33,398 Total: \$116,605  
*Prin. Invest.:* D WOOLUM  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9433 CALIFORNIA STATE UNIV - FULLERTON 1799**  
 SOLAR NEBULA THERMAL AND PHYSICAL EVOLUTION AS CON STRAINED  
 BY PLANETARY, METEORITIC AND ASTRONOMICA  
 04/21/2000 - 04/14/2002 FY01: \$0 Total: \$45,000  
*Prin. Invest.:* D WOODLUM  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10312 CALIFORNIA STATE UNIV - FULLERTON 1800**  
 BETA PIC-LIKE CIRCUMSTELLAR GAS DISK AROUND 2 AND --- FUSE-00  
 01/26/2001 - 01/31/2002 FY01: \$20,000 Total: \$20,000  
*Prin. Invest.:* K CHEN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10695 CALIFORNIA STATE UNIV - FULLERTON 1801**  
 SOLAR NEBULA THERMAL AND PHYSICAL EVOLUTION AS CON STRAINED  
 BY PLANETARY, METEORITIC AND ASTRONOMICAL  
 04/16/2001 - 04/14/2002 FY01: \$45,000 Total: \$45,000  
*Prin. Invest.:* D WOOLUM  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1009 CALIFORNIA STATE UNIV - FULLERTON 1802**  
 GENESIS: DETECTORS CHARACTERIZATION/SELECTION AND EDUCA-  
 TIONAL OUTREACH  
 05/05/1998 - 12/31/2001 FY01: \$56,000 Total: \$157,244  
*Prin. Invest.:* D S WOOLUM  
*Tech. Officer:* JSC/E K STANSBERRY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 1830 CALIFORNIA STATE UNIV - LONG BEACH 1803**  
 MAGNETHOLOGICAL FLUIDS: RHEOLOGY AND NONEQUILBRI UM  
 PATTERN FORMATION  
 04/18/1996 - 05/16/2002 FY01: \$103,550 Total: \$844,550  
*Prin. Invest.:* J LIU  
*Tech. Officer:* GRC/K HSIEH  
*CASE Category:* 13 - PHYSICS

**NAG 5 9310 CALIFORNIA STATE UNIV - LONG BEACH 1804**  
 INTERNATIONAL, STATE & LOCAL WORKFORCE DEVELOPMENT &  
 CAPACITY BUILDING INSUPPORT OF NASA ESE PROGRA  
 04/12/2000 - 04/14/2002 FY01: \$149,989 Total: \$249,986  
*Prin. Invest.:* C T LEE  
*Tech. Officer:* GSFC/A J TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 329 CALIFORNIA STATE UNIV - LONG BEACH 1805**  
 AUGMENTED LEARNING ENVIRONMENT FOR RENEWABLE TEACH ING  
 (ALERT)  
 05/07/1998 - 08/14/2002 FY01: \$0 Total: \$450,000  
*Prin. Invest.:* E AMBOS  
*Tech. Officer:* GSFC/B MEESON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 1 2029 CALIFORNIA STATE UNIV - LOS ANGELES 1806**  
 ACTIVE ISOLATION TECHNIQUES FOR MITIGATING EARTH- QUAKE  
 EFFECTS  
 03/17/1998 - 03/16/2001 FY01: \$1 Total: \$300,001  
*Prin. Invest.:* H HASEMIAN  
*Tech. Officer:* LARC/H M ADELMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 4 127 CALIFORNIA STATE UNIV - LOS ANGELES 1807**  
 THE SCIENCE AMBASSADOR DISTANCE LEARNING PROJECT NEW AWARD  
 05/23/1997 - 03/31/2001 FY01: \$0 Total: \$781,930  
*Prin. Invest.:* T ADENIKA-MORROW  
*Tech. Officer:* DFRC/E L DUKE, DFRC/E COX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 151 CALIFORNIA STATE UNIV - LOS ANGELES 1808**  
 FAR STUDY OF CINTROL STRUCTURE INERACTION IN LARGE FLEXIBLE  
 SPACE STRUCTURE  
 03/26/1998 - 06/30/2001 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* L - HSIA  
*Tech. Officer:* DFRC/J BRADEN, DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 173 CALIFORNIA STATE UNIV - LOS ANGELES 1809**  
 PATNERSHIP AN INQUIRY AERONAUTICAL SCIENCE DISTANC E LEARNING  
 ED PROJECT  
 09/16/1999 - 09/17/2002 FY01: \$74,999 Total: \$199,998  
*Prin. Invest.:* T ADENIKA-MORROW  
*Tech. Officer:* DFRC/M MCCARTY, DFRC/J LARSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 4 174 CALIFORNIA STATE UNIV - LOS ANGELES 1810**  
 PARTNERSHIP INTEGRATION OF CONFIGURATION  
 09/16/1999 - 09/17/2001 FY01: \$90,104 Total: \$200,000  
*Prin. Invest.:* C WU  
*Tech. Officer:* DFRC/K GUPTA, DFRC/L VOELKER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 175 CALIFORNIA STATE UNIV - LOS ANGELES 1811**  
 PARTNERSHIP CONTROL HYPersonic VEHICLES  
 09/15/1999 - 09/17/2001 FY01: \$90,633 Total: \$199,980  
*Prin. Invest.:* M MIRMIRANI  
*Tech. Officer:* DFRC/K GUPTA, DFRC/L VOELKER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 6757 CALIFORNIA STATE UNIV - LOS ANGELES 1812**  
 USE OF DECENTRALIZED CONTROL IN DESIGN OF A LARGE SEGMENTED  
 SPACEREFLECTOR  
 04/06/1998 - 12/31/1999 FY01: -\$14,655 Total: \$1,985,345  
*Prin. Invest.:* H R BOUSSAUS  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7401 CALIFORNIA STATE UNIV - LOS ANGELES 1813**  
 INTEGRATING MODELS WITH NARROW-BAND, MULTI-SCALE, REMOTELY  
 SENSED DATA FOR IMPROVED ASSESSMENT OF P  
 05/20/1998 - 06/30/2000 FY01: \$0 Total: \$260,338  
*Prin. Invest.:* J A GAMON, NONE  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8889 CALIFORNIA STATE UNIV - LOS ANGELES 1814**  
 USE OF DECENTRALIZED CONTROL IN DESIGN OF A SEGMENTED SPACE  
 01/03/2000 - 12/31/2001 FY01: \$500,000 Total: \$1,000,000  
*Prin. Invest.:* H R BOUSSAUS  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8945 CALIFORNIA STATE UNIV - LOS ANGELES 1815**  
 ASYMMETRIES AND VARIATIONS IN JUPITER'S MAGNETO SPHERE  
 01/28/2000 - 01/14/2002 FY01: \$65,900 Total: \$128,600  
*Prin. Invest.:* K KHURANA  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9160 CALIFORNIA STATE UNIV - LOS ANGELES 1816**  
 UNIV PREPARATORY PROGRAM  
 03/06/2000 - 06/30/2002 FY01: \$100,000 Total: \$200,000  
*Prin. Invest.:* M EPSTEIN  
*Tech. Officer:* GSFC/M STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 439 CALIFORNIA STATE UNIV - LOS ANGELES 1817**  
 EXCELLENCE IN SCIENCE AND MATH EDUCATION FOR HARD TO STAFF  
 URBAN SCHOOLS  
 03/03/2000 - 02/28/2002 FY01: \$199,940 Total: \$399,880  
*Prin. Invest.:* T ADENIKA-MORROW  
*Tech. Officer:* GSFC/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6529 CALIFORNIA STATE UNIV - MONTEREY BAY 1818**  
 DEVELOPMENT OF A REGIONAL-SCALE ECOSYSTEM PROCESS MODEL  
 FOR EVALUATING THE IMPACTS OF DEVELOPMENT A  
 12/08/1997 - 10/31/2001 FY01: \$0 Total: \$700,000  
*Prin. Invest.:* L PIERCE  
*Tech. Officer:* GSFC/A JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99020 CALIFORNIA STATE UNIV - MONTEREY BAY 1819**  
 APPLICATION OF REMOTE SENSING AND ECOSYSTEM MODEL- ING TO  
 VINEYARD MANAGEMENT IN CA NAPA VALLEY  
 08/13/1999 - 11/01/2001 FY01: \$177,879 Total: \$318,986  
*Prin. Invest.:* L F JOHNSON  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 1186 CALIFORNIA STATE UNIV - MONTEREY BAY 1820**  
 REMOTE SENSING, ECOSYSTEM MODELING, & GEOSPATIAL ANALYSIS  
 FOR EARTH SYSTEMS SCIENCE & HEALTH  
 06/28/2000 - 06/30/2002 FY01: \$1,049,100 Total: \$1,522,246  
*Prin. Invest.:* S E ALEXANDER  
*Tech. Officer:* ARC/J C COUGHLAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 4 162 CALIFORNIA STATE UNIV - NORTHRIDGE 1821**  
 NASA EXPLORERS  
 02/24/1999 - 12/31/2001 FY01: \$75,397 Total: \$258,150  
*Prin. Invest.:* W FURUMOTO, M LIPSCHUTZ, G MASSEY  
*Tech. Officer:* DFRC/M MCCARTHY, DFRC/J LARSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4973 CALIFORNIA STATE UNIV - NORTHRIDGE 1822**  
 PRECISE GROUND-BASED PHOTOMETRIC OBSERVATIONS AND SOLAR  
 TOTAL AND SPECTRAL IRRADIANCE OBSERVATIONS B  
 06/23/1997 - 10/31/2000 FY01: \$0 Total: \$150,003  
*Prin. Invest.:* G A CHAPMAN  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7191 CALIFORNIA STATE UNIV - NORTHRIDGE 1823**  
 ACQUISITION AND ANALYSIS OF PRECISE GROUND-BASED PHOTO-  
 METRIC FULL-DISK IMAGES FOR THE UNDERSTANDING  
 03/25/1998 - 07/31/2002 FY01: \$16,469 Total: \$143,599  
*Prin. Invest.:* G A CHAPMAN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7778 CALIFORNIA STATE UNIV - NORTHRIDGE 1824**  
 A PROPOSAL TO CHARACTERIZE AND UNDERSTAND THE SOURCES OF  
 SOLAR TOTAL AND SPECTRAL IRRADIANCE VARIABILITY  
 10/28/1998 - 01/31/2002 FY01: \$77,800 Total: \$114,487  
*Prin. Invest.:* D A CHAPMAN  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7878 CALIFORNIA STATE UNIV - NORTHRIDGE 1825**  
 A PROPOSAL TO COMPARE GROUND-BASED PHOTOMETRIC IMAGES  
 WITH IRRADIANCE DATA FROM SOHO  
 12/01/1998 - 12/14/2001 FY01: \$11,970 Total: \$35,810  
*Prin. Invest.:* G A CHAPMAN  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9726 CALIFORNIA STATE UNIV - NORTHRIDGE 1826**  
 MICROSTRIP ANTENNA DEVELOPMENT FOR SPACECRAFT APPLICATIONS  
 07/10/2000 - 08/31/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* S RENGARAJAN  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10880 CALIFORNIA STATE UNIV - NORTHRIDGE 1827**  
 STUDY OF THE POWER INPUT TO THE SOLAR CORONA FROM INTERMIT-  
 TENT MAGNETIC FOOTPRINT MOTIONS  
 05/14/2001 - 05/31/2002 FY01: \$62,896 Total: \$62,896  
*Prin. Invest.:* A CADAVID  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 2 1021 CALIFORNIA STATE UNIV - NORTHRIDGE 1828**  
 EXAMINING THE EFFECTS OF HIGH-LEVEL INTERRUPTIONS ON PART 121  
 AIRCREW PERFORMANCE  
 02/25/1998 - 01/31/2000 FY01: \$0 Total: \$78,707  
*Prin. Invest.:* B TABACHIVIDE, D DAMIS  
*Tech. Officer:* ARC/R K DISMUKES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 381 CALIFORNIA STATE UNIV - NORTHRIDGE 1829**  
 SPECTRO-POLARIMETRY OF PLANETARY OBJECTS  
 02/19/1999 - 08/31/2000 FY01: -\$3 Total: \$13,787  
*Prin. Invest.:* M J PENN  
*Tech. Officer:* GSFC/J E ALLEN  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 489 CALIFORNIA STATE UNIV - NORTHRIDGE 1830**  
 ANALYZING DATA SETS  
 04/06/2000 - 02/28/2002 FY01: \$298,512 Total: \$596,534  
*Prin. Invest.:* C SHUBIN  
*Tech. Officer:* GSFC/M MATTHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 513 CALIFORNIA STATE UNIV - NORTHRIDGE 1831**  
 FAILURE ANALYSIS PREVENTION, AND RELIABILITY MODELING FOR SUB-  
 MICRON ELECTRONICS TECHNOLOGY, A RESE  
 08/29/2000 - 08/31/2002 FY01: \$898,380 Total: \$998,380  
*Prin. Invest.:* B BAVARIAN  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1220 CALIFORNIA STATE UNIV - SACRAMENTO 1832**  
 JOVE  
 11/30/1995 - 08/31/2000 FY01: -\$4,842 Total: \$84,758  
*Prin. Invest.:* B HAUSBACK, Z NDLELA  
*Tech. Officer:* MSFC/DSIX  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 4 200 CALIFORNIA STATE UNIV-BAKERSFIELD 1833**  
 METRIC ANALYSIS AND EVALUATION FOR NASA/DRYDEN FLIGHT  
 RESEARCH  
 01/31/2000 - 02/06/2003 FY01: \$18,598 Total: \$73,041  
*Prin. Invest.:* K L NYBERG  
*Tech. Officer:* DFRC/K S SHY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 4 161 CALIFORNIA STATE UNIV, DOMINQUEZ HILLS 1834**  
 STEP PACE SCIENCE TECH PROJECT  
 02/17/1999 - 12/31/2001 FY01: \$99,886 Total: \$299,869  
*Prin. Invest.:* E KRINSKY  
*Tech. Officer:* DFRC/M MC CARTHY, DFRC/J LARSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 99010 CALIFORNIA STATE UNIV, DOMINQUEZ HILLS 1835**  
 SOUTHERN CALIFORNIA CENTER FOR MANAGING FIRE HAZARDS AT THE  
 URBAN WILDLANDS INTERFACE  
 03/03/1999 - 03/02/2002 FY01: \$500,000 Total: \$1,587,523  
*Prin. Invest.:* C LEE  
*Tech. Officer:* JSC/C HILL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8017 CLAREMONT MCKENNA COLLEGE 1836**  
 THE COSMIC RAY PATH LENGTH DISTRIBUTION EXPECTED FROM THE  
 LOCAL SPACE AND TIME DEPENDENT SUPERNOV  
 01/06/1999 - 12/31/2001 FY01: \$38,862 Total: \$113,112  
*Prin. Invest.:* D C HIGDON  
*Tech. Officer:* GSFC/M C GUHATHAKURTA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4883 COLLEGE OF SAN MATEO 1837**  
 DEVELOP REMOTE SENSING EDUCATIONAL MATERIALS TO BEITY  
 COLLEGES ACROSS THE US.  
 08/01/1997 - 12/31/1999 FY01: -\$15,952 Total: \$208,048  
*Prin. Invest.:* K D KENNEDY  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 2 1001 FOOTHILL-DE ANZA COM COLL SYSTEM OFF 1838**  
 SCIENTIFIC-TECHNICAL & BUSINESS CAREERS TRAINING GRANT  
 07/07/1993 - 08/31/2001 FY01: \$640,028 Total: \$9,788,648  
*Prin. Invest.:* M CONWAY  
*Tech. Officer:* ARC/M E LOPEZ, ARC/J M MCCULLOUGH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 52280 FOOTHILL-DE ANZA COM COLL SYSTEM OFF 1839**  
 EXPERIMENTAL INTERNSHIPS SUPPORTING ASTROBIOLOGY AEROSPACE  
 TECHNOLOGY & INFORMATION TECHNOLOGY  
 07/03/2001 - 06/30/2002 FY01: \$836,324 Total: \$836,324  
*Prin. Invest.:* M P CONRAD, NONE  
*Tech. Officer:* ARC/G JAMES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9700 GLENDALE COMMUNITY COLLEGE 1840**  
 CIMMARUSTI SCIENCE CENTER  
 07/18/2000 - 08/14/2004 FY01: \$0 Total: \$3,831,000  
*Prin. Invest.:* L SEROT  
*Tech. Officer:* GSFC/H KASS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 9 79 LOMA LINDA UNIV 1841**  
 PROTON SPACE RESEARCH  
 01/13/1999 - 09/30/2000 FY01: \$0 Total: \$12,000,000  
*Prin. Invest.:* G A NELSON  
*Tech. Officer:* JSC/F A CUCINOTTA  
*CASE Category:* 13 - PHYSICS

**NCC 9 118 LOMA LINDA UNIV 1842**  
 COOPERATIVE RESEARCH IN PROTON SPACE RADIATION  
 02/02/2001 - 09/30/2001 FY01: \$3,661,000 Total: \$3,661,000  
*Prin. Invest.:* G NELSON, J ARCHAMBEAU, J SLATER  
*Tech. Officer:* JSC/F CUCINOTTA  
*CASE Category:* 13 - PHYSICS

**NAG 5 7050 LOYOLA MARYMOUNT UNIV 1843**  
 TRACKING TRANSIENT EVENTS FROM THE SOLAR WIND TO THE MAGNE-  
 TOSPHERE  
 03/23/1998 - 03/31/2001 FY01: \$19,989 Total: \$62,929  
*Prin. Invest.:* J SANNY  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11197 PASADENA CITY COLLEGE 1844**  
 SMARTT: SCIENTISTS MENTORING ASTRONOMY RESEARCH T EAMS OF  
 TOMORROW: A PROPOSAL FOR DOING RESEARCH  
 09/13/2001 - 12/31/2003 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* J SEPIKAS  
*Tech. Officer:* GSFC/P J SAKIMOTO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9618 POMONA COLLEGE 1845**  
 THERMAL AND MECHANICAL ANALYSIS OF SMALL, SHALLOW MAGMA  
 RESERVOIRS ON MARS  
 05/18/2000 - 05/14/2002 FY01: \$0 Total: \$38,400  
*Prin. Invest.:* E GROSFILS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10157 POMONA COLLEGE 1846**  
 VOLCANIC & TECTONIC HISTORY OF THE NEMESIS TESSERA REGION ON  
 VENUS  
 12/18/2000 - 12/31/2001 FY01: \$24,800 Total: \$24,800  
*Prin. Invest.:* E GROSFILS  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10498 POMONA COLLEGE 1847**  
 THERMOMECHANICAL ANALYSIS OF SMALL, SHALLOW MAGMA  
 RESERVOIRS ON MARS: IMPLICATIONS FOR RESERVOIR FAIL  
 03/09/2001 - 03/14/2003 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* E GROSFILS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8560 SAN DIEGO STATE UNIV 1848**  
 ENVIRONMENTAL CHANGE AND NATURAL HAZARD ASSESSMENT IN  
 WESTERN TURKMENIS-TAN USING INTERFEROMETRIC SY  
 07/14/1999 - 06/30/2002 FY01: \$41,304 Total: \$127,864  
*Prin. Invest.:* R MELLORS  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9301 SAN DIEGO STATE UNIV 1849**  
 OPERATIONAL MONITORING OF ALTERATION IN REGIONAL FOREST  
 COVER USING MULTITEMPORAL REMOTE SENSING  
 03/20/2000 - 04/30/2002 FY01: \$92,873 Total: \$158,396  
*Prin. Invest.:* J FRANKLIN  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10376 SAN DIEGO STATE UNIV 1850**  
 PROBING SHOCKS & WINDS IN THE PECULIAR BINARY STAR VSAGITTAE  
 (FUSE 00)  
 02/08/2001 - 02/14/2002 FY01: \$44,100 Total: \$44,100  
*Prin. Invest.:* J WOOD  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11141 SAN DIEGO STATE UNIV 1851**  
 FIRE, LAND COVER AND CLIMATE CHANGE: IMPACTS ON RIVER FLOWS IN  
 SEMI-ARID SHRUBLAND WATERSHEDS  
 07/26/2001 - 07/31/2002 FY01: \$76,249 Total: \$76,249  
*Prin. Invest.:* A HOPE  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99017 SAN DIEGO STATE UNIV 1852**  
 REGIONAL CHANGE MONITORING OF HABITAT RESERVE SYSTEMS WITH  
 VERY HIGH RESOLUTION REMOTELY SENSED  
 07/19/1999 - 07/18/2002 FY01: \$215,000 Total: \$430,000  
*Prin. Invest.:* D STOW  
*Tech. Officer:* JSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 5 00199 SAN DIEGO STATE UNIV 1853**  
 R & D TO SUPPORT GSFC'S SIMBIOS PROJECT  
 01/26/2001 - 11/30/2001 FY01: \$112,600 Total: \$112,600  
*Prin. Invest.:* J L MUELLER  
*Tech. Officer:* GSFC/C R CRANE  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 00202 SAN DIEGO STATE UNIV 1854**  
 R & D TO SUPPORT GSFC'S SIMBIOS PROJECT  
 02/07/2001 - 11/30/2001 FY01: \$171,476 Total: \$171,476  
*Prin. Invest.:* C C TREES  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 97126 SAN DIEGO STATE UNIV 1855**  
 SIMBIOS NORMALIZED WATER-LEAVING RADIANCE CAL/VAL  
 08/18/1997 - 11/30/2000 FY01: \$0 Total: \$779,480  
*Prin. Invest.:* J L MUELLER  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC 3 842 SAN DIEGO STATE UNIV 1856**  
 DYNAMICS OF FLAME SPREAD IN MICROGRAVITY ENVIRONME NT  
 01/05/2001 - 11/30/2004 FY01: \$115,000 Total: \$115,000  
*Prin. Invest.:* S BHATTACHARJEE  
*Tech. Officer:* GRC/S L OLSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC13 00002 SAN DIEGO STATE UNIV 1857**  
 AFFILIATED RESEARCH CENTE (ARC) PROGRAM AT SAN DIEGO STATE  
 UNIV  
 02/11/2000 - 02/10/2005 FY01: \$224,999 Total: \$374,999  
*Prin. Invest.:* D STOWE  
*Tech. Officer:* SSC/A PEEK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30335 SAN DIEGO STATE UNIV 1858**  
 LONG-TERM IMPACTS OF FIRE ON STREAMFLOW IN CALIFOR NIA  
 MEDITERRANEAN-TYPE SHRUB LANDS: AN INTEGRATED  
 08/21/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* A S HOPE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



**NGT 5 30367**                      **SAN DIEGO STATE UNIV**                      **1859**  
 ASSESSING THE AFFECTS OF VARIATIONS IN SOIL MOISTURE ON THE  
 SURFACE ENERGY BALANCE AND CARBON/R  
 08/13/2001 - 08/31/2004                      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* A HOPE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1285**                      **SAN FRANCISCO STATE UNIV**                      **1860**  
 FREE FLIGHT INFORMATION & AUTOMATION ISSUES  
 02/08/1999 - 02/14/2002                      FY01: \$104,081                      Total: \$266,337  
*Prin. Invest.:* K L MOSIER, E A LYALL  
*Tech. Officer:* ARC/J M ORASANU  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 5 7511**                      **SAN FRANCISCO STATE UNIV**                      **1861**  
 THE SEASONAL AND INTERANNUAL VARIABILITY OF PHYTOPLANKTON IN  
 THE BERING SEA AS INFLUENCED BY SEA ICE  
 07/24/1998 - 07/31/2002                      FY01: \$58,250                      Total: \$326,863  
*Prin. Invest.:* D H ROBINSON  
*Tech. Officer:* GSFC/J W MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8013**                      **SAN FRANCISCO STATE UNIV**                      **1862**  
 A COUPLED ICE-OCEAN MODEL OF MESOSCALE PHYSICAL/BIOLOGICAL  
 INTERACTIONS IN THE SOUTHERN OCEAN  
 01/20/1999 - 01/31/2002                      FY01: \$0                      Total: \$115,840  
*Prin. Invest.:* D H ROBINSON  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 9 19410**                      **SAN FRANCISCO STATE UNIV**                      **1863**  
 ANALYSIS OF VOLATILE ORGANIC COMPOUNDS ON MIR STATION  
 10/27/1995 - 01/31/2000                      FY01: \$0                      Total: \$396,735  
*Prin. Invest.:* D PALMER  
*Tech. Officer:* JSC/A PLAZA  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1128**                      **SAN FRANCISCO STATE UNIV**                      **1864**  
 CONSTRUCTION OF A LONG-TERM CLIMATOLOGY OF ANTARCTIC & ARCTIC  
 POLAR STRATOSPHERIC CLOUDS BY AN AUTOM  
 07/01/1999 - 12/31/2001                      FY01: \$0                      Total: \$105,000  
*Prin. Invest.:* K L PAGAN  
*Tech. Officer:* ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 1277**                      **SAN FRANCISCO STATE UNIV**                      **1865**  
 EFFECTS OF CENTRIFUGATION ON THE IMMUNE RESPONSE OF MACRO-  
 PHAGES & DIFFERENTIATION INTO OSTEOCLASTS  
 08/15/2001 - 07/31/2002                      FY01: \$10,427                      Total: \$10,427  
*Prin. Invest.:* S WEINSTEIN  
*Tech. Officer:* ARC/N D SEARBY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 1278**                      **SAN FRANCISCO STATE UNIV**                      **1866**  
 MODELING THE ONSET EXTENT & DURATION OF REHYDRATION IN THE  
 WINTER POLAR VORTEX, USING IMPACT, AVHRR  
 08/15/2001 - 07/31/2002                      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* P FOSCHI  
*Tech. Officer:* ARC/S HIPSKIND, ARC/A TABAZADEH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5301**                      **SAN FRANCISCO STATE UNIV**                      **1867**  
 AERONAUTICAL TELECOMMUNICATION NETWORK MODELING & SIMULA-  
 TION  
 12/04/1998 - 11/30/2001                      FY01: \$0                      Total: \$59,973  
*Prin. Invest.:* H SHAHNASSER  
*Tech. Officer:* ARC/P R GRAMS, ARC/J WANG  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5324**                      **SAN FRANCISCO STATE UNIV**                      **1868**  
 THE CHEMISTRY, MINERALOGY & SPECTROSCOPY OF THE BIOTIC  
 ELEMENTS IN MARS SOIL ANALOGS  
 05/17/1999 - 11/30/1999                      FY01: \$0                      Total: \$26,120  
*Prin. Invest.:* J B ORENBERG  
*Tech. Officer:* ARC/T L ROUSH  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 2205**                      **SAN JOSE STATE UNIV**                      **1869**  
 CHARACTERIZING STRATOSPHERIC & TROPOSPHERIC AEROSOL: THEORET-  
 ICAL STUDIES & ANALYSIS OF SATELLITE DATA (NRA)  
 06/15/1999 - 05/31/2002                      FY01: \$30,000                      Total: \$84,103  
*Prin. Invest.:* P HAMILL  
*Prin. Invest.:* NONE  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1421**                      **SAN JOSE STATE UNIV**                      **1870**  
 WEB-BASED INTEGRATION OF DATA BASES & APPLICATIONS FOR  
 NATIONAL AIRSPACE SYSTEM ANALYSIS  
 07/14/2000 - 07/14/2002                      FY01: \$0                      Total: \$40,000  
*Prin. Invest.:* G POUR, K CORKER  
*Tech. Officer:* ARC/D KOZARSKY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1435**                      **SAN JOSE STATE UNIV**                      **1871**  
 SHARED CONTROL AMONG AIR TRAFFIC CONTROL, FLIGHT DECK, & DECI-  
 SION AIDING SYSTEMS: PERFORMANCE PARAM  
 09/13/2000 - 08/31/2001                      FY01: \$0                      Total: \$150,943  
*Prin. Invest.:* K CORKER  
*Tech. Officer:* ARC/A C STATLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1454**                      **SAN JOSE STATE UNIV**                      **1872**  
 PROPOSAL STATEMENT OF WORK FOR THE MODELING & SYSTEM  
 SAFETY & STABILITY SUB-ELEMENT-ELEMENT SYSTEM  
 02/01/2001 - 01/31/2002                      FY01: \$95,028                      Total: \$95,028  
*Prin. Invest.:* K CORKER  
*Prin. Invest.:* NONE  
*Tech. Officer:* ARC/I STATLER, ARC/M M CONNORS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4372**                      **SAN JOSE STATE UNIV**                      **1873**  
 RADIO OCCULTATION INVESTIGATION OF THE RINGS OF SATURN  
 04/25/1997 - 02/28/2002                      FY01: \$0                      Total: \$142,400  
*Prin. Invest.:* D A MAROUF  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9500**                      **SAN JOSE STATE UNIV**                      **1874**  
 NUMERICAL SIMULATION OF MARS' CONVECTIVE BOUNDARY LAYER AND  
 DUST DEVILS  
 05/09/2000 - 05/31/2002                      FY01: \$55,000                      Total: \$114,200  
*Prin. Invest.:* S C RAFKIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<b>NAG 5 9751</b>	<b>SAN JOSE STATE UNIV</b>	<b>1875</b>	<b>NCC 2 1045</b>	<b>SAN JOSE STATE UNIV</b>	<b>1883</b>
MESOSCALE & LES MODELING OF THE MARTIAN ATMOSPHERE WIND STREAKS AND DUST DEVI			AIRBORNE MEASUREMENT RESEARCH		
06/27/2000 - 06/30/2002	FY01: \$55,000	Total: \$102,100	06/30/1998 - 06/30/2002	FY01: \$0	Total: \$141,145
<i>Prin. Invest.:</i> S RAFKIN			<i>Prin. Invest.:</i> J GOODMAN		
<i>Tech. Officer:</i> GSFC/D BOGAN			<i>Tech. Officer:</i> ARC/PBUI		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 9766</b>	<b>SAN JOSE STATE UNIV</b>	<b>1876</b>	<b>NCC 2 1059</b>	<b>SAN JOSE STATE UNIV</b>	<b>1884</b>
LARGE-SCALE WAVE ACTIVITY IN A MARS GENERAL CIRCULATION MODEL: CHARACTERIZATION & COMPARISON WITH			RESEARCH ON PLANETARY ATMOSPHERES & ATMOSPHERE PROFILES		
06/29/2000 - 06/30/2002	FY01: \$25,000	Total: \$62,900	07/27/1998 - 09/14/2000	FY01: \$0	Total: \$224,021
<i>Prin. Invest.:</i> A BRIDGER			<i>Prin. Invest.:</i> A SEIFF, J GOODMAN		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> ARC/R E YOUNG		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 11184</b>	<b>SAN JOSE STATE UNIV</b>	<b>1877</b>	<b>NCC 2 1060</b>	<b>SAN JOSE STATE UNIV</b>	<b>1885</b>
CLIMATOLOGY AND NUMERICAL SIMULATION OF CONDENSATE CLOUDS DETECTED BY MGS			SOLAR WIND STUDIES & AI TECHNOLOGIES		
09/05/2001 - 09/14/2004	FY01: \$45,077	Total: \$45,077	08/11/1998 - 10/31/2001	FY01: \$130,584	Total: \$370,550
<i>Prin. Invest.:</i> S RAFKIN			<i>Prin. Invest.:</i> P J HAMILL		
<i>Tech. Officer:</i> GSFC/J M BOYCE			<i>Tech. Officer:</i> ARC/A BARNES		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 11185</b>	<b>SAN JOSE STATE UNIV</b>	<b>1878</b>	<b>NCC 2 1071</b>	<b>SAN JOSE STATE UNIV</b>	<b>1886</b>
AVP GRADUATE STUDIES AND RESEARCH			ASSESSMENT OF DISTRIBUTED OBJECT MIDDLEWARE		
08/21/2001 - 08/31/2003	FY01: \$34,300	Total: \$34,300	11/16/1998 - 04/30/2001	FY01: \$0	Total: \$174,997
<i>Prin. Invest.:</i> A BRIDGER			<i>Prin. Invest.:</i> R FATOOHI		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> ARC/T A LASINSKI		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 8 1735</b>	<b>SAN JOSE STATE UNIV</b>	<b>1879</b>	<b>NCC 2 1091</b>	<b>SAN JOSE STATE UNIV</b>	<b>1887</b>
URBAN EFFECT ON THUNDERSTORMS			REGIONAL & GLOBAL MODELING OF ATMOSPHERIC TRACE SPECIES		
08/04/2000 - 12/31/2001	FY01: \$0	Total: \$50,000	03/01/1999 - 09/30/2001	FY01: \$0	Total: \$140,236
<i>Prin. Invest.:</i> R BORNSTEIN			<i>Prin. Invest.:</i> P A HAMILL		
<i>Tech. Officer:</i> MSFC/D QUATTROCHI			<i>Tech. Officer:</i> ARC/R B CHATFIELD, ARC/E P CONDON		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NCC 2 798</b>	<b>SAN JOSE STATE UNIV</b>	<b>1880</b>	<b>NCC 2 1095</b>	<b>SAN JOSE STATE UNIV</b>	<b>1888</b>
FLIGHT HUMAN FACTORS			HUMAN FACTORS RESEARCH, TECHNOLOGY & SAFETY		
05/12/1993 - 05/31/2000	FY01: -\$1	Total: \$10,321,667	03/11/1999 - 01/31/2002	FY01: \$2,759,106	Total: \$6,678,686
<i>Prin. Invest.:</i> K P JORDAN, D			<i>Prin. Invest.:</i> K P JORDAN		
<i>Tech. Officer:</i> ARC/R K DISMUKES			<i>Tech. Officer:</i> ARC/R K DISMUKES, ARC/C H NULL		
<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 2 984</b>	<b>SAN JOSE STATE UNIV</b>	<b>1881</b>	<b>NCC 2 1096</b>	<b>SAN JOSE STATE UNIV</b>	<b>1889</b>
DYNAMICS OF RINGS & SMALL BODIES			EFFECTS OF CHRONIC EXPOSURE TO HYPER GRAVITY ON DIFFERENT STRAINS OF YOUNG & MATURE RATS		
04/01/1997 - 04/30/2001	FY01: \$0	Total: \$220,335	03/11/1999 - 01/31/2002	FY01: \$0	Total: \$169,868
<i>Prin. Invest.:</i> P J HAMILL			<i>Prin. Invest.:</i> R A FOX		
<i>Tech. Officer:</i> ARC/K ZAHALE			<i>Tech. Officer:</i> ARC/N G DAUNTON		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NCC 2 1015</b>	<b>SAN JOSE STATE UNIV</b>	<b>1882</b>	<b>NCC 2 1097</b>	<b>SAN JOSE STATE UNIV</b>	<b>1890</b>
INTEGRATING LEGACY APPLICATIONS WITHIN A MIDDLEWARE ENVIRONMENT			FLIGHT MANAGEMENT & AIR TRAFFIC MODELING		
02/01/1998 - 07/31/2001	FY01: \$20,000	Total: \$189,814	03/19/1999 - 03/14/2002	FY01: \$548,306	Total: \$1,843,773
<i>Prin. Invest.:</i> R FATOOHI, D HARKEY, NONE			<i>Prin. Invest.:</i> K P JORDAN		
<i>Tech. Officer:</i> ARC/M E LIVINGSTON, ARC/D KAWAK			<i>Tech. Officer:</i> ARC/M B TISCHLER, ARC/B D MCNALLY		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		

**NCC 2 1106**                      **SAN JOSE STATE UNIV**                      **1891**  
 EXPERIMENTAL STUDIES OF THE DISTRIBUTION OF & INTERACTION  
 BETWEEN REACTIVE TRACE CHEMICALS WITH DYN  
 04/12/1999 - 03/31/2002                      FY01: \$176,590                      Total: \$655,961  
*Prin. Invest.:* J GOODMAN  
*Tech. Officer:* ARC/P BUI, ARC/E P CONDON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 1132**                      **SAN JOSE STATE UNIV**                      **1892**  
 THE INFLUENCE OF THE ATMOSPHERE ON POLARIZED BI-DIRECTIONAL  
 REFLECTANCE DATA OF BOREALWETLANDS  
 08/17/1999 - 12/31/2001                      FY01: \$0                      Total: \$31,000  
*Prin. Invest.:* P A HAMILL, U BOTTGER  
*Tech. Officer:* ARC/V VANDERBILT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 1155**                      **SAN JOSE STATE UNIV**                      **1893**  
 FLIGHT HUMAN FACTORS  
 02/02/2000 - 01/31/2002                      FY01: \$1,662,924                      Total: \$3,034,917  
*Prin. Invest.:* K JORDON  
*Tech. Officer:* ARC/RJ DISMUKES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1168**                      **SAN JOSE STATE UNIV**                      **1894**  
 PLANETARY ATMOSPHERIC STRUCTURE FROM SPACECRAFT DATA  
 03/29/2000 - 12/31/2001                      FY01: \$23,000                      Total: \$113,429  
*Prin. Invest.:* A BRIDGER  
*Tech. Officer:* ARC/R E YOUNG  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1248**                      **SAN JOSE STATE UNIV**                      **1895**  
 RINGS NODE DATA ARCHIVE MANAGEMENT  
 03/27/2001 - 03/31/2002                      FY01: \$96,360                      Total: \$96,360  
*Prin. Invest.:* P J HAMILL  
*Tech. Officer:* ARC/J N CUZZI  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1284**                      **SAN JOSE STATE UNIV**                      **1896**  
 A PROPOSAL TO SUPPORT FUTURE FLIGHT RESEARCH AT NASA AMES  
 RESEARCH CENTER  
 09/17/2001 - 11/30/2001                      FY01: \$16,098                      Total: \$16,098  
*Prin. Invest.:* M S PATANKAR  
*Tech. Officer:* ARC/N S DORCHI, ARC/B SULLIVAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1285**                      **SAN JOSE STATE UNIV**                      **1897**  
 ARTIFICIAL INTELLIGENCE STUDIES OF SPACE SCIENCE DATA  
 09/27/2001 - 09/30/2002                      FY01: \$52,330                      Total: \$52,330  
*Prin. Invest.:* P A HAMILL  
*Tech. Officer:* ARC/T L ROUSH, ARC/J SCARGLE  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1286**                      **SAN JOSE STATE UNIV**                      **1898**  
 RESEARCH COLLABORATIVE WITH COMPUTATIONAL SCIENCES DIVISION  
 (CSD)  
 09/28/2001 - 09/30/2002                      FY01: \$93,000                      Total: \$93,000  
*Prin. Invest.:* J MURPHY  
*Tech. Officer:* ARC/N MUSCETTOLA, ARC/D CLANCY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 2 5311**                      **SAN JOSE STATE UNIV**                      **1899**  
 EXTOMYCORRHIZAE ECOLOGY IN YELLOWSTONE PARK  
 03/17/1999 - 01/31/2002                      FY01: \$0                      Total: \$78,220  
*Prin. Invest.:* C A BRINEGAR  
*Tech. Officer:* ARC/K W CULLINGS, ARC/M L FONDA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5326**                      **SAN JOSE STATE UNIV**                      **1900**  
 ASSIMILATION OF MGS DATA INTO A COUPLED GCM-MESOSCALE MODEL  
 OF THE MARTIAN ATMOSPHERE  
 06/01/1999 - 02/28/2001                      FY01: \$0                      Total: \$26,209  
*Prin. Invest.:* S S RAFKIN  
*Tech. Officer:* ARC/R M HABERLE  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5330**                      **SAN JOSE STATE UNIV**                      **1901**  
 INVESTIGATION OF MARS' ATMOSPHERIC CONDITIONS IN CONNECTION  
 WITH AEROBRAKING & AEROCAPTURE ACTIVITIES  
 07/08/1999 - 06/30/2002                      FY01: \$1,984                      Total: \$41,002  
*Prin. Invest.:* A C BRIDGER  
*Tech. Officer:* ARC/R M HABERLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5336**                      **SAN JOSE STATE UNIV**                      **1902**  
 AN INVESTIGATION OF CYCLO-FRONTOGENESIS MARS' ATMOSPHERE  
 07/20/1999 - 07/14/2001                      FY01: \$48,800                      Total: \$169,405  
*Prin. Invest.:* J L HOLLINGSWORTH  
*Tech. Officer:* ARC/R M HABERLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5338**                      **SAN JOSE STATE UNIV**                      **1903**  
 FAR INFRARED EMISSION FROM GALACTIC & EXTRAGALACTIC  
 INTERSTELLAR GAS  
 07/23/1999 - 07/31/2001                      FY01: \$1,400                      Total: \$48,434  
*Prin. Invest.:* M J KAUFMAN, NONE  
*Tech. Officer:* ARC/D J HOLLEN  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5344**                      **SAN JOSE STATE UNIV**                      **1904**  
 ASTROBIOLOGY RAPID RATES OF CHANGE  
 08/12/1999 - 07/31/2002                      FY01: \$10,000                      Total: \$30,000  
*Prin. Invest.:* E P METZGER  
*Tech. Officer:* ARC/H L D'ANTONI  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 5347**                      **SAN JOSE STATE UNIV**                      **1905**  
 VOLATILE OXYGENATED HYDROCARBONS - ANALYTICAL SYSTEM  
 DEVELOPMENT & TROPOSPHERIC ATMOSPHERIC CHEMISTRY  
 09/01/1999 - 01/31/2002                      FY01: \$0                      Total: \$30,000  
*Prin. Invest.:* P A HAMMILL  
*Tech. Officer:* ARC/H B SINGH, ARC/E P CONDON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5353**                      **SAN JOSE STATE UNIV**                      **1906**  
 CLOUD TRANSPORT OF TROPICAL GASES & AEROSOLS  
 09/21/1999 - 05/31/2001                      FY01: \$0                      Total: \$57,905  
*Prin. Invest.:* S C RAFKIN  
*Tech. Officer:* ARC/R B CHATFIELD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NCC 2 5402**                    **SAN JOSE STATE UNIV**                    **1907**  
 IDENTIFICATION & CHARACTERIZATION OF NON-INVENTORIED TERRESTRIAL IMPACT CRATERS  
 10/05/2000 - 09/30/2001                    FY01: \$10,000                    Total: \$10,000  
*Prin. Invest.:* P MESSINA  
*Tech. Officer:* ARC/H L D'ANTONI, ARC/E P CONDON  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 2 5435**                    **SAN JOSE STATE UNIV**                    **1908**  
 AVP GRADUATE STUDIES & RESEARCH  
 05/15/2001 - 04/30/2002                    FY01: \$8,293                    Total: \$8,293  
*Prin. Invest.:* P HAMILL  
*Tech. Officer:* ARC/K ZAHNLE  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5450**                    **SAN JOSE STATE UNIV**                    **1909**  
 ANALYSIS OF SATELLITE DATA AND PREPARATION OF REPORTS ON A STRATOSPHERIC AEROSOL CLIMATOLOGY  
 07/30/2001 - 08/14/2002                    FY01: \$6,765                    Total: \$6,765  
*Prin. Invest.:* P A HAMILL  
*Tech. Officer:* ARC/P B RUSSELL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5451**                    **SAN JOSE STATE UNIV**                    **1910**  
 EXTREME ATMOSPHERIC ENVIRONMENTS AND HABITABLE CLIMATES  
 07/30/2001 - 07/31/2002                    FY01: \$46,000                    Total: \$46,000  
*Prin. Invest.:* J L HOLLINGSWORTH  
*Tech. Officer:* ARC/R E YOUNG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5452**                    **SAN JOSE STATE UNIV**                    **1911**  
 ANALYSIS OF THE INTERACTION OF HALOGENATED AND ORGANIC GASES WITH ATMOSPHERIC PARTICULATES  
 08/03/2001 - 07/31/2002                    FY01: \$10,175                    Total: \$10,175  
*Prin. Invest.:* P J HAMILL  
*Tech. Officer:* ARC/L T IRACI, ARC/A TABAZADEH  
*CASE Category:* 12 - CHEMISTRY

**NCC 2 5460**                    **SAN JOSE STATE UNIV**                    **1912**  
 IONIZED, NEUTRAL & MOLECULAR GAS DIAGNOSTICS IN GALAXIES: MODELS FOR SIRTF  
 09/17/2001 - 08/31/2002                    FY01: \$19,666                    Total: \$19,666  
*Prin. Invest.:* M J KAUFMAN  
*Tech. Officer:* ARC/D J HOLLENBACH, ARC/R E YOUNG  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5465**                    **SAN JOSE STATE UNIV**                    **1913**  
 COMPOSITION & DYNAMICS OF SATURN'S RINGS  
 09/26/2001 - 04/14/2002                    FY01: \$10,000                    Total: \$10,000  
*Prin. Invest.:* P A HAMILL  
*Tech. Officer:* ARC/J N CUZZI, ARC/J J LISSAUER  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 6042**                    **SAN JOSE STATE UNIV**                    **1914**  
 STELLAR 2000  
 03/03/2000 - 04/30/2001                    FY01: \$0                    Total: \$195,500  
*Prin. Invest.:* M M AVERNER  
*Tech. Officer:* ARC/R D MACELROY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT 2 52262**                    **SAN JOSE STATE UNIV**                    **1915**  
 SUMMER FACULTY RESEARCH FELLOWSHIP PROGRAM  
 03/31/2000 - 04/30/2002                    FY01: \$369,417                    Total: \$774,968  
*Prin. Invest.:* B STONE  
*Tech. Officer:* ARC/M MOORE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9736**                    **SANTA CLARA UNIV**                    **1916**  
 DISTRIBUTED SPACE SYSTEM TECHNOLOGY DEMONSTRATIONS WITH THE EMERALD NANOSATELLITE  
 06/22/2000 - 06/30/2002                    FY01: \$55,000                    Total: \$80,000  
*Prin. Invest.:* C A KITTS  
*Tech. Officer:* GSFC/K LUU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1025**                    **SANTA CLARA UNIV**                    **1917**  
 EVALUATING THE EFFECTS OF MAINTENANCE RESOURCE MANAGEMENT IN AIR SAFETY  
 03/02/1998 - 01/31/2000                    FY01: -\$39,079                    Total: \$360,908  
*Prin. Invest.:* J C TAYLOR  
*Tech. Officer:* ARC/B G KANKI, ARC/M M CONNORS  
*CASE Category:* 62 - PSYCHOLOGY SOCIAL ASPECTS

**NCC 2 1156**                    **SANTA CLARA UNIV**                    **1918**  
 EVALUATING BEHAVIORAL-BASED APPROACHES TO CHANGING SAFETY CULTURE IN AVIATION MAINTENANCE  
 02/25/2000 - 01/31/2002                    FY01: \$180,000                    Total: \$325,524  
*Prin. Invest.:* J TAYLOR  
*Tech. Officer:* ARC/B KANKI  
*CASE Category:* 62 - PSYCHOLOGY SOCIAL ASPECTS

**NCC 2 1195**                    **SANTA CLARA UNIV**                    **1919**  
 SHARP DEMONSTRATION FLIGHT: VIDEO BROADCAST SYSTEM FOR RESEARCH IN INTELLIGENT FLIGHT CHARACTERIZATION  
 08/24/2000 - 09/30/2001                    FY01: \$0                    Total: \$13,300  
*Prin. Invest.:* C A KITTS  
*Tech. Officer:* ARC/P KOLODZIEJ, ARC/S M JOHNSON  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 7267**                    **SONOMA STATE UNIV**                    **1920**  
 GLAST MISSION CONCEPT STUDY AND PUBLIC OUTREACH  
 06/29/1998 - 01/31/2000                    FY01: -\$46                    Total: \$44,954  
*Prin. Invest.:* D COMINSKY  
*Tech. Officer:* GSFC/N GEHRELS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8603**                    **SONOMA STATE UNIV**                    **1921**  
 SWIFT EDUCATION AND PUBLIC OUTREACH  
 06/23/1999 - 12/31/2000                    FY01: -\$15                    Total: \$61,921  
*Prin. Invest.:* L R COMINSKY  
*Tech. Officer:* GSFC/N GEHRELS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9495**                    **SONOMA STATE UNIV**                    **1922**  
 SWIFT: A PANCHROMATIC GAMMA RAY BURST MIDEX MISSION  
 04/19/2000 - 01/31/2002                    FY01: \$284,644                    Total: \$487,078  
*Prin. Invest.:* L WHITLOCK  
*Tech. Officer:* GSFC/A PARSONS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9782 SONOMA STATE UNIV 1923**  
 SWIFT PUBLIC RELATIONS - PART 1  
 07/06/2000 - 09/30/2001 FY01: \$27,898 Total: \$39,970  
*Prin. Invest.:* L R COMINSKY  
*Tech. Officer:* GSFC/N GEHRELS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11328 SONOMA STATE UNIV 1924**  
 SWIFT AND GLAST PRESS OFFICER FUNDS- FY02  
 09/18/2001 - 09/30/2006 FY01: \$11,600 Total: \$11,600  
*Prin. Invest.:* L R COMINSKY  
*Tech. Officer:* GSFC/A M PARSONS  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 429 SONOMA STATE UNIV 1925**  
 SPACE MYSTERIES: INQUIRY-DRIVEN WEB EXPLORATIONS THAT TEACH  
 PHYSICAL SCIENCE & MATHEMATICS STANDARD  
 09/29/1999 - 09/30/2002 FY01: \$213,524 Total: \$462,992  
*Prin. Invest.:* L COMINSKY *Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/D GABRYS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2107 STANFORD UNIV 1926**  
 DEVELOPMENT OF A COMPOSITE DAMAGE MODULE FOR THE STAGS  
 FINITE ELEMENT CODE  
 09/03/1998 - 06/02/2001 FY01: \$0 Total: \$140,000  
*Prin. Invest.:* F K CHANG  
*Tech. Officer:* LARC/J H STARNES, JR., LARC/P B BOGERT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2144 STANFORD UNIV 1927**  
 BLENDED-WING-BODY DESIGN FOR ENHANCED ENVIRONMENTAL  
 ACCEPTABILITY  
 03/23/1999 - 12/31/2001 FY01: \$118,000 Total: \$351,455  
*Prin. Invest.:* I KROO  
*Tech. Officer:* LARC/R R ANTCLIFF  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1079 STANFORD UNIV 1928**  
 INFRARED SIGNATURE MASKING BY AIR PLASMA RADIATION  
 08/23/1996 - 10/31/2000 FY01: \$0 Total: \$221,719  
*Prin. Invest.:* C H KRUGER, C O LAUX  
*Tech. Officer:* ARC/W M HUO  
*CASE Category:* 13 - PHYSICS

**NAG 2 1219 STANFORD UNIV 1929**  
 ACTIVE CONTROL OF COMBUSTION INSTABILITY IN AIR-BREATHING  
 PROPULSION SYSTEMS - A COMPUTATIONAL & ...  
 05/19/1998 - 04/30/2002 FY01: \$552,625 Total: \$1,889,910  
*Prin. Invest.:* C T BOWMAN, C F EDWARDS, G RVETSCH  
*Tech. Officer:* ARC/N N MANSOUR, ARC/A A WRAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1257 STANFORD UNIV 1930**  
 GENERATION & CONSERVATION OF DESIGN KNOWLEDGE: NEW MILLENNIUM  
 08/24/1998 - 02/14/2000 FY01: -\$147 Total: \$149,853  
*Prin. Invest.:* L J LEIFFER  
*Tech. Officer:* ARC/W J CLANCY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1337 STANFORD UNIV 1931**  
 ENVIRONMENTAL MONITORING FOR SITUATION ASSESSMENT USING  
 MOBILE & FIXED SENSORS  
 07/13/1999 - 07/14/2002 FY01: \$35,000 Total: \$365,973  
*Prin. Invest.:* R E FIKES  
*Tech. Officer:* ARC/J A KURIEN, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1354 STANFORD UNIV 1932**  
 ROLE OF ADRENERGIC RECEPTORS IN ADAPTATION TO MICROGRAVITY:  
 GENE TARGETED MICE AS A MODEL OF MICRO  
 07/21/1999 - 07/14/2002 FY01: \$244,375 Total: \$641,171  
*Prin. Invest.:* D BERSTEIN, B K KOBILKA  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1373 STANFORD UNIV 1933**  
 HIGH SPEED JET NOISE PREDICTION USING LARGE EDDY SIMULATIONS  
 08/11/1999 - 12/31/2001 FY01: \$24,776 Total: \$99,478  
*Prin. Invest.:* S K LELE, B I VASHI  
*Tech. Officer:* ARC/D KWAK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1397 STANFORD UNIV 1934**  
 EVALUATION OF CHEMICAL KINETICS AND PHOTOCHEMICAL DATA FOR  
 USE IN STRATOSPHERIC MODELING  
 02/17/2000 - 12/31/2001 FY01: \$62,500 Total: \$122,532  
*Prin. Invest.:* C T BOWMAN  
*Tech. Officer:* ARC/E CONDON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1464 STANFORD UNIV 1935**  
 2-D SELF-CALIBRATING PSEUDOLITE ARRAYS FOR COOPERATIVE  
 ROVER/AERIAL VEHICLE NAVIGATION  
 03/23/2001 - 03/14/2002 FY01: \$160,149 Total: \$160,149  
*Prin. Invest.:* S M ROCK  
*Tech. Officer:* ARC/R MORRIS, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1478 STANFORD UNIV 1936**  
 COMPACT LASER-BASED SENSORS FOR MONITORING & CONTROL OF  
 GAS TURBINE COMBUSTORS  
 04/20/2001 - 04/30/2002 FY01: \$180,000 Total: \$180,000  
*Prin. Invest.:* R K HANSON  
*Tech. Officer:* ARC/N N MANSOUR, ARC/A A WRAY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 1843 STANFORD UNIV 1937**  
 DROP BREAKUP IN FLOW THROUGH FLUID BEDS AS MODEL STOCHASTIC  
 STRONG FLOWS  
 05/20/1996 - 04/18/2001 FY01: \$0 Total: \$480,000  
*Prin. Invest.:* E G SHAQTEH  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 1943**                      **STANFORD UNIV**                      **1938**  
 PROBLEMS IN MICROGRAVITY FLUID MECHANICS: THERMO CAPILLARY  
 INSTABILITIES & G-JITTER CONVECTION  
 09/03/1996 - 02/28/2001      FY01: \$0                      Total: \$385,000  
*Prin. Invest.:* G M HOMSY  
*Tech. Officer:* GRC/J C DUH  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2398**                      **STANFORD UNIV**                      **1939**  
 ANISOTROPIC COLLOIDAL SELF ASSEMBLY ANISOTROPIC COLLOIDAL  
 SELF ASSEMBLY  
 04/19/2000 - 11/30/2003      FY01: \$95,000                      Total: \$170,000  
*Prin. Invest.:* A P GAST  
*Tech. Officer:* GRC/J H AGUI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2446**                      **STANFORD UNIV**                      **1940**  
 MICROGRAVITY FLUID MECHANICS: G-JITTER CONVECTION AND THE  
 MECHANICS OF FLUIDIZED BEDS  
 05/26/2000 - 11/30/2003      FY01: -\$60,000                      Total: \$0  
*Prin. Invest.:* G M HOMSY  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2579**                      **STANFORD UNIV**                      **1941**  
 IP INFRASTRUCTURE FOR DISTRIBUTED SPACE SYSTEM  
 04/13/2001 - 01/30/2004      FY01: \$157,710                      Total: \$157,710  
*Prin. Invest.:* A FOX  
*Tech. Officer:* GRC/K BHASIN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2615**                      **STANFORD UNIV**                      **1942**  
 HIGH REGRESSION RATE HYBRID COMBUSTION HIGH REGRESSION RATE  
 HYBRID COMBUSTION  
 06/19/2001 - 09/30/2001      FY01: \$46,500                      Total: \$46,500  
*Prin. Invest.:* B J CANTWELL  
*Tech. Officer:* GRC/D M VENTO  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 3077**                      **STANFORD UNIV**                      **1943**  
 SOLAR OSCILLATIONS INVESTIGATION - MISSION OBSERVATIONS AND  
 DATA ANALYSIS  
 09/25/1995 - 03/14/2000      FY01: \$0                      Total: \$22,111,632  
*Prin. Invest.:* P SCHERRER  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3102**                      **STANFORD UNIV**                      **1944**  
 RELATIVISTIC DISKOSEISMOLOGY  
 10/05/1995 - 09/30/1999      FY01: -\$14                      Total: \$179,986  
*Prin. Invest.:* R V WAGONER  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3263**                      **STANFORD UNIV**                      **1945**  
 HIGH ENERGY RADIATION FROM ROTATION - POWERED PULSARS (NO  
 COST TIME EXTENSION)  
 07/01/1996 - 04/30/2000      FY01: -\$302                      Total: \$130,781  
*Prin. Invest.:* R W ROMANI  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3441**                      **STANFORD UNIV**                      **1946**  
 DIGITAL TOPOGRAPHY PROPOSAL: LONG TERM MONITORING OF EARTH  
 SURFACE CHANGE WITH ERS-1 AND ERS-2....  
 01/11/1997 - 10/14/2001      FY01: \$0                      Total: \$164,472  
*Prin. Invest.:* H ZEBKER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3732**                      **STANFORD UNIV**                      **1947**  
 TOPOGRAPHIC MAPPING IN THE ANTARCTIC ENVIRONMENT U INTERFERE-  
 OMETRY  
 02/14/1997 - 02/28/2001      FY01: \$0                      Total: \$170,406  
*Prin. Invest.:* D ZEBKER  
*Tech. Officer:* GSFC/R H THOMAS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3775**                      **STANFORD UNIV**                      **1948**  
 DEVELOPMENT OF LOW TEMPERATURE WIDE BAND HIGH SPEED  
 02/13/1997 - 02/14/2000      FY01: \$0                      Total: \$348,000  
*Prin. Invest.:* P CABRERA  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3906**                      **STANFORD UNIV**                      **1949**  
 RADAR STUDIES OF LUNAR AND PLANETARY SURFACES  
 02/21/1997 - 10/31/2001      FY01: \$63,000                      Total: \$302,850  
*Prin. Invest.:* G TYLER  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3985**                      **STANFORD UNIV**                      **1950**  
 THE EFFECTS OF CHARGED PARTICLE RADIATION ON GRAVITY SPACE  
 03/03/1997 - 02/14/2000      FY01: -\$332                      Total: \$103,413  
*Prin. Invest.:* D A LIPA  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4038**                      **STANFORD UNIV**                      **1951**  
 PHYSICS OF SOLAR ACTIVITY  
 02/26/1997 - 08/31/2000      FY01: -\$2                      Total: \$226,775  
*Prin. Invest.:* D A STURROCK  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 4554**                      **STANFORD UNIV**                      **1952**  
 PITCH ANGLE SCATTERING AND PRECIPITATION OF RADIATION OBLIQUE  
 WHISTLER WAVES  
 05/05/1997 - 11/14/2000      FY01: \$0                      Total: \$188,000  
*Prin. Invest.:* D S INAN  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 13 - PHYSICS

**NAG 5 5200**                      **STANFORD UNIV**                      **1953**  
 INVESTIGATION OF THE CORONA/CHROMOSPHERE INTERFACE WITH THE  
 CHROMOSPHERIC/CORONAL SPECTROHELIOGRAPH  
 05/28/1998 - 05/31/2002      FY01: \$0                      Total: \$466,460  
*Prin. Invest.:* A B WALKER  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5300**                      **STANFORD UNIV**                      **1954**  
 INVESTIGATION OF CHROMOSPHERIC AND CORONAL STRUCTURES WITH  
 ADVANCED TECHNOLOGY SOLAR IMAGER  
 07/18/2000 - 07/17/2003      FY01: \$404,138                      Total: \$638,954  
*Prin. Invest.:* B C WALKER  
*Tech. Officer:* HQ/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6112**                      **STANFORD UNIV**                      **1955**  
 STRUCTURE OF SOLAR MAGNETIC AND VELOCITY FIELDS  
 07/28/1997 - 06/30/2000      FY01: -\$92                      Total: \$263,484  
*Prin. Invest.:* D H SCHERRER  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6148**                      **STANFORD UNIV**                      **1956**  
 SURFACE DEFORMATION AND TOPOGRAPHIC MEASUREMENTS FROM THE  
 PRESENCE OF VEGETATION  
 08/21/1997 - 08/31/2001      FY01: \$0                      Total: \$196,919  
*Prin. Invest.:* H A ZEBKER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6167**                      **STANFORD UNIV**                      **1957**  
 INVERSION OF TIME DEPENDENT SPACE GEODETIC DATA  
 08/01/1997 - 06/30/2001      FY01: \$0                      Total: \$306,043  
*Prin. Invest.:* P SEGALL  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6615**                      **STANFORD UNIV**                      **1958**  
 LAND-USE AND LAND-COVER CHANGE IN SONORA, MEXICO  
 11/17/1997 - 05/14/2001      FY01: \$0                      Total: \$334,383  
*Prin. Invest.:* P MATSON  
*Tech. Officer:* GSFC/A JANETOS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 7144**                      **STANFORD UNIV**                      **1959**  
 STUDIES OF THE IMPULSIVE PHASE OF SOLAR FLARE: BASIC MECHANISMS  
 AND PARAMETER DISTRIBUTIONS  
 04/20/1998 - 10/14/2001      FY01: \$34,747                      Total: \$229,184  
*Prin. Invest.:* V PETROSIAN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7208**                      **STANFORD UNIV**                      **1960**  
 CHEMICAL AND ISOTOPIC ANALYSIS OF TRACE ORGANIC MATTER ON  
 METEORITES AND INTERSTELLAR DUST USING  
 03/25/1998 - 07/31/2001      FY01: \$0                      Total: \$239,000  
*Prin. Invest.:* R ZARE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7464**                      **STANFORD UNIV**                      **1961**  
 A TRANSITION EDGE MICROCALORIMETER SPECTROMETER FOR THE  
 EUV AND FUV  
 11/30/1998 - 12/31/2001      FY01: \$78,000                      Total: \$232,708  
*Prin. Invest.:* A C WALKER, JR., NONE  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7609**                      **STANFORD UNIV**                      **1962**  
 ABUNDANCES OF CALCIUM-41 AND HAFNIUM-182 IN THE EARLY SOLAR  
 SYSTEM  
 07/27/1998 - 07/31/2000      FY01: \$0                      Total: \$80,000  
*Prin. Invest.:* T IRELAND  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7835**                      **STANFORD UNIV**                      **1963**  
 THE INTERFACE OF TRANSITION REGION AND CORONAL PLASMAS WITH  
 THE CHROMOSPHERIC NETWORK  
 12/14/1998 - 12/14/2001      FY01: \$83,659                      Total: \$241,451  
*Prin. Invest.:* D B GALARCE  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8025**                      **STANFORD UNIV**                      **1964**  
 SEPS/CEPPAD SCIENCE INVESTIGATION  
 01/12/1999 - 12/31/2001      FY01: \$30,000                      Total: \$160,000  
*Prin. Invest.:* M WALT  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8040**                      **STANFORD UNIV**                      **1965**  
 MESOSPHERIC AND IONOSPHERIC EFFECTS OF RELATIVISTIC ELECTRON  
 PRECIPITATION OBSERVED BY THE SAMPEX A  
 01/11/1999 - 01/14/2001      FY01: \$0                      Total: \$52,340  
*Prin. Invest.:* U S INAN  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8563**                      **STANFORD UNIV**                      **1966**  
 URBANIZATION, LAND USE AND BIOLOGICAL RESOURCES  
 05/24/1999 - 05/31/2002      FY01: \$0                      Total: \$47,001  
*Prin. Invest.:* M L LIMHOFF  
*Tech. Officer:* GSFC/M LIMHOFF  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8600**                      **STANFORD UNIV**                      **1967**  
 X-RAY AND MICROWAVE MODELS IN SUPPORT OF HESSI SOLAR FLARE  
 OBSERVATIONS  
 06/14/1999 - 06/14/2002      FY01: \$88,820                      Total: \$135,080  
*Prin. Invest.:* V PETROSIAN  
*Tech. Officer:* GSFC/G D HOLMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8645**                      **STANFORD UNIV**                      **1968**  
 STUDYING THE EFFECTS OF CA, MG, AND K ON AEROSOL SIZE &  
 COMPOSITION, NOY & RADIATIVE TRANSFER  
 07/13/1999 - 07/31/2002      FY01: \$105,143                      Total: \$317,184  
*Prin. Invest.:* M Z JACOBSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8714**                      **STANFORD UNIV**                      **1969**  
 VARIATIONS OF THE SOLAR MAGNETIC FIELDS  
 08/03/1999 - 08/31/2002      FY01: \$24,000                      Total: \$70,500  
*Prin. Invest.:* P H SCHERRER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8802**                      **STANFORD UNIV**                      **1970**  
 "ORION: A LOW-COST DEMONSTRATION OF FORMATION FLYING"  
 12/16/1999 - 07/31/2001      FY01: \$4,512                      Total: \$654,512  
*Prin. Invest.:* R BYER  
*Tech. Officer:* GSFC/J O BRISTOW  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 8866**                      **STANFORD UNIV**                      **1971**  
 A COUPLED ICE-OCEAN MODEL OF MESOSCALE PHYSICAL/ BIOLOGICAL  
 INTERACTIONS IN THE ROSS SEA  
 12/08/1999 - 12/31/2001      FY01: \$0                      Total: \$169,598  
*Prin. Invest.:* K ARRIGO  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8878**                      **STANFORD UNIV**                      **1972**  
 SOLAR OSCILLATIONS INVESTIGATION-MISSION OBSERVATIONS AND  
 DATA ANALYSIS - CONTINUATION OF NAG5-3077  
 01/04/2000 - 06/30/2001      FY01: \$1,564,961                      Total: \$4,499,996  
*Prin. Invest.:* P SCHERRER  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9040**                      **STANFORD UNIV**                      **1973**  
 VALIDATION & IMPROVEMENT OF SRTM PERFORMANCE OVER RUGGED  
 TERRAIN.  
 02/10/2000 - 02/14/2002      FY01: \$50,000                      Total: \$100,000  
*Prin. Invest.:* H A ZEBKER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9087**                      **STANFORD UNIV**                      **1974**  
 SUPERCONDUCTING WIDE-BAND FAST SPECTROPHOTOMETERS  
 02/17/2000 - 12/31/2001      FY01: \$320,000                      Total: \$621,440  
*Prin. Invest.:* B CABRERA  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9494**                      **STANFORD UNIV**                      **1975**  
 UPLINK MICRO-RADIO INSTRUMENT DEVELOPMENT  
 04/18/2000 - 04/30/2001      FY01: \$0                      Total: \$147,682  
*Prin. Invest.:* L TYLER  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9556**                      **STANFORD UNIV**                      **1976**  
 RESEARCH INTO RADIO OCCULTATION METHODS FOR STUDY OF PLAN-  
 ETARY ATMOSPHERES  
 05/04/2000 - 04/30/2003      FY01: \$75,000                      Total: \$150,000  
*Prin. Invest.:* G TYLER  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9737**                      **STANFORD UNIV**                      **1977**  
 DISTRIBUTED SPACE SYSTEM TECHNOLOGY DEMONSTRATIONS WITH THE  
 EMERALD NANOSATELLITE  
 06/22/2000 - 06/30/2002      FY01: \$80,000                      Total: \$130,000  
*Prin. Invest.:* DEBRA  
*Tech. Officer:* GSFC/K LUU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9760**                      **STANFORD UNIV**                      **1978**  
 MEASURING HUMAN IMPACTS ON BIODIVERSITY & CARRYING CAPACITY  
 OF ECO-SYSTEMS: COMBINING REMOTELY-SENSE  
 06/29/2000 - 08/31/2002      FY01: \$51,619                      Total: \$102,105  
*Prin. Invest.:* P EHRlich  
*Tech. Officer:* GSFC/M LIMHOFF  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9784**                      **STANFORD UNIV**                      **1979**  
 STRUCTURE OF SOLAR VELOCITY AND MAGNETIC FIELDS  
 07/06/2000 - 06/30/2002      FY01: \$45,512                      Total: \$169,744  
*Prin. Invest.:* P T SCHERER  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9842**                      **STANFORD UNIV**                      **1980**  
 COMPOSITION, PALEOENVIRONMENTAL DISTRIBUTION, AND  
 PALEOECOLOGY OF ARCHEAN BACTERIAL COMMUNITIES  
 07/31/2000 - 07/31/2002      FY01: \$88,400                      Total: \$171,673  
*Prin. Invest.:* D R LOWE  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9853**                      **STANFORD UNIV**                      **1981**  
 ANTARCTIC ICE SHEET PENETRATION DEPTHS, GRAIN SIZE & ACCUMULA-  
 TION RATES FROM INSAR & SAR ANALYSIS OF  
 07/31/2000 - 03/31/2002      FY01: \$42,416                      Total: \$84,832  
*Prin. Invest.:* H ZEBKER  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9862**                      **STANFORD UNIV**                      **1982**  
 SUPPORT FOR PUBLICATION COSTS FOR PRODUCT OF NASA- FUNDED  
 MEETING  
 08/09/2000 - 07/31/2001      FY01: \$0                      Total: \$10,000  
*Prin. Invest.:* H A MOONEY  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9887**                      **STANFORD UNIV**                      **1983**  
 CHEMICAL AND ISOTOPIC SYSTEMATICS OF EARLY SOLAR SYSTEM  
 PRECURSORS & PRODUCTS  
 08/21/2000 - 08/31/2001      FY01: \$42,000                      Total: \$42,000  
*Prin. Invest.:* T IRELAND  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10483**                      **STANFORD UNIV**                      **1984**  
 SOLAR OSCILLATIONS INVESTIGATION - MICHELSON DOPPLER IMAGER  
 FOR THE SOHO SOLAR MAXIMUM MISSION  
 03/05/2001 - 03/14/2002      FY01: \$2,242,239                      Total: \$2,242,239  
*Prin. Invest.:* P H SCHERRER  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10519**                      **STANFORD UNIV**                      **1985**  
 THE 15TH NATIONAL CONFERENCE OF THE BLACK PHYSICS STUDENTS  
 03/09/2001 - 03/14/2002      FY01: \$84,800                      Total: \$84,800  
*Prin. Invest.:* B CABRERA  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 13 - PHYSICS



<p><b>NAG 5 10534</b>                      <b>STANFORD UNIV</b>                      <b>1986</b>  MONITORING &amp; MODELING LAND-USE CHANGE: INTERGRATING REMOTE SENSING WITH SOCIOECONOMIC DRIVERS  03/12/2001 - 02/28/2002      FY01: \$115,238                      Total: \$115,238  <i>Prin. Invest.:</i> K SETO  <i>Tech. Officer:</i> GSFC/M Y WEI  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 8 1431</b>                      <b>STANFORD UNIV</b>                      <b>1994</b>  R/S HIGH RESOLUTION STUDY OF THE CRITICAL REGION OF OXYGEN USING MAGNETIC LEVITATION  03/05/1998 - 01/31/2003      FY01: \$142,500                      Total: \$432,455  <i>Prin. Invest.:</i> J A LIPA  <i>Tech. Officer:</i> MSFC/D HUBBARD  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 10544</b>                      <b>STANFORD UNIV</b>                      <b>1987</b>  UNDERSTANDING ORGANICS IN METEORITES &amp; THE PRE-BIOTIC ENVIRONMENT  03/09/2001 - 07/31/2002      FY01: \$45,000                      Total: \$45,000  <i>Prin. Invest.:</i> R ZARE  <i>Tech. Officer:</i> GSFC/J M BOYCE  CASE Category: 12 - CHEMISTRY</p>	<p><b>NAG 8 1436</b>                      <b>STANFORD UNIV</b>                      <b>1995</b>  R/S A TEST OF SUPERSYMMETRY THEORY BY SEARCHING FOR ANOMALOUS SHORT RANGE FORCES  02/06/1998 - 07/31/2001      FY01: \$0                      Total: \$124,856  <i>Prin. Invest.:</i> J A LIPA, NONE  <i>Tech. Officer:</i> MSFC/D HUBBARD  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 10576</b>                      <b>STANFORD UNIV</b>                      <b>1988</b>  INFERENCE OF SURFACE PROPERTIES FROM MARS GLOBAL SURVEYOR 3.6 CM WAVELENGTH OBLIQUE SCATTERING  03/21/2001 - 02/28/2002      FY01: \$50,000                      Total: \$50,000  <i>Prin. Invest.:</i> G TYLER  <i>Tech. Officer:</i> GSFC/J M BOYCE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 8 1439</b>                      <b>STANFORD UNIV</b>                      <b>1996</b>  R/S FUNDAMENTAL PHYSICS EXPERIMENTS WITH SUPERCONDUCTING CAVITY-STABILIZED OSCILLATORS ON SPACE  02/01/1998 - 01/31/2003      FY01: \$237,500                      Total: \$827,542  <i>Prin. Invest.:</i> J A LIPA  <i>Tech. Officer:</i> MSFC/J W POE  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 10719</b>                      <b>STANFORD UNIV</b>                      <b>1989</b>  ORION: A LOW-COST DEMONSTRATION OF FORMATION FLYING  04/24/2001 - 01/31/2002      FY01: \$298,830                      Total: \$298,830  <i>Prin. Invest.:</i> R L BYER  <i>Tech. Officer:</i> GSFC/S P HUGHES  CASE Category: 42 - AERONAUTICAL ENGR</p>	<p><b>NAG 8 1457</b>                      <b>STANFORD UNIV</b>                      <b>1997</b>  R/S INVESTIGATION OF THE CRYSTAL GROWTH OF DIELECTRIC MATERIALS BY THE BRIDGMAN TECHNIQUE  02/01/1998 - 01/31/2002      FY01: \$124,450                      Total: \$484,450  <i>Prin. Invest.:</i> R S FEIGELSON  <i>Tech. Officer:</i> MSFC/C TALLEY  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 10799</b>                      <b>STANFORD UNIV</b>                      <b>1990</b>  CONCEPT STUDY FOR THE "SATELLITE TEST OF THE EQUIVALENCE PRINCIPLE" (STEP) MISSION AO-99-OSS-0  05/01/2001 - 04/30/2002      FY01: \$285,990                      Total: \$285,990  <i>Prin. Invest.:</i> C EVERITT  <i>Tech. Officer:</i> GSFC/J R BYRD  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 8 1692</b>                      <b>STANFORD UNIV</b>                      <b>1998</b>  "SOLID STATE ELECTROCHEMICAL OXYGEN CONVERSION FOR MARTIAN &amp; LUNAR ENVIRONMENTS..."  06/02/2000 - 11/30/2003      FY01: \$55,000                      Total: \$100,000  <i>Prin. Invest.:</i> G M HOMSY  <i>Tech. Officer:</i> MSFC/P DOTY  CASE Category: 12 - CHEMISTRY</p>
<p><b>NAG 5 10976</b>                      <b>STANFORD UNIV</b>                      <b>1991</b>  INVESTIGATION OF HELIOSEISMIC WAVES AND MAGNETIC VARIATIONS ASSOCIATED WITH SOLAR FLARES  05/29/2001 - 05/31/2002      FY01: \$27,684                      Total: \$27,684  <i>Prin. Invest.:</i> V PETROSIAN  <i>Tech. Officer:</i> GSFC/W J WAGNER  CASE Category: 13 - PHYSICS</p>	<p><b>NAG 8 1772</b>                      <b>STANFORD UNIV</b>                      <b>1999</b>  THE EFFECTS OF LARGE-SCALE ONE-DIMENSIONAL CONFINEMENT ON THE SPECIFIC HEAT OF HELIUM...  05/04/2001 - 02/28/2003      FY01: \$150,000                      Total: \$150,000  <i>Prin. Invest.:</i> J A LIPA  <i>Tech. Officer:</i> MSFC/D HUBBARD  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 11264</b>                      <b>STANFORD UNIV</b>                      <b>1992</b>  MODELLING CHANGE IN THE SOUTHERN OCEAN: BIOCHEMISTRY OF CARBON UPTAKE AND EXPORT IN THE ROSS SEA,  08/31/2001 - 09/30/2004      FY01: \$80,683                      Total: \$80,683  <i>Prin. Invest.:</i> K ARRIGO  <i>Tech. Officer:</i> GSFC/J MARRA  CASE Category: 33 - OCEANOGRAPHY</p>	<p><b>NAG 8 1777</b>                      <b>STANFORD UNIV</b>                      <b>2000</b>  TEST OF FUNDAMENTAL PHYSICS THROUGH STUDIES OF SUPERFLUID HELIUM THREE  04/27/2001 - 09/30/2005      FY01: \$100,000                      Total: \$100,000  <i>Prin. Invest.:</i> D D OSHEROFF, NONE  <i>Tech. Officer:</i> MSFC/D HUBBARD  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 8 1151</b>                      <b>STANFORD UNIV</b>                      <b>1993</b>  LASER SCATTERING TOMOGRAPHY  08/18/1995 - 04/30/2001      FY01: \$0                      Total: \$730,000  <i>Prin. Invest.:</i> R S FEIGELSON  <i>Tech. Officer:</i> MSFC/D A REISS  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAS 1 00104</b>                      <b>STANFORD UNIV</b>                      <b>2001</b>  AWARD CONTRACT RESULTING FROM NRA-99-OES-07  05/25/2000 - 05/24/2002      FY01: \$303,922                      Total: \$520,922  <i>Prin. Invest.:</i> R L BYER  <i>Tech. Officer:</i> LARC/F PERI  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAS 1 98139**                      **STANFORD UNIV**                      **2002**  
 SAL: SYMBOLIC ANALYSIS LABORATORY  
 10/30/1998 - 10/29/2001      FY01: \$100,181                      Total: \$575,251  
*Prin. Invest.:* D L DILL  
*Tech. Officer:* LARC/P S MINER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 5 00147**                      **STANFORD UNIV**                      **2003**  
 GAMMA RAY LARGE AREA SPACE TELESCOPE (GLAST)  
 05/03/2000 - 11/30/2001      FY01: \$1,235,552                      Total: \$2,046,552  
*Prin. Invest.:* P MICHELSON  
*Tech. Officer:* GSFC/S LAMBROSS  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 31726**                      **STANFORD UNIV**                      **2004**  
 EOS - "BIOSPHERE-ATMOSPHERE INTERACTIONS" STUDY  
 10/24/1991 - 06/30/2000      FY01: -\$29,446                      Total: \$1,310,754  
*Prin. Invest.:* H MOONEY, P VITOUSEK  
*Tech. Officer:* GSFC/P SELLERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 98151**                      **STANFORD UNIV**                      **2005**  
 CONSTELLATION - X PROGRAM  
 11/27/1998 - 12/15/2001      FY01: \$0                      Total: \$60,000  
*Prin. Invest.:* B CABRERA  
*Tech. Officer:* GSFC/J GRADY  
*CASE Category:* 11 - ASTRONOMY

**NAS 8 39225**                      **STANFORD UNIV**                      **2006**  
 GRAVITY PROBE B SCIENCE MISSION INTERIM CONTRACT  
 01/18/1995 - 09/30/2004      FY01: \$38,963,519                      Total: \$321,212,206  
*Prin. Invest.:* C W EVERITT, B PARKINSON  
*Tech. Officer:* MSFC/R S GEVEDEN, MSFC/B RANDOLPH  
*CASE Category:* 13 - PHYSICS

**NCC 2 721**                      **STANFORD UNIV**                      **2007**  
 THE STRUCTURE, FACIES & DEPOSITION OF SILICEOUS S INTER AROUND  
 THERMAL SPRINGS: IMPLICATIONS FOR...  
 07/03/1991 - 12/31/2001      FY01: \$0                      Total: \$539,229  
*Prin. Invest.:* D R LOWE  
*Tech. Officer:* ARC/D J DES MARAIS, ARC/S CHANG  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 2 908**                      **STANFORD UNIV**                      **2008**  
 STUDIES OF PLANETARY RING SYSTEMS  
 06/26/1995 - 05/31/2002      FY01: \$147,990                      Total: \$839,827  
*Prin. Invest.:* A L TYLER, M R SHOWALTER  
*Tech. Officer:* ARC/J N CUZZI  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1010**                      **STANFORD UNIV**                      **2009**  
 DECELOPMENT OF 3-D BIOMEDICAL COMPUTATION  
 01/07/1998 - 03/31/2002      FY01: \$2,236,303                      Total: \$3,586,724  
*Prin. Invest.:* S A SCHENDEL  
*Tech. Officer:* ARC/K A SOUZA  
*CASE Category:* 56 - MEDICL

**NCC 2 1074**                      **STANFORD UNIV**                      **2010**  
 THE RESEARCH & TRAINING ACTIVITIES FOR THE JOINT I NSTITUTE FOR  
 AERONAUTICS AND ACOUSTICS  
 12/21/1998 - 10/31/1999      FY01: -\$1,243                      Total: \$68,757  
*Prin. Invest.:* B J CANTWELL  
*Tech. Officer:* ARC/R A MEHTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1151**                      **STANFORD UNIV**                      **2011**  
 CENTER FOR TURBULENCE RESEARCH  
 01/07/2000 - 01/31/2002      FY01: \$1,250,000                      Total: \$2,570,000  
*Prin. Invest.:* P MOIN  
*Tech. Officer:* ARC/N N MANSOUR, ARC/M M ROGER  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 1154**                      **STANFORD UNIV**                      **2012**  
 MULTIPLE COOPERATING ROBOTS  
 01/20/2000 - 06/30/2001      FY01: \$0                      Total: \$569,999  
*Prin. Invest.:* S ROCK  
*Tech. Officer:* ARC/M G BUALAT/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1172**                      **STANFORD UNIV**                      **2013**  
 HIGH REGRESSION RATE HYBRID COMBUSTION  
 04/10/2000 - 09/30/2001      FY01: \$0                      Total: \$198,240  
*Prin. Invest.:* B J CANTWELL  
*Tech. Officer:* ARC/G G ZILLIAC  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 2 1175**                      **STANFORD UNIV**                      **2014**  
 THE DEVELOPMENT OF A SOLID WASTE TREATMENT TECHNOL OGY FOR  
 THE NEAR TERM HUMAN EXPLORATION OF MARS  
 04/27/2000 - 09/30/2001      FY01: \$118,116                      Total: \$228,710  
*Prin. Invest.:* M REINHARD  
*Tech. Officer:* ARC/M T FLYNN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 2 1208**                      **STANFORD UNIV**                      **2015**  
 DOES MECHANICAL STIMULATION ALTER GENE EXPRESION I N C.ELE-  
 GANS  
 11/24/2000 - 11/14/2001      FY01: \$40,000                      Total: \$40,000  
*Prin. Invest.:* S K KIM  
*Tech. Officer:* ARC/C A CONLEY, ARC/E M HOLTON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5186**                      **STANFORD UNIV**                      **2016**  
 HIGHLY ACCURATE RECONSTRUCTION OF COMPUTED TOMOGRAPHY  
 VOLUME SCANS FOR THE DETERMINATION IF LOCAL BO  
 07/25/1996 - 06/30/2000      FY01: -\$30                      Total: \$128,970  
*Prin. Invest.:* S A NAPEL  
*Tech. Officer:* ARC/R T WHALEN  
*CASE Category:* 56 - MEDICL

**NCC 2 5261**                      **STANFORD UNIV**                      **2017**  
 INVESTIGATION OF ATTENTIONAL BOTTLENECKS USING FUN CTIONAL  
 MAGNETIC RESONANCE IMAGING  
 06/17/1998 - 02/28/2001      FY01: \$0                      Total: \$76,258  
*Prin. Invest.:* J E GABRIELI  
*Tech. Officer:* ARC/R W REMINGTON, ARC/J C JOHNSTON  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

**NCC 2 5270**                      **STANFORD UNIV**                      **2018**  
 EXPLORING CARBON NANOTUBES FOR FUTURE 1NM NANOOUIT  
 HOGGRAPHY  
 06/12/1998 – 05/31/2001      FY01: \$0                      Total: \$70,000  
*Prin. Invest.:* H DAI  
*Tech. Officer:* ARC/T R GOVINDAN  
*CASE Category:* 12 – CHEMISTRY

**NCC 2 5278**                      **STANFORD UNIV**                      **2019**  
 ARCHITECTURE FOR ACCESS & MUNIPULATION OF HETEROGE NEOUS  
 INFORMATION  
 07/16/1998 – 06/30/2001      FY01: \$0                      Total: \$190,000  
*Prin. Invest.:* H GARCIA-MOLINA  
*Tech. Officer:* ARC/M GERALD-YAMASAKI  
*CASE Category:* 22 – COMPUTER SCIENCE

**NCC 2 5298**                      **STANFORD UNIV**                      **2020**  
 THEORETICAL MODELING OF AUTOCATALYTIC MOLECULAR SY STEMS  
 10/22/1998 – 03/31/2000      FY01: \$0                      Total: \$30,000  
*Prin. Invest.:* R B LAUGHLIN  
*Tech. Officer:* ARC/J D SCARGLE, ARC/S P COLOMBANO  
*CASE Category:* 51 – BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5335**                      **STANFORD UNIV**                      **2021**  
 SHARP SOUNDING ROCKET EMPERIMENT & ENTRY SIMULATIO N  
 07/23/1999 – 12/31/2000      FY01: \$0                      Total: \$122,275  
*Prin. Invest.:* B CANTWELL, R TWIGGS  
*Tech. Officer:* ARC/P KOLODZIEJ, ARC/D J RASKY  
*CASE Category:* 41 – AERONAUTICAL ENGNR

**NCC 2 5350**                      **STANFORD UNIV**                      **2022**  
 SIMULATION-BASED PROTOYPING OF SOLID-STATE QUANTUM  
 COMPUTERS  
 09/15/1999 – 03/31/2001      FY01: \$0                      Total: \$60,000  
*Prin. Invest.:* K CHO  
*Tech. Officer:* ARC/T R GOVINDAN  
*CASE Category:* 13 – PHYSICS

**NCC 2 5352**                      **STANFORD UNIV**                      **2023**  
 THE STRUCTURE & CHEMISTRY OF HIGH DENSITY INDUCTIV ELY  
 COUPLED PLASMA DEISCHARGES USED IN MICROELECT  
 09/22/1999 – 04/14/2000      FY01: -\$49                      Total: \$45,463  
*Prin. Invest.:* M A CAPPELLI  
*Tech. Officer:* ARC/S P SHARMA  
*CASE Category:* 41 – AERONAUTICAL ENGNR

**NCC 2 5359**                      **STANFORD UNIV**                      **2024**  
 INVESTIGATON OF CONVOLUTION SEGMENT PAIR DYADS IN BACTERIAL  
 GENOMES  
 10/26/1999 – 10/14/2001      FY01: \$65,000                      Total: \$115,500  
*Prin. Invest.:* R B LAUGHLIN  
*Tech. Officer:* ARC/M L FONDA  
*CASE Category:* 13 – PHYSICS

**NCC 2 5363**                      **STANFORD UNIV**                      **2025**  
 DEVELOPMENT OF FUNDAMENTAL TECHNOLOGIES FOR FLUID FLOW  
 CALCULATIONS  
 01/25/2000 – 01/31/2002      FY01: \$76,165                      Total: \$187,415  
*Prin. Invest.:* T HUGHES  
*Tech. Officer:* ARC/T J BARTH  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NCC 2 5371**                      **STANFORD UNIV**                      **2026**  
 FABRICATION OF SILICON SUBTRATES FOR CONTROLLED SY NTHESISI OF  
 CARBON NANOTUBES  
 03/23/2000 – 02/28/2001      FY01: \$0                      Total: \$45,050  
*Prin. Invest.:* Z SHEN  
*Tech. Officer:* ARC/M MEYYAPPAN/H PARTRIDGE  
*CASE Category:* 13 – PHYSICS

**NCC 2 5377**                      **STANFORD UNIV**                      **2027**  
 DEVELOPMENT AND APPLICATION OF NOVEL DIAGNOSTICS FOR ARC-JET  
 CHARACTERIZATION  
 04/03/2000 – 03/31/2002      FY01: \$95,000                      Total: \$189,896  
*Prin. Invest.:* R K HANSON  
*Tech. Officer:* ARC/G A RAICHE, ARC/J H GRINSTEAD  
*CASE Category:* 41 – AERONAUTICAL ENGNR

**NCC 2 5381**                      **STANFORD UNIV**                      **2028**  
 IN VIVO CHARACTERIZATION OF BREAST TUMOR TISSUE USING THE  
 NASA SMART PROBE  
 04/28/2000 – 11/30/2000      FY01: \$0                      Total: \$23,708  
*Prin. Invest.:* S JEFFREY  
*Tech. Officer:* ARC/R MAH  
*CASE Category:* 56 – MEDICL

**NCC 2 5400**                      **STANFORD UNIV**                      **2029**  
 SIMULATION-BASED DESIGN OF SMART NANOTUBE COMPOSIT E  
 MATERIALS  
 09/25/2000 – 09/30/2002      FY01: \$42,902                      Total: \$81,549  
*Prin. Invest.:* K J CHO  
*Tech. Officer:* ARC/H PARTIDGE, ARC/M MEYYAPPAN  
*CASE Category:* 12 – CHEMISTRY

**NCC 2 5422**                      **STANFORD UNIV**                      **2030**  
 DESIGN OF PREDICTIVE MODELS OF NAS  
 03/09/2001 – 02/28/2002      FY01: \$45,000                      Total: \$45,000  
*Prin. Invest.:* C TOMLIN  
*Tech. Officer:* ARC/G MEYER, ARC/R BACH  
*CASE Category:* 49 – ENGINEERING, OTHER

**NCC 2 5434**                      **STANFORD UNIV**                      **2031**  
 NONINVASIVE INVESTIGATION OF BONE ADAPTATION IN HU MANS TO  
 CUMULATIVE DAILY MECHANICAL LOADING  
 04/26/2001 – 04/30/2002      FY01: \$61,145                      Total: \$61,145  
*Prin. Invest.:* N J PELC  
*Tech. Officer:* ARC/R T WHALEN, ARC/S B ARNAUD  
*CASE Category:* 56 – MEDICL

**NCC 2 5439**                      **STANFORD UNIV**                      **2032**  
 SIMULATION BASED PROTOTYPED OF SOLID-STATE QUANTUM  
 COMPUTERS: A PATHWAY FOR REVOLUTIONARY COMPUTING  
 07/17/2001 – 05/31/2002      FY01: \$42,719                      Total: \$42,719  
*Prin. Invest.:* K CHO  
*Tech. Officer:* ARC/H PATRIDGE, ARC/T R GORINDAN  
*CASE Category:* 13 – PHYSICS

**NCC 2 5444**                      **STANFORD UNIV**                      **2033**  
 THREE DIMENSIONAL NUMERICAL SIMULATION OF NASA STU DIED MFD-  
 BYPASS SCRAMJET ENGINES  
 07/12/2001 – 05/31/2002      FY01: \$35,000                      Total: \$35,000  
*Prin. Invest.:* R W MACCORMICK  
*Tech. Officer:* ARC/U B MANTA  
*CASE Category:* 41 – AERONAUTICAL ENGNR

**NCC 2 5446**                      **STANFORD UNIV**                      **2034**  
 FABRICATION OF SILICON SUBSTRATES FOR CONTROLLED SYNTHESIS OF  
 CARBON NANOTUBES  
 07/16/2001 – 05/14/2002      FY01: \$49,120                      Total: \$49,120  
*Prin. Invest.:* Z X SHEN  
*Tech. Officer:* ARC/H PATRIDGE, ARC/M MEYAPPAN  
*CASE Category:* 12 – CHEMISTRY

**NCC 2 5457**                      **STANFORD UNIV**                      **2035**  
 DEVELOPMENT OF FUNDAMENTAL TECHNOLOGIES FOR COMPLEX MULTI-  
 SCALE FLUID FLOW CALCULATIONS  
 08/17/2001 – 08/14/2002      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* T J HUGHES  
*Tech. Officer:* ARC/N MANSOUR, ARC/T BARTH  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NCC 2 5467**                      **STANFORD UNIV**                      **2036**  
 MOLECULAR DYNAMICS ON MASSIVELY PARALLEL COMPUTERS :  
 TOWARDS BIOLOGICAL TIME SCALES  
 09/28/2001 – 09/30/2002      FY01: \$60,133                      Total: \$60,133  
*Prin. Invest.:* E F DARVE  
*Tech. Officer:* ARC/N N MANSOUR  
*CASE Category:* 22 – COMPUTER SCIENCE

**NCC 3 640**                      **STANFORD UNIV**                      **2037**  
 ATTENUATION OF GAS TURBULENCE BY A NEARLY STATIONARY DISPERSION  
 OF FINE PARTICLES  
 08/18/1998 – 12/31/2001      FY01: \$95,000                      Total: \$375,000  
*Prin. Invest.:* J K EATON  
*Tech. Officer:* GRC/F CHARIMONTE  
*CASE Category:* 46 – MECHANICAL ENGR

**NCC 8 197**                      **STANFORD UNIV**                      **2038**  
 ACTIVE SENSING MONITORING OF CRYOGENIC COMPOSITE STRUCTURES  
 FOR SPACE TRANSPORTATION APPLICATIONS.  
 03/09/2000 – 03/05/2002      FY01: \$130,000                      Total: \$290,000  
*Prin. Invest.:* F CHANG  
*Tech. Officer:* MSFC/A KELLEY  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NGT 2 52246**                      **STANFORD UNIV**                      **2039**  
 ADVANCED LIFE SUPPORT POWER REDUCTION  
 08/20/1998 – 09/30/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* B LUSIGNAN  
*Tech. Officer:* ARC/R T WHALEN  
*CASE Category:* 59 – LIFE SCIENCE, OTHER

**NGT 2 52267**                      **STANFORD UNIV**                      **2040**  
 AN ALTERNATIVE TO PNEUMATIC CONTROL TECHNIQUES FOR ROLL-YAW  
 CONTROL OF FLIGHT VEHICLES  
 07/28/2000 – 08/31/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* S M ROCK  
*Tech. Officer:* ARC/R D MEHTA, ARC/J C ROSS  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NGT 2 52282**                      **STANFORD UNIV**                      **2041**  
 VESTIBULO-OCULAR REFLEXES IN NORMAL AND OTOLITH DEFICIENT  
 HEAD TILT (HET) MICE  
 08/09/2001 – 06/30/2002      FY01: \$21,000                      Total: \$21,000  
*Prin. Invest.:* J RAYMOND  
*Tech. Officer:* ARC/R D BOYLE, ARC/T INTRAVIAIA  
*CASE Category:* 51 – BIOLOGY (EXCLUDING ENVIR)

**NGT 5 92**                      **STANFORD UNIV**                      **2042**  
 RADIO DIAGNOSTICS OF AURORAL HISS AND ASSOCIATED PLASMA  
 DENSITY STRUCTURES/STUDENT: MARIA SALVATI  
 06/09/1999 – 09/14/2002      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* U UMRAN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 45 – ELECTRICAL ENGR

**NGT 5 103**                      **STANFORD UNIV**                      **2043**  
 ADVANCED SOLAR EUV & X-RAY SPECTROHELIOGRAPHY WITH THE TRAN-  
 SITION EDGESENSOR MICROCALORIMETER/STUDENT  
 05/25/2000 – 08/31/2000      FY01: -\$22,000                      Total: \$0  
*Prin. Invest.:* A B WALKER  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 13 – PHYSICS

**NGT 5 30204**                      **STANFORD UNIV**                      **2044**  
 LAND-USE CHANGE, AGRICULTURAL RUNOFF, & GREENHOUSE GASES IN  
 TWO ESTUARIES OF SOUTHERN SONORA MEXICO  
 08/19/1999 – 08/31/2002      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* P MATSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NGT 5 30216**                      **STANFORD UNIV**                      **2045**  
 PHYSIO-CHEMICAL AND BIOLOGICAL CONTROL OVER THE FATE OF  
 NITROGEN AND PHOSPHORUS IN TROPICAL SOIL  
 08/24/1999 – 08/31/2002      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* P M VITOUSEK  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NGT 5 30342**                      **STANFORD UNIV**                      **2046**  
 HYDROLOGIC APPLICATIONS OF SATELLITE RADAR INTERFEROMETRY: LAND  
 SUBSIDENCE OVER EXPLOITED AQUIFER SYSTEMS  
 08/21/2000 – 08/31/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* H ZEBKER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NGT 5 30360**                      **STANFORD UNIV**                      **2047**  
 THE COCCIDIOIDES IMMITS FUNGUS: EXPOSURE MODELING & PUBLIC  
 POLICY THROUGH FAVORED SOIL HABITAT  
 08/23/2000 – 08/31/2001      FY01: \$0                      Total: \$22,000  
*Prin. Invest.:* G W ERNST  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NGT 5 30392**                      **STANFORD UNIV**                      **2048**  
 RESOLVING THE RED SEA PARADOX: INTERANNUAL TO DECADEAL VARI-  
 ABILITY IN PRIMARY PRODUCTION AND CORA  
 08/14/2001 – 08/31/2004      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* K ARRIGO  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NGT 5 50044**                      **STANFORD UNIV**                      **2049**  
 THE SEARCH FOR A DEFINITIVE BLACK HOLE SIGNATURE: PREDICTED MODES OF  
 DISK OSCILLATION  
 07/17/1997 – 08/31/2000      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* R WAGONER  
*Tech. Officer:* GSFC/A NURRIDIN  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NGT 5 50075**                    **STANFORD UNIV**                    **2050**  
 SENSING AND CONTROL TECHNOOGIES FOR FORMATION FLYI  
 08/26/1997 - 12/31/2000    FY01: -\$447                    Total: \$65,553  
*Prin. Invest.:* J HOW  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50101**                    **STANFORD UNIV**                    **2051**  
 ASSESSING LINKS BETWEEN BIODIVERSITY AND ECOSYSTEM FORESTS  
 09/06/1997 - 08/31/2000    FY01: \$0                    Total: \$66,000  
*Prin. Invest.:* C FIELD  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50227**                    **STANFORD UNIV**                    **2052**  
 GLOBAL LIGHTNING DETECTION AND LOCATION USING LONG RANGE VLF  
 SPHERIC MEASUREMENTS  
 09/29/1998 - 08/31/2001    FY01: \$0                    Total: \$66,000  
*Prin. Invest.:* U INAN, WOOD  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 50254**                    **STANFORD UNIV**                    **2053**  
 MULTI-SPECTRAL OBSERVATIONS OF THE SOLAR CORONA, CHROMO-  
 SPHERE AND TRANSITION REGION  
 06/10/1999 - 06/30/2002    FY01: \$22,000                    Total: \$66,000  
*Prin. Invest.:* A B WALKER, JR.  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50351**                    **STANFORD UNIV**                    **2054**  
 NONLINEAR BEAM-PLASMA COUPLING OF THUNDERSTORM- GENERATED  
 RELATIVISTIC ELECTRONS TO THE MAGNETOSPHERE  
 05/10/2001 - 06/30/2002    FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* U S INAN  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50358**                    **STANFORD UNIV**                    **2055**  
 IP INFRASTRUCTURE FOR DISTRIBUTED SPACE SYSTEMS  
 05/14/2001 - 07/31/2002    FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* A FOX  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 28**                    **STANFORD UNIV**                    **2056**  
 TASK-LEVEL CONTROL FOR SPACE ROBOTIC MANIPULATORS  
 09/25/1997 - 09/30/2000    FY01: -\$5,035                    Total: \$60,965  
*Prin. Invest.:* J HOW  
*Tech. Officer:* JSC/D G SICKOREZ  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NGT10 52619**                    **STANFORD UNIV**                    **2057**  
 GSRP TRAINING GRANT  
 01/20/1999 - 07/30/2000    FY01: -\$3,948                    Total: \$34,719  
*Prin. Invest.:* C S CRIDDLE  
*Tech. Officer:* KSC/R M WHEELER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 5191**    **THE SCRIPPS REASERCH INST (TSRI) -LA JOLLA**                    **2058**  
 SATELLITE REMOTE SENSING STUDIES OF BIOLOGICAL AND  
 BIOGEOCHEMICAL PROCESSES IN THE OCEAN  
 04/21/1998 - 03/31/2001    FY01: \$0                    Total: \$38,852  
*Prin. Invest.:* M VERNET  
*Tech. Officer:* GSFC/F E HOGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9386**    **THE SCRIPPS REASERCH INST (TSRI) -LA JOLLA**                    **2059**  
 EVOLUTION OF CATALYTIC RNA IN THE LABORATORY  
 04/07/2000 - 03/31/2002    FY01: \$288,600                    Total: \$560,461  
*Prin. Invest.:* G JOYCE  
*Tech. Officer:* HQ/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9604**    **THE SCRIPPS REASERCH INST (TSRI) -LA JOLLA**                    **2060**  
 A REGIONAL REAL-TIME, INTERACTIVE, GIS-BASED COMPUTATIONAL  
 ENVIRONMENT FOR NASA'S DIRECT BROADCAST  
 05/31/2000 - 05/31/2002    FY01: \$350,000                    Total: \$450,000  
*Prin. Invest.:* J J SIMPSON  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1834**    **THE SCRIPPS REASERCH INST (TSRI) -LA JOLLA**                    **2061**  
 CRYSTALLIZATION OF INTEGRAL MEMBRANE PROTEINS USING MOLECULAR  
 BIOLOGY  
 09/19/2001 - 11/30/2004    FY01: \$52,000                    Total: \$52,000  
*Prin. Invest.:* G A CHANG  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 2 1055**    **THE SCRIPPS REASERCH INST (TSRI) -LA JOLLA**                    **2062**  
 SELF-REPRODUCING MOLECULAR SYSTEMS & DARWINIAN CHEMISTRY  
 08/27/1998 - 06/30/2003    FY01: \$1,129,733                    Total: \$3,263,033  
*Prin. Invest.:* R GHADIRI  
*Tech. Officer:* ARC/L J CAROFF, ARC/S CHANG  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 1 2191**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2063**  
 MODELING ISOTOPE FRACTIONATION IN STRATOSPHERIC CO<sub>2</sub>/N<sub>2</sub>O/CH<sub>4</sub> AND INVESTIGATING  
 STRATOSPHERIC CHEMISTRY/TRANSPORT, STRATOSPHERIC/TROPOSPHERIC  
 05/17/1999 - 03/30/2002    FY01: \$95,076                    Total: \$282,801  
*Prin. Invest.:* K A BOERING  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1135**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2064**  
 ALGORITHMS FOR VISUAL SEARCH AND THE PATHFINDER ROVER  
 06/25/1997 - 11/30/1999    FY01: \$0                    Total: \$175,000  
*Prin. Invest.:* L W STARK  
*Tech. Officer:* ARC/M M SIMS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1210**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2065**  
 FORMAL METHODS FOR SOFTWARE EVOLUTION MODELING INTERFACE  
 05/07/1998 - 07/31/2001    FY01: \$0                    Total: \$449,999  
*Prin. Invest.:* A AOLEM  
*Tech. Officer:* ARC/M R LOWRY  
*CASE Category:* 22 - COMPUTER SCIENCE

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 2 1214 UNIV OF CALIFORNIA - BERKELEY 2066**  
 MOCHA-MODULARITY IN MODEL CHECKING  
 05/05/1998 - 10/31/2000 FY01: -\$643 Total: \$849,357  
*Prin. Invest.:* T A HENZINGER  
*Tech. Officer:* ARC/M R LOWREY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1351 UNIV OF CALIFORNIA - BERKELEY 2067**  
 EARLY GRAVITROPIC EVENTS IN ROOTS OF ARABIDOPSIS: CA2+ & H+ FLUXES IN THE COLUMELLA CELLS  
 07/21/1998 - 07/31/2002 FY01: \$112,044 Total: \$346,437  
*Prin. Invest.:* L J FELDMAN  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY(EXCLUDING ENVIR)

**NAG 2 1359 UNIV OF CALIFORNIA - BERKELEY 2068**  
 COMPARATIVE ANALYSIS OF SEGMENTATION, DURING EMBRYOGENESIS, POSTEMBRYONIC GROWTH & REGENERATION, AM  
 07/23/1998 - 07/31/2001 FY01: \$186,050 Total: \$458,243  
*Prin. Invest.:* D A WEISBLAT  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1361 UNIV OF CALIFORNIA - BERKELEY 2069**  
 HEMICHORDATES & THE ORIGIN OF CHORDATES  
 07/27/1998 - 07/14/2001 FY01: \$170,579 Total: \$446,868  
*Prin. Invest.:* J C GERHART  
*Tech. Officer:* ARC/M M AVERNER, ARC/G C JAHNS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1398 UNIV OF CALIFORNIA - BERKELEY 2070**  
 SUPERCONDUCTING BOLOMETERS OF INFRARED AND MILLIMETER WAVELENGTHS  
 03/16/2000 - 03/14/2002 FY01: \$65,000 Total: \$155,000  
*Prin. Invest.:* P L RICHARDS  
*Tech. Officer:* ARC/C MCCREIGHT  
*CASE Category:* 13 - PHYSICS

**NAG 2 1479 UNIV OF CALIFORNIA - BERKELEY 2071**  
 DETERMINISTIC & PROBABILISTIC HYBRID CONTROL OF A TM  
 05/01/2001 - 04/30/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* S S SASTRY  
*Tech. Officer:* ARC/G MEYER, ARC/M J BONDI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 2 1483 UNIV OF CALIFORNIA - BERKELEY 2072**  
 STABLE ISOTOPE MEASUREMENTS OF CO2 & NO2 FOR SOLVING CONSTRAINTS ON OBSERVED OZONE CHANGES DUE TO CH  
 06/04/2001 - 04/30/2002 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* K A BOERING, NONE  
*Tech. Officer:* ARC/R S HIPSKIN, ARC/C SCOFIELD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1523 UNIV OF CALIFORNIA - BERKELEY 2073**  
 BIOGEOCHEMICAL MARS-LIKE ENVIRONMENTS (BIOMES)  
 09/17/2001 - 08/31/2002 FY01: \$250,000 Total: \$250,000  
*Prin. Invest.:* J F BANFIELD  
*Tech. Officer:* ARC/R GRAYMES, ARC/W DOLCI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2026 UNIV OF CALIFORNIA - BERKELEY 2074**  
 A FUNDAMENTAL STUDY OF SMOLDERING COMBUSTION IN MICROGRAVITY  
 03/14/1997 - 03/15/2002 FY01: \$105,500 Total: \$680,526  
*Prin. Invest.:* A C FERNANDEZ-PELLO  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2103 UNIV OF CALIFORNIA - BERKELEY 2075**  
 LOW EMISSION, HIGH PERFORMANCE GAS TURBINE ENGINES EXPERIMENT AND MODEL RESEARCH AND DEVELOPMENT  
 03/04/1998 - 01/06/2002 FY01: \$127,603 Total: \$386,026  
*Prin. Invest.:* R DIBBLE  
*Tech. Officer:* GRC/R R TACINA, GRC/N S LIU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2105 UNIV OF CALIFORNIA - BERKELEY 2076**  
 MICROGRAVITY EFFECTS ON NEAR-BUBBLE MICROSCALE TRANSPORT DURING BOILING OF BINARY FLUID MIXTURES  
 02/26/1998 - 12/31/2001 FY01: \$0 Total: \$279,761  
*Prin. Invest.:* V P CAREY  
*Tech. Officer:* GRC/B J MOTIL  
*CASE Category:* 13 - PHYSICS

**NAG 3 2152 UNIV OF CALIFORNIA - BERKELEY 2077**  
 WEAKLY NONLINEAR DESCRIPTION OF PARAMETRIC INSTABILITIES  
 06/09/1998 - 12/31/2002 FY01: \$119,500 Total: \$419,500  
*Prin. Invest.:* E KNOBLOCK  
*Tech. Officer:* GRC/J R SKARDA  
*CASE Category:* 13 - PHYSICS

**NAG 3 2221 UNIV OF CALIFORNIA - BERKELEY 2078**  
 NUMERICAL STUDY OF BUOYANCY AND DIFFERENTIAL DIFFUSION EFFECTS ON THE STRUCTURE AND DYNAMICS OF TRIPLES  
 12/29/1998 - 11/11/2001 FY01: \$65,224 Total: \$173,490  
*Prin. Invest.:* J CHEN  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 696 UNIV OF CALIFORNIA - BERKELEY 2079**  
 A PROPOSAL TO FLY THE EUV/FUV SPECTROMETER ON ORFEUS FOR ASTRO-SPAS I & II  
 12/18/1992 - 02/28/2001 FY01: \$0 Total: \$2,839,678  
*Prin. Invest.:* M V HURWITZ  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 959 UNIV OF CALIFORNIA - BERKELEY 2080**  
 ELECTRON REFLECTOMETER ADDITION TO THE MAGNETIC FIELDS INVESTIGATION ON THE MARS OBSERVER MISSION  
 08/01/1987 - 06/30/2001 FY01: \$0 Total: \$1,778,915  
*Prin. Invest.:* R P LIN, C F MCKEE  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 3280 UNIV OF CALIFORNIA - BERKELEY 2081**  
 HIGH RESOLUTION OBSERVATIONS FROM SPACE: NEW INSIGHTS INTO DARK MATTER AND GALAXY FORMATION  
 07/03/1996 - 07/14/2000 FY01: \$0 Total: \$406,700  
*Prin. Invest.:* T BROADHURST  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3499 UNIV OF CALIFORNIA - BERKELEY 2082**  
 COSMOLOGICAL STUDIES OF THE COSMIC MICROWAVE BACKG  
 11/27/1996 - 11/30/2001 FY01: \$0 Total: \$335,762  
*Prin. Invest.:* M I DAVIS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3500 UNIV OF CALIFORNIA - BERKELEY 2083**  
 ADDING THE MARS '96 GAMMA-RAY BURST EXPERIMENT TO RY NETWORK  
 11/27/1996 - 11/30/2001 FY01: \$37,650 Total: \$176,650  
*Prin. Invest.:* K C HURLEY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3556 UNIV OF CALIFORNIA - BERKELEY 2084**  
 A MULTI-WAVELENGTH STUDY OF A COMPLETE SAMPLE OF N  
 01/04/1997 - 12/14/2001 FY01: \$134,000 Total: \$636,000  
*Prin. Invest.:* A V FILIPPENKO  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3596 UNIV OF CALIFORNIA - BERKELEY 2085**  
 MISSION OPERATIONS AND DATA ANALYSIS FOR THE FAST AURORAL  
 SNAPSHOT EXPLORER (FAST) MISSION  
 01/25/1997 - 03/14/2002 FY01: \$756,500 Total: \$11,913,500  
*Prin. Invest.:* C W CARLSON  
*Tech. Officer:* GSFC/R F PFAFF, JR.  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 3913 UNIV OF CALIFORNIA - BERKELEY 2086**  
 PHOTOCATHODE, MICROCHANNEL PLATE AND DELAY LINE TE D UV-VIS-  
 IBLE DETECTOR SYSTEMS  
 02/21/1997 - 06/14/2001 FY01: \$0 Total: \$785,100  
*Prin. Invest.:* D H SIEGMUND  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3916 UNIV OF CALIFORNIA - BERKELEY 2087**  
 DEVELOPMENT OF A RADIO TOMOGRAPHY MISSION FOR INVE 'S MAGNE-  
 TOSPHERE  
 02/21/1997 - 08/14/2000 FY01: \$0 Total: \$160,000  
*Prin. Invest.:* F S MOZER  
*Tech. Officer:* GSFC/R HOWARD  
*CASE Category:* 13 - PHYSICS

**NAG 5 3941 UNIV OF CALIFORNIA - BERKELEY 2088**  
 DEVELOPMENT OF DATA ANALYSIS, COMPRESSION AND VISU LARGE DATA  
 SETS IN ASTROPHYSICS AND COSMOLOGY  
 03/03/1997 - 02/28/2001 FY01: \$0 Total: \$423,000  
*Prin. Invest.:* G SMOOT  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 4194 UNIV OF CALIFORNIA - BERKELEY 2089**  
 SILICON DIFFRACTION GRATINGS FOR ULTRAVIOLET APPLI  
 03/25/1997 - 03/31/2002 FY01: \$96,000 Total: \$468,848  
*Prin. Invest.:* D V HURWITZ  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4202 UNIV OF CALIFORNIA - BERKELEY 2090**  
 JOVIAN RING SYSTEM  
 03/17/1997 - 03/31/2001 FY01: \$0 Total: \$111,000  
*Prin. Invest.:* D DE PATER  
*Tech. Officer:* GSFC/W HUEBNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4454 UNIV OF CALIFORNIA - BERKELEY 2091**  
 BALLOON-BORNE OBSERVATIONS OF THE ANISOTROPY OF TH KGROUND  
 ON ANGULAR SCALES OF 0.2 TO 40 DEGREES  
 06/16/1997 - 01/31/2001 FY01: \$0 Total: \$450,000  
*Prin. Invest.:* D L RICHARD  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4521 UNIV OF CALIFORNIA - BERKELEY 2092**  
 CARBON AND SILICON CARBIDE CLUSTERS AND THEIR RELA DUST/  
 LABORATORY INVESTIGATION OF THE UNIDENTIFIE  
 05/08/1997 - 04/30/2000 FY01: \$0 Total: \$460,000  
*Prin. Invest.:* D J SAYKALLY  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4884 UNIV OF CALIFORNIA - BERKELEY 2093**  
 PAH EMISSION BANDS IN SELECTED PNE  
 07/28/1997 - 07/31/2000 FY01: -\$1 Total: \$74,999  
*Prin. Invest.:* M COHEN  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4898 UNIV OF CALIFORNIA - BERKELEY 2094**  
 KINETIC ANALYSIS OF LANGMUIR WAVE PACKETS IN THE E  
 06/20/1997 - 06/30/2000 FY01: -\$10 Total: \$125,990  
*Prin. Invest.:* D E ERGUN  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 13 - PHYSICS

**NAG 5 4979 UNIV OF CALIFORNIA - BERKELEY 2095**  
 MARS/TITAN/MOON SOLAR WIND INTERACTIONS  
 07/09/1997 - 07/14/2000 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* D G LUHMANN  
*Tech. Officer:* GSFC/S HOWARD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4992 UNIV OF CALIFORNIA - BERKELEY 2096**  
 HISTORICAL STUDIES ON EXTRATERRESTRIAL MATERIALS  
 06/27/1997 - 12/31/2001 FY01: \$160,000 Total: \$832,000  
*Prin. Invest.:* D NISHIZUMI  
*Tech. Officer:* GSFC/J F BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 5102 UNIV OF CALIFORNIA - BERKELEY 2097**  
 ASTROPHYSICAL GAMMA-RAY SPECTROSCOPY WITH THE HIGH RESOLU-  
 TION GAMMA-RAY (HIREGS)  
 02/11/1997 - 10/31/2000 FY01: \$0 Total: \$1,492,600  
*Prin. Invest.:* R W LIN  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 5146 UNIV OF CALIFORNIA - BERKELEY 2098**  
 DEVELOPMENT OF GAS MICROSTRUCTURE DETECTORS (GMSD) FOR  
 GAMMA-RAY TELESCOPES  
 07/02/1997 - 07/02/2001 FY01: \$0 Total: \$248,130  
*Prin. Invest.:* C HAILEY  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5197 UNIV OF CALIFORNIA - BERKELEY 2099**  
 PEACASE PROGRAM FUNDING FOR THE FIRST YEAR OF RESEARCH;  
 SELECTED  
 05/21/1998 - 05/31/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* M V HURWITZ  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5213 UNIV OF CALIFORNIA - BERKELEY 2100**  
 FUNDING FOR PHASE A OF THE CHIPS PROJECT P. I. - DR. M HURWITZ  
 10/08/1998 - 10/31/2003 FY01: \$5,041,228 Total: \$8,777,808  
*Prin. Invest.:* M HURWITZ  
*Tech. Officer:* GSFC/D PIERCE  
*CASE Category:* 13 - PHYSICS

**NAG 5 5231 UNIV OF CALIFORNIA - BERKELEY 2101**  
 TECHNOLOGY DEVELOPMENT FOR THE EXTREMELY-HEAVY GALACTIC  
 COSMIC-RAY COMPOSITION OBSERVER (ECCO)  
 05/17/1999 - 11/30/2003 FY01: \$100,000 Total: \$719,900  
*Prin. Invest.:* A J WESTPHAL  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5285 UNIV OF CALIFORNIA - BERKELEY 2102**  
 DEVELOPMENT OF GERMANIUM DETECTORS WITH LESS THAN 3D SPATIAL  
 RESOLUTION FOR NUCLEAR GAMMA-RAY ASTRO  
 06/12/2000 - 06/07/2002 FY01: \$195,000 Total: \$373,500  
*Prin. Invest.:* R P LIN  
*Tech. Officer:* WFF/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5312 UNIV OF CALIFORNIA - BERKELEY 2103**  
 SOUNDING ROCKET EXPERIMENT TO EXPLORE ELECTRODYNAMICS  
 COUPLING PULSATIONS IN THE CUSP  
 02/06/2001 - 02/05/2003 FY01: \$42,000 Total: \$42,000  
*Prin. Invest.:* G T DELORY  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6103 UNIV OF CALIFORNIA - BERKELEY 2104**  
 NEW DIRECTIONS IN COMETARY SPECTROSCOPY  
 07/24/1997 - 07/31/2001 FY01: \$0 Total: \$83,000  
*Prin. Invest.:* D SPINRAD  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6551 UNIV OF CALIFORNIA - BERKELEY 2105**  
 ORIGIN AND EVOLUTION OF WHITE DWARF STARS: THE EARLY YEARS  
 (L TSA)  
 11/21/1997 - 11/30/2001 FY01: \$106,000 Total: \$389,900  
*Prin. Invest.:* S VENNES  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6552 UNIV OF CALIFORNIA - BERKELEY 2106**  
 FOREGROUND ANALYSIS & REMOVAL FOR FUTURE CMB EXPERIMENTS  
 (L TSA)  
 11/21/1997 - 11/30/2001 FY01: \$109,700 Total: \$426,800  
*Prin. Invest.:* G F SMOOT  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6593 UNIV OF CALIFORNIA - BERKELEY 2107**  
 LAND-USE AND LAND-COVER CHANGE IN SONORA, MEXICO  
 11/18/1997 - 11/14/2000 FY01: \$0 Total: \$215,069  
*Prin. Invest.:* T L BENNING  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 6748 UNIV OF CALIFORNIA - BERKELEY 2108**  
 DETERMINATION OF THE PROPERTIES OF HE IN THE LOCAL  
 INTERSTELLAR MEDIUM FROM THE EUVE ALL-SKY SURVEY  
 01/12/1998 - 12/31/2000 FY01: \$0 Total: \$65,555  
*Prin. Invest.:* B FLYNN  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6890 UNIV OF CALIFORNIA - BERKELEY 2109**  
 VLA MONITORING OF JUPITER IN 3-D AT  $\lambda = 6-90$ CM: 1981 - 1996  
 01/21/1998 - 12/31/2001 FY01: \$0 Total: \$190,439  
*Prin. Invest.:* I DE PATER  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6928 UNIV OF CALIFORNIA - BERKELEY 2110**  
 ANALYSIS OF DATA FROM THE 3-D PLASMA AND ENERGETIC PARTICLE  
 EXPERIMENT ON THE GGS WIND SPACECRAFT  
 02/04/1998 - 01/31/2002 FY01: \$0 Total: \$2,408,000  
*Prin. Invest.:* R P LIN  
*Tech. Officer:* GSFC/K OBILVIE  
*CASE Category:* 13 - PHYSICS

**NAG 5 7173 UNIV OF CALIFORNIA - BERKELEY 2111**  
 AN ISOTOPIC APPROACH FOR DETERMINING THE INDUSTRIAL FRACTION  
 OF THE TOTAL CH<sub>3</sub>BR SOURCE TO THE A  
 03/24/1998 - 02/28/2002 FY01: \$0 Total: \$210,000  
*Prin. Invest.:* A GOLDSTEIN  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7265 UNIV OF CALIFORNIA - BERKELEY 2112**  
 GALACTIC BLACK HOLES AND POSITRON ANNIHILATION RADIATION  
 04/29/1998 - 11/30/2000 FY01: \$0 Total: \$102,000  
*Prin. Invest.:* D M SMITH  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7311 UNIV OF CALIFORNIA - BERKELEY 2113**  
 A STUDY OF CIRCUMSTELLAR GAS IN BETA PICTURE LIKE PROTOPLANETARY  
 DISKS  
 04/22/1998 - 04/30/2001 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* B Y WELSH  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 7343 UNIV OF CALIFORNIA - BERKELEY 2114**  
 IDENTIFYING SGR1900+14, THE THIRD SOFT GAMMA REPEATER, WITH  
 ASCA  
 05/07/1998 - 05/14/2000 FY01: -\$3 Total: \$20,397  
*Prin. Invest.:* K C HURLEY  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7356 UNIV OF CALIFORNIA - BERKELEY 2115**  
 EXTENSION OF "SCIENCE INFORMATION INFRASTRUCTURE" GRANT  
 NAG5-2875. CONTINUED DEVELOPMENT AND DI  
 05/21/1998 - 01/31/2001 FY01: \$0 Total: \$450,000  
*Prin. Invest.:* I HAWKINS  
*Tech. Officer:* GSFC/A F HASLER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7457 UNIV OF CALIFORNIA - BERKELEY 2116**  
 CARBON IN THE UNIVERSE: PAHS AND CLUSTERS  
 09/18/1998 - 06/30/2001 FY01: \$0 Total: \$335,940  
*Prin. Invest.:* R SAYKALLY  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7580 UNIV OF CALIFORNIA - BERKELEY 2117**  
 "SEISMIC HAZARD ASSESSMENT OF THE HAYWARD FAULT, CA, FROM  
 GPS AND INSAR MEASUREMENT" (SE  
 08/04/1998 - 07/31/2002 FY01: \$37,000 Total: \$224,000  
*Prin. Invest.:* R BURGMANN, NONE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7615 UNIV OF CALIFORNIA - BERKELEY 2118**  
 ADVANCE THE STATE OF THE ART IN MICROCHANNEL PLATE  
 TECHNOLOGY TO SIGNIFICANTLY IMPROVE DETECTION  
 08/24/1998 - 08/31/2002 FY01: \$0 Total: \$265,206  
*Prin. Invest.:* D SIEGMUND  
*Tech. Officer:* GSFC/F S HERRERO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7755 UNIV OF CALIFORNIA - BERKELEY 2119**  
 DIRECT IMMERSION PROCESS FOR MCP PERFORMANCE IMPROVEMENTS  
 12/08/1998 - 12/31/2001 FY01: \$100,000 Total: \$293,258  
*Prin. Invest.:* D EDELSTEIN  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7833 UNIV OF CALIFORNIA - BERKELEY 2120**  
 STUDIES OF DUST EMISSION AS MEASURED BY DIRBE AND IRAS ADP 98  
 12/14/1998 - 12/14/2001 FY01: \$87,776 Total: \$234,369  
*Prin. Invest.:* M DAVIS  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7929 UNIV OF CALIFORNIA - BERKELEY 2121**  
 INFLUENCE OF NONEQUILIBRIUM IONIZATION ON TEMPERATURE AND  
 EMISSION MEASUREMENT DIAGNOSTICS  
 12/14/1998 - 12/14/2001 FY01: \$0 Total: \$116,700  
*Prin. Invest.:* D T WOODS  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7936 UNIV OF CALIFORNIA - BERKELEY 2122**  
 PROBING THE MORPHOLOGY, DYNAMICS AND INTERFACES OF THE  
 INTERSTELLAR MEDIUM (LTS 98)  
 12/23/1998 - 12/31/2001 FY01: \$81,000 Total: \$230,000  
*Prin. Invest.:* M COHEN  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7951 UNIV OF CALIFORNIA - BERKELEY 2123**  
 CMES AND SOLAR MAGNETIC FIELD EVOLUTION: A SOHO GI PROPOSAL  
 12/21/1998 - 12/31/2001 FY01: \$82,400 Total: \$248,800  
*Prin. Invest.:* J G LUHMANN  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7961 UNIV OF CALIFORNIA - BERKELEY 2124**  
 A MULTI-INSTRUMENT INVESTIGATION OF WAVE AND PARTICLE  
 PROCESSES IN THE SOLAR WIND AND AT THE BOW SHOCK  
 12/23/1998 - 12/14/2000 FY01: -\$86 Total: \$62,514  
*Prin. Invest.:* S D BALE  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8078 UNIV OF CALIFORNIA - BERKELEY 2125**  
 016 LYSIS OF DATA FROM ELECTRIC FIELD EXPERIMENT ON POLARIS  
 01/22/1999 - 02/28/2002 FY01: \$382,000 Total: \$1,422,500  
*Prin. Invest.:* F MOZER  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8098 UNIV OF CALIFORNIA - BERKELEY 2126**  
 THE MAGNETIC FIELDS OF T TAURI STARS  
 02/04/1999 - 02/14/2002 FY01: \$40,000 Total: \$115,000  
*Prin. Invest.:* C M JOHNS-KRULL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8206 UNIV OF CALIFORNIA - BERKELEY 2127**  
 RXTE SEARCH FOR LONG-LIVED AFTERGLOWS FROM GAMMA RAY  
 BURSTS  
 02/11/1999 - 02/14/2000 FY01: -\$4 Total: \$4,121  
*Prin. Invest.:* K C HURLEY  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8209 UNIV OF CALIFORNIA - BERKELEY 2128**  
 ACCRETION ONTO T TAURI STARS (ADP98)  
 02/25/1999 - 02/28/2001 FY01: -\$3 Total: \$123,697  
*Prin. Invest.:* C M JOHNS-KRULL  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8262 UNIV OF CALIFORNIA - BERKELEY 2129**  
 THE PRIMORDIAL UNIVERSE  
 02/18/1999 - 08/31/2000 FY01: -\$1,638 Total: \$23,058  
*Prin. Invest.:* J SILK  
*Tech. Officer:* GSFC/H SMITH  
*CASE Category:* 11 - ASTRONOMY

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8410 UNIV OF CALIFORNIA - BERKELEY 2130**  
 ANNUAL MEETING OF THE NATIONAL CONFERENCE OF BLACK PHYSICS STUDENTS  
 03/15/1999 - 02/29/2000 FY01: -\$1 Total: \$82,999  
*Prin. Invest.:* G BASRI  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 8468 UNIV OF CALIFORNIA - BERKELEY 2131**  
 THE PHYSICS OF ACTIVE REGIONS  
 05/04/1999 - 04/30/2002 FY01: \$119,300 Total: \$293,850  
*Prin. Invest.:* G H FISHER  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8489 UNIV OF CALIFORNIA - BERKELEY 2132**  
 IMPLEMENTATION OF ALGORITHMS FOR HIGH SPEED AUTONOMOUS CCD DATA REDUCTION  
 05/03/1999 - 09/30/2000 FY01: -\$10,534 Total: \$20,866  
*Prin. Invest.:* D L BUZASI  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 5 8510 UNIV OF CALIFORNIA - BERKELEY 2133**  
 EVALUATING MODEL PREDICTIONS OF CO<sub>2</sub> & WATER VAPOR EXCHANGE WITH FLUX MEASUREMENTS IN A PONDEROSA  
 06/02/1999 - 06/30/2001 FY01: \$0 Total: \$84,090  
*Prin. Invest.:* D BALDOCCHI  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8667 UNIV OF CALIFORNIA - BERKELEY 2134**  
 AN ADVANCED PHOTON COUNTING UV IMAGING DETECTOR  
 07/08/1999 - 07/14/2002 FY01: \$0 Total: \$299,600  
*Prin. Invest.:* O H SIEGMUND  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8737 UNIV OF CALIFORNIA - BERKELEY 2135**  
 THE ROLE OF MULTI-SCALE LAND SURFACE HETEROGENEITY IN PRECIPITATION RECYCLING AND LAND ATMOSPHERE  
 08/17/1999 - 08/14/2002 FY01: \$40,000 Total: \$120,000  
*Prin. Invest.:* X LIANG  
*Tech. Officer:* GSFC/P T HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8753 UNIV OF CALIFORNIA - BERKELEY 2136**  
 FLUXNET: UNIFYING A GLOBAL ARRAY OF TOWER FLUX NETWORKS FOR VALIDATING EOS TERRESTRIAL CARBON, WATER  
 08/12/1999 - 12/31/2001 FY01: \$238,599 Total: \$552,574  
*Prin. Invest.:* D BALDOCCHI  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8861 UNIV OF CALIFORNIA - BERKELEY 2137**  
 DETECTING EXTRASOLAR PLANETS  
 10/07/1999 - 06/30/2002 FY01: \$126,000 Total: \$466,247  
*Prin. Invest.:* D W MARCY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8962 UNIV OF CALIFORNIA - BERKELEY 2138**  
 FUSE SPECTROSCOPY OF HOT POST-AGB STARS IN GLOBULAR CLUSTERS - FUSE  
 01/24/2000 - 03/31/2001 FY01: -\$31,540 Total: \$60  
*Prin. Invest.:* W V DIXON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8984 UNIV OF CALIFORNIA - BERKELEY 2139**  
 CORONAL HEATING DURING STELLAR FLARES & THE SEARCH FOR PROTON BEAMS - FUSE  
 02/03/2000 - 01/31/2002 FY01: \$0 Total: \$63,300  
*Prin. Invest.:* G H FISHER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9091 UNIV OF CALIFORNIA - BERKELEY 2140**  
 RESEARCH IN FUV INTERFEROMETRIC SPECTROSCOPY III  
 02/17/2000 - 02/14/2002 FY01: \$200,000 Total: \$294,200  
*Prin. Invest.:* J EDELSTEIN  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9115 UNIV OF CALIFORNIA - BERKELEY 2141**  
 PHASE-A AND BRIDGE PHASE STUDY OF STEREO/WAVES ACCOMMODATION  
 03/02/2000 - 12/31/2001 FY01: \$110,925 Total: \$191,725  
*Prin. Invest.:* S BALE  
*Tech. Officer:* GSFC/M L KAISER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9126 UNIV OF CALIFORNIA - BERKELEY 2142**  
 ANALYSIS OF ASCA, BEPOSAX, AND RXTE DATA ON GAMMA-RAY BURSTS AND SOFT GAMMA REPEATERS - ADP 99  
 03/14/2000 - 03/14/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* K H HURLEY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9130 UNIV OF CALIFORNIA - BERKELEY 2143**  
 CORONAL STRUCTURE IN THE RS CVN BINARY AR LACERTAE ADP99  
 02/28/2000 - 02/28/2002 FY01: \$0 Total: \$35,000  
*Prin. Invest.:* O H SIEGMUND  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9149 UNIV OF CALIFORNIA - BERKELEY 2144**  
 ADVANCED MCP UV VISIBLE DETECTOR SYSTEMS  
 03/03/2000 - 03/14/2002 FY01: \$200,000 Total: \$250,000  
*Prin. Invest.:* O SIEGMUND  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9210 UNIV OF CALIFORNIA - BERKELEY 2145**  
 SWIFT PHASE B AND C/D  
 03/10/2000 - 09/30/2001 FY01: \$75,000 Total: \$135,000  
*Prin. Invest.:* K H HURLEY  
*Tech. Officer:* GSFC/N GEHRELS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9231 UNIV OF CALIFORNIA - BERKELEY 2146**  
 DEVELOPMENT OF A LONG-TERM INVENTORY OF FIRE BURNE D AREAS &  
 EMISSIONS OF NORTH AMERICA'S BOREAL AN  
 03/22/2000 - 04/30/2002 FY01: \$43,344 Total: \$113,749  
*Prin. Invest.:* P GONG  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9260 UNIV OF CALIFORNIA - BERKELEY 2147**  
 AN EXPERIMENTAL INVESTIGATION OF THE REACTION CHEM ISTRY OF  
 ORGANIC MOLECULES IN COMETARY IMPACT  
 03/17/2000 - 03/14/2001 FY01: \$0 Total: \$84,780  
*Prin. Invest.:* J BLANK*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 9305 UNIV OF CALIFORNIA - BERKELEY 2148**  
 DATA CALIBRATION AND SCIENTIFIC DEFINITION OF THE NEAR, LUNAR  
 PROSPECTORAND MGS MAGNETOMETERS  
 03/20/2000 - 02/28/2002 FY01: \$0 Total: \$65,641  
*Prin. Invest.:* R LIN  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 9317 UNIV OF CALIFORNIA - BERKELEY 2149**  
 ENHANCEMENT OF THE GLOBAL SYSTEMS SCIENCE STUDENT GUIDE  
 SERIES FOR THE DIGITAL EARTH INITIATIVE  
 03/22/2000 - 03/31/2002 FY01: \$119,958 Total: \$219,956  
*Prin. Invest.:* A GOULD  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9318 UNIV OF CALIFORNIA - BERKELEY 2150**  
 ASTROSEISMOLOGY WITH THE WIRE SATELLITE: TAKING AD VANTAGE OF  
 A UNIQUE OPPORTUNITY  
 03/22/2000 - 09/30/2000 FY01: -\$30,329 Total: \$14,671  
*Prin. Invest.:* D BUZASI  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9384 UNIV OF CALIFORNIA - BERKELEY 2151**  
 MOLECULAR CARBON IN THE GALAXY  
 04/04/2000 - 03/31/2002 FY01: \$160,000 Total: \$310,720  
*Prin. Invest.:* R J SAYKALLY  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 13 - PHYSICS

**NAG 5 9398 UNIV OF CALIFORNIA - BERKELEY 2152**  
 BALLOON BORNE OBSERVATIONS OF THE POLARIZATION ANI SOTROPY  
 OF THE COSMIC MICROWAVE BACKGROUND RADIAT  
 04/06/2000 - 03/31/2002 FY01: \$164,478 Total: \$336,178  
*Prin. Invest.:* P L RICHARDS  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9503 UNIV OF CALIFORNIA - BERKELEY 2153**  
 ADDING NEAR TO THE 3RD INTERPLANETARY NETWORK OF GAMMA-RAY  
 BURST DETECTORS  
 04/24/2000 - 04/30/2001 FY01: \$0 Total: \$65,000  
*Prin. Invest.:* K C HURLEY  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9514 UNIV OF CALIFORNIA - BERKELEY 2154**  
 BIOSPHERE-ATMOSPHERE INTERACTIONS  
 04/25/2000 - 04/30/2002 FY01: \$310,000 Total: \$516,667  
*Prin. Invest.:* I FUNG  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9523 UNIV OF CALIFORNIA - BERKELEY 2155**  
 QTHE FEASABILITY OF DETECTING ELECTRIC FIELDS ON THE MARS 03  
 PROMISE ELEEELECTRICAL SUBPACKAGE  
 07/31/2000 - 07/31/2001 FY01: \$0 Total: \$27,000  
*Prin. Invest.:* G T DELORY*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/W M FARRELL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9626 UNIV OF CALIFORNIA - BERKELEY 2156**  
 NEW SOLAR MAX GRANT STUDIES OF GEOTAIL ELECTRIC FIELDS &  
 PLASMA FIELDS  
 05/22/2000 - 09/30/2001 FY01: \$50,000 Total: \$95,034  
*Prin. Invest.:* F MOZER  
*Tech. Officer:* GSFC/D FAIRFIELD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9629 UNIV OF CALIFORNIA - BERKELEY 2157**  
 CASSANDRA: A STORM BASED MODEL FOR FORECASTING THE INITIATION  
 & RUNOUT OF DEBRIS FLOWS  
 05/30/2000 - 05/31/2001 FY01: \$25,000 Total: \$100,000  
*Prin. Invest.:* W E DIETRICH  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9650 UNIV OF CALIFORNIA - BERKELEY 2158**  
 NEW ISTP SOLAR MAX GRANT: DUAL SPACECRAFT OBSERVA TIONS OF  
 DAYSIDE RECONNECTION  
 05/30/2000 - 05/31/2002 FY01: \$0 Total: \$70,000  
*Prin. Invest.:* C CARLSON  
*Tech. Officer:* GSFC/M ACUNA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9701 UNIV OF CALIFORNIA - BERKELEY 2159**  
 MAINTAINING AND EXPANDING THE 3RD INTERPLANETARY NETWORK  
 06/15/2000 - 06/14/2001 FY01: \$0 Total: \$5,000  
*Prin. Invest.:* K C HURLEY  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9864 UNIV OF CALIFORNIA - BERKELEY 2160**  
 GEOLOGICAL ANALYSIS OF MARTIAN CRUSTAL MAGNETIC AMOMALIES  
 08/25/2000 - 08/14/2002 FY01: \$12,853 Total: \$21,653  
*Prin. Invest.:* M RICHARDS  
*Tech. Officer:* GSFC/P TAYLOR  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9909 UNIV OF CALIFORNIA - BERKELEY 2161**  
 SOLIDS IN EARLY SOLAR SYSTEM  
 08/31/2000 - 08/31/2001 FY01: \$0 Total: \$45,000  
*Prin. Invest.:* F H SHU  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9926 UNIV OF CALIFORNIA - BERKELEY 2162**  
 DATA SYSTEM PREPARATIONS FOR LONG-BASELINE INFRA RED  
 09/14/2000 - 08/31/2001 FY01: \$0 Total: \$25,000  
*Prin. Invest.:* C TOWNES  
*Tech. Officer:* GSFC/B DANCHI  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9973 UNIV OF CALIFORNIA - BERKELEY 2163**  
 DISTRIBUTION OF ARGON IN THE DAYSIDE LUNAR ATMOSPHERE - FUSE  
 09/14/2000 - 09/14/2001 FY01: \$0 Total: \$20,700  
*Prin. Invest.:* B C FLYNN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9975 UNIV OF CALIFORNIA - BERKELEY 2164**  
 CLUSTER ELECTRIC FIELD DATA ANALYSIS  
 09/14/2000 - 03/31/2002 FY01: \$483,773 Total: \$783,773  
*Prin. Invest.:* F MOZER  
*Tech. Officer:* GSFC/M GOLDSTEIN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10131 UNIV OF CALIFORNIA - BERKELEY 2165**  
 CLUSTER ION COMPOSITION (CIS) EXPERIMENT  
 12/27/2000 - 12/31/2001 FY01: \$850,000 Total: \$850,000  
*Prin. Invest.:* G K PARKS  
*Tech. Officer:* GSFC/M GOLDSTEIN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10300 UNIV OF CALIFORNIA - BERKELEY 2166**  
 ELECTRON DYNAMICS IN SHOCK RAMPS  
 01/30/2001 - 01/14/2002 FY01: \$73,800 Total: \$73,800  
*Prin. Invest.:* L MUSCHIETTI  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10314 UNIV OF CALIFORNIA - BERKELEY 2167**  
 THE SCIENCE EDUCATION GATEWAY II  
 02/01/2001 - 01/31/2002 FY01: \$150,000 Total: \$150,000  
*Prin. Invest.:* I HAWKINS  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10393 UNIV OF CALIFORNIA - BERKELEY 2168**  
 A SEARCH FOR TRACE ELEMENTS IN ULTRAMASSIVE WHITE DWARF  
 PHOTOSPHERES(FUSE 00)  
 02/12/2001 - 02/14/2002 FY01: \$39,800 Total: \$39,800  
*Prin. Invest.:* J DUPIUS  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10411 UNIV OF CALIFORNIA - BERKELEY 2169**  
 DEVELOPMENT OF CALORIMETRIC AEROGEL FOR CAPTURE OF  
 INTERPLANETARY & INTERSTELLAR GRAINS IN LOW EARTH  
 04/10/2001 - 04/15/2002 FY01: \$52,500 Total: \$52,500  
*Prin. Invest.:* A WESTPHAL  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10428 UNIV OF CALIFORNIA - BERKELEY 2170**  
 3-D PLASMA AND ENERGETIC PARTICLES INVESTIGATION ON THE WIND  
 SPACECRAFT  
 02/23/2001 - 02/28/2002 FY01: \$788,000 Total: \$788,000  
*Prin. Invest.:* R P LIN  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10433 UNIV OF CALIFORNIA - BERKELEY 2171**  
 CHONDRITIC METEORITES AND PLANETESMIALS  
 02/16/2001 - 01/31/2002 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* F SHU  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10466 UNIV OF CALIFORNIA - BERKELEY 2172**  
 UVI DATA ANALYSIS  
 03/08/2001 - 03/14/2002 FY01: \$448,000 Total: \$448,000  
*Prin. Invest.:* G PARKS  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10471 UNIV OF CALIFORNIA - BERKELEY 2173**  
 DUAL-SPACECRAFT INVESTIGATION OF SUBSTANTIAL SOLAR WIND  
 PLASMA ENTRY ACROSS THE TAIL FLANK MAGNETOPA  
 02/27/2001 - 02/28/2002 FY01: \$76,500 Total: \$76,500  
*Prin. Invest.:* T PHAN  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10657 UNIV OF CALIFORNIA - BERKELEY 2174**  
 THE STRUCTURE AND DYNAMICS OF GIANT HERBIG-HARO FLOWS  
 03/20/2001 - 03/31/2002 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* W WELCH  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10664 UNIV OF CALIFORNIA - BERKELEY 2175**  
 NUMERICAL SIMULATION OF 3D COMPACT EDDIES IN A PRO TOPLANE-  
 TARY ACCRETION DISK; THEIR ROBUSTNESS AND  
 03/21/2001 - 02/28/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* P MARCUS  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10673 UNIV OF CALIFORNIA - BERKELEY 2176**  
 ESTIMATING SOIL MOISTURE CHANGES USING RADARSAT & ITS APPLICA-  
 TION IN HYDROLOGICAL MODELING  
 03/27/2001 - 03/14/2002 FY01: \$57,988 Total: \$57,988  
*Prin. Invest.:* X LIANG  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10710 UNIV OF CALIFORNIA - BERKELEY 2177**  
 BEPPOSAX GRBS (ADP 2000)  
 04/23/2001 - 04/30/2002 FY01: \$33,880 Total: \$33,880  
*Prin. Invest.:* K C HURLEY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10713 UNIV OF CALIFORNIA - BERKELEY 2178**  
 ADVANCED ADIABATIC DEMAGNETIZATION REFRIGERATORS FOR CONTINUOUS COOLING FROM 10K TO 50MK  
 04/20/2001 - 04/30/2002 FY01: \$57,190 Total: \$57,190  
*Prin. Invest.:* P L RICHARDS  
*Tech. Officer:* GSFC/P J SHIRRON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10715 UNIV OF CALIFORNIA - BERKELEY 2179**  
 MATADOR IDPU & DCE TESTS  
 04/12/2001 - 03/14/2002 FY01: \$124,000 Total: \$124,000  
*Prin. Invest.:* D T DELORY  
*Tech. Officer:* GSFC/W M FARREL  
*CASE Category:* 13 - PHYSICS

**NAG 5 10800 UNIV OF CALIFORNIA - BERKELEY 2180**  
 CONCEPT STUDY FOR THE "STUDY OF GALACTIC PLASMA EVOLUTION WITH SPEAR" (SPEAR) MISSION AO-99-OSS-0  
 04/30/2001 - 04/30/2002 FY01: \$251,179 Total: \$251,179  
*Prin. Invest.:* D EDELSTEIN, NONE  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10803 UNIV OF CALIFORNIA - BERKELEY 2181**  
 CONCEPT STUDY FOR THE "THE HEAVY NUCLEI EXPLORER" (HNX) MISSION AO-99-OSS-05  
 04/30/2001 - 04/30/2002 FY01: \$57,700 Total: \$57,700  
*Prin. Invest.:* D WESTPHAL  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10839 UNIV OF CALIFORNIA - BERKELEY 2182**  
 3-D MHD TURBULENT DYNAMOS (ATP 2000)  
 05/10/2001 - 06/30/2002 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* G H FISHER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10851 UNIV OF CALIFORNIA - BERKELEY 2183**  
 CONTINUING THE CHALLENGE OF EUV ASTRONOMY: CURRENT ANALYSIS AND PROSPECTS FOR THE FUTURE  
 04/30/2001 - 04/30/2002 FY01: \$30,003 Total: \$30,003  
*Prin. Invest.:* J DUPUIS  
*Tech. Officer:* GSFC/D GOLOMBEK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10866 UNIV OF CALIFORNIA - BERKELEY 2184**  
 ENRICHMENTS OF 3HE IN PLANETARY NEBULAE  
 05/08/2001 - 05/14/2002 FY01: \$24,000 Total: \$24,000  
*Prin. Invest.:* I ROTH  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10925 UNIV OF CALIFORNIA - BERKELEY 2185**  
 CORONAL MODELS AND APPLICATIONS FOR LWS  
 05/11/2001 - 05/14/2002 FY01: \$80,534 Total: \$80,534  
*Prin. Invest.:* J G LUHMANN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11055 UNIV OF CALIFORNIA - BERKELEY 2186**  
 EFFECT OF IMF BY COMPONENT ON THERMOSPHERIC COMPOSITION  
 06/18/2001 - 06/30/2002 FY01: \$100,399 Total: \$100,399  
*Prin. Invest.:* T IMMEL  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11179 UNIV OF CALIFORNIA - BERKELEY 2187**  
 ORIGINS OF RECENT EROSIONAL FEATURES ON MARS: QUANTITATIVE ANALYSIS OF MOC AND MOLA DATA, PHYSICAL  
 08/14/2001 - 08/14/2004 FY01: \$55,000 Total: \$55,000  
*Prin. Invest.:* W DIETRICH  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11200 UNIV OF CALIFORNIA - BERKELEY 2188**  
 INFERENCES OF REGIONAL CARBON EXCHANGE PROCESSES & THEIR VARIABILITY SINCE 1980  
 08/10/2001 - 08/14/2004 FY01: \$287,077 Total: \$287,077  
*Prin. Invest.:* I FUNG  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 6 10 UNIV OF CALIFORNIA - BERKELEY 2189**  
 SOUNDING ROCKET RESEARCH PROGRAM  
 11/01/1980 - 12/31/2001 FY01: \$0 Total: \$3,619,476  
*Prin. Invest.:* C W CARLSON, F S MOZER, K A ANDERSON  
*Tech. Officer:* GSFC/W B JOHNSON, GSFC/R H PLESS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1432 UNIV OF CALIFORNIA - BERKELEY 2190**  
 R/S SUPERFLUID GYROSCOPES FOR SPACE  
 03/02/1998 - 01/31/2003 FY01: \$118,750 Total: \$405,750  
*Prin. Invest.:* R E PACKARD  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 8 1458 UNIV OF CALIFORNIA - BERKELEY 2191**  
 R/S EXPLOITING THE TEMPERATURE DEPENDENCE OF MAGNETIC SUSCEPTIBILITY TO CONTROL CONVECTION  
 02/15/1998 - 01/31/2002 FY01: \$44,000 Total: \$281,000  
*Prin. Invest.:* J W EVANS, F SZOFRAN  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1051 UNIV OF CALIFORNIA - BERKELEY 2192**  
 GENESIS DISCOVERY MISSION  
 08/19/1998 - 05/31/2002 FY01: \$17,000 Total: \$85,600  
*Prin. Invest.:* K NISHIZUMI  
*Tech. Officer:* JSC/K E CYR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 1 99053 UNIV OF CALIFORNIA - BERKELEY 2193**  
 NEXT GENERATION TECHNOLOGIES FOR THE IN SITU DETECTION OF NOX RADICALS AND RESERVOIRS FROM AIRCRAFT  
 02/10/1999 - 02/09/2002 FY01: \$198,436 Total: \$762,187  
*Prin. Invest.:* R COHEN  
*Tech. Officer:* LARC/J HILL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 00133 UNIV OF CALIFORNIA - BERKELEY 2194**  
 STEREO PHASE A CONCEPT STUDY FOR INSITU MEASUREMENTS OF  
 PARTICLES & CME TRANSIENTS(IMPACT)  
 02/22/2000 - 07/30/2006 FY01: \$656,000 Total: \$1,705,985  
*Prin. Invest.:* J LUHMAN, E STONE  
*Tech. Officer:* GSFC/A HARPER  
*CASE Category:* 13 - PHYSICS

**NAS 5 30801 UNIV OF CALIFORNIA - BERKELEY 2195**  
 ISTP PROJECT'S ELECTRIC FIELDS & WAVES  
 07/02/1990 - 12/31/2000 FY01: \$0 Total: \$6,450,700  
*Prin. Invest.:* F MOZER  
*Tech. Officer:* GSFC/L CHRISTENSEN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 96092 UNIV OF CALIFORNIA - BERKELEY 2196**  
 EOS-BIOSPHERE ATMOSPHERIC INTERACTIONS STUDY  
 10/11/1996 - 06/30/2000 FY01: \$0 Total: \$325,000  
*Prin. Invest.:* P MATSON  
*Tech. Officer:* GSFC/P SELLERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 98033 UNIV OF CALIFORNIA - BERKELEY 2197**  
 PHASE A CONCEPT STUDY FOR HESSI INVESTIGATION  
 11/19/1997 - 10/19/2003 FY01: \$6,037,214 Total: \$42,946,214  
*Prin. Invest.:* R P LIN  
*Tech. Officer:* GSFC/F SNOW  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 99242 UNIV OF CALIFORNIA - BERKELEY 2198**  
 FAST FLIGHT OPERATIONS  
 10/01/1999 - 09/30/2001 FY01: \$194,992 Total: \$489,892  
*Prin. Invest.:* C W CARLSON  
*Tech. Officer:* GSFC/R PFAFF  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 142 UNIV OF CALIFORNIA - BERKELEY 2199**  
 DETECTION IDENTIFICATION AND PRECISE LOCATION OF INFRARED  
 OBJECTS  
 07/01/1981 - 05/31/2001 FY01: \$0 Total: \$1,439,572  
*Prin. Invest.:* C E HEILES, M COHEN  
*Tech. Officer:* ARC/D GOORVITCH  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 909 UNIV OF CALIFORNIA - BERKELEY 2200**  
 HUMAN PERFORMANCE IN COORDINATED HAPTIC-VISUAL VIRTUAL ENVI-  
 RONMENTS  
 06/26/1995 - 02/29/2000 FY01: \$0 Total: \$984,336  
*Prin. Invest.:* H KAZERAONI  
*Tech. Officer:* ARC/S R ELLIS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 1080 UNIV OF CALIFORNIA - BERKELEY 2201**  
 THE CENTER FOR STAR FORMATION STUDIES  
 01/25/1999 - 02/14/2001 FY01: \$10,767 Total: \$387,972  
*Prin. Invest.:* F H SHU  
*Tech. Officer:* ARC/D J HOLLENBACH, ARC/P CASSEN  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1125 UNIV OF CALIFORNIA - BERKELEY 2202**  
 THE EXTRACTION OF POINT SOURCES FROM THE NIRS SPEC TROMETER  
 ABOARD THE INFRARED TELESCOPE IN SPACE  
 06/14/1999 - 05/31/2002 FY01: \$0 Total: \$28,000  
*Prin. Invest.:* M COHEN  
*Tech. Officer:* ARC/D GOORVITCH  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1171 UNIV OF CALIFORNIA - BERKELEY 2203**  
 3DOF HAPTIC SIMULATION AND PSYCHOPHYSICAL EXPERIMENTS  
 04/11/2000 - 11/30/2001 FY01: \$0 Total: \$120,000  
*Prin. Invest.:* H KAZEROONI  
*Tech. Officer:* ARC/S R ELLIS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 1255 UNIV OF CALIFORNIA - BERKELEY 2204**  
 2-DOF HAPTIC SIMULATION & PSYCHOPHYSICAL EXPERIMENTS  
 05/03/2001 - 03/31/2002 FY01: \$70,000 Total: \$70,000  
*Prin. Invest.:* H KAZEROONI  
*Tech. Officer:* ARC/B ADELSTEIN, ARC/S R ELLIS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 5289 UNIV OF CALIFORNIA - BERKELEY 2205**  
 THE EVOLUTION OF DUST IN THE MULTIPHASE INTERSTELLAR MEDIUM  
 08/13/1998 - 09/30/2000 FY01: \$0 Total: \$132,599  
*Prin. Invest.:* C F MCKEE  
*Tech. Officer:* ARC/D J HOLLENBACH  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5334 UNIV OF CALIFORNIA - BERKELEY 2206**  
 A STUDY OF THE STATIC & DYNAMIC AERODYNAMICS CHARACTERISTICS  
 OF BLUNT PLANETARY PROBES  
 07/19/1999 - 07/14/2001 FY01: \$0 Total: \$80,000  
*Prin. Invest.:* G T CHAPMAN, M BROWN, A RAMSEY  
*Tech. Officer:* ARC/P F WERCINSKI, ARC/T C TAM  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5388 UNIV OF CALIFORNIA - BERKELEY 2207**  
 TOW-TANK STUDIES OF HELICOPTER VORTEX WAKE  
 07/14/2000 - 06/30/2002 FY01: \$40,000 Total: \$65,000  
*Prin. Invest.:* O SAVAS  
*Tech. Officer:* ARC/F CARADONNA, ARC/C TUNG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5416 UNIV OF CALIFORNIA - BERKELEY 2208**  
 MASSIVE STAR FORMATION  
 01/26/2001 - 02/14/2002 FY01: \$58,000 Total: \$58,000  
*Prin. Invest.:* F H SHU  
*Tech. Officer:* ARC/D J HOLLENBACH, ARC/G LAUGHLIN  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5455 UNIV OF CALIFORNIA - BERKELEY 2209**  
 LONG TERM EXTREME ENVIRONMENT AND MARS ANALOG STUDIES IN  
 THE ATACAMA DESERT  
 08/09/2001 - 07/31/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* R ADMUNDSON  
*Tech. Officer:* ARC/C MCKAY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5461 UNIV OF CALIFORNIA - BERKELEY 2210**  
 TOW-TANK STUDIES OF AIRCRAFT WAKE VORTEX INSTABILITY  
 09/26/2001 - 08/31/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* O SAVAS  
*Tech. Officer:* ARC/D A DURSTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 478 UNIV OF CALIFORNIA - BERKELEY 2211**  
 FLAMMABILITY DIAGRAMS OF COMBUSTIBLE MATERIALS IN MICROGRA-  
 VIITY  
 05/29/1996 - 05/31/2000 FY01: -\$2,658 Total: \$217,442  
*Prin. Invest.:* A C FERNANDEZ-PELLO  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 803 UNIV OF CALIFORNIA - BERKELEY 2212**  
 FLAMMIBILITY DIAGRAMS OF COMBUSTIBLE MATERIALS IN MICROGRAVITY  
 05/31/2000 - 04/30/2004 FY01: \$74,000 Total: \$127,000  
*Prin. Invest.:* D FERNANDEZ-PELLO  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 833 UNIV OF CALIFORNIA - BERKELEY 2213**  
 MICROGRAVITY PRODUCTION OF NANOPARTICLES OF NOVEL MATERIALS  
 USING PLASMA SYNBTHESIS  
 12/13/2000 - 10/31/2004 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* M FRENKLACH  
*Tech. Officer:* GRC/N D PILTCH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 874 UNIV OF CALIFORNIA - BERKELEY 2214**  
 TWO DIMENSIONAL SMOLDERING & ITS TRANSITON TO FLAM ING IN  
 MICROGRAVITY  
 03/14/2001 - 11/30/2004 FY01: \$120,000 Total: \$120,000  
*Prin. Invest.:* C F PELLO  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 896 UNIV OF CALIFORNIA - BERKELEY 2215**  
 CARBON MONOXIDE AND SOOT FORMATION IN INVERSE DIFF USION  
 FLAMES  
 06/06/2001 - 04/30/2003 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* C FERNANDEZ-PELLO  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 138 UNIV OF CALIFORNIA - BERKELEY 2216**  
 EXTENDED EUVE MISSION  
 08/21/1996 - 10/01/2001 FY01: \$300,000 Total: \$8,784,582  
*Prin. Invest.:* R MALINA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 253 UNIV OF CALIFORNIA - BERKELEY 2217**  
 THE SUN-EARTH CONNECTION EDUCATION FORUM.  
 10/30/1997 - 11/14/2001 FY01: \$1,391,318 Total: \$3,844,651  
*Prin. Invest.:* I HAWKINS  
*Tech. Officer:* GSFC/J THIEMAN  
*CASE Category:* 13 - PHYSICS

**NCC 5 352 UNIV OF CALIFORNIA - BERKELEY 2218**  
 SOIL BIOGEOCHEMISTRY OF CARBON, NUTRIENTS, & TRACE GASES IN  
 THE AMAZON REGION OF BRAZIL: FIELD & MOD  
 07/28/1998 - 12/31/2001 FY01: \$21,617 Total: \$218,967  
*Prin. Invest.:* W SILVER  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 492 UNIV OF CALIFORNIA - BERKELEY 2219**  
 EO-1 & LANDSAT IMAGERY FOR MONITORING CALIFORNIA'S CONIFER  
 FOREST & HARDWOOD RANGELAND  
 04/12/2000 - 12/31/2001 FY01: \$67,129 Total: \$125,722  
*Prin. Invest.:* P GONG  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 2 52233 UNIV OF CALIFORNIA - BERKELEY 2220**  
 CHARACTERICATION OF MICROBIAL DIVERISTY IN YELLOWS TONE FUMA-  
 ROLES: THE SEARCH FOR PRIMITIVE LIFE IN.  
 08/26/1997 - 07/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* N R PACE  
*Tech. Officer:* ARC/D J DES MARAIS  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NGT 2 52258 UNIV OF CALIFORNIA - BERKELEY 2221**  
 HIGH-RESOLUTION GROUND-BASED MAPPING OF TITAN'S SU RFACE &  
 HAZE LAYER  
 08/11/1999 - 07/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* I DEPATER  
*Tech. Officer:* ARC/C P MCKAY  
*CASE Category:* 11 - ASTRONOMY

**NGT 2 52259 UNIV OF CALIFORNIA - BERKELEY 2222**  
 A SURGICAL AUGMENTED REALITY VISUALIZATION SYSTEM  
 09/07/1999 - 08/31/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* S S SASTRY  
*Tech. Officer:* ARC/J D SMITH/E M HOLTON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 2 52278 UNIV OF CALIFORNIA - BERKELEY 2223**  
 COMPUTATIONAL INVESTIGATIONS OF MASSIVE STAR FORMA TION  
 06/19/2001 - 06/14/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* C F MCKEE  
*Tech. Officer:* ARC/D J HOLLENBACH  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 83 UNIV OF CALIFORNIA - BERKELEY 2224**  
 SUPERFLUID ANALOG OF THE DC-SQUID FOR MEASURING ABSOLUTE  
 ROTATION (STUDENT - RAYMOND SIMONDS)  
 05/18/1999 - 06/30/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* J C DAVIS  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 30044 UNIV OF CALIFORNIA - BERKELEY 2225**  
 THE RELATIONSHIP BETWEEN SOIL AGE, LAND USE AND C VALLEY OF  
 CALIFORNIA  
 12/12/1996 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* D G AMUNDSON  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30071 UNIV OF CALIFORNIA - BERKELEY 2226**  
 PREDICTING WHEN VEGETATION CHANGE MATTERS TO ECOSY ONING  
 09/09/1997 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* M FIRESTONE  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30110 UNIV OF CALIFORNIA - BERKELEY 2227**  
 A STUDY OF MEV TERRESTRIAL X-RAY BURSTS  
 05/11/1998 - 07/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R P LIN/MILLAN  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 30141 UNIV OF CALIFORNIA - BERKELEY 2228**  
 PHOSPHORUS CYCLING OF LAND USE GRADIENT ON TWO SOIL  
 TEXTURES IN A LOWLAND TROPICAL FOREST  
 08/27/1998 - 02/28/2002 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* W L SILVER, MCGRODDY  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30183 UNIV OF CALIFORNIA - BERKELEY 2229**  
 MEASUREMENT & MODELING OF CARBON, WATER & ENERGY OVER A  
 CALIFORNIA OAK SAVANNA: LINKING THE BIOPHYS  
 08/19/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* T L BENNING  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30219 UNIV OF CALIFORNIA - BERKELEY 2230**  
 ATMOSPHERIC NO2: LASER-INDUCED FLUORESCENCE DETECT ION AT  
 THE PART PER TRILLION LEVEL FROM AIRCRAFT  
 08/24/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* R C COHEN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NGT 5 30351 UNIV OF CALIFORNIA - BERKELEY 2231**  
 THE IMPLICATIONS OF MICROBIAL DECOMPOSTION ON THE DISTRIBUTION  
 OF STABLE C & N ISOTOPES IN TERRESTRIA  
 08/24/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* I CHAPELA  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30361 UNIV OF CALIFORNIA - BERKELEY 2232**  
 INTEGRATING REMOTELY SENSED AFFORESTATION POTENTIAL WITH  
 CREDIT TRADING & TECHNICAL LEARNING IN MOD  
 08/24/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D M KAMMEN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30380 UNIV OF CALIFORNIA - BERKELEY 2233**  
 THE GLOBAL IRON GEOCHEMICAL CYCLE: CHARACTERIZING AEOLIAN  
 IRON SOURCES TO THE OCEAN AND THE EFFECT  
 08/13/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D DE PAOLO  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30383 UNIV OF CALIFORNIA - BERKELEY 2234**  
 GLOBAL TRENDS IN SOIL ORGANIC CARBON RESIDENCE TIME/JONATHAN  
 SANDERMAN  
 08/13/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R AMUNDSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30403 UNIV OF CALIFORNIA - BERKELEY 2235**  
 ECOSYSTEM LEVEL IMPACTS OF CLIMATE WARMING & LOSS OF BIODIV-  
 ERSITY IN MONTANE MEADOW HABITAT/STUDENT  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J HARTE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30424 UNIV OF CALIFORNIA - BERKELEY 2236**  
 ANOMALOUS FRACTIONATION OF TROPOSPHERIC CO2 AS A POTENTIAL  
 TRACER OF BIOSPHEREPRODUCTIVITY  
 09/07/2001 - 09/14/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* K BOERING  
*Tech. Officer:* GSFC/ WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50048 UNIV OF CALIFORNIA - BERKELEY 2237**  
 CONTINUOUS WAVE OPERATION OF FAR-INFRARED GERMANIUM S  
 07/17/1997 - 07/31/2000 FY01: -\$100 Total: \$65,900  
*Prin. Invest.:* E HALLER  
*Tech. Officer:* GSFC/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50061 UNIV OF CALIFORNIA - BERKELEY 2238**  
 ION OUTFLOW FROM THE AURORAL IONOSPHERE  
 08/04/1997 - 12/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* CHARLES  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50066 UNIV OF CALIFORNIA - BERKELEY 2239**  
 DEVELOPMENT OF A SUPERFLUID HELIUM-4 GYROSCOPE  
 09/05/1997 - 06/30/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* D PACKARD  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50157 UNIV OF CALIFORNIA - BERKELEY 2240**  
 THE COMPOSITION OF THE ACTINIDES IN GALACTIC COSMI  
 09/11/1997 - 09/30/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* P PRICE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50188 UNIV OF CALIFORNIA - BERKELEY 2241**  
 DIAMONDS IN GIANT PLANETS? EXPERIMENTS ON "PLANETARY ICES" AT  
 HIGH PRESSURES AND TEMPERATURES  
 05/27/1998 - 12/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R JEANLOZ  
*Prin. Invest.:* NONE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS



**NGT 5 50189 UNIV OF CALIFORNIA - BERKELEY 2242**  
 DETERMINATION OF COSMOLOGICAL PARAMETERS THROUGH COSMIC  
 MICROWAVE BACKGROUND OBSERVATIONS WITH THE  
 05/27/1998 - 06/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* G SMOOT  
*Tech. Officer:* HQ/A NURRIDDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50195 UNIV OF CALIFORNIA - BERKELEY 2243**  
 BALLOON-BORNE OBSERVATIONS OF THE ANISOTROPY OF THE COSMIC  
 MICROWAVE BACKGROUND ON ANGULAR SCALES OF  
 06/04/1998 - 06/30/2002 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* P L RICHARDS  
*Tech. Officer:* HQ/A NURRIDDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50196 UNIV OF CALIFORNIA - BERKELEY 2244**  
 FRAGMENTATION IN COLLAPSING NON-ISOTHERMAL MOLECULAR  
 CLOUDS  
 06/04/1998 - 09/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* C F MCKEE  
*Tech. Officer:* HQ/A NURRIDDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50216 UNIV OF CALIFORNIA - BERKELEY 2245**  
 ABOVEGROUND AND BELOWGROUND PLANT SPECIES FUNCTIONAL  
 TRAITS AND THEIR RELATION TO ECOSYSTEM FUNCTION  
 09/15/1998 - 08/31/2001 FY01: \$0 Total: \$58,667  
*Prin. Invest.:* F S CHAPIN, 111  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50223 UNIV OF CALIFORNIA - BERKELEY 2246**  
 REGIONAL CHANGES IN EXTREME EVENT FREQUENCIES WITHIN THE  
 UNITED STATES (STUDENT: DIANA DERUBERTIS)  
 09/29/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* O E GRANGER, D DERUBERTIS  
*Tech. Officer:* HQ/A NURRIDDIN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50245 UNIV OF CALIFORNIA - BERKELEY 2247**  
 INFRARED SPECTROSCOPY OF STAR FORMATION IN SUPER STAR CLUS-  
 TERS WITH KECK/NIRSPEC (STUDENT: ANDRE)  
 06/02/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* J GRAHAM  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50253 UNIV OF CALIFORNIA - BERKELEY 2248**  
 X-RAY SPECTROSCOPY OF EVOLVED SUPERNOVA REMNANTS  
 06/07/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* C F MCKEE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50331 UNIV OF CALIFORNIA - BERKELEY 2249**  
 EFFECTS OF OXIC-ANOXIC DYNAMICS ON METHANE EFFLUX & STABLE  
 ISOTOPE COMPOSITION IN HUMID TROPICAL  
 08/17/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* W SILVER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50338 UNIV OF CALIFORNIA - BERKELEY 2250**  
 LUNAR MAGNETIC AND ELECTRIC FIELDS (STUDENT: JASPER HALEKAS)  
 05/04/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R LIN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50342 UNIV OF CALIFORNIA - BERKELEY 2251**  
 DETERMINATION OF EVOLUTIONARY PARAMETERS IN POPULATIONS OF  
 THERMOPHILIC ARCHAEA (STUDENT: RACHEL WHITA)  
 05/14/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J TAYLOR  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50365 UNIV OF CALIFORNIA - BERKELEY 2252**  
 AN ELECTRON EDM MEASUREMENT UTILIZING A SLOW-BEAM ATOMIC  
 FOUNTAIN (STUDENT: JASON AMINI)  
 06/12/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S FREEDMAN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2215 UNIV OF CALIFORNIA - DAVIS 2253**  
 AERO-MECHANICAL DESIGN METHODOLOGY FOR SUBSONIC CIVIL  
 TRANSPORT HIGH-LIFT SYSTEMS  
 07/20/1999 - 12/31/2000 FY01: \$1 Total: \$54,972  
*Prin. Invest.:* C P VAN DAM  
*Tech. Officer:* LARC/P A GELHAUSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01045 UNIV OF CALIFORNIA - DAVIS 2254**  
 FURTHER DEVELOPMENT IN AERO-MECHANICAL DESIGN METHODOLO-  
 GIES FOR HIGH-LIFT SYSTEMS  
 04/11/2001 - 04/10/2002 FY01: \$77,593 Total: \$77,593  
*Prin. Invest.:* C P VAN DAM  
*Tech. Officer:* LARC/P A GELHAUSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01116 UNIV OF CALIFORNIA - DAVIS 2255**  
 MODELING AND DESIGN ANALYSIS METHODOLOGY FOR TAYLORED  
 COMPOSITE AIRCRAFT STRUCTURES  
 09/21/2001 - 01/20/2004 FY01: \$18,806 Total: \$18,806  
*Prin. Invest.:* L W REHFELD  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 2 944 UNIV OF CALIFORNIA - DAVIS 2256**  
 CNS CONTROL OF RHYTHMS & HOMEOSTASIS DURING SPACE FLIGHT  
 12/21/1994 - 12/31/2000 FY01: \$0 Total: \$624,482  
*Prin. Invest.:* C A FULLER  
*Tech. Officer:* ARC/W E HINDS, ARC/C M WINGET  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1019 UNIV OF CALIFORNIA - DAVIS 2257**  
 MICROGRAVITY EFFECTS ON DEVELOPING VESTIBULAR AFFERENTS  
 (NEUROLAB)  
 01/22/1996 - 03/31/2001 FY01: \$0 Total: \$577,426  
*Prin. Invest.:* B CHAPMAN  
*Tech. Officer:* ARC/W E HINDS, ARC/C M WINGET  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1216 UNIV OF CALIFORNIA - DAVIS 2258**  
 TOWARDS REAL-TIME VECTOR FIELD VISUALIZATION FOR MASSIVE &  
 MULTI-SOURCE DATA USING HIERARCHIES  
 05/04/1998 - 12/31/2000 FY01: \$0 Total: \$199,193  
*Prin. Invest.:* B HAMANN  
*Tech. Officer:* ARC/A VAZIRI, ARC/M G YAMASAKI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1251 UNIV OF CALIFORNIA - DAVIS 2259**  
 DENIAL OF SERVICE IN THE INFRASTRUCTURE  
 08/19/1998 - 09/30/1999 FY01: \$0 Total: \$98,873  
*Prin. Invest.:* M BISHOP  
*Tech. Officer:* ARC/C M FALSETTI, ARC/B H WHITAKER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1265 UNIV OF CALIFORNIA - DAVIS 2260**  
 ADAPTATION OF RHESUS MACAQUES TO A HYPERDYNAMIC ENVIRONMENT  
 09/14/1998 - 12/31/2000 FY01: \$0 Total: \$757,146  
*Prin. Invest.:* C A FULLER  
*Tech. Officer:* ARC/R E GRINDELAND, ARC/K L SOUZA  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 2 1404 UNIV OF CALIFORNIA - DAVIS 2261**  
 EFFECTS OF GRAVITY ON INSECT CIRCADIAN RHYTHMICITY  
 04/27/2000 - 06/30/2001 FY01: \$222,618 Total: \$419,569  
*Prin. Invest.:* T M HOBAN-HIGGINS  
*Tech. Officer:* ARC/R D MACELROY, ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1442 UNIV OF CALIFORNIA - DAVIS 2262**  
 REMOTE AGRICULTURAL MONITORING HYPERSPECTRAL IMAGERY WITH  
 AN UPDATED AERIAL VEHICLE  
 09/27/2000 - 12/31/2000 FY01: \$0 Total: \$90,000  
*Prin. Invest.:* S USTIN  
*Tech. Officer:* ARC/S S WEGENER, ARC/R S HIPSKIN  
*CASE Category:* 55 - AGRICULTURE

**NAG 2 1451 UNIV OF CALIFORNIA - DAVIS 2263**  
 EFFECTS OF HYPERGRAVITY ON RAT CIRCADIAN CLOCK GENES,  
 REGULATION & EXPRESSION  
 12/19/2000 - 12/14/2001 FY01: \$238,307 Total: \$238,307  
*Prin. Invest.:* C A FULLER  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1459 UNIV OF CALIFORNIA - DAVIS 2264**  
 FIRST INTERNATIONAL CONFERENCE ON COMPUTATIONAL FLUID  
 DYNAMICS  
 03/05/2001 - 01/31/2002 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* J J CHATTOT  
*Tech. Officer:* ARC/W R VAN DALSEM  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1494 UNIV OF CALIFORNIA - DAVIS 2265**  
 EFFECTS OF THE HYPERGRAVITY ON EXPRESSION OF GENES INVOLVED  
 IN REGULATION OF FEEDING  
 07/05/2001 - 06/30/2002 FY01: \$88,698 Total: \$88,698  
*Prin. Invest.:* B A HORWITZ  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2153 UNIV OF CALIFORNIA - DAVIS 2266**  
 EXPERIMENTAL STUDIES OF MULTIPHASE MATERIALS USING NUCLEAR  
 MAGNETIC RESONANCE  
 05/13/1998 - 03/08/2002 FY01: \$71,250 Total: \$242,250  
*Prin. Invest.:* B L POWELL, S DUGAN, R PHILLIPS  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 5 3001 UNIV OF CALIFORNIA - DAVIS 2267**  
 AIRBORNE LASER ALTIMETRIC MONITORING OF THE RAPID EVOLUTION OF  
 TOPOGRAPHY IN LONGVALLEY, CALIF...  
 07/14/1995 - 07/31/2000 FY01: \$0 Total: \$194,646  
*Prin. Invest.:* J MINSTER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6440 UNIV OF CALIFORNIA - DAVIS 2268**  
 EFFECT OF GRAVITY ON THE REGULATION OF CIRCADIAN RHYTHMS  
 11/03/1997 - 06/30/2000 FY01: \$0 Total: \$118,910  
*Prin. Invest.:* D MURAKAMI  
*Tech. Officer:* GSFC/V SCHNEIDER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 7216 UNIV OF CALIFORNIA - DAVIS 2269**  
 USE OF HYPER-SPECTRAL IMAGERY TO IDENTIFY AND MAP LEAFY  
 SPURGE INFESTATIONS AT THEODORE ROOSEVELT  
 03/31/1998 - 03/31/2000 FY01: \$0 Total: \$115,123  
*Prin. Invest.:* S L USTIN  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 7441 UNIV OF CALIFORNIA - DAVIS 2270**  
 GEOMETRIC PARAMETERIZATION OF RAINFALL FIELDS  
 06/02/1998 - 06/14/2002 FY01: \$0 Total: \$131,000  
*Prin. Invest.:* C E PUENTE  
*Tech. Officer:* GSFC/R W LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8258 UNIV OF CALIFORNIA - DAVIS 2271**  
 ION IMAGING STUDIES OF VUV PHOTODISSOCIATION OF COMPLEX  
 PARENT MOLECULES  
 02/17/1999 - 03/31/2002 FY01: \$81,364 Total: \$309,885  
*Prin. Invest.:* W JACKSON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8391 UNIV OF CALIFORNIA - DAVIS 2272**  
 X-RAY PROPERTIES OF DEEP-RADIO-SELECTED QUASARS (A DP98)  
 03/05/1999 - 03/14/2002 FY01: \$0 Total: \$102,548  
*Prin. Invest.:* R H BECKER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8430 UNIV OF CALIFORNIA - DAVIS 2273**  
 THE FORMATION OF GALAXY CLUSTERS (LTS 98)  
 05/10/1999 - 05/14/2002 FY01: \$89,765 Total: \$269,295  
*Prin. Invest.:* S STANFORD  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8586**                      **UNIV OF CALIFORNIA - DAVIS**                      **2274**  
 SUPPORT OF THE INTERNATIONAL CONGRESS MANAGING FOR  
 ECOSYSTEM HEALTH, 15-20 AUGUST 1999, SACRAMENTO  
 06/28/1999 - 06/30/2000                      FY01: \$0                      Total: \$48,500  
*Prin. Invest.*: C O QUALSET  
*Tech. Officer*: GSFC/B W MEESON  
*CASE Category*: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9025**                      **UNIV OF CALIFORNIA - DAVIS**                      **2275**  
 "ERROR CONTROL CODING TECHNIQUES FOR SPACE & SATEL LITE  
 COMMUNICATIONS"  
 02/09/2000 - 02/28/2001                      FY01: \$0                      Total: \$70,000  
*Prin. Invest.*: S LIN, NONE  
*Tech. Officer*: GSFC/W H MILLER  
*CASE Category*: 49 - ENGINEERING, OTHER

**NAG 5 9360**                      **UNIV OF CALIFORNIA - DAVIS**                      **2276**  
 NEW EOS DATA PRODUCTS TO IMPROVE BIOGEOCHEMICAL ESTIMATES  
 04/06/2000 - 04/30/2002                      FY01: \$199,135                      Total: \$375,960  
*Prin. Invest.*: S USTIN  
*Tech. Officer*: GSFC/D E WICKLAND  
*CASE Category*: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9540**                      **UNIV OF CALIFORNIA - DAVIS**                      **2277**  
 X-RAY PROPERTIES OF DEEP-RADIO-SELECTED QUASARS (A DP98)  
 05/02/2000 - 05/31/2002                      FY01: \$0                      Total: \$50,000  
*Prin. Invest.*: N ARAV  
*Tech. Officer*: GSFC/R J OLIVERSEN  
*CASE Category*: 11 - ASTRONOMY

**NAG 5 9897**                      **UNIV OF CALIFORNIA - DAVIS**                      **2278**  
 A JOINT DEEP XMM/AXAF SURVEY IN THE LYNX.3A FIELD  
 09/06/2000 - 09/14/2001                      FY01: \$0                      Total: \$7,900  
*Prin. Invest.*: S A STANFORD  
*Tech. Officer*: GSFC/R F MUSHOTZKY  
*CASE Category*: 11 - ASTRONOMY

**NAG 5 9947**                      **UNIV OF CALIFORNIA - DAVIS**                      **2279**  
 X-RAYS FROM RADIO-LOUD BROAD ABSORPTION LINE QSOS  
 09/06/2000 - 09/14/2002                      FY01: \$15,000                      Total: \$30,500  
*Prin. Invest.*: R H BECKER  
*Tech. Officer*: GSFC/R F MUSHOTZKY  
*CASE Category*: 11 - ASTRONOMY

**NAG 5 10480**                      **UNIV OF CALIFORNIA - DAVIS**                      **2280**  
 ERROR CONTROL CODING TECHNIQUES FOR SPACE AND SATE LLITE  
 COMMUNICATIONS  
 02/27/2001 - 02/28/2002                      FY01: \$70,000                      Total: \$70,000  
*Prin. Invest.*: S LIN  
*Tech. Officer*: GSFC/P YEHL  
*CASE Category*: 49 - ENGINEERING, OTHER

**NAG 5 10591**                      **UNIV OF CALIFORNIA - DAVIS**                      **2281**  
 BIOGEOCHEMICAL CHARACTERIZATION OF LATE ARCHEAN FE NESTRATE  
 MICROBIALITES FROM THE GAMOHAAN FORMATION  
 03/20/2001 - 03/31/2002                      FY01: \$89,200                      Total: \$89,200  
*Prin. Invest.*: D Y SUMNER  
*Tech. Officer*: GSFC/M MEYER  
*CASE Category*: 11 - ASTRONOMY

**NAG 5 11098**                      **UNIV OF CALIFORNIA - DAVIS**                      **2282**  
 ANALYSIS & INTERPRETATION OF CMB DATA (L TSA 2000)  
 07/12/2001 - 07/14/2002                      FY01: \$76,646                      Total: \$76,646  
*Prin. Invest.*: L KNOX  
*Tech. Officer*: GSFC/R OLIVERSEN  
*CASE Category*: 11 - ASTRONOMY

**NAG 5 11260**                      **UNIV OF CALIFORNIA - DAVIS**                      **2283**  
 WESTERN CENTER FOR ESTUARINE ECOSYSTEM INDICATOR RESEARCH  
 08/20/2001 - 08/31/2005                      FY01: \$76,055                      Total: \$76,055  
*Prin. Invest.*: S USTIN  
*Tech. Officer*: GSFC/E LINDSTROM  
*CASE Category*: 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1143**                      **UNIV OF CALIFORNIA - DAVIS**                      **2284**  
 THE GLOBAL ATMOSPHERIC RESPONSE TO LOCALIZED LOW FREQUENCY  
 FORCING  
 05/24/1995 - 03/31/2001                      FY01: \$0                      Total: \$177,000  
*Prin. Invest.*: T R NATHAN  
*Tech. Officer*: MSFC/T L MILLER, MSFC/S H CHOW  
*CASE Category*: 31 - ATMOSPHERIC SCIENCE

**NAG 9 1048**                      **UNIV OF CALIFORNIA - DAVIS**                      **2285**  
 MESOSCOPIC INSTRUMENTATION MINITURE FTIR FOR ENVIRONMENTAL  
 MONITORING  
 08/13/1998 - 08/04/2002                      FY01: \$218,917                      Total: \$401,700  
*Prin. Invest.*: S D COLLINS  
*Tech. Officer*: HQ/D L JAN  
*CASE Category*: 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99023**                      **UNIV OF CALIFORNIA - DAVIS**                      **2286**  
 USING REMOTE SENSING TO MONITOR THE IMPACTS OF FLOOD-IRRIGA-  
 TION OF MEADOWS IN EAST WALKER RIVER  
 08/25/1999 - 11/01/2001                      FY01: \$173,619                      Total: \$345,192  
*Prin. Invest.*: D W TATE  
*Tech. Officer*: SSC/R MCKELLIP  
*CASE Category*: 32 - GEOLOGICAL SCIENCE

**NAS 5 31359**                      **UNIV OF CALIFORNIA - DAVIS**                      **2287**  
 EOS-BIOSPHERE-ATMOSPHERE INTERACTIONS STUDY  
 11/05/1991 - 12/31/1999                      FY01: \$0                      Total: \$533,400  
*Prin. Invest.*: S USTIN  
*Tech. Officer*: GSFC/P SELLERS  
*CASE Category*: 31 - ATMOSPHERIC SCIENCE

**NCC 1 345**                      **UNIV OF CALIFORNIA - DAVIS**                      **2288**  
 DEVELOPMENT OF A DESIGN METHODOLOGY FOR RECONFIGUR ABLE  
 FLIGHT CONTROL SYSTEMS  
 07/06/1999 - 07/14/2000                      FY01: \$1                      Total: \$50,243  
*Prin. Invest.*: R A HESS  
*Tech. Officer*: GSFC/B J BACON  
*CASE Category*: 41 - AERONAUTICAL ENGR

**NCC 1 01007**                      **UNIV OF CALIFORNIA - DAVIS**                      **2289**  
 SIMULATION OF FOREBODY FLOWS AT HIGH-ANGLE-OF- ATTACH  
 DYNAMIC CONDITIONS  
 12/27/2000 - 10/31/2001                      FY01: \$55,752                      Total: \$55,752  
*Prin. Invest.*: C P VAN DAM  
*Tech. Officer*: LARC/C M FREMAUX  
*CASE Category*: 41 - AERONAUTICAL ENGR

**NCC 2 1011 UNIV OF CALIFORNIA - DAVIS 2290**  
 EFFICIENT PARALLEL ALGORITHMS FOR INVISCID & VISCO US FLOW  
 SIMULATION  
 01/27/1998 - 01/31/2002 FY01: \$0 Total: \$215,662  
*Prin. Invest.:* M HAFEZ, J CHATTAT  
*Tech. Officer:* ARC/D KWAK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1131 UNIV OF CALIFORNIA - DAVIS 2291**  
 EYE MOVEMENT VISUAL PERCEPTION & CONTROL  
 07/23/1998 - 02/28/2002 FY01: \$12,222 Total: \$57,444  
*Prin. Invest.:* R A HESS  
*Tech. Officer:* ARC/L S SROUE, ARC/B SWEET  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1183 UNIV OF CALIFORNIA - DAVIS 2292**  
 MODELING ROTORCRAFT INTERACTION WITH ATMOSPHERIC TURBU-  
 LENCE IN LOW-SPEED AND HOVERING FLIGHT  
 06/07/2000 - 05/31/2002 FY01: \$32,700 Total: \$85,117  
*Prin. Invest.:* R HESS  
*Tech. Officer:* ARC/M B TISCHER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1271 UNIV OF CALIFORNIA - DAVIS 2293**  
 GRAVITATIONAL BIOLOGY: COMPARISON OF MAMMALIAN ADAPTATIONS  
 TO GROUND-BASED MODELS  
 07/31/2001 - 06/30/2002 FY01: \$250,658 Total: \$250,658  
*Prin. Invest.:* C A FULLER, D M MURAKAMI  
*Tech. Officer:* ARC/E M HOLTON, ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5308 UNIV OF CALIFORNIA - DAVIS 2294**  
 NUMERICAL SIMULATION OF TIME-DEPENDENT VISCOUS FLO WS ABOUT  
 WIND TURBINES  
 02/23/1999 - 04/30/2001 FY01: \$0 Total: \$85,173  
*Prin. Invest.:* C P VANDAM  
*Tech. Officer:* ARC/E N DUQUE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5313 UNIV OF CALIFORNIA - DAVIS 2295**  
 DEVELOPING & VALIDATING ROTORCRAFT SIMULATION MODELS  
 04/02/1999 - 12/31/2000 FY01: \$0 Total: \$58,981  
*Prin. Invest.:* J DONGARRA  
*Tech. Officer:* ARC/S DAINI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5343 UNIV OF CALIFORNIA - DAVIS 2296**  
 EXPLORING THE BRDF POTENTIAL OF POLARIZED REFLECTANCE  
 08/11/1999 - 11/30/2000 FY01: \$0 Total: \$108,500  
*Prin. Invest.:* S L USTIN  
*Tech. Officer:* ARC/N C VANDERBILT, ARC/E P CONDON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 5369 UNIV OF CALIFORNIA - DAVIS 2297**  
 DEVELOPMENT OF FLIGHT SIMULATOR FIDELITY ASSESSMENT TOOLS  
 03/21/2000 - 12/31/2000 FY01: \$0 Total: \$23,648  
*Prin. Invest.:* R A HESS  
*Tech. Officer:* ARC/D TRAN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5387 UNIV OF CALIFORNIA - DAVIS 2298**  
 DEVELOPMENT & APPLICATION OF A DATA MANAGEMENT TECHNIQUE  
 WITHIN A DISTRIBUTED COMPUTING ENVIRONMENT  
 06/23/2000 - 06/30/2001 FY01: \$35,000 Total: \$95,000  
*Prin. Invest.:* M HAFEZ, J S DACLES-MARIANI  
*Tech. Officer:* ARC/D KWAK  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5406 UNIV OF CALIFORNIA - DAVIS 2299**  
 PREDICTION OF THE AERODYNAMIC CHARACTERISTICS OF A  
 HELICOPTER ROTOR AIRFOIL WITH ACTIVELY-CONTROLLED  
 10/27/2000 - 10/31/2001 FY01: \$17,879 Total: \$17,879  
*Prin. Invest.:* C P VANDAM  
*Tech. Officer:* ARC/M V FULTON, ARC/C TUNG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5425 UNIV OF CALIFORNIA - DAVIS 2300**  
 COMPUTER AIDED FLIGHT SIMULATOR ASSESSMENT  
 03/09/2001 - 02/28/2002 FY01: \$30,870 Total: \$30,870  
*Prin. Invest.:* R A  
*Tech. Officer:* ARC/D T TRAN, ARC/W B CLEVELAND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5426 UNIV OF CALIFORNIA - DAVIS 2301**  
 METACOMPUTATIONS & SIMULATIONS OF SEPARATED FLOWS WITH  
 APPLICATIONS TO AEROSPACE & BIOFLUID DYNAMICS  
 03/08/2001 - 02/28/2002 FY01: \$90,000 Total: \$90,000  
*Prin. Invest.:* M HAFEZ, J J CHATTOT  
*Tech. Officer:* ARC/D KWAK  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 2 5447 UNIV OF CALIFORNIA - DAVIS 2302**  
 DATA COMPRESSION VIA WAVELETS  
 08/14/2001 - 07/31/2002 FY01: \$95,000 Total: \$95,000  
*Prin. Invest.:* M HAFEZ  
*Tech. Officer:* ARC/D KWAK, ARC/C KIRIS  
*CASE Category:* 21 - MATHEMATICS

**NCC 3 353 UNIV OF CALIFORNIA - DAVIS 2303**  
 ELECTROHYDRODYNAMIC POOLING IN REDUCED GRAVITY  
 06/29/1994 - 08/31/2002 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* B D SHAW  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 477 UNIV OF CALIFORNIA - DAVIS 2304**  
 COMBUSTION EXPERIMENTS IN REDUCED GRAVITY WITH TWO -  
 COMPONENT MISCIBLE DROPLETS  
 05/21/1996 - 05/20/2001 FY01: \$0 Total: \$361,585  
*Prin. Invest.:* B SHAW  
*Tech. Officer:* GRC/D DIETRICH  
*CASE Category:* 13 - PHYSICS

**NCC 3 668 UNIV OF CALIFORNIA - DAVIS 2305**  
 THE IMPACT OF BUOYANCY AND FLAME STRUCTURE ON SOOT, RADI-  
 ATION AND NOX EMISSIONS FROM A TURBULENT DI  
 02/12/1999 - 11/30/2002 FY01: \$89,117 Total: \$203,033  
*Prin. Invest.:* I M KENNEDY  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 683 UNIV OF CALIFORNIA - DAVIS 2306**  
 COMBUSTION OF HAN-BASED MONOPROPELLANT IN REDUCED GRAVITY  
 03/08/1999 - 01/03/2003 FY01: \$103,250 Total: \$301,250  
*Prin. Invest.:* B D SHAW  
*Tech. Officer:* GRC/D L DIETRICH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 845 UNIV OF CALIFORNIA - DAVIS 2307**  
 FLAME PROPAGATION IN LOW INTENSITY TURBULENCE UNDER  
 MICROGRAVITY CONDITIONS  
 01/05/2001 - 11/30/2004 FY01: \$90,000 Total: \$90,000  
*Prin. Invest.:* R C ALDREDGE  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 859 UNIV OF CALIFORNIA - DAVIS 2308**  
 MECHANISM OF CREEP OF CU-CR-NB ALLOYS MECHANISM OF CREEP OF  
 CU-CR-NB ALLOYS  
 02/08/2001 - 12/27/2001 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* J GIBELING  
*Tech. Officer:* GRC/M NATHAL  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 872 UNIV OF CALIFORNIA - DAVIS 2309**  
 ELECTRIC FIELD EFFECTS IN SELF-PROPAGATING HIGH TEMPERATURE  
 COMBUSTION SYNTHESIS UNDER MICROGRAVITY  
 03/19/2001 - 11/30/2004 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* Z A MUNIR  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 890 UNIV OF CALIFORNIA - DAVIS 2310**  
 COMBUSTION EXPERIMENTS IN REDUCED GRAVITY WITH TWO  
 COMPONENT MISCIBLE DROPLETS  
 05/01/2001 - 02/28/2002 FY01: \$170,650 Total: \$170,650  
*Prin. Invest.:* B D SHAW  
*Tech. Officer:* GRC/D L DIETRICH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 4 120 UNIV OF CALIFORNIA - DAVIS 2311**  
 APPLICATION OF REMOTE INFRARED THERMOGRAPHY  
 01/27/1999 - 02/25/2001 FY01: \$0 Total: \$58,597  
*Prin. Invest.:* C P VAN DAM  
*Tech. Officer:* DFRC/D BANKS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 4 151 UNIV OF CALIFORNIA - DAVIS 2312**  
 SUPERSONIC FLIGHT EXPERIMENTATION USING INFRARED THERMO-  
 GRAPHY  
 01/30/2001 - 10/31/2001 FY01: \$26,799 Total: \$26,799  
*Prin. Invest.:* C VAN DAM, NONE  
*Tech. Officer:* DFRC/D W BANKS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 287 UNIV OF CALIFORNIA - DAVIS 2313**  
 MICROFABRICATED QUADRUPOLE FOR A MINITURIZED MASS SPECTROM-  
 ETHER  
 01/06/1998 - 11/30/1999 FY01: -\$38 Total: \$30,247  
*Prin. Invest.:* R SMITH  
*Tech. Officer:* GSFC/D HARPOLD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 2 52238 UNIV OF CALIFORNIA - DAVIS 2314**  
 RELATIONSHIP BETWEEN DYNAMIC BAROREFLEX RESPONSE CHARACTER-  
 ISTICS & STATIC BAROREFLEX FUNCTION IN...  
 01/26/1998 - 09/30/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* P MOLE  
*Prin. Invest.:* NONE  
*Tech. Officer:* ARC/J E GREENLEAF  
*CASE Category:* 56 - MEDICAL

**NGT 5 30073 UNIV OF CALIFORNIA - DAVIS 2315**  
 CLIMATE CONTROL OF VEGETATION AND GROWTH FORM DIST WATER  
 AND ENERGY BALANCE AT LANDSCAPE SCALES  
 09/09/1997 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* S G USTIN-KENNEDY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30187 UNIV OF CALIFORNIA - DAVIS 2316**  
 FORMATION, DETECTION & QUANTIFICATION OF OXIDIZED HALOGEN  
 SPECIES IN AEROSOLS FROM THE MARINE BOUNDARY  
 08/19/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* C ANASTASIO  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30352 UNIV OF CALIFORNIA - DAVIS 2317**  
 ECOLOGICAL & ECONOMIC INFLUENCES ON SMALL-SCALE TROPICAL  
 RAINFOREST SUCCESSION: REMOTE SENSING  
 08/24/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* S USTIN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30373 UNIV OF CALIFORNIA - DAVIS 2318**  
 HYPERSPECTRAL REMOTE SENSING OF CORAL REEFS IN THE HAWAIIAN  
 ISLANDS STUDENT: JAMES GOODMAN  
 08/13/2001 - 08/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S USTIN  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30411 UNIV OF CALIFORNIA - DAVIS 2319**  
 EVALUATION BRDF MODELING STRATEGIES FOR BIOPHYSICAL  
 PARAMETER RETRIEVAL THROUGH INVERSION, .../STUD  
 08/15/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S USTIN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50204 UNIV OF CALIFORNIA - DAVIS 2320**  
 FATNESS, FOOD INTAKE AND HYPERGRAVITY: MECHANISMS OF REGULA-  
 TION  
 07/01/1998 - 06/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* C A FULLER  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50230**                    **UNIV OF CALIFORNIA - DAVIS**                    **2321**  
 UTILIZING SCIGN VELOCITY SOLUTIONS TO MODEL LITHOSPHERIC  
 PROCESSES IN THE WESTERN TRANSVERSE RANGE  
 05/24/1999 - 06/30/2002            FY01: \$22,000                    Total: \$66,000  
*Prin. Invest.:* L H KELLOGG, GLASCO  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50281**                    **UNIV OF CALIFORNIA - DAVIS**                    **2322**  
 NEW APPROACHES TO CALCULATING GRAVITATIONAL RADIATION & RADIATION  
 REACTION/STUDENT: JAMES R VAN MET  
 06/20/2000 - 06/30/2002            FY01: \$22,000                    Total: \$44,000  
*Prin. Invest.:* S CARLIP  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 1906**                    **UNIV OF CALIFORNIA - IRVINE**                    **2323**  
 COUPLING ATMOSPHERIC CIRCULATION AND CHEMISTRY: DEVELOPING  
 CTMS FOR CLIMATE SIMULATIONS  
 02/29/1997 - 06/30/2000            FY01: -\$1                        Total: \$282,506  
*Prin. Invest.:* M J PRANTHER  
*Tech. Officer:* LARC/G L MADREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2104**                    **UNIV OF CALIFORNIA - IRVINE**                    **2324**  
 EXPERIMENTAL INVESTIGATION OF SUPERSONIC COPLANAR JETS WITHIN  
 EJECTORS  
 09/02/1998 - 07/31/2001            FY01: \$1                        Total: \$103,890  
*Prin. Invest.:* D PAPAMOSCHOU  
*Tech. Officer:* LARC/J M SEINER, LARC/M K PONTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2308**                    **UNIV OF CALIFORNIA - IRVINE**                    **2325**  
 DEVELOPMENT OF CHEMISTRY-TRANSPORT MODELS IN SUPPORT OF  
 CLIMATE STUDIES AND ASSESSMENTS  
 06/15/2000 - 03/14/2003            FY01: \$133,000                    Total: \$182,979  
*Prin. Invest.:* M J PRATHER  
*Prin. Invest.:* NONE  
*Tech. Officer:* LARC/G L MADREA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01001**                    **UNIV OF CALIFORNIA - IRVINE**                    **2326**  
 REGIONAL CHEMISTRY FROM GLOBAL CTMS W/EC-MODELED MET-  
 FIELDS FOR THE TRACE-P MISSION  
 03/08/2001 - 03/14/2003            FY01: \$25,001                    Total: \$25,001  
*Prin. Invest.:* M J PRATHER  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01006**                    **UNIV OF CALIFORNIA - IRVINE**                    **2327**  
 COMPACT AIRBORNE SYS FOR SO2 & DMS MEAS FOR USE OF FUTURE  
 GTE MISSIONS ABOARD P-3 OR DC-8  
 03/01/2001 - 03/31/2002            FY01: \$81,988                    Total: \$81,988  
*Prin. Invest.:* E S SALTZMAN  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 942**                    **UNIV OF CALIFORNIA - IRVINE**                    **2328**  
 NEURAL-THYROID INTERACTION ON SKELETAL ISOMYOSIN EXPRESSION  
 IN OG (ZERO GRAVITY)  
 12/22/1994 - 11/30/1999            FY01: \$0                        Total: \$520,201  
*Prin. Invest.:* K M BALDWIN  
*Tech. Officer:* ARC/W E HINDS, ARC/C M WINGET  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1831**                    **UNIV OF CALIFORNIA - IRVINE**                    **2329**  
 EFFECTS OF GRAVITY ON SHEARED TURBULENCE LADEN WITH BUBBLES  
 OR DROPLETS  
 05/02/1996 - 11/01/2000            FY01: -\$996                    Total: \$399,004  
*Prin. Invest.:* S ELGHOBASHI, J LA SHERAS  
*Tech. Officer:* GRC/S LA SHERAS  
*CASE Category:* 13 - PHYSICS

**NAG 3 2024**                    **UNIV OF CALIFORNIA - IRVINE**                    **2330**  
 IGNITION AND FLAME SPREAD ABOVE LIQUID FUEL POOLS: GRAVITY  
 EFFECTS  
 03/01/1997 - 03/30/2002            FY01: \$92,150                    Total: \$436,415  
*Prin. Invest.:* W A SIRIGNANO  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2226**                    **UNIV OF CALIFORNIA - IRVINE**                    **2331**  
 APPLICATIONS OF ELECTRIC FIELD IN MICROGRAVITY COMBUSTION  
 02/01/1999 - 11/29/2002            FY01: \$83,600                    Total: \$259,600  
*Prin. Invest.:* D DUNN-RANKIN  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2345**                    **UNIV OF CALIFORNIA - IRVINE**                    **2332**  
 MIXING ENHANCEMENT AND NOISE REDUCTION IN HIGH-SPEED JETS  
 03/07/2000 - 01/31/2002            FY01: \$64,655                    Total: \$128,331  
*Prin. Invest.:* D PAPAMOSCHOU  
*Tech. Officer:* GRC/K Q ZAMAN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2389**                    **UNIV OF CALIFORNIA - IRVINE**                    **2333**  
 SUPERFLUID CONTACT LINE DYNAMICS SUPERFLUID CONTACT LINE  
 DYNAMICS  
 04/13/2000 - 11/30/2003            FY01: \$95,000                    Total: \$145,000  
*Prin. Invest.:* P TABOREK  
*Tech. Officer:* GRC/R WILKINSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 4 166**                    **UNIV OF CALIFORNIA - IRVINE**                    **2334**  
 ROBUST NONLINEAR FLIGHT CONTROL  
 02/25/1999 - 11/30/2000            FY01: \$0                        Total: \$80,000  
*Prin. Invest.:* K MEASE  
*Tech. Officer:* DFRC/J CARTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 217**                    **UNIV OF CALIFORNIA - IRVINE**                    **2335**  
 ROBUST FLIGHT CONTROL WITH GOOD HANDLING QUALITIES ROBUST  
 FLIGHT CONTROL WITH GOOD HANDLING QUALITIES  
 01/17/2001 - 09/30/2001            FY01: \$30,000                    Total: \$30,000  
*Prin. Invest.:* K D MEASE  
*Tech. Officer:* DFRC/C O LEE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 5069**                    **UNIV OF CALIFORNIA - IRVINE**                    **2336**  
 HIGH ENERGY ANTIMATTER TELESCOPE - HEAT  
 07/18/1996 - 09/30/2000                    FY01: \$0                    Total: \$150,000  
*Prin. Invest.:* S W BARWICK  
*Tech. Officer:* WFF/H C NEEDLEMAN, WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5149**                    **UNIV OF CALIFORNIA - IRVINE**                    **2337**  
 DEVELOPMENT OF EMPIRICAL MODE DECOMPOSITION METHOD &  
 HILBERT SPECTRAL ANALYSIS FOR ENGR APPLICATIONS  
 09/09/1997 - 02/28/2002                    FY01: \$0                    Total: \$160,924  
*Prin. Invest.:* J N YANG, Z SHEN  
*Tech. Officer:* GSFC/S R LONG, GSFC/N E HUANG  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 7137**                    **UNIV OF CALIFORNIA - IRVINE**                    **2338**  
 DEVELOPING A CHEMICAL TRANSPORT MODEL FOR ASSESSING GLOBAL  
 CHANGE IN ATMOSPHERIC COMPOSITION  
 03/24/1998 - 03/31/2001                    FY01: \$0                    Total: \$221,212  
*Prin. Invest.:* M J PRATHER  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7301**                    **UNIV OF CALIFORNIA - IRVINE**                    **2339**  
 ASSESSING ROLE OF FIRE & SOIL DRAINAGE IN DETERMINING NET C  
 FLUXES IN BOREAL ECOSYSTEMS  
 05/27/1998 - 04/30/2001                    FY01: \$0                    Total: \$162,372  
*Prin. Invest.:* S TRUMBORE  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8223**                    **UNIV OF CALIFORNIA - IRVINE**                    **2340**  
 "TOOLS AND DIAGNOSTICS FOR THE AEAP/GMI STRATOSPHERIC  
 ASSESSMENT"  
 02/10/1999 - 05/14/2000                    FY01: \$0                    Total: \$50,000  
*Prin. Invest.:* M J PRATHER  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8685**                    **UNIV OF CALIFORNIA - IRVINE**                    **2341**  
 PHOTOCHEMICAL APPLICATIONS OF AEROSOL CLIMATOLOGIES  
 07/16/1999 - 07/14/2002                    FY01: \$18,500                    Total: \$55,486  
*Prin. Invest.:* M J PRATHER  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8935**                    **UNIV OF CALIFORNIA - IRVINE**                    **2342**  
 CONTINUED MONITORING & TRENDS OF SELECTED TRACE GASES AT  
 REMOTE LOCATIONS BETWEEN 71 DEGREES  
 01/13/2000 - 02/28/2003                    FY01: \$210,000                    Total: \$420,000  
*Prin. Invest.:* D R BLAKE  
*Tech. Officer:* GSFC/M KURYLO  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9695**                    **UNIV OF CALIFORNIA - IRVINE**                    **2343**  
 RESOURCE MANAGEMENT IN TIGHTLY COUPLED MULTIPROCESSORS  
 07/03/2000 - 07/14/2002                    FY01: \$49,999                    Total: \$99,999  
*Prin. Invest.:* I SCHERSON  
*Tech. Officer:* GSFC/J DORBAND  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9955**                    **UNIV OF CALIFORNIA - IRVINE**                    **2344**  
 "STABLE ISOTOPES AND RADIOCARBON IN ATMOSPHERIC HYDROCAR-  
 BONS AND THEIR SOURCES"  
 09/21/2000 - 11/30/2001                    FY01: \$192,681                    Total: \$242,681  
*Prin. Invest.:* S C TYLER  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10147**                    **UNIV OF CALIFORNIA - IRVINE**                    **2345**  
 EFFECTS OF LAND-USE ON CLIMATE AND WATER RESOURCES :APPLICA-  
 TION OF A LAND-USE MANAGEMENT  
 12/08/2000 - 09/30/2001                    FY01: \$19,490                    Total: \$19,490  
*Prin. Invest.:* C ZENDER  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10546**                    **UNIV OF CALIFORNIA - IRVINE**                    **2346**  
 INFLUENCE OF MINERAL DUST AEROSOL ON THE CHEMICAL COMPOSI-  
 TION OF THE ATMOSPHERE  
 03/14/2001 - 03/14/2002                    FY01: \$99,603                    Total: \$99,603  
*Prin. Invest.:* ZENDER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10748**                    **UNIV OF CALIFORNIA - IRVINE**                    **2347**  
 X-RAY ISOPHOTE SHAPES AND THE DARK MATTER HALO OF NGC 3923  
 04/18/2001 - 09/30/2002                    FY01: \$32,700                    Total: \$32,700  
*Prin. Invest.:* D BUOTE  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10758**                    **UNIV OF CALIFORNIA - IRVINE**                    **2348**  
 FE K-ALPHA EMISSION IN THE BRIGHT ELLIPTICAL GALAXY NGC 1399  
 04/18/2001 - 09/30/2002                    FY01: \$31,500                    Total: \$31,500  
*Prin. Invest.:* D BUOTE  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11272**                    **UNIV OF CALIFORNIA - IRVINE**                    **2349**  
 ADDING NEW CAPABILITY TO CHEMISTRY-CLIMATE ASSESSMENTS  
 THROUGH THE GLOBAL MODELLING INITIATIVE  
 08/22/2001 - 08/31/2004                    FY01: \$45,000                    Total: \$45,000  
*Prin. Invest.:* M PRATHER  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1437**                    **UNIV OF CALIFORNIA - IRVINE**                    **2350**  
 RESEARCH/3HE-4HE MIXTURES AND DROPLETS STABILIZED IN CESIATED  
 CONTAINERS  
 03/23/1998 - 01/31/2003                    FY01: \$71,250                    Total: \$221,250  
*Prin. Invest.:* P TABOREK, J RUTLEDGE  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1569**                    **UNIV OF CALIFORNIA - IRVINE**                    **2351**  
 GROWTH PROCESSES AND DEFECT STRUCTURE OF MACRO- MOLEC-  
 ULAR CRYSTALS.  
 03/04/1999 - 11/30/2002                    FY01: \$94,900                    Total: \$368,900  
*Prin. Invest.:* A J MALKIN  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

## CALIFORNIA

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**NAG 8 1572**                    **UNIV OF CALIFORNIA - IRVINE**                    **2352**  
 R/S STABILIZATION AND PRESERVATION OF CRYSTALS FOR X-RAY  
 DIFFRACTION EXPERIMENTS  
 02/18/1999 - 11/30/2002      FY01: \$149,150                    Total: \$407,150  
*Prin. Invest.:* F JURNAK  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1652**                    **UNIV OF CALIFORNIA - IRVINE**                    **2353**  
 RESEARCH ENTITLED: "REDUCEAD-ORDER PREDICTIVE/ TRACKING  
 ENTRY GUIDANCE"  
 12/20/1999 - 01/15/2002      FY01: \$35,000                    Total: \$105,000  
*Prin. Invest.:* K D MEASE  
*Tech. Officer:* MSFC/J HANSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1149**                    **UNIV OF CALIFORNIA - IRVINE**                    **2354**  
 MECHANISMS OF MICROACTIVITY EFFECT ON VASULAR FUNCTIONS  
 09/15/1999 - 09/14/2002      FY01: \$304,613                    Total: \$568,864  
*Prin. Invest.:* R E PURDY  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAS 8 00017**                    **UNIV OF CALIFORNIA - IRVINE**                    **2355**  
 OPCGA PHASE C/D FLIGHT HARDWARE DEVELOPMENT  
 02/16/2000 - 07/31/2004      FY01: \$2,708,000                    Total: \$5,967,171  
*Prin. Invest.:* A MCPHERSON  
*Tech. Officer:* MSFC/S ROBBINS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAS 8 00019**                    **UNIV OF CALIFORNIA - IRVINE**                    **2356**  
 ENHANCED GASEOUS NITROGEN DEWAR  
 03/30/2000 - 11/19/2004      FY01: \$520,000                    Total: \$920,000  
*Prin. Invest.:* A MCPHERSON  
*Tech. Officer:* MSFC/S ROBBINS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAS 8 39763**                    **UNIV OF CALIFORNIA - IRVINE**                    **2357**  
 CRYSTAL GROWTH FLIGHT APPARATUS  
 10/30/1992 - 02/18/2000      FY01: \$0                    Total: \$15,895,061  
*Prin. Invest.:* A MCPHERSON  
*Tech. Officer:* MSFC/S ROBBINS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 1 299**                    **UNIV OF CALIFORNIA - IRVINE**                    **2358**  
 WHOLE AIR SAMPLING FROM THE DC-8 AND P-3B AIRCRAFT DURING  
 PEM-TROPICS-B, REF NRA-97-MTPE-13  
 06/09/1998 - 05/31/2001      FY01: -\$1                    Total: \$901,269  
*Prin. Invest.:* D R BLAKE  
*Tech. Officer:* LARC/J M HOELL, JR., LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 413**                    **UNIV OF CALIFORNIA - IRVINE**                    **2359**  
 WHOLE AIR SAMPLING FROM THE DC-8 AND P3-B AIRCRAFT DURING  
 TRACE-P  
 09/21/2000 - 06/30/2002      FY01: \$273,114                    Total: \$616,693  
*Prin. Invest.:* D R BLAKE  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5333**                    **UNIV OF CALIFORNIA - IRVINE**                    **2360**  
 LABORATORY MODELS OF PROTOCELLS  
 07/19/1999 - 10/31/2000      FY01: \$8,448                    Total: \$68,448  
*Prin. Invest.:* J K LANYI  
*Tech. Officer:* ARC/A POHORILLE, ARC/M H NEW  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 5378**                    **UNIV OF CALIFORNIA - IRVINE**                    **2361**  
 OPTIMIZATION OF PERCEPTUAL TRANSPARENCY IN SYNTHETIC VISION  
 DISPLAYS  
 04/05/2000 - 03/31/2002      FY01: \$5,000                    Total: \$20,791  
*Prin. Invest.:* T M DZMURA  
*Tech. Officer:* ARC/J MULLIGAN  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 5404**                    **UNIV OF CALIFORNIA - IRVINE**                    **2362**  
 LABORATORY MODELS OF PROTOCELLS  
 10/17/2000 - 10/31/2001      FY01: \$60,000                    Total: \$60,000  
*Prin. Invest.:* J K LANYI  
*Tech. Officer:* ARC/A POHORILLE, ARC/M FONDA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 5 280**                    **UNIV OF CALIFORNIA - IRVINE**                    **2363**  
 MEASURING THE EFFECTS OF LOGGING ON THE CO2 AND EN ERGY  
 EXCHANGE OF APRIMARYFOREST IN TAPAJOS N  
 06/24/1998 - 12/31/2001      FY01: \$253,383                    Total: \$1,228,960  
*Prin. Invest.:* M L GOULDEN  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 336**                    **UNIV OF CALIFORNIA - IRVINE**                    **2364**  
 CARBON DYNAMICS IN VEGETATION AND SOILS ALONG THE EASTERN LBA  
 TRANSECT  
 06/16/1998 - 12/31/2001      FY01: \$258,712                    Total: \$884,733  
*Prin. Invest.:* S TRUMBORE  
*Tech. Officer:* GSFC/D DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30127**                    **UNIV OF CALIFORNIA - IRVINE**                    **2365**  
 TIMESCALES OF TERRESTRIAL ECOSYSTEM RESPONSE TO GL OBAL  
 CHANGE  
 10/10/1997 - 08/31/2000      FY01: -\$34                    Total: \$65,966  
*Prin. Invest.:* M PRATHER  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30203**                    **UNIV OF CALIFORNIA - IRVINE**                    **2366**  
 LOW LATITUDE NONLINEAR BEHAVIOR OF ROSSBY WAVES COMPOSED OF  
 A SPECTRUM OF PHASE SPEEDS/STUDENT  
 08/19/1999 - 08/31/2002      FY01: \$22,000                    Total: \$66,000  
*Prin. Invest.:* G MAGNUSDOTTIR  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30409**                    **UNIV OF CALIFORNIA - IRVINE**                    **2367**  
 AN INVESTIGATION OF THE RELATIONSHIP BETWEEN CARBO N STORAGE  
 AND METHANE EMISSION IN RICE PADDIES/ST  
 08/15/2001 - 08/31/2004      FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* S TYLER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



**NGT 5 50226 UNIV OF CALIFORNIA - IRVINE 2368**  
 SIGMA D MEASUREMENT OF METHANE AND MOLECULAR HYDRO GEN IN  
 THE ATMOSPHERE  
 09/29/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R J RICE, RICE  
*Tech. Officer:* HQ/A NURRIDDIN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50317 UNIV OF CALIFORNIA - IRVINE 2369**  
 SIMULATED MICROGRAVITY ALTERS VASCULAR CONTRACTILITY: ROLE  
 OF CALCIUM DEPENDENT PKC-MEDIATED NON-  
 07/11/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* R E PURDY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50325 UNIV OF CALIFORNIA - IRVINE 2370**  
 METHYL HALIDE EMISSIONS: THE ATMOSPHERIC IMPACT OF AGRICUL-  
 TURE  
 08/17/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* R J CICERONE  
*Tech. Officer:* GSFC/M W WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 1 1899 UNIV OF CALIFORNIA - LOS ANGELES 2371**  
 STRATOSPHERIC AEROSOL MICROPHYSICS AND PHYSICAL CHEMISTRY:  
 MODELING AND OBSERVATIONS  
 04/01/1997 - 03/31/2001 FY01: \$0 Total: \$356,960  
*Prin. Invest.:* R P TURCO  
*Tech. Officer:* LARC/G MADERA, LARC/M M POTEAT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 1966 UNIV OF CALIFORNIA - LOS ANGELES 2372**  
 RADIATIVE TRANSFER AND SATELLITE REMOTE SOUNDING OF CIRRUS  
 CLOUDS USING FIRE-II-IFO DATA  
 09/08/1997 - 05/07/2000 FY01: -\$1 Total: \$205,000  
*Prin. Invest.:* K N LIU, S C OUPrin. Invest.: NONE  
*Tech. Officer:* LARC/D S MCDUGAL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2097 UNIV OF CALIFORNIA - LOS ANGELES 2373**  
 AIRCRAFT AEROSOLS AND CONTRAILS: MICROPHYSICAL PROCESS AND  
 EVOLUTION  
 09/10/1998 - 09/09/2001 FY01: \$0 Total: \$162,189  
*Prin. Invest.:* R P TURCO  
*Tech. Officer:* LARC/W L GROSE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2274 UNIV OF CALIFORNIA - LOS ANGELES 2374**  
 DEVELOPMENT OF MLPG AND LBIE METHODS FOR NONLINEAR PROBL-  
 EMS OF FRACTURE  
 03/01/2000 - 12/14/2000 FY01: \$0 Total: \$65,000  
*Prin. Invest.:* S N ATLURI  
*Tech. Officer:* LARC/I S RAJA  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 01082 UNIV OF CALIFORNIA - LOS ANGELES 2375**  
 MESHLESS (MLPG AND LBIE) METHODS FOR NONLINEAR ANALYSES  
 05/22/2001 - 05/31/2002 FY01: \$65,005 Total: \$65,005  
*Prin. Invest.:* S N ATTURE, NONE  
*Tech. Officer:* LARC/J S RAJA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1193 UNIV OF CALIFORNIA - LOS ANGELES 2376**  
 MECHANICAL SIGNAL TRANSDUCTION IN COUNTERMEASURES OF  
 PHYSIOLOGICAL SCIENCE  
 03/25/1998 - 04/30/2002 FY01: \$0 Total: \$536,583  
*Prin. Invest.:* T J TIDBALL  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1222 UNIV OF CALIFORNIA - LOS ANGELES 2377**  
 HYPERGRAVITY-INDUCED MODIFICATIONS IN SPATIO-TEMPORAL CODING  
 AMONG UTRICULAR PRIMARY AFFERENT NEURO  
 05/22/1998 - 12/31/2001 FY01: \$197,057 Total: \$539,538  
*Prin. Invest.:* L F HOFFMAN  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1238 UNIV OF CALIFORNIA - LOS ANGELES 2378**  
 SCALABLE NUMERICAL ALGORITHMS ON NON-HETEROGENEOUS  
 COMPUTING ENVIRONMENTS WITH DYNAMIC ROUTING & LOAD  
 07/17/1998 - 06/30/2001 FY01: \$0 Total: \$120,000  
*Prin. Invest.:* T F CHAN  
*Tech. Officer:* ARC/T J BARTH  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1249 UNIV OF CALIFORNIA - LOS ANGELES 2379**  
 NEXT GENERATION INTERNET BANDWIDTH & TRAFFIC MANAGEMENT  
 08/19/1998 - 05/31/2001 FY01: \$0 Total: \$280,418  
*Prin. Invest.:* M GERLA  
*Tech. Officer:* ARC/B H WHITAKER, ARC/B H WHITAKER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1270 UNIV OF CALIFORNIA - LOS ANGELES 2380**  
 NEUROMUSCULAR ADAPTATIONS OF RHESUS MACAQUES TO A HYPERDY-  
 NAMIC ENVIRONMENT  
 09/18/1998 - 12/31/2000 FY01: \$0 Total: \$257,004  
*Prin. Invest.:* V R EDGERTON, J HODGSON, R ROY  
*Tech. Officer:* ARC/R E GRINDELAND, ARC/K L SOUZA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1324 UNIV OF CALIFORNIA - LOS ANGELES 2381**  
 COMPUTATION OF HIGH-SPEED JET NOISE  
 05/20/1999 - 05/14/2001 FY01: \$0 Total: \$40,000  
*Prin. Invest.:* J B FREUND  
*Tech. Officer:* ARC/D KWAK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1484 UNIV OF CALIFORNIA - LOS ANGELES 2382**  
 MANAGEMENT OF AIR CEHICLE SYSTEMS  
 05/14/2001 - 05/14/2002 FY01: \$66,000 Total: \$66,000  
*Prin. Invest.:* J L SPEYER  
*Tech. Officer:* ARC/L TOBIAS, ARC/Y C JUNG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 1819 UNIV OF CALIFORNIA - LOS ANGELES 2383**  
 STUDIES IN THERMOCAPILIARY CONVECTION OF THE MARAN GONI-  
 BERNARD TYPE  
 05/06/1996 - 05/05/2001 FY01: \$0 Total: \$320,000  
*Prin. Invest.:* R E KELLY  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 1832 UNIV OF CALIFORNIA - LOS ANGELES 2384**  
 INVESTIGATION OF MECHANISMS ASSOCIATED WITH NUCLEA TE BOILING  
 UNDER MICROGRAVITY CONDITIONS  
 05/06/1996 - 08/30/2000 FY01: \$0 Total: \$764,880  
*Prin. Invest.:* V K DHIR*Prin. Invest.:* NONE  
*Tech. Officer:* GRC/D F SHAO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 1849 UNIV OF CALIFORNIA - LOS ANGELES 2385**  
 THE MELTING OF AQUEOUS FOAMS  
 05/06/1996 - 05/31/2000 FY01: \$0 Total: \$640,000  
*Prin. Invest.:* D J DURIAN  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 1862 UNIV OF CALIFORNIA - LOS ANGELES 2386**  
 FINITE SIZE EFFECTS NEAR THE LIQUID-GAS CRITICAL P OINT OF 3HE  
 05/08/1996 - 05/22/2001 FY01: \$0 Total: \$308,200  
*Prin. Invest.:* J RUDNICK  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 1889 UNIV OF CALIFORNIA - LOS ANGELES 2387**  
 CONTAINERLESS RIPPLE TURBULENCE  
 05/31/1996 - 05/30/2000 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* S PUTTERMAN  
*Tech. Officer:* GRC/R ROGERS  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2108 UNIV OF CALIFORNIA - LOS ANGELES 2388**  
 DIFFUSING LIGHT PHOTOGRAPHY OF CONTAINERLESS RIPPL E TURBU-  
 LENCE  
 03/01/1998 - 01/07/2002 FY01: \$215,000 Total: \$615,000  
*Prin. Invest.:* S J PUTTERMAN  
*Tech. Officer:* GRC/W M DUVAL  
*CASE Category:* 13 - PHYSICS

**NAG 3 2344 UNIV OF CALIFORNIA - LOS ANGELES 2389**  
 EVALUATION AND IMPROVEMENT OF JET NOISE MODELS AND EXPERI-  
 MENTAL TECHNIQUESUSING HIGH FIDELITY SIMU  
 03/07/2000 - 09/30/2001 FY01: \$40,001 Total: \$106,001  
*Prin. Invest.:* J B FREUND  
*Tech. Officer:* GRC/J BRIDGES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2397 UNIV OF CALIFORNIA - LOS ANGELES 2390**  
 TRANSITION FROM POOL TO FLOW BOILING - THE EFFECT OF REDUCED  
 GRAVITY  
 04/18/2000 - 11/30/2003 FY01: \$95,010 Total: \$144,999  
*Prin. Invest.:* V K DHIR  
*Tech. Officer:* GRC/D F CHAO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2467 UNIV OF CALIFORNIA - LOS ANGELES 2391**  
 A MECHANISTIC STUDY OF NUCLEATE BOILING HEAT TRANS FER UNDER  
 MICROGRAVITY CONDITIONS  
 06/21/2000 - 05/15/2005 FY01: \$190,000 Total: \$300,000  
*Prin. Invest.:* V K DHIR  
*Tech. Officer:* GRC/D F CHAO  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2481 UNIV OF CALIFORNIA - LOS ANGELES 2392**  
 THE MELTING OF AQUEOUS FOAMS THE MELTING OF AQUEOUS FOAMS  
 08/01/2000 - 05/31/2005 FY01: \$190,000 Total: \$328,000  
*Prin. Invest.:* D J DURIAN  
*Tech. Officer:* GRC/F P CHARIAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 713 UNIV OF CALIFORNIA - LOS ANGELES 2393**  
 ESTIMATION THEORY SATELLITE DATA ASSIMULATION AND ATMOSPHERIC  
 PREDICTABILITY  
 09/15/1985 - 12/31/1999 FY01: \$5 Total: \$1,682,999  
*Prin. Invest.:* M GHIL  
*Tech. Officer:* GSFC/J PFAENDTNER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 3235 UNIV OF CALIFORNIA - LOS ANGELES 2394**  
 THE COUPLED MAGNETOSPHERE-IONOSPHERE: AURORAL ARC S AND  
 SUBSTORM BREAKUP  
 05/16/1996 - 05/31/2000 FY01: \$0 Total: \$715,000  
*Prin. Invest.:* F V CORONITI  
*Tech. Officer:* GSFC/J J GREBOWSKY, HQ/J D BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 3764 UNIV OF CALIFORNIA - LOS ANGELES 2395**  
 SOURCE DETERMINATION FOR SUBSTORM-RELATED ION INJE  
 02/13/1997 - 04/14/2001 FY01: \$0 Total: \$165,000  
*Prin. Invest.:* R J STRANGWAY  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 3863 UNIV OF CALIFORNIA - LOS ANGELES 2396**  
 THERMAL AND DYNAMICAL PROCESSES IN THE EVOLUTION O SATELLITES  
 02/14/1997 - 11/30/2001 FY01: \$80,000 Total: \$396,000  
*Prin. Invest.:* G SCHUBERT  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3956 UNIV OF CALIFORNIA - LOS ANGELES 2397**  
 VENUS TECTONICS AND EVOLUTION  
 03/12/1997 - 02/14/2002 FY01: \$39,000 Total: \$183,780  
*Prin. Invest.:* W M KAULA  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4117 UNIV OF CALIFORNIA - LOS ANGELES 2398**  
 DYNAMICAL STUDIES OF PLANETARY AND SATELLITE ATMOS  
 02/28/1997 - 01/31/2002 FY01: \$0 Total: \$304,781  
*Prin. Invest.:* P SCHUBERT  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4215 UNIV OF CALIFORNIA - LOS ANGELES 2399**  
 PRISTINE IGNEOUS ROCKS AND THE EARLY DIFFERENTIATED MATERIALS  
 03/19/1997 - 12/14/2001 FY01: \$135,000 Total: \$744,000  
*Prin. Invest.:* D H WARREN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 4270 UNIV OF CALIFORNIA - LOS ANGELES 2400**  
 ELECTRON PRECIPITATION FROM THE INNER MAGNETOSPHERE THE  
 MIDDLE ATMOSPHERE  
 04/04/1997 - 04/30/2001 FY01: \$0 Total: \$216,557  
*Prin. Invest.:* D M THORNE  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 4331 UNIV OF CALIFORNIA - LOS ANGELES 2401**  
 COSMOCHEMICAL STUDIES: CHONDRITE COMPONENTS AND D METEOR-  
 ITES  
 04/16/1997 - 01/31/2001 FY01: \$0 Total: \$599,000  
*Prin. Invest.:* D T WASSON  
*Tech. Officer:* GSFC/D F NAVA  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 4339 UNIV OF CALIFORNIA - LOS ANGELES 2402**  
 THE ROLE OF THIN CURRENT SHEETS IN PLASMA SHEET CO DISRUPTION  
 04/12/1997 - 10/31/2001 FY01: \$0 Total: \$324,270  
*Prin. Invest.:* D L PRITCHETT  
*Tech. Officer:* GSFC/J D BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 4420 UNIV OF CALIFORNIA - LOS ANGELES 2403**  
 NUMERICAL MODELING OF THE GLOBAL ATMOSPHERE  
 05/01/1997 - 12/31/2000 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* A ARAKAWA  
*Tech. Officer:* GSFC/M SUAREZ  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4688 UNIV OF CALIFORNIA - LOS ANGELES 2404**  
 TOWARD OTHER SOLAR SYSTEMS: GAS, DUST, BROWN DWARF  
 06/17/1997 - 04/30/2002 FY01: \$0 Total: \$147,000  
*Prin. Invest.:* D M ZUCKERMAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4704 UNIV OF CALIFORNIA - LOS ANGELES 2405**  
 ISOTOPIC INVESTIGATIONS OF NEBULAR AND PARENT-BODY SENSITIVITY  
 ION MICROPROBE  
 08/13/1997 - 07/14/2000 FY01: \$0 Total: \$325,700  
*Prin. Invest.:* D D MCKEEGAN  
*Tech. Officer:* HQ/J F BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4766 UNIV OF CALIFORNIA - LOS ANGELES 2406**  
 CHONDRITIC METEORITES: NEBULAR AND PARENT-BODY FO  
 06/05/1997 - 05/31/2002 FY01: \$54,000 Total: \$253,000  
*Prin. Invest.:* D E RUBIN  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6265 UNIV OF CALIFORNIA - LOS ANGELES 2407**  
 ASSYM. AURORAL PROCESSES  
 08/21/1997 - 06/30/2001 FY01: \$0 Total: \$246,911  
*Prin. Invest.:* D M THORNE  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6272 UNIV OF CALIFORNIA - LOS ANGELES 2408**  
 CONDENSATION OF THE MARTIAN ATMOSPHERE DURING POLA DYNAMICS  
 & MICROPHYSICS  
 08/27/1997 - 08/31/2000 FY01: \$0 Total: \$60,400  
*Prin. Invest.:* D PAIGE  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6332 UNIV OF CALIFORNIA - LOS ANGELES 2409**  
 OBSERVATIONAL AND THEORETICAL STUDIES OF SOLAR STR  
 09/30/1997 - 10/31/2000 FY01: \$0 Total: \$627,807  
*Prin. Invest.:* D K ULRICH  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6377 UNIV OF CALIFORNIA - LOS ANGELES 2410**  
 SUBSTORM BREAK-UP AS A COUPLED MAGNETOSPHERE-IONO SPHERE  
 INSTABILITY  
 10/08/1997 - 08/31/2000 FY01: \$0 Total: \$126,000  
*Prin. Invest.:* D PELLAT  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 6680 UNIV OF CALIFORNIA - LOS ANGELES 2411**  
 SPECTRAL DISTRIBUTION OF SOLAR IRRADIANCE VARIABILITY  
 12/08/1997 - 11/30/2000 FY01: \$0 Total: \$124,624  
*Prin. Invest.:* D M PAP  
*Tech. Officer:* GSFC/C JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6689 UNIV OF CALIFORNIA - LOS ANGELES 2412**  
 THEORETICAL TECHNOLOGY RESEARCH FOR THE INTERNATIONAL  
 SOLAR TERRESTRIAL PHYSICS (ISTP) PROGRAM.  
 12/01/1997 - 09/30/2001 FY01: \$0 Total: \$1,514,500  
*Prin. Invest.:* M ABDALLA  
*Tech. Officer:* GSFC/S CURTIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6965 UNIV OF CALIFORNIA - LOS ANGELES 2413**  
 PICK-UP ION INSTABILITIES AT PLANETARY MAGNETOSPHERE RES  
 03/03/1998 - 03/31/2001 FY01: \$0 Total: \$96,968  
*Prin. Invest.:* R J STRANGWAY  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6975 UNIV OF CALIFORNIA - LOS ANGELES 2414**  
 THE ROLE OF COMPANION STARS IN PLANETARY FORMATION  
 03/25/1998 - 06/30/2002 FY01: \$0 Total: \$116,600  
*Prin. Invest.:* A GHEZ  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7123 UNIV OF CALIFORNIA - LOS ANGELES 2415**  
 LIGHT SCATTERING AND REMOTE SENSING OF CIRRUS CLOUDS USING  
 MODIS CHANNELS  
 04/16/1998 - 09/30/2000 FY01: \$0 Total: \$123,000  
*Prin. Invest.:* K N LIU  
*Tech. Officer:* GSFC/M D KING  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7555 UNIV OF CALIFORNIA - LOS ANGELES 2416**  
 REAL-TIME FORECASTING AND RAPID POST-EVENT ASSESSMENT OF  
 EROSIONAL AND DEPOSITIONAL FLOOD DAMAGE  
 06/25/1998 - 08/31/2002 FY01: \$0 Total: \$330,915  
*Prin. Invest.:* L C SMITH  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7721 UNIV OF CALIFORNIA - LOS ANGELES 2417**  
 POLAR MAGNETIC FIELD EXPERIMENT  
 09/23/1998 - 09/30/2001 FY01: \$380,000 Total: \$1,377,000  
*Prin. Invest.:* C T RUSSELL  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7738 UNIV OF CALIFORNIA - LOS ANGELES 2418**  
 RADIATIVE TRANSFER AND REMOTE SENSING IN AEROSOL ATMOSPHERE.  
 10/02/1998 - 09/30/2002 FY01: \$85,000 Total: \$245,000  
*Prin. Invest.:* K LIU  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7899 UNIV OF CALIFORNIA - LOS ANGELES 2419**  
 QUASI-CONTINUOUS ROSAT MONITORING OF THE EXTREME N ARROW-LINE  
 SEYFERT 1 GALAXY IRAS 13224-3809 ADP 9  
 01/03/1999 - 12/31/2000 FY01: \$0 Total: \$38,000  
*Prin. Invest.:* R A EDELSON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7907 UNIV OF CALIFORNIA - LOS ANGELES 2420**  
 STUDY OF TOTAL SOLAR AND SPECTRAL IRRADIANCE VARIATIONS  
 BASED ON THE SOHO/VIRGO AND MDI MEASUREMENTS  
 12/04/1998 - 05/14/2001 FY01: \$0 Total: \$205,228  
*Prin. Invest.:* J M PAP  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7924 UNIV OF CALIFORNIA - LOS ANGELES 2421**  
 EVOLUTION OF DUST AROUND MAIN SEQUENCE STARS (LISA - 98)  
 01/06/1999 - 12/14/2001 FY01: \$69,118 Total: \$201,354  
*Prin. Invest.:* M A JURA  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7959 UNIV OF CALIFORNIA - LOS ANGELES 2422**  
 THE GALILEAN MOONS OF JUPITER: INFERRING INTERNAL PROPERTIES  
 OF NEW WORLDS FROM THEIR INTERACTIONS  
 01/08/1999 - 11/30/2001 FY01: \$0 Total: \$178,006  
*Prin. Invest.:* D G KIVELSON, NONE  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7962 UNIV OF CALIFORNIA - LOS ANGELES 2423**  
 DYNAMICS OF THE R=10-30 RE MAGNETOTAIL DURING GEOMAGNETIC  
 DISTURBANCES  
 12/23/1998 - 12/14/2001 FY01: \$84,000 Total: \$247,000  
*Prin. Invest.:* L R LYONS  
*Tech. Officer:* GSFC/L ZANETTI  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7995 UNIV OF CALIFORNIA - LOS ANGELES 2424**  
 CALIBRATION AND COMPARISON BETWEEN MDI, GOLF, AND MT. WILSON  
 DATA 11  
 01/05/1999 - 12/31/2001 FY01: \$255,000 Total: \$751,562  
*Prin. Invest.:* R K ULRICH  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8050 UNIV OF CALIFORNIA - LOS ANGELES 2425**  
 SOME STUDIES OF STRUCTURE AND DYNAMICS OF JUPITER'S MAGNETOSPHERE  
 01/15/1999 - 11/30/2001 FY01: \$0 Total: \$123,696  
*Prin. Invest.:* D K KHURANA  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8055 UNIV OF CALIFORNIA - LOS ANGELES 2426**  
 A GLOBAL MAGNETOHYDRODYNAMIC MODEL OF THE JOVIAN MAGNETOSPHERE  
 01/15/1999 - 01/31/2001 FY01: \$0 Total: \$60,000  
*Prin. Invest.:* R J WALKER  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8059 UNIV OF CALIFORNIA - LOS ANGELES 2427**  
 MULTIPLE SCALE STRUCTURE OF AURORAL ARCS  
 01/14/1999 - 01/31/2002 FY01: \$72,468 Total: \$207,418  
*Prin. Invest.:* F V CORONITI  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 8060 UNIV OF CALIFORNIA - LOS ANGELES 2428**  
 THE PHYSICAL NATURE OF THE ELECTRON CYCLOTRON MASE R  
 INSTABILITY IN THE AKR SOURCE REGION  
 01/14/1999 - 01/31/2002 FY01: \$61,569 Total: \$177,301  
*Prin. Invest.:* P L PRITCHETT  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8064 UNIV OF CALIFORNIA - LOS ANGELES 2429**  
 JOVIAN SUBSTORMS: A STUDY OF PROCESSES LEADING TO TRANSIENT  
 BEHAVIOR IN THE JOVIAN MAGNETOSPHERE  
 01/11/1999 - 12/31/2000 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* C T RUSSELL  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8065 UNIV OF CALIFORNIA - LOS ANGELES 2430**  
 NON-ADIABATIC PLASMA PROCESSES IN THE JOVIAN MAGNETOSPHERE  
 AND COUPLING TO THE ATMOSPHERE  
 01/11/1999 - 06/30/2002 FY01: \$0 Total: \$105,000  
*Prin. Invest.:* D M THORNE  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8066 UNIV OF CALIFORNIA - LOS ANGELES 2431**  
 ANALYSIS AND INTERPRETATION OF JOVIAN ATMOSPHERE A ND  
 SATELLITE DATA FROM THE GALILEO MISSION  
 01/12/1999 - 12/31/2001 FY01: \$0 Total: \$105,000  
*Prin. Invest.:* D SCHUBERT  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8085 UNIV OF CALIFORNIA - LOS ANGELES 2432**  
 ELECTRON DYNAMICS IN THE MAGNETOTAIL  
 01/29/1999 - 12/31/2001 FY01: \$80,230 Total: \$230,315  
*Prin. Invest.:* D SCHRIVER  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8132 UNIV OF CALIFORNIA - LOS ANGELES 2433**  
 RESEARCH:"SUBSTORM EXPANSION PHASE DYNAMICS", 1-YE AR  
 FUNDING TO SUPPORT COMPLETION OF PI'S STUDY FU  
 02/04/1999 - 05/31/2001 FY01: \$0 Total: \$108,000  
*Prin. Invest.:* F CORONITE  
*Tech. Officer:* GSFC/J GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 8335 UNIV OF CALIFORNIA - LOS ANGELES 2434**  
 EVOLUTION OF DUST AROUND YOUNG MAIN SEQUENCE STARS  
 02/24/1999 - 02/28/2002 FY01: \$23,000 Total: \$65,400  
*Prin. Invest.:* D JURA  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8470 UNIV OF CALIFORNIA - LOS ANGELES 2435**  
 BIOMARKERS FOR MARS EXPLORATION  
 05/06/1999 - 07/31/2002 FY01: \$0 Total: \$84,287  
*Prin. Invest.:* D F KERRIDGE  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8507 UNIV OF CALIFORNIA - LOS ANGELES 2436**  
 STUDY OF THE TERRESTRIAL EFFECTS OF SOLAR IRRADIANCE VARI-  
 ATIONS FROM EUV TO INFRARED: A NEW APPROACH  
 05/10/1999 - 04/30/2002 FY01: \$96,259 Total: \$175,541  
*Prin. Invest.:* J M PAPP  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8530 UNIV OF CALIFORNIA - LOS ANGELES 2437**  
 MINING LUNAR PROSPECTOR'S GRAVITY DATA FOR INSIGHTS INTO THE  
 MECHANICAL AND THERMAL EVOLUTION OF THE  
 06/15/1999 - 06/30/2002 FY01: \$15,000 Total: \$76,000  
*Prin. Invest.:* G SCHUBERT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8540 UNIV OF CALIFORNIA - LOS ANGELES 2438**  
 PRIOR GRANT NAG5-3252 CONTINUATION OF MAP SCIENCE SUPPORT  
 ACTIVITIES BEING IMPLEMENTED BY THE MAP  
 08/19/1999 - 08/14/2002 FY01: \$96,702 Total: \$216,263  
*Prin. Invest.:* E L WRIGHT, NONE  
*Tech. Officer:* GSFC/C BENNETT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8693 UNIV OF CALIFORNIA - LOS ANGELES 2439**  
 BLACK HOLES IN EARLY TYPE GALAXIES: INCIDENCE, FORMATION AND  
 EVOLUTION (LTSA 98)  
 09/08/1999 - 08/31/2000 FY01: \$0 Total: \$109,333  
*Prin. Invest.:* L FERRARESE  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8694 UNIV OF CALIFORNIA - LOS ANGELES 2440**  
 DECENTRALIZED ESTIMATION & CONTROL OF DISTRIBUTED SPACECRAFT  
 07/29/1999 - 07/31/2001 FY01: \$0 Total: \$253,525  
*Prin. Invest.:* J SPEYER  
*Tech. Officer:* GSFC/J CARPENTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 8812 UNIV OF CALIFORNIA - LOS ANGELES 2441**  
 HIGH RESOLUTION SOLAR TRANSMISSION MEASUREMENTS FOR THE  
 DETECTION OF AEROSOLS AND CLOUDS  
 09/15/1999 - 09/30/2001 FY01: \$0 Total: \$198,326  
*Prin. Invest.:* A ELDERING  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8879 UNIV OF CALIFORNIA - LOS ANGELES 2442**  
 PRECISE RELATIVE STATE ESTIMATION & CONTROL OF DISTRIBUTED  
 SATELLITE NETWORKS  
 11/15/1999 - 11/14/2001 FY01: \$204,430 Total: \$386,230  
*Prin. Invest.:* J L SPEYER  
*Tech. Officer:* GSFC/R CARPENTER  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 8938 UNIV OF CALIFORNIA - LOS ANGELES 2443**  
 MAGNETIC FLUCTUATIONS IN THE JOVIAN MAGNETOSPHERE  
 01/13/2000 - 01/14/2002 FY01: \$70,600 Total: \$137,900  
*Prin. Invest.:* C T RUSSELL  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9014 UNIV OF CALIFORNIA - LOS ANGELES 2444**  
 INTERACTION OF LAND SURFACE COVER/CHARACTERISTICS & SURFACE  
 HYDROCLIMATOLOGY AT SEASONAL/INTERANNUAL  
 02/03/2000 - 07/31/2001 FY01: -\$11,308 Total: \$217,819  
*Prin. Invest.:* Y XUE  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9023 UNIV OF CALIFORNIA - LOS ANGELES 2445**  
 DETERMINING THE LONG TERM VARIABILITY AND CHARACTERISTIC TIME  
 SCALES OF AGN - ADP 99  
 02/22/2000 - 02/28/2001 FY01: \$0 Total: \$56,000  
*Prin. Invest.:* R A EDELSON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9027 UNIV OF CALIFORNIA - LOS ANGELES 2446**  
 GLOBAL SURFACE GEOCHEMISTRY & THE DIFFERENTIATION, BULK  
 COMPOSITION, & ORIGIN OF THE MOON  
 02/04/2000 - 02/14/2002 FY01: \$23,000 Total: \$45,000  
*Prin. Invest.:* P H WARREN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9071 UNIV OF CALIFORNIA - LOS ANGELES 2447**  
 CONSEQUENCES OF HIGH-LATITUDE RECONNECTION  
 02/15/2000 - 02/14/2003 FY01: \$80,828 Total: \$153,828  
*Prin. Invest.:* J P BERCHEM  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9074 UNIV OF CALIFORNIA - LOS ANGELES 2448**  
 PARTICLE TRANSPORT IN THE IO TORUS AND NEAR THE MOONS IO AND EUROPA  
 02/15/2000 - 03/31/2002 FY01: \$55,000 Total: \$100,000  
*Prin. Invest.:* R THORNE  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9111 UNIV OF CALIFORNIA - LOS ANGELES 2449**  
 MHD TURBULENCE SIMULATION OF THE DYNAMICS OF THE MAGNETOTAL  
 02/23/2000 - 02/28/2002 FY01: \$48,420 Total: \$89,920  
*Prin. Invest.:* C WU  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9207 UNIV OF CALIFORNIA - LOS ANGELES 2450**  
 ANALYSIS AND VALIDATION OF THE UARS/ACRIM II DATA  
 03/10/2000 - 10/14/2001 FY01: \$0 Total: \$24,740  
*Prin. Invest.:* J PAP  
*Tech. Officer:* GSFC/R CAHALAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9255 UNIV OF CALIFORNIA - LOS ANGELES 2451**  
 THE INTERPLANETARY MAGNETIC FIELD AND THE MAGNETOSPHERIC CURRENT SYSTEMS  
 03/15/2000 - 02/28/2002 FY01: \$79,737 Total: \$150,737  
*Prin. Invest.:* M EL-ALAOUI  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9294 UNIV OF CALIFORNIA - LOS ANGELES 2452**  
 SEQUENTIAL ESTIMATION & PREDICTABILITY STUDIES FOR THE ATMOSPHERE & OCEANS  
 04/10/2000 - 04/14/2002 FY01: \$120,000 Total: \$220,000  
*Prin. Invest.:* M GHIL  
*Tech. Officer:* GSFC/S COHN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9299 UNIV OF CALIFORNIA - LOS ANGELES 2453**  
 NEW GRANT EXTEND SOLAR MAX: INVESTIGATION OF HIGH LATITUDE PHENOMENA USING POLAR DATA  
 05/04/2000 - 05/14/2001 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* C RUSSEL  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9358 UNIV OF CALIFORNIA - LOS ANGELES 2454**  
 SENSITIVITY OF PRECIPITATION IN COUPLED LAND-ATMOSPHERE MODELS  
 04/06/2000 - 06/30/2002 FY01: \$100,000 Total: \$150,000  
*Prin. Invest.:* D J NEELIN  
*Tech. Officer:* GSFC/K BERGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9431 UNIV OF CALIFORNIA - LOS ANGELES 2455**  
 TO CONSTRUCT A MODEL STELLAR POPULATION SCALED TO THE SURFACE BRIGHTNESS OF DISK, HALO, AND BULGE FIE  
 04/14/2000 - 04/14/2001 FY01: \$0 Total: \$10,000  
*Prin. Invest.:* D RICH  
*Tech. Officer:* GSFC/E P SMITH  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 9441 UNIV OF CALIFORNIA - LOS ANGELES 2456**  
 THE METEORITIC COMPONENT IN IMPACT DEPOSITS  
 04/13/2000 - 04/14/2002 FY01: \$55,000 Total: \$110,000  
*Prin. Invest.:* F T KYTE  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9546 UNIV OF CALIFORNIA - LOS ANGELES 2457**  
 DEVELOPMENT OF GLOBAL MAGNETOSPHERIC FIELD MODELS OF JUPITER  
 05/15/2000 - 05/14/2002 FY01: \$84,428 Total: \$160,528  
*Prin. Invest.:* K K KHURANA  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9573 UNIV OF CALIFORNIA - LOS ANGELES 2458**  
 TOWARD OTHER PLANETARY SYSTEMS: IMAGING OF MASSIVE PLANETS AND DUSTY DEBRIS DISKS  
 05/08/2000 - 04/30/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* B ZUCKERMAN  
*Tech. Officer:* HQ/J M BOYCE  
*CASE Category:* 13 - PHYSICS

**NAG 5 9667 UNIV OF CALIFORNIA - LOS ANGELES 2459**  
 REMOTE SENSING OF THE OPTICAL & MICROPHYSICAL PROPERTIES OF CIRRUS CLOUDS USING MODIS CHANNELS  
 05/30/2000 - 08/31/2001 FY01: \$40,000 Total: \$80,000  
*Prin. Invest.:* K N LIU  
*Tech. Officer:* GSFC/M KING  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9693 UNIV OF CALIFORNIA - LOS ANGELES 2460**  
 NEW ISTP SOLAR MAX: INTERACTIVE LEARNING DURING SOLAR MAX  
 06/27/2000 - 06/30/2001 FY01: \$0 Total: \$50,313  
*Prin. Invest.:* M ASHOUR-ABDALLA  
*Tech. Officer:* GSFC/S CURTIS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9713 UNIV OF CALIFORNIA - LOS ANGELES 2461**  
 INFLUENCE OF LAND SURFACE PROCESSES/LAND COVER CHANGES IN AMAZON ON REGIONAL HYDROLOGICAL METEOROLOGY  
 07/06/2000 - 03/14/2002 FY01: \$104,242 Total: \$246,426  
*Prin. Invest.:* Y XUE  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9772 UNIV OF CALIFORNIA - LOS ANGELES 2462**  
 SOLAR MAX EXTENDED SCIENCE PROGRAM  
 06/30/2000 - 06/30/2002 FY01: \$50,000 Total: \$100,000  
*Prin. Invest.:* M ASHOUR-ABDOLLA  
*Tech. Officer:* GSFC/S CURTIS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9789 UNIV OF CALIFORNIA - LOS ANGELES 2463**  
 ISOTOPIC INVESTIGATIONS OF NEBULAR AND PARENT BODY PROCESSES  
 WITH HIGH SENSITIVITY ION MICROPROBE  
 07/11/2000 - 07/14/2002 FY01: \$109,000 Total: \$218,000  
*Prin. Invest.:* K D MCKEEGAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9826 UNIV OF CALIFORNIA - LOS ANGELES 2464**  
 THE LOCAL DISTANCE SCALE: APPLICATION OF THE TIP OF THE RED  
 GIANT BRANCH DISTANCE INDICATOR - LTSA  
 08/23/2000 - 08/31/2002 FY01: \$81,200 Total: \$159,900  
*Prin. Invest.:* S SAKAI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9860 UNIV OF CALIFORNIA - LOS ANGELES 2465**  
 OCEAN CARBON FLUX: TRANSPORT, & BURIAL WITHIN THE WESTERN &  
 EASTERN U.S. COASTAL ZONES  
 08/07/2000 - 06/30/2002 FY01: \$126,200 Total: \$208,200  
*Prin. Invest.:* J MCWILLIAMS  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 10032 UNIV OF CALIFORNIA - LOS ANGELES 2466**  
 AN XMM LONG-LOOK AT NGC5548  
 09/26/2000 - 09/30/2002 FY01: \$16,000 Total: \$46,500  
*Prin. Invest.:* R EDELSON  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10282 UNIV OF CALIFORNIA - LOS ANGELES 2467**  
 MAGNETOHYDRODYNAMIC MODELING OF THE JOVIAN MAGNETO SPHERE  
 01/23/2001 - 01/31/2002 FY01: \$89,771 Total: \$89,771  
*Prin. Invest.:* R WALKER, NONE  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10287 UNIV OF CALIFORNIA - LOS ANGELES 2468**  
 KINETIC PHYSICS OF THE STRESSED NEAR-EARTH PLASMA SHEET  
 01/23/2001 - 01/31/2002 FY01: \$90,784 Total: \$90,784  
*Prin. Invest.:* P L PRITCHETT  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10351 UNIV OF CALIFORNIA - LOS ANGELES 2469**  
 SEARCH FOR MOLECULAR HYDROGEN AROUND VEGA-TYPE STARS  
 02/08/2001 - 02/14/2002 FY01: \$69,500 Total: \$69,500  
*Prin. Invest.:* M A JURA  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10354 UNIV OF CALIFORNIA - LOS ANGELES 2470**  
 UCLA CLUSTER-II MISSION PARTICIPATION  
 02/15/2001 - 02/14/2002 FY01: \$200,000 Total: \$200,000  
*Prin. Invest.:* D G KIVELSON  
*Tech. Officer:* GSFC/M ACUNA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10421 UNIV OF CALIFORNIA - LOS ANGELES 2471**  
 COSMOCHEMICAL STUDIES: METEORITES AND THEIR PARENT ASTEROIDS  
 02/15/2001 - 01/31/2002 FY01: \$155,000 Total: \$155,000  
*Prin. Invest.:* J WASSON  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10473 UNIV OF CALIFORNIA - LOS ANGELES 2472**  
 MAGNETOSPHERE-IONOSPHERE COUPLING IN THE AURORAL ZONE  
 02/27/2001 - 02/28/2002 FY01: \$75,407 Total: \$75,407  
*Prin. Invest.:* D SCHRIVER  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10490 UNIV OF CALIFORNIA - LOS ANGELES 2473**  
 ACQUISITION OF A NEW ELECTRON MICROPROBE AT UCLA  
 03/01/2001 - 02/28/2002 FY01: \$168,000 Total: \$168,000  
*Prin. Invest.:* P WARREN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10609 UNIV OF CALIFORNIA - LOS ANGELES 2474**  
 DETECTION AND MODELING OF MECHANICAL ICE BREAKUP IN LARGE  
 POLAR RIVERS WITH SAR INTERFEROMETRY  
 03/15/2001 - 03/14/2002 FY01: \$71,332 Total: \$71,332  
*Prin. Invest.:* L SMITH  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10615 UNIV OF CALIFORNIA - LOS ANGELES 2475**  
 LOCAL INVERSIONS OF THE MARTIAN GRAVITY FIELD AND INTERPRETA-  
 TIONS OF REGIONAL TECTONICS  
 03/16/2001 - 03/14/2002 FY01: \$49,000 Total: \$49,000  
*Prin. Invest.:* W MOORE  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10663 UNIV OF CALIFORNIA - LOS ANGELES 2476**  
 ADAPTIVE OPTICS IMAGING OF MASSIVE PLANETARY COMPANIONS TO  
 YOUNG STARS  
 03/22/2001 - 06/30/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* B ZUCKERMAN  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10685 UNIV OF CALIFORNIA - LOS ANGELES 2477**  
 APPLICATIONS AND VALIDATION OF THE SRTM DEM IN THE AMAZON  
 BASIN: HYDROLOGICAL AND GEOMORPHOLOGICAL  
 03/30/2001 - 02/28/2002 FY01: \$150,000 Total: \$150,000  
*Prin. Invest.:* D E ALSDORF  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10834 UNIV OF CALIFORNIA - LOS ANGELES 2478**  
 SOLAR CYCLE VARIATION AND MULTI-POINT STUDIES OF ICME PROP-  
 erties  
 04/27/2001 - 04/30/2002 FY01: \$77,870 Total: \$77,870  
*Prin. Invest.:* C T RUSSELL  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10905 UNIV OF CALIFORNIA - LOS ANGELES 2479**  
 TIME DEPENDENCE OF SOLAR MAGNETIC FIELDS  
 05/22/2001 - 05/31/2002 FY01: \$95,500 Total: \$95,500  
*Prin. Invest.:* R K ULRICH  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10973 UNIV OF CALIFORNIA - LOS ANGELES 2480**  
 MARS POLAR PROPERTIES AND CLIMATE HISTORY  
 05/24/2001 - 06/30/2002 FY01: \$75,000 Total: \$75,000  
*Prin. Invest.:* D PAIGE  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10986 UNIV OF CALIFORNIA - LOS ANGELES 2481**  
 SOLAR EFFECTS ON GLOBAL CLIMATE DUE TO COSMIC RAYS AND SOLAR  
 ENERGETIC PARTICLES  
 05/15/2001 - 05/14/2002 FY01: \$102,067 Total: \$102,067  
*Prin. Invest.:* J RAEDER  
*Tech. Officer:* GSFC/J F SPANN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11102 UNIV OF CALIFORNIA - LOS ANGELES 2482**  
 TECTONICS AND VOLCANISM IN AFAR USING RADARSAT INT ERFERO-  
 METRY DATA  
 07/10/2001 - 06/30/2002 FY01: \$84,285 Total: \$84,285  
*Prin. Invest.:* G PELTZER  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11210 UNIV OF CALIFORNIA - LOS ANGELES 2483**  
 DYNAMICAL STUDIES OF PLANETARY AND SATELLITE ATMO- SPHERES  
 08/09/2001 - 08/14/2003 FY01: \$70,000 Total: \$70,000  
*Prin. Invest.:* G SCHUBERT  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11216 UNIV OF CALIFORNIA - LOS ANGELES 2484**  
 MAGNETOSPHERE-IONOSPHERE COUPLING IN THE JOVIAN AU RORAL  
 ZONE  
 08/13/2001 - 08/31/2004 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* R THORNE  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11363 UNIV OF CALIFORNIA - LOS ANGELES 2485**  
 APPLICATIONS OF REMOTELY SENSED LAND SURFACE DATA FOR  
 SEASONAL AND LONG-TERM HYDROCLIMATE PREDICTION  
 09/28/2001 - 09/30/2003 FY01: \$206,667 Total: \$206,667  
*Prin. Invest.:* J KIM  
*Tech. Officer:* GSFC/M JACKSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1020 UNIV OF CALIFORNIA - LOS ANGELES 2486**  
 GENESIS DISCOVERY MISSION  
 07/16/1998 - 03/04/2002 FY01: \$41,000 Total: \$213,600  
*Prin. Invest.:* K D MCKEEGAN  
*Tech. Officer:* JSC/E K STANSBERRY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1252 UNIV OF CALIFORNIA - LOS ANGELES 2487**  
 OPTICAL BIOSENSORS FOR IN FLIGHT MEASUREMENT OF HORMONES  
 LEVELS  
 08/15/2000 - 07/31/2003 FY01: \$73,120 Total: \$87,744  
*Prin. Invest.:* B  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 4 00051 UNIV OF CALIFORNIA - LOS ANGELES 2488**  
 FORMATION FLIGHT TECHNOLOGY  
 09/18/2000 - 09/30/2003 FY01: \$425,000 Total: \$460,000  
*Prin. Invest.:* J L SPEYER  
*Tech. Officer:* DFRC/G L SPEYER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 5 00247 UNIV OF CALIFORNIA - LOS ANGELES 2489**  
 DESIGN, FABRICATION, & DELIVERY OF MAGNETOMETER SYSTEM FOR  
 THE ST-5 MISSION.  
 02/13/2001 - 08/01/2002 FY01: \$230,000 Total: \$230,000  
*Prin. Invest.:* R J STRANGWAY  
*Tech. Officer:* GSFC/A RUSSO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1050 UNIV OF CALIFORNIA - LOS ANGELES 2490**  
 ASTROBIOLOGY @ UCLA AN INTEGRATED MULTIDISCIPLINARY APPROACH  
 TO RESEARCH & EDUCATION  
 08/19/1998 - 06/30/2003 FY01: \$1,035,025 Total: \$2,523,373  
*Prin. Invest.:* B RUNNEGAR  
*Tech. Officer:* ARC/R A GRAYMES, ARC/W W DOLCI  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 3 690 UNIV OF CALIFORNIA - LOS ANGELES 2491**  
 ACOUSTICALLY FORCED CONDENSED PHASE FUEL COMBUSTIO N UNDER  
 MICRGRAVITY CONDITIONS  
 03/22/1999 - 12/29/2001 FY01: \$145,897 Total: \$359,059  
*Prin. Invest.:* O I SMITH  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 4 121 UNIV OF CALIFORNIA - LOS ANGELES 2492**  
 FLIGHT SYSTEMS RESEARCH CENTER  
 02/17/1999 - 10/31/2001 FY01: \$1,379,000 Total: \$3,869,530  
*Prin. Invest.:* A V BALAKRISHNAN  
*Tech. Officer:* SSC/K W IIIFF, SSC/R R MEYER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 149 UNIV OF CALIFORNIA - LOS ANGELES 2493**  
 GRAND CHALLENGE RESEARCH  
 08/09/1996 - 06/30/2000 FY01: \$0 Total: \$2,000,000  
*Prin. Invest.:* C MECHOSO  
*Tech. Officer:* GSFC/J R FISCHER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 5 301 UNIV OF CALIFORNIA - LOS ANGELES 2494**  
 EARTH PARTNERS' PRIVATE NETWORK  
 04/03/1998 - 02/28/2002 FY01: \$161,200 Total: \$2,443,600  
*Prin. Invest.:* R MUNTZ  
*Tech. Officer:* GSFC/M MAIDEN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



**NCC 5 385 UNIV OF CALIFORNIA - LOS ANGELES 2495**  
 REMOTE SENSING OF CIRRUS CLOUDS AND RADIATION EFFECTS IN THE  
 EVOLUTION OF CIRRUS CLOUDS  
 04/01/1999 - 04/14/2002 FY01: \$0 Total: \$75,000  
*Prin. Invest.:* K N LIU  
*Tech. Officer:* GSFC/W LAU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 1 01039 UNIV OF CALIFORNIA - LOS ANGELES 2496**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) YR.2  
 08/29/2001 - 06/30/2003 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* G P CARMEN  
*Tech. Officer:* LARC/R G BRYANT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52240 UNIV OF CALIFORNIA - LOS ANGELES 2497**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/10/2000 - 06/30/2001 FY01: \$12,001 Total: \$22,001  
*Prin. Invest.:* G P CARMEN  
*Tech. Officer:* LARC/R G BRYANT, LARC/J S HARRISON  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 2 52265 UNIV OF CALIFORNIA - LOS ANGELES 2498**  
 EFFECT OF SIMULATED MICROGRAVITY ON NT-3 EXPRESSION IN  
 PROPRIOCEPTIVE AFFERENT NEURONS IN RATS  
 07/14/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* V R EDGERTON, A J BIGBEE  
*Tech. Officer:* ARC/R E GRINDELAND, ARC/E M HOLTON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 112 UNIV OF CALIFORNIA - LOS ANGELES 2499**  
 DECENTRALIZED CONTROL OF DISTRIBUTED SATELLITE NETWORKS,  
 GSRP TRAINING GRANT. STUDENT: GENE BELAN  
 08/18/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* J L SPEYER  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 117 UNIV OF CALIFORNIA - LOS ANGELES 2500**  
 COMBINING SPACE AND GROUND BASED PLASMASPHERIC OBSERVA-  
 TIONS FOR UNDERSTANDING PLASMA MASS DENSITY  
 06/04/2001 - 08/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* M MOLDWIN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 30133 UNIV OF CALIFORNIA - LOS ANGELES 2501**  
 REMOTE SENSING OF CIRRUS CLOUDS USING MODIS AIRBORNE  
 SIMULATOR (MAS) CHANNELS  
 06/24/1998 - 08/31/2000 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* K LIU  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30215 UNIV OF CALIFORNIA - LOS ANGELES 2502**  
 INVESTIGATION OF AEROSOL/CLOUD INTERACTIONS USING A COUPLED  
 HIGH-RESOLUTION DYNAMICS/MICROPHY  
 08/24/1999 - 08/31/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* R P TURCO  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30338 UNIV OF CALIFORNIA - LOS ANGELES 2503**  
 ESTIMATION OF THE TERRESTRIAL CARBON POOL & HYDROLOGIC SENSITIV-  
 ITY OF THE WEST SIBERIAN LOWLAND/STU  
 08/21/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* L SMITH  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30372 UNIV OF CALIFORNIA - LOS ANGELES 2504**  
 AN INVEST. OF CLOUD FEATURES IN HIGH-RESOL. INFRARED EMISSION  
 SPECTRA: UNDERSTANDING RADIATIVE EFF  
 08/13/2001 - 08/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* A ELDERING  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50187 UNIV OF CALIFORNIA - LOS ANGELES 2505**  
 A SEARCH FOR GIANT PLANETS ORBITING NEARBY STARS  
 05/27/1998 - 06/30/2001 FY01: \$0 Total: \$65,625  
*Prin. Invest.:* B ZUCKERMAN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50202 UNIV OF CALIFORNIA - LOS ANGELES 2506**  
 NEUROMUSCULAR AND ENDOCRINE FACTORS IN WEIGHTLESSNESS-  
 INDUCED ATROPHY/  
 07/02/1998 - 07/31/2001 FY01: \$0 Total: \$63,333  
*Prin. Invest.:* V EDGERTON  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50220 UNIV OF CALIFORNIA - LOS ANGELES 2507**  
 HEALTH MGMT SYSTEM DESIGN & INTELLIGENT CONTROL OF FUTURE  
 MINIATUREAUTONOMOUS SPACECRAFTS UTIL  
 09/23/1998 - 09/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* P WANG, ESHAGHI  
*Tech. Officer:* HQ/S MCGEE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50310 UNIV OF CALIFORNIA - LOS ANGELES 2508**  
 PROXIMO-DISTAL PATTERNING IN MOLLUSCS AND ANNELIDS: IMPLICA-  
 TIONS FOR LIMB EVOLUTION-STUDENT: SHANNON  
 07/07/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D K JACOBS  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50332 UNIV OF CALIFORNIA - LOS ANGELES 2509**  
 A STUDY OF UNRESOLVED ISSUES REGARDING STRATOSPHERIC  
 AEROSOL FORMATION, EVOLUTION & COMPOSITION BY  
 08/17/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* R TURCO  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50359 UNIV OF CALIFORNIA - LOS ANGELES 2510**  
 CASSINI MEASUREMENT OF MAGNETIC FIELDS WITHIN 2 SOLAR RADII-  
 TUDENT: ELIZABETH JENSEN  
 05/23/2001 - 08/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* C RUSSELLI  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NGT 8 52844 UNIV OF CALIFORNIA - LOS ANGELES 2511**  
 GRADUATE STUDENT RESEARCH PROGRAM FELLOWSHIP  
 08/22/1997 - 08/14/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* M A ABDU  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 5116 UNIV OF CALIFORNIA - RIVERSIDE 2512**  
 THE TIGRE INSTRUMENT FOR INTERMEDIATE - ENERGY GAMMA-RAY  
 ASTRONOMY FROM 0.3 TO 100MEV  
 04/09/1997 - 11/30/2002 FY01: \$712,510 Total: \$1,761,528  
*Prin. Invest.:* A D ZYCH*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5118 UNIV OF CALIFORNIA - RIVERSIDE 2513**  
 AN ARCSECOND RESOLUTION: AXGAM  
 04/09/1997 - 06/30/2001 FY01: \$0 Total: \$600,000  
*Prin. Invest.:* O T TUMER  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5211 UNIV OF CALIFORNIA - RIVERSIDE 2514**  
 ULDB COMPTON TELESCOPE MISSION ULDB COMPTON TELESCOPE  
 MISSION  
 09/17/1998 - 12/31/2001 FY01: \$0 Total: \$70,067  
*Prin. Invest.:* A D ZYCHE  
*Tech. Officer:* WFF/A B MERRITT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5288 UNIV OF CALIFORNIA - RIVERSIDE 2515**  
 A HIGH RESOLUTION ALL-SKY X-RAY & GAMMA-RAY MONITOR (AXGAM)  
 05/31/2000 - 05/17/2003 FY01: -\$20,600 Total: \$119,400  
*Prin. Invest.:* T O TUMER  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 8682 UNIV OF CALIFORNIA - RIVERSIDE 2516**  
 SPACE-TIME DYNAMICS OF SOIL MOISTURE & TEMPERATURE -SCALE  
 ISSUES  
 07/15/1999 - 07/14/2002 FY01: \$92,493 Total: \$270,340  
*Prin. Invest.:* B P MOHANTY  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9812 UNIV OF CALIFORNIA - RIVERSIDE 2517**  
 NON-ENZYMATIC OLIGOMERIZATION OF MONONUCLEOTIDES USING NON-  
 STANDARD OLIGONUCLEOTIDE TEMPLATES  
 07/19/2000 - 07/14/2002 FY01: \$70,000 Total: \$135,940  
*Prin. Invest.:* C Y SWITZER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10932 UNIV OF CALIFORNIA - RIVERSIDE 2518**  
 PARTICLE ACCELERATION AND TRANSPORT  
 05/30/2001 - 06/30/2002 FY01: \$123,311 Total: \$123,311  
*Prin. Invest.:* G ZANK  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 2044 UNIV OF CALIFORNIA - SAN DIEGO 2519**  
 RADIATIVE CHARACTER'S OF THE SURFACE & CLOUDS IN THE ARCTIC  
 USING RESEARCH AIRCRAFT--NRA-94-MTPE-04  
 04/03/1998 - 03/31/2002 FY01: \$60,000 Total: \$418,823  
*Prin. Invest.:* F P VALERO, S K POPE, P J FLATAU  
*Tech. Officer:* LARC/D S MCDUGAL, LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1313 UNIV OF CALIFORNIA - SAN DIEGO 2520**  
 THE DEVELOPMENT OF PILOT EXPERTISE IN THE AIRBUS A 320 AIRCRAFT  
 04/01/1999 - 01/31/2002 FY01: \$121,238 Total: \$297,084  
*Prin. Invest.:* E L HUTCHINS  
*Tech. Officer:* ARC/S M CASNER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1376 UNIV OF CALIFORNIA - SAN DIEGO 2521**  
 EVOLUTION OF NEURAL CREST & PLACODES: AMPHIOXUS A S A MODEL  
 FOR THE ANCESTROOF THE VERTEBRATES  
 08/17/1999 - 06/30/2002 FY01: \$75,228 Total: \$188,632  
*Prin. Invest.:* L Z HOLLAND  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1888 UNIV OF CALIFORNIA - SAN DIEGO 2522**  
 MATERIAL INSTABILITIES IN PARTICULATE SYSTEMS: UC SD 95-647R  
 05/31/1996 - 06/30/2000 FY01: -\$3,259 Total: \$316,741  
*Prin. Invest.:* J D GODDARD  
*Tech. Officer:* GRC/M E HILL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2117 UNIV OF CALIFORNIA - SAN DIEGO 2523**  
 DYNAMICS OF ACCELERATED INTERFACES: PARAMETRIC EXC ITATION  
 AND FLUID SLOSHINGIN CLOSED CONTAINERS A  
 01/28/1998 - 12/18/2001 FY01: \$20,000 Total: \$233,000  
*Prin. Invest.:* C POZRIKIDIS  
*Tech. Officer:* GRC/J R SKARDA  
*CASE Category:* 13 - PHYSICS

**NAG 3 2465 UNIV OF CALIFORNIA - SAN DIEGO 2524**  
 VIBRATORY DYNAMICS AND TRANSPORT OF GRANULAR MEDIA AT  
 VARIOUS G LEVELS  
 06/19/2000 - 11/30/2003 FY01: \$76,000 Total: \$126,000  
*Prin. Invest.:* J D GODDARD  
*Tech. Officer:* GRC/M E HILL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2554 UNIV OF CALIFORNIA - SAN DIEGO 2525**  
 STRETCHED DIFFUSION FLAMES IN VON KARMAN SWIRLING FLOWS  
 03/15/2001 - 11/30/2004 FY01: \$9,900 Total: \$9,900  
*Prin. Invest.:* F WILLIAMS  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3528 UNIV OF CALIFORNIA - SAN DIEGO 2526**  
 ASSESSMENT OF CLIMATIC AND ANTHROPOGENIC IMPACTS O CYCLE  
 CONSTRAINED BY ATMOSPHERIC MEASUREMENTS AND  
 11/18/1996 - 07/31/2000 FY01: \$0 Total: \$609,000  
*Prin. Invest.:* D D KEELING  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3944**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2527**  
 DEVELOPMENT OF A PIXON-BASED IMAGE RECONSTRUCTION USER  
 COMMUNITY  
 03/04/1997 - 02/29/2000      FY01: \$0      Total: \$335,000  
*Prin. Invest.:* D C PUETTER  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 4023**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2528**  
 ADVANCED GLOBAL ATMOSPHERIC GASES EXPERIMENT (AGAG)  
 03/25/1997 - 12/31/2001      FY01: \$487,435      Total: \$2,337,919  
*Prin. Invest.:* R F WEISS  
*Tech. Officer:* GSFC/M J KURYLO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4284**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2529**  
 THE ORION PHENOMENON: PARTICLE FLUENCES IN THE SO  
 04/01/1997 - 02/29/2000      FY01: \$0      Total: \$100,000  
*Prin. Invest.:* D MARTI  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4546**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2530**  
 NASA SPECIALIZED CENTER OF RESEARCH AND TRAINING I THE CHEM-  
 ISTRY OF EARLY SELF-REPLICATING SYSTEMS  
 05/06/1997 - 03/31/2002      FY01: \$950,000      Total: \$4,716,000  
*Prin. Invest.:* P L BADA, NONE  
*Tech. Officer:* HQ/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 4574**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2531**  
 METEORITIC SULFUR ISOTOPIC ANALYSIS  
 07/07/1997 - 02/28/2002      FY01: \$35,000      Total: \$172,000  
*Prin. Invest.:* D H THIEMENS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4648**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2532**  
 MICROGRAVITY IN VITRO MODEL OF BONE: FLOW EFFECTS  
 06/11/1997 - 05/31/2000      FY01: \$0      Total: \$421,536  
*Prin. Invest.:* J A FRANGOS  
*Tech. Officer:* GSFC/M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 4658**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2533**  
 THEORETICAL STUDIES OF MAGNETIC RECONNECTION  
 06/09/1997 - 05/14/2001      FY01: \$0      Total: \$243,248  
*Prin. Invest.:* D B QUEST  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 4775**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2534**  
 AN INTEGRATED SYSTEM FOR WATER BUDGET CLOSURE OVER MASS: A  
 TRMM VALIDATION EFFORT  
 07/15/1997 - 06/30/2001      FY01: \$0      Total: \$173,000  
*Prin. Invest.:* J O ROADS  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4938**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2535**  
 MICRO-DETECTION SYSTEM FOR DETERMINATION OF THE BI OF AMINO  
 ACIDS  
 06/23/1997 - 05/31/2001      FY01: \$0      Total: \$130,000  
*Prin. Invest.:* P L BADA  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 5111**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2536**  
 BALLOON-BORNE HIGH ENERGY X-RAY SPECTROMETER (HEXIS) BASED  
 ON CZT TECHNOLOGY  
 04/07/1997 - 04/30/2001      FY01: \$0      Total: \$1,072,750  
*Prin. Invest.:* J L MATTESON  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5176**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2537**  
 GLOBAL BATHYMETRIC PREDICTION FOR OCEAN MODELING A  
 07/17/1997 - 07/14/2001      FY01: \$0      Total: \$148,524  
*Prin. Invest.:* D T SANDWELL  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 5266**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2538**  
 CRYOGENIC WHOLE AIR SAMPLING OF CARBON DIOXIDE IN THE UPPER  
 ATMOSPHERE  
 06/01/2000 - 05/24/2003      FY01: \$55,900      Total: \$106,600  
*Prin. Invest.:* M H THIEMENS  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5287**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2539**  
 BALLOON-BORNE HIGH ENERGY X-RAY IMAGING SPECTROMETER  
 (HEXIS) BASED ON CZT TECHNOLOGY  
 05/31/2000 - 05/17/2003      FY01: \$0      Total: \$145,000  
*Prin. Invest.:* J L MATTESON  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5332**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2540**  
 FULL FUNDING FOR THE 1ST YEAR, GRANT AMOUNT IS 70K , PI: LINGEN-  
 FELTERTITLE: NEW THEORETICAL STUD  
 05/30/2001 - 02/28/2004      FY01: \$70,000      Total: \$70,000  
*Prin. Invest.:* D LINGENFELTER  
*Tech. Officer:* WFF/B MERRITT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6135**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2541**  
 VALIDATING THE USEFULNESS OF THE COMBINED GMS & GO FOR LONG-  
 TERM GLOBAL CLIMATE CHANGE STUDIES  
 08/13/1997 - 06/30/2001      FY01: \$0      Total: \$485,000  
*Prin. Invest.:* J J SIMPSON  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6149**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2542**  
 OCEAN TIDE LOADING COMPUTATION  
 08/21/1997 - 08/31/2001      FY01: \$0      Total: \$41,810  
*Prin. Invest.:* D C AGNEW  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6150 UNIV OF CALIFORNIA - SAN DIEGO 2543**  
 SEAFLOOR GEODETIC MONITORING USING GPS AND ACOUSTI ATION TO  
 NATURAL HAZARDS ON THE SE FLANK OF HAWAI  
 08/21/1997 - 08/31/2000 FY01: \$0 Total: \$524,757  
*Prin. Invest.:* J B RAND  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6179 UNIV OF CALIFORNIA - SAN DIEGO 2544**  
 CONTINUOUS REMOTE MEASUREMENTS OF ATMOSPHERIC O<sub>2</sub> C RELA-  
 TION TO INTERANNUAL VARIATIONS IN BIOLOGICAL  
 08/19/1997 - 08/14/2001 FY01: \$0 Total: \$407,349  
*Prin. Invest.:* R KEELING  
*Tech. Officer:* GSFC/J A YODER  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6202 UNIV OF CALIFORNIA - SAN DIEGO 2545**  
 EFFECTS OF WHITECAPS ON SATELLITE-DERIVED OCEAN COLOR  
 10/02/1997 - 12/31/2000 FY01: \$0 Total: \$490,000  
*Prin. Invest.:* R FROUIN  
*Tech. Officer:* GSFC/J A YODER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6375 UNIV OF CALIFORNIA - SAN DIEGO 2546**  
 BIOGEOCHEMICAL RESPONSE TO MESOSCALE PHYSICAL FORC ING IN  
 THE CALIFORNIA CURRENT SYSTEM  
 10/03/1997 - 03/31/2001 FY01: \$0 Total: \$424,978  
*Prin. Invest.:* P NILLER  
*Tech. Officer:* GSFC/J A YODER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6414 UNIV OF CALIFORNIA - SAN DIEGO 2547**  
 MODELING UV-B EFFECTS ON PRIMARY PRODUCTION THROUG HOUT THE  
 SOUTHERNOCEAN USING MULTI-SENSOR SA  
 10/29/1997 - 10/31/2001 FY01: \$0 Total: \$396,868  
*Prin. Invest.:* D LUBIN  
*Tech. Officer:* GSFC/K ARRIGO  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 5 6466 UNIV OF CALIFORNIA - SAN DIEGO 2548**  
 OPTICAL AND ANCILLARY MEASUREMENTS AT HIGH LATITUD ES IN  
 SUPPORT OFTHE MODIS OCEAN VALIDATION  
 11/04/1997 - 09/30/2001 FY01: \$0 Total: \$224,288  
*Prin. Invest.:* D STRAMSKI  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6497 UNIV OF CALIFORNIA - SAN DIEGO 2549**  
 PREDICTABILITY OF THE CALIFORNIA CURRENT SYSTEM  
 10/08/1997 - 10/14/2001 FY01: \$0 Total: \$633,198  
*Prin. Invest.:* D MILLER  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6559 UNIV OF CALIFORNIA - SAN DIEGO 2550**  
 SEASONAL TO DECADAL-SCALE VARIABILITY IN SATELLITE OCEAN  
 COLOR AND SEA SURFACE TEMPERATURE FOR THE  
 10/27/1997 - 04/30/2001 FY01: \$0 Total: \$352,860  
*Prin. Invest.:* B MITCHELL  
*Tech. Officer:* GSFC/J YODER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6668 UNIV OF CALIFORNIA - SAN DIEGO 2551**  
 SOUTHERN OCEAN SEASONAL NET PRODUCTION FROM ATMOSP HERE  
 AND OCEANDATASETS  
 11/26/1997 - 06/30/2001 FY01: \$0 Total: \$311,173  
*Prin. Invest.:* R F KEELING  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6947 UNIV OF CALIFORNIA - SAN DIEGO 2552**  
 NUMERICAL AND ANALYTICAL STUDIES OF THE SHOCKED SO LAR WIND  
 INTERACTION WITH THE DAYSIDE MANTLE OF V  
 02/26/1998 - 03/31/2002 FY01: \$0 Total: \$235,914  
*Prin. Invest.:* K QUEST  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7000 UNIV OF CALIFORNIA - SAN DIEGO 2553**  
 HIGH RESOLUTION STUDY OF THE X-RAY TURN-ON IN HER X-1  
 02/06/1998 - 08/14/2001 FY01: \$0 Total: \$14,739  
*Prin. Invest.:* D GRUBER  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7045 UNIV OF CALIFORNIA - SAN DIEGO 2554**  
 THEORETICAL STUDIES IN COSMIC RAY AND GAMMA RAY AS TROPHYSICS  
 AND LIGHT ELEMENT NUCLEOSYNTHESIS -  
 03/18/1998 - 02/28/2001 FY01: \$0 Total: \$188,290  
*Prin. Invest.:* R E LINGENFELTER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7096 UNIV OF CALIFORNIA - SAN DIEGO 2555**  
 ANOMALOUS HEAT BUDGETS IN INTERIOR PACIFIC OCEAN ON SEASONAL  
 TO INTERANNUAL TIMESCALES  
 05/27/1998 - 03/31/2002 FY01: \$33,470 Total: \$379,886  
*Prin. Invest.:* W WHITE  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 7100 UNIV OF CALIFORNIA - SAN DIEGO 2556**  
 OPTICAL MEASUREMENTS AND MODELING TO ESTIMATE CONC ENTRA-  
 TIONS AND FLUXES OF ORGANIC MATTER IN THE SO  
 06/04/1998 - 05/31/2001 FY01: \$0 Total: \$469,864  
*Prin. Invest.:* D STRAMSKI  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7119 UNIV OF CALIFORNIA - SAN DIEGO 2557**  
 ANALYSIS OF SKY FLUCTUATIONS FROM HEXTE III; EXAMI NATION OF THE  
 CYCLOTRON LINES IN THE SPECTRUM OF  
 04/16/1998 - 03/31/2001 FY01: \$0 Total: \$26,128  
*Prin. Invest.:* D E GRIBER  
*Tech. Officer:* GSFC/K SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7295 UNIV OF CALIFORNIA - SAN DIEGO 2558**  
 CORONAL RECONSTRUCTION USING LASCO AND UVCS OBSERV ATIONS  
 04/13/1998 - 10/31/1999 FY01: -\$108 Total: \$79,892  
*Prin. Invest.:* P HICK  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7362 UNIV OF CALIFORNIA - SAN DIEGO 2559**  
 ASCA PROPOSAL - ASCA AND HST OBSERVATIONS OF BL LA C 0236+164  
 AND THE INTERVENING SYSTEM  
 05/05/1998 - 04/30/2002 FY01: \$0 Total: \$14,000  
*Prin. Invest.:* R D COHEN  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7612 UNIV OF CALIFORNIA - SAN DIEGO 2560**  
 IMPROVED SPECTRAL CHARACTERIZATION OF THE GEOMAGNETIC  
 FIELD (SENH98-0124)  
 07/24/1998 - 05/31/2002 FY01: \$37,000 Total: \$224,000  
*Prin. Invest.:* R L PARKER  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/H B FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7614 UNIV OF CALIFORNIA - SAN DIEGO 2561**  
 FUNDING FOR "EARTH CONDUCTIVITY FROM SATELLITE MAGNETIC  
 DATA" (SENH98-0123)  
 07/24/1998 - 07/14/2002 FY01: \$42,000 Total: \$254,000  
*Prin. Invest.:* C G CONSTABLE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7637 UNIV OF CALIFORNIA - SAN DIEGO 2562**  
 CO2 BUDGET AND ATMOSPHERIC RECTIFICATION OVER NORTH AMERICA  
 (CO2BAR)  
 11/30/1998 - 11/30/2001 FY01: \$20,000 Total: \$65,000  
*Prin. Invest.:* R F KEELING  
*Tech. Officer:* GSFC/D E WICKLANS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7653 UNIV OF CALIFORNIA - SAN DIEGO 2563**  
 QUANTITATIVE ASSESSMENT OF THE INTEGRATED RESPONSE IN GLOBAL  
 HEAT AND MOISTURE BUDGETS TO CHANGING  
 08/25/1998 - 08/31/2001 FY01: \$0 Total: \$210,000  
*Prin. Invest.:* W WHITE  
*Tech. Officer:* HQ/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7836 UNIV OF CALIFORNIA - SAN DIEGO 2564**  
 CORONAL SPEEDS DETERMINED FROM CORRELATION TECHNIQUES  
 APPLIED TO LASCO IMAGES  
 12/14/1998 - 12/14/2000 FY01: \$0 Total: \$80,000  
*Prin. Invest.:* B V JACKSON  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7887 UNIV OF CALIFORNIA - SAN DIEGO 2565**  
 SPECTRAL TESTS OF THE HOMOGENEITY OF BRIGHT GRBS  
 12/02/1998 - 11/30/1999 FY01: \$0 Total: \$5,000  
*Prin. Invest.:* J SISTERSON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8167 UNIV OF CALIFORNIA - SAN DIEGO 2566**  
 FRAGMENTARY SOLAR SYSTEM HISTORY  
 02/10/1999 - 01/31/2002 FY01: \$120,000 Total: \$359,000  
*Prin. Invest.:* D MARTI  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8172 UNIV OF CALIFORNIA - SAN DIEGO 2567**  
 ISOTOPIC, CHEMICAL AND MINERALOGICAL INVESTIGATIONS OF  
 EXTRATERRESTRIAL MATERIALS  
 02/24/1999 - 02/28/2002 FY01: \$280,000 Total: \$775,000  
*Prin. Invest.:* G W LUNGMAIR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8180 UNIV OF CALIFORNIA - SAN DIEGO 2568**  
 ADVANCED GLOBAL ATMOSPHERIC GASES EXPERIMENT (AGAGE)  
 02/12/1999 - 12/31/2001 FY01: \$86,003 Total: \$264,192  
*Prin. Invest.:* R F WEISS  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8252 UNIV OF CALIFORNIA - SAN DIEGO 2569**  
 ANTARCTIC ULTRAVIOLET RADIATION CLIMATOLOGY FROM THE TOTAL  
 ZONE MAPPING SPECTROMETER  
 02/19/1999 - 02/28/2002 FY01: \$95,000 Total: \$285,000  
*Prin. Invest.:* D LUBIN  
*Tech. Officer:* GSFC/J R HERMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8272 UNIV OF CALIFORNIA - SAN DIEGO 2570**  
 A SEARCH FOR EXTRASOLAR PLANETS IN OPEN CLUSTERS  
 03/05/1999 - 02/28/2002 FY01: \$49,000 Total: \$133,400  
*Prin. Invest.:* D GUIRRENBACH  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8292 UNIV OF CALIFORNIA - SAN DIEGO 2571**  
 SEASONAL ATMOSPHERIC AND OCEANIC PREDICTIONS  
 02/25/1999 - 02/28/2002 FY01: \$140,000 Total: \$420,000  
*Prin. Invest.:* J O ROADS  
*Tech. Officer:* GSFC/M REINECKER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8322 UNIV OF CALIFORNIA - SAN DIEGO 2572**  
 BAYESIAN HIERARCHICAL AIR-SEA INTERACTION MODELING: APPLICATION  
 TO THE LABRADOR SEA  
 04/13/1999 - 05/31/2002 FY01: \$6,322 Total: \$62,574  
*Prin. Invest.:* P NILER  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8351 UNIV OF CALIFORNIA - SAN DIEGO 2573**  
 THE APPLICATION OF JASON-1 MEASUREMENTS TO ESTIMATE THE  
 GLOBAL NEARSURFACE OCEAN CIRCULATION  
 03/01/1999 - 03/31/2002 FY01: \$102,000 Total: \$354,000  
*Prin. Invest.:* P P NILER  
*Tech. Officer:* GSFC/C KOBLINSKY  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 8498 UNIV OF CALIFORNIA - SAN DIEGO 2574**  
 THE HIGH ENERGY X-RAY IMAGING SURVEY (HEXIS)  
 05/27/1999 - 11/30/2001 FY01: \$0 Total: \$755,000  
*Prin. Invest.:* R E ROTHSCCHILD  
*Tech. Officer:* GSFC/L KALUZIENSKI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 8504 UNIV OF CALIFORNIA - SAN DIEGO 2575**  
 RECONSTRUCTION OF THE PLASMA DISTRIBUTION IN CORON A AND  
 HELIOSPHERER  
 05/11/1999 - 04/30/2002 FY01: \$129,251 Total: \$249,053  
*Prin. Invest.:* B V JACKSON  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8551 UNIV OF CALIFORNIA - SAN DIEGO 2576**  
 ORGANIC CONSTITUENTS OF SHORT-PERIOD COMETS  
 06/04/1999 - 05/31/2001 FY01: \$0 Total: \$144,722  
*Prin. Invest.:* M N FOMENKOVA  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8610 UNIV OF CALIFORNIA - SAN DIEGO 2577**  
 ANALYSIS & INTERPRETATION OF LUNAR PROSPECTOR GRS/ NS DATA  
 06/10/1999 - 06/30/2000 FY01: \$0 Total: \$15,000  
*Prin. Invest.:* J R ARNOLD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8623 UNIV OF CALIFORNIA - SAN DIEGO 2578**  
 NUMERICAL CLIMATE OBSERVING NETWORK DESIGN STUDY  
 08/09/1999 - 08/31/2002 FY01: \$147,924 Total: \$341,722  
*Prin. Invest.:* D STAMMER  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8731 UNIV OF CALIFORNIA - SAN DIEGO 2579**  
 ADVANCED CADMIUM-ZINC-TELLURIDE DETECTORS FOR RESE ARCH IN  
 ASTROPHYSICS  
 08/17/1999 - 08/14/2002 FY01: \$103,315 Total: \$260,577  
*Prin. Invest.:* J L MATTESON  
*Tech. Officer:* GSFC/F A HERRERO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8768 UNIV OF CALIFORNIA - SAN DIEGO 2580**  
 DYNAMIC HUMAN-CENTERED INTERFACES: MONITORING ATTE NTIONAL  
 PROCESSES IN CONTROL OF CRITICAL SYSTEMS  
 08/26/1999 - 08/31/2001 FY01: \$116,334 Total: \$315,345  
*Prin. Invest.:* T JUNG  
*Tech. Officer:* GSFC/R CROUCH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8780 UNIV OF CALIFORNIA - SAN DIEGO 2581**  
 ROUTINE HIGH-RESOLUTION, ATMOSPHERIC FORCAST/ANALY SIS  
 MODELING SYSTEMS FOR THE PACIFIC DISASTER CE  
 08/30/1999 - 08/31/2001 FY01: \$0 Total: \$575,555  
*Prin. Invest.:* J ROADS  
*Tech. Officer:* GSFC/E PAYLOR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8901 UNIV OF CALIFORNIA - SAN DIEGO 2582**  
 ESTIMATING THE OCEAN FLOW FIELD FROM COMBINED SEA SURFACE  
 TEMPERATURE AND SEASURFACE HEIGHT DATA  
 01/04/2000 - 01/14/2002 FY01: \$18,380 Total: \$161,672  
*Prin. Invest.:* D STAMMER  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9005 UNIV OF CALIFORNIA - SAN DIEGO 2583**  
 ANALYSIS AND INTERPRETATION OF NEAR XGRS DATA  
 01/27/2000 - 01/31/2002 FY01: \$0 Total: \$15,000  
*Prin. Invest.:* J R ARNOLD  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9036 UNIV OF CALIFORNIA - SAN DIEGO 2584**  
 MEASUREMENT OF ELECTRIC FIELDS WITH MULTIPLE SPREAD ELECTRON  
 BEAMS  
 02/10/2000 - 02/14/2002 FY01: \$0 Total: \$92,500  
*Prin. Invest.:* C MCILWAIN  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9122 UNIV OF CALIFORNIA - SAN DIEGO 2585**  
 PROBING THE SPECTRAL EVOLUTION OF PARTICLES IN THE BLAZAR MKN  
 421 \_ADP99  
 03/07/2000 - 03/14/2002 FY01: \$0 Total: \$49,592  
*Prin. Invest.:* R ROTHSCHILD  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9224 UNIV OF CALIFORNIA - SAN DIEGO 2586**  
 COSMOLOGICAL PARAMETERS FROM THE LYMAN-ALPHA FOREST (L TSA  
 99)  
 03/14/2000 - 03/14/2001 FY01: \$0 Total: \$87,973  
*Prin. Invest.:* D TYTLER  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9247 UNIV OF CALIFORNIA - SAN DIEGO 2587**  
 THERMAL & NONTHERMAL COMPONENTS IN THE SPECTRA OF A2319 &  
 A1367 FROM RXTE & SAX OBSERVATIONS (ADP 99  
 03/14/2000 - 03/14/2002 FY01: \$0 Total: \$49,739  
*Prin. Invest.:* Y REPHAEI  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9314 UNIV OF CALIFORNIA - SAN DIEGO 2588**  
 3-D GLOBAL KINETIC SIMULATIONS OF SOLAR WIND INTER ACTION WITH  
 ASTEROIDS: DETERMINATION OF MAGNETIC P  
 03/23/2000 - 09/14/2001 FY01: \$0 Total: \$89,723  
*Prin. Invest.:* N OMIDI  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9423 UNIV OF CALIFORNIA - SAN DIEGO 2589**  
 TOMOGRAPHIC ANALYSIS AND VISUALIZATION OF REMOTELY --SENSED  
 HELIOSPHERIC DATA  
 04/13/2000 - 04/30/2002 FY01: \$99,400 Total: \$197,400  
*Prin. Invest.:* B V JACKSON  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9506 UNIV OF CALIFORNIA - SAN DIEGO 2590**  
 THE PIXON METHOD FOR DATA COMPRESSION, IMAGE CLASSIFICATION,  
 AND IMAGE RECONSTRUCTION  
 04/26/2000 - 04/30/2002 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* R P PUETTER  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9566 UNIV OF CALIFORNIA - SAN DIEGO 2591**  
 EMERGENCE OF RNA AND EARLY LIFE; EXPERIMENTAL MODELING AND  
 GEOCHEMICAL CONSTRAINTS  
 05/05/2000 - 05/14/2001 FY01: \$0 Total: \$80,000  
*Prin. Invest.:* G ARRHENIUS  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 9623 UNIV OF CALIFORNIA - SAN DIEGO 2592**  
 TOPOGRAPHIC RECOVERY FROM SPACEBORNE RADAR & LASED RANGING:  
 VALIDATION & INVESTIGATION OF PLATE BOUNDARIES  
 06/12/2000 - 05/31/2002 FY01: \$40,000 Total: \$80,000  
*Prin. Invest.:* D T SANDWELL  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9659 UNIV OF CALIFORNIA - SAN DIEGO 2593**  
 MICRO-DETECTION SYSTEM FOR DETERMINATION OF THE BIOTIC OR  
 ABIOTIC ORIGIN OF AMINO ACIDS  
 05/31/2000 - 05/31/2002 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* J L BADA  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9679 UNIV OF CALIFORNIA - SAN DIEGO 2594**  
 ISOTOPIC FRACTIONATION PROCESSES DURING PRE-SOLAR GRAIN  
 FORMATION  
 06/15/2000 - 06/14/2001 FY01: \$0 Total: \$35,000  
*Prin. Invest.:* M H THIEMENS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9721 UNIV OF CALIFORNIA - SAN DIEGO 2595**  
 A PHYSICALLY BASED APPROACH TO CONSTRUCTION OF A CLIMATE-  
 QUALITY SST RECORD FROM COMPLEMENTARY SPATIAL DATA  
 06/22/2000 - 06/30/2002 FY01: \$157,500 Total: \$270,000  
*Prin. Invest.:* J J SIMPSON, NONE  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9788 UNIV OF CALIFORNIA - SAN DIEGO 2596**  
 OCEAN CARBON FLUX: TRANSPORTS & BURIAL WITHIN THE WESTERN &  
 EASTERN U.S. COASTAL ZONES  
 07/28/2000 - 07/31/2002 FY01: \$97,500 Total: \$191,250  
*Prin. Invest.:* A MILLER  
*Tech. Officer:* GSFC/E LINSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9825 UNIV OF CALIFORNIA - SAN DIEGO 2597**  
 RXTE OBSERVATIONS OF AGN (ADP 99)  
 08/15/2000 - 08/14/2001 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* P R BLANCO  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10065 UNIV OF CALIFORNIA - SAN DIEGO 2598**  
 INVESTIGATING THE GROUNDING ZONE & TIDAL RESPONSE OF THE  
 AMERY ICE SHELF, EAST ANTARCTICA, USING  
 11/20/2000 - 11/30/2001 FY01: \$63,619 Total: \$63,619  
*Prin. Invest.:* D SANDWELL  
*Tech. Officer:* GSFC/K PARTINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10276 UNIV OF CALIFORNIA - SAN DIEGO 2599**  
 SEASONAL TO DECADEAL-SCALE VARIABILITY IN SATELLITE OCEAN COLOR  
 & SEA SURFACE TEMPERATURE FOR CALIFORNIA  
 01/19/2001 - 04/30/2002 FY01: \$111,000 Total: \$111,000  
*Prin. Invest.:* B MITCHELL  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10487 UNIV OF CALIFORNIA - SAN DIEGO 2600**  
 ISOTOPIC FRACTIONATION PROCESSES DURING PRE-SOLAR GRAIN  
 FORMATION  
 02/27/2001 - 04/30/2002 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* M H THIEMENS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10644 UNIV OF CALIFORNIA - SAN DIEGO 2601**  
 PENETRATION OF UV RADIATION IN THE EARTH'S OCEANS (YR 1 OF 3)  
 03/21/2001 - 03/31/2002 FY01: \$87,554 Total: \$87,554  
*Prin. Invest.:* G MITCHELL  
*Tech. Officer:* GSFC/J R HERMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10667 UNIV OF CALIFORNIA - SAN DIEGO 2602**  
 NITROGEN, CARBON AND PHOSPHATE IN THE OLDEST PRESERVED  
 CRUST OF THE EARTH  
 03/21/2001 - 03/31/2002 FY01: \$125,500 Total: \$125,500  
*Prin. Invest.:* G ARRHENIUS  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10669 UNIV OF CALIFORNIA - SAN DIEGO 2603**  
 NATIONAL SUMMIT ON INNOVATION WEBCAST  
 03/23/2001 - 03/31/2002 FY01: \$94,285 Total: \$94,285  
*Prin. Invest.:* E FURTEK  
*Tech. Officer:* GSFC/J GASCH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10691 UNIV OF CALIFORNIA - SAN DIEGO 2604**  
 A UNIFORM STUDY OF X-RAY PULSAR MAGNETIC FIELDS  
 04/09/2001 - 04/14/2002 FY01: \$67,669 Total: \$67,669  
*Prin. Invest.:* W HEINDL  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10737 UNIV OF CALIFORNIA - SAN DIEGO 2605**  
 TIME SERIES OF CONTINUOUS MEASUREMENTS OF ATMOSPHERIC O<sub>2</sub>  
 AND CO<sub>2</sub> CONCENTRATIONS FOR ELUCIDATING  
 04/20/2001 - 04/30/2002 FY01: \$238,308 Total: \$238,308  
*Prin. Invest.:* R KEELING  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 10871 UNIV OF CALIFORNIA - SAN DIEGO 2606**  
 NONTHERMAL PHENOMENA IN CLUSTERS OF GALAXIES (LISA 2000)  
 05/10/2001 - 05/31/2002 FY01: \$58,954 Total: \$58,954  
*Prin. Invest.:* Y REPHAELI, NONE  
*Tech. Officer:* GSFC/R OLIVERSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10874 UNIV OF CALIFORNIA - SAN DIEGO 2607**  
 SOLAR WIND FLOWS FROM ACTIVE REGIONS  
 05/14/2001 - 05/31/2002 FY01: \$80,102 Total: \$80,102  
*Prin. Invest.:* P HICK  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10886 UNIV OF CALIFORNIA - SAN DIEGO 2608**  
 STATE TRANSITIONS AND QPOs IN X-RAY TRANSIENTS (ADP 00)  
 05/03/2001 - 05/14/2002 FY01: \$37,558 Total: \$37,558  
*Prin. Invest.:* J TOMSICK  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10968 UNIV OF CALIFORNIA - SAN DIEGO 2609**  
 THE RESPONSE TO CZT DETECTORS TO X-RAYS  
 06/06/2001 - 06/14/2002 FY01: \$51,827 Total: \$51,827  
*Prin. Invest.:* R E ROTHSCCHILD  
*Tech. Officer:* GSFC/F HERRERO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10993 UNIV OF CALIFORNIA - SAN DIEGO 2610**  
 KINETIC INTERACTION OF THE PLASMA MANTLES OF UNMAGNETIZED  
 PLANETS WITH THE SOLAR WIND  
 05/31/2001 - 05/31/2002 FY01: \$39,000 Total: \$39,000  
*Prin. Invest.:* K QUEST  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11123 UNIV OF CALIFORNIA - SAN DIEGO 2611**  
 MODEL HELIOSPHERIC DISTURBANCE PROPAGATION USING REMOTE  
 SENSING OBSERVATIONS  
 07/18/2001 - 07/14/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* B V JACKSON  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11217 UNIV OF CALIFORNIA - SAN DIEGO 2612**  
 USE OF ATMOSPHERIC CO<sub>2</sub>, VEGETATIVE INDEX, AND DAILY CLIMATIC  
 DATA IN A COORDINATED DIAGNOSTIC INVESTIGATION  
 08/13/2001 - 08/31/2004 FY01: \$241,182 Total: \$241,182  
*Prin. Invest.:* C KEELING  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1516 UNIV OF CALIFORNIA - SAN DIEGO 2613**  
 VARIABILITY AND PREDICTABILITY OF LAND-ATMOSPHERE OBSERVA-  
 TIONAL AND MODELING STUDIES  
 05/12/1998 - 04/30/2002 FY01: \$0 Total: \$161,023  
*Prin. Invest.:* J ROADS  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1571 UNIV OF CALIFORNIA - SAN DIEGO 2614**  
 CARTILAGE TISSUE ENGINEERING: CIRCUMFERENTIAL SEEDING OF  
 CHONDROCYTES USING ROTATING BIOREACTORS  
 01/12/1999 - 11/30/2002 FY01: \$141,550 Total: \$402,550  
*Prin. Invest.:* R L SAH  
*Tech. Officer:* JSC/D R MORRISON  
*CASE Category:* 56 - MEDICAL

**NAG 8 1589 UNIV OF CALIFORNIA - SAN DIEGO 2615**  
 NOVEL STRATEGY FOR TRI-DIMENSIONAL IN VITRO BONE INDUCTION  
 02/25/1999 - 11/30/2002 FY01: \$120,650 Total: \$333,650  
*Prin. Invest.:* J A FRANGOS  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1002 UNIV OF CALIFORNIA - SAN DIEGO 2616**  
 DETERMINING OXYGEN BLANK & SUITABILITY CVD DIAMOND  
 04/30/1998 - 05/31/2002 FY01: \$54,000 Total: \$394,000  
*Prin. Invest.:* M H THIEMENS  
*Tech. Officer:* JSC/E K STANSBERY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 1 98141 UNIV OF CALIFORNIA - SAN DIEGO 2617**  
 A STUDY OF CLOUD RADIATIVE FORCING AND FEEDBACK (CERES)  
 10/30/1998 - 10/29/2002 FY01: \$246,563 Total: \$701,579  
*Prin. Invest.:* V RAMANATHAN  
*Tech. Officer:* LARC/B A WIELICKI, LARC/R L HUFFMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 00194 UNIV OF CALIFORNIA - SAN DIEGO 2618**  
 SIMBIOS II - SATELLITE OCEAN COLOR VALIDATION USING  
 01/23/2001 - 11/30/2001 FY01: \$200,742 Total: \$200,742  
*Prin. Invest.:* R FROUIN  
*Tech. Officer:* GSFC/C R MCCAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 01002 UNIV OF CALIFORNIA - SAN DIEGO 2619**  
 SIMBIOS II-BIO OPTICAL MEASUREMENT AND MODELING OF THE NORTH  
 PACIFIC & SOUTHERN OCEANS  
 01/23/2001 - 11/30/2001 FY01: \$276,619 Total: \$276,619  
*Prin. Invest.:* B G MITCHELL  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 30720 UNIV OF CALIFORNIA - SAN DIEGO 2620**  
 HIGH ENERGY X-RAY TIMING EXPERIMENT FOR XTE PROJECT  
 11/01/1989 - 09/30/2002 FY01: \$460,000 Total: \$30,488,322  
*Prin. Invest.:* R E ROTHSCCHILD  
*Tech. Officer:* GSFC/W D DAVIS  
*CASE Category:* 11 - ASTRONOMY



**NAS 5 97121 UNIV OF CALIFORNIA - SAN DIEGO 2621**  
 PULSE SHAPE DISCRIMINATOR FOR INTEGRAL SPECTROMETER (LETTER CONTRACT)  
 01/24/1997 - 09/30/2001 FY01: \$556,956 Total: \$5,706,068  
*Prin. Invest.:* J L MATTESON, R P LIN  
*Tech. Officer:* GSFC/J P MURPHY  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 97130 UNIV OF CALIFORNIA - SAN DIEGO 2622**  
 BIO-OPTIONAL MEASUREMENT-MODELING OF CA CURRENT & POLAR OCEAN  
 08/18/1997 - 11/30/2000 FY01: \$0 Total: \$858,048  
*Prin. Invest.:* B G MITCHELL  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 97135 UNIV OF CALIFORNIA - SAN DIEGO 2623**  
 SATELLITE OCEAN COLOR VALIDATION USING MERCHANT SHIP  
 09/22/1997 - 11/30/2000 FY01: \$0 Total: \$486,989  
*Prin. Invest.:* R FROUIN  
*Tech. Officer:* GSFC/J L MUELLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 97139 UNIV OF CALIFORNIA - SAN DIEGO 2624**  
 RESEARCH--ATMOSPHERIC CORRECTION ALGORITHMS FOR OCEAN COLOR REMOTE SENSING  
 09/23/1997 - 05/22/2000 FY01: \$0 Total: \$220,000  
*Prin. Invest.:* K STAMNES  
*Tech. Officer:* GSFC/J MUELLER  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 99006 UNIV OF CALIFORNIA - SAN DIEGO 2625**  
 GLAS SCIENCE TEAM LEADER.  
 11/25/1998 - 12/01/2002 FY01: \$370,000 Total: \$900,000  
*Prin. Invest.:* J B MINSTER  
*Tech. Officer:* GSFC/G SMITH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 99120 UNIV OF CALIFORNIA - SAN DIEGO 2626**  
 TRIANA SCIENCE INVESTIGATION  
 12/09/1998 - 09/30/2003 FY01: \$2,646,852 Total: \$25,585,524  
*Prin. Invest.:* F VALCRO  
*Tech. Officer:* GSFC/J WATZIM, GSFC/C TOOLEY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 9 98124 UNIV OF CALIFORNIA - SAN DIEGO 2627**  
 EFFECT OF EVA & LONG-TERM EXPOSURE TO MICROGRAVITY ON PULMONARY FUNCTION  
 03/02/1999 - 06/30/2003 FY01: \$379,083 Total: \$1,344,412  
*Prin. Invest.:* J B WEST  
*Tech. Officer:* JSC/S M MCCULLUM  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 978 UNIV OF CALIFORNIA - SAN DIEGO 2628**  
 NONINVASIVE MEASUREMENT OF INTERCRANIAL PRESSURE USING ULTRASOUND  
 02/04/1997 - 12/31/1999 FY01: \$0 Total: \$609,667  
*Prin. Invest.:* R A PEDOWITZ  
*Tech. Officer:* ARC/C M WINGET, ARC/G C JAHNS  
*CASE Category:* 56 - MEDICL

**NCC 2 1133 UNIV OF CALIFORNIA - SAN DIEGO 2629**  
 LOWER BODY NEGATIVE PRESSURE AS A COUNTERMEASURE FOR SPACEFLIGHT DECONDITIONING  
 08/02/1999 - 04/30/2002 FY01: \$88,000 Total: \$632,363  
*Prin. Invest.:* A R HARGENS  
*Tech. Officer:* ARC/E M HOLTON  
*CASE Category:* 56 - MEDICL

**NCC 2 1196 UNIV OF CALIFORNIA - SAN DIEGO 2630**  
 NON-INVASIVE INTRACRANIAL PRESSURE MEASUREMENT FOR SPACE FLIGHT - SPACE PHYSIOLOGY & COUNTERMEASURE  
 09/29/2000 - 04/30/2002 FY01: \$40,000 Total: \$117,000  
*Prin. Invest.:* C ROGERS  
*Tech. Officer:* ARC/E M HOLTON, ARC/B P DALTON  
*CASE Category:* 56 - MEDICL

**NCC 2 5302 UNIV OF CALIFORNIA - SAN DIEGO 2631**  
 TECHNOLOGY FOR MOLECULAR-LEVEL COMPUTER MODELING OF PROTOCELLULAR  
 12/22/1998 - 10/14/2000 FY01: \$0 Total: \$153,259  
*Prin. Invest.:* V GALINSKY  
*Tech. Officer:* ARC/A POHORILLE, ARC/M H NEW  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 2 5448 UNIV OF CALIFORNIA - SAN DIEGO 2632**  
 ADVANCE ALGORITHMS FOR MOLECULAR-LEVEL COMPUTER MODELING OF PROTOCELLULAR SYSTEMS  
 08/03/2001 - 01/31/2002 FY01: \$47,656 Total: \$47,656  
*Prin. Invest.:* V GALINSKY  
*Tech. Officer:* ARC/M H NEW  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 3 506 UNIV OF CALIFORNIA - SAN DIEGO 2633**  
 STRETCHED DIFFUSION FLAMES IN VON KARMAN SWIRLING FLOWS  
 09/25/1996 - 01/01/2001 FY01: \$0 Total: \$170,709  
*Prin. Invest.:* F A WILLIAMS  
*Tech. Officer:* GRC/K R SACKSTEDER, GRC/H D ROSS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 3 569 UNIV OF CALIFORNIA - SAN DIEGO 2634**  
 NEW APPROACHES FOR INTEGRALLY DAMPED COMPOSITE FAN BLADES  
 07/25/1997 - 10/17/2000 FY01: -\$25 Total: \$98,411  
*Prin. Invest.:* J KOSMATKA  
*Tech. Officer:* GRC/O MEHMED  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 693 UNIV OF CALIFORNIA - SAN DIEGO 2635**  
 HIGH-PRESSURE COMBUSTION OF BINARY FUEL SPRAYS HIGH-PRESSURE COMBUSTION OF BINARY FUEL SPRAYS  
 03/25/1999 - 01/03/2003 FY01: \$44,446 Total: \$124,022  
*Prin. Invest.:* F A WILLIAMS  
*Tech. Officer:* GRC/D L DIETRICH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 695 UNIV OF CALIFORNIA - SAN DIEGO 2636**  
 DYNAMICS OF DROPLETS EXTINCTION IN SLOW CONVECTIVE FLOWS  
 03/25/1999 - 01/13/2003 FY01: \$7,847 Total: \$23,203  
*Prin. Invest.:* F A WILLIAMS  
*Tech. Officer:* GRC/D LURBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NCC 3 769 UNIV OF CALIFORNIA - SAN DIEGO 2637**  
 SCIENTIFIC SUPPORT FOR A PROPOSED SPACE SHUTTLE DR OPLET  
 BURNING EXPERIMENT  
 02/08/2000 - 12/13/2002 FY01: \$123,437 Total: \$242,437  
*Prin. Invest.:* F A WILLIAMS  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 819 UNIV OF CALIFORNIA - SAN DIEGO 2638**  
 INTEGRAL DAMPING OF A TRAILING EDGE BLOWING FAN BL ADE  
 07/31/2000 - 02/28/2001 FY01: \$0 Total: \$40,000  
*Prin. Invest.:* D KOSMATKA  
*Tech. Officer:* GRC/O MEHMED  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 902 UNIV OF CALIFORNIA - SAN DIEGO 2639**  
 STRUCTURAL ANALYSIS OF AN INTEGRAL DAMPED FAN STRUCTURAL  
 ANALYSIS OF AN INTEGRAL DAMPED FAN  
 07/13/2001 - 04/30/2002 FY01: \$79,194 Total: \$79,194  
*Prin. Invest.:* D KOSMATKA  
*Tech. Officer:* GRC/O MEHMED  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 5 230 UNIV OF CALIFORNIA - SAN DIEGO 2640**  
 CORRELATED NOISE IN GPS TIME SERIES AND ITS EFFECT MODELS  
 08/22/1997 - 08/31/2001 FY01: \$0 Total: \$92,292  
*Prin. Invest.:* D C AGNEW  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 5 257 UNIV OF CALIFORNIA - SAN DIEGO 2641**  
 EARTHKAM (EARTH KNOWLEDGE ACQUIRED BY MIDDLE SCHOO LS)  
 11/25/1997 - 10/31/2001 FY01: \$0 Total: \$2,274,999  
*Prin. Invest.:* D K RIDE  
*Tech. Officer:* HQ/P MOUMNTJOY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 540 UNIV OF CALIFORNIA - SAN DIEGO 2642**  
 EARTHKAM BRIDGE FUNDING REQUEST  
 02/20/2001 - 01/31/2002 FY01: \$500,000 Total: \$500,000  
*Prin. Invest.:* S RIDE  
*Tech. Officer:* GSFC/P L MOUNTJOY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 585 UNIV OF CALIFORNIA - SAN DIEGO 2643**  
 INTERNATIONAL SPACE STATION MIDDLE SCHOOL EDUC./ ISS EARTHKAM  
 08/31/2001 - 08/31/2005 FY01: \$320,196 Total: \$320,196  
*Prin. Invest.:* S RIDE  
*Tech. Officer:* GSFC/P MOUNTJOY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 9 105 UNIV OF CALIFORNIA - SAN DIEGO 2644**  
 CHARACTERIZATION OF AUTONOMIC FUNTION  
 02/21/2000 - 02/20/2003 FY01: \$21,608 Total: \$42,668  
*Prin. Invest.:* P J MILLS  
*Tech. Officer:* JSC/J MECK  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 9 106 UNIV OF CALIFORNIA - SAN DIEGO 2645**  
 CHARACTERIZATION OF AUTOMIC FUNCTION  
 02/16/2000 - 03/31/2003 FY01: \$123,068 Total: \$243,188  
*Prin. Invest.:* M G ZEIGLER  
*Tech. Officer:* JSC/J MECK  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT 2 52251 UNIV OF CALIFORNIA - SAN DIEGO 2646**  
 ACHIEVING APPLICATION PERFORMANCE ON THE INFORMATI ON POWER  
 GRID  
 09/18/1998 - 03/31/2001 FY01: \$12,000 Total: \$66,000  
*Prin. Invest.:* F BERMAN  
*Tech. Officer:* ARC/C H SCHULBACK  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 3 52333 UNIV OF CALIFORNIA - SAN DIEGO 2647**  
 GRADUATE STUDENT RESEARCHES PROGRAM  
 06/11/1997 - 12/31/2000 FY01: -\$1,839 Total: \$64,161  
*Prin. Invest.:* J KOSMATKA  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 4 52429 UNIV OF CALIFORNIA - SAN DIEGO 2648**  
 CONTROL ORIENTED MODELING AND VALDATION OF AEROSE RVOE-  
 LASTIC SYSTEMS  
 07/20/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R D CALLAFON  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 106 UNIV OF CALIFORNIA - SAN DIEGO 2649**  
 THE INFLUENCES OF LIGHT ON PHYTOPLANKTON FLUORESCE NCE AND  
 PRODUCTIVITY (STUDENT: JESSICA NOLAN)  
 05/30/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* B G MITCHELL, NONE  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 33 - OCEANOGRAPHY

**NGT 5 30122 UNIV OF CALIFORNIA - SAN DIEGO 2650**  
 LONG-TERM VARIABILITY IN PHYTOPLANKTON GROWTH RATE S &  
 PRIMARY PRODUCTIVITY ESSF RECIPIENT: AMY SHAN  
 10/01/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R GOERICKE  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT 5 30368 UNIV OF CALIFORNIA - SAN DIEGO 2651**  
 NEAR-FIELD FAULT DEFORMATION IN SOUTHERN CALIFORNI A AND BAJA,  
 MEXICO FROM THE GLOBAL POSITIONING  
 08/13/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D SANDWELL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40007 UNIV OF CALIFORNIA - SAN DIEGO 2652**  
 SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATONA COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 01/24/1997 - 01/31/2001 FY01: \$0 Total: \$1,836,750  
*Prin. Invest.:* J A ARNOLD  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40085 UNIV OF CALIFORNIA - SAN DIEGO 2653**  
 CALIFORNIA SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 02/12/2001 - 01/31/2002 FY01: \$460,750 Total: \$460,750  
*Prin. Invest.:* J ARNOLD  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50131 UNIV OF CALIFORNIA - SAN DIEGO 2654**  
 IMPROVING SCIENTIFIC APPLICATION PERFORMANCE BY DY  
 09/10/1997 - 06/30/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* F BERMAN  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50183 UNIV OF CALIFORNIA - SAN DIEGO 2655**  
 THREE ASTROPHYSICAL GRAILS: THE ORIGINS OF DARK MATTER,  
 GAMMA-RAY BURSTS, AND HEAVY ELEMENTS  
 05/27/1998 - 06/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* G M FULLER  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50234 UNIV OF CALIFORNIA - SAN DIEGO 2656**  
 PARADIGM SHIFTS IN THE GAMMA-RAY BURST MYSTERY AND  
 COSMOLOGY: WORKING TOWARDS FIRM GROUND  
 05/27/1999 - 06/30/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* G FULLER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1261 UNIV OF CALIFORNIA - SAN FRANCISCO 2657**  
 TELOMERE REPAIR & CHROMOSOME INSTABILITY AFTER HIGH LINEAR  
 ENERGY TRANSFER PARTICLE RADIATION  
 09/25/2000 - 07/31/2002 FY01: \$242,854 Total: \$291,425  
*Prin. Invest.:* J P MURNANE, B FOULADI  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 56 - MEDICL

**NAS 9 99055 UNIV OF CALIFORNIA - SAN FRANCISCO 2658**  
 LIFE SCIENCE FLIGHT EXPERIMENT  
 01/29/1999 - 12/31/2002 FY01: \$125,000 Total: \$355,000  
*Prin. Invest.:* T LANG  
*Tech. Officer:* JSC/D BAUMANN  
*CASE Category:* 56 - MEDICL

**NCC 2 993 UNIV OF CALIFORNIA - SAN FRANCISCO 2659**  
 EVOLUTIONARY CELL COMPUTING  
 05/16/1997 - 06/30/2000 FY01: \$0 Total: \$158,786  
*Prin. Invest.:* M A WILSON  
*Tech. Officer:* ARC/M H NEW, ARC/S CHANG  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 2 1126 UNIV OF CALIFORNIA - SAN FRANCISCO 2660**  
 MEMBRANE-BASED FUNCTIONS IN THE ORIGINS OF CELLULAR LIFE  
 06/14/1999 - 12/31/2001 FY01: \$100,622 Total: \$197,114  
*Prin. Invest.:* M A WILSON  
*Tech. Officer:* ARC/M H NEW, ARC/M L FONDA  
*CASE Category:* 12 - CHEMISTRY

**NCC 2 1194 UNIV OF CALIFORNIA - SAN FRANCISCO 2661**  
 DO INTEGRINS MEDIATE THE SKELETAL RESPONSES TO ALTERED  
 LOADING IN VIVI? (SUBPROJECT A)  
 08/28/2000 - 09/30/2002 FY01: \$100,034 Total: \$199,422  
*Prin. Invest.:* C H DAMSKY  
*Tech. Officer:* ARC/R K GLOBUS, ARC/E M HOLTON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5294 UNIV OF CALIFORNIA - SAN FRANCISCO 2662**  
 MOLECULAR MODELING IN BIO-NANOTECHNOLOGY: COMPUTER AIDED  
 GENETIC ENGINEERING OF A PROTEIN-BASED ...  
 09/21/1998 - 09/30/2000 FY01: \$0 Total: \$147,817  
*Prin. Invest.:* M A WILSON, NONE  
*Tech. Officer:* ARC/R L JAFFE  
*CASE Category:* 12 - CHEMISTRY

**NCC 2 5295 UNIV OF CALIFORNIA - SAN FRANCISCO 2663**  
 TOWARDS A PHYLOGENY OF BIOLOGICAL FUNCTIONS  
 09/25/1998 - 03/31/2001 FY01: \$0 Total: \$175,533  
*Prin. Invest.:* M A WILSON  
*Tech. Officer:* ARC/M H NEW, ARC/M L FONDA  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 5389 UNIV OF CALIFORNIA - SAN FRANCISCO 2664**  
 RESEARCH IN COMPUTATIONAL ASTROBIOLOGY  
 07/07/2000 - 06/30/2001 FY01: \$0 Total: \$42,856  
*Prin. Invest.:* M A WILSON  
*Tech. Officer:* ARC/M H NEW, ARC/A POHORILLE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 2 5412 UNIV OF CALIFORNIA - SAN FRANCISCO 2665**  
 COMPUTER MODELING OF NUCLEIC ACID INTERACTIONS FOR IN VIVO  
 DNA SEQUENCE DETECTION  
 11/30/2000 - 11/30/2001 FY01: \$61,496 Total: \$61,496  
*Prin. Invest.:* M A WILSON, A HERMONE  
*Tech. Officer:* ARC/R L JAFFE, ARC/H PARTRIDGE  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5453 UNIV OF CALIFORNIA - SAN FRANCISCO 2666**  
 RESEARCH IN COMPUTATIONAL ASTROBIOLOGY  
 08/08/2001 - 07/31/2002 FY01: \$56,780 Total: \$56,780  
*Prin. Invest.:* M A WILSON  
*Tech. Officer:* ARC/M NEW, ARC/A POHORILLO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 01003 UNIV OF CALIFORNIA - SANTA BARBARA 2667**  
 BIOMIMETIC, SELF-HEALING NANOCOMPOSITES FOR AEROSPACE  
 APPLICATIONS: 1. UCSB COMPONENTS  
 12/29/2000 - 09/30/2003 FY01: \$145,833 Total: \$145,833  
*Prin. Invest.:* D E MORSE  
*Tech. Officer:* LARC/E J SIOCHI  
*CASE Category:* 12 - CHEMISTRY

**NAG 2 1140 UNIV OF CALIFORNIA - SANTA BARBARA 2668**  
 MODELING & PREDICTION OF WILDFIRE HAZARD IN SOUTHERN  
 CALIFORNIA, INTEGRATION OF MODELS WITH.....  
 07/21/1997 - 06/30/2001 FY01: \$0 Total: \$245,000  
*Prin. Invest.:* D A ROBERTS, S LUSTIN, R CHURCH  
*Tech. Officer:* ARC/G A SHELTON, ARC/J A BRASS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 1847 UNIV OF CALIFORNIA - SANTA BARBARA 2669**  
 THE SUPERFLUID TRANSITION OF HE4 UNDER UNUSUAL CONDITIONS  
 05/02/1996 - 07/31/2001 FY01: \$30,000 Total: \$821,000  
*Prin. Invest.:* P AHLERS  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 1857 UNIV OF CALIFORNIA - SANTA BARBARA 2670**  
 NUMERICAL SIMULATION OF ELECTROCHEMICAL TRANSPORT PROCESS  
 IN MICROGRAVITY ENVIRONMENTS  
 05/06/1996 - 11/06/2000 FY01: -\$86 Total: \$319,914  
*Prin. Invest.:* S BAMEERJEE *Prin. Invest.:* NONE  
*Tech. Officer:* GRC/J C DUH  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2115 UNIV OF CALIFORNIA - SANTA BARBARA 2671**  
 INTERACTION FORCES AND THE FLOW-INDUCED COALESCENCE OF  
 DROPS AND BUBBLES  
 02/19/1998 - 12/31/2002 FY01: \$166,250 Total: \$616,250  
*Prin. Invest.:* L G LEAL  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 2119 UNIV OF CALIFORNIA - SANTA BARBARA 2672**  
 POOL BOILING CIRCUITS FROM FLAT PLATES: MECHANISM(S) AND  
 ENHANCEMENT  
 02/26/1998 - 12/31/2001 FY01: \$133,850 Total: \$481,850  
*Prin. Invest.:* T G THEOFANOUS, Y BUYEVIAH  
*Tech. Officer:* GRC/J B MCQUILLEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2414 UNIV OF CALIFORNIA - SANTA BARBARA 2673**  
 DIRECT NUMERICAL SIMULATION OF TURBULENT FLOWS WITH PHASE  
 CHANGE IN MICROGRAVITY  
 06/02/2000 - 11/30/2003 FY01: \$47,500 Total: \$87,500  
*Prin. Invest.:* P BANERJEE  
*Tech. Officer:* LARC/J H AGUI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2439 UNIV OF CALIFORNIA - SANTA BARBARA 2674**  
 GRADIENT DRIVEN FLUCTUATIONS GRADIENT DRIVEN FLUCTUATIONS  
 04/20/2000 - 11/30/2003 FY01: \$133,000 Total: \$183,000  
*Prin. Invest.:* D S CANNELL  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2466 UNIV OF CALIFORNIA - SANTA BARBARA 2675**  
 THE DYNAMICS OF PARTICULATE DEPOSITION AND RESUSPENSION  
 PROCESSES AT MODERATE TO HIGH REYNOLDS NUMBER  
 06/20/2000 - 11/30/2003 FY01: \$31,739 Total: \$48,845  
*Prin. Invest.:* E MEIBURG  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2493 UNIV OF CALIFORNIA - SANTA BARBARA 2676**  
 THE DYNAMICS OF MISCIBLE INTERFACES: SIMULATIONS OF THE  
 DYNAMICS OF MISCIBLE INTERFACES: SIMULATIONS  
 10/11/2000 - 12/31/2001 FY01: \$107,500 Total: \$107,500  
*Prin. Invest.:* E H MEIBURG  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2513 UNIV OF CALIFORNIA - SANTA BARBARA 2677**  
 PROBLEMS IN MICROGRAVITY FLUID MECHANICS: G-JITTE R CONVECTION  
 12/19/2000 - 11/30/2003 FY01: \$150,250 Total: \$150,250  
*Prin. Invest.:* G M HOMSY  
*Tech. Officer:* GRC/F P CHIARAMONTE III  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3620 UNIV OF CALIFORNIA - SANTA BARBARA 2678**  
 "REMOTE SENSING INFORMATION SCIENCES RESEARCH GROUP"  
 02/07/1997 - 06/30/2001 FY01: \$0 Total: \$2,384,434  
*Prin. Invest.:* D C CLARKE  
*Tech. Officer:* GSFC/A J TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3646 UNIV OF CALIFORNIA - SANTA BARBARA 2679**  
 SOLAR SYSTEM PHYSICS  
 02/25/1997 - 04/30/2002 FY01: \$85,000 Total: \$335,750  
*Prin. Invest.:* S J PEALE  
*Tech. Officer:* GSFC/J G GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4629 UNIV OF CALIFORNIA - SANTA BARBARA 2680**  
 PARAMETERIZATION OF CLOUD 3-D EFFECTS ON SURFACE SPECTRUM  
 ESTIMATED FROM SATELLITE MEASUREMENTS  
 05/21/1997 - 11/30/2001 FY01: \$0 Total: \$380,000  
*Prin. Invest.:* C GAUTHIER  
*Tech. Officer:* GSFC/R CAHALAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4814 UNIV OF CALIFORNIA - SANTA BARBARA 2681**  
 HYDROLOGY, HYDROCHEMICAL MODELING AND REMOTE SENSING OF  
 SNOW-COVERED ALPINE DRAINAGE BASINS  
 06/19/1997 - 12/31/2001 FY01: \$0 Total: \$2,394,535  
*Prin. Invest.:* J C DOZIER  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4963 UNIV OF CALIFORNIA - SANTA BARBARA 2682**  
 PROGRAM IS PART OF A LONG TERM EFFORT TO DEVELOP UNDERGRADUATE  
 STUDENTS, EARLY ON IN THEIR ACADEMIC LIFE  
 06/27/1997 - 12/31/2000 FY01: \$0 Total: \$225,000  
*Prin. Invest.:* C GAUTIER  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6120 UNIV OF CALIFORNIA - SANTA BARBARA 2683**  
 THE EOS AMAZON PROJECT  
 08/13/1997 - 06/30/2002 FY01: \$0 Total: \$623,394  
*Prin. Invest.:* T DUNNE  
*Tech. Officer:* GSFC/T JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6288 UNIV OF CALIFORNIA - SANTA BARBARA 2684**  
 DEVELOPMENT AND APPLICATION OF THE NEXT GENERATION FOR THE  
 UNDERSTANDING OF MARINE PROCESSES ON REGIONAL SCALE  
 09/10/1997 - 08/31/2001 FY01: \$0 Total: \$579,515  
*Prin. Invest.:* D SIEGEL  
*Tech. Officer:* GSFC/J YODER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6434 UNIV OF CALIFORNIA - SANTA BARBARA 2685**  
 BIO-OPTICS IN THE WESTERN ANTARCTIC PENINSULA REGION  
 10/16/1997 - 06/30/2002 FY01: \$0 Total: \$492,438  
*Prin. Invest.:* R C SMITH  
*Tech. Officer:* GSFC/J A MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6465 UNIV OF CALIFORNIA - SANTA BARBARA 2686**  
 INVESTIGATION OF SNOW PROPERTIES USING MODIS AND ASTER DATA  
 10/24/1997 - 09/30/2001 FY01: \$0 Total: \$310,053  
*Prin. Invest.:* J SHI  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6478 UNIV OF CALIFORNIA - SANTA BARBARA 2687**  
 INFRASTRUCTURE FOR TRAINING AND PARTNERSHIPS-CALIFORNIA  
 WATER AND COASTAL OCEAN RESOURCES  
 11/18/1997 - 09/30/1999 FY01: -\$1 Total: \$395,479  
*Prin. Invest.:* D SIEGEL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6911 UNIV OF CALIFORNIA - SANTA BARBARA 2688**  
 A REQUEST FOR SCIENCE READINESS FUNDS FOR THE OPTICAL  
 MONITOR PROGRAM OF THE X-RAY MULTI-MIRROR MISS  
 01/28/1998 - 10/31/2001 FY01: \$0 Total: \$201,479  
*Prin. Invest.:* D CORDOVA  
*Tech. Officer:* GSFC/R DONNELLY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7075 UNIV OF CALIFORNIA - SANTA BARBARA 2689**  
 DETAILED THEORETICAL MODELING OF THE SPECTRUM AND POLARIZA-  
 TION OF ACCRETION DISKS IN ACTIVE GALAXIES  
 02/25/1998 - 02/28/2002 FY01: \$0 Total: \$223,024  
*Prin. Invest.:* O M BLAES  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7177 UNIV OF CALIFORNIA - SANTA BARBARA 2690**  
 PROBABILITY OF DETECTING PLANETS WITH MICROLENSING  
 03/16/1998 - 03/14/2002 FY01: \$33,000 Total: \$121,100  
*Prin. Invest.:* S J PEALE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7248 UNIV OF CALIFORNIA - SANTA BARBARA 2691**  
 SIMPLE AND MULTIPLE ENDMEMBER SPECTRAL MIXTURE ANALYSIS IN  
 THE BOREAL FOREST  
 04/24/1998 - 06/30/2000 FY01: \$0 Total: \$40,000  
*Prin. Invest.:* D A ROBERTS  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7714 UNIV OF CALIFORNIA - SANTA BARBARA 2692**  
 POSTLAUNCH: STATEMENT OF WORK U.S. OPTICAL MONITOR TEAM  
 10/05/1998 - 03/31/2002 FY01: \$433,796 Total: \$994,063  
*Prin. Invest.:* D A CORDOVA  
*Tech. Officer:* GSFC/N E WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7940 UNIV OF CALIFORNIA - SANTA BARBARA 2693**  
 OUTREACH PROJECT  
 01/19/1999 - 03/31/2002 FY01: \$128,619 Total: \$253,850  
*Prin. Invest.:* D FOSTER  
*Tech. Officer:* GSFC/N E WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7981 UNIV OF CALIFORNIA - SANTA BARBARA 2694**  
 ATMOSPHERIC EXCITATION OF PLANETARY NORMAL MODES  
 01/13/1999 - 12/31/2001 FY01: \$0 Total: \$68,250  
*Prin. Invest.:* D TANIMOTO  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8319 UNIV OF CALIFORNIA - SANTA BARBARA 2695**  
 PLUMES AND BLOOMS: MODELING THE CASE II WATERS OF THE SANTA  
 BARBARA CHANNEL  
 04/01/1999 - 03/31/2001 FY01: \$0 Total: \$180,000  
*Prin. Invest.:* D A SIEGEL  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8396 UNIV OF CALIFORNIA - SANTA BARBARA 2696**  
 MESOSCALE EFFECTS OF CLIMATE AND LAND-COVER CHANGE ON  
 RIVER-BASIN HYDROLOGY IN AMAZONIA  
 04/01/1999 - 03/31/2002 FY01: \$100,000 Total: \$300,000  
*Prin. Invest.:* T DUNNE  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8542 UNIV OF CALIFORNIA - SANTA BARBARA 2697**  
 GAZETTEER IMPLEMENTATION FOR INDIRECT SPATIAL REFERENCING  
 05/20/1999 - 08/31/2000 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* L L HILL  
*Tech. Officer:* GSFC/K MOE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8616 UNIV OF CALIFORNIA - SANTA BARBARA 2698**  
 EVALUATING USAGE OF SAR IN MEASURING SNOW PROPERTIES  
 06/14/1999 - 06/30/2002 FY01: \$129,107 Total: \$320,177  
*Prin. Invest.:* J SHI  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8658 UNIV OF CALIFORNIA - SANTA BARBARA 2699**  
 ROTATIONAL INSTABILITIES AND NUCLEOSYNTHESIS IN ACCRETING  
 NEUTRON STARS  
 08/31/1999 - 06/30/2002 FY01: \$40,000 Total: \$117,680  
*Prin. Invest.:* L BILDSTEN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8669 UNIV OF CALIFORNIA - SANTA BARBARA 2700**  
 NANOSCALE BOLOMETERS AND EVAPORATIVE ELECTRONIC REFRIGERA-  
 TION  
 07/09/1999 - 07/14/2002 FY01: \$0 Total: \$432,592  
*Prin. Invest.:* A CLELAND  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 13 - PHYSICS

**NAG 5 8680 UNIV OF CALIFORNIA - SANTA BARBARA 2701**  
 ATMOSPHERIC MINERAL DUST AND CHLOROPHYLL BLOOMS  
 07/19/1999 - 07/14/2002 FY01: \$118,691 Total: \$350,379  
*Prin. Invest.:* N M MAHOWALD  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9055 UNIV OF CALIFORNIA - SANTA BARBARA 2702**  
 APPLICATIONS AND VALIDATION OF THE SRTM DEM IN THE AMAZON:  
 HYDROLOGICAL AND GEOMORPHOLOGICAL ANALYSIS  
 02/14/2000 - 05/31/2001 FY01: \$25,000 Total: \$100,000  
*Prin. Invest.:* D E ALSDORF  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9073 UNIV OF CALIFORNIA - SANTA BARBARA 2703**  
 BALLOON BORNE MILLIMETER WAVELENGTH SKY STUDIES &  
 TECHNOLOGY DEVELOPMENT  
 02/15/2000 - 02/14/2002 FY01: \$379,972 Total: \$738,482  
*Prin. Invest.:* P LUBIN  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9251 UNIV OF CALIFORNIA - SANTA BARBARA 2704**  
 BALLOON BORNE OBSERVATIONS OF THE POLARIZATION OF THE COSMIC  
 MICROWAVE BACKGROUND  
 03/31/2000 - 03/31/2002 FY01: \$166,220 Total: \$350,530  
*Prin. Invest.:* J E RUHL  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9671 UNIV OF CALIFORNIA - SANTA BARBARA 2705**  
 THE ROLE OF NORTH AFRICAN MINERAL AEROSOLS IN CLIM ATE AND  
 BIOGEOCHIMSTRY  
 06/12/2000 - 05/31/2002 FY01: \$227,385 Total: \$423,333  
*Prin. Invest.:* N M MAHOWALD  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9811 UNIV OF CALIFORNIA - SANTA BARBARA 2706**  
 GLOBALLY CONSISTENT TOPOGRAPHIC CHARACTERIZATION OF LARGE  
 RIVER FLOODPLAINS BASED ON THE SRT  
 07/21/2000 - 07/31/2002 FY01: \$95,001 Total: \$134,998  
*Prin. Invest.:* L K MERTES  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICALSCIENCE

**NAG 5 9818 UNIV OF CALIFORNIA - SANTA BARBARA 2707**  
 DEVELOPMENT AND APPLICATION OF THE NEXT GENERATION OF OCEAN  
 COLOR MODELS FOR THE UNDERSTANDING OF MA  
 07/26/2000 - 08/31/2002 FY01: \$150,000 Total: \$200,000  
*Prin. Invest.:* D A SIEGEL  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9844 UNIV OF CALIFORNIA - SANTA BARBARA 2708**  
 HYDROLOGY, HYDROCHEMICAL MODELING & REMOTE SENSING IN  
 SEASONALLY SNOW-COVERED ALPINE DRAINAGE  
 08/07/2000 - 07/31/2002 FY01: \$0 Total: \$750,000  
*Prin. Invest.:* J C DOZIER  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9941 UNIV OF CALIFORNIA - SANTA BARBARA 2709**  
 DISTORTIONS OF THE CMB FROM VARIOUS PROCESSES OF THE EARLY  
 UNIVERSE  
 09/08/2000 - 09/30/2001 FY01: \$0 Total: \$40,791  
*Prin. Invest.:* P M LUBIN  
*Tech. Officer:* GSFC/A J KOGUT  
*CASE Category:* 13 - PHYSICS

**NAG 5 9971 UNIV OF CALIFORNIA - SANTA BARBARA 2710**  
 SPECTROSCOPY OF DIPS AND FLARES IN CIR X-1  
 09/13/2000 - 09/14/2002 FY01: \$16,800 Total: \$43,800  
*Prin. Invest.:* R E SHIREY  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10146 UNIV OF CALIFORNIA - SANTA BARBARA 2711**  
 REMOTE SENSING ASSESSMENT OF BIOGEOCHEMICAL PROCESSES IN  
 THE SARGASSO SEA  
 01/04/2001 - 11/30/2001 FY01: \$97,934 Total: \$97,934  
*Prin. Invest.:* N NELSON  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10299 UNIV OF CALIFORNIA - SANTA BARBARA 2712**  
 QUANTUM LTD.-TERAHERTZ DETECTION WITHOUT LIQUID CRYOGENS  
 PROPOSAL #1138  
 01/31/2001 - 12/31/2001 FY01: \$245,251 Total: \$245,251  
*Prin. Invest.:* M SHERWIN  
*Tech. Officer:* GSFC/T DOIRON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 10457 UNIV OF CALIFORNIA - SANTA BARBARA 2713**  
 REMOTE SENSING INFORMATON SCIENCE RESEARCH  
 02/26/2001 - 02/28/2002 FY01: \$390,000 Total: \$390,000  
*Prin. Invest.:* J E ESTES  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10520 UNIV OF CALIFORNIA - SANTA BARBARA 2714**  
 TECTONIC-CLIMATE INTERACTIONS IN ACTIVE OROGENIC BELTS: QUAN-  
 TIFICATION OF DYNAMIC TOPOGRAPHY WITH  
 03/30/2001 - 02/14/2002 FY01: \$146,532 Total: \$146,532  
*Prin. Invest.:* D W BURBANK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10671 UNIV OF CALIFORNIA - SANTA BARBARA 2715**  
 ESTIMATING SOIL MOISTURE CHANGES USING RADARSAT & ITS APPLICA-  
 TION IN HYDROLOGICAL MODELING  
 03/27/2001 - 03/14/2002 FY01: \$71,282 Total: \$71,282  
*Prin. Invest.:* J SHI  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11249 UNIV OF CALIFORNIA - SANTA BARBARA 2716**  
 MULTI-MEDIA FLUID MECHANICS: FLUIDS IN MICROGRAVITY  
 08/16/2001 - 08/31/2002 FY01: \$150,000 Total: \$150,000  
*Prin. Invest.:* G HOMSY  
*Tech. Officer:* GSFC/D SPEARS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1429 UNIV OF CALIFORNIA - SANTA BARBARA 2717**  
 R/S BOUNDARY EFFECTS ON TRANSPORT PROPERTIES AND DYNAMIC  
 FINITE-SIZE SCALING NEAR THE SUPERFLUID  
 02/23/1998 - 01/31/2003 FY01: \$161,500 Total: \$628,121  
*Prin. Invest.:* G AHLERS, V DOHM, F C LIU  
*Tech. Officer:* MSFC/J POE, JPL/D STRAYER  
*CASE Category:* 13 - PHYSICS

**NAG 8 1757 UNIV OF CALIFORNIA - SANTA BARBARA 2718**  
 RESEARCH ENTITLED, THE SUPERFLUID TRANSITION OF HE UNDER  
 UNUSUAL CONDITIONS  
 04/26/2001 - 04/29/2005 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* G AHLERS  
*Tech. Officer:* GSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 9 1329 UNIV OF CALIFORNIA - SANTA BARBARA 2719**  
 QUANTITATIVE MODELING OF HUMAN SACADIC TARGETING DURING VISUAL  
 RESEARCH  
 06/29/2001 - 12/23/2002 FY01: \$167,146 Total: \$167,146  
*Prin. Invest.:* M ECKSTIEN  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG13 99025 UNIV OF CALIFORNIA - SANTA BARBARA 2720**  
 IMPLEMENTATION OF PREDICTIVE SOIL MODELING IN THE NATIONAL  
 COOPERATIVE SOIL SURVEY  
 08/27/1999 - 11/01/2001 FY01: \$121,343 Total: \$235,149  
*Prin. Invest.:* O CHADWICK  
*Tech. Officer:* JSC/R MCKELLIP  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAS 5 00196 UNIV OF CALIFORNIA - SANTA BARBARA 2721**  
 SIMBIOS II-OPTIMIZATION OF OCEAN COLOR ALGORITHMS: APPLICATION  
 TO SATELLITE & IN SITU DATA MERGING.  
 01/10/2001 - 11/30/2001 FY01: \$133,635 Total: \$133,635  
*Prin. Invest.:* S MARITORENA  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 00200 UNIV OF CALIFORNIA - SANTA BARBARA 2722**  
 SIMBIOS II - THE BERMUDA BIO-OPTICS PROJECT (BBPO) YEARS 9 THRU  
 11.  
 01/26/2001 - 11/30/2001 FY01: \$237,559 Total: \$237,559  
*Prin. Invest.:* D A SIEGEL  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 00201 UNIV OF CALIFORNIA - SANTA BARBARA 2723**  
 SIMBIOS II - PLUMES & BLOOMS: OBSERVATIONS, ANALYSIS & MODELING  
 FOR SIMBIOS.  
 01/26/2001 - 11/30/2001 FY01: \$208,287 Total: \$208,287  
*Prin. Invest.:* D A SIEGEL  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 31370 UNIV OF CALIFORNIA - SANTA BARBARA 2724**  
 EOS INVESTIGATION  
 12/23/1991 - 12/14/2001 FY01: \$541,000 Total: \$4,303,402  
*Prin. Invest.:* Z WAN  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 31374 UNIV OF CALIFORNIA - SANTA BARBARA 2725**  
 EOS INVESTIGATION - ATMOSPHERIC INFRARED SOUNDER (AIRS) TEAM  
 MEMBER INVESTIGATION  
 03/04/1992 - 12/14/2001 FY01: \$185,000 Total: \$1,695,000  
*Prin. Invest.:* C GAUTIER  
*Tech. Officer:* GSFC/E KRIENS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 5 31710 UNIV OF CALIFORNIA - SANTA BARBARA 2726**  
 EOS INVESTIGATION/HIRIS TEAM MEMBER  
 09/17/1992 - 12/14/2001 FY01: \$0 Total: \$137,461  
*Prin. Invest.:* D DOZLER  
*Tech. Officer:* GSFC/T BRAKKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAS 5 31713 UNIV OF CALIFORNIA - SANTA BARBARA 2727**  
 EOS INVESTIGATION/HIRIS TEAM MEMBER  
 02/25/1992 - 12/14/2001 FY01: \$0 Total: \$331,783  
*Prin. Invest.:* J M MELACK  
*Tech. Officer:* GSFC/T BRAKE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 97125 UNIV OF CALIFORNIA - SANTA BARBARA 2728**  
 BERMUDA BIOOPTICS PROGRAM FOR SIMBIOS  
 07/11/1997 - 11/30/2000 FY01: \$0 Total: \$922,676  
*Prin. Invest.:* D A SIEGEL  
*Tech. Officer:* GSFC/C MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 97127 UNIV OF CALIFORNIA - SANTA BARBARA 2729**  
 BERMUDA TESTBED MOORING IN SUPPORT OF SIMBIOS  
 07/15/1997 - 10/31/2001 FY01: \$0 Total: \$519,274  
*Prin. Invest.:* T D DICKEY  
*Tech. Officer:* GSFC/C MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 99083 UNIV OF CALIFORNIA - SANTA BARBARA 2730**  
 SPECTRAL DATA ASSIMILATION FOR MERGING SATELLITE OCEAN COLOR  
 IMAGERY  
 01/26/1999 - 10/31/1999 FY01: \$0 Total: \$299,610  
*Prin. Invest.:* D SIEGEL  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC 2 1049 UNIV OF CALIFORNIA - SANTA BARBARA 2731**  
 CHARACTERIZATION OF LIGHTWEIGHT CERAMIC ABLATOR MATERIALS  
 07/16/1998 - 12/14/2000 FY01: \$0 Total: \$147,088  
*Prin. Invest.:* F MILSTEIN  
*Tech. Officer:* ARC/H K TRAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 2 5368 UNIV OF CALIFORNIA - SANTA BARBARA 2732**  
 INTRA-AND INTERSUBBAND ELECTRON-ELECTRON-PHONON SCATTERING IN QUANTUM CONFINED STRUCTURES FOR ...  
 02/28/2000 - 02/28/2001 FY01: \$0 Total: \$59,304  
*Prin. Invest.:* M W WU  
*Tech. Officer:* ARC/T R GOVINDAN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 281 UNIV OF CALIFORNIA - SANTA BARBARA 2733**  
 MULTI-SCALE ANALYSIS OF INUNDATION WITH MICROWAVE AND OPTICAL REMOTE SENSING IN THE AMAZON BASIN:  
 06/16/1998 - 12/31/2001 FY01: \$189,058 Total: \$688,772  
*Prin. Invest.:* J MELACK  
*Tech. Officer:* GSFC/D DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 282 UNIV OF CALIFORNIA - SANTA BARBARA 2734**  
 LAND-COVER CONVERSION IN AMAZONIA, THE ROLE OF ENVIRONMENT AND SUBSTRATE COMPOSITION IN MODIFYING SO  
 06/12/1998 - 12/31/2001 FY01: \$176,726 Total: \$706,442  
*Prin. Invest.:* O A CHADWICK  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 302 UNIV OF CALIFORNIA - SANTA BARBARA 2735**  
 THE EARTH SYSTEM SCIENCE WORKBENCH: A SCALABLE INFRASTRUCTURE FOR ESIP'S  
 04/09/1998 - 11/30/2001 FY01: \$673,000 Total: \$3,398,000  
*Prin. Invest.:* J FREW  
*Tech. Officer:* GSFC/M MAIDEN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 496 UNIV OF CALIFORNIA - SANTA BARBARA 2736**  
 HYPERION APPLICATIONS & VALIDATION FOR FIRE HAZARD ASSESSMENT IN THE SANTA MONICA MOUNTAINS, CALIF  
 04/19/2000 - 12/31/2001 FY01: \$39,854 Total: \$74,343  
*Prin. Invest.:* D A ROBERTS  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 589 UNIV OF CALIFORNIA - SANTA BARBARA 2737**  
 HYPERSPECTRAL ANALYSIS OF LAND-COVER IN RONDONIA  
 09/20/2001 - 09/30/2004 FY01: \$20,864 Total: \$20,864  
*Prin. Invest.:* D A ROBERTS  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 3 52317 UNIV OF CALIFORNIA - SANTA BARBARA 2738**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 08/05/1996 - 11/30/1999 FY01: -\$4,000 Total: \$58,781  
*Prin. Invest.:* S BANERJEE  
*Tech. Officer:* GRC/D MONTEGANI  
*CASE Category:* 43 - CHEMICAL ENGR

**NGT 4 52407 UNIV OF CALIFORNIA - SANTA BARBARA 2739**  
 GSRP ANALYSIS OF ADAPTIVE CONTROL OF AEROELASTIC STRUCTURES USING MULTIDISCIPLINARY STARS PROGRAMS  
 06/18/1998 - 07/31/2002 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J C BRUCH, DR., J TARANTINO  
*Tech. Officer:* SSC/K GUPTA, SSC/L S VOELKER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 4 52423 UNIV OF CALIFORNIA - SANTA BARBARA 2740**  
 DEVELOPMENT OF THE EIGENVECTOR ORIENTATION METHOD FOR FLUTTER PREDICTIONS  
 06/02/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* H T YANG  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 4 52428 UNIV OF CALIFORNIA - SANTA BARBARA 2741**  
 DETERMINING MECHANICAL PROPERTIES OF NANO MATERIALS USING NANOINDENTATION AND A FINITE ELEMENT METHOD  
 07/20/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* H YANG, NONE  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 30063 UNIV OF CALIFORNIA - SANTA BARBARA 2742**  
 BIO-OPTICAL ANALYSIS OF PRIMARY PRODUCTIVITY AND G CHANGE IN ANTARCTIC COASTAL WATERS  
 09/10/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R SMITH  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30173 UNIV OF CALIFORNIA - SANTA BARBARA 2743**  
 MASS BALANCE OF SEDIMENT TRANSPORT ACROSS COASTAL MARGIN FILTERS AT THE BASE OF THE TRANSVERSE RANGE  
 09/22/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* MERTES, WARRICK  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30194 UNIV OF CALIFORNIA - SANTA BARBARA 2744**  
 A TOP-DOWN APPROACH TO UNDERSTANDING & PREDICTING DIMETHYL-SULFIDE VARIABILITY IN THE SARGASSO SEA  
 08/18/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* D A SIEGEL, TOOLE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30201 UNIV OF CALIFORNIA - SANTA BARBARA 2745**  
 MONITORING POPULATION AND THE EXTENT OF HUMAN SETTLEMENT IN THE BRAZILIAN AMAZON WITH SYNTH  
 08/24/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* K C CLARKE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30225 UNIV OF CALIFORNIA - SANTA BARBARA 2746**  
 REGIONAL BIOGEOCHEMISTRY OF LAND USE CHANGE IN THE HUMID TROPICS: DETECTION & MODELING OF THE  
 08/14/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* T DUNNE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



**NGT 5 30332 UNIV OF CALIFORNIA - SANTA BARBARA 2747**  
 INTERACTIONS OF LAND COVER CHANGE & TOPOGRAPHY IN THE HYDRO-  
 LOGIC RESPONSE OF MESOSCALE TROPIC  
 08/14/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* T DUNNE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30357 UNIV OF CALIFORNIA - SANTA BARBARA 2748**  
 THE ROLE OF TOPOGRAPHY & PROXIMITY TO BEDROCK IN DETERMINING  
 NUTRIENT SUPPLY TO A SEASONAL AMAZONI  
 08/22/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* O CHADWICK  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30400 UNIV OF CALIFORNIA - SANTA BARBARA 2749**  
 REMOTE SENSING OF ANTHROPOGENIC BIOMASS BURNING & FOREST  
 DEGRADATION IN MADAGASCAR: THE DEVELOPMENT  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D ROBERTS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30406 UNIV OF CALIFORNIA - SANTA BARBARA 2750**  
 SATELLITE DETECTION OF TRICHODESMIUM SPP. AND ITS RELATION  
 TO ATMOSPHERIC DUST DEPOSITIONS  
 08/15/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D SIEGEL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30413 UNIV OF CALIFORNIA - SANTA BARBARA 2751**  
 ROLES OF REGIONAL CLIMATOLOGY IN THE NORTH AFRICAN DESERT  
 DUST. STUDENT: MASARU YOSHIOKA  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* N MAHOWALD  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50192 UNIV OF CALIFORNIA - SANTA BARBARA 2752**  
 MEASUREMENT OF CMB ANISOTROPIES FOR DETERMINATION OF  
 COSMOLOGICAL PARAMETERS  
 06/05/1998 - 06/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* P LUBIN  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50269 UNIV OF CALIFORNIA - SANTA BARBARA 2753**  
 B2K, AN EXPERIMENT TO MEASURE THE POLARIZATION OF THE CMB  
 06/22/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* J RUHL, NONE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50327 UNIV OF CALIFORNIA - SANTA BARBARA 2754**  
 MAPPING WILDLAND FUELS USING COMBINED HYPERSPECTRAL &  
 SYNTHETIC APERTURE RADAR FOR FIRE HAZARD  
 08/17/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D A ROBERTS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 1239 UNIV OF CALIFORNIA - SANTA CRUZ 2755**  
 ACCELERATED TIME-VARYING FLOW VISUALIZATION WITH FEAUTURE  
 PRESERVATION  
 07/17/1998 - 10/31/2000 FY01: \$0 Total: \$117,000  
*Prin. Invest.:* A VANGELDER, J WILHELMS  
*Tech. Officer:* ARC/A VAZIRI, ARC/M GERALD-YAMASAKI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 3232 UNIV OF CALIFORNIA - SANTA CRUZ 2756**  
 THE PROPERTIES OF INTERSTELLAR DUST GRAINS IN CIRRUS CLOUDS  
 05/08/1996 - 04/30/2000 FY01: -\$599 Total: \$245,296  
*Prin. Invest.:* P GUHATHAKURTA  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3507 UNIV OF CALIFORNIA - SANTA CRUZ 2757**  
 ISO DEEP SURVEY  
 10/31/1996 - 11/14/2000 FY01: -\$1 Total: \$39,999  
*Prin. Invest.:* D C KOO  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4445 UNIV OF CALIFORNIA - SANTA CRUZ 2758**  
 PHOTON-WEIGHTED MIDPOINT EXPOSURE METER FOR KECK/H  
 RESEARCH  
 04/25/1997 - 04/30/2001 FY01: \$0 Total: \$205,494  
*Prin. Invest.:* D S VOGT  
*Tech. Officer:* GSFC/S HOWARD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4494 UNIV OF CALIFORNIA - SANTA CRUZ 2759**  
 FORMATION AND EARLY EVOLUTION OF SOLAR AND EXTRA-S  
 04/30/1997 - 03/31/2001 FY01: \$0 Total: \$112,776  
*Prin. Invest.:* D H BODENHEIMER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4610 UNIV OF CALIFORNIA - SANTA CRUZ 2760**  
 MAJOR UNRESOLVED PROBLEMS IN FU ORIONIS SYSTEMS  
 05/20/1997 - 05/31/2000 FY01: \$0 Total: \$150,000  
*Prin. Invest.:* D H BODENHEIMER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4665 UNIV OF CALIFORNIA - SANTA CRUZ 2761**  
 STRUCTURE AND FUNCTION OF ENCAPSULATED REPLICATING  
 06/05/1997 - 12/31/1999 FY01: -\$712 Total: \$340,201  
*Prin. Invest.:* D DEAMER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 7245 UNIV OF CALIFORNIA - SANTA CRUZ 2762**  
 GEOPHYSICS OF SMALL PLANETARY BODIES  
 04/15/1998 - 10/14/1999 FY01: -\$208 Total: \$156,192  
*Prin. Invest.:* E ASPHAUG  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7515 UNIV OF CALIFORNIA - SANTA CRUZ 2763**  
 TIDALY DRIVEN G-MODE OSCILLATION IN SOLAR-TYPE STARS BY  
 CLOSEPLANETARY COMPANIONS  
 05/29/1998 - 05/31/2001 FY01: \$0 Total: \$135,000  
*Prin. Invest.:* D LIN  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8128 UNIV OF CALIFORNIA - SANTA CRUZ 2764**  
 THREE DIMENSIONAL MODELS FOR GAMMA-RAY BURSTS AND SUPER-  
 NOVAE\_ (ATP98)  
 02/05/1999 - 02/14/2002 FY01: \$96,000 Total: \$273,606  
*Prin. Invest.:* S E WOOSLEY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8196 UNIV OF CALIFORNIA - SANTA CRUZ 2765**  
 THE GROWTH OF PROTOGIANT PLANETS IN PROTOSTELLAR DISKS  
 02/04/1999 - 01/31/2002 FY01: \$45,000 Total: \$130,000  
*Prin. Invest.:* D N LIN  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8218 UNIV OF CALIFORNIA - SANTA CRUZ 2766**  
 TESTING INFLATION AND DARK MATTER WITH NEW DATA, MODELS, AND  
 METHODS(ATP98)  
 02/08/1999 - 02/14/2002 FY01: \$228,138 Total: \$665,901  
*Prin. Invest.:* J R PRIMACK  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8348 UNIV OF CALIFORNIA - SANTA CRUZ 2767**  
 THE PROPERTIES OF INTERSTELLAR DUST GRAINS IN IRAS 'CIRRUS'  
 CLOUDS(ATP98)  
 03/01/1999 - 04/30/2002 FY01: \$55,901 Total: \$159,572  
*Prin. Invest.:* P GUHATHAKURTA  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8409 UNIV OF CALIFORNIA - SANTA CRUZ 2768**  
 EVOLUTION OF HOT GAS IN ELLIPTICAL GALAXIES (ATP 98)  
 03/15/1999 - 03/31/2002 FY01: \$43,000 Total: \$121,622  
*Prin. Invest.:* W G MATHEWS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8750 UNIV OF CALIFORNIA - SANTA CRUZ 2769**  
 MONITORING ECOSYSTEM CONDITION AND STRESS IN THE SAN PABLO  
 BAY, CA REGION  
 09/08/1999 - 09/14/2002 FY01: \$61,210 Total: \$190,492  
*Prin. Invest.:* R KUDELA  
*Tech. Officer:* GSFC/J W MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8855 UNIV OF CALIFORNIA - SANTA CRUZ 2770**  
 COMPOUND REMOTE SENSING FOR THE DETERMINATION OF NEW  
 PRIMARY PRODUCTION IN COASTAL WATERS  
 11/23/1999 - 11/30/2001 FY01: \$79,639 Total: \$157,149  
*Prin. Invest.:* R KUDELA  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8914 UNIV OF CALIFORNIA - SANTA CRUZ 2771**  
 SMALL BODIES AND PLANETARY COLLISIONS  
 01/27/2000 - 12/31/2001 FY01: \$114,000 Total: \$222,300  
*Prin. Invest.:* E ASPHAUG  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9391 UNIV OF CALIFORNIA - SANTA CRUZ 2772**  
 WORKSTATION CLUSTER FOR SMALL BODIES AND PLANETARY COLLI-  
 SIONS  
 04/04/2000 - 04/14/2001 FY01: \$0 Total: \$25,000  
*Prin. Invest.:* E ASPHAUG  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9403 UNIV OF CALIFORNIA - SANTA CRUZ 2773**  
 STRUCTURE AND FUNCTION OF ENCAPSULATED REPLICATING SYSTEMS  
 04/06/2000 - 03/31/2002 FY01: \$117,000 Total: \$227,214  
*Prin. Invest.:* D DEAMER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9526 UNIV OF CALIFORNIA - SANTA CRUZ 2774**  
 MULTIDIMENSIONAL MODELING OF THE SOLAR NEBULA: A BETTER TOOL  
 FOR UNDERSTANDING OBSERVATIONS  
 04/28/2000 - 05/31/2002 FY01: \$0 Total: \$45,000  
*Prin. Invest.:* P BODENHEIMER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9661 UNIV OF CALIFORNIA - SANTA CRUZ 2775**  
 FORMATION AND EARLY EVOLUTION OF SOLAR AND EXTRA- SOLAR  
 GIANT PLANETS  
 06/01/2000 - 06/14/2002 FY01: \$38,000 Total: \$66,000  
*Prin. Invest.:* P BODENHEIMER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9711 UNIV OF CALIFORNIA - SANTA CRUZ 2776**  
 OBSERVATIONS OF ROTATION POWERED PULSARS IN SUPPORT OF GLAST  
 06/15/2000 - 06/14/2002 FY01: \$37,000 Total: \$50,903  
*Prin. Invest.:* D E THORSETT  
*Tech. Officer:* GSFC/S LAMBROS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9956 UNIV OF CALIFORNIA - SANTA CRUZ 2777**  
 HOT GAS ENRICHMENT BY DRAWF GALAXIES IN THE 5044 GALAXY GROUP  
 09/13/2000 - 09/14/2001 FY01: \$0 Total: \$16,000  
*Prin. Invest.:* W G MATHEWS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9966 UNIV OF CALIFORNIA - SANTA CRUZ 2778**  
 FE K-ALPHA EMISSION IN THE BRIGHT ELLIPTICAL GALAXY NGC 1399  
 09/26/2000 - 12/31/2000 FY01: -\$18,000 Total: \$0  
*Prin. Invest.:* D BUOTE  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10039 UNIV OF CALIFORNIA - SANTA CRUZ 2779**  
 X-RAY ISOPHOTE SHAPES AND THE DARK MATTER HALO OF NGC 3923  
 10/03/2000 - 12/31/2000 FY01: \$0 Total: \$0  
*Prin. Invest.:* D BUOTE  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10053 UNIV OF CALIFORNIA - SANTA CRUZ 2780**  
 THE X-RAY HALOS OF EXTREMELY LUMINOUS GIANT LSB & HSB DISK GALAXIES  
 12/06/2000 - 12/14/2001 FY01: \$13,526 Total: \$13,526  
*Prin. Invest.:* B J WEINER  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10232 UNIV OF CALIFORNIA - SANTA CRUZ 2781**  
 THE IONIZATION HISTORY OF THE INTERGALACTIC MEDIUM  
 01/24/2001 - 11/30/2002 FY01: \$67,957 Total: \$67,957  
*Prin. Invest.:* P MADAU  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10612 UNIV OF CALIFORNIA - SANTA CRUZ 2782**  
 GROWTH OF PLANETESIMALS IN A PROTOSTELLAR DISK ENVIRONMENT  
 03/17/2001 - 03/14/2002 FY01: \$55,000 Total: \$55,000  
*Prin. Invest.:* D LIN  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10676 UNIV OF CALIFORNIA - SANTA CRUZ 2783**  
 BEOWULF CLUSTER FOR SMALL BODIES AND PLANETARY COLLISIONS  
 03/30/2001 - 03/31/2002 FY01: \$51,700 Total: \$51,700  
*Prin. Invest.:* E ASPHAUG  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10683 UNIV OF CALIFORNIA - SANTA CRUZ 2784**  
 PHYSICAL PROPERTIES OF A  $Z < 1$  LYMAN LIMIT SYSTEM - FUSE 2000  
 03/29/2001 - 03/31/2002 FY01: \$2,250 Total: \$2,250  
*Prin. Invest.:* B J WEINER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10727 UNIV OF CALIFORNIA - SANTA CRUZ 2785**  
 TIDAL INTERACTION BETWEEN SHORT-PERIOD PLANETS AND THEIR HOST STARS  
 04/09/2001 - 04/14/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* D LIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11220 UNIV OF CALIFORNIA - SANTA CRUZ 2786**  
 CONVECTION AND MAGNETIC FIELD GENERATION IN GIANT AND EXTRA-SOLAR PLANETS: NUMERICAL SIMULATIONS  
 08/13/2001 - 08/31/2004 FY01: \$107,000 Total: \$107,000  
*Prin. Invest.:* G A GLATZMAIER  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1037 UNIV OF CALIFORNIA - SANTA CRUZ 2787**  
 (NAS) AMES EDUCATION ASSOCIATES PROGRAM  
 05/08/1998 - 06/30/2002 FY01: \$1,396,962 Total: \$3,348,045  
*Prin. Invest.:* D L STANSBURY  
*Tech. Officer:* ARC/S . PARKHUST, ARC/R G O'BRIEN III  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1081 UNIV OF CALIFORNIA - SANTA CRUZ 2788**  
 STAR & PLANET FORMATION  
 01/15/1999 - 02/28/2002 FY01: \$16,378 Total: \$365,251  
*Prin. Invest.:* P H BODENHEIMER  
*Tech. Officer:* ARC/D J HOLLENBACH, ARC/P CASSEN  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1260 UNIV OF CALIFORNIA - SANTA CRUZ 2789**  
 COMPARING & UNDERSTANDING DATA DISTRIBUTIONS IN EOS APPLICATIONS  
 04/26/2001 - 02/28/2002 FY01: \$67,301 Total: \$67,301  
*Prin. Invest.:* A PANG  
*Tech. Officer:* ARC/D L KAO, ARC/V R WATSON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5254 UNIV OF CALIFORNIA - SANTA CRUZ 2790**  
 PLANETARY RING/MOON SYSTEMS  
 02/10/1998 - 08/31/2000 FY01: \$0 Total: \$99,202  
*Prin. Invest.:* P BODENHEIMER, D LIN  
*Tech. Officer:* ARC/J N CUZZI  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5281 UNIV OF CALIFORNIA - SANTA CRUZ 2791**  
 COMPARATIVE VISUALIZATION OF EXPERIMENTAL WIND TUNNEL DATA & COMPUTATIONAL FLUID DYNAMICS SIMULATIONS  
 07/23/1998 - 06/30/2001 FY01: \$0 Total: \$155,413  
*Prin. Invest.:* A PANG  
*Tech. Officer:* ARC/A VAZIRI, ARC/M YAMASAKI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5297 UNIV OF CALIFORNIA - SANTA CRUZ 2792**  
 DISTRIBUTION OF WATER & WATER-ROCK INTERACTION DURING PLANET EVOLUTION  
 10/19/1998 - 08/31/2000 FY01: -\$293 Total: \$39,707  
*Prin. Invest.:* N ROSENBERG  
*Tech. Officer:* ARC/J N CUZZI  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5309 UNIV OF CALIFORNIA - SANTA CRUZ 2793**  
 FROM PREBIOTIC CHEMISTRY TO AN RNA WORLD  
 02/23/1999 - 01/31/2000 FY01: -\$56 Total: \$58,004  
*Prin. Invest.:* A KANAVARIOTI  
*Tech. Officer:* ARC/A POHORILLE, ARC/M L FONDA  
*CASE Category:* 12 - CHEMISTRY

**NCC 2 5339 UNIV OF CALIFORNIA - SANTA CRUZ 2794**  
 COLLABORATIVE RESEARCH IN STABLE ISOTOPE BIOGEOCHEMISTRY  
 07/30/1999 - 07/31/2001 FY01: \$11,358 Total: \$89,768  
*Prin. Invest.:* G H RAU  
*Tech. Officer:* ARC/D J DES MARAIS, ARC/L JAHNKE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

<p><b>NCC 2 5351</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2795</b>  SEARCH FOR THE UPPER TEMPERATURE LIMIT FOR EUKARYA - IS THERE  COMPLEX LIFE BEYOND EARTH?  09/03/1999 - 08/31/2001      FY01: \$0      Total: \$20,000  Prin. Invest.: J PEARSE, J TRENT  Tech. Officer: ARC/M FONDA  CASE Category: 59 - LIFE SCIENCE, OTHER</p>	<p><b>NGT 2 52230</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2803</b>  EFFECTS OF WATER IMMERSION (WEIGHTLESSNESS) ON THE REGULA-  TION OF RENEAL FUNCTION IN SEALS EXPOSED..  08/19/1997 - 08/31/2001      FY01: \$0      Total: \$88,000  Prin. Invest.: C L ORTIZ  Tech. Officer: ARC/C E WADE, ARC/B J CORBIN  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NCC 2 5358</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2796</b>  THE MOLECULAR BASIS OF HYPERTHEMPHILY  10/18/1999 - 10/14/2001      FY01: \$0      Total: \$65,540  Prin. Invest.: G MILLHAUSER, R A BOGOMOLNI, J D TRENT  Tech. Officer: ARC/M KLISS  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NGT 2 52260</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2804</b>  VIOLENT VAGABONDS: THE EFFECT OF LARGE IMPACTS &amp; M IGRATION ON  GIANT PLANET EVOLUTION  10/26/1999 - 10/14/2001      FY01: \$0      Total: \$44,000  Prin. Invest.: P H  Tech. Officer: ARC/K J ZAHNLE  CASE Category: 11 - ASTRONOMY</p>
<p><b>NCC 2 5367</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2797</b>  NUCLEOTIDE CHEMISTRY ON PREBIOTIC EARTH  02/04/2000 - 01/31/2001      FY01: -\$4      Total: \$62,396  Prin. Invest.: A KANAVARIOTI  Tech. Officer: ARC/M L FONDA  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NGT 5 43</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2805</b>  MULTIWAVELENGTH STUDY OF THE EVOLUTION OF GALAXIES NMENT  06/23/1997 - 06/30/2001      FY01: \$0      Total: \$66,000  Prin. Invest.: P GUHATHAKURTA  Tech. Officer: GSFC/M S BURRELL  CASE Category: 11 - ASTRONOMY</p>
<p><b>NCC 2 5370</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2798</b>  COLLABORATIVE RESEARCH ON MICROBIAL MAT NITROGEN C YCLING  03/16/2000 - 03/14/2002      FY01: \$91,906      Total: \$183,855  Prin. Invest.: J P ZEHR, NONE  Tech. Officer: ARC/B N BEBOUT/M L FONDA  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NGT 5 108</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2806</b>  MULTI-WAVELENGTH STUDY OF GRBS USING BATSE, HETE II &amp; MILAGRO  (STUDENT: MIGUEL MORALES)  06/12/2000 - 06/30/2002      FY01: \$22,000      Total: \$44,000  Prin. Invest.: D A WILLIAMS  Tech. Officer: GSFC/G A SOFFEN  CASE Category: 13 - PHYSICS</p>
<p><b>NCC 2 5418</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2799</b>  GIANT MOLECULAR CLOUD STRUCTURE &amp; EVOLUTION  02/01/2001 - 02/28/2002      FY01: \$61,450      Total: \$61,450  Prin. Invest.: P BODENHEIMER  Tech. Officer: ARC/D J HOLLENBACH, LARC/G LAUGHLIN  CASE Category: 11 - ASTRONOMY</p>	<p><b>NGT 5 30074</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2807</b>  THE EVOLUTION OF STREAM CHANNELS IN A PROGRESSIVE N: THE FINIS-  TERRE RANGE, PAUA NEW GUINEA  09/09/1997 - 02/28/2001      FY01: \$0      Total: \$66,000  Prin. Invest.: D SILVER  Tech. Officer: GSFC/G ASRAR  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NCC 2 5428</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2800</b>  THREE-DIMENSIONAL MODELING OF ASTEROID &amp; CORNET IM PACTS INTO  PLANETARY ATMOSPHERES  03/14/2001 - 08/31/2001      FY01: \$30,222      Total: \$30,222  Prin. Invest.: E I ASPHAUGH  Tech. Officer: ARC/K J ZAHNLE, ARC/R E YOUNG  CASE Category: 11 - ASTRONOMY</p>	<p><b>NGT 5 30112</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2808</b>  EROSION AND SEDIMENT FLUXES BY VALLEY GLACIERS THR OUGH THE  CLIMATECYCLE: LINKS BETWEEN ALPINE  08/28/1998 - 08/31/2001      FY01: \$0      Total: \$66,000  Prin. Invest.: R S ANDERSON  Tech. Officer: GSFC/M Y WEI  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NCC 2 5436</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2801</b>  ORIGINS &amp; STRUCTURES OF PLANETARY &amp; SATELLITE SYST EMS  05/18/2001 - 04/30/2002      FY01: \$49,383      Total: \$49,383  Prin. Invest.: P BODENHEIMER, A R DOBROVOLSKI  Tech. Officer: ARC/J N CUZZI  CASE Category: 11 - ASTRONOMY</p>	<p><b>NGT 5 30415</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2809</b>  MODELING REEF ACCRETION RATES USING HYPERSPECTRAL REMOTE  SENSING ANDFIELD MEASUREMENTS IN THE NO  08/16/2001 - 08/31/2004      FY01: \$22,000      Total: \$22,000  Prin. Invest.: D POTTS  Tech. Officer: GSFC/M WEI  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NCC 2 5456</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2802</b>  C/C VARIATIONS IN AQUATIC PHOTOAUTOTROPHS: THE PO SSIBLE  CONTRIBUTION OF PHOTORESPIRATORY CARBON EX  08/15/2001 - 07/31/2002      FY01: \$21,423      Total: \$21,423  Prin. Invest.: G H RAU  Tech. Officer: ARC/D DESMARAIS, ARC/L JAHNKE  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NGT 5 90077</b>      <b>UNIV OF CALIFORNIA - SANTA CRUZ</b>      <b>2810</b>  GRPS: PHYSICAL MECHANISMS FOR LONG-TERM CLIMATE VA  09/08/1997 - 08/31/2000      FY01: -\$823      Total: \$65,177  Prin. Invest.: G VALLIS  Tech. Officer: GSFC/G ASRAR  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>

**NAG 5 9570**                    **UNIV OF REDLANDS**                    **2811**  
 TECHNOLOGY INFRASTRUCTURE FOR TEACHING, RESEARCH, AND  
 INFORMATION SHARING  
 05/15/2000 - 04/30/2001            FY01: \$0                                    Total: \$3,228,000  
*Prin. Invest.:* P DOOLITTLE  
*Tech. Officer:* HQ/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11366**                    **UNIV OF REDLANDS**                    **2812**  
 SCIENCE AND MATHEMATICS BUILDING PROJECT  
 09/28/2001 - 09/30/2002            FY01: \$1,831,000                        Total: \$1,831,000  
*Prin. Invest.:* J R APPLETON  
*Tech. Officer:* GSFC/M V PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10049**                    **UNIV OF SAN DIEGO**                    **2813**  
 INNOVATIVE CURRICULAR REVISION & RESEARCH IN FIELD OF EARTH-  
 SYSTEM & SPACE SCIENCE  
 10/13/2000 - 09/30/2001            FY01: \$458,000                        Total: \$458,000  
*Prin. Invest.:* S LOWERY  
*Tech. Officer:* GSFC/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1354**                    **UNIV OF SAN DIEGO**                    **2814**  
 FABRICATION AND GROWTH OF ENGINEERED TISSUES: ARTICULAR CARTI-  
 LAGE W/BIOLOGICAL FUNCTIONAL STRAT  
 08/17/2001 - 09/30/2004            FY01: \$59,000                            Total: \$59,000  
*Prin. Invest.:* R SAH, A HOGER, S N BHATIA  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 56 - MEDICL

**NCC 5 308**                    **UNIV OF SAN DIEGO**                    **2815**  
 CREATIVE & INNOVATIVE WORKING PHOTOTYPE EARTH SCIENCE INFOR.  
 PARTNERSHIP IN SUPPORT OF EARTH  
 01/15/1998 - 11/30/2001            FY01: \$250,000                        Total: \$1,375,000  
*Prin. Invest.:* J J SIMPSON  
*Tech. Officer:* GSFC/M MAIDEN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 893**                    **UNIV OF SAN FRANCISCO**                    **2816**  
 ENVIRONMENTAL RADIATION MEASUREMENTS ON THE MIR SP ACE  
 STATION  
 03/27/1995 - 08/31/2000            FY01: \$0                                    Total: \$601,588  
*Prin. Invest.:* E V BENTON, A L FRANK, R P KEEGAN  
*Tech. Officer:* ARC/C M WINGET, ARC/G C JAHNS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 1282**                    **UNIV OF SAN FRANCISCO**                    **2817**  
 DOES GRAVITY INFLUENCE MATRIX SURVIVAL SIGNALING  
 09/10/2001 - 09/30/2002            FY01: \$13,021                            Total: \$13,021  
*Prin. Invest.:* C H DAMSKY  
*Tech. Officer:* ARC/E A ALMEIDA, ARC/E M HOLTON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 1 1996**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2818**  
 TURBULENCE EFFECTS ON VERY LARGE FLIGHT VEHICLES.  
 01/23/1998 - 01/31/2002            FY01: \$0                                    Total: \$226,000  
*Prin. Invest.:* P B LISSAMAN  
*Tech. Officer:* LARC/J R CURZ  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1489**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2819**  
 INVESTIGATING TEAMWORK AMONG SPACECRAFT (NEWAMES)  
 06/28/2001 - 11/30/2001            FY01: \$50,000                        Total: \$50,000  
*Prin. Invest.:* M TAMBE  
*Tech. Officer:* ARC/C J PLAUNT, ARC/J BRESINA  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 1842**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2820**  
 GROUND BASED STUDIES OF INTERNAL FLOWS IN LEVIATED LASER -  
 HEATED DROPS  
 05/03/1996 - 10/31/2000            FY01: \$0                                    Total: \$554,999  
*Prin. Invest.:* S S SADHAL  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 1877**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2821**  
 DETAILED STUDIES ON THE STRUCTURE AND DAYNAMICS OF REACTING  
 DUSTING FLOWS IN NORMAL AND MICROGRAVITY  
 06/01/1996 - 01/01/2001            FY01: \$0                                    Total: \$393,615  
*Prin. Invest.:* P N EGOLFOPOULOS, P S CAMPBELL  
*Tech. Officer:* GRC/D D ROSS, GRC/M A SOCKSTEILER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2124**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2822**  
 STRUCTURE OF FLAME BALLS IN LOW LEWIS NUMBER STRUCTURE OF  
 FLAME BALLS IN LOW LEWIS NUMBER  
 02/10/1998 - 04/30/2003            FY01: \$214,709                        Total: \$843,809  
*Prin. Invest.:* P D RONNEY  
*Tech. Officer:* GRC/K J WEILAND  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2125**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2823**  
 THE DYNAMICS OF MISCIBLE INTERFACES: A SPACE FLIG HT EXPERIMENT  
 02/25/1998 - 12/31/2002            FY01: \$127,848                        Total: \$575,847  
*Prin. Invest.:* T MAXWORTHY, E H MEIBURG  
*Tech. Officer:* GRC/B SIGH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2478**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2824**  
 THE DYNAMICS OF PARTICULATE DEPOSITION AND RESUSPE NSION  
 PROCESSES AT MODERATE TO HIGH REYNOLDS NUMB  
 08/09/2000 - 11/30/2003            FY01: \$59,115                            Total: \$92,026  
*Prin. Invest.:* D MAXWORTHY  
*Tech. Officer:* GRC/F P CHARIAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2559**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2825**  
 INTEGRATED MICROPHONIC RECEIVER FOR KA-BAND INTEGRATED MICR-  
 PHONIC RECEIVER FOR KA-BAND  
 03/10/2001 - 01/15/2004            FY01: \$262,500                        Total: \$262,500  
*Prin. Invest.:* A LEVI  
*Tech. Officer:* GRC/J POUCH  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 2313**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2826**  
 LONG-TERM FUV FLUX AND WIND VARIABILITY IN BE STAR S AND MULTI-  
 WAVELENGTH OBS. ATEQUATOR-ON. . . .  
 07/12/1993 - 07/14/2000            FY01: \$670                                Total: \$25,000  
*Prin. Invest.:* G J PETERS  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3429 UNIV OF SOUTHERN CALIFORNIA 2827**  
 THE ABUNDANCES OF THE IRON GROUP ELEMENTS IN EARLY B STARS  
 10/21/1996 - 10/31/2001 FY01: \$0 Total: \$65,300  
*Prin. Invest.:* G J PETERS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4488 UNIV OF SOUTHERN CALIFORNIA 2828**  
 EUVE OBSERVATIONS OF ACTIVE B STARS  
 06/04/1997 - 05/31/2000 FY01: -\$77 Total: \$17,289  
*Prin. Invest.:* G J PETERS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5018 UNIV OF SOUTHERN CALIFORNIA 2829**  
 ROCKET UNDERFLIGHTS FOR SOHO CROSS-CALIBRATION AND SOLAR  
 ATMOSPHERE INVESTIGATIONS  
 02/28/1994 - 08/31/2001 FY01: \$0 Total: \$1,669,385  
*Prin. Invest.:* D J JUDGE  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5333 UNIV OF SOUTHERN CALIFORNIA 2830**  
 FIRST OF 3 YEAR EFFORT IN BASIC SCIENTIFIC RESEARCH WITH USC  
 06/25/2001 - 06/18/2004 FY01: \$289,969 Total: \$289,969  
*Prin. Invest.:* D JUDGE  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6360 UNIV OF SOUTHERN CALIFORNIA 2831**  
 OCEAN COLOR ALGORITHMS FOR PHOTOSYNTHETIC RATE AND BIO-OP-  
 TICAL COMPONENT  
 10/24/1997 - 03/14/2001 FY01: \$0 Total: \$508,091  
*Prin. Invest.:* D A KIEFER  
*Tech. Officer:* GSFC/J A YODER  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6512 UNIV OF SOUTHERN CALIFORNIA 2832**  
 OPTICAL AND ANCILLARY MEASUREMENTS AT HIGH LATITUDES IN  
 SUPPORT OF THE MODIS OCEAN VALIDATION PROG  
 12/05/1997 - 03/31/2002 FY01: \$62,354 Total: \$310,372  
*Prin. Invest.:* M STRAMSKA  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICALSCIENCE, OTHER

**NAG 5 6696 UNIV OF SOUTHERN CALIFORNIA 2833**  
 AN INVESTIGATION OF THE HIGH TEMPERATURE CIRCUMSTELLAR  
 PLASMA IN ALGOI- TYPE INTERACTING BINARIES  
 12/17/1997 - 12/31/2001 FY01: \$0 Total: \$40,000  
*Prin. Invest.:* G J PETERS  
*Tech. Officer:* GSFC/R POLIDAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6966 UNIV OF SOUTHERN CALIFORNIA 2834**  
 PHYSICAL PROCESSES AT THE HELIOSPHERIC BOUNDARY AND THEIR  
 DETECTABLE SIGNATURES AT 1 AU. A THEORET  
 03/05/1998 - 12/31/2001 FY01: \$0 Total: \$68,300  
*Prin. Invest.:* M A GRUNTMAN  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7117 UNIV OF SOUTHERN CALIFORNIA 2835**  
 EUV OBSERVATIONS OF EARLY B STARS: EUV FLUX VARIABILITY IN BETA  
 CMA THROUGHTOUT ITS BEAT PERIOD  
 04/13/1998 - 04/14/2001 FY01: \$0 Total: \$11,520  
*Prin. Invest.:* G J PETERS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7147 UNIV OF SOUTHERN CALIFORNIA 2836**  
 MINIATURIZED OPTICS FREE EUV ARRAY SPECTROMETER TO PROVIDE  
 STABLE SOLAR EUV SPECTRA  
 03/23/1998 - 04/14/2001 FY01: \$0 Total: \$228,255  
*Prin. Invest.:* D L JUDGE  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7222 UNIV OF SOUTHERN CALIFORNIA 2837**  
 CROSS-CORRELATION ANALYSIS OF UV PROFILE VARIATIONS AND  
 NONRADIAL PULSATIONS IN B STARS  
 04/10/1998 - 04/14/2000 FY01: -\$17 Total: \$22,383  
*Prin. Invest.:* G PETERS  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7816 UNIV OF SOUTHERN CALIFORNIA 2838**  
 APPLICATIONS OF THE FILTER DIAGONALIZATION SPECTRAL ESTIMATOR  
 IN HELIOSEISMOLOGY  
 12/14/1998 - 06/14/2000 FY01: \$0 Total: \$49,706  
*Prin. Invest.:* W DAPPEN  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7902 UNIV OF SOUTHERN CALIFORNIA 2839**  
 EQUATION OF STATE STUDIES USING SOHO DATA  
 12/10/1998 - 12/31/2000 FY01: \$0 Total: \$45,728  
*Prin. Invest.:* W DAPPEN  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8021 UNIV OF SOUTHERN CALIFORNIA 2840**  
 STUDIES OF SOLAR INTERNAL STRUCTURE AND DYNAMICS USING HIGH  
 DEGREE-POLYMODE OBSERVATIONS FROM THE  
 01/22/1999 - 03/31/2002 FY01: \$72,000 Total: \$203,000  
*Prin. Invest.:* E J RHODES  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8274 UNIV OF SOUTHERN CALIFORNIA 2841**  
 PHOTON ABSORPTION STUDIES OF ATMOSPHERIC GASES UNDER  
 IN-SITU CONDITIONS  
 04/06/1999 - 12/31/2001 FY01: \$55,000 Total: \$154,455  
*Prin. Invest.:* D JUDGE  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8309 UNIV OF SOUTHERN CALIFORNIA 2842**  
 REMOTE OPTICAL MEASUREMENTS OF NEAR-SURFACE TURBULENCE  
 FOR THE OCEAN-AIRGAS EXCHANGE: A THEORETICAL  
 03/08/1999 - 04/30/2000 FY01: -\$2,575 Total: \$27,425  
*Prin. Invest.:* D BOGUCKI  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8367 UNIV OF SOUTHERN CALIFORNIA 2843**  
 THE ABUNDANCES OF THE IRON GROUP ELEMENTS IN EARLY B STARS  
 (ADP98)  
 03/01/1999 - 02/28/2002 FY01: \$0 Total: \$38,889  
*Prin. Invest.:* G PETERS, NONE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8445 UNIV OF SOUTHERN CALIFORNIA 2844**  
 REMOTE SENSING DETECTION AND ANALYSIS OF STORMWATER PLUMES  
 IN SANTAMONICA BAY, CALIFORNIA  
 04/07/1999 - 03/31/2000 FY01: -\$235 Total: \$100,796  
*Prin. Invest.:* B H JONES  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 8545 UNIV OF SOUTHERN CALIFORNIA 2845**  
 STUDIES OF TEMPORAL CHANGES IN SOLAR INTERNAL STRUCTURE &  
 DYNAMICS USING OBSERVATIONS OF INTERM  
 05/13/1999 - 04/30/2002 FY01: \$168,205 Total: \$423,448  
*Prin. Invest.:* E J RHODES  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8884 UNIV OF SOUTHERN CALIFORNIA 2846**  
 MODELING N2 AND CO2 FIXATION BY THE OCEAN DIAZOTROPHIC CYANO-  
 BACTERIUM, TRICHODESMIUM  
 11/24/1999 - 09/30/2001 FY01: \$0 Total: \$59,027  
*Prin. Invest.:* D CAPONE  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8939 UNIV OF SOUTHERN CALIFORNIA 2847**  
 OUTER PLANET UPPER ATMOSPHERE/MAGNETOSPHERE RESEARCH  
 01/14/2000 - 01/14/2002 FY01: \$75,000 Total: \$145,650  
*Prin. Invest.:* D SHEMANSKY  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8978 UNIV OF SOUTHERN CALIFORNIA 2848**  
 OBSERVATION OF THE ACCRETION-DRIVEN BIPOLAR FLOWS IN THE  
 INTERACTING BINARIES THYTA & V356 SGR FUSE  
 01/24/2000 - 01/31/2002 FY01: \$0 Total: \$29,000  
*Prin. Invest.:* G J PETERS  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9124 UNIV OF SOUTHERN CALIFORNIA 2849**  
 CIRCUMSTELLAR MATERIAL & STELLAR COMPONENTS IN HR 2142, A  
 MASSIVE INTERACTING BINARY IN A LATE EVOLU  
 03/07/2000 - 03/14/2002 FY01: \$0 Total: \$29,378  
*Prin. Invest.:* G PETERS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9740 UNIV OF SOUTHERN CALIFORNIA 2850**  
 VALIDATION OF THE SEMI-DIURNAL TIDAL FLUCTUATIONS IN THE  
 COMPUTATIONS OF THE WATER LEAVING RADIANCE FROM  
 08/31/2000 - 08/31/2001 FY01: \$0 Total: \$27,125  
*Prin. Invest.:* R ITURRIAGA  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10399 UNIV OF SOUTHERN CALIFORNIA 2851**  
 MICROSCALE, MILLIWATT VACUUM PUMPS FOR SAMPLING INSTRUMENTATION  
 02/13/2001 - 01/31/2002 FY01: \$174,272 Total: \$174,272  
*Prin. Invest.:* G SHIFLETT  
*Tech. Officer:* GSFC/M DUTTA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10930 UNIV OF SOUTHERN CALIFORNIA 2852**  
 INVESTIGATING THE EXCITATION MECHANISM FOR COMETARY X-RAY,  
 EUV, & FUV EMISSIONS (FUSE 2000)  
 05/17/2001 - 06/30/2002 FY01: \$10,000 Total: \$10,000  
*Prin. Invest.:* D E SHEMANSKY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10989 UNIV OF SOUTHERN CALIFORNIA 2853**  
 EXPLORATION OF THE HELIOSPHERIC INTERFACE BY SOLAR BACKSCATTERED  
 LYMAN ALPHA RADIATION: INTERPRETATION  
 06/05/2001 - 05/31/2002 FY01: \$76,041 Total: \$76,041  
*Prin. Invest.:* P K GANGOPADHAY  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11001 UNIV OF SOUTHERN CALIFORNIA 2854**  
 IMPLEMENTATION OF A NEW METHOD FOR THE COMPUTATION OF THE  
 FREQUENCIES & FREQUENCY SPLITTINGS OF THE  
 06/06/2001 - 05/31/2002 FY01: \$88,000 Total: \$88,000  
*Prin. Invest.:* E J RHODES  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11042 UNIV OF SOUTHERN CALIFORNIA 2855**  
 TEMPERATURE-DEPENDENT CROSS SECTION MEASUREMENT OF LIGHT  
 HYDROCARBONS, IN SUPPORT OF OUTER PLANET  
 06/13/2001 - 06/14/2002 FY01: \$53,000 Total: \$53,000  
*Prin. Invest.:* C WU  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11218 UNIV OF SOUTHERN CALIFORNIA 2856**  
 IMPROVE ESTIMATE OF GAS TRANSFER USING SCATTEROMETER  
 08/13/2001 - 08/31/2004 FY01: \$103,971 Total: \$103,971  
*Prin. Invest.:* D BOGUCKI  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11304 UNIV OF SOUTHERN CALIFORNIA 2857**  
 MICROGRAVITY TRANSPORT PROCESSES IN FLUID, THERMAL MATERIALS  
 AND BIOLOGICAL SCIENCES CONFERENCE  
 08/30/2001 - 08/31/2002 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* S SADHAL  
*Tech. Officer:* GSFC/D SPEARS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1240 UNIV OF SOUTHERN CALIFORNIA 2858**  
 NUMERICAL & LABORATORY EXPERIMENTS ON INTERACTIVE DYNAMICS  
 OF CONVECTION & DIRECTIONAL SOLIDIFICATION  
 04/15/1996 - 04/30/2001 FY01: \$0 Total: \$499,997  
*Prin. Invest.:* T MAXWORTHY, E MEIBURG  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1663 UNIV OF SOUTHERN CALIFORNIA 2859**  
 NON-INTRUSIVE MEASUREMENT OF THERMOPHYSICAL PROPERTIES OF  
 LIQUIDS BY ELEKTROSTATIC LEVITATION  
 06/16/2000 - 11/30/2003 FY01: \$85,500 Total: \$300,500  
*Prin. Invest.:* S SADHAL  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1701 UNIV OF SOUTHERN CALIFORNIA 2860**  
 EXTINCTION AND INSTABILITY MECHANISMS OF POLYMERIZATION  
 FRONTS  
 07/19/2000 - 11/30/2003 FY01: \$95,000 Total: \$135,000  
*Prin. Invest.:* P RONNEY  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1165 UNIV OF SOUTHERN CALIFORNIA 2861**  
 AUGMENTED REALITY FOR SPACE FLIGHT  
 12/07/1999 - 12/09/2002 FY01: \$208,525 Total: \$413,559  
*Prin. Invest.:* U NEUMANN  
*Tech. Officer:* JSC/B J WOOLFORD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAS 2 00091 UNIV OF SOUTHERN CALIFORNIA 2862**  
 OPERATION / MGMT OF NASA FAR WEST RTTC  
 12/21/2000 - 12/31/2002 FY01: \$1,202,845 Total: \$1,202,845  
*Prin. Invest.:* K DOZIER  
*Tech. Officer:* ARC/C COSTELLANO, ARC/B ROBINSON  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAS 5 99232 UNIV OF SOUTHERN CALIFORNIA 2863**  
 SENSOR INTERCOMPARISON & MERGER FOR BIOLOGICAL & INTERDIS-  
 CIPLINARY STUDIES.  
 08/31/1999 - 08/30/2000 FY01: \$118 Total: \$110,818  
*Prin. Invest.:* D G CAPONE  
*Tech. Officer:* GSFC/C MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 8 97115 UNIV OF SOUTHERN CALIFORNIA 2864**  
 USC RTTC  
 01/30/1997 - 12/31/2000 FY01: \$167,075 Total: \$5,333,164  
*Prin. Invest.:* G BEKEY  
*Tech. Officer:* ARC/C CASTELLANO  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 2 1224 UNIV OF SOUTHERN CALIFORNIA 2865**  
 BIOLOGICAL ASPECTS OF COMPUTION  
 04/05/2001 - 02/28/2002 FY01: \$250,000 Total: \$250,000  
*Prin. Invest.:* L ADLEMAN  
*Tech. Officer:* ARC/T R GOVINDAN, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1242 UNIV OF SOUTHERN CALIFORNIA 2866**  
 ROBUST SPEECH RECOGNITION USING DYNAMIC SYNAPSE NE URAL  
 NETWORKS  
 04/25/2001 - 02/28/2002 FY01: \$125,000 Total: \$125,000  
*Prin. Invest.:* T W BERGER  
*Tech. Officer:* ARC/L STONE, ARC/M SHAFTO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5420 UNIV OF SOUTHERN CALIFORNIA 2867**  
 CARBON NANOTUBE MOLECULAR ELECTROCIENS  
 02/09/2001 - 02/28/2002 FY01: \$94,999 Total: \$94,999  
*Prin. Invest.:* C ZHOU  
*Tech. Officer:* ARC/M MEYYAPPAN, ARC/H PARTRIDGE  
*CASE Category:* 13 - PHYSICS

**NCC 2 5454 UNIV OF SOUTHERN CALIFORNIA 2868**  
 MOLECULAR WIRES AND TRANSISTORS  
 08/08/2001 - 07/31/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* C ZHOU  
*Tech. Officer:* ARC/M MEYYAPPAN, ARC/H PARRISAGE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 501 UNIV OF SOUTHERN CALIFORNIA 2869**  
 THE HIGH-LEWIS NUMBER DIFFUSIVE-THERMAL INSTABILIT Y IN  
 PREMIXED GAS COMBUSTION & LOW TEMPERATURE HY  
 09/05/1996 - 03/31/2001 FY01: -\$2,078 Total: \$457,329  
*Prin. Invest.:* H G PEARLMAN, NONE  
*Tech. Officer:* GRC/D W GRIFFIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 671 UNIV OF SOUTHERN CALIFORNIA 2870**  
 TRANSPORT AND CHEMICAL EFFECTS ON CONCURRENT AND O PPOSED-  
 FLOW FLAME SPREAD AT MICROGRAVITY  
 02/12/1999 - 01/03/2003 FY01: \$201,500 Total: \$486,500  
*Prin. Invest.:* P D RONNEY  
*Tech. Officer:* GRC/S A GOKOGLU  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 678 UNIV OF SOUTHERN CALIFORNIA 2871**  
 QUANTITATIVE STUDIE SON THE PROPAGATION AND EXTINC TION OF  
 NEAR-LIMIT FLAMES UNDER NORMAL AND MICROG  
 03/01/1999 - 11/29/2002 FY01: \$95,000 Total: \$300,000  
*Prin. Invest.:* F N EGOLFPOULOS  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 827 UNIV OF SOUTHERN CALIFORNIA 2872**  
 ACOUSTIC BUBBLE REMOVAL FROM BOILING SURFACES AND ITS OPTI-  
 MIZATION  
 09/29/2000 - 11/30/2003 FY01: \$80,249 Total: \$80,249  
*Prin. Invest.:* K OHSAKA  
*Tech. Officer:* GRC/M M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 834 UNIV OF SOUTHERN CALIFORNIA 2873**  
 DETAILED STUDIES ON THE STRUCTURE AND DYNAMICS OF REACTING  
 DUSTY FLOWS AT NORMAL- AND MICRO- GRAVITY  
 12/18/2000 - 10/31/2004 FY01: \$99,999 Total: \$99,999  
*Prin. Invest.:* P N EGOLFPOULOS  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER



**NCC 3 841 UNIV OF SOUTHERN CALIFORNIA 2874**  
 HIGH PRESSURE TRANSPORT PROPERTIES OF FLUIDS: THE ORY AND  
 DATA FROM LEVITATED DROPS AT COMBUSTION-R  
 12/22/2000 - 11/30/2003 FY01: \$45,000 Total: \$45,000  
*Prin. Invest.:* K OHSAKA  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 854 UNIV OF SOUTHERN CALIFORNIA 2875**  
 DETERMINATION OF COOL FLAME QUENCHING DISTANCES AT  
 MICROGRAVITY  
 01/24/2001 - 11/30/2004 FY01: \$47,467 Total: \$47,467  
*Prin. Invest.:* H PEARLMAN  
*Tech. Officer:* GRC/J E BROOKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 871 UNIV OF SOUTHERN CALIFORNIA 2876**  
 THE HIGH-LEWIS NUMBER DIFFUSIVE-THERMAL INSTABILITY IN  
 PREMIXED GAS COMBUSTION AND LOW TEMPERATURE  
 03/01/2001 - 11/30/2004 FY01: \$109,485 Total: \$109,485  
*Prin. Invest.:* H PEARLMAN  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NSG 5108 UNIV OF SOUTHERN CALIFORNIA 2877**  
 ROCKET EXPERIMENTS TO MEASURE THE SOLAR SPECTRAL PROFILE &  
 INTENSITY  
 04/01/1976 - 10/31/2000 FY01: \$0 Total: \$3,316,267  
*Prin. Invest.:* D L JUDGE, H S OGAWA  
*Tech. Officer:* GSFC/L J EARLY, GSFC/R H PLESS  
*CASE Category:* 13 - PHYSICS

## COLORADO

**NCC 2 5337 ADAMS STATE COLLEGE 2878**  
 ENHANCEMENT OF AMPHION  
 07/23/1999 - 12/31/2000 FY01: -\$3,587 Total: \$46,457  
*Prin. Invest.:* S ROACH  
*Tech. Officer:* ARC/M R LOWRY, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 1970 COLORADO SCHOOL OF MINES 2879**  
 NMRI MEASUREMENTS & GRANULAR DYNAMICS SIMULATIONS OF  
 SEGREGATION OF GRANULAR MIXTURES  
 09/25/1996 - 10/31/1999 FY01: \$0 Total: \$478,034  
*Prin. Invest.:* M NAKAGAWA, E FUKUSHIMA  
*Tech. Officer:* GRC/B SINGH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 9684 COLORADO SCHOOL OF MINES 2880**  
 LUNAR DATA ANALYSIS PROGRAM PROPOSAL: ECONOMIC EVALUATION  
 OF POLAR REGIONS USING LUNAR PROSPECT  
 06/29/2000 - 06/30/2002 FY01: \$32,000 Total: \$64,000  
*Prin. Invest.:* M B DUKE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1207 COLORADO SCHOOL OF MINES 2881**  
 EXTRACTION OF VOLATILES FROM LUNAR AND MARTIAN REGOLITHS  
 03/01/2000 - 02/28/2003 FY01: \$50,000 Total: \$229,997  
*Prin. Invest.:* M B DUKE  
*Tech. Officer:* JSC/D MCKAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1364 COLORADO SCHOOL OF MINES 2882**  
 A NOVEL COLLOIDAL MICROFLUIDS PLATFORM FOR SPACE BORNE  
 MICRO TOTAL  
 07/27/2001 - 09/30/2002 FY01: \$81,000 Total: \$81,000  
*Prin. Invest.:* D W. M. MARR  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 56 - MEDICL

**NCC 3 659 COLORADO SCHOOL OF MINES 2883**  
 A FUNDAMENTAL STUDY OF THE COMBUSTION SYNTHESIS OF CERAMIC-  
 METAL COMPOSITE MATERIALS UNDER MICROGRA  
 01/05/1999 - 11/11/2002 FY01: \$118,750 Total: \$358,750  
*Prin. Invest.:* D J MOORE  
*Tech. Officer:* GRC/S A GOKOGLU  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCCW 96 COLORADO SCHOOL OF MINES 2884**  
 THE CENTER FOR COMMERCIAL APPLICATIONS OF COMBUSTION IN SPACE  
 05/01/1996 - 10/31/2001 FY01: \$0 Total: \$9,036,613  
*Prin. Invest.:* F SCHOWENGERDT  
*Tech. Officer:* MSFC/J R WEST  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 2045 COLORADO STATE UNIV 2885**  
 LARGE EDDY SIMULATION OF CIRRUS CLOUDS  
 04/02/1998 - 10/31/2001 FY01: \$0 Total: \$142,463  
*Prin. Invest.:* W COTTON  
*Tech. Officer:* LARC/D S MCDUGAL, LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2063 COLORADO STATE UNIV 2886**  
 STUDIES OF ICE NUCLEATING AEROSOL PARTICLES IN ARCTIC CLOUD  
 SYSTEMS  
 05/19/1998 - 02/28/2001 FY01: -\$19,438 Total: \$214,468  
*Prin. Invest.:* D C ROGERS, J P DEMOTT  
*Tech. Officer:* LARC/D S MCDUGAL, LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2081 COLORADO STATE UNIV 2887**  
 INTERACTIONS OF THE CLOUDY ARCTIC BOUNDARY LAYER WITH VARI-  
 ABLE SURFACE CONDITIONS  
 06/23/1998 - 04/30/2001 FY01: -\$1 Total: \$265,000  
*Prin. Invest.:* D A RANDALL  
*Tech. Officer:* LARC/D S MCDUGAL, LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2247 COLORADO STATE UNIV 2888**  
 RETRIEVAL OF PROPERTIES OF HIGH CLOUDS FROM LITE DATA  
 10/21/1999 - 09/30/2002 FY01: \$75,740 Total: \$218,143  
*Prin. Invest.:* G STEPHENS  
*Tech. Officer:* LARC/V DELNORE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 1801**                      **COLORADO STATE UNIV**                      **2889**  
 ADVANCED ELECTRIC PROPULSION RESEARCH  
 01/23/1996 - 10/31/2001                      FY01: \$45,028                      Total: \$205,107  
*Prin. Invest.:* P J WILBUR  
*Tech. Officer:* GRC/V K RAWLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 4073**                      **COLORADO STATE UNIV**                      **2890**  
 CLIMATE SENSITIVITY OF THAW LAKE SYSTEMS ON THE AL  
 03/17/1997 - 12/31/1999                      FY01: \$10,199                      Total: \$25,335  
*Prin. Invest.:* D LISTON  
*Tech. Officer:* GSFC/R H THOMAS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4646**                      **COLORADO STATE UNIV**                      **2891**  
 TITLE: USING MULTI-SENSOR DATA TO MODEL FACTORS L IN GLOBAL  
 ARID & SEMIARID LANDS  
 06/17/1997 - 05/31/2002                      FY01: \$0                      Total: \$2,212,780  
*Prin. Invest.:* D OJIMA  
*Tech. Officer:* GSFC/G C GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4749**                      **COLORADO STATE UNIV**                      **2892**  
 ANALYSIS OF THE DIURNAL CYCLE OF PRECIPITATION AND RADIATIVE  
 FORCING USING TRMM PRODUCTS  
 06/26/1997 - 06/30/2000                      FY01: -\$10                      Total: \$357,524  
*Prin. Invest.:* D RANDALL  
*Tech. Officer:* GSFC/O THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4754**                      **COLORADO STATE UNIV**                      **2893**  
 VALIDATION STUDIES AND ALGORITHM REFINEMENT IN SUP  
 06/17/1997 - 05/31/2000                      FY01: -\$3,674                      Total: \$528,295  
*Prin. Invest.:* S A RUTLEDGE  
*Tech. Officer:* GSFC/R A ALDER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4983**                      **COLORADO STATE UNIV**                      **2894**  
 THE BIO-ATMOSPHERIC CYCLES OF NITROGEN AND CARBON: POLLUTION  
 AND TERRESTRIAL ECOSYSTEMS  
 08/29/1997 - 07/31/2000                      FY01: -\$23                      Total: \$82,477  
*Prin. Invest.:* W PARTON  
*Tech. Officer:* HQ/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6228**                      **COLORADO STATE UNIV**                      **2895**  
 VEMAP PHASE II  
 09/11/1997 - 06/30/2001                      FY01: \$0                      Total: \$377,912  
*Prin. Invest.:* D OJIMA  
*Tech. Officer:* GSFC/J RANSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6637**                      **COLORADO STATE UNIV**                      **2896**  
 ASSESSING THE IMPACT OF REMOTE SENSING DATA ON CLO UDINESS  
 PREDICTION IN SHORT-TERM FORECASTS  
 11/18/1997 - 04/30/2001                      FY01: \$0                      Total: \$544,049  
*Prin. Invest.:* P L STEPHENS  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7558**                      **COLORADO STATE UNIV**                      **2897**  
 SNOW HYDROLOGY-THE PARAMETERIZATION OF SUBGRID PRO CSESSES  
 WITHIN APHYSCALLY BASED SNOW ENER  
 07/02/1998 - 06/30/2001                      FY01: \$0                      Total: \$51,313  
*Prin. Invest.:* K ELDER  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7560**                      **COLORADO STATE UNIV**                      **2898**  
 A SNOW-EVOLUTION MODELING-SYSTEM FOR WEATHER,CLIMA TE,AND  
 HYDROLOGIC APPLICATIONS  
 06/29/1998 - 06/30/2001                      FY01: \$0                      Total: \$320,000  
*Prin. Invest.:* G E LISTON  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7717**                      **COLORADO STATE UNIV**                      **2899**  
 IMPROVING TRMM GV & FC GOALS USING POLARIMETRIC RA DAR ANAL-  
 YSES W/IN-SITUGROUND-BASED AND AIRCRAFT P  
 10/27/1998 - 10/31/2002                      FY01: \$100,644                      Total: \$306,488  
*Prin. Invest.:* V N BRINGI  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7719**                      **COLORADO STATE UNIV**                      **2900**  
 TOWARDS A MULTISENSOR APPROACH TO IMPROVE ON CURRE NT TRMM  
 RETRIEVALS OF CLOUDS AND PRECIPITATION  
 10/27/1998 - 10/31/2001                      FY01: \$83,395                      Total: \$257,201  
*Prin. Invest.:* G L STEPHENS  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7783**                      **COLORADO STATE UNIV**                      **2901**  
 MODELED AEROSOL OPTICAL PROPERTIES FROM MEASUREMENTS  
 T-BASED MIXTURES OF CHEMICAL SPECIES-ASSESSING TH  
 11/03/1998 - 12/31/2001                      FY01: \$0                      Total: \$100,000  
*Prin. Invest.:* S M KREIDENWEIS  
*Tech. Officer:* GSFC/M MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7876**                      **COLORADO STATE UNIV**                      **2902**  
 TRMM PRECIPITATION RADAR AND MICROPHYSICS: INTERP RETATION  
 ANDPRECIPITATION ESTIMATION  
 11/30/1998 - 11/30/2000                      FY01: \$0                      Total: \$137,976  
*Prin. Invest.:* V CHANDRASEKAR  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8705**                      **COLORADO STATE UNIV**                      **2903**  
 NET CARBON & ENERGY BALANCE OF SAVANNA ECOSYSTEMS AT EOS  
 VALIDATION SITES IN SOUTHERN AFRICA  
 07/21/1999 - 06/30/2000                      FY01: \$0                      Total: \$192,159  
*Prin. Invest.:* N HANAN  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9308**                      **COLORADO STATE UNIV**                      **2904**  
 FUNDING FOR THE CLOSEOUT OF "FREEZING CHARACTERISTICS OF  
 SOOT/SULFATE AEROSOLS IN RESPONSE TO NRA-  
 03/28/2000 - 03/31/2002                      FY01: \$57,000                      Total: \$73,040  
*Prin. Invest.:* D J DEMOTT  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9642**                      **COLORADO STATE UNIV**                      **2905**  
 ANALYSIS OF DATA FROM TRMM/LBA TO VALIDATE TRMM SATELLITE  
 ALGORITHMS & MODELS  
 06/19/2000 - 11/30/2001                      FY01: \$262,311                      Total: \$355,984  
*Prin. Invest.:* S A RUTLEDGE  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9647**                      **COLORADO STATE UNIV**                      **2906**  
 USE OF TRMM DATA TO TEST AN IMPROVED PARAMETERIZATION OF  
 STRATIFORM PRECIPITATION  
 06/20/2000 - 11/30/2001                      FY01: \$261,000                      Total: \$336,432  
*Prin. Invest.:* D A RANDALL  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9655**                      **COLORADO STATE UNIV**                      **2907**  
 TRMM PRECIPITATION RADAR AND MICROPHYSICS: INTERPOLATION  
 AND PRECIPITATION ESTIMATION  
 06/09/2000 - 11/30/2001                      FY01: \$136,000                      Total: \$193,239  
*Prin. Invest.:* V CHANDRASEKAR  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9665**                      **COLORADO STATE UNIV**                      **2908**  
 TRMM SOUNDING STUDIES  
 06/06/2000 - 06/14/2002                      FY01: \$109,000                      Total: \$175,500  
*Prin. Invest.:* R H JOHNSON  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10076**                      **COLORADO STATE UNIV**                      **2909**  
 TWO-BEAM SODIUM LIDAR OBSERVATION OF TEMPERATURE & WINDS &  
 PASSIVE OPTICAL MEASUREMENT CLUSTER IN TH  
 10/24/2000 - 04/30/2002                      FY01: \$202,000                      Total: \$202,000  
*Prin. Invest.:* C SHE  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10482**                      **COLORADO STATE UNIV**                      **2910**  
 THE EFFECTS OF CLIMATE REGIME ON TRMM RETRIEVALS  
 03/01/2001 - 05/31/2002                      FY01: \$151,000                      Total: \$151,000  
*Prin. Invest.:* W K BERG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10593**                      **COLORADO STATE UNIV**                      **2911**  
 AN INTEGRATED MULTI-SCALE INVESTIGATION OF GRASSLAND  
 MANAGEMENT: IMPLICATIONS FOR CARBON CYCLING  
 03/22/2001 - 02/28/2002                      FY01: \$115,866                      Total: \$115,866  
*Prin. Invest.:* R CONANT  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11010**                      **COLORADO STATE UNIV**                      **2912**  
 OBSERVATIONAL, THEORETICAL, AND MODELING RESEARCH IN SUPPORT  
 OF CAMEX  
 06/06/2001 - 06/14/2002                      FY01: \$85,000                      Total: \$85,000  
*Prin. Invest.:* W H SCHUBERT  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11018**                      **COLORADO STATE UNIV**                      **2913**  
 VALIDATE SATELLITE MEASUREMENTS OF UV RADIATION BY TOMS  
 06/21/2001 - 06/14/2002                      FY01: \$69,728                      Total: \$69,728  
*Prin. Invest.:* J SLUSSER  
*Tech. Officer:* GSFC/J R HERMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11073**                      **COLORADO STATE UNIV**                      **2914**  
 LAND-USE CHANGE IN TEMPERATE EAST ASIA: LAND COVER CHANGES  
 IMPACTS ON CARBON FLUXES AND LAND PRODUCT  
 07/19/2001 - 08/14/2002                      FY01: \$43,225                      Total: \$43,225  
*Prin. Invest.:* D OJIMA  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11109**                      **COLORADO STATE UNIV**                      **2915**  
 VALIDATION AND ENHANCEMENT OF AMSR-E CLOUD AND PRECIPITATION  
 PRODUCTS AQUA-0070-0047  
 07/13/2001 - 08/31/2002                      FY01: \$56,819                      Total: \$56,819  
*Prin. Invest.:* G L STEPHENS  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11140**                      **COLORADO STATE UNIV**                      **2916**  
 ENERGY & WATER CYCLES WITHIN HURRICANES DETERMINED FROM  
 HIGH-RESOLUTIONS SIMULATIONS  
 08/08/2001 - 08/14/2002                      FY01: \$44,999                      Total: \$44,999  
*Prin. Invest.:* M T MONTGOMERY  
*Tech. Officer:* GSFC/A J NEGRI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11189**                      **COLORADO STATE UNIV**                      **2917**  
 THE EXTENSION OF THE TRMM MICROWAVE RAINFALL AND VERTICAL  
 STRUCTURE ALGORITHM TO OTHER RADIOMETER  
 08/07/2001 - 08/14/2002                      FY01: \$313,617                      Total: \$313,617  
*Prin. Invest.:* C D KUMMEROW  
*Tech. Officer:* GSFC/R L LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11280**                      **COLORADO STATE UNIV**                      **2918**  
 MARS SOIL MECHANICS INVESTIGATION  
 08/20/2001 - 08/31/2002                      FY01: \$59,200                      Total: \$59,200  
*Prin. Invest.:* J NELSON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1511**                      **COLORADO STATE UNIV**                      **2919**  
 COUPLING ATMOSPHERIC, ECOLOGIC, AND HYDROLOGIC PROCESSES IN  
 A REGIONAL CLIMATE MODEL  
 03/05/1998 - 03/01/2001                      FY01: \$0                      Total: \$348,133  
*Prin. Invest.:* R A PIELKE, G E LISTON  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1801** **COLORADO STATE UNIV** **2920**  
 MINI-MAGNETOSPHERIC PLASMA PROPULSION FOR PLANT-ETARY  
 EXPLORATION  
 04/25/2001 - 03/15/2004 FY01: \$101,101 Total: \$101,101  
*Prin. Invest.:* P J WILBUR  
*Tech. Officer:* GRC/V K RAWLIN  
*CASE Category:* 13 - PHYSICS

**NAG10 234** **COLORADO STATE UNIV** **2921**  
 GRAVITY INDUCED CHANGES IN GENE EXPRESSION  
 09/22/1997 - 12/31/2000 FY01: \$0 Total: \$353,340  
*Prin. Invest.:* A N REDDY  
*Tech. Officer:* KSC/W M KNOTT  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAS 1 98125** **COLORADO STATE UNIV** **2922**  
 CLOUDS AND THE EARTH'S ENERGY SYSTEM (CERES) SCIENTIFIC INVESTIGATION  
 10/28/1998 - 10/31/2001 FY01: \$355,370 Total: \$694,407  
*Prin. Invest.:* D A  
*Tech. Officer:* LARC/B A WIELICKI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 99103** **COLORADO STATE UNIV** **2923**  
 ALGORITHM AND INSTRUMENT SUPPORT ACTIVITIES FOR PICASSO-CENA  
 05/17/1999 - 05/16/2002 FY01: \$70,000 Total: \$133,250  
*Prin. Invest.:* G L STEPHENS, C PLATT  
*Tech. Officer:* LARC/G GIBSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 99237** **COLORADO STATE UNIV** **2924**  
 CLOUDSAT MISSION AS A PART OF EARTH SYSTEM SCIENCE PATHFINDER (ESSP) PROJECT  
 12/17/1999 - 03/31/2005 FY01: \$907,216 Total: \$1,126,327  
*Prin. Invest.:* G STEPHENS  
*Tech. Officer:* GSFC/D LEWIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 8 97082** **COLORADO STATE UNIV** **2925**  
 A STUDY OF THE ROLE OF CLOUDS IN THE RELATIONSHIP BETWEEN LAND USE/LAND COVER AND THE CLIMATE  
 11/21/1996 - 03/20/2001 FY01: \$0 Total: \$172,624  
*Prin. Invest.:* S Q KIDDER  
*Tech. Officer:* MSFC/T MILLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 1099** **COLORADO STATE UNIV** **2926**  
 AN EXTENDED ANALYSIS OF SCIENCE OUTREACH PROGRAMS IN THE SPACE LIFE SCIENCES IMPLEMENTED NASA IN PAR  
 03/16/1999 - 06/30/2002 FY01: \$472,308 Total: \$1,881,516  
*Prin. Invest.:* G R COULTER  
*Tech. Officer:* ARC/S POTTER, ARC/M M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1268** **COLORADO STATE UNIV** **2927**  
 NASA WORKSHOP: WHEN ECOLOGIES COLLIDE? PLANETARY PROTECTION ISSUES IN THE HUMAN EXPLORATION OF MARS  
 05/31/2001 - 02/28/2002 FY01: \$53,050 Total: \$53,050  
*Prin. Invest.:* M CRISWELL  
*Tech. Officer:* ARC/D F BLAKE, ARC/M L FONDA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 5 284** **COLORADO STATE UNIV** **2928**  
 SPATIAL INTEGRATION OF REGIONAL CARBON BALANCE IN AMAZONIA  
 06/25/1998 - 12/31/2001 FY01: \$355,497 Total: \$961,362  
*Prin. Invest.:* A DENNING  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 288** **COLORADO STATE UNIV** **2929**  
 JOINT RESEARCH STUDIES ON EARTH-ATMOSPHERIC PROBLEMS  
 06/05/1998 - 03/31/2002 FY01: \$310,000 Total: \$992,434  
*Prin. Invest.:* G L STEPHENS  
*Tech. Officer:* GSFC/A J NEGRI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 30182** **COLORADO STATE UNIV** **2930**  
 THE EFFECTS OF REMOTELY SENSED DATA ON MODELED LAND-SURFACE-ATMOSPHERE INTERACTIONS: CONSEQUENCES  
 08/13/1999 - 08/31/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* A DENNING  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30218** **COLORADO STATE UNIV** **2931**  
 LIGHTNING & RADAR OBSERVATIONS FROM GROUND-BASED & SPACEBORNE PLATFORMS: APPLICATIONS FOR TRMM  
 08/24/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* S A RUTLEDGE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30344** **COLORADO STATE UNIV** **2932**  
 THE RESPONSE OF THE NORTH AMERICAN MONSOON TO BOUNDARY AND REGIONAL FORCING MECHANISMS AS SIMULATED  
 08/21/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* R PIELKE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30421** **COLORADO STATE UNIV** **2933**  
 SPACEBORNE OBSERVATIONS OF PRECIPITATION USING NASA A/TRMM AND GPM MISSION (STUDENT: KONRAD GOJARA)  
 09/07/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* V CHANDRAEKAR  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50164** **COLORADO STATE UNIV** **2934**  
 PROPERTIES OF COMET MANTLE DUST  
 06/03/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* J NELSON  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 49** **COLORADO STATE UNIV** **2935**  
 EVALUATION OF GRAVITY-INDEPENDENT CONSTANT FORCE RESISTIVE EXERCISE UNIT  
 06/29/2000 - 06/30/2001 FY01: \$0 Total: \$21,986  
*Prin. Invest.:* S P JAMES  
*Tech. Officer:* JSC/M C GREENNISEN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 1927 UNIV OF COLORADO - BOULDER 2936**  
 REFLECTED GPS SIGNALS: THEORY AND EXPERIMENTS MY 1/2  
 05/23/1997 - 05/31/2001 FY01: -\$1 Total: \$315,000  
*Prin. Invest.:* 1 B BORN, P AXELRAD  
*Tech. Officer:* LARC/S J KATZBERG, LARC/M J FEREBEE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2021 UNIV OF COLORADO - BOULDER 2937**  
 THEORETICAL INVESTIGATIONS OF CLOUDS AND AEROSOLS IN THE  
 STRATOSPHERE AND UPPER TROPOSPHERE  
 03/12/1998 - 03/11/2001 FY01: \$0 Total: \$326,000  
*Prin. Invest.:* O B TOON  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2047 UNIV OF COLORADO - BOULDER 2938**  
 APPLICATION OF LES TO UNDERSTANDING AND PARAMETER-IZING THE  
 ARCTIC CLOUDY BOUNDARY LAYER  
 04/02/1998 - 04/30/2001 FY01: \$0 Total: \$463,000  
*Prin. Invest.:* J A CURRY  
*Tech. Officer:* LARC/D J MCDUGAL, LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2068 UNIV OF COLORADO - BOULDER 2939**  
 EXPERIMENTAL AND ANALYTICAL CHARACTERIZATION OF THE  
 NONLINEAR BEHAVIOR OF MEMBRANE STRUCTURES  
 05/11/1998 - 11/10/2000 FY01: \$0 Total: \$305,000  
*Prin. Invest.:* M M MIKULAS, JR.  
*Tech. Officer:* LARC/M S LAKE  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 2165 UNIV OF COLORADO - BOULDER 2940**  
 COMPARISONS OF THREE DIMENSIONAL NUMERICAL SIMULATIONS OF  
 AMBIENT AND VOLCANIC STRATOSPHERIC  
 04/28/1999 - 05/31/2002 FY01: \$75,000 Total: \$225,000  
*Prin. Invest.:* O B TOON  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2187 UNIV OF COLORADO - BOULDER 2941**  
 IMPACT OF DESCENDING POLAR MESOSPHERIC NOX ON STRATOSPHERIC  
 OZONE, NRA-98-OES-04  
 04/27/1999 - 01/31/2002 FY01: \$42,000 Total: \$115,000  
*Prin. Invest.:* C E RANDALL  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2231 UNIV OF COLORADO - BOULDER 2942**  
 CIRRUS CLOUD RETRIEVAL ANALYSIS IN SUPPORT OF FIRSC SUBMILLI-  
 METER-WAVE SPECTROMETER  
 08/17/1999 - 05/31/2000 FY01: -\$2,287 Total: \$17,713  
*Prin. Invest.:* K F EVANS  
*Tech. Officer:* LARC/I G NOLT  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01053 UNIV OF COLORADO - BOULDER 2943**  
 APPLICATION OF LES TO UNDERSTANDING AND PARAMETER-IZING THE  
 ARCTIC CLOUDY BOUNDARY LAYER  
 03/30/2001 - 04/30/2002 FY01: \$155,000 Total: \$155,000  
*Prin. Invest.:* J A CURRY, C A GELLILAN, R R REEDER  
*Tech. Officer:* LARC/V E DELNORE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01074 UNIV OF COLORADO - BOULDER 2944**  
 ADVANCED CROSS ENTERPRISE TECHNOLOGY DEVELOPMENT FOR NASA  
 MISSIONS  
 06/07/2001 - 01/31/2004 FY01: \$271,000 Total: \$271,000  
*Prin. Invest.:* A BETY  
*Tech. Officer:* LARC/C MOORE  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 01081 UNIV OF COLORADO - BOULDER 2945**  
 ESTIMATES OF NUMBER OF YEARS TO DETECT FUTURE CHANGES IN  
 CLOUDS AND RADIATION  
 05/15/2001 - 04/30/2003 FY01: \$65,414 Total: \$65,414  
*Prin. Invest.:* E C  
*Tech. Officer:* LARC/B A WIELICKI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 1124 UNIV OF COLORADO - BOULDER 2946**  
 MEASUREMENTS OF LONG LIVED TRACE GASES FROM COMMERCIAL  
 AIRCRAFT PLATFORMS: INSTRUMENT DEVELOPMENT  
 04/08/1997 - 02/28/2002 FY01: \$0 Total: \$730,343  
*Prin. Invest.:* L M AVALLONE  
*Tech. Officer:* ARC/E P CONDON, ARC/S S WEGENER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1258 UNIV OF COLORADO - BOULDER 2947**  
 CONTRAIL PERSISTENCE & AIRCRAFT EXHAUST IMPACTS ON CIRRUS  
 08/25/1998 - 04/30/2001 FY01: \$0 Total: \$170,254  
*Prin. Invest.:* O B TOON  
*Tech. Officer:* ARC/R P HIPSKIND, ARC/E P CONDON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1306 UNIV OF COLORADO - BOULDER 2948**  
 MEASUREMENTS OF CIO & CO2 FOR ACCENT  
 03/17/1999 - 02/29/2000 FY01: -\$1,608 Total: \$23,395  
*Prin. Invest.:* D W TOOHEY  
*Tech. Officer:* ARC/E P CONDON, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1307 UNIV OF COLORADO - BOULDER 2949**  
 IN SITU MEASUREMENTS OF HALOGEN OXIDES FROM THE DC -8 FOR  
 SOLVE  
 03/19/1999 - 03/31/2002 FY01: \$0 Total: \$174,603  
*Prin. Invest.:* D W TOOHEY  
*Tech. Officer:* ARC/E P CONDON, ARC/S R HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1315 UNIV OF COLORADO - BOULDER 2950**  
 THEORETICAL STUDIES OF STRATOSPHERIC CLOUDS & AEROSOLS IN  
 SUPPORT OF SOLVE  
 04/01/1999 - 03/31/2002 FY01: \$40,000 Total: \$100,400  
*Prin. Invest.:* O B TOON  
*Tech. Officer:* ARC/E P CONDON, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1445 UNIV OF COLORADO - BOULDER 2951**  
 APPLICATION OF AEROSONDE, CLUSTERS TO EVALUATING THE MESO-  
 SCALE VARIABILITY IN TROPICAL STORMS  
 09/28/2000 - 03/14/2001 FY01: \$0 Total: \$90,000  
*Prin. Invest.:* P J WEBSTER  
*Tech. Officer:* ARC/S S WEGENER, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1506 UNIV OF COLORADO - BOULDER 2952**  
 APPLICATIONS OF THE AEROSONDE TO CAMEX-4  
 07/17/2001 - 06/30/2002 FY01: \$566,807 Total: \$566,807  
*Prin. Invest.:* G J HOLLAND  
*Tech. Officer:* ARC/C P SCOFIELD, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 2400 UNIV OF COLORADO - BOULDER 2960**  
 PHYSICS OF REGOLITH IMPACTS IN MICROGRAVITY EXPERIMENT (PRIME)  
 04/19/2000 - 11/30/2003 FY01: \$85,500 Total: \$135,500  
*Prin. Invest.:* J E COLWELL  
*Tech. Officer:* GRC/B J MOTIL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 1846 UNIV OF COLORADO - BOULDER 2953**  
 STRUCTURE HYDRODYNAMICS AND PHASE TRANSITIONS OF F REELY  
 SUSPENDED LIQUID CRYSTALS  
 05/02/1996 - 05/01/2001 FY01: \$0 Total: \$435,000  
*Prin. Invest.:* N A CLARK  
*Tech. Officer:* GRC/J S LING, GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2402 UNIV OF COLORADO - BOULDER 2961**  
 STRATIFIED TAYLOR-COUETTE FLOW WITH RADIAL BUOYANCY  
 04/19/2000 - 11/30/2003 FY01: \$95,000 Total: \$125,000  
*Prin. Invest.:* J E HART  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 1848 UNIV OF COLORADO - BOULDER 2954**  
 WAVES IN RADIAL GRAVITY USING MAGNETIC FLUID  
 06/25/1996 - 06/24/2001 FY01: \$0 Total: \$340,000  
*Prin. Invest.:* D R OHLSEN, J E HART, P D WEIDMAN  
*Tech. Officer:* GRC/N R HALL  
*CASE Category:* 11 - ASTRONOMY

**NAG 3 2457 UNIV OF COLORADO - BOULDER 2962**  
 STRUCTURE AND DYNAMICS OF FREELY SUSPENDED LIQUID CRYSTALS  
 06/07/2000 - 11/30/2003 FY01: \$113,408 Total: \$190,153  
*Prin. Invest.:* N A CLARK  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 1850 UNIV OF COLORADO - BOULDER 2955**  
 CELL AND PARTICLE INTERACTIONS AND AGGREGATION DURING ELECTROPHORETIC MOTION  
 05/02/1996 - 08/31/2000 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* R H DAVIS  
*Tech. Officer:* GRC/J S LING, GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2587 UNIV OF COLORADO - BOULDER 2963**  
 MULTI-BEAM ANTENNA ARRAYS FOR SATELLITE COMMUNICATIONS  
 04/04/2001 - 12/31/2001 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* Z POPOVIC  
*Tech. Officer:* GRC/R Q LEE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2116 UNIV OF COLORADO - BOULDER 2956**  
 THERMOCAPILLARY-INDUCED PHASE SEPARATION OF DISPERSED  
 SYSTEMS WITH COALESCENCE  
 01/28/1998 - 12/31/2001 FY01: \$71,250 Total: \$281,250  
*Prin. Invest.:* R H DAVIS  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 2643 UNIV OF COLORADO - BOULDER 2964**  
 VIRTUAL MISSION OPERATIONS USING INTERNET PROTOCOLS  
 08/23/2001 - 07/31/2004 FY01: \$38,000 Total: \$38,000  
*Prin. Invest.:* E HANSEN  
*Tech. Officer:* GRC/D CAREK  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2136 UNIV OF COLORADO - BOULDER 2957**  
 DUSTY PLASMA DYNAMICS NEAR SURFACES IN SPACE. DUSTY PLASMA  
 DYNAMICS NEAR SURFACES IN SPACE.  
 03/05/1998 - 01/05/2002 FY01: \$95,000 Total: \$355,000  
*Prin. Invest.:* J E COLWELL, S ROBERTSON, M HORANYI  
*Tech. Officer:* GRC/H K NAHRA  
*CASE Category:* 13 - PHYSICS

**NAG 3 2651 UNIV OF COLORADO - BOULDER 2965**  
 NEW MATERIALS FOR PROTON-CONDUCTING MEMBRANES NEW  
 MATERIALS FOR PROTON-CONDUCTING MEMBRANES  
 09/27/2001 - 08/31/2002 FY01: \$20,000 Total: \$20,000  
*Prin. Invest.:* J MICHL  
*Tech. Officer:* GRC/P L LOYSELLE  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2220 UNIV OF COLORADO - BOULDER 2958**  
 COMBUSTION OF METALS IN REDUCED-GRAVITY AND EXTRATERRESTRIAL  
 ENVIRONMENTS  
 12/29/1998 - 11/11/2002 FY01: \$113,875 Total: \$303,001  
*Prin. Invest.:* M C BRANCH  
*Tech. Officer:* GRC/R FRIEDMAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 1853 UNIV OF COLORADO - BOULDER 2966**  
 GODDARD HIGH RESOLUTION SPECTROGRAPH (GHR) INCLUDING  
 ACTIVITIES AS A GHR GUARANTEED TIME OBSERV.  
 01/02/1992 - 11/14/1999 FY01: -\$226 Total: \$2,320,726  
*Prin. Invest.:* J C BRANDT  
*Tech. Officer:* GSFC/A SMITH  
*CASE Category:* 11 - ASTRONOMY

**NAG 3 2267 UNIV OF COLORADO - BOULDER 2959**  
 COLLISIONS INTO DUST EXPERIMENT II COLLISIONS INTO DUST EXPERIMENT II  
 05/14/1999 - 04/30/2002 FY01: \$41,759 Total: \$113,579  
*Prin. Invest.:* J E COLWELL  
*Tech. Officer:* GRC/B J MOTIL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 2256 UNIV OF COLORADO - BOULDER 2967**  
 GLOBAL-SCALE TURBULENT SOLAR CONVECTION COUPLED TO ROTATION  
 AND MAGNETIC FIELDS  
 04/27/1993 - 12/31/2000 FY01: \$0 Total: \$1,405,000  
*Prin. Invest.:* J TOOMRE  
*Tech. Officer:* GSFC/T J BIRMINGHAM, GSFC/J D BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 2259 UNIV OF COLORADO - BOULDER 2968**  
 CONTEMPORANEOUS EUVE AND GHRSS OBSERVATIONS OF THE OUTER  
 ATMOSPHERIC STRUCTURE OF RS CVN . . . .  
 04/30/1993 - 09/30/1999 FY01: \$0 Total: \$144,037  
*Prin. Invest.:* A BROWN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3143 UNIV OF COLORADO - BOULDER 2969**  
 TEMPORAL VARIATIONS OF THE GEOPOTENTIAL  
 11/09/1995 - 11/14/1999 FY01: -\$211 Total: \$224,789  
*Prin. Invest.:* J WAHR  
*Tech. Officer:* GSFC/P T TAYLOR  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3224 UNIV OF COLORADO - BOULDER 2970**  
 X-RAY EMISSION FROM PRE-MAIN SEQUENCE STARS-TEST- ING THE  
 SOLAR ANALOGY  
 05/07/1996 - 12/31/2000 FY01: \$0 Total: \$338,976  
*Prin. Invest.:* S L SKINNER  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3225 UNIV OF COLORADO - BOULDER 2971**  
 SPECTRAL AND TEMPORAL PROPERTIES OF BLACK HOLE CANDIDATES  
 05/07/1996 - 08/31/2001 FY01: \$0 Total: \$328,000  
*Prin. Invest.:* M A NOWAK  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3226 UNIV OF COLORADO - BOULDER 2972**  
 THE FUNDAMENTAL PHYSICAL PROCESSES PRODUCING AND CONTROL-  
 LING STELLAR CORONAL/TRANSITION  
 05/07/1996 - 04/30/2002 FY01: \$0 Total: \$553,000  
*Prin. Invest.:* T A AYRES  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3394 UNIV OF COLORADO - BOULDER 2973**  
 CHARACTERIZING AND QUANTIFYING THE X-RAY VARIABLE SKY  
 09/06/1996 - 09/14/2002 FY01: \$0 Total: \$205,188  
*Prin. Invest.:* G S STRINGFELLOW  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3437 UNIV OF COLORADO - BOULDER 2974**  
 LAND AND LAND-USE CHANGE IN THE CLIMATE SENSITIVE HIGH PLAINS:  
 AN AUTOMATED APPROACH WITH LANDSAT  
 10/07/1996 - 12/31/2001 FY01: \$51,685 Total: \$863,197  
*Prin. Invest.:* A GOETZ  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3438 UNIV OF COLORADO - BOULDER 2975**  
 ENHANCED ANTARCTIC RESEARCH WITH LANDSAT: ICE SHEET  
 DYNAMICS, HISTORY AND CARTOGRAPHY  
 10/07/1996 - 06/30/2002 FY01: \$16,978 Total: \$263,523  
*Prin. Invest.:* T SCAMBOS  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3763 UNIV OF COLORADO - BOULDER 2976**  
 REMOTE SENSING OF PLANETARY SURFACES  
 02/21/1997 - 01/31/2001 FY01: \$0 Total: \$215,823  
*Prin. Invest.:* B M JAKOSKY  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3794 UNIV OF COLORADO - BOULDER 2977**  
 LIQUID CRYSTAL FOCAL-PLANE SHUTTERS  
 03/25/1997 - 07/31/2002 FY01: \$0 Total: \$58,941  
*Prin. Invest.:* P T STOCKE  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3847 UNIV OF COLORADO - BOULDER 2978**  
 MAPPING RICE PRODUCTION IN CHINA WITH AVHRR IMAGER  
 01/30/1997 - 11/14/2000 FY01: -\$2,186 Total: \$327,985  
*Prin. Invest.:* W EMERY  
*Tech. Officer:* GSFC/D J KAHLE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3949 UNIV OF COLORADO - BOULDER 2979**  
 LOWER IONOSPHERE THERMOSPHERE EXPLORER  
 02/21/1997 - 02/14/2001 FY01: \$0 Total: \$199,777  
*Prin. Invest.:* D C SOLOMON  
*Tech. Officer:* GSFC/R HOWARD  
*CASE Category:* 13 - PHYSICS

**NAG 5 3967 UNIV OF COLORADO - BOULDER 2980**  
 INTEGRATED ANALYSIS OF COLUMELLA CELL STRUCTURE AN  
 CRAFT MISSION DATA  
 03/03/1997 - 02/28/2002 FY01: \$0 Total: \$499,236  
*Prin. Invest.:* A STAEHELIN  
*Tech. Officer:* GSFC/M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 3997 UNIV OF COLORADO - BOULDER 2981**  
 WAVELET-BASED INTERPOLATION AND REPRESENTATION OF SPACE-  
 CRAFT MISSION DATA  
 03/13/1997 - 05/31/2000 FY01: -\$1,864 Total: \$188,136  
*Prin. Invest.:* M M LIGHTNER  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 4061 UNIV OF COLORADO - BOULDER 2982**  
 WARPING AND PRECESSION OF ACCRETION DISKS IN XRAY  
 03/18/1997 - 03/31/2001 FY01: \$0 Total: \$271,500  
*Prin. Invest.:* M C BEGELMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4063 UNIV OF COLORADO - BOULDER 2983**  
 ASTROPHYSICS AT THE DISK-HALO INTERFACE  
 03/18/1997 - 03/31/2002 FY01: \$0 Total: \$293,400  
*Prin. Invest.:* M J SHULL  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

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**NAG 5 4095 UNIV OF COLORADO - BOULDER 2984**  
 EVENT RATE FOR LISA GRAVITATIONAL WAVE SIGNALS FRO BLACK HOLE  
 COALESCENCES  
 03/12/1997 - 03/31/2002 FY01: \$46,000 Total: \$192,500  
*Prin. Invest.:* D L BENDER  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4163 UNIV OF COLORADO - BOULDER 2985**  
 DYNAMICAL MODELS OF THE SOLAR SYSTEM FORMATION AND  
 03/26/1997 - 02/28/2001 FY01: \$0 Total: \$161,900  
*Prin. Invest.:* D R STEWART  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4218 UNIV OF COLORADO - BOULDER 2986**  
 SEA ICE AND OCEAN PROCESSES IN BAFFIN BAY: A STUD DATA AND  
 NUMERICAL MODELING  
 04/15/1997 - 03/31/2000 FY01: \$0 Total: \$228,436  
*Prin. Invest.:* D STEFFEN  
*Tech. Officer:* GSFC/R H THOMAS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4248 UNIV OF COLORADO - BOULDER 2987**  
 GREENLAND ICE SHEET CLIMATOLOGY AND SURFACE ENERGY GREEN-  
 LAND CLIMATE NETWORK (GCNET)  
 03/26/1997 - 03/31/2001 FY01: \$0 Total: \$853,239  
*Prin. Invest.:* D STEFFEN  
*Tech. Officer:* GSFC/R THOMAS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4312 UNIV OF COLORADO - BOULDER 2988**  
 ORIGINS CONFERENCE-1997  
 04/18/1997 - 12/31/2000 FY01: \$0 Total: \$68,473  
*Prin. Invest.:* D M SHULL  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4314 UNIV OF COLORADO - BOULDER 2989**  
 LABORATORY STUDIES OF LOW TEMPERATURE RATE COEFFIC CHEM-  
 ISTRY OF THE OUTER PLANETS  
 04/16/1997 - 12/31/1999 FY01: -\$157 Total: \$404,441  
*Prin. Invest.:* D R LEONE  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4343 UNIV OF COLORADO - BOULDER 2990**  
 DUST PLASMA INTERACTION  
 04/17/1997 - 05/14/2001 FY01: \$0 Total: \$236,500  
*Prin. Invest.:* D HORANYI  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 4440 UNIV OF COLORADO - BOULDER 2991**  
 RADARSAT ANTARACTIC MAPPING PROJECT  
 05/13/1997 - 06/30/2002 FY01: \$11,404 Total: \$50,939  
*Prin. Invest.:* R G BARRY  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4446 UNIV OF COLORADO - BOULDER 2992**  
 THE DIURNAL CYCLE OF CONVECTION AND ITS INTERACTIO CIRCULATION  
 04/28/1997 - 06/30/2000 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* D L SALBY  
*Tech. Officer:* GSFC/R A SCHIFFER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4467 UNIV OF COLORADO - BOULDER 2993**  
 NATURAL OSCILLATIONS OF THE THERMOSPHERE-IONOSPHER  
 05/27/1997 - 04/30/2002 FY01: \$0 Total: \$271,054  
*Prin. Invest.:* P FORBES  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 4506 UNIV OF COLORADO - BOULDER 2994**  
 PROPOSAL FOR COLLABORATION ON THE DEVELOPMENT AND AMSR  
 SNOW WATER EQUIVALENT ALGORITHM  
 05/07/1997 - 04/30/2001 FY01: \$0 Total: \$116,604  
*Prin. Invest.:* R L ARMSTRONG  
*Tech. Officer:* GSFC/A T CHANG  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4526 UNIV OF COLORADO - BOULDER 2995**  
 CHARGED PARTICULATES IN THE POLAR MESOSPHERE/INSTR  
 05/07/1997 - 11/30/2000 FY01: \$0 Total: \$228,000  
*Prin. Invest.:* D ROBERTSON  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 4783 UNIV OF COLORADO - BOULDER 2996**  
 COORDINATED ASCA OBSERVATIONS OF CORONAL STRUCTURE CVN  
 BINARY SIGMA CRB  
 06/20/1997 - 06/30/2000 FY01: \$0 Total: \$17,800  
*Prin. Invest.:* A BROWN  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4804 UNIV OF COLORADO - BOULDER 2997**  
 A UNIFIED ANALYSIS OF NON-RADIATIVE HEATING AND WI  
 07/30/1997 - 07/31/2002 FY01: \$108,500 Total: \$497,100  
*Prin. Invest.:* G HARPER  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4901 UNIV OF COLORADO - BOULDER 2998**  
 DOCUMENTING, UNDERSTANDING, AND PREDICTING THE AGG RADIATION  
 FLUX FOR SHEBA  
 06/19/1997 - 12/14/2000 FY01: \$0 Total: \$284,507  
*Prin. Invest.:* D CURRY  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4918 UNIV OF COLORADO - BOULDER 2999**  
 PENETRATIVE DYNAMICS OF THE SOLAR INTERIOR  
 07/07/1997 - 11/30/2000 FY01: \$0 Total: \$261,809  
*Prin. Invest.:* D JULIEN  
*Tech. Officer:* GSFC/W G WAGNER  
*CASE Category:* 13 - PHYSICS



**NAG 5 5020 UNIV OF COLORADO - BOULDER 3000**  
 HIGH RESOLUTION X-RAY SPECTROSCOPY FROM SOUNDING ROCKETS  
 03/11/1994 - 10/31/2001 FY01: \$0 Total: \$1,793,373  
*Prin. Invest.:* W C CASH  
*Tech. Officer:* GSFC/L J EARLY, GSFC/R H PLESS  
*CASE Category:* 13 - PHYSICS

**NAG 5 5027 UNIV OF COLORADO - BOULDER 3001**  
 ENERGY TRANSFER IN THE THERMOSPHERE AND MESOSPHERE FUNDING  
 FOR A ONE-YEAR EFFORT IN BASIC RESEARCH  
 03/03/1995 - 02/29/2004 FY01: \$0 Total: \$383,148  
*Prin. Invest.:* S SOLOMON  
*Tech. Officer:* GSFC/L EARLY  
*CASE Category:* 13 - PHYSICS

**NAG 5 5028 UNIV OF COLORADO - BOULDER 3002**  
 TIDES, PLANETARY WAVES, AND EDDY FORCING OF THE MEAN MLT  
 CIRCULATION FOR THE TIMED SCIENCE...  
 03/03/1995 - 03/05/2005 FY01: \$159,450 Total: \$835,576  
*Prin. Invest.:* J FORBES  
*Tech. Officer:* GSFC/L J EARLY, GSFC/R H PLESS  
*CASE Category:* 13 - PHYSICS

**NAG 5 5096 UNIV OF COLORADO - BOULDER 3003**  
 HIGH RESOLUTION SPECTROSCOPY IN THE FAR AND EXTREME  
 ULTRAVIOLET  
 12/02/1996 - 05/31/2003 FY01: \$529,078 Total: \$2,325,978  
*Prin. Invest.:* E WILKINSON  
*Tech. Officer:* GSFC/W JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5168 UNIV OF COLORADO - BOULDER 3004**  
 ANALYSIS OF TIME DEPENDENT FAULT INTERACTIONS AND CALIFORNIA  
 07/17/1997 - 07/14/2001 FY01: \$0 Total: \$236,922  
*Prin. Invest.:* J B RUNDLE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 5274 UNIV OF COLORADO - BOULDER 3005**  
 FUNDING FOR PHASE 1 AWARD OF THE OWLS/MARE PROJECT UNESS  
 06/21/2000 - 04/13/2006 FY01: \$0 Total: \$370,000  
*Prin. Invest.:* W EMERY  
*Tech. Officer:* WFF/D L PIERCE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 5331 UNIV OF COLORADO - BOULDER 3006**  
 YEAR 1 OF A 3 YEAR GRANT IN BASIC SCIENTIFIC RESEARCH WITH U OF  
 COLORADO FOR X-RAY  
 04/18/2001 - 04/17/2004 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* D CASH  
*Tech. Officer:* GSFC/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6048 UNIV OF COLORADO - BOULDER 3007**  
 LATE STAGES OF ACCRETION OF URANUS AND NEPTUNE  
 07/25/1997 - 06/30/2002 FY01: \$27,300 Total: \$164,470  
*Prin. Invest.:* D STEWART  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6051 UNIV OF COLORADO - BOULDER 3008**  
 ASSESSING FUTURE STABILITY OF US HIGH PLAINS LANDC PROCESS  
 MODELING WITH LANDSAT IN SITU MODERN, AND  
 07/28/1997 - 09/30/2001 FY01: \$0 Total: \$530,000  
*Prin. Invest.:* D WEBB  
*Tech. Officer:* GSFC/G C GUTMIN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6134 UNIV OF COLORADO - BOULDER 3009**  
 QUANTIFYING GRASSLAND-TO-WOODLAND TRANSITIONS AND CARBON  
 AND NITROGEN DYNAMICS IN THE SOUTHWEST UNIT  
 09/08/1997 - 01/31/2002 FY01: \$0 Total: \$548,190  
*Prin. Invest.:* D A WESSMAN  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6147 UNIV OF COLORADO - BOULDER 3010**  
 VARIATIONS IN GPS TIME SERIES: A STUDY OF HYDROLO  
 08/21/1997 - 08/31/2001 FY01: \$0 Total: \$225,526  
*Prin. Invest.:* K M LARSON  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6198 UNIV OF COLORADO - BOULDER 3011**  
 MODELING SUBSTORM DYNAMICS WITH A LOW-DIMENSIONAL E SPACE  
 SYSTEM  
 08/20/1997 - 12/31/2000 FY01: \$0 Total: \$152,068  
*Prin. Invest.:* D DOXAS  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 6337 UNIV OF COLORADO - BOULDER 3012**  
 X-RAY REPROCESSING IN ACTIVE GALACTIC NUCLEI  
 10/30/1997 - 10/31/2001 FY01: \$108,900 Total: \$421,000  
*Prin. Invest.:* M BEGELMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6462 UNIV OF COLORADO - BOULDER 3013**  
 VALIDATION STUDIES AND SENSITIVITY ANALYSES FOR RE TRIEVALS OF  
 SNOW ALBEDO & SNOWCOVERED AREA FROM  
 10/14/1997 - 03/31/2003 FY01: \$12,646 Total: \$288,279  
*Prin. Invest.:* A NOLIN  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6474 UNIV OF COLORADO - BOULDER 3014**  
 IMAGING INTERPLANETARY HYDROGEN WITH ULYSSES  
 11/13/1997 - 10/31/2001 FY01: \$0 Total: \$120,000  
*Prin. Invest.:* D PRYOR  
*Tech. Officer:* GSFC/L LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6521 UNIV OF COLORADO - BOULDER 3015**  
 IMPROVING THE ACCURACY OF SATELLITE SEA SURFACE TEMPERATURE  
 MEASUREMENTS BY EXPLICITLY ACCOUNTING F  
 12/05/1997 - 09/30/2001 FY01: \$0 Total: \$526,369  
*Prin. Invest.:* D EMERY  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6627 UNIV OF COLORADO - BOULDER 3016**  
 CYCLIC AND LONG TERM TRENDS IN THE MESOSPHERE  
 11/18/1997 - 11/30/2000 FY01: \$0 Total: \$236,548  
*Prin. Invest.:* D E THOMAS  
*Tech. Officer:* GSFC/C JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6629 UNIV OF COLORADO - BOULDER 3017**  
 STUDIES OF TROPICAL/MID-LATITUDE EXCHANGE USING UARS OBSERVATIONS  
 11/18/1997 - 11/30/2001 FY01: \$0 Total: \$160,089  
*Prin. Invest.:* D AVALLONE  
*Tech. Officer:* GSFC/A DOUGLASS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6636 UNIV OF COLORADO - BOULDER 3018**  
 PASSIVE MICROWAVE SNOW COVER ALGORITHM INTERCOMPARISON AND VALIDATION  
 11/18/1997 - 10/31/2001 FY01: \$0 Total: \$307,162  
*Prin. Invest.:* D L ARMSTRONG  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6666 UNIV OF COLORADO - BOULDER 3019**  
 AVHRR-BASED POLAR PATHFINDER PRODUCTS - EVALUATION, ENHANCEMENT AND TRANSITION TO MODIS  
 11/25/1997 - 11/30/2000 FY01: \$0 Total: \$292,968  
*Prin. Invest.:* D FOWLER  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6683 UNIV OF COLORADO - BOULDER 3020**  
 MODELING AND ANALYSIS OF UARS DATA IN THE STRATOSPHERE, MESOSPHERE, AND LOWER THERMOSPHERE  
 12/08/1997 - 11/30/2001 FY01: \$0 Total: \$80,000  
*Prin. Invest.:* S BAILEY  
*Tech. Officer:* GSFC/C JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6758 UNIV OF COLORADO - BOULDER 3021**  
 LABORATORY STUDIES OF THE VISIBLE SPECTROSCOPY AND CHEMISTRY OF POLYCYCLIC AROMATIC HYDROCARBON (PAH)  
 12/24/1997 - 12/31/2001 FY01: \$148,000 Total: \$494,662  
*Prin. Invest.:* T P SNOW  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6791 UNIV OF COLORADO - BOULDER 3022**  
 EXTRACTION OF TIDES AND PLANETARY WAVES FROM SATELLITE OBSERVATIONS  
 02/17/1998 - 02/28/2002 FY01: \$0 Total: \$142,043  
*Prin. Invest.:* S PALO  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6820 UNIV OF COLORADO - BOULDER 3023**  
 ARTIC REGIONAL SEA-ICE ANOMALIES: A DIAGNOSIS OF ATMOSPHERIC OCEAN INTERACTIONS AND LINKAGES TO  
 01/09/1998 - 12/31/2001 FY01: \$0 Total: \$257,503  
*Prin. Invest.:* A LYNCH  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6850 UNIV OF COLORADO - BOULDER 3024**  
 UARS - SOLSTICE  
 01/12/1998 - 12/14/2001 FY01: \$0 Total: \$723,000  
*Prin. Invest.:* D ROTTMAN  
*Tech. Officer:* GSFC/C JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6875 UNIV OF COLORADO - BOULDER 3025**  
 ABSOLUTE GRAVITY/GPS MEASUREMENTS IN GREENLAND  
 02/17/1998 - 12/31/2001 FY01: \$0 Total: \$57,574  
*Prin. Invest.:* J WAHR  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6880 UNIV OF COLORADO - BOULDER 3026**  
 LASER INTERFEROMETRY TECHNIQUES FOR ACCURATE MEASUREMENT OF DISTANCE CHANGES BETWEEN WIDELY SEPARATED STARS  
 02/17/1998 - 12/31/2000 FY01: \$0 Total: \$285,000  
*Prin. Invest.:* R T STEBBINS  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6900 UNIV OF COLORADO - BOULDER 3027**  
 INVESTIGATIONS OF CLOUDS AND AEROSOLS ON MARS AND VENUS  
 01/21/1998 - 09/30/2001 FY01: \$78,800 Total: \$300,239  
*Prin. Invest.:* O TOON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6901 UNIV OF COLORADO - BOULDER 3028**  
 CHROMOSPHERIC STRUCTURE AND WIND ACCELERATION IN ZETA AURORAL STARS  
 02/04/1998 - 02/14/2001 FY01: -\$3,018 Total: \$36,982  
*Prin. Invest.:* P BENNETT  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6936 UNIV OF COLORADO - BOULDER 3029**  
 THE EVOLUTION AND X-RAY MORPHOLOGY OF DISTANT CLUSTERS OF GALAXIES  
 02/04/1998 - 02/14/2002 FY01: \$0 Total: \$80,000  
*Prin. Invest.:* J T STOCKE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6984 UNIV OF COLORADO - BOULDER 3030**  
 MEDIUM ENERGY PARTICLE PRECIPITATION EFFECTS ON THE MESOSPHERE AND LOWER THERMOSPHERE  
 02/27/1998 - 03/31/2002 FY01: \$0 Total: \$229,484  
*Prin. Invest.:* M CODRESCU  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7021 UNIV OF COLORADO - BOULDER 3031**  
 SATELLITE REMOTE SENSING OF TROPICAL ICE CLOUDS AND PRECIPITATION FOR GCM VERIFICATION  
 03/19/1998 - 12/31/2000 FY01: \$0 Total: \$97,981  
*Prin. Invest.:* D EVANS  
*Tech. Officer:* GSFC/K H BERGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7088 UNIV OF COLORADO - BOULDER 3032**  
 MHD SIMULATIONS OF THE COUPLING BETWEEN ION AND JUPITER  
 02/23/1998 - 03/31/2002 FY01: \$0 Total: \$199,346  
*Prin. Invest.:* F BAGENAL  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7128 UNIV OF COLORADO - BOULDER 3033**  
 PRECISION MEASUREMENT OF LARGE SCALE STRUCTURE-ATP  
 03/24/1998 - 02/14/2002 FY01: \$0 Total: \$207,289  
*Prin. Invest.:* A J HAMILTON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7223 UNIV OF COLORADO - BOULDER 3034**  
 A SEARCH FOR CORONAL EMISSION AT THE BOTTOM OF THE MAIN-SEQUENCE  
 04/09/1998 - 04/14/2002 FY01: \$0 Total: \$9,920  
*Prin. Invest.:* G S STRINGFELLOW  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7262 UNIV OF COLORADO - BOULDER 3035**  
 THE INTERGALACTIC MEDIUM AND QSO ABSORPTION SYSTEMS (LTSA - NEW)  
 04/28/1998 - 04/30/2002 FY01: \$114,300 Total: \$427,900  
*Prin. Invest.:* J SHULL  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7329 UNIV OF COLORADO - BOULDER 3036**  
 XTE PROPOSAL - RXTE OBSERVATIONS OF M87: INVESTIGATING THE NON-THERMAL CONTINUUM  
 04/24/1998 - 04/14/2001 FY01: \$0 Total: \$8,000  
*Prin. Invest.:* C REYNOLDS  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7365 UNIV OF COLORADO - BOULDER 3037**  
 RELATIONSHIPS BETWEEN THE BULK-SKIN SEA SURFACE TEMPERATURE DIFFERENCE, WIND AND NET AIR-SEA HEAT F  
 04/29/1998 - 04/30/2001 FY01: \$35,000 Total: \$317,444  
*Prin. Invest.:* W EMERY  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 7398 UNIV OF COLORADO - BOULDER 3038**  
 XTE PROPOSAL - COORDINATED XTE OBSERVATIONS OF FLARES AND CORONAL STRUCTURE ON THE RS CVN BINARY  
 05/13/1998 - 05/31/2000 FY01: -\$97 Total: \$5,968  
*Prin. Invest.:* A BROWN  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7402 UNIV OF COLORADO - BOULDER 3039**  
 INTEGRATED USE OF EXPERIMENTAL MODELING & REMOTE SENSING TECHNIQUES TO INVESTIGATE CARBON ISOTOPE  
 05/15/1998 - 11/30/1999 FY01: -\$252 Total: \$201,285  
*Prin. Invest.:* A TOWNSEND  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7449 UNIV OF COLORADO - BOULDER 3040**  
 RELATIONSHIPS BETWEEN INTERSTELLAR AND INTERPLANETARY GRAINS  
 07/02/1998 - 06/30/2002 FY01: \$0 Total: \$83,500  
*Prin. Invest.:* T P SNOW  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7465 UNIV OF COLORADO - BOULDER 3041**  
 NARROW BAND IMAGING WITH HOLOGRAPHIC TELESCOPES  
 11/25/1998 - 12/31/2001 FY01: \$82,000 Total: \$182,810  
*Prin. Invest.:* D WILKINSON  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7466 UNIV OF COLORADO - BOULDER 3042**  
 AEROSOL-CLOUD-CLIMATE INTERACTIONS  
 05/28/1998 - 05/31/2000 FY01: \$0 Total: \$122,473  
*Prin. Invest.:* K STEFFEN  
*Tech. Officer:* GSFC/J ZWALLY  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7496 UNIV OF COLORADO - BOULDER 3043**  
 EVALUATION OF SNOW WATER EQUIVALENT ACROSS GRASSLAND AND REGIONS  
 06/29/1998 - 01/31/2001 FY01: -\$48,187 Total: \$65,140  
*Prin. Invest.:* A FREI  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7541 UNIV OF COLORADO - BOULDER 3044**  
 THE USE OF CASES OBSERVATIONS TO ASSESS AND PARAMETERIZE THE IMPACT OF LAND-SURFACE HETEROGENEITY ON  
 06/18/1998 - 08/31/2001 FY01: \$0 Total: \$100,351  
*Prin. Invest.:* D YATES  
*Tech. Officer:* GSFC/E ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7543 UNIV OF COLORADO - BOULDER 3045**  
 INVESTIGATING DOWNSCALING METHODS AND EVALUATING CLIMATE MODELS FOR USE IN ESTIMATING REGIONAL WATER  
 06/23/1998 - 07/31/2001 FY01: \$0 Total: \$270,000  
*Prin. Invest.:* A FREI  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7638 UNIV OF COLORADO - BOULDER 3046**  
 INTERFEROMETRIC TECHNIQUES FOR GRAVITATIONAL WAVE DETECTION IN SPACE  
 12/08/1998 - 12/31/2001 FY01: \$94,000 Total: \$138,000  
*Prin. Invest.:* D T STEBBINS  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7652 UNIV OF COLORADO - BOULDER 3047**  
 AN INVESTIGATION OF THE EFFECT OF PARTICLE IONIZATION ON THE  
 EARTH'S MIDDLE ATMOSPHERE AND ITS R  
 08/25/1998 - 09/30/2001 FY01: \$0 Total: \$195,000  
*Prin. Invest.:* D W RUSCH  
*Tech. Officer:* HQ/J SHARBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7679 UNIV OF COLORADO - BOULDER 3048**  
 CLOUD STRUCTURE RECONSTRUCTION AND SHORTWAVE RADIATIVE  
 TRANSFER MODELING FOR ARMYEAR 1 OF A 3 YEAR  
 09/17/1998 - 02/28/2002 FY01: \$0 Total: \$143,000  
*Prin. Invest.:* K EVANS  
*Tech. Officer:* GSFC/W WISCOMBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7703 UNIV OF COLORADO - BOULDER 3049**  
 FUNDING FOR TEMPORAL VARIATIONS OF THE GEOPOTENTIAL  
 (SENH98-0102)  
 09/23/1998 - 09/30/2001 FY01: \$48,000 Total: \$286,000  
*Prin. Invest.:* J M WAHR  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7723 UNIV OF COLORADO - BOULDER 3050**  
 THE DISK WIND MODEL OF THE BROAD LINE REGIONS IN ACTIVE GALACTIC  
 NUCLEI AND CATAclysmic VARI  
 09/23/1998 - 09/30/2002 FY01: \$90,630 Total: \$174,047  
*Prin. Invest.:* M C BEGELMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7725 UNIV OF COLORADO - BOULDER 3051**  
 MODEL PREDICTIONS OF INTERACTIONS BETWEEN SOLAR AND ANTHROPOGENIC  
 PERTURBATIONS IN THE EARTH'S  
 09/23/1998 - 09/30/2001 FY01: \$20,500 Total: \$62,000  
*Prin. Invest.:* D RUSCH  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7760 UNIV OF COLORADO - BOULDER 3052**  
 CHARACTERIZING THE SIPLE COAST ICE STREAM SYSTEM USING  
 SATELLITE IMAGES, IMPROVED TOPOGRAPHY, AND IN  
 12/21/1998 - 12/31/2001 FY01: \$39,461 Total: \$119,876  
*Prin. Invest.:* T A SCAMBOS  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7784 UNIV OF COLORADO - BOULDER 3053**  
 SOLAR MESOSPHERE EXPLORER MEASUREMENTS OF EL CHICHON  
 AEROSOLS  
 11/09/1998 - 10/31/2001 FY01: \$58,000 Total: \$173,850  
*Prin. Invest.:* C E RANDALL  
*Tech. Officer:* GSFC/M MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7838 UNIV OF COLORADO - BOULDER 3054**  
 STUDY OF ANOMALOUS VARIATION OF THE TOTAL SOLAR IR RADIANCE AT  
 THE BEGINNING OF SOLAR CYCLE 23  
 12/16/1998 - 12/14/2001 FY01: \$0 Total: \$125,020  
*Prin. Invest.:* G DE TOMA  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7851 UNIV OF COLORADO - BOULDER 3055**  
 MULTIWAVELENGTH TESTING OF BROADBAND EUV GRATINGS  
 11/30/1998 - 12/31/2000 FY01: \$0 Total: \$52,000  
*Prin. Invest.:* D WILKINSON  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7996 UNIV OF COLORADO - BOULDER 3056**  
 GLOBAL AND LOCAL HELIOSEISMIC STUDIES OF SOLAR CONVECTION-  
 ZONE DYNAMICS USING SOI-MDI  
 01/05/1999 - 12/31/2001 FY01: \$210,000 Total: \$685,000  
*Prin. Invest.:* J TOOMRE  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8047 UNIV OF COLORADO - BOULDER 3057**  
 A COMPARATIVE ANALYSIS OF THE GALILEO-ERA IO TORUS &  
 ATMOSPHERE  
 01/15/1999 - 01/14/2001 FY01: \$0 Total: \$105,000  
*Prin. Invest.:* N M SCHNEIDER  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8096 UNIV OF COLORADO - BOULDER 3058**  
 ULTRAVIOLET STUDIES OF JUPITER'S HYDROCARBONS AND AEROSOLS  
 FROM GALILEO  
 01/29/1999 - 01/31/2002 FY01: \$0 Total: \$110,000  
*Prin. Invest.:* D R PRYOR  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8108 UNIV OF COLORADO - BOULDER 3059**  
 THE YOUNGEST STARS - LTSA 98  
 02/11/1999 - 02/14/2002 FY01: \$98,190 Total: \$295,256  
*Prin. Invest.:* J BALLY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8127 UNIV OF COLORADO - BOULDER 3060**  
 "INFRARED OPTICAL CONSTANTS OF PARTICLES IN THE LOWER STRATO-  
 SPHERE AND UPPER TROPOSPHERE"  
 02/04/1999 - 11/30/2001 FY01: \$105,052 Total: \$318,188  
*Prin. Invest.:* M A TOLBERT  
*Tech. Officer:* GSFC/M D KING  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8133 UNIV OF COLORADO - BOULDER 3061**  
 GLOBAL MODELS OF SOLAR CONVECTION, ROTATION AND MAGNETIC  
 ACTIVITY  
 03/02/1999 - 04/30/2002 FY01: \$316,000 Total: \$896,788  
*Prin. Invest.:* J TOOMRE  
*Tech. Officer:* GSFC/J M GREBOWSKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8178 UNIV OF COLORADO - BOULDER 3062**  
 ULTRAVIOLET PHOTOMETRIC PARAMETERS OF THE ICY GALI LEAN  
 SATELLITES AND THE MOON  
 02/11/1999 - 02/14/2001 FY01: \$0 Total: \$64,800  
*Prin. Invest.:* A HENDRIX  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8236 UNIV OF COLORADO - BOULDER 3063**  
 SN1987A: THE BIRTH OF A SUPERNOVA REMNANT (ATP 98 )  
 02/25/1999 - 02/28/2001 FY01: \$200,750 Total: \$299,308  
*Prin. Invest.:* R A MCCRAY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8247 UNIV OF COLORADO - BOULDER 3064**  
 GGS CEPPAD SUPPLEMENT  
 02/24/1999 - 01/31/2002 FY01: \$75,000 Total: \$276,000  
*Prin. Invest.:* D BAKER  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8256 UNIV OF COLORADO - BOULDER 3065**  
 JOVIAN AURORAL CHEMISTRY  
 02/11/1999 - 02/14/2002 FY01: \$12,000 Total: \$35,304  
*Prin. Invest.:* W PRYOR  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8259 UNIV OF COLORADO - BOULDER 3066**  
 MULTISPECTRAL MAPPING OF THE MARTIAN POLAR ICE CAP S  
 02/16/1999 - 02/28/2002 FY01: \$69,000 Total: \$217,000  
*Prin. Invest.:* A W NOLIN  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8266 UNIV OF COLORADO - BOULDER 3067**  
 WAVE STRUCTURES AND VERTICAL COUPLING IN THE MARTIAN  
 ATMOSPHERE  
 02/24/1999 - 05/31/2002 FY01: \$44,000 Total: \$125,900  
*Prin. Invest.:* J M FORBES  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8311 UNIV OF COLORADO - BOULDER 3068**  
 THE DIURNAL CYCLE OF CONVECTION AND ITS INTERACTION WITH THE  
 LARGE SCALE CIRCULATION  
 03/12/1999 - 02/28/2002 FY01: \$116,977 Total: \$159,769  
*Prin. Invest.:* M L SALBY  
*Tech. Officer:* GSFC/J R CURRAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8320 UNIV OF COLORADO - BOULDER 3069**  
 INTEGRATING MICROWAVE AND HYPERSPECTRAL REMOTE SENSING FOR  
 ESTIMATING VEGETATION STRUCTURE AND BI  
 04/06/1999 - 03/31/2002 FY01: \$48,552 Total: \$135,131  
*Prin. Invest.:* G P ASNER  
*Tech. Officer:* GSFC/D C WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8338 UNIV OF COLORADO - BOULDER 3070**  
 PHOTOMETRIC ANALYSIS OF THE JOVIAN RING SYSTEM AND MODELING  
 OF RINGORIGIN AND EVOLUTION  
 03/23/1999 - 04/30/2002 FY01: \$0 Total: \$122,874  
*Prin. Invest.:* LW ESPOSITO  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8362 UNIV OF COLORADO - BOULDER 3071**  
 THEORETICAL STUDIES OF MICROPHYSICAL MARINE BOUNDARY-LAYER  
 CLOUDS  
 03/15/1999 - 03/14/2002 FY01: \$0 Total: \$105,532  
*Prin. Invest.:* O B TOON  
*Tech. Officer:* GSFC/M MISCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8399 UNIV OF COLORADO - BOULDER 3072**  
 POLAR PATHFINDER HDF-EOS PILOT PROJECT  
 05/14/1999 - 05/14/2001 FY01: \$0 Total: \$92,006  
*Prin. Invest.:* R L WEAVER  
*Tech. Officer:* GSFC/K MOE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8442 UNIV OF COLORADO - BOULDER 3073**  
 NONLINEAR MODELING OF HIGH-LATITUDE ELECTRODYNAMICS AND  
 MID-LATITUDE CURRENTS AND PREDICTION FROM R  
 04/08/1999 - 04/30/2002 FY01: \$17,410 Total: \$50,418  
*Prin. Invest.:* D N BAKER  
*Tech. Officer:* GSFC/A J KLIMAS  
*CASE Category:* 13 - PHYSICS

**NAG 5 8538 UNIV OF COLORADO - BOULDER 3074**  
 SUPERCONDUCTING MIXERS FOR FAR INFRARED SPECTROSCOPY  
 08/11/1999 - 08/14/2002 FY01: \$0 Total: \$203,000  
*Prin. Invest.:* A L BETZ  
*Tech. Officer:* GSFC/F HERRERO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8615 UNIV OF COLORADO - BOULDER 3075**  
 APPLICATION OF SATELLITE SAR IMAGERY IN MAPPING THE ACTIVE  
 LAYER OF ARCTIC PERMAFROST  
 06/14/1999 - 06/30/2001 FY01: \$0 Total: \$66,015  
*Prin. Invest.:* T ZHANG  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8643 UNIV OF COLORADO - BOULDER 3076**  
 DISTRIBUTION & AUTOMATION TECHNOLOGY APPLICATION, "DATA"  
 07/08/1999 - 06/30/2001 FY01: \$0 Total: \$568,626  
*Prin. Invest.:* E R HANSEN  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8697 UNIV OF COLORADO - BOULDER 3077**  
 ALGORITHMS FOR AUTONOMOUS GPS ORBIT DETERMINATION & FORMATION  
 FLYING  
 08/18/1999 - 08/14/2001 FY01: \$0 Total: \$146,780  
*Prin. Invest.:* P AXELRAD  
*Tech. Officer:* GSFC/J LEITNER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 8709 UNIV OF COLORADO - BOULDER 3078**  
 LAND USE IMPACTS ON SUBTROPICAL BIOGEOCHEMICAL CYC LES: AN  
 INTEGRATED FIELD-PROCESSING MODELING-REMO  
 07/29/1999 - 07/31/2002 FY01: \$100,566 Total: \$366,582  
*Prin. Invest.:* G ASNER  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 8755 UNIV OF COLORADO - BOULDER 3079**  
 INTERCALIBRATION OF MESOSPHERE/LOWER THERMOSPHERE WINDS  
 FROM SPACE-BASED & GROUND-BASED MEASUREMENTS  
 08/12/1999 - 08/14/2002 FY01: \$16,000 Total: \$46,500  
*Prin. Invest.:* J M FORBES  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8840 UNIV OF COLORADO - BOULDER 3080**  
 INTERNATIONAL RESEARCH WORKSHOP ON INTEGRATING GIS & ENVI-  
 RONMENTAL MODELING: PROBLEMS, PROSPECTS,&  
 09/22/1999 - 09/30/2000 FY01: -\$2,560 Total: \$7,440  
*Prin. Invest.:* B O PARKS  
*Tech. Officer:* GSFC/B W MEESON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8910 UNIV OF COLORADO - BOULDER 3081**  
 SMALL-SCALE POLYGONS AND THE HISTORY OF GROUND ICE ON MARS  
 12/29/1999 - 02/14/2001 FY01: \$0 Total: \$58,900  
*Prin. Invest.:* M T MELLON  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8912 UNIV OF COLORADO - BOULDER 3082**  
 BOOK ON HYPERSPECTRAL IMAGING  
 01/03/2000 - 05/31/2000 FY01: -\$3 Total: \$76,277  
*Prin. Invest.:* A GOETZ  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8923 UNIV OF COLORADO - BOULDER 3083**  
 LABORATORY STUDIES OF LOW TEMPERATURE RATE COEFFEC IENTS:  
 THE ATMOSPHERICCHEMISTRY OF THE OUTER PLAN  
 01/06/2000 - 12/31/2002 FY01: \$110,200 Total: \$214,008  
*Prin. Invest.:* D R LEONE  
*Tech. Officer:* GSFC/R B BEEBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8940 UNIV OF COLORADO - BOULDER 3084**  
 GALILEO MULTI-SPECTRAL ANALYSIS  
 01/13/2000 - 09/30/2001 FY01: -\$19,359 Total: \$8,241  
*Prin. Invest.:* K SIMMONS  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9007 UNIV OF COLORADO - BOULDER 3085**  
 SATELLITE ATMOSPHERE & IO TORUS OBSERVATIONS  
 01/28/2000 - 01/31/2002 FY01: \$99,500 Total: \$192,475  
*Prin. Invest.:* N M SCHNEIDER  
*Tech. Officer:* GSFC/T H MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9010 UNIV OF COLORADO - BOULDER 3086**  
 FUV SPECTRA OF EVOLVED LATE-K AND M STARS: MASS LOSS  
 REVISITED AND STELLAR ACTIVITY - FUSE  
 02/02/2000 - 01/31/2002 FY01: \$0 Total: \$67,000  
*Prin. Invest.:* G HARPER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9018 UNIV OF COLORADO - BOULDER 3087**  
 HIGH VELOCITY CLOUDS: ORIGIN & ENVIRONMENT - FUSE  
 02/03/2000 - 01/31/2001 FY01: \$0 Total: \$24,540  
*Prin. Invest.:* J SHULL  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9026 UNIV OF COLORADO - BOULDER 3088**  
 SIMULATION & THEORETICAL MODELING OF OBSERVATIONS OF BIPOLAR  
 STRUCTURE & LOW FREQUENCY WAVES IN THE  
 02/03/2000 - 02/28/2002 FY01: \$87,918 Total: \$167,218  
*Prin. Invest.:* M V GOLDMAN  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9041 UNIV OF COLORADO - BOULDER 3089**  
 STELLAR WINDS, HYDROGEN WALLS, AND THE LOCAL INTER STELLAR  
 MEDIUM -L TSA99  
 02/22/2000 - 02/28/2002 FY01: \$178,996 Total: \$228,346  
*Prin. Invest.:* B WOOD  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9043 UNIV OF COLORADO - BOULDER 3090**  
 CLIMATOLOGY OF ARCTIC CANADA  
 02/22/2000 - 02/28/2002 FY01: \$37,822 Total: \$74,066  
*Prin. Invest.:* K STEFFEN  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9092 UNIV OF COLORADO - BOULDER 3091**  
 ION ETCHED HOLOGRAPHIC GRATINGS  
 02/17/2000 - 01/31/2002 FY01: \$90,000 Total: \$165,360  
*Prin. Invest.:* J GREEN  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9114 UNIV OF COLORADO - BOULDER 3092**  
 PHASE-A AND BRIDGE PHASE STUDY OF STEREO/WAVES ACCOMMODA-  
 TION  
 03/01/2000 - 12/31/2001 FY01: \$30,000 Total: \$58,206  
*Prin. Invest.:* R ERGUN  
*Tech. Officer:* GSFC/M L KAISER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9172 UNIV OF COLORADO - BOULDER 3093**  
 DUSTY PLASMAS IN PLANETARY MAGNETOSPHERES  
 03/08/2000 - 02/28/2002 FY01: \$74,194 Total: \$148,094  
*Prin. Invest.:* M HORANYI  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9201 UNIV OF COLORADO - BOULDER 3094**  
 THERMOSPHERIC ODD-NITROGEN RESPONSE TO AURORAL ENERGY  
 03/09/2000 - 09/14/2001 FY01: \$0 Total: \$41,400  
*Prin. Invest.:* S SOLOMON  
*Tech. Officer:* GSFC/J SCHARBER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9304 UNIV OF COLORADO - BOULDER 3095**  
 CLOSEOUT OF "LABORATORY STUDIES OF THE NUCLEATION, COMPOSITION & REACTIVITY OF AIRCRAFT CONDENSATION  
 03/22/2000 - 03/31/2002 FY01: \$64,000 Total: \$154,236  
*Prin. Invest.:* D A TOLBERT  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9336 UNIV OF COLORADO - BOULDER 3096**  
 INVESTIGATION OF RADIO TOMOGRAPHY IMAGING OF THE MAGNETOSPHERE  
 03/27/2000 - 02/28/2002 FY01: \$79,100 Total: \$151,700  
*Prin. Invest.:* R ERGUN  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9353 UNIV OF COLORADO - BOULDER 3097**  
 CHARACTERIZATION AND NUMERICAL SIMULATION OF FAST SOLITARY WAVES IN THE AURORAL IONOSPHERE  
 03/30/2000 - 03/31/2002 FY01: \$0 Total: \$72,600  
*Prin. Invest.:* R ERGUN  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9404 UNIV OF COLORADO - BOULDER 3098**  
 GLOBAL & REGIONAL IMPACTS OF MESOSCALE VARIABILITY IN AIR-SEA FLUXES  
 04/10/2000 - 04/30/2002 FY01: \$364,045 Total: \$615,712  
*Prin. Invest.:* P J WEBSTER  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9412 UNIV OF COLORADO - BOULDER 3099**  
 STANDARD GLOBAL SNOW COVER PRODUCTS FROM SATELLITE REMOTE SENSING  
 05/08/2000 - 05/14/2002 FY01: \$132,415 Total: \$226,805  
*Prin. Invest.:* R ARMSTRONG  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9421 UNIV OF COLORADO - BOULDER 3100**  
 ENERGIZATION AND LOSS OF OUTER RADIATION BELT ELECTRONS  
 04/11/2000 - 04/30/2002 FY01: \$43,277 Total: \$92,277  
*Prin. Invest.:* X LI  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9443 UNIV OF COLORADO - BOULDER 3101**  
 CHARGED AEROSOLS  
 04/13/2000 - 05/31/2001 FY01: \$0 Total: \$36,800  
*Prin. Invest.:* S ROBERTSON  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9448 UNIV OF COLORADO - BOULDER 3102**  
 KLE ANALYSIS OF SCIGN GPS DATA  
 04/12/2000 - 04/14/2002 FY01: \$40,000 Total: \$80,000  
*Prin. Invest.:* J B RUNDLE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9450 UNIV OF COLORADO - BOULDER 3103**  
 USE OF SATELLITE GRAVIMETRY TO DEVELOP AND TEST A LAND WATER-AND ENERGY-BALANCE MODEL  
 04/12/2000 - 04/30/2002 FY01: \$49,051 Total: \$72,266  
*Prin. Invest.:* J WAHR  
*Tech. Officer:* GSFC/P HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9474 UNIV OF COLORADO - BOULDER 3104**  
 THERMOSPHERIC OXYGEN MAPPER (TOM)  
 04/17/2000 - 04/30/2002 FY01: \$181,773 Total: \$361,021  
*Prin. Invest.:* A L BETZ  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9477 UNIV OF COLORADO - BOULDER 3105**  
 ADVANCING GLACIOLOGICAL APPLICATIONS OF REMOTE SENSING WITH EO-1  
 04/24/2000 - 04/30/2001 FY01: \$0 Total: \$58,580  
*Prin. Invest.:* T SCAMBOS  
*Tech. Officer:* GSFC/R BINDSCHADLER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9491 UNIV OF COLORADO - BOULDER 3106**  
 LITHOSPHERIC DYNAMICS OF MARS: WATER, FLOW, AND FAILURE  
 05/17/2000 - 04/14/2002 FY01: \$42,400 Total: \$84,830  
*Prin. Invest.:* R E GRIMM  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9537 UNIV OF COLORADO - BOULDER 3107**  
 FORMATION OF MAGNETIC STRUCTURES AT THE BASE OF THE SOLAR CONVECTION ZONE  
 05/04/2000 - 05/14/2002 FY01: \$132,073 Total: \$183,523  
*Prin. Invest.:* N H BRUMMELL  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9568 UNIV OF COLORADO - BOULDER 3108**  
 REGIONAL INTEGRATED MONITORING SYSTEM FOR THE HYDROLOGY OF THE PAN-ARCTIC LAND MASS  
 05/17/2000 - 05/31/2002 FY01: \$176,373 Total: \$296,121  
*Prin. Invest.:* M SERREZE  
*Tech. Officer:* GSFC/P HAUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9590 UNIV OF COLORADO - BOULDER 3109**  
 CHARACTERIZING THE OXIDIZING PROPERTIES OF MARS' POLAR REGIONS  
 05/15/2000 - 05/14/2002 FY01: \$0 Total: \$85,000  
*Prin. Invest.:* A R HENDRIX  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9602 UNIV OF COLORADO - BOULDER 3110**  
 EVALUATION AND ERROR ASSESSMENT OF OPERATIONAL PASSIVE  
 MICROWAVE ALGORITHMS  
 05/17/2000 - 12/31/2001 FY01: \$0 Total: \$72,723  
*Prin. Invest.:* J STROEVE  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9631 UNIV OF COLORADO - BOULDER 3111**  
 MULTI-DECADE OBSERVATIONS OF MARTIAN SURFACE VARIABILITY &  
 SEDIMENT TRANSPORT: INTEGRATED ANALYSES  
 05/26/2000 - 05/31/2002 FY01: \$60,000 Total: \$120,000  
*Prin. Invest.:* S W LEE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9666 UNIV OF COLORADO - BOULDER 3112**  
 THE EFFECTS OF CLIMATE REGIME ON TRMM RETRIEVALS  
 05/30/2000 - 11/14/2000 FY01: -\$46,667 Total: \$0  
*Prin. Invest.:* W K BERG  
*Tech. Officer:* GSFC/R J/L  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9692 UNIV OF COLORADO - BOULDER 3113**  
 AEROSOL-CLOUD-CLIMATE INTERACTIONS  
 06/21/2000 - 08/31/2001 FY01: \$0 Total: \$122,990  
*Prin. Invest.:* K STEFFEN  
*Tech. Officer:* GSFC/J ZWALLY  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9694 UNIV OF COLORADO - BOULDER 3114**  
 ATMOSPHERIC MODELING AND INFRARED OBSERVATIONS OF A TRAN-  
 SITING EXTRA-SOLAR PLANET  
 06/27/2000 - 09/30/2002 FY01: \$40,469 Total: \$46,914  
*Prin. Invest.:* L W ESPOSITO  
*Tech. Officer:* GSFC/L D DEMING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9722 UNIV OF COLORADO - BOULDER 3115**  
 GLOBAL LAND ICE MEASUREMENTS FROM SPACE  
 06/22/2000 - 06/30/2002 FY01: \$89,997 Total: \$200,000  
*Prin. Invest.:* G R SCHARFEN  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9727 UNIV OF COLORADO - BOULDER 3116**  
 COMPARISON OF QUICKSCAT AND GPS-DERIVED OCEAN SURFACE WINDS  
 07/11/2000 - 07/31/2001 FY01: \$0 Total: \$74,683  
*Prin. Invest.:* P AXELRAD  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 9753 UNIV OF COLORADO - BOULDER 3117**  
 RETRIEVAL OF HYDROMETER SIZE DISTRIBUTIONS FROM TRMM FIELD  
 CAMPAIGN PROFILER DOPPLER VELOCITY SPEC  
 06/23/2000 - 06/30/2002 FY01: \$68,000 Total: \$111,156  
*Prin. Invest.:* C R WILLIAMS  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9779 UNIV OF COLORADO - BOULDER 3118**  
 ORIGIN OF MAGNETIC LINEATIONS ON MARS  
 07/10/2000 - 06/30/2002 FY01: \$50,000 Total: \$100,500  
*Prin. Invest.:* R E GRIMM  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9861 UNIV OF COLORADO - BOULDER 3119**  
 IMPROVING THE SIMULATION OF SEA ICE LEAD CONDITION & TURBULENT  
 FLUXES USING RGPS PRODUCTS & MERGED  
 08/09/2000 - 07/31/2002 FY01: \$118,928 Total: \$234,058  
*Prin. Invest.:* J MASLANIK  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10000 UNIV OF COLORADO - BOULDER 3120**  
 DYNAMICS OF PLANETESIMALS AND PLANETARY ACCRETION  
 09/20/2000 - 08/31/2001 FY01: \$0 Total: \$70,000  
*Prin. Invest.:* G STEWART  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10083 UNIV OF COLORADO - BOULDER 3121**  
 CONTEMPORANEOUS XMM & HST OBSERVATIONS OF SEYFERT GALAXIES  
 11/06/2000 - 11/14/2001 FY01: \$14,495 Total: \$14,495  
*Prin. Invest.:* C S REYNOLDS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10106 UNIV OF COLORADO - BOULDER 3122**  
 STUDENT NITRIC OXIDE EXPERIMENT (SNOE) - EXTENDED MISSION  
 11/24/2000 - 12/31/2001 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* C A BARTH  
*Tech. Officer:* GSFC/C P HOLMES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10155 UNIV OF COLORADO - BOULDER 3123**  
 SMALL-SCALE POLYGONS AND THE HISTORY OF GROUND ICE ON MARS  
 12/18/2000 - 12/31/2001 FY01: \$62,000 Total: \$62,000  
*Prin. Invest.:* M T MELLON  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10211 UNIV OF COLORADO - BOULDER 3124**  
 ABSOLUTE GRAVITY/GPS MEASUREMENTS IN GREENLAND  
 01/03/2001 - 12/31/2001 FY01: \$19,278 Total: \$19,278  
*Prin. Invest.:* J WAHR  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10213 UNIV OF COLORADO - BOULDER 3125**  
 FAR INFRARED FOCAL PLANE ARRAYS  
 01/04/2001 - 01/14/2002 FY01: \$290,000 Total: \$290,000  
*Prin. Invest.:* A L BETZ  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



**NAG 5 10259 UNIV OF COLORADO - BOULDER 3126**  
 STUDIES FOR IMPROVED GRAVITATIONAL WAVE SENSITIVITY  
 01/09/2001 - 12/31/2001 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* P L BENDER  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 13 - PHYSICS

**NAG 5 10265 UNIV OF COLORADO - BOULDER 3127**  
 DISTRIBUTION OF NEAR-SURFACE GROUND ICE ON MARS  
 01/09/2001 - 12/31/2001 FY01: \$65,000 Total: \$65,000  
*Prin. Invest.:* M MELLON  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10288 UNIV OF COLORADO - BOULDER 3128**  
 IMPROVING THE ACCURACY OF SATELLITE SEA SURFACE TEMPERATURE  
 MEASUREMENTS BY EXPLICITLY ACCOUNTING  
 01/29/2001 - 01/31/2002 FY01: \$125,000 Total: \$125,000  
*Prin. Invest.:* W EMERY  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10309 UNIV OF COLORADO - BOULDER 3129**  
 STUDY OF THE INFLUENCE OF SMALL SCALE E-FIELD VARIABILITY ON  
 THE DISTRIBUTION OF GEOMAGNETIC  
 01/24/2001 - 04/30/2002 FY01: \$41,000 Total: \$41,000  
*Prin. Invest.:* M CODRESCU  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10319 UNIV OF COLORADO - BOULDER 3130**  
 EXCITATION AND ABUNDANCES IN N132D - FUSE.  
 01/29/2001 - 01/31/2002 FY01: \$25,500 Total: \$25,500  
*Prin. Invest.:* J A MORSE  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10325 UNIV OF COLORADO - BOULDER 3131**  
 THE UNUSUAL WOLF-RAYET STAR EZ CMA  
 01/31/2001 - 01/31/2002 FY01: \$14,328 Total: \$14,328  
*Prin. Invest.:* S L SKINNER  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10326 UNIV OF COLORADO - BOULDER 3132**  
 DECIPHERING THE X-RAY EMISSION OF THE NEAREST HERBIG AE STAR  
 01/31/2001 - 01/31/2002 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* S L SKINNER, NONE  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10339 UNIV OF COLORADO - BOULDER 3133**  
 FUV SPECTRA OF EVOLVED LATE-K & M STARS: MASS LOSS REVISITED &  
 STELLAR ACTIVITY - FUSE  
 02/05/2001 - 02/14/2002 FY01: \$56,500 Total: \$56,500  
*Prin. Invest.:* G HARPER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10340 UNIV OF COLORADO - BOULDER 3134**  
 MAGNETOSPHERES AND WINDS IN THE RAPID BRAKING ZONE (FUSE 00)  
 02/05/2001 - 02/14/2002 FY01: \$83,900 Total: \$83,900  
*Prin. Invest.:* T R AYRES  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10362 UNIV OF COLORADO - BOULDER 3135**  
 X-RAY EMISSION IN WOLF-RAYET STARS: XMM REVEALS THE SHOCKING  
 TRUTH  
 02/06/2001 - 02/14/2002 FY01: \$15,078 Total: \$15,078  
*Prin. Invest.:* S L SKINNER  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10368 UNIV OF COLORADO - BOULDER 3136**  
 WIDELY TUNABLE OPTICAL LOCAL OSCILLATORS WITH 1 E-15 STABILITY:  
 ULTRASTABLE LASER SYSTEMS  
 02/12/2001 - 01/14/2002 FY01: \$392,722 Total: \$392,722  
*Prin. Invest.:* J L HALL  
*Tech. Officer:* GSFC/W HEAPS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 10413 UNIV OF COLORADO - BOULDER 3137**  
 REMOTE SENSING OF PLANETARY SURFACES  
 02/14/2001 - 02/14/2002 FY01: \$45,000 Total: \$45,000  
*Prin. Invest.:* B JAKOSKY  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10418 UNIV OF COLORADO - BOULDER 3138**  
 GEOMORPHOLOGY AND GEODYNAMICS AT CRUSTAL BOUNDARIES  
 WITHIN ASIA AND AFRICA.  
 02/22/2001 - 02/28/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* R G BILHAM  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10461 UNIV OF COLORADO - BOULDER 3139**  
 LITHOSPHERIC DYNAMICS OF MARS: WATER, FLOW, & FAILURE  
 02/26/2001 - 07/20/2001 FY01: \$0 Total: \$0  
*Prin. Invest.:* R E GRIMM  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10474 UNIV OF COLORADO - BOULDER 3140**  
 SOLAR WIND FLUCTUATIONS & THEIR CONSEQUENCES ON THE MAGNE-  
 TOSPHERE  
 02/27/2001 - 02/28/2002 FY01: \$82,080 Total: \$82,080  
*Prin. Invest.:* X LI  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10508 UNIV OF COLORADO - BOULDER 3141**  
 DYNAMICS OF PLANETESIMALS AND PLANETARY ACCRETION  
 03/05/2001 - 02/28/2002 FY01: \$82,000 Total: \$82,000  
*Prin. Invest.:* G R STEWART  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10556 UNIV OF COLORADO - BOULDER 3142**  
 INVESTIGATION OF THE ASSIMILATION OF ICE MOTION DATA IN SEA ICE  
 MODELS  
 03/12/2001 - 03/14/2002 FY01: \$96,593 Total: \$96,593  
*Prin. Invest.:* T ARBETTER  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10581 UNIV OF COLORADO - BOULDER 3143**  
 HIGH-RESOLUTION THERMAL INERTIA OF MARS  
 03/19/2001 - 02/28/2002 FY01: \$88,000 Total: \$88,000  
*Prin. Invest.:* M MELON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10600 UNIV OF COLORADO - BOULDER 3144**  
 ASSESSMENT OF GREENLAND OUTLET GLACIER ALBEDO VARIABILITY  
 03/14/2001 - 03/14/2002 FY01: \$46,013 Total: \$46,013  
*Prin. Invest.:* J STROEVE  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10601 UNIV OF COLORADO - BOULDER 3145**  
 COMPARISON OF INTERSTELLAR & INTERPLANETARY GRAINS  
 03/19/2001 - 02/28/2002 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* T SNOW  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10616 UNIV OF COLORADO - BOULDER 3146**  
 PHYSICAL PROPERTIES OF POTENTIAL MARS LANDING SITE S  
 03/16/2001 - 03/14/2002 FY01: \$39,000 Total: \$39,000  
*Prin. Invest.:* B JAKOSKY  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10698 UNIV OF COLORADO - BOULDER 3147**  
 CONTRAIL PERSISTENCE AND AIRCRAFT EXHAUST IMPACTS ON CIRRUS  
 04/18/2001 - 11/30/2001 FY01: \$42,025 Total: \$42,025  
*Prin. Invest.:* O TOON  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10763 UNIV OF COLORADO - BOULDER 3148**  
 COSMOLOGICAL PARAMETERS FROM LARGE SCALE STRUCTURE (ATP  
 2000)  
 04/23/2001 - 04/30/2002 FY01: \$79,425 Total: \$79,425  
*Prin. Invest.:* A J HAMILTON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10790 UNIV OF COLORADO - BOULDER 3149**  
 DETERMINING THE STRUCTURE OF LOW-LEVEL JETS IN MARITIME  
 STORMS USING QUIKSCAT  
 04/25/2001 - 04/30/2002 FY01: \$120,012 Total: \$120,012  
*Prin. Invest.:* O PERSSON  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10791 UNIV OF COLORADO - BOULDER 3150**  
 INFARED AND PASSIVE MICROWAVE RADIOMETRIC SSTs AND THEIR RELA-  
 TIONSHIPS TO ATMOSPHERIC FORCING  
 04/25/2001 - 04/30/2002 FY01: \$115,618 Total: \$115,618  
*Prin. Invest.:* W EMERY  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10797 UNIV OF COLORADO - BOULDER 3151**  
 CONCEPT STUDY FOR THE "JUPITER MAGNETOSPHERIC EXPLORER"  
 (JMEX) MISSION AO-99-OSS-05  
 04/30/2001 - 04/30/2002 FY01: \$423,472 Total: \$423,472  
*Prin. Invest.:* D M SCHNEIDER  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10857 UNIV OF COLORADO - BOULDER 3152**  
 VARIABILITY AND FORCING OF CLIMATIC PARAMETERS ON THE GREEN-  
 LAND ICE SHEET: GREENLAND CLIMATE NETWORK  
 05/03/2001 - 04/30/2002 FY01: \$150,000 Total: \$150,000  
*Prin. Invest.:* K STEFFEN  
*Tech. Officer:* GSFC/A  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10892 UNIV OF COLORADO - BOULDER 3153**  
 HARD X-RAY, SPECTROSCOPIC MICROWAVE, AND H-ALPHA LINEAR  
 POLARIZATION STUDIES WITH HARD X-RAY OBSERV  
 05/10/2001 - 05/31/2002 FY01: \$75,905 Total: \$75,905  
*Prin. Invest.:* A KIPLINGER  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10917 UNIV OF COLORADO - BOULDER 3154**  
 SPATIAL VARIATION OF HELIOSEISMIC FREQUENCY SHIFTS  
 05/14/2001 - 05/31/2002 FY01: \$84,404 Total: \$84,404  
*Prin. Invest.:* B HINDMAN  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10937 UNIV OF COLORADO - BOULDER 3155**  
 LWS PROPOSAL TO PROVIDE SCIENTIFIC GUIDANCE AND MODELING  
 SUPPORT FOR THE IONOSPHERIC MAPPER MISSIO  
 05/15/2001 - 05/14/2002 FY01: \$169,737 Total: \$169,737  
*Prin. Invest.:* T FULLER-ROWELL  
*Tech. Officer:* GSFC/J F SPANN  
*CASE Category:* 99 - MULTINTERDISCIPL, OTHER

**NAG 5 10948 UNIV OF COLORADO - BOULDER 3156**  
 MOLECULE FORMATION AT HIGH EXTINCTION AND LOW METALICITY IN  
 THE MAGELLANIC CLOUDS - FUSE 2000  
 05/24/2001 - 05/31/2002 FY01: \$62,500 Total: \$62,500  
*Prin. Invest.:* J SHULL  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10950 UNIV OF COLORADO - BOULDER 3157**  
 FOSSIL FUEL IN THE LOCAL GROUP (FUSE 00)  
 05/24/2001 - 05/31/2002 FY01: \$26,500 Total: \$26,500  
*Prin. Invest.:* M GIROUX  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10954 UNIV OF COLORADO - BOULDER 3158**  
 SCALING AND ALLOMETRY IN RIVER NETWORKS: COUPLING RAINFALL,  
 TOPOGRAPHY, AND VEGETATION WITH HYDROLOGY  
 05/18/2001 - 05/31/2002 FY01: \$55,963 Total: \$55,963  
*Prin. Invest.:* V GUPTA  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10966 UNIV OF COLORADO - BOULDER 3159**  
 AEROSOL-CLOUD-CLIMATE INTERACTIONS  
 06/04/2001 - 05/31/2002 FY01: \$68,374 Total: \$68,374  
*Prin. Invest.:* K STEFFEN  
*Tech. Officer:* GSFC/J ZWALLY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10967 UNIV OF COLORADO - BOULDER 3160**  
 POLAR TIMAS OPERATIONS AND DATA ANALYSIS  
 06/06/2001 - 11/30/2001 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* W K PETERSON  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10970 UNIV OF COLORADO - BOULDER 3161**  
 DYNAMICAL MODELS OF SOLAR SYSTEM FORMATION AND EVOLUTION  
 05/22/2001 - 05/31/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* G R STEWART  
*Tech. Officer:* GSFC/D A SENSKE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10983 UNIV OF COLORADO - BOULDER 3162**  
 PRODUCT DISTRIBUTION FOR THE RAMP AMM-1 VERSION 2 AT THE  
 NATIONAL SNOW AND ICE DATA CENTER  
 06/12/2001 - 06/14/2002 FY01: \$19,631 Total: \$19,631  
*Prin. Invest.:* T SCAMBOS  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11022 UNIV OF COLORADO - BOULDER 3163**  
 A STUDY OF UNCERTAINTIES FOR MODIS CLOUD RETRIEVAL OF OPTICAL  
 THICKNESS & EFFECTIVE RADIUS  
 06/07/2001 - 03/31/2002 FY01: \$49,408 Total: \$49,408  
*Prin. Invest.:* D PINCUS  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11028 UNIV OF COLORADO - BOULDER 3164**  
 CONTINUATION OF THE SCIENCE ANALYSIS AND DATA VALIDATION OF  
 THE UARS SOLSTICE.  
 06/25/2001 - 06/30/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* G J ROTTMAN  
*Tech. Officer:* GSFC/C JACKSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11069 UNIV OF COLORADO - BOULDER 3165**  
 INVESTIGATIONS OF DESERT DUST & SMOKE IN THE NORTH ATLANTIC IN  
 SUPPORT OF THE TOMS INSTRUMENT.  
 07/20/2001 - 07/14/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* O B TOON  
*Tech. Officer:* GSFC/P K BHARTIA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11107 UNIV OF COLORADO - BOULDER 3166**  
 VALIDATION OF AMSR-E SNOW PRODUCTS AQUA-0090-0026 /  
 NRA-00-OES-  
 07/24/2001 - 08/31/2002 FY01: \$75,774 Total: \$75,774  
*Prin. Invest.:* R L ARMSTRONG  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11110 UNIV OF COLORADO - BOULDER 3167**  
 BALLOON BORNE SOUNDINGS FOR VALIDATION OF UPPER TROPO-  
 SPHERIC HUMIDITY AND TEMPERATURE (NRA-00-OES-  
 07/12/2001 - 08/31/2002 FY01: \$100,523 Total: \$100,523  
*Prin. Invest.:* H W VOEMEL  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11167 UNIV OF COLORADO - BOULDER 3168**  
 DENSITY STRUCTURES IN THE THERMOSPHERE OF MARS: ASSIMILATIVE  
 ANALYSES OF MGS ACCELEROMETER AND TES  
 08/07/2001 - 08/14/2003 FY01: \$45,000 Total: \$45,000  
*Prin. Invest.:* J FORBES  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11177 UNIV OF COLORADO - BOULDER 3169**  
 ANALYSIS OF MGS MAGNETOMETER DATA & COMPARISONS WITH MODELS  
 OF MARS' MAGNETIC FIELD & SOLAR WIND  
 08/13/2001 - 08/14/2003 FY01: \$61,000 Total: \$61,000  
*Prin. Invest.:* F BAGENAL  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11192 UNIV OF COLORADO - BOULDER 3170**  
 MEASUREMENT & INTERPRETATION ON TEMPORAL VARIATION OF THE  
 EARTH'S GRAVITY FIELD USING GPS & SLR DATA  
 08/30/2001 - 08/31/2002 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* S R NEREM  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11205 UNIV OF COLORADO - BOULDER 3171**  
 DETECTING FUTURE TRENDS IN OZONE-LOOKING FOR INITIAL SIGNS OF  
 RECOVERY IN TOMS AND SBUV/2 RECORDS  
 08/09/2001 - 08/14/2004 FY01: \$40,915 Total: \$40,915  
*Prin. Invest.:* E WEATHERHEAD  
*Tech. Officer:* GSFC/R MCPETERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11224 UNIV OF COLORADO - BOULDER 3172**  
 INVESTIGATING THE FORMATION OF THE THARSIS RISE AND CRUSTAL  
 DICHOTOMY BY MODELING THE MGS DATA AND M  
 08/13/2001 - 08/14/2004 FY01: \$57,000 Total: \$57,000  
*Prin. Invest.:* S ZHONG  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11238 UNIV OF COLORADO - BOULDER 3173**  
 REGIONAL NPP & CARBON STOCKS IN SW USA RANGELANDS: LAND USE  
 IMPACTS ON THE GRASSLAND-WOODLAND BALANC  
 09/17/2001 - 08/31/2004 FY01: \$365,301 Total: \$365,301  
*Prin. Invest.:* C WESSMAN  
*Tech. Officer:* GSFC/G GUTMAN  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11241 UNIV OF COLORADO - BOULDER 3174**  
 12TH CAMBRIDGE WORKSHOP ON COOL STARS, STELLAR SYS TEMS AND  
 THE SUN: THE FUTURE OF COOL-STAR ASTROPH  
 08/15/2001 - 09/30/2001 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* T AYRES  
*Tech. Officer:* GSFC/P CRANE  
 CASE Category: 11 - ASTRONOMY

**NAG 5 11243 UNIV OF COLORADO - BOULDER 3175**  
 THEORETICAL INVESTIGATIONS OF CLOUDS AND AEROSOLS IN THE  
 STRATOSPHERE AND UPPERTROPOSPHERE  
 08/16/2001 - 08/31/2004 FY01: \$139,160 Total: \$139,160  
*Prin. Invest.:* O B TOON  
*Tech. Officer:* GSFC/P DECOLA  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11279 UNIV OF COLORADO - BOULDER 3176**  
 OVERSIGHT AND DEVELOPMENT OF A COMMUNITY MONTE CAR LO RADIA-  
 TIVEONE YEARGRANT  
 08/21/2001 - 08/31/2002 FY01: \$12,300 Total: \$12,300  
*Prin. Invest.:* R PINCUS  
*Tech. Officer:* GSFC/R CAHALAN  
 CASE Category: 31 - ATMOSPHERIC SCIENCE

**NAG 5 11292 UNIV OF COLORADO - BOULDER 3177**  
 QUALITY DATA VISUALIZATION TOOL FOR MODIS  
 08/22/2001 - 08/31/2002 FY01: \$77,600 Total: \$77,600  
*Prin. Invest.:* R L WEAVER  
*Tech. Officer:* GSFC/K L MOE  
 CASE Category: 22 - COMPUTER SCIENCE

**NAG 5 11294 UNIV OF COLORADO - BOULDER 3178**  
 SIMPLE MODELS OF THE SPATIAL DISTRIBUTION OF CLOUD RADIATIVE  
 PROPERTIES FOR REMOTE SENSING STUDIES  
 08/22/2001 - 09/30/2002 FY01: \$42,593 Total: \$42,593  
*Prin. Invest.:* R PINCUS  
*Tech. Officer:* GSFC/W WISCOMBE  
 CASE Category: 31 - ATMOSPHERIC SCIENCE

**NAG 5 11299 UNIV OF COLORADO - BOULDER 3179**  
 INVESTIGATION OF THE OFF-PLANE GRATING TECHNOLOGY FOR X-RAYS-  
 PECTROSCOPY. DELIVERABLE I  
 08/29/2001 - 11/30/2001 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* D CASH  
*Tech. Officer:* GSFC/D T NGUYEN  
 CASE Category: 13 - PHYSICS

**NAG 5 11308 UNIV OF COLORADO - BOULDER 3180**  
 ICE SHELVES AND LANDFAST ICE ON THE ANTARCTIC PERI METER: CHAR-  
 ACTERISTICSAND THE EFFECTS OF CLIMATE  
 08/30/2001 - 08/31/2003 FY01: \$20,632 Total: \$20,632  
*Prin. Invest.:* T SCAMBOS  
*Tech. Officer:* GSFC/W ABDALATI  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1446 UNIV OF COLORADO - BOULDER 3181**  
 FUNDAMENTAL PHYSICS USING FREQUENCY STABILIZED LASERS AS  
 OPTICAL ATOMIC CLOCKS  
 02/05/1998 - 01/31/2001 FY01: \$0 Total: \$195,000  
*Prin. Invest.:* J HALL  
*Tech. Officer:* MSFC/D HUBBARD  
 CASE Category: 13 - PHYSICS

**NAG 8 1475 UNIV OF COLORADO - BOULDER 3182**  
 INFLUENCE OF SOLUTOCAPILLARY CONVECTION ON MACRO- VOID  
 DEFECT FORMATION IN POLYMERIC MEMBRANES  
 02/03/1998 - 01/31/2002 FY01: \$68,400 Total: \$258,000  
*Prin. Invest.:* A GREENBERG  
*Tech. Officer:* MSFC/P M DOTY  
 CASE Category: 13 - PHYSICS

**NAG 8 1551 UNIV OF COLORADO - BOULDER 3183**  
 R/S DESIGN AND CALIBRATION OF AUTONOMOUS COHERENT DOPPLER  
 LIDAR FOR SPACE MISSIONS  
 12/01/1998 - 11/30/2001 FY01: \$0 Total: \$126,185  
*Prin. Invest.:* R FREHLICH  
*Tech. Officer:* MSFC/M KAVAYA  
 CASE Category: 31 - ATMOSPHERIC SCIENCE

**NAG 9 1209 UNIV OF COLORADO - BOULDER 3184**  
 MULTI WAVELENGTH ANALYSIS OF ASTEROIDS  
 03/01/2000 - 12/31/2001 FY01: \$0 Total: \$14,880  
*Prin. Invest.:* A R HENDRIX  
*Tech. Officer:* JSC/F VILAS  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAS 5 97045 UNIV OF COLORADO - BOULDER 3185**  
 EXTENSION OF SOLSTICE PHASE B EFFORT  
 02/21/1997 - 07/31/2007 FY01: \$15,887,963 Total: \$59,333,364  
*Prin. Invest.:* G ROTTMAN  
*Tech. Officer:* GSFC/V GRIFFIN  
 CASE Category: 42 - ASTRONAUTICAL ENGR

**NAS 5 97046 UNIV OF COLORADO - BOULDER 3186**  
 LETTER CONTRACT FOR HIRDIS PHASE C/D/E  
 01/17/1997 - 03/31/2008 FY01: \$2,781,900 Total: \$76,070,995  
*Prin. Invest.:* J GILLE  
*Tech. Officer:* GSFC/L MILAN  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAS 5 97145 UNIV OF COLORADO - BOULDER 3187**  
 MISSION OPERATIONS, DATA ANALYSIS, AND ALGORITHM MAINTENANCE  
 FOR UARS SOLSTICE  
 03/31/1997 - 11/30/2001 FY01: \$262,052 Total: \$1,558,799  
*Prin. Invest.:* G J ROTTMAN  
*Tech. Officer:* GSFC/C H JACKMAN  
 CASE Category: 31 - ATMOSPHERIC SCIENCE

**NAS 5 98043 UNIV OF COLORADO - BOULDER 3188**  
 SCIENCE MANAGEMENT FOR COS  
 03/04/1998 - 08/15/2003 FY01: \$2,341,600 Total: \$12,609,600  
*Prin. Invest.:* J GREEN  
*Tech. Officer:* GSFC/L FEINBERG  
 CASE Category: 11 - ASTRONOMY

**NAS 5 98070 UNIV OF COLORADO - BOULDER 3189**  
 OPERATION OF SNOW AND ICE DISTRIBUTED ACTIVE ARCHIVE  
 01/29/1998 - 01/31/2003 FY01: \$4,440,000 Total: \$14,307,345  
*Prin. Invest.:* R G BARRY, V TROISI  
*Tech. Officer:* GSFC/Q A BARKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 8 38779 UNIV OF COLORADO - BOULDER 3190**  
 MECHANICS OF GRANULAR MATERIALS MICROGRAVITY  
 09/24/1992 - 10/31/2002 FY01: \$475,852 Total: \$4,240,513  
*Prin. Invest.:* S STURE  
*Tech. Officer:* MSFC/B V GUYNES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 1 281 UNIV OF COLORADO - BOULDER 3191**  
 NANOMECHANICS OF ACTIVELY CONTROLLED DEPLOYABLE OPTICS  
 03/11/1998 - 03/10/2001 FY01: -\$1 Total: \$262,924  
*Prin. Invest.:* L D PETERSON  
*Tech. Officer:* LARC/M S LAKE  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 1 01046 UNIV OF COLORADO - BOULDER 3192**  
 VERY LARGE EFFICIENT SPACE STRUCTURES  
 06/22/2001 - 01/21/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* M M MIKULAS, JR  
*Tech. Officer:* LARC/W K BELVIN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 1 01048 UNIV OF COLORADO - BOULDER 3193**  
 EVA & ROBOTIC ASSEMBLY OF LARGE SPACE STRUCTURES  
 08/20/2001 - 12/19/2002 FY01: \$20,000 Total: \$20,000  
*Prin. Invest.:* E C WEATHERHEAD  
*Tech. Officer:* LARC/B A WIELICKI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 1052 UNIV OF COLORADO - BOULDER 3194**  
 CENTER FOR ASTROBIOLOGY  
 08/28/1998 - 06/30/2003 FY01: \$922,526 Total: \$1,975,492  
*Prin. Invest.:* B JAKOSKI  
*Tech. Officer:* ARC/R A GRAYMES, ARC/W W DOLCI  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1104 UNIV OF COLORADO - BOULDER 3195**  
 A COMPREHENSIVE-BASED ANALYSIS OF SHARED CONCEPTUAL  
 MODELS OF AVIONICS SYSTEMS  
 04/02/1999 - 03/31/2002 FY01: \$91,059 Total: \$232,978  
*Prin. Invest.:* P POISON  
*Tech. Officer:* ARC/E A PALMER, ARC/N SMITH  
*CASE Category:* 21 - MATHEMATICS

**NCC 2 1112 UNIV OF COLORADO - BOULDER 3196**  
 COMPREHENSION OF NAVIGATION DIRECTIONS  
 04/14/1999 - 09/30/2002 FY01: \$37,618 Total: \$103,051  
*Prin. Invest.:* A F HEALY  
*Tech. Officer:* ARC/I BARSHI  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 1145 UNIV OF COLORADO - BOULDER 3197**  
 THE APPLICATION OF ADVANCED CULTIVATION TECHNIQUES IN THE LONG  
 TERM MAINTENANCE OF SPACE FLIGHT...  
 12/01/1999 - 01/14/2002 FY01: \$86,337 Total: \$119,337  
*Prin. Invest.:* G HEYENGA  
*Tech. Officer:* ARC/M KLISS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5300 UNIV OF COLORADO - BOULDER 3198**  
 THE ROLE OF CLOUDS IN LONG-TERM HABITABILITY OF PLA NETS  
 11/18/1998 - 12/31/2000 FY01: \$0 Total: \$146,001  
*Prin. Invest.:* O B TOON  
*Tech. Officer:* ARC/R E YOUNG, ARC/R M HABERLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5391 UNIV OF COLORADO - BOULDER 3199**  
 INTEGRATION & SUPPORT OF NIH-B1 DROSOPHILA MELANOG ASTER  
 NEURAL DEVELOPMENT EXPERIMENT ON SHUTTLE 10  
 08/15/2000 - 02/14/2001 FY01: \$0 Total: \$25,000  
*Prin. Invest.:* L STODIECK  
*Tech. Officer:* ARC/D REISS-BEBENHEIM  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5401 UNIV OF COLORADO - BOULDER 3200**  
 THE PROPERTIES OF CLOUDS IN THE ATMOSPHERES OF EARLY EARTH,  
 MARS, & TITAN  
 09/29/2000 - 10/31/2002 FY01: \$94,128 Total: \$109,801  
*Prin. Invest.:* O B TOON  
*Tech. Officer:* ARC/R E YOUNG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 3 773 UNIV OF COLORADO - BOULDER 3201**  
 MICROELECTROMECHANICAL LINEAR ACTUATOR MICROELECTROME-  
 CHANICAL LINEAR ACTUATOR  
 02/15/2000 - 12/31/2001 FY01: \$100,000 Total: \$149,998  
*Prin. Invest.:* Y LEE  
*Tech. Officer:* GRC/H NGUYEN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 796 UNIV OF COLORADO - BOULDER 3202**  
 SURFACE COLLISIONS INVOLVING PARTICLES AND MOISTURE (SCIPM)  
 05/16/2000 - 05/30/2004 FY01: \$26,000 Total: \$76,000  
*Prin. Invest.:* R H DAVIS  
*Tech. Officer:* GRC/F P CHARIAMONTE 111  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 458 UNIV OF COLORADO - BOULDER 3203**  
 EO-1 EVALUATION & VERIFICATION FOR APPLICATION TO LAND-USE  
 CHANGE: ATMOSPHERIC CORRECTION, SOIL &  
 02/25/2000 - 12/31/2001 FY01: \$240,950 Total: \$404,728  
*Prin. Invest.:* A F GOETZ  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 480 UNIV OF COLORADO - BOULDER 3204**  
 ANALYSIS OF EO-1, LANDSAT 7, AND AVIRIS FOR ESTIMATING VEGETA-  
 TION STRUCTURE AND FUNCTION IN ARID EC  
 03/20/2000 - 12/31/2001 FY01: \$6,035 Total: \$87,920  
*Prin. Invest.:* G P ASNER  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 481 UNIV OF COLORADO - BOULDER 3205**  
 LOW-COST EVALUATION OF EO-1 HYPERION AND ALI FOR DETECTION &  
 BIOPHYSICAL CHARACTERIZATION OF FOREST  
 03/20/2000 - 03/31/2002 FY01: \$4,788 Total: \$128,617  
*Prin. Invest.:* G P ASNER  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 564 UNIV OF COLORADO - BOULDER 3206**  
 ALGORITHMS FOR AUTONOMOUS GPS ORBIT DETERMINATION AND  
 FORMATION FLYING  
 06/12/2001 - 12/31/2001 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* P AXELRAD  
*Tech. Officer:* GSFC/J A LEITNER  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 8 131 UNIV OF COLORADO - BOULDER 3207**  
 BIONERVE SPACE TECHNOLOGIES  
 01/31/1997 - 10/31/2001 FY01: \$2,865,245 Total: \$12,113,345  
*Prin. Invest.:* G MORGENTHALE  
*Tech. Officer:* MSFC/S J LAMBING  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 9 65 UNIV OF COLORADO - BOULDER 3208**  
 SPACE STATION BASED MIRON ACURACY DEPLOYMENT EXPER IMENT  
 07/01/1997 - 10/31/2001 FY01: \$0 Total: \$1,475,362  
*Prin. Invest.:* L PETERSON  
*Tech. Officer:* JSC/C PARRA  
*CASE Category:* 41 - AERONAUTICAL ENGRN

**NGT 40008 UNIV OF COLORADO - BOULDER 3209**  
 NATIONAL SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 10/19/1989 - 02/28/2000 FY01: \$0 Total: \$2,773,666  
*Prin. Invest.:* E R HANSEN  
*Tech. Officer:* HQ/E T SCHWARTZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 01023 UNIV OF COLORADO - BOULDER 3210**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/06/2001 - 06/30/2004 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* T O MANN  
*Tech. Officer:* LARC/W K BELVIN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NGT 1 52182 UNIV OF COLORADO - BOULDER 3211**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 12/01/1998 - 08/31/2001 FY01: \$12,001 Total: \$66,001  
*Prin. Invest.:* M J ARMATYS, P AXELRAD  
*Tech. Officer:* LARC/S J KATZBERG  
*CASE Category:* 41 - AERONAUTICAL ENGRN

**NGT 2 52264 UNIV OF COLORADO - BOULDER 3212**  
 MODELING AEROSOL NUCLEATION IN THE PRESENCE OF CLO UDS  
 06/23/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* O TOON  
*Tech. Officer:* ARC/A S ACKERMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 2 52270 UNIV OF COLORADO - BOULDER 3213**  
 HYDROCARBON NUCLEATION ON THOLINS: APPLICATIONS T O TITAN  
 08/29/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* M A TOLBERT  
*Tech. Officer:* ARC/C P MCKAY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 2 52279 UNIV OF COLORADO - BOULDER 3214**  
 COLD SALINE SPRINGS IN PERMAFROST ON EARTH AND MAR S  
 06/22/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* B TOON  
*Tech. Officer:* ARC/C P MCKAY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 5 47 UNIV OF COLORADO - BOULDER 3215**  
 INVESTIGATION OF HARDWARE AND ALGORITHM ARCHITECTU GEO AND  
 HEO ORBITS  
 06/23/1997 - 06/30/2001 FY01: \$0 Total: \$88,000  
*Prin. Invest.:* P AXELRAD  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 49 UNIV OF COLORADO - BOULDER 3216**  
 OUTER ELECTRON BELT MODELING BY ASSIMILATION OF RE DATA  
 06/23/1997 - 06/30/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* D N BAKER  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 80 UNIV OF COLORADO - BOULDER 3217**  
 THE STRUCTURE AND DEVELOPMENT OF SUPERNOVA REMNANT 1987A  
 (STUDENT): ELI MICHAEL  
 05/12/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* R MCCRAY  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 93 UNIV OF COLORADO - BOULDER 3218**  
 USE OF REMOTE SENSING IMAGERY IN BIOGEOCHEMICAL MOD ELS TO  
 PREDICT TRACE GAS EMISSIONS & CROP YEILD  
 06/15/1999 - 06/30/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* N KHATIB  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/J L PRIVETTE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 123 UNIV OF COLORADO - BOULDER 3219**  
 INVESTIGATION OF GPS BISTATIC RADAR FOR SOIL MOISTURE REMOTE  
 SENSING (STUDENT): DALLAS MASTERS  
 06/07/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D AXELRAD  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30026 UNIV OF COLORADO - BOULDER 3220**  
 SCALABLE AND ADAPTIVE FILE MANAGEMENT IN NETWORKS  
 10/17/1996 - 03/31/2000 FY01: \$655 Total: \$67,310  
*Prin. Invest.:* D WEISMAN  
*Tech. Officer:* HQ/G ASRAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30072 UNIV OF COLORADO - BOULDER 3221**  
 PASSIVE MICROWAVE MEASUREMENTS OF ARCTIC CLOUDS  
 09/09/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J CURRY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30076 UNIV OF COLORADO - BOULDER 3222**  
 ATMOSPHERIC LIFETIMES OF PEROXY NITRATES \_STUDENT - EDW  
 09/09/1997 - 02/28/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* A R RAVISHANKARA  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30128 UNIV OF COLORADO - BOULDER 3223**  
 SPATIAL VARIABILITY OF CLOUD CHARACTERISTICS & SUR FACE RADIATION FLUXES FOR SHEBA/FIRE III  
 10/01/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J CURRY  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30136 UNIV OF COLORADO - BOULDER 3224**  
 LABORATORY STUDIES OF CIRRUS CLOUD FORMATION MECHANISMS/STUDENT:FORTIN  
 09/04/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* M TOLBERT  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30155 UNIV OF COLORADO - BOULDER 3225**  
 COMPARISONS OF THREE-DIMENSIONAL GENERAL CIRCULATION MODEL SIMULATIONS OF THE DESERT AEROSOL LIFE  
 08/28/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* B TOON, COLARCO  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30170 UNIV OF COLORADO - BOULDER 3226**  
 ATMOSPHERIC CIRCULATION AND REGIONAL SEA ICE SENSITIVITY IN THE ARCTIC STUDENT:LYNCH CULLATHER  
 09/04/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* A H LYNCH  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30180 UNIV OF COLORADO - BOULDER 3227**  
 SPATIAL AND TEMPORAL RESPONSE TO ANTHROPOGENIC NITROGEN DEPOSITION IN A HETEROGENEOUS ROCKY MOUNTAIN  
 08/12/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* C A WESSMAN  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30209 UNIV OF COLORADO - BOULDER 3228**  
 IN SITU MEASUREMENTS OF CARBON DIOXIDE IN THE UPPER TROPOSPHERE & LOWER STRATOSPHERE/STUDENT GAT  
 08/18/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* L M AVALLONE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30345 UNIV OF COLORADO - BOULDER 3229**  
 LINKING LANDSAT TM DATA & EVAPOTRANSPIRATION IN TWO HUMID TROPICAL WATERSHEDS IN PANAMA/STUDENT AL  
 08/21/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* G ASNER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30348 UNIV OF COLORADO - BOULDER 3230**  
 REGIONAL IMPACTS OF WOODLAND EXPANSION ON NITROGEN OXIDE EMISSIONS FROM TEXAS SAVANNAS: COMBINING  
 08/21/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* G ASNER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30363 UNIV OF COLORADO - BOULDER 3231**  
 LABORATORY STUDIES OF ICE NUCLEATION FROM INTERNALLY MIXED SULFURIC ACID/MINERALAEROSOL PARTICLES/  
 08/24/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* M A TOLBERT  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30376 UNIV OF COLORADO - BOULDER 3232**  
 A HIGH-RESOLUTION ABLATION STUDY NEAR JAKOBSHAVN ON THE GREENLAND ICE SHEET/TODD H. ALBERT  
 08/13/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* K STEFFEN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30394 UNIV OF COLORADO - BOULDER 3233**  
 IMPROVEMENTS IN THE ESTIMATION OF THE EARTH'S GRAVITY FIELD USING GRACE MISSION DATA (STUDENT: DON  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S NEREM  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30399 UNIV OF COLORADO - BOULDER 3234**  
 CLIMATIC VARIABILITY, HUMAN AGENCY & ENVIRONMENTAL CHANGE ACROSS AN ALTITUDINAL TRANSECT, ANDES-AMAZ  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R BARRY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30416 UNIV OF COLORADO - BOULDER 3235**  
 SNOW SLOPE STABILITY: MODELING AND INVESTIGATIONS(STUDENT:HANS-PETER MARSHA  
 08/17/2001 - 08/31/2005 FY01: \$9,317 Total: \$9,317  
*Prin. Invest.:* T PFEFFER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30422 UNIV OF COLORADO - BOULDER 3236**  
 HETEROGENEOUS N2O5 HYDROLYSIS ON MIXED (NH4)2SO4/O RGANIC  
 THIN FILMSREPRESENTATIVE OF TROPOSPHE  
 09/07/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* M A TOLBERT  
*Tech. Officer:* GSFC/M WEI  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40028 UNIV OF COLORADO - BOULDER 3237**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRA  
 12/31/1996 - 01/31/2001 FY01: -\$60,118 Total: \$1,807,630  
*Prin. Invest.:* E R HANSEN  
*Tech. Officer:* GSFC/D D DETROYE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40072 UNIV OF COLORADO - BOULDER 3238**  
 COLORADO SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2002 FY01: \$535,118 Total: \$535,118  
*Prin. Invest.:* E R HANSEN  
*Tech. Officer:* GSFC/D D DETROYE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50102 UNIV OF COLORADO - BOULDER 3239**  
 PROPOSAL FOR THE DEVELOPMENT, EXPLORATION, AND VAL , FULLY  
 THREE-DIMENSIONAL EARTHQUAKE MODEL  
 09/06/1997 - 02/28/2001 FY01: -\$40 Total: \$65,960  
*Prin. Invest.:* J RUNDLE  
*Tech. Officer:* GSFC/M WEI  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50106 UNIV OF COLORADO - BOULDER 3240**  
 DETERMINATION OF OPTICAL CONSTANTS FOR THE REMOTE STRATO-  
 SPHERIC CLOUDS AND GLOBALAEROSOLS  
 09/06/1997 - 08/31/2000 FY01: -\$496 Total: \$65,504  
*Prin. Invest.:* M TOLBERT  
*Tech. Officer:* GSFC/M WEI  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50176 UNIV OF COLORADO - BOULDER 3241**  
 A STUDY OF THE HOT COMPONENT OF THE LOCAL INTERSTELLAR  
 MEDIUM  
 05/22/1998 - 06/30/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* J C GREEN/MCLEAN  
*Tech. Officer:* HQ/A NURRIDIN  
 CASE Category: 11 - ASTRONOMY

**NGT 5 50194 UNIV OF COLORADO - BOULDER 3242**  
 STELLAR EVOLUTION IN STARBURST GALAXIES  
 06/05/1998 - 07/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* P S CONTI  
*Tech. Officer:* HQ/A NURRIDIN  
 CASE Category: 11 - ASTRONOMY

**NGT 5 50197 UNIV OF COLORADO - BOULDER 3243**  
 MARTIAN SURFACE MAGNETIC FIELD  
 06/11/1998 - 06/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* F BAGENAL  
*Tech. Officer:* HQ/A NURRIDIN  
 CASE Category: 11 - ASTRONOMY

**NGT 5 50232 UNIV OF COLORADO - BOULDER 3244**  
 TIDES AND ZONAL MEAN FROM SATELLITE-BASED MEASUREMENTS:  
 ANALYSIS TECHNIQUES  
 05/27/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* J FORBES  
*Tech. Officer:* GSFC/L SMITH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50237 UNIV OF COLORADO - BOULDER 3245**  
 MODELING THE POST-RUNAWAY GROWTH OF TERRESTRIAL PLANETS  
 (STUDENT: CRAIG AGNOR)  
 05/27/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* R CANUP  
*Tech. Officer:* GSFC/L SMITH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50241 UNIV OF COLORADO - BOULDER 3246**  
 PROBING CORONAL STRUCTURE & VARIABILITY IN ACTIVE BINARY  
 SYSTEMS  
 06/03/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* A BROWN, NONE  
*Tech. Officer:* GSFC/L SMITH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50242 UNIV OF COLORADO - BOULDER 3247**  
 MAPPING THE DETAILED STRUCTURE OF THE LOCAL INTERSTELLAR  
 MEDIUM  
 06/03/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* J LINSKY  
*Tech. Officer:* GSFC/L SMITH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50271 UNIV OF COLORADO - BOULDER 3248**  
 LANDSCAPE DYNAMICS IN THE ARID SOUTHWEST: INTERACTIONS OF  
 ECOSYSTEM PATTERN & PROCESS THROUGH TIME  
 08/12/1999 - 08/31/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* C WESSMAN  
*Tech. Officer:* GSFC/L SMITH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50273 UNIV OF COLORADO - BOULDER 3249**  
 ATMOSPHERIC MODELING AND INFRARED OBSERVATIONS OF TRANSITING  
 EXTRASOLAR PLANET/STUDENT: L JEREMY RI  
 06/08/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* LESPOSITO  
*Tech. Officer:* GSFC/L SMITH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50294 UNIV OF COLORADO - BOULDER 3250**  
 DUST DYNAMICS IN PHOTOELECTRON LAYERS NEAR SURFACE IN SPACE/  
 STUDENT: AMANDA SICKAFOOSE  
 06/26/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* J E COLDWELL  
*Tech. Officer:* GSFC/L SMITH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER



**NGT 5 50320 UNIV OF COLORADO - BOULDER 3251**  
 SATELLITE GRAVITY & LARGE-SCALE HYDROLOGY/STUDENT: SEAN SWENSON  
 08/17/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* J WAHR  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50337 UNIV OF COLORADO - BOULDER 3252**  
 ASTROBIOLOGICAL AND GEOLOGICAL IMPLICATIONS OF DIAPYCNIC TRANSPORT WITHIN EUROPA AND GANYMEDE  
 05/04/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R RAPPALARDO  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50340 UNIV OF COLORADO - BOULDER 3253**  
 A NARROW BAND FAR ULTRAVIOLET IMAGING SPECTROGRAPH FOR INTERSTELLAR SHOCKS (STUDENT: MATTHEW BEASLEY)  
 05/14/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J GREEN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50341 UNIV OF COLORADO - BOULDER 3254**  
 NEW METHODS FOR HYPERSPECTRAL IMAGING IN THE VACUUM ULTRAVIOLET STUDENT: NATHANIEL CUNNINGHAM  
 05/14/2001 - 07/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J GREEN  
*Tech. Officer:* GSFC/K E BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50345 UNIV OF COLORADO - BOULDER 3255**  
 ELECTROSTATIC DISCHARGES NEAR THE MARIAN SURFACE (STUDENT: CORINNE KRAUSS)  
 05/14/2001 - 07/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* M HORANYI  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50350 UNIV OF COLORADO - BOULDER 3256**  
 NUMERICAL ALGORITHMS FOR ALGORITHMS COMPUTING STUDENT: JULIA ZUEV  
 05/08/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* E ZWEIBEL  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50352 UNIV OF COLORADO - BOULDER 3257**  
 PLANETARY-SCALE WAVES AND IONOSPHERE 'WEATHER' (STUDENT: GILBERT LICHTSTEIN)  
 05/09/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J FORBES  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 22 UNIV OF COLORADO - BOULDER 3258**  
 REMOTELY DETERMINING MATERIAL TYPE OF ORBITAL DEBRIS  
 05/30/1997 - 06/30/2000 FY01: -\$5 Total: \$65,995  
*Prin. Invest.:* L NELSON  
*Tech. Officer:* JSC/D G SICKOREZ  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT10 52624 UNIV OF COLORADO - BOULDER 3259**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RESEARCH PROGRAM  
 07/19/2000 - 07/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D HOEHN  
*Tech. Officer:* KSC/R WHEELER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10521 UNIV OF COLORADO - DENVER 3260**  
 IONOSPHERIC ELECTRODYNAMICS OF PLANETARY-SCALE OSCILLATIONS  
 03/03/2001 - 04/30/2002 FY01: \$37,000 Total: \$37,000  
*Prin. Invest.:* J M FORBES  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1176 UNIV OF COLORADO AT COLORADO SPRINGS 3261**  
 DEVELOPMENT OF THE PSUEDO PILOTED AIRCRAFT SIMULATION (PPAS)  
 05/05/2000 - 12/31/2001 FY01: \$125,979 Total: \$165,979  
*Prin. Invest.:* P J GORDON  
*Tech. Officer:* ARC/T F ROMER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1297 UNIV OF DENVER 3262**  
 IN SITU AEROSOL SIZE DISTRIBUTION MEASUREMENTS FROM THE ER-2 SAGE III VALIDATION & STUDIES OF OZONE  
 03/09/1999 - 03/31/2002 FY01: \$200,824 Total: \$647,824  
*Prin. Invest.:* J C WILSON  
*Tech. Officer:* ARC/E P CONDON, ARC/R S HIPKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1301 UNIV OF DENVER 3263**  
 MEASUREMENTS OF PARTICLE SIZE DISTRIBUTIONS FROM 4 -2000NM DIAMETER ON THE DC-8 FOR THE SAGE III OZO  
 03/06/1999 - 01/14/2001 FY01: -\$1,509 Total: \$96,052  
*Prin. Invest.:* J M REEVES, J C WILSON  
*Tech. Officer:* ARC/E P CONDON, ARC/R S HIPKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1391 UNIV OF DENVER 3264**  
 INFRARED REMOTE SENSING OF ATMOSPHERIC CONSTITUENTS  
 01/19/2000 - 12/31/2002 FY01: \$427,143 Total: \$804,271  
*Prin. Invest.:* F MURCRAY  
*Tech. Officer:* ARC/E CONDON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 3386 UNIV OF DENVER 3265**  
 CALIBRATION AND SCIENTIFIC SUPPORT OF LENA FOR THE IMAGE SATELLITE PROGRAM  
 09/04/1996 - 07/31/2000 FY01: \$0 Total: \$264,598  
*Prin. Invest.:* T A STEPHEN  
*Tech. Officer:* GSFC/M SMITH  
*CASE Category:* 11 - ASTRONOMY

## CONNECTICUT

## NASA'S UNIVERSITY PROGRAM

**NAG 5 6467**                      **UNIV OF DENVER**                      **3266**  
 NEAR IR BALLOON-BORNE MEASUREMENTS IN SUPPORT OF S AGE III  
 AND MOPITT  
 11/12/1997 - 09/30/2000      FY01: \$0                      Total: \$161,254  
*Prin. Invest.:* F J MURCRAY  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6679**                      **UNIV OF DENVER**                      **3267**  
 GROUND BASED FTIR SOLAR SPECTRAL MEASUREMENTS IN S UPPORT  
 OF MOPITT & SAGE III  
 12/12/1997 - 12/31/2001      FY01: \$0                      Total: \$179,938  
*Prin. Invest.:* F J MURCRAY  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 1 96017**                      **UNIV OF DENVER**                      **3268**  
 COMPARISON OF INSITU AEROSOL SIZE DISTRIBUTIONS ACQUIRED IN THE  
 UPPER TROPOSPHERE AND LOWER  
 08/02/1996 - 08/08/2000      FY01: \$0                      Total: \$71,000  
*Prin. Invest.:* J C WILSON  
*Tech. Officer:* LARC/G MADDREA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 313**                      **UNIV OF DENVER**                      **3269**  
 ANALYSIS OF ATMOSPHERIC MEASUREMENTS IN SUPPORT OF THE  
 NETWORK FOR THE DETECTION OF STRATOSPHERIC CH  
 07/22/1998 - 09/30/2001      FY01: \$2                      Total: \$20,988  
*Prin. Invest.:* F J MURCRAY  
*Tech. Officer:* LARC/C P RINSLAND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 365**                      **UNIV OF DENVER**                      **3270**  
 COLLABORATIVE STUDY FOR ANALYSIS OF HI RESOLUTION INFRARED  
 ATMOSPHERIC SPECTRA BETW LARC & U DENVER  
 01/10/2000 - 11/30/2001      FY01: \$53,000                      Total: \$105,000  
*Prin. Invest.:* A GOLDMAN  
*Tech. Officer:* LARC/C P RINSLAND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 01061**                      **UNIV OF DENVER**                      **3271**  
 COLLABORATIVE STUDY FOR ANALYSIS OF HI RESOLUTION INFRARED  
 ATMOSPHERIC SPECTRA BETW LARC & U DENVER  
 09/10/2001 - 09/14/2003      FY01: \$54,000                      Total: \$54,000  
*Prin. Invest.:* A GOLDMAN  
*Tech. Officer:* LARC/C P RINSLAND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 506**                      **UNIV OF DENVER**                      **3272**  
 "THE LENA INSTRUMENT ABOARD THE IMAGE SATELLITE"  
 07/20/2000 - 07/31/2002      FY01: \$31,000                      Total: \$51,006  
*Prin. Invest.:* T M STEPHEN  
*Tech. Officer:* GSFC/T MOORE  
*CASE Category:* 11 - ASTRONOMY

**NCC 8 176**                      **UNIV OF DENVER**                      **3273**  
 INTERNATIONAL SPACE STATION METEROID/ORBITAL DEBRIS HAZARD  
 ASSESSMENT AND SOFTWARE DEVELOPMENT.  
 12/22/1998 - 12/21/2001      FY01: \$171,029                      Total: \$653,740  
*Prin. Invest.:* J E WILLIAMSEN  
*Tech. Officer:* MSFC/G D OLSEN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NGT 8 52894**                      **UNIV OF DENVER**                      **3274**  
 TEMPERATURE EFFECTS ON METEOROID DEBRIS PROTECTIVE STRUC-  
 TURES  
 08/29/2000 - 08/31/2003      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* R AMME  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1257**                      **UNIV OF SOUTHERN COLORADO**                      **3275**  
 DEVELOPMENT OF MULTI CHANNEL HIGH FREQUENCY QRS ELECRO-  
 CARDIO GRAPH  
 08/25/2000 - 05/25/2001      FY01: \$0                      Total: \$15,000  
*Prin. Invest.:* J DEPALMA  
*Tech. Officer:* JSC/T T SCHLEGEL  
*CASE Category:* 56 - MEDICL

**NGT 1 52209**                      **UNIV OF SOUTHERN COLORADO**                      **3276**  
 GRADUATE STUDENT RESEARCH PROGRAM (GSRP) YEAR 1  
 05/25/1999 - 06/30/2001      FY01: \$1                      Total: \$44,001  
*Prin. Invest.:* L M GARRETT  
*Tech. Officer:* LARC/A E MOTLEY, LARC/L D THOMAS  
*CASE Category:* 41 - AERONAUTICAL ENGR

## CONNECTICUT

**NAG 5 8650**                      **FAIRFIELD UNIV**                      **3277**  
 OPTIMIZING PERFORMANCE OF FAR-INFRARED PHOTOCONDUCTORS:  
 NEW APPROACH FOR INTERPRETATION & CALIBRAT  
 07/29/1999 - 01/31/2002      FY01: \$0                      Total: \$151,146  
*Prin. Invest.:* N HAEGEL  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8048**                      **TRINITY COLLEGE**                      **3278**  
 RETRIEVAL OF JOVIAN ATMOSPHERIC STRUCTURE FROM GALILEO NIMS  
 01/14/1999 - 06/30/2001      FY01: \$0                      Total: \$47,205  
*Prin. Invest.:* D WEIR  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1434**                      **UNIV. OF CONNECTICUT HEALTH CENTER**                      **3279**  
 USE OF GFP TRANSGENES TO ASSESS OSTEOPROGENITOR PROGRES-  
 SION IN INTACT BONE  
 08/29/2000 - 08/31/2002      FY01: \$166,250                      Total: \$253,750  
*Prin. Invest.:* D W ROWE  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 6316**                      **UNIV. OF CONNECTICUT HEALTH CENTER**                      **3280**  
 TRANSGENIC MARKERS OF BONE CELL LINEAGE PROGRESSION  
 09/29/1997 - 03/31/2001      FY01: \$0                      Total: \$369,456  
*Prin. Invest.:* D ROWE  
*Tech. Officer:* GSFC/M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 1 01113**                      **UNIV OF CONNECTICUT**                      **3281**  
 PREDICTIONS OF FATIGUE LIFE AND DELAMINATION IN LIGHTWEIGHT  
 AEROSPACE COMPONENTS  
 08/16/2001 - 08/31/2003      FY01: \$17,000                      Total: \$17,000  
*Prin. Invest.:* K D MURPHY  
*Tech. Officer:* LARC/J H ROBINSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 1870**                      **UNIV OF CONNECTICUT**                      **3282**  
 EVAPORATION, BOILING AND CONDENSATION ON/IN CAPILA RY SRUC-  
 TURES OF HIGH HEAT FLUX TWO-PHASE DEVICES  
 05/09/1996 - 05/31/2001      FY01: \$0                      Total: \$360,000  
*Prin. Invest.:* A FAGHRI  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 7654**                      **UNIV OF CONNECTICUT**                      **3283**  
 ECOPHYSIOLOGY OF SUBPOPULATIONS OF ALEXANDRIUM TAM ARENSE  
 08/25/1998 - 08/31/2001      FY01: \$0                      Total: \$150,000  
*Prin. Invest.:* C ROESLER  
*Tech. Officer:* GSFC/J W MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7813**                      **UNIV OF CONNECTICUT**                      **3284**  
 CALIBRATION OF GROUND-BASED WEATHER RADAR SYSTEMS FROM  
 TRMM SAPCE-BASED RADAR OBSERVATIONS: A DEMON  
 11/12/1998 - 12/31/2000      FY01: \$0                      Total: \$157,845  
*Prin. Invest.:* E N ANAGOSTOU  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7915**                      **UNIV OF CONNECTICUT**                      **3285**  
 DECIPHERING THE MOLECULAR RECORD OF EARLY EVOLUTIO N  
 12/09/1998 - 07/31/2002      FY01: \$50,000                      Total: \$147,100  
*Prin. Invest.:* P J GOGARTEN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8602**                      **UNIV OF CONNECTICUT**                      **3286**  
 DEVELOPMENT OF PLANETARY REMOTE SENSING TECHNOLOGY FOR  
 APPLICATIONS TO TELEFORENSICS  
 06/21/1999 - 06/30/2002      FY01: \$119,120                      Total: \$140,620  
*Prin. Invest.:* J S SCHWEITZER  
*Tech. Officer:* GSFC/J I TROMBKA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8636**                      **UNIV OF CONNECTICUT**                      **3287**  
 UNDERSTANDING THE ERROR CHARACTERISTICS OF PRECIPI TATION  
 ESTIMATES FROM SPACE-BASED OBSERVING SYSTE  
 07/10/1999 - 09/30/2001      FY01: \$108,013                      Total: \$232,441  
*Prin. Invest.:* E N ANAGOSTOU  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9639**                      **UNIV OF CONNECTICUT**                      **3288**  
 INVESTIGATING THE ADEQUACY OF TRMM PRECIPITATION RADAR  
 OBSERVATIONS FOR CALIBRATING GROUND-BASED WE  
 06/02/2000 - 11/30/2001      FY01: \$162,207                      Total: \$219,362  
*Prin. Invest.:* E N ANAGOSTOU  
*Tech. Officer:* GSFC/R J LAWRENEGE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10599**                      **UNIV OF CONNECTICUT**                      **3289**  
 NASA PLANNING GRANT: LEARNING COMMUNITY OF TODAY & TOMORROW  
 03/14/2001 - 06/15/2002      FY01: \$25,000                      Total: \$25,000  
*Prin. Invest.:* D MOSS  
*Tech. Officer:* GSFC/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11143**                      **UNIV OF CONNECTICUT**                      **3290**  
 DEPLOYMENT OF A MOBILE POLARIMETRIC X-BAND RADAR & IN SITU  
 INSTRUMENTATION TO SUPPORT QPE...STUDIES  
 08/01/2001 - 07/31/2004      FY01: \$90,000                      Total: \$90,000  
*Prin. Invest.:* E N ANAGOSTOU  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11307**                      **UNIV OF CONNECTICUT**                      **3291**  
 CREATION OF AN EARTH GRANT GEOSPATIAL TECHNOLOGY E XTENSION  
 PROGRAM(ENVIRONMENTAL RESEARCH INS  
 08/30/2001 - 08/31/2004      FY01: \$25,000                      Total: \$25,000  
*Prin. Invest.:* D CIVCO  
*Tech. Officer:* GSFC/E SHEFFNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1428**                      **UNIV OF CONNECTICUT**                      **3292**  
 BOSE-EINSTEIN CONDENSATE AND ATOM LASER: COHERENCE AND  
 OPTICAL PROPERTIES  
 02/02/1998 - 01/31/2003      FY01: \$80,750                      Total: \$256,750  
*Prin. Invest.:* J JAVANAINEN  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 9 1243**                      **UNIV OF CONNECTICUT**                      **3293**  
 RESEARCH GRANT  
 07/07/2000 - 09/01/2001      FY01: \$0                      Total: \$21,998  
*Prin. Invest.:* M MOREAU  
*Tech. Officer:* JSC/F MARTIN, JSC/D SICKOREZ  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG13 99001**                      **UNIV OF CONNECTICUT**                      **3294**  
 BETTER LAND USE PLANNING FOR SUBUBANIZING NE, CREATING  
 NETWORK OF GEOSPATIAL INFORMATION  
 02/19/1999 - 02/18/2002      FY01: \$0                      Total: \$1,099,576  
*Prin. Invest.:* D CIVCO  
*Tech. Officer:* SSC/C HILL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1067**                      **UNIV OF CONNECTICUT**                      **3295**  
 PRODUCTION & CONSUMPTION OF BIOGENCI GASES IN MICR OBIAL MATS  
 07/17/2000 - 09/30/2002      FY01: \$41,667                      Total: \$150,026  
*Prin. Invest.:* P T VISSCHER  
*Tech. Officer:* ARC/B M BEBOUT, ARC/D J DES MARIAS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 3 789**                      **UNIV OF CONNECTICUT**                      **3296**  
 HEAT TRANSFER IN ROTATING THIN LIQUID FILMS INCLUD ING NUCLEATE  
 BOILING  
 04/07/2000 - 11/30/2003      FY01: \$95,000                      Total: \$135,000  
*Prin. Invest.:* D FAGHRI  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 1 01025**                      **UNIV OF CONNECTICUT**                      **3297**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/22/2001 - 06/30/2004      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* K D MURPHY  
*Tech. Officer:* LARC/W K BELVIN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

## CONNECTICUT

## NASA'S UNIVERSITY PROGRAM

**NGT 5 82** **UNIV OF CONNECTICUT** **3298**  
 PREDICTING THE DISTRIBUTION OF BIODIVERSITY: INTE GRATING  
 REMOTE SENSING TECHNOLOGY ANDFIELD-BASED  
 05/11/1999 - 07/31/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* R COLWELL  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NGT 5 30369** **UNIV OF CONNECTICUT** **3299**  
 INVESTIGATION OF CONTINUOUS THUNDERSTORM MONITORIN G OVER  
 LARGE REGIONS USING SATELLITEINFARED OBS  
 08/13/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* E ANAGNOSTOU  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 390** **UNIV OF HARTFORD** **3300**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/13/1999 - 08/31/2001 FY01: \$0 Total: \$450,000  
*Prin. Invest.:* S TOWNSEND  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40031** **UNIV OF HARTFORD** **3301**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRA  
 12/30/1996 - 02/28/2001 FY01: \$0 Total: \$807,500  
*Prin. Invest.:* S L TOWNSEND  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40093** **UNIV OF HARTFORD** **3302**  
 CONNECTICUT SPACE GRANT COLLEGE AND FELLOWSHIP PRO GRAM  
 02/28/2001 - 02/28/2002 FY01: \$212,500 Total: \$212,500  
*Prin. Invest.:* S TOWNSEND  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4821** **WESLEYAN UNIV** **3303**  
 PHOTOMETRIC STUDIES OF T TAURI STARS  
 06/18/1997 - 05/31/2002 FY01: \$54,000 Total: \$254,400  
*Prin. Invest.:* D HERBST  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9064** **WESLEYAN UNIV** **3304**  
 MEASURING THE GALACTIC POTENTIAL WITH NASA'S SPACE INTERFER-  
 OMETRY MISSION - LTSA 99  
 02/29/2000 - 02/14/2002 FY01: \$32,310 Total: \$77,480  
*Prin. Invest.:* K V JOHNSTON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 21 - MATHEMATICS

**NAG 2 948** **YALE UNIV** **3305**  
 SYNAPTOGENESIS IN MICROGRAVITY  
 12/20/1994 - 08/31/2001 FY01: \$0 Total: \$672,933  
*Prin. Invest.:* H S KESHISHIAN  
*Tech. Officer:* ARC/D REISS-BUBENHEIM, ARC/W E HINDS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1433** **YALE UNIV** **3306**  
 EFFECTS OF SPACE FLIGHT ON DROSOPHILA NEURAL DEVEL OPMENT  
 08/29/2000 - 09/30/2001 FY01: \$28,195 Total: \$209,415  
*Prin. Invest.:* H S KESHISHIAN  
*Tech. Officer:* ARC/D R BUBENHEIM, ARC/M F VASQUEZ  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1504** **YALE UNIV** **3307**  
 MECHANISMS OF GRAVITY-EVOKED NEURONAL PLASTICITY  
 07/16/2001 - 09/30/2002 FY01: \$75,000 Total: \$75,000  
*Prin. Invest.:* R G KALB  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1935** **YALE UNIV** **3308**  
 RHEOLOGY OF CONCENTRATED EMULSIONS  
 08/05/1996 - 05/31/2001 FY01: \$0 Total: \$470,000  
*Prin. Invest.:* M LOEWENBERG  
*Tech. Officer:* GRC/B SINGH  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 1939** **YALE UNIV** **3309**  
 COMPUTATIONAL & EXPERIMENTAL STUDY OF LAMINAR DIFF USION  
 FLAMES IN A MICROGRAVITY ENVIRONMENT  
 08/05/1996 - 11/30/2000 FY01: \$0 Total: \$444,000  
*Prin. Invest.:* M B LONG, M D SMOOKE  
*Tech. Officer:* GRC/K J WEILAND, GRC/H D ROSS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 1951** **YALE UNIV** **3310**  
 DESING/INTERPRETATION OF MICROGRAVITY EXPERIMENT T O OBTAIN  
 FLUID/SOLID BOUNDARY CONDITIONS IN NON-I  
 08/14/1996 - 12/31/2001 FY01: \$0 Total: \$400,000  
*Prin. Invest.:* D E ROSNER  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 2262** **YALE UNIV** **3311**  
 COMPUTATIONAL AND EXPERIMENTAL STUDY OF ENERGETIC MATERIALS  
 IN A COUNTERFLOW MICROGRAVITY ENVIRONMEN  
 04/27/1999 - 04/06/2003 FY01: \$77,773 Total: \$204,910  
*Prin. Invest.:* M D SMOOKE  
*Tech. Officer:* GRC/D L LURBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2377** **YALE UNIV** **3312**  
 STUDIES OF THE DYNAMIC CONTROL AND EVAPORATION OF THREE  
 DIMENSIONAL DROPLET ARRAYS  
 04/07/2000 - 11/30/2003 FY01: \$92,000 Total: \$142,000  
*Prin. Invest.:* R E APFEL  
*Tech. Officer:* GRC/R ROGERS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2425** **YALE UNIV** **3313**  
 EFFECT OF STRUCTURE - DEPENDENT INTERACTIONS ON TH E FORMA-  
 TION OF COLLOIDAL AGGREGATES AND NUCLEI  
 05/17/2000 - 06/30/2001 FY01: -\$6,842 Total: \$43,158  
*Prin. Invest.:* D L GRANT  
*Tech. Officer:* GRC/B MOTIL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2477** **YALE UNIV** **3314**  
 FLOWS OF WET FOAMS AND CONCENTRATED EMULSIONS FLOWS OF WET  
 FOAMS AND CONCENTRATED EMULSIONS  
 07/24/2000 - 11/30/2003 FY01: \$76,000 Total: \$176,000  
*Prin. Invest.:* D LOEWENBERG  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3853** **YALE UNIV** **3315**  
 CLIMATE CHANGE AND HUMAN RESPONSE IN THE SEMI-ARID  
 (148-65-80-27)  
 12/16/1996 - 07/31/2000 FY01: \$0 Total: \$1,195,852  
*Prin. Invest.:* R B SMITH  
*Tech. Officer:* GSFC/A J TUYAHOV  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 5255** **YALE UNIV** **3316**  
 X-RAY SINGLE-PHOTON SPECTROMETERS X-RAY SINGLE-PHOTON  
 SPECTROMETERS  
 02/19/2000 - 02/03/2003 FY01: \$175,000 Total: \$340,000  
*Prin. Invest.:* D E PROBER  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6404** **YALE UNIV** **3317**  
 OBSERVATIONAL STUDIES OF DYNAMICAL EFFECTS IN GLOBULAR CLUS-  
 TERS  
 11/04/1997 - 08/31/2001 FY01: \$111,640 Total: \$424,000  
*Prin. Invest.:* C BAILYN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7074** **YALE UNIV** **3318**  
 STAR FORMATION IN THE EARLY UNIVERSE-ATP  
 03/03/1998 - 02/14/2002 FY01: \$0 Total: \$277,032  
*Prin. Invest.:* P COPPI  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8406** **YALE UNIV** **3319**  
 MODELING CONVECTION IN STARS; IMPROVING STELLAR MODELS FOR  
 STELLAR POPULATION SYNTHESIS (ATP-  
 03/15/1999 - 03/14/2002 FY01: \$186,864 Total: \$298,261  
*Prin. Invest.:* P F DEMARQUE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8589** **YALE UNIV** **3320**  
 PHOTON-COUNTING DETECTORS FOR SUBMILLIMETER IMAGING AND  
 SPECTROSCOPY.  
 07/08/1999 - 07/14/2001 FY01: \$0 Total: \$505,559  
*Prin. Invest.:* R J SCHOELKOPF  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8813** **YALE UNIV** **3321**  
 FROM RNA TO CONTEMPORARY METABOLISM: THE M1 RIBOSOME AS A  
 MODEL SYSTEM  
 09/23/1999 - 08/31/2001 FY01: \$70,000 Total: \$140,000  
*Prin. Invest.:* R L DORIT  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9123** **YALE UNIV** **3322**  
 ANALYSIS OF NEW & ARCHIVAL DATA TO STUDY & CHARACTERIZE RAPID  
 X-RAY VARIABILITY IN BLAZARS - ADP 99  
 03/28/2000 - 03/31/2001 FY01: \$0 Total: \$43,548  
*Prin. Invest.:* P COPPI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9168** **YALE UNIV** **3323**  
 GLOBULAR CLUSTER FORMATION (ATP 99\_)  
 03/27/2000 - 03/31/2002 FY01: \$103,267 Total: \$205,430  
*Prin. Invest.:* S ZEPF  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9316** **YALE UNIV** **3324**  
 LANDSCAPE CHANGES IN THE MIDDLE EAST: A REGIONAL ASSESSMENT  
 USING REMOTE SENSING  
 03/28/2000 - 03/31/2002 FY01: \$385,000 Total: \$635,000  
*Prin. Invest.:* R SMITH  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9437** **YALE UNIV** **3325**  
 CHARACTERIZATION OF HUMID-FOREST & SAVANNA ECO-REGIONS OF  
 WEST & CENTRAL AFRICA USING SATELLITE SENSORS  
 04/13/2000 - 04/30/2002 FY01: \$197,558 Total: \$329,573  
*Prin. Invest.:* M ASHTON  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9554** **YALE UNIV** **3326**  
 RNA MODIFYING ENZYMES: DETERMINANTS OF DESIGN AND EVOLUTION  
 OF BIOLOGICAL INFORMATION PROCESSING  
 05/04/2000 - 04/30/2001 FY01: \$0 Total: \$103,620  
*Prin. Invest.:* D SOLL  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 9595** **YALE UNIV** **3327**  
 SINGLE-PHOTON DETECTORS WITH RF-SINGLE-ELECTRON TRAN-  
 SISTOR READOUTS FOR VISIBLE-THROUGH-UV  
 06/09/2000 - 06/30/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* D E PROBER  
*Tech. Officer:* GSFC/C STAHLE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9651** **YALE UNIV** **3328**  
 THE FORMATION AND EVOLUTION OF GLOBULAR CLUSTER SYSTEMS AND  
 IMPLICATIONS FOR THE FORMATION HISTORY  
 06/22/2000 - 06/14/2002 FY01: \$117,520 Total: \$231,620  
*Prin. Invest.:* S ZEPF  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9839** **YALE UNIV** **3329**  
 INVESTIGATIONS OF THE TROPICAL TROPopause REGION  
 11/16/2000 - 12/31/2001 FY01: \$126,276 Total: \$126,276  
*Prin. Invest.:* S SHERWOOD  
*Tech. Officer:* GSFC/M R SCHOEBERL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## CONNECTICUT

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10439** **YALE UNIV** **3330**  
 DEVELOPMENT OF AN ATOM INTERFEROMETER GRAVITY GRAD IOMETER  
 FOR SPACE FLIGHT, PROPOSAL 1258  
 03/13/2001 - 03/14/2002 FY01: \$281,175 Total: \$281,175  
*Prin. Invest.:* P KASEVICH  
*Tech. Officer:* GSFC/N J DENNEHY  
*CASE Category:* 13 - PHYSICS

**NAG 5 10755** **YALE UNIV** **3331**  
 FABRICATION AND CHARACTERIZATION OF SUBMILLIMETER SINGLE-  
 PHONON COUNTERS  
 04/20/2001 - 04/30/2002 FY01: \$175,000 Total: \$175,000  
*Prin. Invest.:* R J SCHOELKOPF, NONE  
*Tech. Officer:* GSFC/F HERRERO  
*CASE Category:* 13 - PHYSICS

**NAG 5 10912** **YALE UNIV** **3332**  
 RING-DIAGRAM ANALYSIS OF THE SOLAR SURFACE LAYERS  
 05/14/2001 - 05/31/2002 FY01: \$57,221 Total: \$57,221  
*Prin. Invest.:* S BASU  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11335** **YALE UNIV** **3333**  
 CHANGES INFLUENCE OF HUMANS, CLIMATE, AND FIRE ON FOREST  
 ECOSYSTEMS AND CARBON DYNAMICS IN INDONESIA  
 09/06/2001 - 09/14/2004 FY01: \$253,107 Total: \$253,107  
*Prin. Invest.:* L M CURRAN  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1351** **YALE UNIV** **3334**  
 NOVEL CONCEPTS IN ACOUSTOPHORESIS FOR BIO- TECHNOLOGY  
 APPLICATIONS UNDER DIRECTION DR. APFEL.  
 05/23/1997 - 09/30/2001 FY01: \$0 Total: \$248,000  
*Prin. Invest.:* R E APFEL  
*Tech. Officer:* MSFC/B GUYNES, MSFC/J MAYO  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1443** **YALE UNIV** **3335**  
 R/S ATOM INTERFEROMETRY IN A MICROGRAVITY ENVIRON- MENT  
 02/06/1998 - 01/31/2003 FY01: \$95,000 Total: \$370,000  
*Prin. Invest.:* M A KASEVICH  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 8 1449** **YALE UNIV** **3336**  
 INVESTIGATION OF FUTURE MICROGRAVITY ATOMIC CLOCKS  
 03/09/1998 - 03/01/2003 FY01: \$190,000 Total: \$740,000  
*Prin. Invest.:* K GIBBLE  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 8 1461** **YALE UNIV** **3337**  
 NUCLEATION AND GROWTH MECHANISMS UNDERLYING THE MICRO-  
 STRUCTURE OF POLYMER FOAMS PRODUCED  
 02/18/1998 - 01/31/2002 FY01: \$145,000 Total: \$358,333  
*Prin. Invest.:* R E APFEL, D WU  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1767** **YALE UNIV** **3338**  
 ATOM INTERFEROMETER TEST OF THE EQUIVALENCE PRINCIPLE  
 05/14/2001 - 05/13/2005 FY01: \$150,000 Total: \$150,000  
*Prin. Invest.:* M A KASEVICH, L MALEKI  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NCC 2 1229** **YALE UNIV** **3339**  
 DOMAIN-SPECIFIC SELF-ADAPTIVE SOFTWARE  
 03/26/2001 - 11/30/2001 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* P HUDAK  
*Tech. Officer:* ARC/R MORRIS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 3 691** **YALE UNIV** **3340**  
 COMBUSTION OF INDIVIDUAL BUBBLES AND SUBMERGED GAS JETS IN  
 LIQUID FUELS  
 03/24/1999 - 01/11/2003 FY01: \$125,700 Total: \$303,700  
*Prin. Invest.:* D E ROSNER  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 3 52347** **YALE UNIV** **3341**  
 RHEOLOGY AND STATISTICAL MICROSTRUCTURE OF CONCENT RATED  
 EMULSIONS AND FOAMS  
 08/11/1998 - 07/01/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* M LOEWENBERG  
*Tech. Officer:* GRC/F MONTEGANI  
*CASE Category:* 43 - CHEMICAL ENGR

**NGT 5 121** **YALE UNIV** **3342**  
 NOISE & SENSITIVITY OF SQPC SUBMILLIMETER DETECTORS/STUDENT:  
 JOHN D. TEUFEL  
 05/31/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D SCHOELKOPF  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 30371** **YALE UNIV** **3343**  
 ENVIRONMENTAL ASSESSMENT OF HUMAN HEALTH RISK: SPATIAL AND  
 TEMPORAL MODELS OF LYME DISEASE  
 08/14/2001 - 08/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D FISH  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50042** **YALE UNIV** **3344**  
 TERAHERTZ SUPERCONDUCTING HETERODYNE RECEIVERS  
 08/04/1997 - 06/30/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* PROBER  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50067** **YALE UNIV** **3345**  
 SPACE BASED LASER-COOLED ATOMIC CLOCKS  
 08/26/1997 - 06/30/2001 FY01: \$0 Total: \$65,060  
*Prin. Invest.:* K GIBBLE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50287** **YALE UNIV** **3346**  
 GLOBAL CLUSTER SYSTEMS AS PROBES OF GALAXY FORMATION  
 (STUDENT: KATHERINE RHODE)  
 06/22/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* C E BAILY  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## DELAWARE

**NAG 1 2030** **DELAWARE STATE UNIV** **3347**  
 INVESTIGATION OF OPTICAL PHASE DISTORTIONS IN SOLID STATE  
 PULSED LASER AMPLIFIER  
 03/23/1998 - 12/31/2001 FY01: \$0 Total: \$297,207  
*Prin. Invest.:* N MELIJECHI  
*Tech. Officer:* LARC/W C EDWARDS, LARC/N P BANRES  
*CASE Category:* 13 - PHYSICS

**NAG 5 8240** **DELAWARE STATE UNIV** **3348**  
 DELAWARE STATE UNIV CENTER FOR EXCELLENCE IN MATHEMATICS,  
 SCIENCE, AND TECHNOLOGY  
 02/19/1999 - 02/28/2002 FY01: \$100,000 Total: \$299,998  
*Prin. Invest.:* G OFOSU  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1920** **UNIV OF DELAWARE** **3349**  
 FREE-SURFACE AND CONTACT-LINE MOTION OF LIQUIDS IN A  
 MICROGRAVITY ENVIRONMENT  
 07/07/1996 - 07/10/2001 FY01: \$0 Total: \$355,000  
*Prin. Invest.:* L W SCHWARTZ  
*Tech. Officer:* GRC/M W WEISLOGEL  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 1955** **UNIV OF DELAWARE** **3350**  
 SURFACTANT-BASED CRITICAL PHENOMENA IN MICROGRAVITY  
 08/19/1996 - 08/31/2001 FY01: \$0 Total: \$241,500  
*Prin. Invest.:* E W KALER, M E PAULATIS  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 5 4829** **UNIV OF DELAWARE** **3351**  
 AN INTEGRATED SYSTEM FOR WATER BUDGET CLOSURE OVER MASS: A  
 TRMM VALIDATION EFFORT  
 07/03/1997 - 06/30/2001 FY01: \$0 Total: \$160,000  
*Prin. Invest.:* C J WILLMOTT  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 5181** **UNIV OF DELAWARE** **3352**  
 PROTON/ANTI-PROTON RATIO AS A PROBE OF SOLAR MODULATION  
 03/26/1998 - 08/31/2001 FY01: \$0 Total: \$201,604  
*Prin. Invest.:* T K GAISSE  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5221** **UNIV OF DELAWARE** **3353**  
 GRANT NAG5-5221 BALLOON AIR CHERENKOV (BACH) PI PROF PAUL  
 EVENSON  
 03/16/1999 - 03/11/2004 FY01: \$0 Total: \$475,000  
*Prin. Invest.:* P A EVENSON  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6553** **UNIV OF DELAWARE** **3354**  
 THE INFLUENCE OF COUPLING WITH THE IONOSPHERE AND  
 ATMOSPHERE ON ROTATIONAL DYNAMICS IN THE JOVIAN MA  
 10/17/1997 - 08/31/2000 FY01: \$0 Total: \$120,992  
*Prin. Invest.:* D PONTIUS  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 7009** **UNIV OF DELAWARE** **3355**  
 NATURE AND ORIGIN OF THE HIGHEST ENERGY COSMIC RAY S - ATP  
 02/12/1998 - 02/14/2002 FY01: \$0 Total: \$293,484  
*Prin. Invest.:* T STANOV  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7949** **UNIV OF DELAWARE** **3356**  
 APPLICATION OF SATELLITE ALTIMETER DATA TO STUDIES OF OCEAN  
 SURFACE HEATFLUX AND UPPER OCEAN THERMA  
 12/23/1998 - 12/14/2001 FY01: \$80,000 Total: \$225,000  
*Prin. Invest.:* X YAN  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8556** **UNIV OF DELAWARE** **3357**  
 A DATA COORDINATOR FOR CLIVAR AND G30S  
 06/23/1999 - 06/30/2001 FY01: \$0 Total: \$125,242  
*Prin. Invest.:* F WEBSTER  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8696** **UNIV OF DELAWARE** **3358**  
 OBSERVATIONAL STUDIES OF THE SOLAR CORONA  
 08/17/1999 - 12/31/2000 FY01: \$0 Total: \$25,030  
*Prin. Invest.:* D R WEBSTER  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9116** **UNIV OF DELAWARE** **3359**  
 MARS GLOBAL SURVEYOR DATA ANALYSIS AND INTERPRETATION  
 02/28/2000 - 02/28/2002 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* N F NESS  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 10416** **UNIV OF DELAWARE** **3360**  
 LMC 1995, THE THIRD SUPERSOFT X-RAY NOVA  
 02/22/2001 - 02/28/2002 FY01: \$5,000 Total: \$5,000  
*Prin. Invest.:* J MCDONALD  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

## DELAWARE

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10911 UNIV OF DELAWARE 3361**  
 COMPARATIVE STUDY OF INTERPLANETARY MAGNETIC FIELD TURBULENCE  
 05/11/2001 - 05/31/2002 FY01: \$91,560 Total: \$91,560  
*Prin. Invest.:* C W SMITH  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10919 UNIV OF DELAWARE 3362**  
 HIGHEST ENERGY COSMIC RAYS  
 05/17/2001 - 05/31/2002 FY01: \$90,000 Total: \$90,000  
*Prin. Invest.:* T STANLEV  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11006 UNIV OF DELAWARE 3363**  
 HEATING OF THE LOWER CORONA: TRANSPORT, CASCADE & RECONNECTION  
 06/05/2001 - 05/31/2002 FY01: \$31,000 Total: \$31,000  
*Prin. Invest.:* W H MATHAEUS  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11095 UNIV OF DELAWARE 3364**  
 FUV DIAGNOSTICS OF STRUCTURE IN HOT-STAR WINDS (FUSE 1999)  
 07/24/2001 - 07/31/2002 FY01: \$20,750 Total: \$20,750  
*Prin. Invest.:* S P OWOCKI  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11228 UNIV OF DELAWARE 3365**  
 MAGNETIC FIELDS ON OB STARS (ATP 2000)  
 08/15/2001 - 08/14/2004 FY01: \$10,655 Total: \$10,655  
*Prin. Invest.:* D MULLAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11232 UNIV OF DELAWARE 3366**  
 THE SPACE INFORMATION NETWORKING ARCHITECTURE FOR FUTURE NASA SCIENCE MISSIONS  
 08/15/2001 - 08/14/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* C SHEN  
*Tech. Officer:* GSFC/J RASH  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 8 1346 UNIV OF DELAWARE 3367**  
 PROTEIN CRYSTALLIZATION IN COMPLEX FLUIDS  
 05/23/1997 - 11/30/2001 FY01: \$0 Total: \$540,000  
*Prin. Invest.:* E W KALER, D  
*Tech. Officer:* MSFC/D SMITH  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1427 UNIV OF DELAWARE 3368**  
 DROPLETS OF 3HE-4HE MIXTURES  
 02/11/1998 - 01/31/2003 FY01: \$95,000 Total: \$324,000  
*Prin. Invest.:* S T CHUI  
*Tech. Officer:* MSFC/J W POE  
*CASE Category:* 13 - PHYSICS

**NAG 9 989 UNIV OF DELAWARE 3369**  
 PROPOSAL TO DEVELOPE ASTRONAUT TRAINING  
 02/08/1998 - 06/30/2002 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* V KLEMAS, Q ZHEN  
*Tech. Officer:* JSC/S K RUNCO  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC 3 784 UNIV OF DELAWARE 3370**  
 A PRELIMINARY INVESTIGATION OF THE E-BEAM INDUCED POLYMERIZATION OF MALEIMIDE AND NORBORNENE END-CAP  
 03/14/2000 - 01/26/2001 FY01: -\$35,075 Total: \$819  
*Prin. Invest.:* G R PALMESE  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 843 UNIV OF DELAWARE 3371**  
 SOOT FORMATION IN PURELY-CURVED PREMIXED FLAMES AN D LAMINAR FLAME SPEEDS OF SOOT-FORMING FLAMES  
 12/28/2000 - 11/30/2004 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* D WANG  
*Tech. Officer:* GRC/K R SACKSTER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 50367 UNIV OF DELAWARE 3372**  
 SENSOR DESIGN AND CONTROL FOR THE REAL-TIME OPTIMI ZATION OF CULTURING CONDITIONS, ANALYSISAND CONT  
 06/12/2001 - 08/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* P DHUJATI  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 3530 UNIV OF DELAWARE - BARTOL RESEARCH INST 3373**  
 MULTI-SPECTRAL DIAGNOSTICS AND DYNAMICAL MODELLING STAR WINDS  
 12/13/1996 - 11/30/2001 FY01: \$105,600 Total: \$489,078  
*Prin. Invest.:* S P OWOCKI  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4065 UNIV OF DELAWARE - BARTOL RESEARCH INST 3374**  
 RADIATION HYDRODYNAMICS OF INTERACTING WINDS IN MA  
 03/26/1997 - 03/31/2001 FY01: \$0 Total: \$192,000  
*Prin. Invest.:* K GAYLEY  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5063 UNIV OF DELAWARE - BARTOL RESEARCH INST 3375**  
 BALLOON AIR CHERENKOV (BACH) MEASUREMENTS OF HIGH ENERGY COSMICRAY COMPOSITION  
 05/03/1996 - 04/30/2000 FY01: \$0 Total: \$737,000  
*Prin. Invest.:* P EVENSON  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 6061 UNIV OF DELAWARE - BARTOL RESEARCH INST 3376**  
 EXPERIMENTAL RESEARCH ON ANISOTROPY OF THE COSMIC BACKGROUND RADIATION FROM A BALLOON-BORNE PLATFORM  
 08/01/1997 - 06/30/2000 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* PICCIRILLO  
*Tech. Officer:* GSFC/R SILVERBERG  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 6469 UNIV OF DELAWARE - BARTOL RESEARCH INST 3377**  
 USING ULYSSES OBSERVATIONS TO CONSTRAIN GLOBAL MODELS OF  
 THE HELIOSPHERE  
 10/31/1997 - 10/31/2001 FY01: \$0 Total: \$302,042  
*Prin. Invest.:* G ZANK  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6470 UNIV OF DELAWARE - BARTOL RESEARCH INST 3378**  
 ULYSSES-SWICS CONSTRAINTS ON NON-MAXWELLIAN ELECTRON  
 DISTRIBUTIONS AND UNEQUAL ION FLOW SPEEDS IN A  
 11/14/1997 - 10/31/2001 FY01: \$0 Total: \$165,275  
*Prin. Invest.:* S OWOCKI  
*Tech. Officer:* HQ/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6570 UNIV OF DELAWARE - BARTOL RESEARCH INST 3379**  
 INVESTIGATION OF INTERPLANETARY TURBULENCE AT HIGH LATITUDE  
 USING THE ULYSSES SPACECRAFT  
 11/13/1997 - 10/31/2001 FY01: \$0 Total: \$248,199  
*Prin. Invest.:* C SMITH  
*Tech. Officer:* HQ/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6905 UNIV OF DELAWARE - BARTOL RESEARCH INST 3380**  
 ORIGINS OF COOL STAR MASS LOSS: A UNIFIED AND EFFICIENT  
 APPROACH TO ANALYZE FLUCTUATING WIND LOSS  
 02/09/1998 - 01/31/2000 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* D MULLAN  
*Tech. Officer:* HQ/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6969 UNIV OF DELAWARE - BARTOL RESEARCH INST 3381**  
 ENERGETIC PARTICLE PROCESSES IN THE HELIOSPHERE  
 03/12/1998 - 10/31/2001 FY01: \$0 Total: \$276,500  
*Prin. Invest.:* J A LE ROUX  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7142 UNIV OF DELAWARE - BARTOL RESEARCH INST 3382**  
 TURBULENCE AND PARTICLE TRANSPORT IN SPACE PLASMAS  
 03/23/1998 - 02/28/2002 FY01: \$0 Total: \$205,200  
*Prin. Invest.:* J BIEBER  
*Tech. Officer:* HQ/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7164 UNIV OF DELAWARE - BARTOL RESEARCH INST 3383**  
 TURBULENCE, RECONNECTION, AND HEATING IN THE LOWER CORONA  
 03/13/1998 - 04/14/2002 FY01: \$42,394 Total: \$275,851  
*Prin. Invest.:* W H MATTHAEUS  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7545 UNIV OF DELAWARE - BARTOL RESEARCH INST 3384**  
 EVALUATION OF SNOW WATER EQUIVALENT ACROSS GRASSLAND  
 REGIONS  
 06/22/1998 - 06/30/2001 FY01: \$0 Total: \$110,144  
*Prin. Invest.:* D LEATHERS, W SHUTTLEWORTH  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7796 UNIV OF DELAWARE - BARTOL RESEARCH INST 3385**  
 COMPOSITION AND ABUNDANCE RATIOS OF ANOMALOUS AND GALACTIC  
 COSMIC RAYS: IMPLICATIONS OF ACE OBSERVATIONS  
 12/14/1998 - 09/30/2001 FY01: \$85,000 Total: \$241,000  
*Prin. Invest.:* G P ZANK  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8014 UNIV OF DELAWARE - BARTOL RESEARCH INST 3386**  
 GROUND-LEVEL SOLAR COSMIC RAY DATA FROM SOLAR CYCLE 19  
 01/13/1999 - 12/31/2001 FY01: \$0 Total: \$22,500  
*Prin. Invest.:* R PYLE  
*Tech. Officer:* GSFC/J H BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8134 UNIV OF DELAWARE - BARTOL RESEARCH INST 3387**  
 RESEARCH IN "TURBULENCE AND TRANSPORT PROCESSES" THROUGH THE  
 FIRST YEAR OF A 3-YEAR FUNDING CYCLE.  
 02/04/1999 - 02/14/2002 FY01: \$222,605 Total: \$526,954  
*Prin. Invest.:* W H MATTHAEUS  
*Tech. Officer:* GSFC/J GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 8827 UNIV OF DELAWARE - BARTOL RESEARCH INST 3388**  
 PARTICIPATION IN NASA-GSFC MAGNETOMETER EXPERIMENT ON MARS  
 GLOBAL SURVEYOR  
 09/07/1999 - 09/30/2002 FY01: \$0 Total: \$28,836  
*Prin. Invest.:* N F NESS  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NGT 5 40024 UNIV OF DELAWARE - BARTOL RESEARCH INST 3389**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 12/19/1996 - 08/31/2001 FY01: -\$160,861 Total: \$805,201  
*Prin. Invest.:* N F NESS  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40122 UNIV OF DELAWARE - BARTOL RESEARCH INST 3390**  
 DELAWARE SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 03/26/2001 - 03/31/2002 FY01: \$409,423 Total: \$409,423  
*Prin. Invest.:* N F NESS  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50167 UNIV OF DELAWARE - BARTOL RESEARCH INST 3391**  
 PROTEIN CRYSTALLIZATION OF BINARY MIXTURES  
 07/08/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* A M LENHOFF/TESSIER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## DISTRICT OF COLUMBIA

<b>NAG 1 1353</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3392</b>	
RESEARCH AND EDUCATION PROGRAM FOR NON-TRADITIONAL ENGINEERING STUDENTS IN THE JIAFS			
10/09/1991 - 11/30/1999	FY01: -\$1,771	Total: \$535,617	
<i>Prin. Invest.:</i> J L WHITESIDES			
<i>Tech. Officer:</i> LARC/R L YANG, LARC/E J PRIOR			
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			
<b>NAG 1 1972</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3393</b>	
A PROGRAM OF RESEARCH AND EDUCATION IN AERO-SPACE VEHICLE DESIGN, SYNTHESIS, AND OPTIMIZATION.			
10/31/1997 - 11/30/1999	FY01: -\$2,128	Total: \$350,434	
<i>Prin. Invest.:</i> R R SANDUSKY			
<i>Tech. Officer:</i> LARC/C V ECKSTROM			
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			
<b>NAG 2 1456</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3394</b>	
ADAPTIVE UNSTRUCTURED GRID PARALLEL BENCHMARK			
02/05/2001 - 01/31/2002	FY01: \$36,499	Total: \$36,499	
<i>Prin. Invest.:</i> M MYERS			
<i>Tech. Officer:</i> ARC/R BISWAS, ARC/J YAN			
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			
<b>NAG 5 697</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3395</b>	
MATHEMATICAL MODELING OF ENERGY MINIMIZING OFF-DESIGN SHAPES OF LARGE SCIENTIFIC BALLOONS			
01/25/1993 - 11/30/2000	FY01: \$0	Total: \$572,414	
<i>Prin. Invest.:</i> F BAGINSKI			
<i>Tech. Officer:</i> GSFC/H C NEEDLEMAN, GSFC/I S SMITH			
<i>CASE Category:</i> 21 - MATHEMATICS			
<b>NAG 5 3957</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3396</b>	
ENVIRONMENTAL SECURITY, SUSTAINABLE DEVELOPMENT, A GLOBAL OBSERVING STRATEGY			
03/03/1997 - 12/31/2000	FY01: \$0	Total: \$390,228	
<i>Prin. Invest.:</i> D WILLIAMSON			
<i>Tech. Officer:</i> GSFC/J GASCH			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NAG 5 5292</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3397</b>	
THE SHAPE OF A DESCENDING BALLOON THE SHAPE OF A DESCENDING BALLOON			
06/14/2000 - 11/30/2001	FY01: \$0	Total: \$49,948	
<i>Prin. Invest.:</i> F BAGINSKI			
<i>Tech. Officer:</i> WFF/B A MERRITT			
<i>CASE Category:</i> 13 - PHYSICS			
<b>NAG 5 6081</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3398</b>	
STUDY OF VENUS NEUTRAL UPPER ATMOSPHERE USING MAGE			
08/11/1997 - 09/30/2000	FY01: \$0	Total: \$100,000	
<i>Prin. Invest.:</i> D M KEATING			
<i>Tech. Officer:</i> GSFC/S HOWARD			
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			
<b>NAG 5 8068</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3399</b>	
IMPROVED NUMERICAL MODELING OF LOW-DENSITY ATMOSPHERIC FLOW ON IO			
01/29/1999 - 12/31/2001	FY01: \$31,231	Total: \$73,856	
<i>Prin. Invest.:</i> D A LEVIN, NONE			
<i>Tech. Officer:</i> GSFC/R BEEBE			
<i>CASE Category:</i> 11 - ASTRONOMY			
<b>NAG 5 8287</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3400</b>	
MARS GLOBAL SURVEYOR ACCELEROMETER EXPERIMENT: STUDY OF MARS THERMOSPHERE AND COUPLING			
02/22/1999 - 03/31/2002	FY01: \$72,000	Total: \$146,500	
<i>Prin. Invest.:</i> G M KEATING			
<i>Tech. Officer:</i> GSFC/J BOYCE			
<i>CASE Category:</i> 11 - ASTRONOMY			
<b>NAG 5 9550</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3401</b>	
PRECIPITATION STUDIES USING THE TRMM MICROWAVE LINK FACILITY			
05/30/2000 - 05/31/2002	FY01: \$93,000	Total: \$150,167	
<i>Prin. Invest.:</i> R H LANG			
<i>Tech. Officer:</i> GSFC/R J LAWRENCE			
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			
<b>NAG 5 10417</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3402</b>	
DETECTION OF GUNPOWDER RESIDUE USING X-RAY FLUORESCENCE AND ELECTRON MICROSCOPY.			
02/21/2001 - 02/28/2002	FY01: \$31,915	Total: \$31,915	
<i>Prin. Invest.:</i> D A ROWLEY			
<i>Tech. Officer:</i> GSFC/J I TROMBKA			
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			
<b>NAG 5 10539</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3403</b>	
SOCIOECONOMIC BENEFITS OF NASA'S EARTH SCIENCE AND APPLICATIONS RESEARCH. PROPOSAL, JAUP, C			
03/16/2001 - 03/14/2002	FY01: \$182,761	Total: \$182,761	
<i>Prin. Invest.:</i> D A WILLIAMSON			
<i>Tech. Officer:</i> GSFC/E TORREZ-MARTINEZ			
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			
<b>NAG 5 11101</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3404</b>	
PARALLEL DIMENSION REDUCTION OF HYPERSPECTRAL DATA			
07/26/2001 - 07/31/2004	FY01: \$31,000	Total: \$31,000	
<i>Prin. Invest.:</i> T EL-GHAZAWI			
<i>Tech. Officer:</i> GSFC/J LE MOIGNE			
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			
<b>NAG 5 11175</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3405</b>	
DATA ANALYSIS OF MGS ACCELEROMETER EXPERIMENT TO CHARACTERIZE THE MARS ATMOSPHERE AT AEROBRAKING A			
08/30/2001 - 08/14/2003	FY01: \$60,000	Total: \$60,000	
<i>Prin. Invest.:</i> G KEATING			
<i>Tech. Officer:</i> GSFC/J BOYCE			
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			
<b>NAG 5 11343</b>	<b>GEORGE WASHINGTON UNIV</b>	<b>3406</b>	
DEVELOPMENT OF INDIVIDUALLY ADDRESSABLE MICRO-MIRROR ARRAYS FOR SPACE APPLICATIONS			
09/27/2001 - 09/30/2002	FY01: \$53,686	Total: \$53,686	
<i>Prin. Invest.:</i> M ZAGHLOUL			
<i>Tech. Officer:</i> GSFC/M DUTTA			
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			

**NAG 9 1185**                    **GEORGE WASHINGTON UNIV**                    **3407**  
 DEVELOP TUNABLE DIODE LASER/CAVITY RING-DOWN SENSO R  
 01/11/2000 - 01/09/2003                    FY01: \$0                    Total: \$101,249  
*Prin. Invest.:* J H MILLER  
*Tech. Officer:* NMO/D JAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 14**                    **GEORGE WASHINGTON UNIV**                    **3408**  
 AEROACOUSTICS RESEARCH PROGRAM IN JIAFS  
 05/16/1979 - 11/30/1999                    FY01: -\$3,264                    Total: \$3,601,667  
*Prin. Invest.:* H LIEBOWITZ, M K MYERS  
*Tech. Officer:* LARC/L R CLARK, LARC/D G STEPHENS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 24**                    **GEORGE WASHINGTON UNIV**                    **3409**  
 PROGRAMS OF RESEARCH IN FLIGHT SCIENCES  
 08/08/1979 - 11/30/1999                    FY01: -\$1,397                    Total: \$3,793,710  
*Prin. Invest.:* H LIEBOWITZ, J L WHITESIDES  
*Tech. Officer:* LARC/R T BRIGHT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 47**                    **GEORGE WASHINGTON UNIV**                    **3410**  
 CORE PROGRAM IN THE JOINT INST FOR ADVANCEMENT OF FLIGHT  
 SCIENCES AT THE NASA-LANGLEY RESEARCH  
 11/05/1980 - 11/30/2000                    FY01: -\$20,223                    Total: \$5,461,231  
*Prin. Invest.:* J L WHITESIDES, H W LIEBOWITZ  
*Tech. Officer:* LARC/R L YANG, LARC/M F CARD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 326**                    **GEORGE WASHINGTON UNIV**                    **3411**  
 A PROGRAM OF RESEARCH IN FLIGHT DYNAMICS IN JIAFS  
 01/27/1999 - 11/30/2001                    FY01: \$70,000                    Total: \$279,239  
*Prin. Invest.:* V KLEIN  
*Tech. Officer:* LARC/J G BATTERSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 331**                    **GEORGE WASHINGTON UNIV**                    **3412**  
 A COOPERATIVE PROGRAM OF RESEARCH & EDUCATION IN AEROSPACE  
 VEHICLE MECHANICS AT JIAFS  
 03/22/1999 - 12/31/2002                    FY01: \$265,000                    Total: \$825,992  
*Prin. Invest.:* R H TOLSON  
*Tech. Officer:* LARC/R W BUCHAN/  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 1 370**                    **GEORGE WASHINGTON UNIV**                    **3413**  
 EXPERIMENTS IN THE FLUID AND THERMAL SCIENCES  
 02/10/2000 - 11/30/2001                    FY01: \$118,000                    Total: \$251,857  
*Prin. Invest.:* A D CUTLER  
*Tech. Officer:* LARC/G S DISKIN, LARC/M W SMITH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 374**                    **GEORGE WASHINGTON UNIV**                    **3414**  
 AEROACOUSTICS RESEARCH PROGRAM JIAFS  
 02/15/2000 - 11/30/2001                    FY01: \$56,790                    Total: \$144,801  
*Prin. Invest.:* M K MYERS  
*Tech. Officer:* LARC/C A POWELL  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 384**                    **GEORGE WASHINGTON UNIV**                    **3415**  
 A RESEARCH PROGRAM IN FLIGHT SCIENCES AT THE NASA LANGLEY  
 RESEARCH CENTER - JIAFS  
 03/07/2000 - 11/30/2001                    FY01: \$141,248                    Total: \$375,303  
*Prin. Invest.:* J L WHITESIDES  
*Tech. Officer:* LARC/E WAGGONER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 387**                    **GEORGE WASHINGTON UNIV**                    **3416**  
 A PROGRAM OF RESEARCH AND EDUCATION IN AERO-SPACE VEHICLE  
 DESIGN, SYNTHESIS, AND OPTIMIZATION  
 03/13/2000 - 11/30/2001                    FY01: \$193,368                    Total: \$370,227  
*Prin. Invest.:* R R SANDUSKY  
*Tech. Officer:* LARC/M D MOORE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 01017**                    **GEORGE WASHINGTON UNIV**                    **3417**  
 PROGRAM OF RESEARCH AND EDUCATION IN AEROSPACE STRUCTURES  
 AT THE JOINT INST FOR ADVANCEMENT  
 01/18/2001 - 11/30/2001                    FY01: \$344,890                    Total: \$344,890  
*Prin. Invest.:* P A COOPER, R H TOLSON  
*Tech. Officer:* LARC/K L BRINKLEY  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 1 01020**                    **GEORGE WASHINGTON UNIV**                    **3418**  
 A CORE PROGRAM IN JIAFS  
 02/02/2001 - 11/30/2001                    FY01: \$133,706                    Total: \$133,706  
*Prin. Invest.:* J WHITESIDES  
*Tech. Officer:* LARC/R A HATHAWAY/E J PRIOR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 51**                    **GEORGE WASHINGTON UNIV**                    **3419**  
 PROGRAM FOR RESEARCH AND EDUCATION IN SPACE TECHNOLOGY  
 12/14/1992 - 09/30/1999                    FY01: \$1,961                    Total: \$2,849,048  
*Prin. Invest.:* G FRIEDER, N BEDEWI  
*Tech. Officer:* GSFC/T E HUBER, GSFC/J R ROBINSON  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 5 436**                    **GEORGE WASHINGTON UNIV**                    **3420**  
 PROGRAM FOR RESEARCH AND EDUCATION IN SPACE TECHNOLOGY  
 (PREST)  
 10/04/1999 - 09/30/2001                    FY01: \$124,117                    Total: \$192,253  
*Prin. Invest.:* S A SARKANI, NONE  
*Tech. Officer:* GSFC/D ASATO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 40056**                    **GEORGE WASHINGTON UNIV**                    **3421**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/01/1995 - 02/28/2000                    FY01: -\$43,188                    Total: \$270,552  
*Prin. Invest.:* J M LOGSDON  
*Tech. Officer:* HQ/E T SCHWARTZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 52223**                    **GEORGE WASHINGTON UNIV**                    **3422**  
 SCIENCE & ENG. APPRENTICE PROGRAM; TRANSFER FR AMES 10/2000;  
 ENTERED 5/2001; GSFC STARTS SUPP 3  
 06/05/1997 - 05/15/2000                    FY01: \$0                    Total: \$72,199  
*Prin. Invest.:* M KRUPSAW  
*Tech. Officer:* ARC/G D BLANEY, ARC/D S OZBURN  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 2 52263**                      **GEORGE WASHINGTON UNIV**                      **3423**  
 SCI & ENG. APPRENTICE PROGRAM; TRANS GSFC FR AMES GSFC STARTS  
 SUPP. #2  
 06/30/2000 - 06/14/2001                      FY01: \$0                      Total: \$27,837  
*Prin. Invest.:* M KRUPSAW  
*Tech. Officer:* ARC/G D BLANEY, ARC/D S OZBORN  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 5 30**                      **GEORGE WASHINGTON UNIV**                      **3424**  
 IMAGE RESTORATION AND NOISE REMOVAL IN HOLOGRAPHIC DATA  
 07/15/1996 - 08/14/2000                      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* M H LOEW  
*Tech. Officer:* GSFC/G A SOFFEN, GSFC/J DORBAND  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 40058**                      **GEORGE WASHINGTON UNIV**                      **3425**  
 THE NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PR  
 02/14/1997 - 02/28/2000                      FY01: \$0                      Total: \$595,000  
*Prin. Invest.:* J M LOGSDON  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1058**                      **GEORGETOWN UNIV**                      **3426**  
 CALCIUM KINETIC DURING SPACE FLIGHT  
 12/16/1998 - 12/31/2000                      FY01: \$0                      Total: \$39,339  
*Prin. Invest.:* E WASTNEY  
*Tech. Officer:* JSC/S M SMITH  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1366**                      **GEORGETOWN UNIV**                      **3427**  
 AWARD BASIC GRANT IN THE AMOUNT  
 08/16/2001 - 09/30/2004                      FY01: \$43,000                      Total: \$43,000  
*Prin. Invest.:* J M JESSUP  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 1 2019**                      **HOWARD UNIV**                      **3428**  
 STRUCTURE-FUNCTION RELATIONSHIPS OF IMPACT-MODIFIED CYANATE  
 ESTER RESINS  
 03/13/1998 - 03/15/2002                      FY01: \$0                      Total: \$300,000  
*Prin. Invest.:* W E COLLINS  
*Tech. Officer:* LARC/H L BELVIN, LARC/J W CONNELL  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 1 2124**                      **HOWARD UNIV**                      **3429**  
 INVESTIGATION OF WAKE-VORTEX/AIRCRAFT ENCOUNTERS  
 12/14/1998 - 08/31/2000                      FY01: -\$1,767                      Total: \$14,387  
*Prin. Invest.:* S T SMITH, C ROBERTS, K PETE  
*Tech. Officer:* LARC/D D VICROY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2148**                      **HOWARD UNIV**                      **3430**  
 CONTRIBUTION OF FLAP-SIDE EDGE VORTEX BURSTING TO AIRFRAME  
 NOISE (NRA 98-LARC-5)  
 02/05/1999 - 11/04/2001                      FY01: \$63,415                      Total: \$217,274  
*Prin. Invest.:* S T SMITH  
*Tech. Officer:* LARC/R R ANTOLIFF  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1526**                      **HOWARD UNIV**                      **3431**  
 A SEARCH FOR PORPHYRINS & METALLOPORPHYRINS IN THE  
 MURCHISON METEORITE USING MALDI-TOF MASS SPECTRO  
 09/27/2001 - 09/30/2002                      FY01: \$60,778                      Total: \$60,778  
*Prin. Invest.:* P HAMBRIGHT  
*Tech. Officer:* ARC/G COOPER, ARC/B J COLLINS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 1978**                      **HOWARD UNIV**                      **3432**  
 AEROSPACE POWER SYSTEM AUTOMATION  
 10/25/1996 - 12/31/2000                      FY01: \$0                      Total: \$300,000  
*Prin. Invest.:* J A MOMOH  
*Tech. Officer:* GRC/J L DOLCE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2030**                      **HOWARD UNIV**                      **3433**  
 EXPERIMENTAL IMPLEMENTATION OF HIGH PERFORMANCE AC DRIVES  
 USING NERAL DESIGNS  
 04/04/1997 - 08/31/2000                      FY01: \$0                      Total: \$140,000  
*Prin. Invest.:* A RUBARI  
*Tech. Officer:* GRC/D F NOGA, GRC/D M KAW KAM  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2287**                      **HOWARD UNIV**                      **3434**  
 EXPERIMENTAL VERIFICATION OF ELECTRIC DRIVE TECHNOLOGIES  
 BASED ON ARTIFICIAL INTELLIGENCE TOOLS  
 08/23/1999 - 06/01/2002                      FY01: \$76,000                      Total: \$152,000  
*Prin. Invest.:* D RUBARI  
*Tech. Officer:* GRC/D F NOGA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2429**                      **HOWARD UNIV**                      **3435**  
 A TRANSPORT OPERATION AND CONTROL OF HIGH PERFORMANCE,  
 POWER MANAGEMENT AND DISTRIBUTION (PMAD)  
 05/23/2000 - 12/31/2001                      FY01: \$0                      Total: \$58,065  
*Prin. Invest.:* D A MOMOH  
*Tech. Officer:* GRC/R M BUTTON  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2621**                      **HOWARD UNIV**                      **3436**  
 DETECTION, DIAGNOSIS, LOCATION AND RECOMMENDATION OF REME-  
 DIAL ACTIONS FOR CORONA/SOFT FAULTS  
 05/24/2001 - 04/05/2003                      FY01: \$57,517                      Total: \$57,517  
*Prin. Invest.:* D A MOMOH  
*Tech. Officer:* GRC/R M BUTTON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 6066**                      **HOWARD UNIV**                      **3437**  
 THE DEVELOPMENT OF A NEW GENERATION TRAPPED RADIAT  
 07/28/1997 - 01/31/2001                      FY01: \$0                      Total: \$290,959  
*Prin. Invest.:* R BOURGIN  
*Tech. Officer:* GSFC/S FUNG  
*CASE Category:* 21 - MATHEMATICS

**NAG 5 6835**                      **HOWARD UNIV**                      **3438**  
 LABORATORY STUDIES OF NITRILES IN TITAN'S ATMOSPHERE: CYANOAC-  
 ETYLENES AND C3N  
 01/07/1998 - 12/31/2000                      FY01: \$0                      Total: \$189,368  
*Prin. Invest.:* J HALPERN  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7384**                      **HOWARD UNIV**                      **3439**  
 PUBLIC SERVICE INTERN PROGRAM  
 05/13/1998 - 05/14/2000      FY01: \$0                      Total: \$161,300  
*Prin. Invest.:* D WOODARD  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8790**                      **HOWARD UNIV**                      **3440**  
 QUALITY SOFTWARE: KNOWLEDGE ACQUISITION IN SOFTWARE ENGINEERING RESEARCH  
 08/31/1999 - 08/31/2001      FY01: \$0                      Total: \$200,000  
*Prin. Invest.:* J TRIMBLE  
*Tech. Officer:* GSFC/W TRUSZKOWSKI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 9279**                      **HOWARD UNIV**                      **3441**  
 TO PROVIDE 7 ON-SITE INTERNSHIPS AT GODDARD FOR GRADUATE STUDENTS IN ADMINISTRATIVE DISCIPLINES  
 03/21/2000 - 03/31/2001      FY01: \$0                      Total: \$73,700  
*Prin. Invest.:* W WOODARD  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10371**                      **HOWARD UNIV**                      **3442**  
 NANOCOMPOSITE-BASED COMPACT THERMOMAGNETIC CRYOCOO LERS  
 NRA PROPOSAL#1319  
 02/09/2001 - 01/14/2002      FY01: \$126,399                      Total: \$126,399  
*Prin. Invest.:* T HUBER  
*Tech. Officer:* GSFC/J TUTTLE  
*CASE Category:* 13 - PHYSICS

**NAG 5 10675**                      **HOWARD UNIV**                      **3443**  
 SUPPLEMENT TO THE CENTER FOR THE STUDY OF TERRESTR IAL AND EXTRATERRESTRIAL ATMOSPHERES (CSTEA)  
 03/27/2001 - 03/14/2002      FY01: \$200,000                      Total: \$200,000  
*Prin. Invest.:* A N THORPE  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10838**                      **HOWARD UNIV**                      **3444**  
 PUBLIC SERVICE INTERN PROGRAM  
 05/11/2001 - 05/31/2002      FY01: \$73,700                      Total: \$73,700  
*Prin. Invest.:* M C WOODARD  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11118**                      **HOWARD UNIV**                      **3445**  
 TECHNOLOGY ASSESSMENT AND RELIABILITY CHARACTERIZA TION OF III-VSEMICONDUCTOR MODFET DEVICE  
 08/07/2001 - 08/14/2002      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* D MOHAMMAD  
*Tech. Officer:* GSFC/A SHARMA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 9 977**                      **HOWARD UNIV**                      **3446**  
 CAFFEINE METBOLISM-THE PHARMACOKINETICS OF SPACE FLIGHT  
 09/30/1997 - 06/30/2001      FY01: \$0                      Total: \$394,052  
*Prin. Invest.:* M W COOMES  
*Tech. Officer:* JSC/L PUTCHA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAS 5 00214**                      **HOWARD UNIV**                      **3447**  
 HIERARCHICAL ALGORITHMS & THEIR EMBEDDED COMPUTATIONAL REALIZATION IN RECONFIGURABLE H/W.  
 09/29/2000 - 09/28/2002      FY01: \$234,354                      Total: \$234,354  
*Prin. Invest.:* C GLOTZER  
*Tech. Officer:* GSFC/J STEPHENS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 184**                      **HOWARD UNIV**                      **3448**  
 TERRESTRIAL AND EXTRATERRESTRIAL ATMOSPHERES  
 03/12/1997 - 02/28/2002      FY01: \$999,422                      Total: \$4,997,706  
*Prin. Invest.:* A N THORPE  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 197**                      **HOWARD UNIV**                      **3449**  
 CSTE A HBCU ACADEMIC AND RESEARCH CONSORTIUM (CHARC)  
 05/22/1997 - 05/31/2000      FY01: \$0                      Total: \$2,200,000  
*Prin. Invest.:* A N THORPE  
*Tech. Officer:* GSFC/W R HOEGY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 387**                      **HOWARD UNIV**                      **3450**  
 CENTER FOR THE STUDY OF TERRESTRIAL AND EXTRATERRE STRIAL ATMOSPHERES(CSTEA)  
 04/16/1999 - 07/31/2001      FY01: \$23,362                      Total: \$223,362  
*Prin. Invest.:* S T SMITH  
*Tech. Officer:* GSFC/W R HOEGY  
*CASE Category:* 13 - PHYSICS

**NCC 5 420**                      **HOWARD UNIV**                      **3451**  
 CSTE A-HBCU ACACEMIC AND RESEARCH CONSORTIUM (CHARC )  
 08/30/1999 - 08/31/2002      FY01: \$0                      Total: \$1,125,000  
*Prin. Invest.:* A THORPE  
*Tech. Officer:* GSFC/W HOEGY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 424**                      **HOWARD UNIV**                      **3452**  
 GSFC/HU FELLOWSHIP IN ATMOSPHERIC SCIENCE (GOHFAS)  
 08/27/1999 - 08/31/2001      FY01: \$0                      Total: \$175,000  
*Prin. Invest.:* S T SMITH  
*Tech. Officer:* GSFC/W HOEGY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 556**                      **HOWARD UNIV**                      **3453**  
 GODDARD SPACE FLIGHT CENTER/HOWARD UNIV FELL OWSHIP IN ATMOSPHERIC SCIENCE (GOHFAS)  
 05/24/2001 - 04/30/2002      FY01: \$295,000                      Total: \$295,000  
*Prin. Invest.:* S T SMITH  
*Tech. Officer:* GSFC/W R HOEGY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 8 184**                      **HOWARD UNIV**                      **3454**  
 IMPORT OF IMPAIRED POLYADP-RIBOSYLATION AND FREE RADICAL STRESS IN ATAXIA-TELANGIECTASIA  
 09/01/1999 - 08/31/2001      FY01: \$0                      Total: \$99,349  
*Prin. Invest.:* R SRIDHAR  
*Tech. Officer:* MSFC/R SRIDHAR  
*CASE Category:* 56 - MEDICL

## DISTRICT OF COLUMBIA

## NASA'S UNIVERSITY PROGRAM

**NGT 5 77**                    **HOWARD UNIV**                    **3455**  
 SUPPORT OF THE 1999 ASEE-NASA SUMMER FACULTY FELLOWSHIP PROGRAM(AERONAUTICS AND SPACE RESEARCH)  
 03/25/1999 - 12/31/2000      FY01: \$0                    Total: \$431,500  
*Prin. Invest.:* J B HALPERN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 113**                    **HOWARD UNIV**                    **3456**  
 SUPPORT OF THE 2001 ASEE-NASA SUMMER FACULTY FELLOWSHIP PROGRAM (AERONAUTICS & SPACE RESEARCH)  
 04/13/2001 - 03/31/2002      FY01: \$354,000                    Total: \$354,000  
*Prin. Invest.:* J B HALPERN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10027**                    **THE AMERICAN UNIV**                    **3457**  
 DEEP LITHOSPHERIC STRUCTURE.  
 10/02/2000 - 09/30/2001      FY01: \$7,740                    Total: \$7,740  
*Prin. Invest.:* J KUTINA  
*Tech. Officer:* GSFC/P TAYLOR  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 5 269**                    **THE AMERICAN UNIV**                    **3458**  
 DEVELOPMENT OF STATE OF THE ART SOLID STATE LASERS FOR ALTIMETRY AND OTHER LIDAR APPLICATIONS  
 02/11/1998 - 06/30/2000      FY01: \$0                    Total: \$473,454  
*Prin. Invest.:* R B KAY  
*Tech. Officer:* GSFC/J L BUFTON  
*CASE Category:* 13 - PHYSICS

**NCC 5 482**                    **THE AMERICAN UNIV**                    **3459**  
 DEVELOPMENT OF STATE-OF-THE-ART SOLID STATE LASERS FOR ALTIMETRY & OTHER LIDAR APPLICATIONS  
 03/23/2000 - 04/30/2002      FY01: \$90,621                    Total: \$343,682  
*Prin. Invest.:* R B KAY  
*Tech. Officer:* GSFC/J L BUFTON  
*CASE Category:* 13 - PHYSICS

**NGT 5 79**                    **THE AMERICAN UNIV**                    **3460**  
 YEAR 1 OF GSRP GRANT FOR MR. SAMUEL GOMPERS OF THE AMERICAN UNIVERSITY IN SUPPORT OF MICROLASER DEVELOPMENT  
 05/04/1999 - 12/31/2000      FY01: -\$4,115                    Total: \$25,218  
*Prin. Invest.:* J KAY  
*Tech. Officer:* GSFC/G SOFFEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 40068**                    **THE AMERICAN UNIV**                    **3461**  
 DISTRICT OF COLUMBIA/NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/29/2000 - 02/28/2002      FY01: \$212,500                    Total: \$425,000  
*Prin. Invest.:* R BERENDZEN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01066**                    **THE CATHOLIC UNIV OF AMERICA**                    **3462**  
 REAL-TIME ADAPTIVE AUTOMATION OF FLIGHT TASKS  
 04/18/2001 - 12/31/2001      FY01: \$38,837                    Total: \$38,837  
*Prin. Invest.:* R PARASURAMAN  
*Tech. Officer:* LARC/L J PRINZEL  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 2 1096**                    **THE CATHOLIC UNIV OF AMERICA**                    **3463**  
 DYNAMIC AUTOMATION TOOLS FOR AIR TRAFFIC MANAGEMENT  
 12/09/1996 - 02/28/2001      FY01: \$0                    Total: \$959,796  
*Prin. Invest.:* R PARASURAMAN  
*Tech. Officer:* ARC/W JOHNSON, ARC/M R ROSEKEND  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 5 1413**                    **THE CATHOLIC UNIV OF AMERICA**                    **3464**  
 OBSERVATIONS OBTAINED W/ GODDARD HIGH RESOLUTION  
 08/02/1990 - 09/30/1999      FY01: -\$111                    Total: \$280,895  
*Prin. Invest.:* F C BRUHWEILER, C A GRADY  
*Tech. Officer:* GSFC/A SMITH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3378**                    **THE CATHOLIC UNIV OF AMERICA**                    **3465**  
 OBSERVATIONS AND ANALYSIS OF DATA OBTAINED BY THE SPACE TELESCOPE IMAGING SPECTROGRAPH  
 08/28/1996 - 09/30/2001      FY01: \$0                    Total: \$453,665  
*Prin. Invest.:* A BOGGESS  
*Tech. Officer:* GSFC/T R GULL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3487**                    **THE CATHOLIC UNIV OF AMERICA**                    **3466**  
 MEASURING BORON ABUNDANCES WITH IUE SPECTRA USING LINES  
 11/25/1996 - 11/14/2000      FY01: \$0                    Total: \$31,905  
*Prin. Invest.:* F C BRUNHWEILER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4103**                    **THE CATHOLIC UNIV OF AMERICA**                    **3467**  
 OBSERVATIONS AND ANALYSIS OF SEYFERT GALAXIES WITH THE SPACE TELESCOPE IMAGING SPECTROGRAPH  
 03/31/1997 - 08/31/2002      FY01: \$20,000                    Total: \$812,607  
*Prin. Invest.:* S KRAEMER  
*Tech. Officer:* GSFC/T GULL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4345**                    **THE CATHOLIC UNIV OF AMERICA**                    **3468**  
 EXPERIMENTAL STUDIES OF INGENOUS PROCESSES IN ENST  
 04/09/1997 - 04/30/2001      FY01: \$0                    Total: \$159,000  
*Prin. Invest.:* D DICKINSON  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4362**                    **THE CATHOLIC UNIV OF AMERICA**                    **3469**  
 SPATIAL-SPECTRAL MAPPING OF CO EMISSION IN COMETS HALE-BOPP, AND COMPARISON WITH OTHER ORGANICS  
 04/21/1997 - 09/30/2001      FY01: \$0                    Total: \$89,765  
*Prin. Invest.:* D DISANTI  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4940**                    **THE CATHOLIC UNIV OF AMERICA**                    **3470**  
 INTERPRETIVE TOOLS FOR ANALYSIS OF CORONAL IMAGES  
 06/23/1997 - 09/30/2001      FY01: \$0                    Total: \$192,800  
*Prin. Invest.:* D GUHATHAKURTA  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 6026 THE CATHOLIC UNIV OF AMERICA 3471**  
 DEVELOPMENT OF VERY LIGHT WEIGHT ACTIVE OPTICS  
 09/04/1997 - 06/30/2001 FY01: \$0 Total: \$66,714  
*Prin. Invest.:* F BRUHWEILER  
*Tech. Officer:* GSFC/C BOWERS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6139 THE CATHOLIC UNIV OF AMERICA 3472**  
 NEAR-SURFACE MANIFESTATIONS OF GEO-EFFECTIVE SOLAR  
 09/08/1997 - 09/14/2002 FY01: \$0 Total: \$198,827  
*Prin. Invest.:* D GOPALSWAMY  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6239 THE CATHOLIC UNIV OF AMERICA 3473**  
 A STUDY OF PHYSICAL PROCESSES IN THE ATMOSPHERE OF  
 09/08/1997 - 09/30/2002 FY01: \$0 Total: \$268,375  
*Prin. Invest.:* R D ROBINSON  
*Tech. Officer:* GSFC/K G CARPENTER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6674 THE CATHOLIC UNIV OF AMERICA 3474**  
 THE NATURE AND ORIGIN OF THE HGMM PHENOMENA  
 11/21/1997 - 05/31/2000 FY01: -\$9,370 Total: \$80,630  
*Prin. Invest.:* F BRUHWEILER  
*Tech. Officer:* GSFC/D LECKRONE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7078 THE CATHOLIC UNIV OF AMERICA 3475**  
 MAPPING OF HIGH-ALTITUDE OZONE IN THE ATMOSPHERE OF MARS  
 02/25/1998 - 02/28/2001 FY01: \$0 Total: \$114,700  
*Prin. Invest.:* V A KRASNOPOLSKY  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7132 THE CATHOLIC UNIV OF AMERICA 3476**  
 STUDIES OF THE DISTRIBUTION OF AEROSOLS AND THEIR EFFECT ON  
 MARTIAN ATMOSPHERIC DYNAMICS USING M  
 03/06/1998 - 02/29/2000 FY01: -\$431 Total: \$59,269  
*Prin. Invest.:* D D SMITH  
*Tech. Officer:* GSFC/J PEARL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7413 THE CATHOLIC UNIV OF AMERICA 3477**  
 INVESTIGATION OF THE SOLAR CORONA WITH THE SPARTAN 201 WHITE-  
 LIGHT CORONAGRAPH SYSTEM  
 06/05/1998 - 05/14/2000 FY01: \$0 Total: \$74,528  
*Prin. Invest.:* S GIBSON  
*Tech. Officer:* GSFC/R R FISCHER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7753 THE CATHOLIC UNIV OF AMERICA 3478**  
 QUANTITATIVE ANALYSIS OF ETHANE AND METHANE IN COMETS HYAKU-  
 TAKE AND HALE-BOPP: DETERMINATION OF  
 12/08/1998 - 12/31/2001 FY01: \$34,100 Total: \$98,174  
*Prin. Invest.:* N RUSSO  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7905 THE CATHOLIC UNIV OF AMERICA 3479**  
 SPATIAL-SPECTRAL MAPPING OF COMETARY CO EMISSION, AND  
 COMPARISON WITH OTHER ORGANICS  
 12/10/1998 - 09/30/2002 FY01: \$83,500 Total: \$238,350  
*Prin. Invest.:* D A DISANTI  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8018 THE CATHOLIC UNIV OF AMERICA 3480**  
 INTERPRETATION OF SOHO/LASCO, EIT, UVCS OBSERVATIONS USING A  
 MULTI-DIMENSIONAL MHD MODEL  
 01/06/1999 - 12/31/2001 FY01: \$62,000 Total: \$172,276  
*Prin. Invest.:* M GUATHAKURTA  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8276 THE CATHOLIC UNIV OF AMERICA 3481**  
 RADIATIVE ACCELERATION CALCULATIONS FOR B STAR ENVELOPES AND  
 ATMOSPHERES (ATP 98)  
 02/19/1999 - 02/28/2002 FY01: \$60,000 Total: \$157,491  
*Prin. Invest.:* C R PROFFITT  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8312 THE CATHOLIC UNIV OF AMERICA 3482**  
 LABORATORY PREPARATION AND REACTIONS OF DIRADICAL SPECIES  
 RELEVANT TO HYDROCARBON PHOTOCHEMISTRY  
 03/22/1999 - 02/28/2000 FY01: -\$4,825 Total: \$65,375  
*Prin. Invest.:* D J BOGAN  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8357 THE CATHOLIC UNIV OF AMERICA 3483**  
 GRANT FUNDS FOR UNIV SUPPORT OF ELEANOR ROOS EVELT HIGH  
 SCHOOL INVOLVEMENT IN US FIRST ROB  
 03/11/1999 - 01/31/2000 FY01: -\$1,326 Total: \$18,674  
*Prin. Invest.:* D NGUYEN  
*Tech. Officer:* GSFC/L PURVES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8508 THE CATHOLIC UNIV OF AMERICA 3484**  
 EXPERIMENTAL STUDIES OF IGNEOUS PROCESSES IN ENSTATITE  
 METEORITES  
 05/21/1999 - 04/30/2002 FY01: \$10,000 Total: \$20,000  
*Prin. Invest.:* T DICKINSON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8529 THE CATHOLIC UNIV OF AMERICA 3485**  
 LUNAR ABUNDANCES OF RADIOACTIVE ELEMENTS AND IMPLICATIONS  
 FOR LUNAR EVOLUTION  
 06/15/1999 - 06/30/2001 FY01: \$0 Total: \$49,000  
*Prin. Invest.:* R D STARR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8619 THE CATHOLIC UNIV OF AMERICA 3486**  
 RESEARCH SUPPORT OF WIND MAGNETIC FIELD INSTRUMENT  
 06/18/1999 - 12/31/2000 FY01: \$0 Total: \$25,000  
*Prin. Invest.:* Y C WHANG  
*Tech. Officer:* GSFC/J A SLAVIN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8622 THE CATHOLIC UNIV OF AMERICA 3487**  
 CONTINUED DEVELOPMENT OF A FABRY-PEROT AND LYOT NARROW  
 BAND IMAGING SYSTEM.  
 06/22/1999 - 06/30/2002 FY01: \$0 Total: \$58,180  
*Prin. Invest.:* F C BRUHWEILER  
*Tech. Officer:* GSFC/B WOODGATE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8631 THE CATHOLIC UNIV OF AMERICA 3488**  
 ATOMIC & MOLECULAR ABUNDANCES IN THE INTERSTELLAR MEDIUM OF  
 THE MILKY WAY AND THE MAGELLANIC  
 06/25/1999 - 08/14/2001 FY01: \$0 Total: \$228,786  
*Prin. Invest.:* F C BRUHWEILER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8691 THE CATHOLIC UNIV OF AMERICA 3489**  
 A SEARCH FOR ROTATIONAL MODULATION OF X-RAY CTRS ON GAMMA  
 CAS (BO.5E)  
 07/21/1999 - 01/31/2001 FY01: \$0 Total: \$9,810  
*Prin. Invest.:* R D ROBINSON  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8752 THE CATHOLIC UNIV OF AMERICA 3490**  
 LARGE SCALE STRUCTURE IN THE DISTANT UNIVERSE  
 08/17/1999 - 12/31/2000 FY01: \$0 Total: \$91,366  
*Prin. Invest.:* F C BRUHWEILER  
*Tech. Officer:* GSFC/B E WOODGATE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8761 THE CATHOLIC UNIV OF AMERICA 3491**  
 HUMAN BIOLOGY-BASED ADAPTIVE SYSTEMS IN SUPPORT OF SPACE  
 EXPLORATION  
 09/03/1999 - 08/31/2002 FY01: \$207,567 Total: \$472,334  
*Prin. Invest.:* R D PARASURAMAN  
*Tech. Officer:* GSFC/R CROUCH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8793 THE CATHOLIC UNIV OF AMERICA 3492**  
 ULTRAVIOLET DIAGNOSTICS OF MAGNETIC AND RELATED ACTIVITY IN  
 MAIN SEQUENCE B STARS (ADP 98)  
 09/07/1999 - 11/30/2001 FY01: \$29,424 Total: \$65,760  
*Prin. Invest.:* M SMITH  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8968 THE CATHOLIC UNIV OF AMERICA 3493**  
 CORONAL EMISSION AND MASS LOSS IN THE HOTTEST STAR OF THE H-R  
 DIAGRAM - FUSE  
 01/24/2000 - 01/31/2002 FY01: \$0 Total: \$48,100  
*Prin. Invest.:* F C BRUHWEILER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8998 THE CATHOLIC UNIV OF AMERICA 3494**  
 THE DRIVERS OF CORONAL AND INTERPLANETARY SHOCKS.  
 02/02/2000 - 02/14/2002 FY01: \$0 Total: \$110,000  
*Prin. Invest.:* N GOPALSWAMY  
*Tech. Officer:* GSFC/M L KAISER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9394 THE CATHOLIC UNIV OF AMERICA 3495**  
 VOYAGER CROSSING OF THE TERMINATION SHOCK  
 04/06/2000 - 04/14/2001 FY01: \$0 Total: \$25,000  
*Prin. Invest.:* Y C WHANG  
*Tech. Officer:* GSFC/L F BURLQGA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9400 THE CATHOLIC UNIV OF AMERICA 3496**  
 MAPPING OF HIGH-ALTITUDE OZONE IN THE ATMOSPHERE OF MARS  
 04/10/2000 - 03/31/2001 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* V A KRASNOPOLSKY  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9502 THE CATHOLIC UNIV OF AMERICA 3497**  
 GLOBAL MEASUREMENT OF SOLAR WIND SPEED AND TEMPERA TURE IN  
 THE SUN'S CORONA USING GROUND BASED VISIBL  
 06/06/2000 - 06/14/2002 FY01: \$203,801 Total: \$251,639  
*Prin. Invest.:* O ST.CYR  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9539 THE CATHOLIC UNIV OF AMERICA 3498**  
 ABUNDANCES OF VERY HEAVY ELEMENTS IN LATE-B AND EARLY-A STARS  
 (ADP 99)  
 05/09/2000 - 05/14/2002 FY01: \$31,241 Total: \$60,458  
*Prin. Invest.:* G W WAHLGREN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9600 THE CATHOLIC UNIV OF AMERICA 3499**  
 MICROWAVE ENHANCEMENT IN CORONAL HOLES: STRUCTURE, VARI-  
 ABILITY & MAGNETIC NATURE  
 05/19/2000 - 09/14/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* N GOPALSWAMY  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9696 THE CATHOLIC UNIV OF AMERICA 3500**  
 HOT POPULATIONS IN NEARBY ELLIPTICAL GALAXIES - FUSE  
 07/18/2000 - 07/31/2002 FY01: \$0 Total: \$58,879  
*Prin. Invest.:* T BROWN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9865 THE CATHOLIC UNIV OF AMERICA 3501**  
 REDUCTION AND SCIENTIFIC ANALYSIS OF INFRARED DATA OBTAINED  
 WITH THE NEAR INFRARED SPECTROMETER  
 08/17/2000 - 06/14/2001 FY01: \$0 Total: \$37,210  
*Prin. Invest.:* F C BRUHWEILER  
*Tech. Officer:* GSFC/M M FRUEND  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9888 THE CATHOLIC UNIV OF AMERICA 3502**  
 A SPECTROSCOPIC STUDY OF ION MOTIONS IN CORONAL HOLES USING  
 SOHO/SUMER OBSERVATIONS  
 08/24/2000 - 08/31/2002 FY01: \$49,843 Total: \$99,686  
*Prin. Invest.:* T MORAN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 10006 THE CATHOLIC UNIV OF AMERICA 3503**  
 LARGE-SCALE STRUCTURE IN THE DISTANT UNIVERSE  
 09/22/2000 - 09/30/2002 FY01: \$0 Total: \$91,366  
*Prin. Invest.:* F C BRUHWEILER  
*Tech. Officer:* GSFC/B WOODGATE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10013 THE CATHOLIC UNIV OF AMERICA 3504**  
 RESEARCH EXPERIENCES FOR UNDERGRADUATES IN THE LABORATORY  
 FOR ASTRONOMY & SOLARPHYSICS  
 09/25/2000 - 09/30/2001 FY01: \$90,265 Total: \$96,107  
*Prin. Invest.:* F C BRUHWEILER  
*Tech. Officer:* GSFC/C CRANNEL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10033 THE CATHOLIC UNIV OF AMERICA 3505**  
 SPACE QUALIFICATION OF LARGE LIGHTWEIGHT MIRROR TECHNOLOGY  
 FOR USE AT VISIBLE & NEAR-IR WAVELENGTHS  
 09/29/2000 - 12/31/2001 FY01: \$42,000 Total: \$84,000  
*Prin. Invest.:* P C CHEN  
*Tech. Officer:* GSFC/S G NEFF  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10095 THE CATHOLIC UNIV OF AMERICA 3506**  
 DEVELOPMENT OF IR ARRAY SPECTROMETERS FOR GROUND- BASED &  
 SPACE-BORNE PLANETARY ASTRONOMY.  
 11/28/2000 - 11/30/2002 FY01: \$111,305 Total: \$111,305  
*Prin. Invest.:* F C BRUHWEILER  
*Tech. Officer:* GSFC/D C REUTER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10130 THE CATHOLIC UNIV OF AMERICA 3507**  
 SOLAR WIND ELECTRON DATA ANALYSES  
 12/06/2000 - 06/14/2002 FY01: \$64,000 Total: \$64,000  
*Prin. Invest.:* Y WHANG  
*Tech. Officer:* GSFC/K W OGILVIE  
*CASE Category:* 13 - PHYSICS

**NAG 5 10231 THE CATHOLIC UNIV OF AMERICA 3508**  
 THE DRIVERS OF CORONAL AND INTERPLANETARY SHOCKS  
 01/22/2001 - 02/14/2002 FY01: \$97,270 Total: \$97,270  
*Prin. Invest.:* N GOPALSWAMY  
*Tech. Officer:* GSFC/M L KAISER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10307 THE CATHOLIC UNIV OF AMERICA 3509**  
 DEVELOPMENT OF INSTRUMENTATION & MISSION OPERATION CONCEPTS  
 FOR THE SOLAR TERRESTRIAL RELATIONS OBSE  
 01/31/2001 - 01/31/2002 FY01: \$128,250 Total: \$128,250  
*Prin. Invest.:* D ST. CYR  
*Tech. Officer:* GSFC/D ORWIG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10382 THE CATHOLIC UNIV OF AMERICA 3510**  
 MONITORING THE VARIABLE ABSORPTION IN THE SEYFERT 1 GALAXY  
 NGC 3783 WITH FUSE, HST, AND CHANDRA  
 02/06/2001 - 02/14/2002 FY01: \$85,600 Total: \$85,600  
*Prin. Invest.:* D CRENSHAW  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10492 THE CATHOLIC UNIV OF AMERICA 3511**  
 CONTINUED MAPPING OF HIGH-ALTITUDE OZONE & SEARCH FOR NIGHT-  
 GLOW ON MARS  
 02/27/2001 - 02/28/2002 FY01: \$59,800 Total: \$59,800  
*Prin. Invest.:* V KRASNOPOLSKY  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10500 THE CATHOLIC UNIV OF AMERICA 3512**  
 SCIENTIFIC WORKSHOP AT THE CATHOLIC UNIV OF AMERICA: MASS  
 OUTFLOW ACTIVE GALACTIC NUCLEI: N  
 03/09/2001 - 12/31/2001 FY01: \$10,000 Total: \$10,000  
*Prin. Invest.:* S KRAEMER  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10575 THE CATHOLIC UNIV OF AMERICA 3513**  
 CORRELATIVE PHOTOCHEMICAL STUDY OF THE IRTF-CSHELL MAPS OF  
 O3, CO & H2O & THE MGS TES OBSERVATIONS O  
 03/13/2001 - 03/14/2002 FY01: \$55,000 Total: \$55,000  
*Prin. Invest.:* V KRASNOPOLSKY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10680 THE CATHOLIC UNIV OF AMERICA 3514**  
 DARK CLUSTERS AS GRAVITATIONAL LENSES  
 04/02/2001 - 03/31/2002 FY01: \$24,020 Total: \$24,020  
*Prin. Invest.:* G WILLIGER  
*Tech. Officer:* GSFC/D KAZANAS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10795 THE CATHOLIC UNIV OF AMERICA 3515**  
 GROUND-BASED INFRARED SPECTROSCOPY OF WATER IN COMETS:  
 FLUORESCENCE MODELING AND QUANTITATIVE AN  
 04/25/2001 - 04/30/2002 FY01: \$42,300 Total: \$42,300  
*Prin. Invest.:* N D RUSSO  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10837 THE CATHOLIC UNIV OF AMERICA 3516**  
 PROPAGATION OF CMES THROUGH THE INTERPLANETARY MEDIUM:  
 INTERACTIONS WITH THE SOLAR WIND  
 04/27/2001 - 04/30/2002 FY01: \$50,880 Total: \$50,880  
*Prin. Invest.:* N GOPALSWAMY *Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10867 THE CATHOLIC UNIV OF AMERICA 3517**  
 X-RAY & MICROWAVE MODELS IN SUPPORT OF HESSI SOLAR FLARE  
 OBSERVATIONS.  
 05/07/2001 - 05/14/2002 FY01: \$10,800 Total: \$10,800  
*Prin. Invest.:* L OFMAN  
*Tech. Officer:* GSFC/G D HOLMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10870 THE CATHOLIC UNIV OF AMERICA 3518**  
 RXTE FLARES ON PROX CEN (ADP 00)  
 05/07/2001 - 05/14/2002 FY01: \$11,941 Total: \$11,941  
*Prin. Invest.:* R D ROBINSON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10931 THE CATHOLIC UNIV OF AMERICA 3519**  
 INVESTIGATING THE EXCITATION MECHANISM FOR COMETARY X-RAY,  
 EUV, & FUV EMISSIONS(FUSE 2000)  
 05/16/2001 - 05/31/2002 FY01: \$10,000 Total: \$10,000  
*Prin. Invest.:* V KRASNOPOLSKY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10944 THE CATHOLIC UNIV OF AMERICA 3520**  
 JUST WHAT IS ETA CARINAE - FUSE 00  
 05/24/2001 - 05/31/2002 FY01: \$23,500 Total: \$23,500  
*Prin. Invest.:* R IPING  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11003 THE CATHOLIC UNIV OF AMERICA 3521**  
 PHYSICAL PROPERTIES OF THE SOLAR WIND IN CORONAL HOLES  
 DEDUCED FROM WAVES IN PLUMES  
 06/06/2001 - 05/31/2002 FY01: \$10,000 Total: \$10,000  
*Prin. Invest.:* L OFMAN  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11014 THE CATHOLIC UNIV OF AMERICA 3522**  
 SEARCH FOR H2 IN MARS' ATMOSPHERE (FUSE 1999)  
 06/25/2001 - 06/30/2002 FY01: \$25,900 Total: \$25,900  
*Prin. Invest.:* V KRASNOPOLSKY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11131 THE CATHOLIC UNIV OF AMERICA 3523**  
 EVOLUTION OF THE BASTILLE DAY SHOCK AND MERGED INTERACTION  
 REGION  
 07/24/2001 - 07/31/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* Y C WHANG  
*Tech. Officer:* GSFC/L F BURLAGA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11137 THE CATHOLIC UNIV OF AMERICA 3524**  
 CIRCUMSTELLAR ENVIRONMENTS OF EVOLVED STARS AND THEIR  
 INTERACTION WITH THE INTERSTELLAR MEDIUM  
 07/20/2001 - 07/31/2002 FY01: \$115,711 Total: \$115,711  
*Prin. Invest.:* F C BRUHWEILER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11162 THE CATHOLIC UNIV OF AMERICA 3525**  
 CONSEQUENCES OF CME INTERACTION IN THE INTERPLANETARY  
 MEDIUM  
 08/07/2001 - 08/14/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* N GOPALSWAMY  
*Tech. Officer:* GSFC/M ACUNA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11225 THE CATHOLIC UNIV OF AMERICA 3526**  
 SOLAR WIND INTERACTION WITH THE MARTIAN CRUSTAL MAGNETIC  
 FIELDS AND THE IMPLICATIONS FOR THE EVOLUT  
 08/13/2001 - 08/14/2003 FY01: \$75,000 Total: \$75,000  
*Prin. Invest.:* D CRIDER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11327 THE CATHOLIC UNIV OF AMERICA 3527**  
 DEVELOPMENT OF GOSSAMER CLASS TELESCOPE MIRRORS  
 09/18/2001 - 03/31/2002 FY01: \$35,303 Total: \$35,303  
*Prin. Invest.:* P C CHEN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11342 THE CATHOLIC UNIV OF AMERICA 3528**  
 NEW MODEL ATMOSPHERES AND SPECTRAL ENERGY DISTRIBUTIONS  
 FOR STARS IN THE UPPER H-R DIAGRAM  
 09/24/2001 - 09/30/2002 FY01: \$70,615 Total: \$70,615  
*Prin. Invest.:* F C BRUHWEILER  
*Tech. Officer:* GSFC/S HEAP  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1247 THE CATHOLIC UNIV OF AMERICA 3529**  
 HUMAN FACTORS IN DISTRIBUTED AIR-GROUND TRAFFIC MANAGEMENT  
 03/26/2001 - 03/31/2002 FY01: \$30,082 Total: \$30,082  
*Prin. Invest.:* R PARASURAMAN  
*Tech. Officer:* ARC/R MOGFORD, ARC/P SNYDER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 68 THE CATHOLIC UNIV OF AMERICA 3530**  
 STUDIES OF ELEMENTARY REACTIONS OF CHEMICAL IMPORTANCE IN  
 THE ATMOSPHERES OF PLANETS  
 04/28/1994 - 04/30/2000 FY01: -\$2,063 Total: \$774,851  
*Prin. Invest.:* F L NESBITT  
*Tech. Officer:* GSFC/L J STIEF  
*CASE Category:* 12 - CHEMISTRY

**NCC 5 130 THE CATHOLIC UNIV OF AMERICA 3531**  
 HIGH RESOLUTION SPECTROSCOPY OF COMETARY COMAE AND PLAN-  
 ETARY ATMOSPHERES: IMPLEMENTATION OF THE NEW...  
 02/02/1996 - 03/31/2000 FY01: -\$3,014 Total: \$142,138  
*Prin. Invest.:* M DISANTI, M A DI SANTI  
*Tech. Officer:* GSFC/M J MUMMA  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 210 THE CATHOLIC UNIV OF AMERICA 3532**  
 INFRARED SPECTROSCOPY OF COMETS: AN OBSERVATIONAL STUDY OF  
 COMETARY COMPOSITION AND ORIGIN.  
 06/17/1997 - 05/31/2000 FY01: \$0 Total: \$158,760  
*Prin. Invest.:* N RUSSO  
*Tech. Officer:* GSFC/M J MUMMA  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 376 THE CATHOLIC UNIV OF AMERICA 3533**  
 THE DRIVERS OF CORONAL AND INTERPLANETARY SHOCKS  
 01/19/1999 - 01/31/2001 FY01: \$0 Total: \$59,600  
*Prin. Invest.:* N GOPALSWAMY  
*Tech. Officer:* GSFC/M ACUNA  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 377 THE CATHOLIC UNIV OF AMERICA 3534**  
 THE SUN-EARTH CONNECTION: SOLAR PHYSICS, PHYSICS OF THE HELIO-  
 SPHERE, AND SPACE WEATHER  
 01/27/1999 - 01/31/2001 FY01: \$0 Total: \$67,540  
*Prin. Invest.:* V ANDRETTA  
*Tech. Officer:* GSFC/A I POLAND  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

FLORIDA

**NCC 5 380 THE CATHOLIC UNIV OF AMERICA 3535**  
 INVESTIGATION OF X-RAY AND GAMMA-RAYS FROM SOLAR F LARES AND  
 PLANETARY TYPE BODIES  
 02/12/1999 - 03/31/2002 FY01: \$202,000 Total: \$1,014,985  
*Prin. Invest.:* R D STARR  
*Tech. Officer:* GSFC/L ORWIG  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 418 THE CATHOLIC UNIV OF AMERICA 3536**  
 MAINTENANCE OF THE ISTEP/IACG CDAW DATA BASE  
 08/19/1999 - 08/14/2001 FY01: \$0 Total: \$35,500  
*Prin. Invest.:* N GOPALSWAMY  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 5 445 THE CATHOLIC UNIV OF AMERICA 3537**  
 INFRARED SPECTROSCOPY OF COMETS: AN OBSERVATIONAL AND  
 EXPERIMENTAL STUDY OF COMETARY COMPOSITION AND  
 04/20/2000 - 05/31/2001 FY01: \$34,140 Total: \$38,140  
*Prin. Invest.:* N DELLO RUSSO, NONE  
*Tech. Officer:* GSFC/M J MUMMA  
*CASE Category:* 13 - PHYSICS

**NCC 5 452 THE CATHOLIC UNIV OF AMERICA 3538**  
 CHEMICAL/PHYSICAL PROPERTIES OF PLANETARY & ASTRO- PHYSICAL  
 MOLECULES  
 02/03/2000 - 04/30/2005 FY01: \$377,341 Total: \$542,309  
*Prin. Invest.:* T THORN  
*Tech. Officer:* GSFC/J E ALLEN  
*CASE Category:* 12 - CHEMISTRY

**NCC 5 504 THE CATHOLIC UNIV OF AMERICA 3539**  
 SPATIAL-SPECTRAL MAPPING OF CO AND OTHER EMISSIONS IN COMETS,  
 AND OF WATER IN MARS ATMOSPHERE  
 06/27/2000 - 03/31/2002 FY01: \$9,180 Total: \$15,580  
*Prin. Invest.:* M A DISANTI  
*Tech. Officer:* GSFC/M J MUMMA  
*CASE Category:* 13 - PHYSICS

**NCC 5 512 THE CATHOLIC UNIV OF AMERICA 3540**  
 RENEWAL OF COOP AGREEMENT NCC-418 MAINTENANCE OF CDAW DATA  
 BASE.  
 08/24/2000 - 08/31/2001 FY01: \$0 Total: \$7,000  
*Prin. Invest.:* N GOPALSWAMY  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 5 548 THE CATHOLIC UNIV OF AMERICA 3541**  
 HESSI DATA ANALYSIS  
 04/06/2001 - 04/14/2002 FY01: \$61,400 Total: \$61,400  
*Prin. Invest.:* D GOPALSWAMY  
*Tech. Officer:* GSFC/B DENNIS  
*CASE Category:* 13 - PHYSICS

**NGT 1 01028 THE CATHOLIC UNIV OF AMERICA 3542**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/12/2001 - 06/30/2004 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* R PARASURAMA  
*Tech. Officer:* LARC/D J WING  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52190 THE CATHOLIC UNIV OF AMERICA 3543**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/20/1998 - 06/30/2001 FY01: \$0 Total: \$54,001  
*Prin. Invest.:* S M GALSTER, R PARASURAMAN  
*Tech. Officer:* LARC/P C SHUTTE, LARC/A T POPE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 5 4724 UNIV OF DISTRICT OF COLUMBIA 3544**  
 SATURDAY ACADEMY PROGRAM  
 06/19/1997 - 03/31/2001 FY01: \$0 Total: \$1,768,980  
*Prin. Invest.:* W R COLEMAN  
*Tech. Officer:* GSFC/L RANDOLPH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9545 UNIV OF DISTRICT OF COLUMBIA 3545**  
 REMOTE SENSING SPECTRAL IDENTIFICATION OF FRESHWATER  
 PLANKTON  
 05/03/2000 - 01/14/2002 FY01: \$0 Total: \$72,143  
*Prin. Invest.:* H L PHELPS  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 10855 UNIV OF DISTRICT OF COLUMBIA 3546**  
 RETAINING HIGH POTENTIAL JUNIOR AND SENIOR HIGH SCHOOL  
 STUDENTS  
 05/02/2001 - 04/30/2002 FY01: \$295,047 Total: \$295,047  
*Prin. Invest.:* W COLEMAN  
*Tech. Officer:* GSFC/C HOLLINSWORTH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 196 UNIV OF DISTRICT OF COLUMBIA 3547**  
 PARTNERSHIP AWARD WITH MINORITY UNIVERSITIES AND C  
 05/22/1997 - 06/30/2000 FY01: \$0 Total: \$400,000  
*Prin. Invest.:* G WYCHE-MOORE  
*Tech. Officer:* GSFC/E ENGMAN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 5 421 UNIV OF DISTRICT OF COLUMBIA 3548**  
 ANACOSTIA RIVER INST FOR REMOTE SENSING: A COMMUNITY REMOTE-  
 SENSING PROGRAM  
 09/21/1999 - 09/30/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* G WYCHE-MOORE  
*Tech. Officer:* GSFC/D T TOLL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## FLORIDA

**NAG10 195 BETHUNE - COOKMAN COLLEGE 3549**  
 OPERATION OF THE CNTR FOR SPACE EDUCATION  
 09/11/1996 - 09/30/2001 FY01: \$121,627 Total: \$1,691,580  
*Prin. Invest.:* G W BECKLES, A E LONG  
*Tech. Officer:* KSC/S DUTCZAK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG10 269 BETHUNE - COOKMAN COLLEGE 3550**  
 NASA/FLORIDA MINORITY INST ENTREPRENEURIAL PARTNERSHIP  
 09/13/1999 - 10/31/2001 FY01: \$300,000 Total: \$1,200,000  
*Prin. Invest.:* A D TAYLOR  
*Tech. Officer:* KSC/W B WILLIAMS  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NCC 5 426**            **BETHUNE - COOKMAN COLLEGE**            **3551**  
 A BETTER, FASTER AND INEXPENSIVE PHOTOGRAMMETRY SYSTEM  
 09/07/1999 - 08/31/2002    FY01: \$0                            Total: \$199,991  
*Prin. Invest.:* E F EKPO  
*Tech. Officer:* GSFC/S E HETHERINGTON  
*CASE Category:* 13 - PHYSICS

**NCC10 55**            **BETHUNE - COOKMAN COLLEGE**            **3552**  
 OPERATION AT THE CENTER FOR SPACE EDUCATION  
 09/24/2001 - 09/24/2006    FY01: \$361,258                    Total: \$361,258  
*Prin. Invest.:* A LONG  
*Tech. Officer:* KSC/S DUTCZAK, KSC/P SAILER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11097**        **ECKERD COLLEGE**                            **3553**  
 INFRARED SPECTRA OF COSMIC-TYPE ICES CONTAINING NITROGEN  
 07/06/2001 - 07/14/2002    FY01: \$10,000                    Total: \$10,000  
*Prin. Invest.:* R L HUDSON  
*Tech. Officer:* GSFC/M H MOORE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 5199**        **EMBRY-RIDDLE AERONAUTICAL UNIV**        **3554**  
 ICE CONTENT AND ODD-OXYGEN IN NOCTILUCENT-CLOUDS (ICON)  
 06/18/1998 - 03/31/2002    FY01: \$0                            Total: \$313,791  
*Prin. Invest.:* P J ESPY  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5265**        **EMBRY-RIDDLE AERONAUTICAL UNIV**        **3555**  
 FIRST YEAR FUNDING/ CYROGENIC WHOLE AIR SAMPLING OF CARBON  
 DIOXIDE IN THE UPPER MESOSPHERE  
 04/12/2000 - 03/23/2003    FY01: \$96,100                    Total: \$218,300  
*Prin. Invest.:* P W ERDMAN  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 10066**       **EMBRY-RIDDLE AERONAUTICAL UNIV**        **3556**  
 ENERGETICS & DYNAMICS OF THE MESOSPHERE & LOWER THERMO-  
 SPHERE; TIMED/CEDAR COLLABORATIVE STUDIES  
 10/31/2000 - 04/30/2002    FY01: \$198,600                    Total: \$198,600  
*Prin. Invest.:* G G SIVJEE  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCA 1 133**         **EMBRY-RIDDLE AERONAUTICAL UNIV**        **3557**  
 1996 AGATE - GENERAL AVIATION  
 07/23/1996 - 10/31/2001    FY01: \$506,800                    Total: \$3,822,800  
*Prin. Invest.:* S HAMPTON  
*Tech. Officer:* LARC/B J HOLMES, LARC/M H DURHAM  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCA 1 01003**       **EMBRY-RIDDLE AERONAUTICAL UNIV**        **3558**  
 SOUTHEAST SATSLAB  
 08/31/2001 - 04/30/2002    FY01: \$500,000                    Total: \$500,000  
*Prin. Invest.:* S HAMPTON  
*Tech. Officer:* LARC/J R BURLEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 685**         **EMBRY-RIDDLE AERONAUTICAL UNIV**        **3559**  
 SILICON CARBIDE DIODE MIXERS FOR IMPROVED SAFETY I N AIRCRAFT  
 RF AVIONICS  
 03/04/1999 - 01/26/2002    FY01: \$24,025                    Total: \$73,025  
*Prin. Invest.:* A HELFRICK  
*Tech. Officer:* GRC/P G NEUDECK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 2 1384**        **FLA INTERNATIONAL UNIV**                    **3560**  
 DEVELOPING AN ADVANCED EENVIRONMENT FOR COLLABORAT IVE  
 COMPUTING BY AUGMENTING POSTDOC  
 09/15/1999 - 12/31/2001    FY01: \$57,000                    Total: \$200,000  
*Prin. Invest.:* I R FERNANDEZ  
*Tech. Officer:* ARC/H T STEWART, ARC/S LAU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1440**        **FLA INTERNATIONAL UNIV**                    **3561**  
 SPECIFICATION & ANALYSIS OF SOFTWARE ARCHITECTURES OF HIGH  
 ASSURANCE SYSTEMS  
 09/26/2000 - 09/14/2002    FY01: \$97,688                    Total: \$194,845  
*Prin. Invest.:* X HE, X HE  
*Tech. Officer:* ARC/B J COLLINS/D JAMES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 3826**        **FLA INTERNATIONAL UNIV**                    **3562**  
 BASIC RESEARCH IN ATOMIC, MOLECULAR AND OPTICAL PHYSICS IN  
 SUPPORT OF NASA STRATEGIC ENTERPRISES  
 01/29/1997 - 01/31/2001    FY01: \$0                            Total: \$298,794  
*Prin. Invest.:* K HARDY  
*Tech. Officer:* GSFC/R HARTLE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8156**        **FLA INTERNATIONAL UNIV**                    **3563**  
 AVIRIS IMAGE CLASSIFICATION USING PHYTOPLANKTON RE FLECTANCE  
 SPECTRA  
 02/02/1999 - 01/31/2001    FY01: \$0                            Total: \$14,222  
*Prin. Invest.:* L L RICHARDSON  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8791**        **FLA INTERNATIONAL UNIV**                    **3564**  
 A STUDY OF THEFINAL PRODUCT STATES OF THE DISSOCIA TIVE RECOM-  
 BINATION REACTION BY TOFSPECTROSCOPY  
 08/31/1999 - 08/31/2002    FY01: \$41,056                    Total: \$198,472  
*Prin. Invest.:* K HARDY  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/R HARTLE  
*CASE Category:* 13 - PHYSICS

**NAG 5 9478**        **FLA INTERNATIONAL UNIV**                    **3565**  
 HIGH PERFORMANCE DATABASE MANAGEMENT WITH APPLICAT ION TO  
 EARTH SCIENCE  
 04/25/2000 - 04/30/2002    FY01: \$500,000                    Total: \$1,000,000  
*Prin. Invest.:* N RISHE  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 212**        **FLA INTERNATIONAL UNIV**                    **3566**  
 APPLIED RESEARCH IN INDUSTRIAL & SYSTEMS ENGINEERING (ARISE)  
 CENTER  
 08/29/1997 - 08/31/2001    FY01: \$0                            Total: \$399,960  
*Prin. Invest.:* M A CENTENO  
*Tech. Officer:* KSC/A MITSKEVICH  
*CASE Category:* 49 - ENGINEERING, OTHER

## NASA'S UNIVERSITY PROGRAM

FLORIDA

**NAG10 251** **FLA INTERNATIONAL UNIV** **3567**  
 MATHEMATICS, SCIENCE & TECH ACHIEVEMENT (MSTA)  
 09/23/1998 - 09/22/2001 FY01: \$0 Total: \$299,994  
*Prin. Invest.:* C MENDEZ  
*Tech. Officer:* KSC/R MC KINNEY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 254** **FLA INTERNATIONAL UNIV** **3568**  
 PROGRAM  
 05/01/1999 - 07/01/2002 FY01: \$200,000 Total: \$599,982  
*Prin. Invest.:* C MENDEZ  
*Tech. Officer:* KSC/R MCKINNEY  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NAG10 259** **FLA INTERNATIONAL UNIV** **3569**  
 MSTA - MATH, SCIENCE & TECHNOLOGY ACHIEVEMENT  
 05/01/1999 - 08/14/2002 FY01: \$100,000 Total: \$300,000  
*Prin. Invest.:* I BECCERA-FERNANDEZ  
*Tech. Officer:* KSC/S ROBERTS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG10 268** **FLA INTERNATIONAL UNIV** **3570**  
 PROJECT VISION: VERY INTENSIVE SCIENTIFIC INTERC URRICULAR  
 ON-SITE EDUCATION  
 09/09/1999 - 12/31/2001 FY01: \$298,026 Total: \$795,753  
*Prin. Invest.:* G A ROIG  
*Tech. Officer:* KSC/R J MCKINNEY  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG10 292** **FLA INTERNATIONAL UNIV** **3571**  
 SPACEPORT TECHHNOLOGY CENTER AND WORK INSTRUCTION DELIVERY  
 INITIATIVE  
 09/29/2000 - 08/31/2001 FY01: \$0 Total: \$60,238  
*Prin. Invest.:* M CENTENO  
*Tech. Officer:* KSC/M GROH-HAMMOND  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG10 307** **FLA INTERNATIONAL UNIV** **3572**  
 ENHANCING THE SCOPE AND FUNCTIONALITY OF SAGE (SEA RCHABLE  
 ANSWER GENERATING ENVIRONMENT)  
 09/28/2001 - 02/28/2002 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* I BECERRA-FERNANDEZ  
*Tech. Officer:* KSC/O MELENDEZ  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG10 309** **FLA INTERNATIONAL UNIV** **3573**  
 BRINGING SCIENCE AND TECHNOLOGY TO HISPANIC YOUTH THROUGH  
 TELEVISED, SPANISH-LANGUAGEMEDIA: BRIDGIN  
 09/28/2001 - 08/31/2002 FY01: \$154,667 Total: \$154,667  
*Prin. Invest.:* G ROIG  
*Tech. Officer:* KSC/J NUNEZ  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01057** **FLORIDA A&M UNIV** **3574**  
 ACTIVE CONTROL OF BOUNDARY-LAYER SEPARATION AND FLOW DISTOR-  
 TION IN ADVERSE PRESSURE GRADIENT FLOWS  
 03/27/2001 - 03/31/2004 FY01: \$80,981 Total: \$80,981  
*Prin. Invest.:* F S ALVI, C SHIH  
*Tech. Officer:* LARC/S A GORTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1439** **FLORIDA A&M UNIV** **3575**  
 INVESTIGATION OF THE ELECTRONIC PROPERTIES OF DIST ORTED  
 CARBON NANOTUBES  
 09/21/2000 - 08/31/2001 FY01: \$89,433 Total: \$186,755  
*Prin. Invest.:* M ENCINOSA  
*Tech. Officer:* ARC/B J COLLINS, ARC/D JAMES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 1759** **FLORIDA A&M UNIV** **3576**  
 A GRADUATE FELLOWSHIP COMPONENT TO AUGMENT PROGRAM IMAGE  
 06/14/1995 - 12/14/2001 FY01: \$356,500 Total: \$1,522,879  
*Prin. Invest.:* F S HUMPHRIES, F J FOREMAN, NONE  
*Tech. Officer:* GRC/J E BOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 1971** **FLORIDA A&M UNIV** **3577**  
 CUBIC BORON NITRIDE ALPHAVOLTAIC DEVICES  
 09/21/1996 - 12/31/1999 FY01: -\$5,294 Total: \$254,211  
*Prin. Invest.:* S M DURBIN  
*Tech. Officer:* GRC/G C RYBICKI  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2193** **FLORIDA A&M UNIV** **3578**  
 ROBUST FAULT DETECTION AND ISOLATION FOR NASA LAUN CH  
 VEHICLES  
 09/01/1998 - 08/31/2001 FY01: \$80,129 Total: \$234,476  
*Prin. Invest.:* E G COLLINS  
*Tech. Officer:* GRC/T GUO  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2387** **FLORIDA A&M UNIV** **3579**  
 LATTICE-BOLTZMANN TECHNIQUES FOR MULTIPHASE FLOW T RANSPORT  
 IN MICROGRAVITY ENVIRONMENT  
 04/11/2000 - 11/15/2001 FY01: \$0 Total: \$0  
*Prin. Invest.:* D CHELLA  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 4 164** **FLORIDA A&M UNIV** **3580**  
 EVOLUTIONARY ALGORITHMS  
 02/26/1999 - 02/25/2001 FY01: \$48,208 Total: \$225,000  
*Prin. Invest.:* M ABDULLAH, F HAMILTON  
*Tech. Officer:* DFRC/K GUPTA, DFRC/E COX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 7989** **FLORIDA A&M UNIV** **3581**  
 LINKAGES 2001  
 12/31/1998 - 02/29/2000 FY01: \$0 Total: \$200,000  
*Prin. Invest.:* D H AMMONS  
*Tech. Officer:* GSFC/J L HARRINGTON, JR.  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9119** **FLORIDA A&M UNIV** **3582**  
 LINKAGES 2001 PROJECT  
 02/24/2000 - 01/31/2001 FY01: \$0 Total: \$500,000  
*Prin. Invest.:* J H AMMONS  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9420** **FLORIDA A&M UNIV** **3583**  
 ELECTROCHEMICAL CAPACITORS & HYBRID POWER SOURCES FOR  
 SPACE APPLICATIONS  
 04/11/2000 - 04/30/2002 FY01: \$99,849 Total: \$197,835  
*Prin. Invest.:* J ZHENG  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10148** **FLORIDA A&M UNIV** **3584**  
 COLLISION PROCESSES IN ASTROPHYSICAL PLASMAS  
 12/08/2000 - 12/31/2001 FY01: \$175,427 Total: \$175,427  
*Prin. Invest.:* C A WEATHERFORD  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10726** **FLORIDA A&M UNIV** **3585**  
 LINKAGES 2001 PROJECT  
 04/09/2001 - 03/31/2002 FY01: \$250,000 Total: \$250,000  
*Prin. Invest.:* K H PHIFER-MCGHEE  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 238** **FLORIDA A&M UNIV** **3586**  
 MINORITY ACCESS TO GRAD ENGR PROGRAM  
 12/17/1997 - 12/16/2002 FY01: \$1,260,000 Total: \$5,733,056  
*Prin. Invest.:* F S HUMPHRIES  
*Tech. Officer:* KSC/E SMITH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG10 242** **FLORIDA A&M UNIV** **3587**  
 MAPSTAP  
 05/13/1998 - 05/31/2002 FY01: \$0 Total: \$599,997  
*Prin. Invest.:* B SAMUELS  
*Tech. Officer:* KSC/E JOHNSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 248** **FLORIDA A&M UNIV** **3588**  
 PRODIGY 2000  
 09/23/1998 - 09/22/2001 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* B MCCUNE  
*Tech. Officer:* KSC/R MCKINNEY  
*CASE Category:* 62 - PSYCHOLOGY SOCIAL ASPECTS

**NAG10 264** **FLORIDA A&M UNIV** **3589**  
 ELECTROSTATIC CHARGING, PRECIPITATION, ADHESION, AND DISSIPATION  
 IN THE MARTIAN ATMOSPHERE  
 08/01/1999 - 10/31/2001 FY01: \$93,577 Total: \$192,574  
*Prin. Invest.:* F B GROSS  
*Tech. Officer:* KSC/R LEE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG10 267** **FLORIDA A&M UNIV** **3590**  
 PROJECT DISCOVER II SBI/NASA INTERNSHIPS PROJECT DISCOVER II SBI/  
 NASA INTERNSHIPS  
 09/09/1999 - 12/31/2001 FY01: \$204,265 Total: \$443,689  
*Prin. Invest.:* S C MOBLEY  
*Tech. Officer:* KSC/R J MCKINNEY  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NAG10 272** **FLORIDA A&M UNIV** **3591**  
 FAULT TOLERANT ROBOT ANALYSIS AND DESIGN  
 09/27/1999 - 09/20/2000 FY01: -\$145 Total: \$92,125  
*Prin. Invest.:* R G ROBERTS  
*Tech. Officer:* KSC/W C JONES  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG10 289** **FLORIDA A&M UNIV** **3592**  
 WIRELESS SPREAD-SPECTRUM INTERCOMMUNICATION SYSTEM WIRE-  
 LESS SPREAD-SPECTRUM INTERCOMMUNICATION SYSTEM  
 07/11/2000 - 06/07/2003 FY01: \$97,315 Total: \$193,581  
*Prin. Invest.:* B A HARVEY  
*Prin. Invest.:* NONE  
*Tech. Officer:* KSC/F MCKENZIE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG13 41** **FLORIDA A&M UNIV** **3593**  
 LABILE AND STABLE SOC POOLS REVEALED BY C-14 AND C-13 SIGNA-  
 TURES  
 09/27/1996 - 06/26/2000 FY01: -\$5,599 Total: \$283,306  
*Prin. Invest.:* Y P HSIEH  
*Tech. Officer:* SSC/A JOYCE  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NCC 1 252** **FLORIDA A&M UNIV** **3594**  
 CENTER FOR NONLINEAR AND NONEQUILIBRIUM AEROSCIENCES  
 (CENNAS)  
 04/23/1997 - 12/31/2001 FY01: \$1,200,000 Total: \$5,200,000  
*Prin. Invest.:* J JOHNSON  
*Tech. Officer:* LARC/W SELLERS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 956** **FLORIDA A&M UNIV** **3595**  
 A COOPERATIVE RESEARCH PROGRAM IN AERONAUTICAL INFORMATION  
 SCIENCE TECHNOLOGIES  
 07/01/1996 - 02/28/2001 FY01: \$0 Total: \$1,316,338  
*Prin. Invest.:* A KROTHAPALLI, L LOURENCO, S WALKER  
*Tech. Officer:* ARC/J C ROSS, ARC/P T SODERMAN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1005** **FLORIDA A&M UNIV** **3596**  
 DEVELOPMENT OF A TRANSDERMAL DELIVERY DEVICE FOR MELATONIN  
 IN VIVO  
 08/25/1997 - 07/31/2002 FY01: -\$54,931 Total: \$276,406  
*Prin. Invest.:* M S SACHDEVA, NONE  
*Tech. Officer:* ARC/C M WINGET, ARC/G S LEE  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 1018** **FLORIDA A&M UNIV** **3597**  
 INTEGRATED DESIGN SYSTEMS TECHNOLOGY  
 02/12/1998 - 12/31/2000 FY01: \$0 Total: \$480,263  
*Prin. Invest.:* A KROTHAPALLI  
*Tech. Officer:* ARC/M E LIVINGSTON, ARC/D J KOGA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1221** **FLORIDA A&M UNIV** **3598**  
 A COOPERATIVE RESEARCH PROGRAM IN AERONAUTICAL INFORMATION  
 SCIENCE TECHNOLOGIES  
 03/22/2001 - 03/15/2002 FY01: \$349,927 Total: \$349,927  
*Prin. Invest.:* A KROTHAPALLI, C SHIH, L LOURENCO  
*Tech. Officer:* ARC/G K YAMAUCHI, ARC/J C ROSS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 1993**                    **FLORIDA ATLANTIC UNIV**                    **3599**  
 BROADBAND FAN NOISE FROM TURBULENT VORTICAL FLOWS INCIDENT  
 ON STATOR VANES  
 01/15/1998 - 04/14/2000                    FY01: -\$1                    Total: \$142,018  
*Prin. Invest.:* S L GLEGG, M DHANAK  
*Tech. Officer:* LARC/J W POSEY, LARC/F FARASSAT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2115**                    **FLORIDA ATLANTIC UNIV**                    **3600**  
 FUNDAMENTAL ISSUES ON INTERRELATION BETWEEN SAFETY FACTORS  
 AND UNCERTAINTY ANALYSIS  
 10/29/1998 - 06/30/2000                    FY01: -\$319                    Total: \$49,681  
*Prin. Invest.:* T ELISHAKOFF  
*Tech. Officer:* LARC/J H STARNES, JR.  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01079**                    **FLORIDA ATLANTIC UNIV**                    **3601**  
 MODIFIED AND ADVANCED FORMULATIONS FOR UNCERTAINTY ANALYSIS  
 IN STRUCTURES ANALYSIS  
 06/01/2001 - 01/31/2002                    FY01: \$33,095                    Total: \$33,095  
*Prin. Invest.:* I ELISHAKOFF  
*Tech. Officer:* LARC/W J STROUD, LARC/I S RAJU  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2023**                    **FLORIDA ATLANTIC UNIV**                    **3602**  
 SPACE COMMUNICATIONS TECHNOLOGY CENTER  
 03/12/1997 - 01/15/2002                    FY01: \$325,000                    Total: \$1,404,999  
*Prin. Invest.:* W E GLENN, H HELMKEN  
*Tech. Officer:* GRC/T P BIZON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2319**                    **FLORIDA ATLANTIC UNIV**                    **3603**  
 MODELING OF THE UNSTEADY INTERNAL FLOWS IN AEROENGINES FOR  
 NOISE PREDICTION CODES  
 01/11/2000 - 03/31/2001                    FY01: -\$1,001                    Total: \$96,379  
*Prin. Invest.:* S A GLEGG  
*Tech. Officer:* GRC/E ENVIA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 3 26956**                    **FLORIDA ATLANTIC UNIV**                    **3604**  
 ACTS PROPAGATION EXPERIMENTS  
 06/21/1993 - 01/30/2002                    FY01: \$40,000                    Total: \$406,278  
*Prin. Invest.:* H F HELMKEN  
*Tech. Officer:* GRC/R J GUNDERMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 2 1141**                    **FLORIDA ATLANTIC UNIV**                    **3605**  
 ACHIEVING HIGH SOFTWARE RELIABILITY  
 09/17/1999 - 09/30/2000                    FY01: \$139,000                    Total: \$274,762  
*Prin. Invest.:* T G KHOSGOFTAR  
*Tech. Officer:* ARC/S YASSINI, ARC/D OZBURN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5264**                    **FLORIDA ATLANTIC UNIV**                    **3606**  
 AN INVESTIGATION OF HINGELESS-ROTOR TRIM & STABILITY WITH  
 EXPERIMENTAL CORRELATION  
 04/23/1998 - 12/31/2000                    FY01: -\$17                    Total: \$20,126  
*Prin. Invest.:* G H GEONKAR  
*Tech. Officer:* ARC/T H MAIER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2260**                    **FLORIDA INST OF TECHNOLOGY**                    **3607**  
 MODELING COMPOSITES LAMINATE CRUSHING FOR CRASH ANALYSIS  
 01/12/2000 - 12/15/2001                    FY01: \$31,066                    Total: \$51,066  
*Prin. Invest.:* D C FLEMING  
*Tech. Officer:* LARC/L E JONES  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 2 1508**                    **FLORIDA INST OF TECHNOLOGY**                    **3608**  
 GRAVITATIONAL IMPACTS ON THE CELL CYCLE  
 07/23/2001 - 07/31/2002                    FY01: \$82,568                    Total: \$82,568  
*Prin. Invest.:* C E HELMSTETTER  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3103**                    **FLORIDA INST OF TECHNOLOGY**                    **3609**  
 WHITE DWARF EVOLUTION AND AGE AND EVOLUTION OF THE GALAXY  
 10/11/1995 - 10/14/2000                    FY01: -\$6,572                    Total: \$166,428  
*Prin. Invest.:* M A WOOD  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10888**                    **FLORIDA INST OF TECHNOLOGY**                    **3610**  
 COSMIC RAY INTERSTELLAR PROPAGATION (ATP 2000)  
 05/09/2001 - 05/14/2002                    FY01: \$63,292                    Total: \$63,292  
*Prin. Invest.:* M ZHANG  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11036**                    **FLORIDA INST OF TECHNOLOGY**                    **3611**  
 STUDIES OF COSMIC RAY MODULATION & ENERGETIC PARTICLE PROP-  
 AGATION IN TIME-DEPENDENT 3-DIMENSION  
 06/12/2001 - 07/31/2002                    FY01: \$101,160                    Total: \$101,160  
*Prin. Invest.:* M ZHANG  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1582**                    **FLORIDA INST OF TECHNOLOGY**                    **3612**  
 "NEW CELL CULTURE TECHNOLOGY"  
 03/01/1999 - 11/30/2002                    FY01: \$124,450                    Total: \$351,450  
*Prin. Invest.:* C HELMSTALTER  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 50257**                    **FLORIDA INST OF TECHNOLOGY**                    **3613**  
 TECHNOLOGIES FOR ASSESSING THE EFFECTS OF LONG-TERM SPACE  
 HABITATION ON CELLULAR AGING\_ STUDENT: K  
 07/09/1999 - 06/30/2002                    FY01: \$22,000                    Total: \$66,000  
*Prin. Invest.:* C HELMSTETTER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50290**                    **FLORIDA INST OF TECHNOLOGY**                    **3614**  
 THE LUMINOSITY FUNCTION & THE CHROMOSPHERIC ACTIVITY-AGE  
 RELATION FOR M DWARF STARS IN COMMON PROP  
 06/27/2000 - 06/30/2002                    FY01: \$22,000                    Total: \$44,000  
*Prin. Invest.:* T OSWALT  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NGT10 52621**                    **FLORIDA INST OF TECHNOLOGY**                    **3615**  
 TRAINING GRANT UNDER A GRADUATE STUDENT RESEARCHERS  
 PROGRAM  
 06/22/1999 – 08/05/2000                    FY01: -\$5,963                    Total: \$16,037  
*Prin. Invest.:* R LANIER  
*Tech. Officer:* KSC/J MEDINA  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NGT10 52622**                    **FLORIDA INST OF TECHNOLOGY**                    **3616**  
 TRAINING GRANT UNDER A GRADUATE STUDENT RESEARCHERS  
 PROGRAM  
 07/02/1999 – 10/31/2001                    FY01: \$0                    Total: \$22,000  
*Prin. Invest.:* M BUSH  
*Tech. Officer:* KSC/R WHEELER  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG10 247**                    **FLORIDA MEMORIAL COLLEGE**                    **3617**  
 INITIATIVE FOR AFRICAN AMERICAN/UNDER REPRESENTED STUDENTS  
 08/01/1998 – 08/31/2001                    FY01: \$0                    Total: \$527,713  
*Prin. Invest.:* H HUISSO  
*Tech. Officer:* KSC/R MC KINNEY  
*CASE Category:* 29 – MATH/COMPUTER SCI, OTHER

**NAG 1 1889**                    **FLORIDA STATE UNIV**                    **3618**  
 PREDICTION OF COMPRESSIBLE JET FLOW FIELDS AND AERODYNAMIC  
 SOUND\_FIELD  
 01/09/1997 – 12/31/2000                    FY01: -\$1                    Total: \$434,507  
*Prin. Invest.:* M Y HUSSANI  
*Tech. Officer:* LARC/J M SEINER, LARC/M K PONTON  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 1986**                    **FLORIDA STATE UNIV**                    **3619**  
 MICRO-AND MACRO-FLUID DYNAMICS AND ACOUSTICS OF RESONANT  
 LINERS  
 01/02/1998 – 12/31/2001                    FY01: \$1                    Total: \$225,001  
*Prin. Invest.:* K W TAM  
*Tech. Officer:* LARC/W R WATSON, LARC/T L PARROTT  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 2078**                    **FLORIDA STATE UNIV**                    **3620**  
 NOISE SUPPRESSION OF HEATED SUPERSONIC JETS BY WATER INJECTION  
 06/16/1998 – 04/30/2001                    FY01: \$1                    Total: \$219,422  
*Prin. Invest.:* A KROTHAPALLI, L LOURENCO  
*Tech. Officer:* LARC/M K NORUM, LARC/M K PONTON  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 2127**                    **FLORIDA STATE UNIV**                    **3621**  
 DYNAMICAL FACTORS CONTROLLING OZONE, OH AND AEROSOL LEVELS  
 OVER THE PEM-TROPICS B REGION  
 01/20/1999 – 12/31/2001                    FY01: \$53,375                    Total: \$203,000  
*Prin. Invest.:* T N KRISHNAMURTI  
*Tech. Officer:* LARC/J R RAPER  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 1 2145**                    **FLORIDA STATE UNIV**                    **3622**  
 AIRFRAME-JET ENGINE INTEGRATION NOISE  
 03/30/1999 – 12/31/2001                    FY01: \$100,000                    Total: \$300,000  
*Prin. Invest.:* C K TAM  
*Tech. Officer:* LARC/R R ANTCLIFF  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 01031**                    **FLORIDA STATE UNIV**                    **3623**  
 DISCONTINUOUS SPECTRAL ELEMENT AEROACOUSTIC CODE FOR FAN  
 NOISE RADIATION  
 02/08/2001 – 11/30/2003                    FY01: \$53,070                    Total: \$53,070  
*Prin. Invest.:* M Y HUSSANI  
*Tech. Officer:* LARC/F FARASSAT, LARC/R H THOMAS  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 3 1841**                    **FLORIDA STATE UNIV**                    **3624**  
 THERETICAL STUDIES OF LIQUID HELIUM NEAR THE SUPER FLUID TRANSITION  
 05/01/1996 – 01/07/2002                    FY01: \$11,000                    Total: \$291,000  
*Prin. Invest.:* E MANOUSAKIS, NONE  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 – PHYSICS

**NAG 3 1885**                    **FLORIDA STATE UNIV**                    **3625**  
 FLUID PHYSICS IN STOCHASTIC ACCELERATION ENVIRONMENT  
 06/17/1996 – 06/16/2001                    FY01: \$0                    Total: \$434,901  
*Prin. Invest.:* J VINALS  
*Tech. Officer:* GRC/A CHAIT  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 3 2102**                    **FLORIDA STATE UNIV**                    **3626**  
 NUMERICAL SIMULATION OF SCREECH TONES FROM SUPERSONIC JETS:  
 PHYSICS & PREDICTIONS  
 12/24/1997 – 11/30/2001                    FY01: \$0                    Total: \$247,500  
*Prin. Invest.:* C K TAM  
*Tech. Officer:* GRC/K Q ZAMAN  
*CASE Category:* 46 – MECHANICAL ENGR

**NAG 3 2327**                    **FLORIDA STATE UNIV**                    **3627**  
 ADVANCED COMPUTATIONAL AEROACOUSTICS METHODS FOR FAN  
 NOISE PREDICTIONS  
 02/07/2000 – 01/11/2003                    FY01: \$0                    Total: \$100,000  
*Prin. Invest.:* C TAM  
*Tech. Officer:* GRC/E ENVIA  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 3 2445**                    **FLORIDA STATE UNIV**                    **3628**  
 LATTICE-BOLTZMANN TECHNIQUES FOR MULTIPHASE FLOW TRANSPORT  
 IN MICROGRAVITY ENVIRONMENT  
 05/25/2000 – 05/18/2002                    FY01: \$92,905                    Total: \$132,828  
*Prin. Invest.:* D CHELLA  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 5 4729**                    **FLORIDA STATE UNIV**                    **3629**  
 INITIALIZATION AND HIGH RESOLUTION GLOBAL PREDICTIVE DATA FROM  
 TRMM PROGRAM AREA: MODELING, ANALYSIS,  
 07/03/1997 – 06/30/2000                    FY01: \$0                    Total: \$378,445  
*Prin. Invest.:* T N KRISHNAMURTI  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 5 4752**                    **FLORIDA STATE UNIV**                    **3630**  
 VALIDATING TRMM-DERIVED LATENT HEATING DISTRIBUTION COMBINED-  
 INSTRUMENT RETRIEVAL ALGORITHM INCLUDING IMPACT  
 06/18/1997 – 05/31/2000                    FY01: \$0                    Total: \$439,500  
*Prin. Invest.:* E A SMITH  
*Tech. Officer:* GSFC/A J NEGRI  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE



**NAG 5 4873**                    **FLORIDA STATE UNIV**                    **3631**  
 USING NASA FULL PHYSICS ADJOINT OF THE GEOS-1 GCM ANALYSIS,  
 SENSITIVITY ANALYSIS AND OPTIMAL SENSOR  
 07/03/1997 - 05/31/2002      FY01: \$140                    Total: \$323,576  
*Prin. Invest.:* I NAVON  
*Tech. Officer:* GSFC/M HALL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4921**                    **FLORIDA STATE UNIV**                    **3632**  
 SIBERIAN PERMAFROST: APPLICATIONS TO MARS  
 07/07/1997 - 05/31/2000      FY01: \$0                    Total: \$117,372  
*Prin. Invest.:* D FRIEDMANN  
*Tech. Officer:* GSFC/M A MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 6258**                    **FLORIDA STATE UNIV**                    **3633**  
 AN INTERCOMPARISON OF THE INFLUENCE OF VEGETATION SURFACE-AT-  
 MOSPHERE WATER EXCHANGE AND BOUNDARY LAY  
 08/27/1997 - 07/31/2001      FY01: \$0                    Total: \$350,000  
*Prin. Invest.:* E SMITH  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6665**                    **FLORIDA STATE UNIV**                    **3634**  
 COMBINING SSM/I,T,T2 AND GOES MEASUREMENTS FOR A SATELLITE-  
 BASED ATMOSPHERIC WATER BUDGET OF  
 11/25/1997 - 11/30/2001      FY01: \$0                    Total: \$495,000  
*Prin. Invest.:* E A SMITH  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7254**                    **FLORIDA STATE UNIV**                    **3635**  
 ANOMALOUS HEAT BUDGETS IN THE INTERIOR PACIFIC OCEAN ON  
 SEASONAL-TO-INTERANNUAL TIMESCALES AND  
 05/14/1998 - 04/30/2001      FY01: \$0                    Total: \$87,500  
*Prin. Invest.:* J J O'BRIEN  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 7302**                    **FLORIDA STATE UNIV**                    **3636**  
 RETRIEVAL OF SURFACE RADIATION FLUXES OVER BOREAS SNOW  
 REGIME FROM GOES 8 IMAGERY FOR APPLICATIONS T  
 05/04/1998 - 10/31/2000      FY01: \$0                    Total: \$165,402  
*Prin. Invest.:* E A SMITH  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7577**                    **FLORIDA STATE UNIV**                    **3637**  
 "REDUCTION AND ANALYSIS OF LEO SATELLITE MAGNETIC FIELD  
 DATA"(SENH98-0077)  
 08/04/1998 - 07/31/2001      FY01: \$33,000              Total: \$196,000  
*Prin. Invest.:* J C CAIN  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7618**                    **FLORIDA STATE UNIV**                    **3638**  
 ANNUAL MARINE PRIMARY PRODUCTION ALGORITHM DEVELOP MENT  
 AND APPLICATION TO MODIS DATA  
 09/08/1998 - 07/31/2001      FY01: \$0                    Total: \$156,053  
*Prin. Invest.:* R L LIVERSON  
*Tech. Officer:* GSFC/W ESAIAS  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 7630**                    **FLORIDA STATE UNIV**                    **3639**  
 ZONAL PROPAGATION OF NONLINEAR OCEANIC ANOMALIES  
 08/10/1998 - 09/30/2001      FY01: \$118,959              Total: \$454,144  
*Prin. Invest.:* W DEWAR  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7718**                    **FLORIDA STATE UNIV**                    **3640**  
 VALIDATION OF TRMM LEVEL-3 PRECIPITATION DATA OVER AFRICA  
 10/27/1998 - 10/31/2001      FY01: \$71,804              Total: \$252,007  
*Prin. Invest.:* S E NICHOLSON  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8284**                    **FLORIDA STATE UNIV**                    **3641**  
 ANALYSIS OF THE CRUSTAL MAGNETIC FIELD OF MARS  
 02/19/1999 - 02/28/2002      FY01: \$45,000              Total: \$128,200  
*Prin. Invest.:* J C CAIN  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8291**                    **FLORIDA STATE UNIV**                    **3642**  
 THERMODYNAMICS IN LAYERED MODELS  
 02/25/1999 - 02/28/2002      FY01: \$59,370              Total: \$261,628  
*Prin. Invest.:* W WEWAR  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 8327**                    **FLORIDA STATE UNIV**                    **3643**  
 ADVANCED DATA ASSIMILATION INTO OCEAN CIRCULATION MODELS  
 DRIVEN BY NSCAT DATA & ENSO IMPACTS NORTH  
 04/28/1999 - 04/30/2002      FY01: \$230,000              Total: \$564,000  
*Prin. Invest.:* J J O'BRIEN  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8598**                    **FLORIDA STATE UNIV**                    **3644**  
 THE IMPACT OF VEGETATION CHANGES IN THE SAHEL ON REGIONAL  
 SCALE HYDROLOGY  
 06/14/1999 - 06/30/2002      FY01: \$88,004              Total: \$219,361  
*Prin. Invest.:* S E NICHOLSON  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8647**                    **FLORIDA STATE UNIV**                    **3645**  
 "STUDY OF THE EVOLUTION OF PRECIPITATION AND CLOUD STRUC-  
 TURES DURING THE LIFE CYCLE ... TRMM AND IS  
 07/19/1999 - 07/31/2002      FY01: \$28,000              Total: \$94,000  
*Prin. Invest.:* G LIU  
*Tech. Officer:* GSFC/W B ROSSOW  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9410**                      **FLORIDA STATE UNIV**                      **3646**  
 STUDY THE IMPACT OF TOMS OZONE MEASUREMENTS ON MEAOSCALE  
 PREDICTION USING MM5 4D-VAR SYSTEM  
 04/11/2000 - 04/30/2001      FY01: \$0                      Total: \$46,772  
*Prin. Invest.:* X ZOU  
*Tech. Officer:* GSFC/A J KRUEGER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9662**                      **FLORIDA STATE UNIV**                      **3647**  
 SUPERENSEMBLE FORECASTS OF PRECIPITATION USING TRMM, TMI & PR  
 ALGORITHMS  
 06/06/2000 - 11/30/2001      FY01: \$138,463                      Total: \$193,713  
*Prin. Invest.:* T N KRISHNAMURTI  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9845**                      **FLORIDA STATE UNIV**                      **3648**  
 SIBERIAN PERMAFORST. APPLICATIONS TO MARS  
 08/07/2000 - 07/31/2001      FY01: \$0                      Total: \$40,492  
*Prin. Invest.:* I FRIEDMAN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9866**                      **FLORIDA STATE UNIV**                      **3649**  
 RETRIEVAL OF SURFACE RADIATION FLUXES OVER BOREAS SNOW  
 REGIME FROM GOES 8 IMAGERY FOR APPLICATIONS T  
 08/07/2000 - 07/31/2001      FY01: \$0                      Total: \$28,000  
*Prin. Invest.:* E A SMITH  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10001**                      **FLORIDA STATE UNIV**                      **3650**  
 016 OF TRMM FIELD CAMPAIGN DATA FOR VALIDATION-APP LICATION  
 STUDIES WITH LEVEL 2 RAIN PROFILE ALGORI  
 09/21/2000 - 11/30/2001      FY01: \$115,000                      Total: \$149,435  
*Prin. Invest.:* H A COOPER  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10860**                      **FLORIDA STATE UNIV**                      **3651**  
 VARIABILITY OF THE WESTERN INDIAN OCEAN & THE GULF OF ADEN  
 05/02/2001 - 04/30/2002      FY01: \$94,007                      Total: \$94,007  
*Prin. Invest.:* D NOF  
*Tech. Officer:* GSFC/E LINDSR TOM  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11067**                      **FLORIDA STATE UNIV**                      **3652**  
 APPLICATIONS OF TOMS OZONE DATA TO NUMERICAL WEATHER ANAL-  
 YSIS AND FORECAST  
 07/09/2001 - 07/14/2002      FY01: \$70,000                      Total: \$70,000  
*Prin. Invest.:* X ZOU, NONE  
*Tech. Officer:* GSFC/P K BHARTA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1163**                      **FLORIDA STATE UNIV**                      **3653**  
 ANALYSIS OF ELECTROPHORETIC TRANSPORT  
 08/30/1995 - 08/31/2000      FY01: -\$3,050                      Total: \$526,585  
*Prin. Invest.:* B R LOCKE  
*Tech. Officer:* MSFC/P H RHODES, MSFC/T Y MILLER  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 8 1537**                      **FLORIDA STATE UNIV**                      **3654**  
 IMPACT STUDIES OF NEWER DATA SETS (COMEX-3) ON VERY HIGH  
 RESOLUTION GLOBAL FORECASTS  
 06/05/1998 - 10/30/2002      FY01: \$74,998                      Total: \$273,035  
*Prin. Invest.:* T N KRISHNAMURTI  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1773**                      **FLORIDA STATE UNIV**                      **3655**  
 PREDICTING DYNAMIC AND STATIC CRITICAL PROPERTIES OF BULK AND  
 CONFINED HELIUM.  
 04/26/2001 - 04/30/2005      FY01: \$67,664                      Total: \$67,664  
*Prin. Invest.:* E MANOUSAKIS  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1848**                      **FLORIDA STATE UNIV**                      **3656**  
 ASSIMILATION, ENSEMBLE FORECASTS AND ADAPTIVE STRA TEGIES  
 USING GAMES-4 DATASETS  
 08/20/2001 - 09/02/2004      FY01: \$68,602                      Total: \$68,602  
*Prin. Invest.:* T N KRISHNAMURTI  
*Tech. Officer:* MSFC/J E ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 308**                      **FLORIDA STATE UNIV**                      **3657**  
 NUMERICAL SIMULATIONS AND DIAGNOSTIC STUDIES OF METEOROLOGICAL  
 CONDITIONS DURING PEM-TROPICS B  
 07/21/1998 - 07/31/2001      FY01: \$1                      Total: \$183,118  
*Prin. Invest.:* H E FUELBERG  
*Tech. Officer:* LARC/J M HOELL, JR., LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 412**                      **FLORIDA STATE UNIV**                      **3658**  
 NUMERICAL SIMULATIONS AND DIAGNOSTIC STUDIES RELAT ING  
 METEOROLOGY TO ATMOSPHERIC CHEMISTYR DURING  
 09/18/2000 - 08/31/2003      FY01: \$98,837                      Total: \$141,523  
*Prin. Invest.:* H E FUELBERG  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 01026**                      **FLORIDA STATE UNIV**                      **3659**  
 AN INVESTIGATION OF THE FLOW PHYSICS OF ACOUSTIC LINERS BY  
 DIRECT NUMERICAL SIMULATION  
 01/31/2001 - 12/31/2003      FY01: \$60,000                      Total: \$60,000  
*Prin. Invest.:* C K TAM  
*Tech. Officer:* LARC/W R WATSON, LARC/M G JONES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 292**                      **FLORIDA STATE UNIV**                      **3660**  
 HIGH RESOLUTION CARBON EXCHANGE OVER LARGE-SCALE A MAZONIA  
 BASED ONMODELING AND GOES SATELLITE  
 06/25/1998 - 12/31/2001      FY01: \$109,913                      Total: \$379,640  
*Prin. Invest.:* E A SMITH  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

FLORIDA

**NCC 8 158**                      **FLORIDA STATE UNIV**                      **3661**  
 SOUTHEAST REGIONAL EARTH SCIENCE APPLICATIONS CENTER  
 09/25/1998 - 09/24/2003      FY01: \$0                      Total: \$90,000  
*Prin. Invest.:* J J O'BRIEN  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 30116**                      **FLORIDA STATE UNIV**                      **3662**  
 SATELLITE DERIVED LAND SURFACE TEMPERATURE & ADJOI NT  
 MODELING TECHNIQUES TO IMPROVE A SPATIAL BIOSP  
 10/01/1997 - 08/31/2000      FY01: -\$1,672                      Total: \$64,328  
*Prin. Invest.:* E SMITH  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30158**                      **FLORIDA STATE UNIV**                      **3663**  
 DYNAMICS AND VARIABILITY OF THE NORTH HAWAIIAN RID GE CURRENT  
 FROM SATELLITE ALTIMETRY AND AN  
 08/28/1998 - 12/31/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* J J O'BRIEN, LEONARDI  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30164**                      **FLORIDA STATE UNIV**                      **3664**  
 NONLINEAR EXCHANGE PROCESSES BETWEEN THE PACIFIC AND THE  
 INDIAN OCEAN  
 08/31/1998 - 08/31/2002      FY01: \$0                      Total: \$58,000  
*Prin. Invest.:* D NOF, H SIMMONS  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30186**                      **FLORIDA STATE UNIV**                      **3665**  
 THE WATER BALANCE OF EASTERN AFRICAN GREAT LAKES STUDENT:  
 XANGANG YIN  
 08/19/1999 - 08/31/2001      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* S E NICHOLSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30191**                      **FLORIDA STATE UNIV**                      **3666**  
 INTER- AND INTRA-ANNUAL VARIABILITY OF THE NORTH AMERICAN  
 MONSOON: A NUMERICAL MODELING STUDY/STU  
 08/19/1999 - 08/31/2000      FY01: -\$7,112                      Total: \$14,888  
*Prin. Invest.:* T KRISHNAMURTI  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30370**                      **FLORIDA STATE UNIV**                      **3667**  
 DEVELOPMENT OF SCATTEROMETER-DERIVED RESEARCH-QUAL ITY  
 SURFACE PRESSURES STUDENT: KYLE HILBURN  
 08/13/2001 - 08/31/2002      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* J O'BRIEN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 282**                      **MIAMI-DADE COMMUNITY COLLEGE**                      **3668**  
 HOMESTEAD BUSINESS INCUBATOR HOMESTEAD BUSINESS INCUBATOR  
 05/18/2000 - 12/31/2001      FY01: \$0                      Total: \$915,000  
*Prin. Invest.:* E J PADRON  
*Tech. Officer:* KSC/D CULBERTSON  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NAG 2 1465**                      **THE UNIV OF CENTRAL FLORIDA**                      **3669**  
 VERIFICATION TOOLS FOR KSC LAUNCH CONTROL SOFTWARE  
 03/22/2001 - 03/31/2002      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* G H WALTON  
*Tech. Officer:* ARC/J PENIX  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2311**                      **THE UNIV OF CENTRAL FLORIDA**                      **3670**  
 IMPORTANCE OF CONJUGATE HEAT TRANSFER IN TURBINE B LADES AND  
 VANES  
 12/28/1999 - 06/01/2001      FY01: \$53,740                      Total: \$103,740  
*Prin. Invest.:* D KAPAT  
*Tech. Officer:* GRC/J D HEIDMANN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 8265**                      **THE UNIV OF CENTRAL FLORIDA**                      **3671**  
 INVESTIGATIONS OF MARTIAN IMPACT CRATER MORPHOLOGIES AND  
 MORPHOMETRIES  
 02/23/1999 - 04/30/2002      FY01: \$50,000                      Total: \$141,700  
*Prin. Invest.:* N G BARLOW  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9548**                      **THE UNIV OF CENTRAL FLORIDA**                      **3672**  
 TRMM VALIDATION: IMPROVED ZR RELATIONSHIP FROM TEFLUN-B &  
 TROPICAL CYCLONE WINDS & PRECIPITATION  
 05/30/2000 - 05/31/2002      FY01: \$126,000                      Total: \$193,667  
*Prin. Invest.:* W JONES  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10308**                      **THE UNIV OF CENTRAL FLORIDA**                      **3673**  
 ANTENNA-COUPLED INFRARED SENSORS- PROPOSAL #215  
 02/02/2001 - 12/31/2001      FY01: \$179,596                      Total: \$179,596  
*Prin. Invest.:* G D BOREMAN  
*Tech. Officer:* GSFC/C STAHL  
*CASE Category:* 13 - PHYSICS

**NAG 5 10730**                      **THE UNIV OF CENTRAL FLORIDA**                      **3674**  
 FOURIER TRANSFORM IMAGING SPECTROMETER WITH HIGH-  
 THROUGHPUT AND NO MOVING PARTS  
 04/10/2001 - 04/14/2002      FY01: \$120,000                      Total: \$120,000  
*Prin. Invest.:* R G SELLAR  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG10 215**                      **THE UNIV OF CENTRAL FLORIDA**                      **3675**  
 DEVELOPMENT OF ELECTRONKINETIC TECHNIQUE  
 04/17/1997 - 08/31/2000      FY01: \$0                      Total: \$225,000  
*Prin. Invest.:* C GEIGER  
*Tech. Officer:* KSC/J QUINN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG10 258**                      **THE UNIV OF CENTRAL FLORIDA**                      **3676**  
 NASA/UCF SPACE SCHOLARS PROGRAM  
 05/01/1999 - 06/30/2001      FY01: \$0                      Total: \$75,937  
*Prin. Invest.:* J SMITH  
*Tech. Officer:* KSC/R MCKINNEY  
*CASE Category:* 49 - ENGINEERING, OTHER

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NAG10 260 THE UNIV OF CENTRAL FLORIDA 3677**  
 NASA-ASEE SUMMER FACULTY FELLOWSHIP PROGRAM  
 04/16/1999 - 12/31/2000 FY01: \$0 Total: \$321,500  
*Prin. Invest.:* E R HOSLER  
*Tech. Officer:* KSC/G BUCKINGHAM  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG10 273 THE UNIV OF CENTRAL FLORIDA 3678**  
 KNOWLEDGE EXTRACTION FROM TEXT FOR NASA APPLICATIONS  
 10/08/1999 - 12/30/2000 FY01: -\$11,530 Total: \$49,091  
*Prin. Invest.:* F J GOMEZ  
*Tech. Officer:* KSC/C G STEVENSON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG10 276 THE UNIV OF CENTRAL FLORIDA 3679**  
 DEVELOPMENT OF ADVANCE LIFE SUPPORT AUTOMATED REMOTE  
 MANIPULATOR END-EFFECTOR (ALSARM) (PHASE II)  
 02/02/2000 - 11/15/2001 FY01: \$21,666 Total: \$41,259  
*Prin. Invest.:* D W JOHNSON  
*Tech. Officer:* KSC/C D QUINCY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG10 278 THE UNIV OF CENTRAL FLORIDA 3680**  
 FUNGAL DIVERSITY IN COMPOST STUDIED USING BOTH TRADITIONAL  
 PLATTING AND MOLECULAR APPROACHES  
 02/14/2000 - 10/09/2001 FY01: \$45,000 Total: \$110,000  
*Prin. Invest.:* J F WEISHAMPEL  
*Tech. Officer:* KSC/C QUINCY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG10 280 THE UNIV OF CENTRAL FLORIDA 3681**  
 2000 NASA/ASEE SUMMER FACULTY FELLOWSHIP RESEARCH PROGRAM  
 04/10/2000 - 03/31/2002 FY01: \$0 Total: \$357,000  
*Prin. Invest.:* D HOSIER  
*Tech. Officer:* KSC/J P GORDON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 290 THE UNIV OF CENTRAL FLORIDA 3682**  
 ASSESSMENT OF TECHNOLOGIES FOR VISUAL GAS LEAK DETECTION  
 07/30/2000 - 10/31/2001 FY01: \$50,000 Total: \$65,043  
*Prin. Invest.:* R SELLAR  
*Tech. Officer:* KSC/C DAVIS  
*CASE Category:* 13 - PHYSICS

**NAG10 296 THE UNIV OF CENTRAL FLORIDA 3683**  
 INSTALIZING KENNEDY SPACE CENTER'S STRATEGIC LEARNING  
 PROCESS  
 03/30/2001 - 02/01/2002 FY01: \$262,000 Total: \$262,000  
*Prin. Invest.:* T KOTNOUR  
*Tech. Officer:* KSC/J LYONS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG10 299 THE UNIV OF CENTRAL FLORIDA 3684**  
 NASA/ASEE SUMMER FACULTY FELLOWSHIP RESEARCH PROGRAM  
 05/16/2001 - 12/31/2001 FY01: \$346,141 Total: \$346,141  
*Prin. Invest.:* R HOSLER  
*Tech. Officer:* KSC/C BLACK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 301 THE UNIV OF CENTRAL FLORIDA 3685**  
 ULTRASOUND ENHANCEMENT OF A PERMEABLE REACTIVE BARRIER  
 UNDERGOING ACCELERATE AGING  
 06/15/2001 - 04/30/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* D R REINHART  
*Tech. Officer:* KSC/J W QUINN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG10 306 THE UNIV OF CENTRAL FLORIDA 3686**  
 INTELLIGENT TEXT RETRIEVAL AND KNOWLEDGE ACQUISITION FROM  
 TEXTS FOR NASA APPLICATIONS: PREPROCESSING  
 09/07/2001 - 03/31/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* F GOMEZ  
*Tech. Officer:* KSC/C G STEVENSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCA10 35 THE UNIV OF CENTRAL FLORIDA 3687**  
 JOINT SPONSORED RESEARCH AGREEMENT THE VISION SPACEPORT  
 PROJECT  
 09/15/1998 - 12/31/2000 FY01: \$0 Total: \$297,230  
*Prin. Invest.:* R HOFER  
*Tech. Officer:* KSC/C M CLESKEY, KSC/C D SHELTON  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCA10 41 THE UNIV OF CENTRAL FLORIDA 3688**  
 FUNDED SPACE ACT AGREEMENT FOR SPACEPORT SYSTEM PROC-  
 ESSING MODEL  
 02/25/2000 - 09/29/2000 FY01: \$0 Total: \$320,000  
*Prin. Invest.:* M MOLLAGHAGEMI  
*Tech. Officer:* KSC/G CATES, KSC/D SHELTON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 712 THE UNIV OF CENTRAL FLORIDA 3689**  
 ULTRA-LIGHT-WEIGHT, RADATION-RESISTANT, THIN-FILM SOLAR CELLS  
 FOR SPACE ELECTRICPOWER  
 06/10/1999 - 04/30/2002 FY01: \$40,000 Total: \$160,000  
*Prin. Invest.:* N G DHERE  
*Tech. Officer:* GRC/A F HEPP  
*CASE Category:* 13 - PHYSICS

**NCC10 35 THE UNIV OF CENTRAL FLORIDA 3690**  
 NASA NOX3; PILOT SCALE EVALUATION OF NEW TECHNOLOGY FOR NOX  
 CONTROL  
 02/22/2000 - 12/31/2001 FY01: \$55,000 Total: \$100,000  
*Prin. Invest.:* D C COOPER  
*Tech. Officer:* KSC/M COLLINS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40069 THE UNIV OF CENTRAL FLORIDA 3691**  
 FLORIDA/NATIONAL SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 04/28/2000 - 04/29/2001 FY01: \$0 Total: \$475,000  
*Prin. Invest.:* S DURRANCE  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40071 THE UNIV OF CENTRAL FLORIDA 3692**  
 FLORIDA/NATIONAL SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 01/05/2001 - 08/31/2003 FY01: \$85,000 Total: \$85,000  
*Prin. Invest.:* S DURRANCE  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40107 THE UNIV OF CENTRAL FLORIDA 3693**  
 FLORIDA SPACE GRANT CONSORTIUM  
 03/02/2001 - 02/28/2002 FY01: \$486,000 Total: \$486,000  
*Prin. Invest.:* S DURRANCE  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT10 52615 THE UNIV OF CENTRAL FLORIDA 3694**  
 EFFECTIVE ORGANIZATIONAL PERFORMANCE IMPROVEMENT TOOLS  
 USED IN AVIATION & AEROSPACE  
 07/14/1998 - 07/30/2000 FY01: -\$163 Total: \$43,837  
*Prin. Invest.:* T KOTNOUR  
*Tech. Officer:* KSC/L GOSPER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT10 52625 THE UNIV OF CENTRAL FLORIDA 3695**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT  
 RESEARCH PROGRAM  
 08/10/2000 - 06/30/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* D G KOTNOUR  
*Tech. Officer:* KSC/L GOSPER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT10 52627 THE UNIV OF CENTRAL FLORIDA 3696**  
 INSTABILITIES IN MAGNETIC FLUIDS IN TERRESTRIAL AND MICROGRAVITY  
 ENVIRONMENTS  
 07/24/2000 - 06/13/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D LUO  
*Tech. Officer:* KSC/R YOUNGQUIST  
*CASE Category:* 13 - PHYSICS

**NGT10 52630 THE UNIV OF CENTRAL FLORIDA 3697**  
 GSRP: STRATEGIC IMPLEMENTATION THROUGH PROCESS ALIGNMENT  
 08/02/2001 - 06/13/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:*  
*Tech. Officer:* KSC/L GOSPER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 1809 UNIV OF FLORIDA 3698**  
 DEVELOPMENT OF TEMPERATURE SENSITIVE PAINTS FOR WIND TUNNELL  
 03/04/1996 - 11/30/1999 FY01: -\$769 Total: \$299,444  
*Prin. Invest.:* K S SCHANZE  
*Tech. Officer:* LARC/B T UPCHURCH, LARC/M MITCHELL  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 2060 UNIV OF FLORIDA 3699**  
 WAVELET AND MULTIREOLUTION ANALYSIS FOR FINITE ELEMENT  
 NETWORKING PARADIGMS  
 06/04/1998 - 04/30/2001 FY01: \$0 Total: \$19,726  
*Prin. Invest.:* A L KURDILA, NONE  
*Tech. Officer:* LARC/J M HOUSNER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2092 UNIV OF FLORIDA 3700**  
 DEV OF AN INNOVATIVE ALGORITHM FOR AERODYNAMICS- STRUCTURE  
 INTERACTION USING LATTICE BOLTZMANN METH  
 07/31/1998 - 07/14/2001 FY01: \$65,000 Total: \$297,500  
*Prin. Invest.:* R MEI, W SHYY, L LUO  
*Tech. Officer:* LARC/D H RUDY, LARC/R T BIEDRON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2133 UNIV OF FLORIDA 3701**  
 MEMS-BASED ACOUSTIC ARRAY TECHNOLOGY MY 1/3  
 02/11/1999 - 12/31/2001 FY01: \$151,125 Total: \$406,720  
*Prin. Invest.:* M SHEPLAK  
*Tech. Officer:* LARC/R R ANTELIFF  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2161 UNIV OF FLORIDA 3702**  
 CHEMICALLY TAILORED PARTICLES FOR WIND-TUNNEL SEED ING  
 03/15/1999 - 05/04/2000 FY01: \$0 Total: \$50,003  
*Prin. Invest.:* K S SCHANZE  
*Tech. Officer:* LARC/B T UPCHURCH, LARC/C J OBARA  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 2177 UNIV OF FLORIDA 3703**  
 VARIABLE COMPLEXITY OPTIMIZATION OF COMPOSITE STRUCTURES  
 04/02/1999 - 01/27/2002 FY01: \$133,000 Total: \$367,163  
*Prin. Invest.:* R T HAFTKA  
*Tech. Officer:* LARC/J H STARNES, JR.  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2188 UNIV OF FLORIDA 3704**  
 INFORMATION THEORETIC EXTRACTION OF ELECTROENCEPHALOGRAPH  
 (EEG) FEATURES FOR MONITORING SUBJECT ATTENTION  
 04/28/1999 - 09/30/2000 FY01: \$0 Total: \$59,923  
*Prin. Invest.:* J C PRINCIPE  
*Tech. Officer:* LARC/M A MOTTER, LARC/A T POPE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 2198 UNIV OF FLORIDA 3705**  
 REDUCED ORDER MODELS VIA MULTIREOLUTION ANALYSIS FOR  
 CONTROL OF FLOW  
 05/19/1999 - 02/18/2002 FY01: \$55,000 Total: \$157,810  
*Prin. Invest.:* A J KURDILA  
*Tech. Officer:* LARC/W A SILVA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2232 UNIV OF FLORIDA 3706**  
 DAMAGE TOLERANCE OF SANDWICH PLATES WITH DEBONDED FACE  
 SHEETS  
 09/02/1999 - 10/31/2000 FY01: \$0 Total: \$48,673  
*Prin. Invest.:* B V SANKAR  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2249 UNIV OF FLORIDA 3707**  
 THE DEVELOPMENT OF DESIGN TOOLS FOR FLOW-CONTROL ACTUATORS  
 12/21/1999 - 01/02/2003 FY01: \$59,161 Total: \$122,315  
*Prin. Invest.:* L N CATTAFESTA, A J KURDILA  
*Tech. Officer:* LARC/S A GORTON, LARC/R D JOSLIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2261 UNIV OF FLORIDA 3708**  
 ADVANCED TECHNOLOGY DEVELOPMENT FOR ACTIVE ACOUSTIC LINERS  
 01/21/2000 - 10/31/2000 FY01: \$0 Total: \$102,393  
*Prin. Invest.:* M SHEPLAK  
*Tech. Officer:* LARC/M G JONES, LARC/T L PARROTT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 01013**                      **UNIV OF FLORIDA**                      **3709**  
 ELECTROMECHANICAL ACOUSTIC LINER TECHNOLOGY  
 02/07/2001 - 12/31/2003      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* L N SHEPLAK, L N CATTAFESTA III  
*Tech. Officer:* LARC/M G JONES, LARC/T L PARROT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 01024**                      **UNIV OF FLORIDA**                      **3710**  
 COMPUTATIONAL MODELING & ANALYSIS SYNTHETIC JETS  
 03/09/2001 - 03/31/2004      FY01: \$45,000                      Total: \$45,000  
*Prin. Invest.:* R MITTAL, L N CATTAFESTA III  
*Tech. Officer:* LARC/S A GORTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01088**                      **UNIV OF FLORIDA**                      **3711**  
 ANALYSIS METHODS FOR FUNCTIONALLY GRADED MATERIALS AND  
 STRUCTURES  
 06/14/2001 - 12/31/2001      FY01: \$30,000                      Total: \$30,000  
*Prin. Invest.:* B V SANKAR  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 01098**                      **UNIV OF FLORIDA**                      **3712**  
 INTEGRATED SHEAR STRESS/TEMPERATURE MICROMACHINED SENSORS  
 06/14/2001 - 10/31/2001      FY01: \$52,091                      Total: \$52,091  
*Prin. Invest.:* M SHEPLAK, T NISHIDA, L N CATTAFESTA, III  
*Tech. Officer:* LARC/S K KAHNG  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 2 1179**                      **UNIV OF FLORIDA**                      **3713**  
 DESIGN SPACE EXPLORATION FOR MDO ON A TERAFLAP COMPUTER  
 02/26/1998 - 01/31/2001      FY01: \$0                      Total: \$104,340  
*Prin. Invest.:* R T HAITKA  
*Tech. Officer:* ARC/G H KLOPTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2341**                      **UNIV OF FLORIDA**                      **3714**  
 SHEET FLOWS, AVALANCHES, AND DUNE EVOLUTION ON EARTH AND  
 MARS  
 03/01/2000 - 11/21/2004      FY01: \$17,100                      Total: \$22,860  
*Prin. Invest.:* D M HANES  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2382**                      **UNIV OF FLORIDA**                      **3715**  
 MICROGRAVITY DRIVEN INSTABILITIES IN GAS-FLUIDIZED BEDS  
 04/05/2000 - 11/30/2003      FY01: \$57,728                      Total: \$77,987  
*Prin. Invest.:* A L LADD  
*Tech. Officer:* GRC/B J MOTIL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2415**                      **UNIV OF FLORIDA**                      **3716**  
 SEPARATION OF SPECIES BY OSCILLATORY FLOW SEPARATION OF  
 SPECIES BY OSCILLATORY FLOW  
 06/07/2000 - 11/30/2003      FY01: \$90,250                      Total: \$130,250  
*Prin. Invest.:* D NARAYANAN  
*Tech. Officer:* GRC/F P CHIARAMONTE III  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2461**                      **UNIV OF FLORIDA**                      **3717**  
 OPTIMIZATION OF THERMAL MANAGEMENT SYSTEM WEIGHT OPTIMIZA-  
 TION OF THERMAL MANAGEMENT SYSTEM WEIGHT  
 06/13/2000 - 09/30/2000      FY01: -\$38                      Total: \$9,962  
*Prin. Invest.:* D E LEAR  
*Tech. Officer:* GRC/E L GOLLIER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2553**                      **UNIV OF FLORIDA**                      **3718**  
 SUPERSONIC INLETS FOR PULSE DETONATION ENGINES  
 03/15/2001 - 01/01/2004      FY01: \$50,444                      Total: \$50,444  
*Prin. Invest.:* C SEGAL  
*Tech. Officer:* GRC/R FERNANDEZ  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2630**                      **UNIV OF FLORIDA**                      **3719**  
 WEIGHT OPTIMIZATION OF ACTIVE THERMAL MANAGEMENT USING A  
 NOVEL HEAT PUMP  
 06/13/2001 - 05/31/2003      FY01: \$58,333                      Total: \$58,333  
*Prin. Invest.:* D E LEAR  
*Tech. Officer:* GRC/E L GOLLIER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 3772**                      **UNIV OF FLORIDA**                      **3720**  
 HUMAN DIMENSIONS OF DEFORESTATION & REGROWTH IN THE INTEGRATING  
 DATA FROM SATELLITES, DEMOGRAPHIC CENSUS  
 03/11/1997 - 02/28/2001      FY01: \$0                      Total: \$536,368  
*Prin. Invest.:* D WOOD  
*Tech. Officer:* GSFC/N MAYNARD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4287**                      **UNIV OF FLORIDA**                      **3721**  
 CARBON SPECIES AS POSSIBLE CARRIERS OF THE UIRS  
 04/29/1997 - 12/31/2000      FY01: \$0                      Total: \$197,000  
*Prin. Invest.:* D T VALA  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4531**                      **UNIV OF FLORIDA**                      **3722**  
 DYNAMICS OF SOLAR SYSTEM DUST  
 05/08/1997 - 02/28/2002      FY01: \$85,300                      Total: \$419,444  
*Prin. Invest.:* D F DERMOTT  
*Tech. Officer:* HQ/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4547**                      **UNIV OF FLORIDA**                      **3723**  
 PLANETARY AEROSOL MONITOR/INTEGRATED DUST ANALYZER  
 05/06/1997 - 05/31/2000      FY01: \$0                      Total: \$282,390  
*Prin. Invest.:* D GUSTAFSON  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6378**                      **UNIV OF FLORIDA**                      **3724**  
 OPTICAL PROPERTIES OF IRREGULAR DUST PARTICLES: EXPERIMENT  
 AND THEORY  
 10/08/1997 - 04/30/2002      FY01: \$50,000                      Total: \$261,944  
*Prin. Invest.:* D GUSTAFSON  
*Tech. Officer:* GSFC/S HOWARD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6751 UNIV OF FLORIDA 3725**  
 TOWARDS A COMPLETE INVENTORY OF STAR AND PLANET FORMATION  
 ACTIVITY IN NEARBY MOLECULAR CLOUDS  
 01/12/1998 - 01/14/2001 FY01: \$0 Total: \$139,800  
*Prin. Invest.:* E LADA  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7559 UNIV OF FLORIDA 3726**  
 NITROGEN AND PHOSPHORUS DYNAMICS IN FORESTS AND CONVERTED  
 FOREST SITES IN THE AMAZON BASIN: A REVIEW  
 06/28/1998 - 06/30/2000 FY01: \$0 Total: \$21,908  
*Prin. Invest.:* H L GHOLZ  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7664 UNIV OF FLORIDA 3727**  
 THE USE OF SATELLITE-GENERATED METEOROLOGICAL DATA TO  
 PREDICT MOSQUITO-BORNE ENCEPHALITIS TRANSMISSION  
 09/09/1998 - 09/30/2000 FY01: \$0 Total: \$36,000  
*Prin. Invest.:* J F DAY  
*Tech. Officer:* GSFC/B W MESSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8522 UNIV OF FLORIDA 3728**  
 CHEMICAL ABUNDANCES AND EVOLUTION IN QUASARS AND ACTIVE  
 GALACTIC NUCLEI I/II  
 05/12/1999 - 05/14/2002 FY01: \$0 Total: \$205,000  
*Prin. Invest.:* F W HAMANN, NONE  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8944 UNIV OF FLORIDA 3729**  
 COMPLEX SILICATE GRAINS WITH SUBLIMATING MANTLES: A SYSTEMATIC  
 LABORATORY STUDY OF OPTICAL PROPERTIES  
 01/13/2000 - 01/14/2002 FY01: \$68,300 Total: \$133,769  
*Prin. Invest.:* L KOLOKOLOVA  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9280 UNIV OF FLORIDA 3730**  
 A GLOBAL, MULTI-WAVEBAND MODEL OF THE ZODIACAL CLOUD (ADP 99)  
 03/21/2000 - 03/31/2002 FY01: \$43,862 Total: \$86,446  
*Prin. Invest.:* K GROGAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9331 UNIV OF FLORIDA 3731**  
 LAND-USE & LAND-COVER CHANGE: DECADAL-SCALE DYNAMICS OF  
 LAND OWNERSHIP LAND MANAGEMENT & CARBON  
 03/28/2000 - 04/30/2002 FY01: \$105,663 Total: \$196,662  
*Prin. Invest.:* M W BINFORD  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10567 UNIV OF FLORIDA 3732**  
 CHARACTERIZATION AND SIMULATION OF REMOTELY SENSED SOIL MOIS-  
 TURE FOR RAINFALL-RUNOFF MODELING  
 03/12/2001 - 03/14/2002 FY01: \$78,853 Total: \$78,853  
*Prin. Invest.:* J JACOBS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10670 UNIV OF FLORIDA 3733**  
 MOLTEN MORPHOLOGIES & NON-EQUILIBRIUM MINERAL COMPOSITIONS  
 GENERATED BY A POLYMER-INDUCED LIQUID PHASE  
 03/29/2001 - 04/30/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* L B GOWER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1243 UNIV OF FLORIDA 3734**  
 FOR RESEARCH ENTITLED AN ELECTROMECHANICAL METHOD TO VISU-  
 ALIZE FLOW AND MEASURE DIFFUSIVITY  
 05/28/1996 - 05/27/2000 FY01: \$0 Total: \$600,000  
*Prin. Invest.:* T J ANDERSON, R NARAYANAN  
*Tech. Officer:* MSFC/P R DOTY, MSFC/R POWER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1244 UNIV OF FLORIDA 3735**  
 THE FEATURES OF SELF-ASSEMBLING ORGANIC BILAYERS  
 05/01/1996 - 04/30/2000 FY01: -\$342 Total: \$279,658  
*Prin. Invest.:* D R TALHAM, J H ADAIR  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1251 UNIV OF FLORIDA 3736**  
 R/S " CONFINEMENT AND PROPULSION CHARACTERISTICS OF THE  
 GASDYNAMIC MIRROR FUSION ROCKET"  
 12/23/1996 - 05/15/2002 FY01: \$90,000 Total: \$419,878  
*Prin. Invest.:* S ANGHZIE  
*Tech. Officer:* MSFC/W J EMRICH, JR.  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1673 UNIV OF FLORIDA 3737**  
 MORPHOLOGICAL STABILITY OF FACETED INTERFACES  
 05/16/2000 - 11/30/2003 FY01: \$85,500 Total: \$130,500  
*Prin. Invest.:* R ABBASCHIAM  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1675 UNIV OF FLORIDA 3738**  
 THE FEATURES OF SELF-ASSEMBLING ORGANIC BILAYERS IMPORTANT  
 TO THE FORMATION OF INORGANIC MATERIALS.  
 05/11/2000 - 11/30/2003 FY01: \$85,500 Total: \$125,500  
*Prin. Invest.:* D TALHAM  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1679 UNIV OF FLORIDA 3739**  
 AN ELECTROCHEMICAL METHOD TO VISUALIZE FLOW IN LIQUID METALS  
 04/25/2000 - 11/30/2003 FY01: \$104,500 Total: \$149,500  
*Prin. Invest.:* T J ANDERSON  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1729**                      **UNIV OF FLORIDA**                      **3740**  
 DEVELOPMENT AND APPLICATION OF OPTIMIZATION TECHNIQUES FOR  
 ROCKET ENGINE COMPONENT DESIGN  
 06/16/2000 – 05/31/2001      FY01: \$0                      Total: \$50,000  
*Prin. Invest.:* W SHYY  
*Tech. Officer:* MSFC/L W GRIFFIN  
*CASE Category:* 42 – ASTRONAUTICAL ENGR

**NAG 8 1742**                      **UNIV OF FLORIDA**                      **3741**  
 A GLOBAL OPTIMIZATION METHODOLOGY FOR ROCKET PRO – PULSION  
 09/06/2000 – 09/15/2001      FY01: \$0                      Total: \$50,000  
*Prin. Invest.:* W SHYY  
*Tech. Officer:* MSFC/K TUCKER  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 8 1791**                      **UNIV OF FLORIDA**                      **3742**  
 RESEARCH ENTITLED, "DEV. OF OPTIMIZATION STRATEGIE FOR FULL-  
 FLOW STAGED COMBUSTION INJECTORS  
 03/15/2001 – 03/14/2005      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* W SHYY  
*Tech. Officer:* MSFC/K TUCKER, MSFC/D CHAFFEE  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 8 1821**                      **UNIV OF FLORIDA**                      **3743**  
 APPLICATION OF PRESSURE SENSITIVE PAINT TO THEMFC 14 INCH  
 TRISONIC WIND TUNNEL  
 06/01/2001 – 05/30/2002      FY01: \$29,361                      Total: \$29,361  
*Prin. Invest.:* B CARROLL  
*Tech. Officer:* MSFC/A L FROST  
*CASE Category:* 59 – LIFE SCIENCE, OTHER

**NAG10 145**                      **UNIV OF FLORIDA**                      **3744**  
 GENETICALLY ENGINEERED PLANT BIOMONITOR IN MICRO- GRAVITY  
 09/21/1994 – 08/31/2001      FY01: \$0                      Total: \$711,208  
*Prin. Invest.:* R J FERL  
*Tech. Officer:* KSC/W M KNOTT  
*CASE Category:* 55 – AGRICULTURE

**NAG10 274**                      **UNIV OF FLORIDA**                      **3745**  
 MINIATURE LOW-POWER INTEGRATED CO/CO2/02 SENSOR FO R ISRU  
 CONTROL AND VERIFICATION  
 12/03/1999 – 11/29/2000      FY01: \$0                      Total: \$10,000  
*Prin. Invest.:* E D WACHSMAN  
*Tech. Officer:* KSC/M BASSIGNANI  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG10 285**                      **UNIV OF FLORIDA**                      **3746**  
 CRYOGENICS R&T SUPPORT FOR KENNEDY SPACE CENTER CRYOGENICS  
 R&T SUPPORT FOR KENNEDY SPACE CENTER  
 06/05/2000 – 05/18/2002      FY01: \$95,000                      Total: \$225,000  
*Prin. Invest.:* C SEGAL  
*Tech. Officer:* KSC/M LONERGAN  
*CASE Category:* 43 – CHEMICAL ENGR

**NAG10 291**                      **UNIV OF FLORIDA**                      **3747**  
 TIANGENIC PLANT BIOMONITORS TIANGENIC PLANT BIOMONITORS  
 09/29/2000 – 09/30/2003      FY01: \$125,399                      Total: \$195,399  
*Prin. Invest.:* R J FERL  
*Tech. Officer:* KSC/D R COX  
*CASE Category:* 51 – BIOLOGY (EXCLUDING ENVIR)

**NAG10 293**                      **UNIV OF FLORIDA**                      **3748**  
 DEVELOPMENT OF AN OBJECT-ORIENTED ALS-CROP DATABAS E SYSTEM  
 FOR DOCUMENTING RESEARCH AND MARS DEPLOY  
 12/08/2000 – 10/29/2003      FY01: \$45,000                      Total: \$45,000  
*Prin. Invest.:* R A BUCKLIN  
*Tech. Officer:* KSC/J C SAGER  
*CASE Category:* 55 – AGRICULTURE

**NAG10 303**                      **UNIV OF FLORIDA**                      **3749**  
 ELECTROLYTIC REDUCTION OF CO-2 TO 0-2 AND CO FOR I SRU WITH  
 HIGH CONDUCTIVITY SOLID OXIDE ELECTROLYT  
 07/27/2001 – 04/30/2002      FY01: \$15,000                      Total: \$15,000  
*Prin. Invest.:* E D WACHSMAN  
*Prin. Invest.:* NONE  
*Tech. Officer:* KSC/D E LUECK  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAS 8 97110**                      **UNIV OF FLORIDA**                      **3750**  
 OPERATION AND MANAGEMENT FOR THE NASA TECH TRANS- FER  
 CENTER  
 02/02/1997 – 12/30/2000      FY01: -\$369,173                      Total: \$4,780,950  
*Prin. Invest.:* J R THORNTON  
*Tech. Officer:* MSFC/J POE  
*CASE Category:* 42 – ASTRONAUTICAL ENGR

**NAS10 96004**                      **UNIV OF FLORIDA**                      **3751**  
 ON-SITE MEDICAL SUPPORT DURING STS LAUNCH & LAND- ING OPERA-  
 TIONS  
 09/13/1996 – 09/30/2001      FY01: \$121,029                      Total: \$512,555  
*Prin. Invest.:* A H NEIMS  
*Tech. Officer:* KSC/D A TIPTON  
*CASE Category:* 56 – MEDICL

**NCC 1 397**                      **UNIV OF FLORIDA**                      **3752**  
 FLEXIBLE WING BASED MICRO AERIAL VEHICLES  
 05/24/2000 – 09/30/2001      FY01: \$54,920                      Total: \$74,920  
*Prin. Invest.:* P G IFJU, D A JENKINS  
*Tech. Officer:* LARC/M R WASZAK  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NCC 1 01023**                      **UNIV OF FLORIDA**                      **3753**  
 REAL-TIME FEEDBACK FLOW CONTROL  
 02/14/2001 – 01/31/2004      FY01: \$70,000                      Total: \$70,000  
*Prin. Invest.:* L N CATTAFESTA, III, M SHEPLAK  
*Tech. Officer:* LARC/A E WASHBURN, LARC/W L SELLERS  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NCC 1 01060**                      **UNIV OF FLORIDA**                      **3754**  
 CHARACTERIZATION OF MICROMACHINED THERMAL SHEAR STRESS  
 SENSOR FOR QUANTITATIVE TURBULENCE MEASUREM  
 08/30/2001 – 08/31/2003      FY01: \$5,000                      Total: \$5,000  
*Prin. Invest.:* M SHEPLAK, W SHYY, L N CATTAFESTA, III  
*Tech. Officer:* LARC/A E WASHBURN, LARC/A E WASHBURN  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NCC 2 1197**                      **UNIV OF FLORIDA**                      **3755**  
 DO INTEGRINS MEDIATE THE SKELETAL RESPONSE TO ALTE RED  
 LOADING? (SUBPROJECT C)  
 08/28/2000 – 09/30/2002      FY01: \$24,158                      Total: \$48,417  
*Prin. Invest.:* T J WRONSKI  
*Tech. Officer:* ARC/R K GLOBUS, ARC/E M HOLTON  
*CASE Category:* 51 – BIOLOGY (EXCLUDING ENVIR)



## NASA'S UNIVERSITY PROGRAM

FLORIDA

**NCC 2 5246 UNIV OF FLORIDA 3756**  
 OPTIMIZATION OF INFRARED DETECTOR ARRAYS FOR AIRBORNE  
 ASTRONOMY  
 12/03/1997 - 02/28/2001 FY01: \$0 Total: \$142,822  
*Prin. Invest.:* C M TELESCO, R K PIKA  
*Tech. Officer:* ARC/E F ERICKSON, ARC/M R HAAS  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5403 UNIV OF FLORIDA 3757**  
 COMPUTATIONAL INVESTIGATION OF CARBON NANOTUBE MAT ERIALS  
 10/11/2000 - 10/14/2001 FY01: \$44,873 Total: \$44,873  
*Prin. Invest.:* S SINNOTT  
*Tech. Officer:* ARC/H PARTRIDGE, ARC/M MEYAPPAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5424 UNIV OF FLORIDA 3758**  
 UF PARTICIPATION IN THE AIRBORNE INFRARED ECHELLE SPECTROM-  
 ETHER PROJECT  
 02/27/2001 - 02/28/2002 FY01: \$36,167 Total: \$36,167  
*Prin. Invest.:* R K PINA  
*Tech. Officer:* ARC/E F ERICKSON  
*CASE Category:* 11 - ASTRONOMY

**NCC 3 476 UNIV OF FLORIDA 3759**  
 IN-SITU MONITORING OF CRYSTAL GROWTH USING MEPHIST O  
 05/22/1996 - 08/07/2000 FY01: \$0 Total: \$501,495  
*Prin. Invest.:* R ABBASCHIAN  
*Tech. Officer:* GRC/C DEGON  
*CASE Category:* 13 - PHYSICS

**NCC 8 149 UNIV OF FLORIDA 3760**  
 RESEARCH IN COMMUNICATING SCIENTIFIC KNOWLEDGE  
 12/22/1997 - 12/21/2002 FY01: \$80,000 Total: \$1,039,917  
*Prin. Invest.:* D TREISE  
*Tech. Officer:* MSFC/R KOCZOR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 157 UNIV OF FLORIDA 3761**  
 SOUTHEAST REGIONAL EARTH SCIENCE APPLICATIONS CENTER  
 10/20/1998 - 10/20/2003 FY01: \$0 Total: \$120,000  
*Prin. Invest.:* J W JONES, J W HANSEN  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 9 84 UNIV OF FLORIDA 3762**  
 AUTOMATIC TEST ANALUPIS FR ADA PROGRAMS  
 03/18/1999 - 03/31/2001 FY01: \$0 Total: \$120,000  
*Prin. Invest.:* Y H LEE  
*Tech. Officer:* JSC/A T LEE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 9 110 UNIV OF FLORIDA 3763**  
 ENVIRONMENTAL SYSTEMS COMMERCIAL SPACE TECH CNTR  
 09/22/2000 - 11/30/2005 FY01: \$675,000 Total: \$926,741  
*Prin. Invest.:* J J WARWICK  
*Tech. Officer:* JSC/K R DAUES  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NGT 1 01022 UNIV OF FLORIDA 3764**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/01/2001 - 06/30/2003 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* M SHEPLAK  
*Tech. Officer:* LARC/K K TEDJOJUWONS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52233 UNIV OF FLORIDA 3765**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 04/24/2000 - 06/30/2001 FY01: \$12,000 Total: \$22,000  
*Prin. Invest.:* M SHEPHERD  
*Tech. Officer:* LARC/K K TEDJOJIONO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 128 UNIV OF FLORIDA 3766**  
 ADAPTIVE SATELLITE ATTITUDE CONTROL/KEVIN J. WALCH KO  
 08/22/2001 - 07/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* P C MASON  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 40025 UNIV OF FLORIDA 3767**  
 THE NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PR  
 12/19/1996 - 09/30/2000 FY01: \$0 Total: \$1,404,996  
*Prin. Invest.:* W SHYY  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50021 UNIV OF FLORIDA 3768**  
 THE CHEM & PHY PROPERTIES OF COMETS HALE-BOPP (199 6 B2)  
 07/17/1997 - 12/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* H CAMPINS  
*Tech. Officer:* GSFC/A NURRIDIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50031 UNIV OF FLORIDA 3769**  
 DETECTING PLANETS IN CIRCUMSTELLAR DISKS  
 07/17/1997 - 01/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* S DERMOTT  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50074 UNIV OF FLORIDA 3770**  
 RAPID THERMAL PROCESSING OF INDIUM ARSENIDE USING RANSPORT  
 REACTORSTUDENT - DANIEL  
 09/05/1997 - 08/31/2000 FY01: \$0 Total: \$64,960  
*Prin. Invest.:* T ANDERSON  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50177 UNIV OF FLORIDA 3771**  
 THE ORIGIN OF THE INFRARED EXCESS IN PRE-MAIN-SEQU ENCE  
 STARS(STUDENT - E. POLOMSKI)  
 05/26/1998 - 12/31/2000 FY01: -\$13,021 Total: \$52,979  
*Prin. Invest.:* C TELESCO  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 11 - ASTRONOMY

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50233**                      **UNIV OF FLORIDA**                      **3772**  
 LOOKING FOR VARIATIONS IN THE INITIAL MASS FUNCTION: FIRST  
 COMPREHENSIVE NEAR-IR SPECTROSCOPY  
 05/27/1999 - 06/30/2002      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* E A LADA  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52890**                      **UNIV OF FLORIDA**                      **3773**  
 CRITICAL INITIAL FLAW (CIF) SIZE EVALUATION IN SINGLE CRYSTAL NICKEL-BASE (PWA 1493)  
 06/01/2000 - 06/30/2003      FY01: \$0                      Total: \$22,000  
*Prin. Invest.:* N ARAKERE  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT10 52626**                      **UNIV OF FLORIDA**                      **3774**  
 HIGH PERFORMANCE MASS SPECTROMETRY WITH A MINIATURE ION TRAP FOR BIOLOGICAL AND ENVIRONMENTAL MONITORING  
 07/20/2000 - 07/31/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* R A YOST  
*Tech. Officer:* KSC/F ADAMS  
*CASE Category:* 12 - CHEMISTRY

**NGT13 52710**                      **UNIV OF FLORIDA**                      **3775**  
 NASA GRADUATE PROGRAM-USING REMOTE SENSING TECHNIQUES TO ASSESS STRESS CONDITIONS  
 07/21/1997 - 01/31/2001      FY01: -\$18                      Total: \$65,828  
*Prin. Invest.:* S SHIH  
*Tech. Officer:* JSC/A JOYCE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 1 2002**                      **UNIV OF MIAMI**                      **3776**  
 A COMPACT AIRBORNE SYSTEM FOR SO<sub>2</sub> & DMF MEASUREMENT FOR USE ON FUTURE MISSIONS  
 02/09/1998 - 07/14/2000      FY01: \$1                      Total: \$238,701  
*Prin. Invest.:* E S SALTZMAN  
*Tech. Officer:* LARC/J L RAPER, LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6033**                      **UNIV OF MIAMI**                      **3777**  
 AN INTEGRATED GPS SYSTEM FOR MONITORING ACTIVE VOLCANOES  
 10/02/1997 - 09/30/2000      FY01: \$0                      Total: \$300,000  
*Prin. Invest.:* T H DIXON  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6576**                      **UNIV OF MIAMI**                      **3778**  
 SEAWIFS DATA COLLECTION, CALIBRATION AND PROCESSING FOR THE INDIAN OCEAN  
 12/15/1997 - 10/31/2000      FY01: \$0                      Total: \$102,821  
*Prin. Invest.:* R EVANS  
*Tech. Officer:* GSFC/J YODER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6577**                      **UNIV OF MIAMI**                      **3779**  
 HIGH ACCURACY INFRARED INTERFEROMETRIC VALIDATION OF SATELLITE SURFACE TEMPERATURE RETRIEVALS  
 12/12/1997 - 05/31/2001      FY01: \$0                      Total: \$599,877  
*Prin. Invest.:* P J MINNETT  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6659**                      **UNIV OF MIAMI**                      **3780**  
 A STUDY OF THE IMPACT OF OCEANIC BIOLOGICAL PROCESSES ON THE AIR-SEA EXCHANGE OF METHYL BROMIDE:  
 11/20/1997 - 04/30/2002      FY01: \$0                      Total: \$320,065  
*Prin. Invest.:* E SALTZMAN  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7110**                      **UNIV OF MIAMI**                      **3781**  
 TOMS VALIDATION BASED ON PROFILES OF AEROSOL PROPERTIES IN THE LOWER TROPOSPHERE AS OBTAINED WITH  
 03/18/1998 - 03/31/2002      FY01: \$0                      Total: \$452,904  
*Prin. Invest.:* D M PROSPERO  
*Tech. Officer:* GSFC/J HERMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7674**                      **UNIV OF MIAMI**                      **3782**  
 INTEGRATION OF LONG TERM OCEANIC AEROSOL RECORDS FROM UNIVERSITY OF MIAMI NETWORK STATIONS WITH  
 09/09/1998 - 08/31/2001      FY01: \$40,000                      Total: \$120,000  
*Prin. Invest.:* J M PROSPERO  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8161**                      **UNIV OF MIAMI**                      **3783**  
 COORDINATION OF THE 4TH INTERNATIONAL SYMPOSIUM ON GAS TRANSFER AT WATER SURFACES, JUNE 5-8  
 02/05/1999 - 01/31/2001      FY01: \$0                      Total: \$18,000  
*Prin. Invest.:* M DONELAN  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8222**                      **UNIV OF MIAMI**                      **3784**  
 ACTIVITIES AS PROJECT SCIENTIST OF GLOBAL MODELING INITIATIVE  
 02/10/1999 - 12/31/2000      FY01: \$0                      Total: \$243,431  
*Prin. Invest.:* J RODRIGUEZ  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8229**                      **UNIV OF MIAMI**                      **3785**  
 STUDIES OF WESTERN PACIFIC INTERANNUAL ANOMALY PATTERNS TOWARD IMPROVED ENSO PREDICTION.  
 02/24/1999 - 03/31/2002      FY01: \$49,075                      Total: \$175,623  
*Prin. Invest.:* G HALIWELL  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8864**                      **UNIV OF MIAMI**                      **3786**  
 SEAWIFS DATA COLLECTION, CALIBRATION, & PROCESSING FOR THE INDIAN OCEAN  
 12/02/1999 - 01/31/2002      FY01: \$54,525                      Total: \$107,010  
*Prin. Invest.:* R H EVANS  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9066**                      **UNIV OF MIAMI**                      **3787**  
 PRESENT DAY TECTONICS OF THE CENTRAL ANDES  
 02/18/2000 - 02/28/2002      FY01: \$16,500                      Total: \$66,000  
*Prin. Invest.:* T H DIXON  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9068**                      **UNIV OF MIAMI**                      **3788**  
VOLCANO PLUME MONITORING USING UNMANNED AERIAL VEHICLES  
02/17/2000 - 02/28/2002      FY01: \$113,510                      Total: \$188,510  
*Prin. Invest.:* T H DIXON  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9627**                      **UNIV OF MIAMI**                      **3789**  
A SATELLITE DATA RECEPTION & ANALYSIS FACILITY FOR ENVIRONMENTAL MONITORING IN THE SOUTHEASTERN  
08/10/2000 - 07/14/2002      FY01: \$997,800                      Total: \$1,912,800  
*Prin. Invest.:* T DIXON  
*Tech. Officer:* GSFC/A R TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9739**                      **UNIV OF MIAMI**                      **3790**  
DERIVATION, VALIDATION, & EXPLOITATION OF SEA-SURFACE TEMPERATURES MEASURED BY SENSORS ON TRMM  
06/28/2000 - 05/31/2002      FY01: \$92,000                      Total: \$151,500  
*Prin. Invest.:* P J MINNETT  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10588**                      **UNIV OF MIAMI**                      **3791**  
CONTINUED PROCESSING & EXTENSION OF THE AVHRR PATH FINDER OCEANS GLOBALSEA SURFACE TEMPERATURE DATA  
03/20/2001 - 03/31/2002      FY01: \$107,060                      Total: \$107,060  
*Prin. Invest.:* R EVANS  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 10725**                      **UNIV OF MIAMI**                      **3792**  
ACTIVITIES AS PROJECT SCIENTIST OF THE GLOBAL MODE LING INITIATIVE.  
04/09/2001 - 02/28/2002      FY01: \$162,267                      Total: \$162,267  
*Prin. Invest.:* J RODRIGUEZ  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10928**                      **UNIV OF MIAMI**                      **3793**  
A SATELLITE DATA RECEPTION & ANALYSIS FACILITY FOR ENVIRONMENTAL MONITORING IN THE SOUTHEASTERN  
05/11/2001 - 06/08/2001      FY01: \$0                      Total: \$0  
*Prin. Invest.:* T DIXON  
*Tech. Officer:* GSFC/T GUBBELS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10963**                      **UNIV OF MIAMI**                      **3794**  
IMPROVING TROPICAL CYCLONE QUANTITATIVE PRECIPITATION FORECASTS USING TRMM PRECIPITATION ESTIMATES  
06/01/2001 - 05/31/2002      FY01: \$70,000                      Total: \$70,000  
*Prin. Invest.:* S S CHEN  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11104**                      **UNIV OF MIAMI**                      **3795**  
TRANS-OCEANIC MEASUREMENTS FOR EOS AQUA VALIDATION-AQUA-0058-0087  
07/13/2001 - 08/31/2002      FY01: \$163,174                      Total: \$163,174  
*Prin. Invest.:* P J MINNETT  
*Tech. Officer:* GSFC/D Q STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11277**                      **UNIV OF MIAMI**                      **3796**  
ANALYSIS OF TROPOSPHERIC MEASUREMENTS UTILIZING A HIERARCHY OF MODELS  
08/22/2001 - 08/31/2004      FY01: \$78,555                      Total: \$78,555  
*Prin. Invest.:* J RODRIGUEZ  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1346**                      **UNIV OF MIAMI**                      **3797**  
AWARD BASIC GRANT  
07/27/2001 - 09/30/2004      FY01: \$66,000                      Total: \$66,000  
*Prin. Invest.:* L INVERARDI  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAS 5 31361**                      **UNIV OF MIAMI**                      **3798**  
MODIS - INVESTIGATION  
01/15/1992 - 03/14/2002      FY01: \$1,161,000                      Total: \$8,314,000  
*Prin. Invest.:* O B BROWN  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 31362**                      **UNIV OF MIAMI**                      **3799**  
EOS/MODIS INVESTIGATION ENTITLED: "PROCESSING/ CALIBRATION FOR OCEAN OBSERVATION WITH EOS/MODIS"  
12/13/1991 - 03/14/2002      FY01: \$1,377,000                      Total: \$11,122,000  
*Prin. Invest.:* R EVANS  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 31363**                      **UNIV OF MIAMI**                      **3800**  
MODERATE RESOLUTION IMAGING SPECTROMETER INVESTIGATION - OCEAN  
01/15/1992 - 03/14/2002      FY01: \$836,000                      Total: \$6,198,000  
*Prin. Invest.:* H GORDON  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 31734**                      **UNIV OF MIAMI**                      **3801**  
DEVELOPMENT FOR SEAWIFS  
11/22/1991 - 04/21/2001      FY01: \$51,252                      Total: \$318,375  
*Prin. Invest.:* H GORDAN  
*Tech. Officer:* GSFC/C MCLAIN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 01021**                      **UNIV OF MIAMI**                      **3802**  
DEPLOY FAST-GAS GC/MS SYS TO MEAS C2&C3 CARBONYLS, METHANOL & ETHANOL ON NASA AIRCRAFT DURING TRACE-  
03/13/2001 - 10/14/2002      FY01: \$49,959                      Total: \$49,959  
*Prin. Invest.:* D D RIEMER  
*Tech. Officer:* LARC/J L RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NGT 5 30222**                      **UNIV OF MIAMI**                      **3803**  
 MID-OCEAN MESOSCALE VARIABILITY AS DEDUCED FROM TOPEX ALTI-  
 METRY & HIGH-RESOLUTION NUMERICAL MODEL  
 08/26/1999 - 08/31/2000              FY01: \$0                      Total: \$10,000  
*Prin. Invest.:* O B BROWN  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30425**                      **UNIV OF MIAMI**                      **3804**  
 A STUDY OF GLOBAL RAINFALL DISTRIBUTIONS IN TROPICAL CYCLONES  
 USING NASA/TRMM DATA/STUDENT: MAN  
 09/19/2001 - 09/30/2004              FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* S S CHEN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01046**                      **UNIV OF SOUTH FLORIDA**                      **3805**  
 COMBINED THERMAL AND STRUCTURAL OPTIMIZATION OF FUNCTIONALLY  
 GRADED TILE  
 03/26/2001 - 12/31/2001              FY01: \$65,000                      Total: \$65,000  
*Prin. Invest.:* R T HAFTA, S VENKATARAMAN, B V SANKAR  
*Tech. Officer:* LARC/M L BLOSSER  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 3 2614**                      **UNIV OF SOUTH FLORIDA**                      **3806**  
 DEVELOPMENT OF A FLEXIBLE II-VI-BASED HIGH PERFORMANCE HIGH  
 BANDGAP DEVICE FOR THIN FILM TANDEM SOL  
 05/23/2001 - 04/30/2003              FY01: \$58,837                      Total: \$58,837  
*Prin. Invest.:* D MOREL  
*Tech. Officer:* GRC/A HEPP  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 3446**                      **UNIV OF SOUTH FLORIDA**                      **3807**  
 BOTTOM-ASSESSMENT AND WATER-CONSTITUTENT ALGORITHMS FOR  
 THE ETM IN THE COASTAL ZONE  
 10/10/1996 - 06/30/2001              FY01: \$69,917                      Total: \$782,681  
*Prin. Invest.:* KARGER  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 5202**                      **UNIV OF SOUTH FLORIDA**                      **3808**  
 COLLABORATION ON A STUDY OF SIGMA NAUGHT BLOOM EFFECTS ON  
 RADAR ALTIMETERS  
 06/18/1998 - 06/21/2002              FY01: \$35,000                      Total: \$110,000  
*Prin. Invest.:* G T MITCHUM  
*Tech. Officer:* GSFC/G S HAYNE  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6301**                      **UNIV OF SOUTH FLORIDA**                      **3809**  
 HYPERSPECTRAL CHARACTERIZATION FOR APPLICATION TO CARBON  
 CYCLING IN COASTAL REGIONS  
 09/02/1997 - 08/14/2001              FY01: \$0                      Total: \$335,571  
*Prin. Invest.:* P COBLE  
*Tech. Officer:* GSFC/J YODER  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6448**                      **UNIV OF SOUTH FLORIDA**                      **3810**  
 SYNOPTIC ANALYSIS OF FACTORS INFLUENCING CARBON FLUXES AT THE  
 CARIACO CONTINENTAL MARGIN TIME SER  
 10/24/1997 - 09/30/2001              FY01: \$0                      Total: \$446,836  
*Prin. Invest.:* F MULLER-KARGER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6449**                      **UNIV OF SOUTH FLORIDA**                      **3811**  
 A NUMERICAL ANALYSIS OF NEW NITROGEN SOURCES OF NO<sub>3</sub> AND N<sub>2</sub>  
 EFFECTING CARBON CYCLING IN THE SOUTH  
 10/24/1997 - 10/14/2001              FY01: \$0                      Total: \$582,965  
*Prin. Invest.:* J WALSH  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8175**                      **UNIV OF SOUTH FLORIDA**                      **3812**  
 SOUTHEASTERN US X-BAND EOS DB RECEPTION FACILITY ( SEUS-X):  
 INFRASTRUCTURE FOR ENVIRONMENTAL ASSE  
 02/04/1999 - 02/14/2001              FY01: -\$9,340                      Total: \$490,660  
*Prin. Invest.:* F E MULLER-KARGER  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10532**                      **UNIV OF SOUTH FLORIDA**                      **3813**  
 SOUTHEASTERN US X-BAND EOS DB PROCESSING AND ANALYSIS  
 FACILITY INFRASTRUCTURE FOR ENVIRONMENT  
 03/12/2001 - 02/28/2002              FY01: \$227,319                      Total: \$227,319  
*Prin. Invest.:* F MULLER-KARGER  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10738**                      **UNIV OF SOUTH FLORIDA**                      **3814**  
 IMPACTS OF LARGE RIVER PLUMES ON CARBON AND SALT FLUXES IN THE  
 SURFACE OCEAN  
 04/18/2001 - 04/30/2002              FY01: \$125,853                      Total: \$125,853  
*Prin. Invest.:* C CHU  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 10908**                      **UNIV OF SOUTH FLORIDA**                      **3815**  
 A MILLENNIUM GLOBAL SCALE CORAL REEF ECOSYSTEM ASSESSMENT  
 USING HIGH RESOLUTION REMOTE SENSING DATA  
 05/07/2001 - 05/31/2002              FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* S ANDREFOUET  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11254**                      **UNIV OF SOUTH FLORIDA**                      **3816**  
 AN ASSESSMENT OF GLOBAL ORGANIC CARBON FLUX ALONG CONTI-  
 NENTAL MARGINS  
 08/20/2001 - 08/31/2004              FY01: \$133,545                      Total: \$133,545  
*Prin. Invest.:* F MULLER-KARGER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1381**                      **UNIV OF SOUTH FLORIDA**                      **3817**  
 RESEARCH "DEVELOPMENT OF AN INSULIN SECRETING IMMUNOPRIVI-  
 LEGED CELL-CELL AGGREGATE UTILIZING  
 06/01/1997 - 12/31/2001              FY01: \$50,000                      Total: \$426,000  
*Prin. Invest.:* D CAMERON  
*Tech. Officer:* MSFC/B GUYNES, MSFC/J MAYO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 648**                      **UNIV OF SOUTH FLORIDA**                      **3818**  
 EVALUATION OF OVARIAN TUMOR CELL GROWTH AND GENE EXPRESSION  
 10/28/1992 - 01/31/2002              FY01: \$0                      Total: \$600,000  
*Prin. Invest.:* J L BECKER  
*Tech. Officer:* JSC/S R GONDA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1341 UNIV OF SOUTH FLORIDA 3819**  
 3D GROWTH EFFECTS ON DRUG RESISTANCE IN HUMAN OVAR IAN TUMOR  
 CELLS  
 08/01/2001 - 09/30/2004 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* J L BECKER, NONE  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1365 UNIV OF SOUTH FLORIDA 3820**  
 CREATION AND TRANSLATION OF IMMUNOPRIVELEDGED SERTOLI-  
 NUERON -AGGREGATED CELLS  
 07/27/2001 - 09/30/2002 FY01: \$68,000 Total: \$68,000  
*Prin. Invest.:* S SAPORTA, D F CAMERON, A E WILLING  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 56 - MEDICL

**NAG10 204 UNIV OF SOUTH FLORIDA 3821**  
 EDUCATION GRANT ENTITLED "YES WE CARE"  
 01/07/1997 - 06/30/2002 FY01: \$0 Total: \$324,546  
*Prin. Invest.:* R E HENNING  
*Tech. Officer:* KSC/J A DIGGS  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NAS 3 26412 UNIV OF SOUTH FLORIDA 3822**  
 ACTS PROPAGATION EXPERIMENTS  
 05/03/1993 - 09/30/2000 FY01: \$0 Total: \$376,895  
*Prin. Invest.:* R E HENNING  
*Tech. Officer:* GRC/G J GUNDERMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 5 31716 UNIV OF SOUTH FLORIDA 3823**  
 EARTH OBSERVING SYSTEM MODIS/HIRIS TEAM MEMBER INVESTIGATION  
 01/15/1992 - 12/14/2001 FY01: \$698,000 Total: \$5,511,168  
*Prin. Invest.:* K R CARDER  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 97128 UNIV OF SOUTH FLORIDA 3824**  
 CAL/VAL OF CARBON FLUXES FOR SIMBIOS  
 08/18/1997 - 10/17/2001 FY01: \$0 Total: \$616,988  
*Prin. Invest.:* F E MULLER-KARGER  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 97137 UNIV OF SOUTH FLORIDA 3825**  
 STRAY LIGHT & ATOMOSPHERIC ADJACENCY EFFECTS FOR LARGE FOV  
 OCEAN VIEWING SPACE SENSORS  
 09/23/1997 - 03/22/2001 FY01: \$0 Total: \$520,841  
*Prin. Invest.:* K CARTER  
*Tech. Officer:* GSFC/J L MUELLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 30143 UNIV OF SOUTH FLORIDA 3826**  
 EL NINO/SOUTHERN OSCILLATION IN THE ANTARCTIC CIRCUMPOLAR  
 CURRENT  
 08/27/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* G T MITHCHUM, HAAN  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30159 UNIV OF SOUTH FLORIDA 3827**  
 FUNCTIONAL GROUPING OF PLANTS IN FLORIDA SCRUB HAB ITAT  
 08/28/1998 - 08/31/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* J R BROOKS  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30346 UNIV OF SOUTH FLORIDA 3828**  
 CHARACTERIZATION OF CDOM RIVERINE CONTRIBUTION AND DISTRIBU-  
 TION THORUGH REMOTE SENSINGSATELLITE IMA  
 08/21/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* P COBLE  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30354 UNIV OF SOUTH FLORIDA 3829**  
 IMPACT OF LARGE & SMALL RIVERSON ADJACENT OCEANIC ENVIRON-  
 MENTS/STUDENT: ANA ODRIOLLA  
 08/24/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* F MULLER-KARGER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30414 UNIV OF SOUTH FLORIDA 3830**  
 MAPPING AND MONITORING OF CHANGE IN THE FLORIDA KE YS REEF  
 TRACT FROMSPACE USING LANDSAT 7, MODI  
 08/15/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* F MULLER-KARGER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2236 UNIV OF WEST FLORIDA 3831**  
 INTELLIGENT TACTILE SYSTEMS FOR IMPROVED SAFETY OF FLIGHT  
 (NRA-98-LARC-8)  
 09/20/1999 - 12/31/2001 FY01: \$163,512 Total: \$395,962  
*Prin. Invest.:* A K RAV  
*Tech. Officer:* LARC/W K GERDEN  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NAG 2 1225 UNIV OF WEST FLORIDA 3832**  
 ATTENTION DIRECTING PILOTING DISPLAY: OZ A COMPUTE R BASED  
 HUMAN-CENTERED SYSTEM  
 05/29/1998 - 01/31/2002 FY01: \$99,268 Total: \$472,427  
*Prin. Invest.:* D L STILL  
*Tech. Officer:* ARC/D C FOYLE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 2 1226 UNIV OF WEST FLORIDA 3833**  
 INTELLIGENT HUMAN COMPUTER TACTILE INTERFACES FOR ROTOR-  
 CRAFT & CIVIL AVIATION  
 06/11/1998 - 12/31/2001 FY01: \$0 Total: \$485,906  
*Prin. Invest.:* N SURI, F GUEDRY, A RAZ  
*Tech. Officer:* ARC/J DEMAIO, ARC/J V LEBACQZ  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NAG 2 1332**                      **UNIV OF WEST FLORIDA**                      **3834**  
 ADAPTING AN ATTENTION DIRECTION PILOTING DISPLAY FOR THE SPACE SHUTTLE  
 06/21/1999 - 09/30/2001              FY01: \$74,982                      Total: \$222,596  
*Prin. Invest.:* D STILL  
*Tech. Officer:* HQ/A R GROSS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 2 1490**                      **UNIV OF WEST FLORIDA**                      **3835**  
 TACTILE INTERFACES TO ENHANCE SAFETY PERFORMANCE A ND RELIABILITY IN AGRICULTURAL  
 07/02/2001 - 12/31/2001              FY01: \$54,000                      Total: \$54,000  
*Prin. Invest.:* A K RAJ  
*Tech. Officer:* ARC/J DEMAIO  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 5 8782**                      **UNIV OF WEST FLORIDA**                      **3836**  
 HAPTIC INTERFACES TO AUGMENT HUMAN/MACHINE INTERAC TION IN SPACE ACTIVITES  
 08/30/1999 - 02/28/2002              FY01: \$154,987                      Total: \$402,754  
*Prin. Invest.:* A K RAJ  
*Tech. Officer:* GSFC/R CROUCH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1386**                      **UNIV OF WEST FLORIDA**                      **3837**  
 HUMAN CENTERED COMPUTING PERSPECTIVE ON MARS EXPLO RATION  
 09/21/2001 - 09/30/2002              FY01: \$175,000                      Total: \$175,000  
*Prin. Invest.:* J HANSEN  
*Tech. Officer:* JSC/B WARD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 2 1036**                      **UNIV OF WEST FLORIDA**                      **3838**  
 EXPLANATION & COLLABORATION THROUGH CONCEPT MAPS  
 05/07/1998 - 06/30/2001              FY01: \$0                      Total: \$604,499  
*Prin. Invest.:* A J CANAS  
*Tech. Officer:* ARC/B H WHITAKER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1191**                      **UNIV OF WEST FLORIDA**                      **3839**  
 UNSOLOCIATED PROPOSAL TO ESTABLISH THE INFORMATION TECHNOLOGY ASSESSMENT CONSORTIUM (ITAC) & SUPPOR  
 08/07/2000 - 12/31/2001              FY01: \$793,849                      Total: \$959,849  
*Prin. Invest.:* K M FORD  
*Tech. Officer:* ARC/M E DUENAS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1239**                      **UNIV OF WEST FLORIDA**                      **3840**  
 POLISHING: ENHANCING DATA QUALITY BY REPAIRING IM PERFECTIONS  
 04/06/2001 - 02/28/2002              FY01: \$117,000                      Total: \$117,000  
*Prin. Invest.:* C M TENG  
*Tech. Officer:* ARC/J SKILES  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1254**                      **UNIV OF WEST FLORIDA**                      **3841**  
 TEAMWORK IN PRACTICE: DESIGN FOR COLLABORATION IN MIXED HUMAN-ROBOTIC TEAMS  
 04/27/2001 - 02/28/2002              FY01: \$162,000                      Total: \$162,000  
*Prin. Invest.:* J M BRADSHAW  
*Tech. Officer:* ARC/R L ALENA, ARC/M G SHAFTO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1283**                      **UNIV OF WEST FLORIDA**                      **3842**  
 MULTI-AGENT SOFTWARE DESIGN & ENGINEERING FOR HUMA N-CENTERED COLLABORATIVE AUTONOMOUS SPACE SYSTEMS  
 09/04/2001 - 08/31/2002              FY01: \$297,400                      Total: \$297,400  
*Prin. Invest.:* J M BRADSHAW  
*Tech. Officer:* ARC/D CLANCY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG10 165**                      **VALENCIA COMMUNITY COLLEGE**                      **3843**  
 HIGH TECH TRNG OF INDIVIDUALS W/DISABILITY  
 06/06/1995 - 08/31/2000              FY01: \$20,000                      Total: \$135,043  
*Prin. Invest.:* K WOODBERRY  
*Tech. Officer:* KSC/G BUCKINGHAM  
*CASE Category:* 22 - COMPUTER SCIENCE

GEORGIA

**NAG10 265**                      **ALBANY STATE UNIV**                      **3844**  
 ALBANY STATE UNIV HIGH SCHOOL/HIGH TECH ALBANY STATE UNIV HIGH SCHOOL/HIGH TECH  
 09/10/1999 - 09/30/2002              FY01: \$75,000                      Total: \$200,000  
*Prin. Invest.:* D HODGES-TILLER  
*Prin. Invest.:* NONE  
*Tech. Officer:* KSC/R J MCKINNEY  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NAG 1 01091**                      **CLARK ATLANTA UNIV**                      **3845**  
 COMMERCIAL PROCESS DEVELOPMENT FOR POLYIMIDE FOAMS  
 05/24/2001 - 05/24/2004              FY01: \$75,000                      Total: \$75,000  
*Prin. Invest.:* D R VEAZIE  
*Tech. Officer:* LARC/E S WEISER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 1973**                      **CLARK ATLANTA UNIV**                      **3846**  
 GROWTH AND CHARACTERIZATION OF III-V SEMICONDUCTOR S FOR DEVICE APPLICATIONS  
 09/26/1996 - 06/30/2000              FY01: \$0                      Total: \$299,214  
*Prin. Invest.:* M D WILLIAMS  
*Tech. Officer:* GRC/S A ALTERNOVITZ  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2292**                      **CLARK ATLANTA UNIV**                      **3847**  
 TEST AND EVALUATION OF NONCHROMATE FINISHING AGENT  
 09/29/1999 - 08/23/2001              FY01: \$0                      Total: \$199,998  
*Prin. Invest.:* D OKHIO  
*Tech. Officer:* GRC/R LAWRENCE  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 5 6889**                      **CLARK ATLANTA UNIV**                      **3848**  
 ELECTRON EXCITATION CROSS SECTIONS OF ATOMS AND IO NS RELEVANT TO PLANETARY ATMOSPHERES  
 01/21/1998 - 09/30/2001              FY01: \$0                      Total: \$192,755  
*Prin. Invest.:* S TAYAL  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8792** **CLARK ATLANTA UNIV** **3849**  
 DEVELOPMENT OF DISPERSION RELATIONS FOR SOLAR AND STELLAR  
 DIAGNOSTICS  
 09/02/1999 - 08/31/2001 FY01: \$0 Total: \$197,950  
*Prin. Invest.:* A MSEZANE  
*Tech. Officer:* GSFC/A TEMKIN  
*CASE Category:* 13 - PHYSICS

**NAG 8 1493** **CLARK ATLANTA UNIV** **3850**  
 MOBILE SCIENCE, MATHEMATICS EDUCATION UNIT  
 06/01/1998 - 08/15/2001 FY01: \$0 Total: \$295,984  
*Prin. Invest.:* A MSEZANE  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 21 - MATHEMATICS

**NAG 8 1535** **CLARK ATLANTA UNIV** **3851**  
 MASTAP FOR SCIENCE TEACHERS OPEN SUPPORT SYSTEMS (S-TOSS)  
 05/07/1998 - 05/01/2001 FY01: \$0 Total: \$600,000  
*Prin. Invest.:* B E ALICK  
*Tech. Officer:* MSFC/A C BEAM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1814** **CLARK ATLANTA UNIV** **3852**  
 TRANSFER ICEMS INSPIRING CAREERS IN ENGINEERING, MATHEMATICS  
 AND SCIENCE FROM MOORHOUSE TO CLARK AT  
 05/21/2001 - 09/05/2001 FY01: \$19,864 Total: \$19,864  
*Prin. Invest.:* E MCDONALD *Prin. Invest.:* NONE  
*Tech. Officer:* MSFC/E ORDONEZ  
*CASE Category:* 21 - MATHEMATICS

**NAS 3 01201** **CLARK ATLANTA UNIV** **3853**  
 RESIN TRANSFER MOLDING AND VACUUM ASSISTED RESIN TRANSFER  
 MOLDING PROGRAM  
 08/27/2001 - 07/31/2002 FY01: \$56,136 Total: \$56,136  
*Prin. Invest.:* E A MINTZ  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 552** **CLARK ATLANTA UNIV** **3854**  
 HIGH PERFORMANCE POLYMERS AND COMPOSITES CENTER  
 04/29/1997 - 02/28/2002 FY01: \$1,649,525 Total: \$4,999,438  
*Prin. Invest.:* A A MINTZ  
*Tech. Officer:* GRC/S DUTTA, GRC/M A MEADOR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 707** **CLARK ATLANTA UNIV** **3855**  
 LIQUID FUELS: PYROLYTIC DEGRADATION AND FIRE SPREAD BEHAVIOR  
 AS INFLUENCED BY BUOYANCY  
 05/19/1999 - 03/14/2002 FY01: \$132,964 Total: \$367,234  
*Prin. Invest.:* Y D YEBOAH  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 910** **CLARK ATLANTA UNIV** **3856**  
 DEVELOPMENT OF THERMALLY STABLE AND HIGHLY FLUORESCENT IR  
 DYES  
 08/21/2001 - 08/19/2002 FY01: \$20,000 Total: \$20,000  
*Prin. Invest.:* D R BU  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 911** **CLARK ATLANTA UNIV** **3857**  
 DEVELOPING NOVEL FLUORESCENT MATERIALS WITH NEAR INFRARED  
 EMISSION BY USING M-PHEYLENE  
 09/04/2001 - 08/19/2002 FY01: \$20,000 Total: \$20,000  
*Prin. Invest.:* D PANG  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NCC 5 347** **CLARK ATLANTA UNIV** **3858**  
 INTEGRATION OF RESEARCH AND EDUCATION IN THE AREA OF EARTH  
 SYSTEMS SCIENCE  
 07/01/1998 - 06/30/2002 FY01: \$440,032 Total: \$1,929,914  
*Prin. Invest.:* C H WILLIAMS  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1579** **EMORY UNIV** **3859**  
 DESIGN, SYNTHESIS, AND CHARACTERIZATION OF WELL-DEFINED, BIOMI-  
 METIC POLYPEPTIDE NETWORKS  
 01/05/1999 - 11/30/2002 FY01: \$115,900 Total: \$340,424  
*Prin. Invest.:* V CONTICELLO  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 1 1890** **GEORGIA INST OF TECHNOLOGY** **3860**  
 HIGH TEMPERATURE COMPOSITE/METAL LAMINATES  
 01/17/1997 - 08/31/2000 FY01: -\$1 Total: \$181,232  
*Prin. Invest.:* W S JOHNSON  
*Tech. Officer:* LARC/T L ST. CLAIR, LARC/S E LOWTHER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 2014** **GEORGIA INST OF TECHNOLOGY** **3861**  
 TECHNIQUES FOR IMPROVING PILOT RECOVERY FROM SYSTEM FAILURES  
 03/02/1998 - 08/31/2001 FY01: \$1 Total: \$158,744  
*Prin. Invest.:* A R PRITCHETT  
*Tech. Officer:* LARC/A C TRUJILLO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2146** **GEORGIA INST OF TECHNOLOGY** **3862**  
 APPLIC OF CIRCULATION CONTROL TECHNOL TO AIRFRAME NOISE  
 REDUCTION  
 03/09/1999 - 02/28/2002 FY01: \$215,000 Total: \$634,721  
*Prin. Invest.:* K K AHUIA, L N SANKAR, R J ENGLAN  
*Tech. Officer:* LARC/R R ANTCLIFF  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2149** **GEORGIA INST OF TECHNOLOGY** **3863**  
 DEVELOPMENT FOR ADVANCED LIFE CYCLE COSTING METHOD FOR  
 TECHNOLOGY BENEFITS/COSTS/RISK ASSESSMENT  
 03/26/1999 - 12/31/2001 FY01: \$108,342 Total: \$323,593  
*Prin. Invest.:* D N MAVRIS  
*Tech. Officer:* LARC/M D MOORE, LARC/P A GELHAUSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2169** **GEORGIA INST OF TECHNOLOGY** **3864**  
 PNEUMATIC AERODYNAMICS AND CONTROL FOR CHANNEL WING  
 POWERED-LIFT AIRCRAFT  
 03/24/1999 - 02/28/2002 FY01: \$103,000 Total: \$298,000  
*Prin. Invest.:* R J ENGLAR  
*Tech. Officer:* LARC/W T HODGES123  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2175**      **GEORGIA INST OF TECHNOLOGY**      **3865**  
 RAPIDLY RE-CONFIGURABLE FLIGHT SIMULATOR TOOLS FOR CREW  
 VEHICLE INTEGRATION RESEARCH AND DESIGN  
 04/09/1999 - 03/29/2002      FY01: \$1      Total: \$85,820  
*Prin. Invest.:* A R PRITCHETT  
*Tech. Officer:* LARC/P C SCHUTTE, LARC/A C TRUJILLO  
*CASE Category:* 22 - COMPUTERSCIENCE

**NAG 1 2202**      **GEORGIA INST OF TECHNOLOGY**      **3866**  
 SAGE II OZONE (V6.0) ANAL W/EMPHASIS ON LONG TERM TRENDS IN THE  
 LOWER STRATOSPHERE(NRA-98-OES-04)  
 06/11/1999 - 07/07/2002      FY01: \$98,000      Total: \$254,700  
*Prin. Invest.:* D M CUNNOLD  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2235**      **GEORGIA INST OF TECHNOLOGY**      **3867**  
 EXPLORATION OF ADVANCED PROBABILISTIC/STOCHASTIC DESIGN  
 METHODS  
 08/26/1999 - 08/31/2002      FY01: \$65,000      Total: \$264,819  
*Prin. Invest.:* D MAVRIS, NONE  
*Tech. Officer:* GRC/R E YACKOVETSKY, GRC/M D MOORE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 2243**      **GEORGIA INST OF TECHNOLOGY**      **3868**  
 DEMO/EVAL OF INTELLIGENT FLT PROPULSION & CONTROL SYS UNDER  
 UNANTICIPATED CRITICALFAILURE CONDITION  
 09/27/1999 - 09/30/2001      FY01: \$0      Total: \$162,846  
*Prin. Invest.:* A J CALISE  
*Tech. Officer:* LARC/P W GOODE  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 1 2245**      **GEORGIA INST OF TECHNOLOGY**      **3869**  
 INCONEL HOLLOW SPHERE STRUCTURES FOR LIGHTWEIGHT PANELS ---  
 NRA 99-LARC-1  
 09/22/1999 - 01/31/2002      FY01: \$0      Total: \$50,001  
*Prin. Invest.:* J K COCHRAN, J K LEE, T H SANDERS  
*Tech. Officer:* LARC/W D BREWER, LARC/S J HALES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 2276**      **GEORGIA INST OF TECHNOLOGY**      **3870**  
 SIMPLE ELASTICITY OF MODELING AND FAILURE PREDICTION OF  
 COMPOSITE FLEXBEAMS  
 03/06/2000 - 10/31/2000      FY01: \$0      Total: \$65,000  
*Prin. Invest.:* E A ARMANIOS  
*Tech. Officer:* LARC/T K OBRIEN/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2280**      **GEORGIA INST OF TECHNOLOGY**      **3871**  
 IMPROVING CONCEPTUAL DESIGN FOR LAUNCH VEHICLES  
 03/20/2000 - 12/19/2000      FY01: -\$8      Total: \$53,992  
*Prin. Invest.:* J R OLDS  
*Tech. Officer:* LARC/T A TALAY  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 2312**      **GEORGIA INST OF TECHNOLOGY**      **3872**  
 NANOTUBE REINFORCEMENT OF ADHESIVELY BONDED JOINTS  
 06/20/2000 - 06/30/2003      FY01: \$1      Total: \$59,934  
*Prin. Invest.:* W S JOHNSON  
*Tech. Officer:* LARC/B J JENSEN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 01055**      **GEORGIA INST OF TECHNOLOGY**      **3873**  
 INTELLIGENT PILOT AIDS FOR FLIGHT RE-PLANNING IN EMERGENCIES  
 04/26/2001 - 04/25/2004      FY01: \$65,325      Total: \$65,325  
*Prin. Invest.:* A R PRITCHETT, NONE  
*Tech. Officer:* LARC/A C TRUJILLO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01117**      **GEORGIA INST OF TECHNOLOGY**      **3874**  
 NEURAL NETWORK BASED ADAPTIVE CONTROL FOR NONLINEAR FLIGHT  
 REGIMES NRA 01-LARC-1  
 08/16/2001 - 08/31/2004      FY01: \$50,000      Total: \$50,000  
*Prin. Invest.:* A J CALISE, N HOVAKIMYAN  
*Tech. Officer:* LARC/M A MOTTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1262**      **GEORGIA INST OF TECHNOLOGY**      **3875**  
 QUALITY-OF-SERVICE PROBLEMS OF REAL-TIME VBR TRAFF IC IN  
 HYBRID NETWORKS  
 09/03/1998 - 08/31/2001      FY01: \$0      Total: \$302,434  
*Prin. Invest.:* I F AKYILDIZ  
*Tech. Officer:* ARC/C M FALSETTI, ARC/B H WITHAKER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1291**      **GEORGIA INST OF TECHNOLOGY**      **3876**  
 SIMULATION OF THE NATIONAL AIRSPACE SYSTEM FOR SAF ETY ANAL-  
 YSIS  
 02/02/1999 - 03/31/2002      FY01: \$82,811      Total: \$274,150  
*Prin. Invest.:* D GOLDSMAN, A R PRITCHETT  
*Tech. Officer:* ARC/C I STATLER, ARC/M C CONNORS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1314**      **GEORGIA INST OF TECHNOLOGY**      **3877**  
 ENABLING CSPA OPERATIONS THROUGH PILOT DEVELOPMENT IN  
 LONGITUDINAL APPROACH SPACING  
 04/01/1999 - 06/30/2002      FY01: \$30,000      Total: \$150,201  
*Prin. Invest.:* A B PRITCHETT  
*Tech. Officer:* ARC/V BATTISTE, ARC/W W JOHNSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1390**      **GEORGIA INST OF TECHNOLOGY**      **3878**  
 DYNAMIC STALL CHARACTERISTICS OF DROPPED LEADING EDGE  
 AIRFOILS  
 01/07/2000 - 09/30/2000      FY01: -\$379      Total: \$20,544  
*Prin. Invest.:* L N SANKAR  
*Tech. Officer:* ARC/C TUNG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1418**      **GEORGIA INST OF TECHNOLOGY**      **3879**  
 IN-FLIGHT DEMONSTRATION OF TACTILE CUEING ON RASCA L  
 07/13/2000 - 08/31/2002      FY01: \$49,922      Total: \$99,658  
*Prin. Invest.:* J P PRASAD, A J CALISE  
*Tech. Officer:* ARC/M S WHALLEY, ARC/M B TISCHER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1431**      **GEORGIA INST OF TECHNOLOGY**      **3880**  
 MOLECULAR BASIS OF MECHANO-SIGNAL TRANSDUCTION IN VASCULAR  
 ENDOTHELIAL CELL  
 08/15/2000 - 07/31/2002      FY01: \$287,858      Total: \$395,163  
*Prin. Invest.:* H JO  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)



**NAG 2 1488**      **GEORGIA INST OF TECHNOLOGY**      **3881**  
 REAL-TIME CONTROL OF LEAN BLOWOUT IN A TURBINE ENGINE FOR  
 MINIMIZING NOX EMISSIONS  
 06/27/2001 – 05/31/2002      FY01: \$349,978      Total: \$349,978  
*Prin. Invest.:* B ZINN  
*Tech. Officer:* ARC/N N MANSOUR  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 3 1894**      **GEORGIA INST OF TECHNOLOGY**      **3882**  
 NON-COALESCENCE EFFECTS IN MICROGRAVITY  
 06/17/1996 – 06/16/2001      FY01: \$0      Total: \$487,015  
*Prin. Invest.:* G P NEITZEL  
*Tech. Officer:* GRC/R S KARDA  
*CASE Category:* 46 – MECHANICAL ENGR

**NAG 3 1949**      **GEORGIA INST OF TECHNOLOGY**      **3883**  
 THE DEVELOPMENT OF NOVEL, HIGH-FLUX, HEAT TRANSFER CELLS FOR  
 THERMAL CONTROL IN MICROGRAVITY  
 09/17/1996 – 09/12/2001      FY01: \$0      Total: \$480,000  
*Prin. Invest.:* M K SMITH, A GLEZER  
*Tech. Officer:* GRC/B SINGH  
*CASE Category:* 46 – MECHANICAL ENGR

**NAG 3 2006**      **GEORGIA INST OF TECHNOLOGY**      **3884**  
 TERRESTRIAL EXPERIMENTS ON G-GITTER EFFECTS ON TRANSPORT &  
 PATTERN FORMATION  
 01/24/1997 – 07/16/2001      FY01: \$0      Total: \$277,327  
*Prin. Invest.:* M F SCHATZ, H L SWINNEY  
*Tech. Officer:* GRC/W DUVAL, GRC/T K GLASGOW  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 3 2205**      **GEORGIA INST OF TECHNOLOGY**      **3885**  
 NONLINEAR DYNAMIC ANALYSIS OF DISORDERED BLADED-DISK  
 ASSEMBLIES  
 10/07/1998 – 09/30/1999      FY01: -\$13,408      Total: \$1,591  
*Prin. Invest.:* O G MCGEE  
*Tech. Officer:* GRC/G L STEFKO  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 3 2329**      **GEORGIA INST OF TECHNOLOGY**      **3886**  
 SINGLE-/MULTI-LAYER MICROSTRIP AND COPLANAR WAVEGUIDE LINES  
 CROSSTALK  
 02/09/2000 – 01/31/2003      FY01: \$49,152      Total: \$98,233  
*Prin. Invest.:* D M TENTZERIS  
*Tech. Officer:* GRC/G E PONCHAK  
*CASE Category:* 45 – ELECTRICAL ENGR

**NAG 3 2352**      **GEORGIA INST OF TECHNOLOGY**      **3887**  
 DISTRIBUTED EXHAUST NOZZLES FOR JET NOISE REDUCTION  
 03/10/2000 – 09/30/2001      FY01: \$0      Total: \$149,991  
*Prin. Invest.:* D K AHULA  
*Tech. Officer:* GRC/N H SAIYED  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 3 2373**      **GEORGIA INST OF TECHNOLOGY**      **3888**  
 NOVEL OPTICAL DIAGNOSTICS TECHNIQUES FOR STUDYING PARTICLE  
 CONTACT AND DEPOSITION UPON A LARGE CYLINDER  
 03/28/2000 – 11/30/2003      FY01: \$75,904      Total: \$117,152  
*Prin. Invest.:* D YODA  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 3 2431**      **GEORGIA INST OF TECHNOLOGY**      **3889**  
 NON-COALESCENCE IN MICROGRAVITY: SCIENCE AND TECHNOLOGY  
 05/23/2000 – 11/30/2003      FY01: \$83,600      Total: \$133,600  
*Prin. Invest.:* D P NEITZEL  
*Tech. Officer:* GRC/R SKARDA  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 3 2500**      **GEORGIA INST OF TECHNOLOGY**      **3890**  
 NONLINEAR DYNAMIC ANALYSIS OF DISORDERED BLADE-DISK  
 ASSEMBLIES  
 11/03/2000 – 09/30/2001      FY01: \$73,412      Total: \$73,412  
*Prin. Invest.:* D G MCGEE, NONE  
*Tech. Officer:* GRC/J M LUCERO  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 3 2580**      **GEORGIA INST OF TECHNOLOGY**      **3891**  
 MULTI-ACCESS & ROUTING PROTOCOLS FOR MULTICAST APPLICATIONS  
 IN SATELLITE IP NETWORKS  
 04/05/2001 – 03/07/2004      FY01: \$55,000      Total: \$55,000  
*Prin. Invest.:* I F AKYILDIZ  
*Tech. Officer:* GRC/C T RAMOS  
*CASE Category:* 29 – MATH/COMPUTER SCI, OTHER

**NAG 3 2585**      **GEORGIA INST OF TECHNOLOGY**      **3892**  
 A MULTICAST PROTOCOL SUITE FOR SATELLITE IP NETWORKS  
 04/10/2001 – 02/28/2004      FY01: \$149,833      Total: \$149,833  
*Prin. Invest.:* D F AKYILDIZ  
*Tech. Officer:* GRC/C T RAMOS  
*CASE Category:* 45 – ELECTRICAL ENGR

**NAG 3 2586**      **GEORGIA INST OF TECHNOLOGY**      **3893**  
 AN INVESTIGATION OF APPLICATIONS FOR THERMODYNAMIC WORK  
 POTENTIAL TO TURBOSHIFT ENGINE TECH EVALUATION  
 04/06/2001 – 02/28/2002      FY01: \$60,000      Total: \$60,000  
*Prin. Invest.:* D N MAVRIS  
*Tech. Officer:* GRC/D THURMAN  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 5 3855**      **GEORGIA INST OF TECHNOLOGY**      **3894**  
 THE YANGTZE DELTA OF CHINA AS AN EVOLVING METRO-AG  
 (148-65-80-04)  
 02/03/1997 – 11/30/2000      FY01: \$0      Total: \$1,446,050  
*Prin. Invest.:* W L CHAMEIDES  
*Tech. Officer:* GSFC/A J TUYAHOV  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 5 4190**      **GEORGIA INST OF TECHNOLOGY**      **3895**  
 LABORATORY EVALUATION AND APPLICATION OF MICROWAVE UNDER  
 SIMULATED CONDITIONS FOR PLANETARY ATMOSPHERE  
 06/10/1997 – 12/31/2001      FY01: \$92,417      Total: \$432,851  
*Prin. Invest.:* D G STEFFES  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 5 6022**      **GEORGIA INST OF TECHNOLOGY**      **3896**  
 RESEARCH PROPOSAL ENTITLED "MODELING AND DATA ANALYSIS OF  
 SULFATE AEROSOL"  
 08/19/1997 – 02/14/2002      FY01: \$0      Total: \$278,358  
*Prin. Invest.:* M CHIN  
*Tech. Officer:* GSFC/A THOMPSON  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 5 7420**      **GEORGIA INST OF TECHNOLOGY**      **3897**  
 ANALYSIS OF USER ASSISTANCE REQUESTS AT THE NASA G ODDARD  
 DISTRIBUTED ACTIVE ARCHIVE CENTER  
 06/09/1998 - 05/31/2002      FY01: \$0      Total: \$210,000  
*Prin. Invest.:* C MITCHELL  
*Tech. Officer:* GSFC/W TRUSZOKWSKI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 7450**      **GEORGIA INST OF TECHNOLOGY**      **3898**  
 RELATIONSHIPS BETWEEN INTERSTELLAR AND INTERPLANETARY  
 GRAINS  
 07/02/1998 - 06/30/2001      FY01: \$0      Total: \$86,500  
*Prin. Invest.:* D P BRADLEY  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7471**      **GEORGIA INST OF TECHNOLOGY**      **3899**  
 POTENTIAL VORTICITY-BASED DIAGNOSES OF SEASONAL AND INTRA-  
 SEASONAL VARIABILITY IN AN ASSIMILATED  
 06/08/1998 - 03/31/2001      FY01: \$0      Total: \$144,300  
*Prin. Invest.:* R X BLACK  
*Tech. Officer:* GSFC/S SCHUBERG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7519**      **GEORGIA INST OF TECHNOLOGY**      **3900**  
 APPRENTICE - INCREMENTAL PASS AUTOMATION INITIAL PROTOTYPE  
 AND EVALUATION WITH TRACE  
 06/16/1998 - 05/31/2002      FY01: \$0      Total: \$90,000  
*Prin. Invest.:* C MITCHELL  
*Tech. Officer:* GSFC/J CATENA  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 7682**      **GEORGIA INST OF TECHNOLOGY**      **3901**  
 GLOBAL DISTRIBUTION OF TROPOSPHERIC AEROSOLS: A 3-D MODEL  
 ANALYSIS OF SATELLITE DATA  
 09/09/1998 - 08/31/2002      FY01: \$125,000      Total: \$287,506  
*Prin. Invest.:* M CHIN  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8698**      **GEORGIA INST OF TECHNOLOGY**      **3902**  
 QUANTIFYING THE RELATIONSHIP BETWEEN REMOTELY-SENSED &  
 MODELED SOIL MOISTURE  
 09/14/1999 - 06/30/2002      FY01: \$23,034      Total: \$142,030  
*Prin. Invest.:* C D PETERS-LIDARD  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8880**      **GEORGIA INST OF TECHNOLOGY**      **3903**  
 PROJECT TO INTERFACE CLIMATE MODELING ON GLOBAL & REGIONAL  
 SCALES WITH EARTH OBSERVING SYSTEM (EOS)  
 11/24/1999 - 12/31/2001      FY01: \$0      Total: \$677,654  
*Prin. Invest.:* R E DICKINSON  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8891**      **GEORGIA INST OF TECHNOLOGY**      **3904**  
 PARTICIPATION OF THE HNO<sub>3</sub> CIMS INSTRUMENT IN THE SAGE III OZONE  
 LOSS AND VALIDATION EXPERIMENT (SOLV)  
 12/06/1999 - 11/30/2000      FY01: \$0      Total: \$66,500  
*Prin. Invest.:* F EISELE  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8895**      **GEORGIA INST OF TECHNOLOGY**      **3905**  
 USING UARS MLS TO INVESTIGATE THE IMPACTS OF TROPOSPHERE  
 CONVECTION & PLANETARY-SCALE & SYMPTIC WA  
 01/12/2000 - 11/30/2000      FY01: \$0      Total: \$132,725  
*Prin. Invest.:* D FU  
*Tech. Officer:* GSFC/A DOUGLASS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8931**      **GEORGIA INST OF TECHNOLOGY**      **3906**  
 LABORATORY INVESTIGATIONS OF STRATOSPHERIC & UPPER TROPO-  
 SPHERIC CHEMISTRY  
 01/19/2000 - 12/31/2001      FY01: \$174,567      Total: \$340,826  
*Prin. Invest.:* P H WINE  
*Tech. Officer:* GSFC/M KURYLO  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9868**      **GEORGIA INST OF TECHNOLOGY**      **3907**  
 THE YANGTZE DELTA OF CHINA AS AN ENVOLVING METRO-AGRO-PLEX  
 (MAP)  
 08/09/2000 - 10/31/2001      FY01: \$0      Total: \$250,000  
*Prin. Invest.:* W L CHAMEIDES  
*Tech. Officer:* GSFC/A J TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10209**      **GEORGIA INST OF TECHNOLOGY**      **3908**  
 IMPROVING THE REPRESENTATION OF LAND IN CLIMATE MODELS BY  
 APPLICATION OF EOS OBSERVATIONS  
 12/29/2000 - 12/31/2001      FY01: \$500,000      Total: \$500,000  
*Prin. Invest.:* R DICKINSON  
*Tech. Officer:* GSFC/Y SUD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10374**      **GEORGIA INST OF TECHNOLOGY**      **3909**  
 DIAGNOSTIC STUDIES OF SHORT-TERM CLIMATE VARIABILITY IN NASA/  
 GSFC GENERAL CIRCULATION MODELS  
 03/17/2001 - 03/31/2002      FY01: \$85,000      Total: \$85,000  
*Prin. Invest.:* R X BLACK  
*Tech. Officer:* GSFC/S SCHUBERT  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10632**      **GEORGIA INST OF TECHNOLOGY**      **3910**  
 COMPARISON OF INTERSTELLAR AND INTERPLANETARY DUST  
 03/17/2001 - 06/30/2002      FY01: \$50,000      Total: \$50,000  
*Prin. Invest.:* J BRADLEY  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11063**      **GEORGIA INST OF TECHNOLOGY**      **3911**  
 VARIABILITY OF AEROSOL DISTRIBUTION AND OPTICAL PROPERTIES  
 SIMULATED BY GOCART MODEL USING TOMS  
 06/26/2001 - 06/30/2002      FY01: \$61,170      Total: \$61,170  
*Prin. Invest.:* P GINOUX  
*Tech. Officer:* GSFC/R MCPETERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1245**      **GEORGIA INST OF TECHNOLOGY**      **3912**  
 EFFECT OF GRAVITY ON THE EVOLUTION OF SPATIAL ARRANGEMENT OF  
 FEATURES IN MICROSTRUCTURES  
 05/10/1996 - 05/09/2001      FY01: \$0      Total: \$320,000  
*Prin. Invest.:* A M GOKHALE  
*Tech. Officer:* MSFC/P DOTY, MSFC/R POWER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1597**      **GEORGIA INST OF TECHNOLOGY**      **3913**  
 R/S CONCEPTUAL DESIGN FOR ADVANCED SPACE TRANS- PORTATION  
 SYSTEMS  
 12/16/1998 - 12/15/2001      FY01: -\$49,150      Total: \$389,850  
*Prin. Invest.:* J R OLDS  
*Tech. Officer:* MSFC/J J HUTT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1638**      **GEORGIA INST OF TECHNOLOGY**      **3914**  
 RESEARACH ENTITLED: "FAULT TOLERANT NONLINEAR ADAPTATIVE  
 FLIGHT CONTROL FOR THE X-33"  
 09/24/1999 - 06/30/2002      FY01: \$72,361      Total: \$202,275  
*Prin. Invest.:* A CALISE  
*Tech. Officer:* MSFC/R DABNEY, MSFC/J HANSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1713**      **GEORGIA INST OF TECHNOLOGY**      **3915**  
 STUDY OF DEPLOYMENT OPTIONS AND EXPLORATION USES F FOR SPACE  
 SOLAR POWER  
 03/01/2000 - 11/15/2000      FY01: \$0      Total: \$149,999  
*Prin. Invest.:* J OLDS  
*Tech. Officer:* MSFC/J HOWELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1819**      **GEORGIA INST OF TECHNOLOGY**      **3916**  
 PERMEABILITY TESTING OF IMPACTED COATED COMPOSITE LAMINATES  
 05/21/2001 - 07/31/2002      FY01: \$68,616      Total: \$68,616  
*Prin. Invest.:* W S JOHNSON  
*Tech. Officer:* MSFC/A NETTLES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAS 1 00087**      **GEORGIA INST OF TECHNOLOGY**      **3917**  
 RESEARCH IN ACOUSTICS & NOISE CONTROL FOR AIRCRAFT AND SPACE  
 TRANSPORTATION VEHICLES  
 05/01/2000 - 04/30/2005      FY01: \$439,876      Total: \$522,876  
*Prin. Invest.:* K K AHUJA, D E PAREKH, R J ENGLAR  
*Tech. Officer:* LARC/L R CLARK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 1 18938**      **GEORGIA INST OF TECHNOLOGY**      **3918**  
 SAGE III EXPERIMENT SCIENTIFIC SUPPORT/CUNNOLD  
 02/20/1990 - 01/31/2005      FY01: \$95,000      Total: \$657,700  
*Prin. Invest.:* D M CUNNOLD  
*Tech. Officer:* LARC/G L MADDREA/L R MCMASTER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 99073**      **GEORGIA INST OF TECHNOLOGY**      **3919**  
 R & D OF ELECTROMAGNETIC SYSTEMS  
 02/17/1999 - 02/16/2004      FY01: \$795,410      Total: \$1,491,656  
*Prin. Invest.:* G GIMMESTAD  
*Tech. Officer:* LARC/S D HARRAH  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAS 3 00179**      **GEORGIA INST OF TECHNOLOGY**      **3920**  
 SYSTEM STUIDES FOR NASA AEROSPACE PROPULSION AND AIRFRAME  
 TECHNOLOGY  
 09/28/2000 - 09/27/2005      FY01: \$0      Total: \$50,000  
*Prin. Invest.:* R E MCKINLEY, JR, J TAI, B ROTH  
*Tech. Officer:* LARC/C M MEYERS, LARC/M T TONG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 5 00171**      **GEORGIA INST OF TECHNOLOGY**      **3921**  
 OZONE MONITORING INSTRUMENT (OMI) SCIENCE TEAM.  
 06/07/2000 - 10/31/2004      FY01: \$100,015      Total: \$170,015  
*Prin. Invest.:* D M CUNNOLD  
*Tech. Officer:* GSFC/J C RIVERA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS10 01025**      **GEORGIA INST OF TECHNOLOGY**      **3922**  
 OPERATIONS/MAINT SOUTHEAST REGIONAL TECH TRANSFER CENTER  
 01/31/2001 - 01/31/2003      FY01: \$1,200,000      Total: \$1,200,000  
*Prin. Invest.:* D BRIDGES, J MILLS, B HILL  
*Tech. Officer:* KSC/C GRIFFIN, KSC/D MAKUFKA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCA 1 163**      **GEORGIA INST OF TECHNOLOGY**      **3923**  
 AGATE - HUMAN FACTORS AND SYSTEMS INTERFACE  
 01/28/1998 - 12/31/1999      FY01: -\$50      Total: \$49,950  
*Prin. Invest.:* N AVAILABLE  
*Tech. Officer:* LARC/N AVAILABLE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 1 296**      **GEORGIA INST OF TECHNOLOGY**      **3924**  
 MEASUREMENTS OF NO AND NO2 OVER THE TROPICAL PACIF IC  
 04/28/1998 - 05/31/2001      FY01: \$0      Total: \$550,217  
*Prin. Invest.:* S T SANDHOLM  
*Tech. Officer:* LARC/J M HOELL, JR., LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 301**      **GEORGIA INST OF TECHNOLOGY**      **3925**  
 MEASUREMENT OF OH, H2SO4, MSA, NH3, AND DMSO ABOAR D THE P-3B  
 AIRCRAFT  
 05/27/1998 - 05/31/2001      FY01: \$0      Total: \$574,683  
*Prin. Invest.:* F L EISELE, R L MAULDIN  
*Tech. Officer:* LARC/J L ROPER, LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 306**      **GEORGIA INST OF TECHNOLOGY**      **3926**  
 TROPOSPHERIC DIAGNOSTIC MODELING STUDIES OF PEM- TROPICS B  
 FIELD DATA: INVESTIGATION OF THE  
 07/10/1998 - 11/23/2001      FY01: \$124,246      Total: \$509,326  
*Prin. Invest.:* D D DAVIS, G CHEN  
*Tech. Officer:* LARC/J M HOELL, JR., LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 317**      **GEORGIA INST OF TECHNOLOGY**      **3927**  
 MODELING AND DATA ANALYSIS OF PEM-TROPICS B OBSERVATIONS  
 08/17/1998 - 07/31/2001      FY01: \$0      Total: \$391,852  
*Prin. Invest.:* S C LIU  
*Tech. Officer:* LARC/J M HOELL, LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 375**      **GEORGIA INST OF TECHNOLOGY**      **3928**  
 DOWNSIZING OF GATECH'S AIRBORNE FLUORESCENCE (AFS) FOR THE  
 MEASUREMENT OF NITROGENOXIDES  
 02/10/2000 - 05/18/2001      FY01: \$1      Total: \$247,809  
*Prin. Invest.:* H W GUAN, S T SANDHOLM  
*Tech. Officer:* LARC/J L RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 401**            **GEORGIA INST OF TECHNOLOGY**            **3929**  
 HUMAN FACTORS CONSIDERATIONS FOR SAFE RECOVERY FROM FAULTS  
 IN FLIGHT CONTROL SYSTEMS  
 06/08/2000 - 06/14/2003    FY01: \$92,006                            Total: \$157,006  
*Prin. Invest.:* A R PRITCHETT  
*Tech. Officer:* LARC/C M BELCASTRO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 1 411**            **GEORGIA INST OF TECHNOLOGY**            **3930**  
 RAPID MEASUREMENTS OF AEROSOL IONIC COMPOSITION AND 3-10 NM  
 PARTICLE SIZE DISTRIBUTIONS ON THE NASA  
 09/14/2000 - 09/14/2002    FY01: \$172,669                            Total: \$338,672  
*Prin. Invest.:* R J WEBER  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 417**            **GEORGIA INST OF TECHNOLOGY**            **3931**  
 MEASUREMENTS OF NO AND NO<sub>2</sub> FROM THE ASIAN OUTFLOW INTO THE  
 WESTERN PACIFIC  
 09/27/2000 - 09/30/2002    FY01: \$167,835                            Total: \$361,919  
*Prin. Invest.:* S T SANDHOLM  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 421**            **GEORGIA INST OF TECHNOLOGY**            **3932**  
 MEASUREMENT OF OH, H<sub>2</sub>SO<sub>4</sub>, MSA, AND HN0<sub>3</sub> ABOARD THE P-3B  
 AIRCRAFT  
 09/26/2000 - 12/31/2002    FY01: \$158,101                            Total: \$287,859  
*Prin. Invest.:* F L EISELE  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 01024**        **GEORGIA INST OF TECHNOLOGY**            **3933**  
 TROPOSPH MODELG STUDIES TRACE-P FIELD DATA: INVEST HOX/NOX/03  
 PHOTOCHEM SYS COUPL'G TO SULFUR/AEROSO  
 01/29/2001 - 11/30/2003    FY01: \$149,710                            Total: \$149,710  
*Prin. Invest.:* D D DAVIS  
*Tech. Officer:* LARC/J L RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 945**            **GEORGIA INST OF TECHNOLOGY**            **3934**  
 ROTORCRAFT CENTERS OF EXCELLENCE  
 05/03/1996 - 02/28/2001    FY01: \$0                                    Total: \$5,830,069  
*Prin. Invest.:* D C SCHRAGE, D A PETERS, K B BOTA  
*Tech. Officer:* ARC/Y H YU, ARC/J M DAVIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 961**            **GEORGIA INST OF TECHNOLOGY**            **3935**  
 MODELING, TRAINING, AND AIDING IN AEROSPACE SYSTEM S  
 07/18/1996 - 05/31/2002    FY01: \$0                                    Total: \$571,333  
*Prin. Invest.:* C M MITCHELL  
*Tech. Officer:* ARC/E A PALMER, ARC/K CORKER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1124**        **GEORGIA INST OF TECHNOLOGY**            **3936**  
 HOW PROFESSIONAL PILOTS PERCEIVE & RESPOND TO AMIB GUOUS &  
 UNCERTAIN DECISION SITUATIONS  
 07/01/1999 - 04/30/2002    FY01: \$120,045                            Total: \$308,661  
*Prin. Invest.:* U M FISCHER  
*Tech. Officer:* ARC/J M ORASANU  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 1193**        **GEORGIA INST OF TECHNOLOGY**            **3937**  
 A PROBABILISTIC APPROACH TO TECHNOLOGY, IDENTIFICATION, EVALUATION &  
 SELECTION FOR LOW COST SPACE T  
 08/24/2000 - 09/14/2001    FY01: \$130,381                            Total: \$178,381  
*Prin. Invest.:* D N MAVRIS  
*Tech. Officer:* ARC/M E LIVINGSTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5332**        **GEORGIA INST OF TECHNOLOGY**            **3938**  
 EVALUATION OF ADVANCED THERMAL PROTECTION TECHNIQUES FOR  
 FUTURE REUSABLE LAUNCH VEHICLES  
 07/20/1999 - 06/30/2001    FY01: \$0                                    Total: \$50,752  
*Prin. Invest.:* R OLDS  
*Tech. Officer:* ARC/P KOLOZIEJ, ARC/D J RASKY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 711**            **GEORGIA INST OF TECHNOLOGY**            **3939**  
 DAMAGE MECHANICS MODELING FOR LIFE PREDICTION OF ULTRA HIGH  
 TEMPERATURE POLYMER MATRIX COMPOSITES  
 06/07/1999 - 12/31/2001    FY01: \$79,973                            Total: \$279,974  
*Prin. Invest.:* D TALREJA  
*Tech. Officer:* GRC/J R ELLIS  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 900**            **GEORGIA INST OF TECHNOLOGY**            **3940**  
 MICROMACHINED HIGH FREQUENCY CIRCUITS FOR SUBMILLI METER-  
 WAVE SENSORS  
 06/28/2001 - 06/24/2002    FY01: \$39,918                            Total: \$39,918  
*Prin. Invest.:* D PAPAPOLYMEROU  
*Tech. Officer:* GRC/G E PONCHAK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 1 52132**        **GEORGIA INST OF TECHNOLOGY**            **3941**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/06/1996 - 08/31/2001    FY01: \$0                                    Total: \$99,000  
*Prin. Invest.:* A GLEZER, A GLEZER (ADVISOR)  
*Tech. Officer:* LARC/R D JOSLIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 1 52162**        **GEORGIA INST OF TECHNOLOGY**            **3942**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/11/1997 - 06/30/2001    FY01: \$0                                    Total: \$66,001  
*Prin. Invest.:* B V GIBBENS  
*Tech. Officer:* LARC/J E GARDNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 52163**        **GEORGIA INST OF TECHNOLOGY**            **3943**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 09/03/1997 - 09/02/2001    FY01: \$12,000                            Total: \$88,001  
*Prin. Invest.:* J R OLDS, D W WAY  
*Tech. Officer:* LARC/R A LEPSCH, LARC/L R ROWELL  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52167**        **GEORGIA INST OF TECHNOLOGY**            **3944**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 12/01/1997 - 11/30/2000    FY01: -\$18                                Total: \$65,983  
*Prin. Invest.:* K A CUNEFARE  
*Tech. Officer:* HQ/P BACON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 52170**      **GEORGIA INST OF TECHNOLOGY**      **3945**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 04/15/1997 - 01/01/2001      FY01: \$0      Total: \$66,001  
*Prin. Invest.:* F MISTREE  
*Tech. Officer:* LARC/T A ZANG  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 1 52225**      **GEORGIA INST OF TECHNOLOGY**      **3946**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) YEAR 1  
 10/28/1999 - 09/30/2001      FY01: \$22,000      Total: \$42,400  
*Prin. Invest.:* W H REES  
*Tech. Officer:* LARC/E WEISER, LARC/T ST. CLARA  
*CASE Category:* 43 - CHEMICAL ENGR

**NGT 2 52253**      **GEORGIA INST OF TECHNOLOGY**      **3947**  
 THERMAL ANALYSIS & TPS DESIGN OF ABLE/LEAD HPERSON IC VEHICLES  
 07/20/1999 - 08/31/2000      FY01: -\$24,511      Total: \$19,489  
*Prin. Invest.:* S M RUFFIN, V S MCKAY  
*Tech. Officer:* ARC/P F WERCINSKI, ARC/T C TAM  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 2 52255**      **GEORGIA INST OF TECHNOLOGY**      **3948**  
 IMPLEMENTATION OF INTELLIGNET FLIGHT CONTROL ON TH E NASA  
 STONE SOUP SIMULATOR  
 07/20/1999 - 01/31/2000      FY01: -\$7,586      Total: \$14,414  
*Prin. Invest.:* A CALIS  
*Tech. Officer:* ARC/J KANESHIGE, ARC/S LAU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 2 52266**      **GEORGIA INST OF TECHNOLOGY**      **3949**  
 FULLY AUTOMATED CARTESIAN GRID CFD APPLICATIONS FO R MDO IN  
 HIGH - SPEED FLOWS  
 07/17/2000 - 08/14/2002      FY01: \$22,000      Total: \$44,000  
*Prin. Invest.:* S M RUFFIN  
*Tech. Officer:* ARC/M J AHOSMIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 2 52274**      **GEORGIA INST OF TECHNOLOGY**      **3950**  
 CENTERS OF EXCELLENCE IN ROTORCRAFT TECHNOLOGY  
 02/12/2001 - 04/30/2002      FY01: \$780,000      Total: \$780,000  
*Prin. Invest.:* D P SCHRAGE, D A PETERS  
*Tech. Officer:* ARC/Y H YU, ARC/AWKERR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 3 52329**      **GEORGIA INST OF TECHNOLOGY**      **3951**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 06/10/1997 - 05/30/2001      FY01: -\$10,867      Total: \$55,133  
*Prin. Invest.:* E W ZEGURA  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 3 52334**      **GEORGIA INST OF TECHNOLOGY**      **3952**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 06/11/1997 - 08/31/2000      FY01: -\$27,041      Total: \$38,959  
*Prin. Invest.:* G T ZHOU  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 3 52338**      **GEORGIA INST OF TECHNOLOGY**      **3953**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 09/11/1997 - 08/03/2000      FY01: \$0      Total: \$66,000  
*Prin. Invest.:* M LIU  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 3 52371**      **GEORGIA INST OF TECHNOLOGY**      **3954**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 06/26/2000 - 08/31/2002      FY01: \$9,600      Total: \$31,600  
*Prin. Invest.:* J H GINSBERG  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 4 52405**      **GEORGIA INST OF TECHNOLOGY**      **3955**  
 GRADUATRE STUDENT RESEARCHERS PROGRAM ROBUST LINEAR &  
 NONLINEAR CONTROL FOR JET ENGINE  
 06/25/1997 - 07/01/2000      FY01: -\$15      Total: \$65,845  
*Prin. Invest.:* J CORRADO, W HADDAD  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 30069**      **GEORGIA INST OF TECHNOLOGY**      **3956**  
 DEVELOPMENT OF A SELECT ION ATMOSPHERIC PRESSURE C S SPEC-  
 TROMETRY TECHNIQUE FOR THE MEASUREMENT OF T  
 09/10/1997 - 08/31/2000      FY01: \$0      Total: \$65,950  
*Prin. Invest.:* D WINE  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30384**      **GEORGIA INST OF TECHNOLOGY**      **3957**  
 DEVELOPMENT OF A CHEMICAL IONIZATION MASS SPECTROM ETRY  
 TECHNIQUE FORMEASURINGATMOSPHERIC PERNI  
 08/13/2001 - 08/31/2004      FY01: \$22,000      Total: \$22,000  
*Prin. Invest.:* L HUEY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40023**      **GEORGIA INST OF TECHNOLOGY**      **3958**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/03/1997 - 01/31/2001      FY01: -\$205,352      Total: \$1,539,399  
*Prin. Invest.:* E ARMANIOS  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40116**      **GEORGIA INST OF TECHNOLOGY**      **3959**  
 GEORGIA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/08/2001 - 02/28/2002      FY01: \$680,352      Total: \$680,352  
*Prin. Invest.:* E ARMANIOS  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50284**      **GEORGIA INST OF TECHNOLOGY**      **3960**  
 EXPLOITING TEMPORAL UNCERTAINTY IN SIMULATION MODELS  
 06/23/2000 - 07/31/2002      FY01: \$22,000      Total: \$44,000  
*Prin. Invest.:* R FUJIMOTO  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50330**      **GEORGIA INST OF TECHNOLOGY**      **3961**  
 THE EFFECTS ON LAND SURFACE HETEROGENETIES ON AERO SOL  
 CONCENTRATIONS IN CHINA & THEIR IMPACT ON REG  
 08/17/2000 - 08/31/2002      FY01: \$22,000      Total: \$44,000  
*Prin. Invest.:* W L CHAMEIDES  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50363**      **GEORGIA INST OF TECHNOLOGY**      **3962**  
 KINETIC FRICTION ON NON-COALESCING AND NON-WETTING DROPS/  
 STUDENT: MARIA-ISABEL CARNASCIALI  
 06/12/2001 - 07/31/2002      FY01: \$22,000      Total: \$22,000  
*Prin. Invest.:* P NEITZEL  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52854**      **GEORGIA INST OF TECHNOLOGY**      **3963**  
 DEVELOPMENT OF A TOOL FOR CONCEPTUAL DESIGN OF ROCKET BASED  
 COMBINED CYCLE PROPULSION SYSTEMS  
 07/21/1998 - 08/14/2001      FY01: \$0      Total: \$66,000  
*Prin. Invest.:* J R OLDS  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 8 52881**      **GEORGIA INST OF TECHNOLOGY**      **3964**  
 QUANTITATIVE CHARACTERIZATION OF GRAVITATIONAL EFFECTS ON THE  
 EVOLUTION OF MICROSTRUCTURE.  
 09/14/1999 - 03/14/2002      FY01: \$0      Total: \$44,000  
*Prin. Invest.:* A GOKHALE  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 8 52887**      **GEORGIA INST OF TECHNOLOGY**      **3965**  
 DEV OF PREDICTIVE MODELS OF ADVANCED PROPULSION CONCEPTS  
 FOR LOW COST SPACE TRANSPORTATION  
 05/24/2000 - 07/31/2003      FY01: \$22,000      Total: \$44,000  
*Prin. Invest.:* J SEITZMAN  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 8 52898**      **GEORGIA INST OF TECHNOLOGY**      **3966**  
 A CAPABILITY TO GENERATE PHYSICS-BASED MASS ESTIMATING RELA-  
 TIONSHIPS FOR CONCEPTUAL SPACE VEHICLE  
 05/25/2001 - 06/30/2004      FY01: \$22,000      Total: \$22,000  
*Prin. Invest.:* J OLDS  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 13 - PHYSICS

**NGT13 52742**      **GEORGIA INST OF TECHNOLOGY**      **3967**  
 RAPID MEASUREMENTS OF AEROSOL BULK COMPOSITION USING A  
 PARTICLE INTO LIQUID SAMPLING SYSTEM  
 07/12/2000 - 07/31/2001      FY01: \$22,000      Total: \$44,000  
*Prin. Invest.:* K MAXWELL, R WEBER  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT13 52750**      **GEORGIA INST OF TECHNOLOGY**      **3968**  
 DYNAMIC FLUID FLOW SIMULATION AND VALIDATION OF E- 1 AND E-2  
 LIQUID OXYGEN HYDROGEN MODELS  
 06/18/2001 - 06/30/2003      FY01: \$22,000      Total: \$22,000  
*Prin. Invest.:* R RIVERA  
*Tech. Officer:* SSC/R HOLLAND  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 254**      **GEORGIA SOUTHERN UNIV**      **3969**  
 "PHYSICAL PROPERTIES OF PLANETARY MOLECULES", GSFC CONTROL  
 NUMBER 5-3326  
 10/30/1997 - 10/31/2000      FY01: \$0      Total: \$83,883  
*Prin. Invest.:* R NELSON, NONE  
*Tech. Officer:* GSFC/J ALLEN  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 4950**      **GEORGIA STATE UNIV**      **3970**  
 WAVELENGTH-TUNABLE NOVEL SEMICONDUCTOR FIR DETECTO  
 RESEARCH  
 06/23/1997 - 12/31/2001      FY01: \$0      Total: \$158,000  
*Prin. Invest.:* D PERERA  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6904**      **GEORGIA STATE UNIV**      **3971**  
 CROSS-CORRELATION ANALYSIS OF UV PROFILE VARIATIONS AND  
 NONRADIAL PULSATIONS IN BESTARS  
 02/06/1998 - 12/31/2001      FY01: \$0      Total: \$65,300  
*Prin. Invest.:* D GIES  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7752**      **GEORGIA STATE UNIV**      **3972**  
 PHOTOIONIZATION AND RELATED DIELECTRONIC/RADIATIVE RECOMBINA-  
 TION ANELASTIC SCATTERING CROSS SE  
 11/25/1998 - 12/31/2001      FY01: \$50,000      Total: \$146,100  
*Prin. Invest.:* S T MANSON  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1416**      **MEDICAL COLLEGE OF GEORGIA**      **3973**  
 CELLULAR & MOLECULAR MECHANISMS MEDIATING RAPID RE SEALING OF  
 GRAVITY-INDUCED PLASMA MEMBRANE DISRUP  
 07/12/2000 - 06/30/2002      FY01: \$301,455      Total: \$457,166  
*Prin. Invest.:* P L MCNEIL  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 6602**      **MOREHOUSE COLLEGE**      **3974**  
 AN INFRARED STUDY OF ORTHO AND PARA HYDROGEN ON IN TERS-  
 TELLAR GRAINS  
 11/13/1997 - 10/31/2000      FY01: \$0      Total: \$221,667  
*Prin. Invest.:* J KING, JR.  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1492**      **MOREHOUSE COLLEGE**      **3975**  
 INSPIRING CAREERS IN ENGINEERING, MATHMEMATICS, AND SCIENCE  
 (ICEMS)  
 06/04/1998 - 05/18/2001      FY01: -\$19,864      Total: \$277,547  
*Prin. Invest.:* E MCDONALD  
*Tech. Officer:* MSFC/A BEAM  
*CASE Category:* 21 - MATHEMATICS

**NAG 8 1636**      **MOREHOUSE COLLEGE**      **3976**  
 "USING THE NASA ROTATING BIOREACTOR TO STUDY ROLE OF NITRIC  
 OXIDE IN BREAST-INDUCED ANGIOGENESIS"  
 09/30/1999 - 06/30/2002      FY01: \$72,811      Total: \$221,635  
*Prin. Invest.:* G L SANFORD  
*Tech. Officer:* MSFC/R RICHMOND  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

**NAG 8 1711** **MOREHOUSE COLLEGE** **3977**  
 STRATEGIC PREPAREDNESS ADVANCING CAREERS IN ENGINEERING/  
 SCIENCES (SPACE)  
 03/29/2000 - 03/28/2003 FY01: \$1,539,013 Total: \$3,040,303  
*Prin. Invest.:* J KING  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 964** **MOREHOUSE COLLEGE** **3978**  
 SIMULATED MICROGRAVITY ...  
 09/25/1997 - 12/31/2001 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* K DUTT  
*Tech. Officer:* JSC/K KRISHEN  
*CASE Category:* 56 - MEDICL

**NAG 2 1215** **MOREHOUSE SCHOOL MED** **3979**  
 PRE-METARSAL DIFFERENTIATION & MINERALIZATION  
 05/04/1998 - 06/30/2001 FY01: \$0 Total: \$100,789  
*Prin. Invest.:* B J KLEMENT  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1381** **MOREHOUSE SCHOOL MED** **3980**  
 BONE & CALCIUM METABOLISM IN DAHL SALT SENSITIVE & SALT RESES-  
 TANT RATS WITH UNLOADED HINDLIMBS  
 09/03/1999 - 08/31/2002 FY01: \$37,901 Total: \$129,499  
*Prin. Invest.:* M THIERRY-PALMER  
*Tech. Officer:* ARC/B J COLLINS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1448** **MOREHOUSE SCHOOL MED** **3981**  
 CHONDROCYTE DIFFERENTIATION & MATURATION IN HYPERGRAVITY  
 09/29/2000 - 09/30/2002 FY01: \$191,606 Total: \$191,606  
*Prin. Invest.:* B J KLEMENT  
*Tech. Officer:* ARC/C E WADE, ARC/B J COLLINS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 6029** **MOREHOUSE SCHOOL MED** **3982**  
 THE NASASPACE BIOLOGY RESEARCH ASSOCIATE PROGRAM F OR THE  
 21ST CENTURY  
 03/01/1999 - 12/31/1999 FY01: -\$1,629 Total: \$46,494  
*Prin. Invest.:* G SONNENFELD  
*Tech. Officer:* ARC/B LUNA, ARC/R A GRYMES  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 3 2611** **MOREHOUSE SCHOOL MED** **3983**  
 GRAVITATIONAL EFFECTS ON NUTRIENT DIFFUSION THROUGH CARTI-  
 LAGE MATRIX  
 05/22/2001 - 07/31/2005 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* D J KLEMENT  
*Tech. Officer:* GRC/D W GRIFFIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 963** **MOREHOUSE SCHOOL MED** **3984**  
 GRAVITY-INDUCED CHANGES ON THE STERIDOGENESIS ...  
 09/25/1997 - 09/30/2001 FY01: \$0 Total: \$299,966  
*Prin. Invest.:* R SRIDARAN  
*Tech. Officer:* JSC/K KRISHEN  
*CASE Category:* 56 - MEDICL

**NAG 9 971** **MOREHOUSE SCHOOL MED** **3985**  
 EFFECT OF MICRO GRAV ON DISPO & BIOTRANS OF THERAPEUTIC  
 AGENTS ...  
 09/25/1997 - 04/30/2000 FY01: \$0 Total: \$388,518  
*Prin. Invest.:* D POTTER  
*Tech. Officer:* JSC/L PUTCHA  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1164** **MOREHOUSE SCHOOL MED** **3986**  
 TISSUE ENGINEERING OF HUMAN RETINA IN NASA BIOREATOR FOR  
 TRANSPLANT  
 10/01/1999 - 09/30/2001 FY01: \$31,552 Total: \$199,999  
*Prin. Invest.:* K DUTT  
*Tech. Officer:* JSC/C SAMS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1262** **MOREHOUSE SCHOOL MED** **3987**  
 JOINT RESEARCH ON SPACE-RELATED BIOLOGICAL ISSUES  
 05/07/2001 - 04/30/2002 FY01: \$150,000 Total: \$150,000  
*Prin. Invest.:* G SONNENFELD, M THIERRY-PALMER  
*Tech. Officer:* ARC/S M HING, ARC/O SANTOS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 9 53** **MOREHOUSE SCHOOL MED** **3988**  
 DEVELOP MINORITY UNIV SPACE MEDICINE CENTER  
 12/18/1997 - 01/01/2001 FY01: \$0 Total: \$3,129,072  
*Prin. Invest.:* M THIERRY-PALMER  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 56 - MEDICL

**NCC 9 112** **MOREHOUSE SCHOOL MED** **3989**  
 SPACE MEDICINE  
 09/26/2000 - 06/30/2005 FY01: \$904,658 Total: \$1,200,000  
*Prin. Invest.:* M THIERRY-PALMER  
*Tech. Officer:* JSC/C SAMS, JSC/G HENDERSEN  
*CASE Category:* 56 - MEDICL

**NGT 2 52239** **MOREHOUSE SCHOOL MED** **3990**  
 MINORITY COMPONENT FOR THE SPACE BIOLOGY RESEARCH ASSOCI-  
 ATES PROGRAM  
 02/26/1998 - 12/31/1999 FY01: \$0 Total: \$149,394  
*Prin. Invest.:* G L SANFORD  
*Tech. Officer:* ARC/B LUNA, ARC/R A GRYMES  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 9157** **PAINÉ COLLEGE** **3991**  
 PRE-COLLEGE ENRICHMENT PROGRAM IN MATHEMATICS SCIENCE, ENGI-  
 NEERING AND TECHNOLOGY  
 03/03/2000 - 02/28/2002 FY01: \$100,000 Total: \$200,000  
*Prin. Invest.:* R KESSLER  
*Tech. Officer:* GSFC/M STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2241** **SAVANNAH STATE UNIV** **3992**  
 RENEWABLE ENERGY SCAD/TRAINING USING ACTS RENEWABLE  
 ENERGY SCAD/TRAINING USING ACTS  
 03/17/1999 - 10/29/2001 FY01: \$0 Total: \$212,086  
*Prin. Invest.:* D KALU  
*Tech. Officer:* GRC/R J ACOSTA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG10 266 SAVANNAH STATE UNIV 3993**  
 HIGH SCHOOL/HIGH TECH PROGRAM A PARTNERSHIP OF SSU WITH THE  
 GEORGIA COMMITTEE ON EMPLOYMENT OF PEOP  
 09/01/1999 - 08/31/2001 FY01: \$74,971 Total: \$199,942  
*Prin. Invest.:* D SAJWAN  
*Tech. Officer:* KSC/R J MCKINNEY  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NAG 3 2486 SPELMAN COLLEGE 3994**  
 DEVELOPMENT OF A PROBE FOR DETERMINING FUEL-TO-OXY GEN  
 RATIOS IN AIRPLANE FUEL TANKS  
 09/01/2000 - 08/31/2001 FY01: \$0 Total: \$42,000  
*Prin. Invest.:* D CHEN  
*Tech. Officer:* GRC/Q NGUYEN  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NAG 5 9313 SPELMAN COLLEGE 3995**  
 BUILDING CAPITAL IN THE SCIENCES: TECHNOLOGY-BASED  
 INSTRUCTIONAL LABORATORY DESIGN AND DISTANCE EDUC  
 03/22/2000 - 04/30/2001 FY01: \$0 Total: \$915,000  
*Prin. Invest.:* S T BOZEMAN  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1635 SPELMAN COLLEGE 3996**  
 FIFTH ANNUAL MODEL INST FOR EXCELLANCE CONFERENCE  
 09/29/1999 - 11/29/2000 FY01: \$0 Total: \$438,331  
*Prin. Invest.:* E FALCONER  
*Tech. Officer:* MSFC/W LOVE, MSFC/A C BEAM  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1712 SPELMAN COLLEGE 3997**  
 WOMEN IN SCIENCES AND ENGINEERING SCHOLARS PROGRAM  
 05/15/2000 - 03/31/2003 FY01: \$1,500,000 Total: \$3,000,000  
*Prin. Invest.:* C GILLYARD  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 758 SPELMAN COLLEGE 3998**  
 DEVELOPMENT OF A NOVEL MULTI-COMPONENT PROBE FOR C OMBUS-  
 TION AND PROPULSION DIAGNOSTICS  
 12/30/1999 - 01/31/2002 FY01: \$78,420 Total: \$158,420  
*Prin. Invest.:* D C CHEN  
*Tech. Officer:* GRC/Q NGUYEN  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NCC 8 144 SPELMAN COLLEGE 3999**  
 INTEGRATED APPROACH TO THE PREDICTION OF HYPER- POLARIZABILTY  
 OF ORGANIC CRYSTALS  
 08/22/1997 - 06/30/2000 FY01: \$0 Total: \$291,363  
*Prin. Invest.:* B CARDELINO, NONE  
*Tech. Officer:* MSFC/C MOORE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 8 179 SPELMAN COLLEGE 4000**  
 MODEL INSTS FOR EXCELLENCE (MIE)  
 03/22/1999 - 03/31/2001 FY01: \$198,781 Total: \$4,320,776  
*Prin. Invest.:* E Z FALCONER, A THOMPSON  
*Tech. Officer:* MSFC/W J LOVE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 194 SPELMAN COLLEGE 4001**  
 CRYSTAL ENGINEERING OF NONLINEAR OPTICAL COMPOUNDS NEW  
 APPROACH FOR PREDICTING HYPERPOLARIZABILITIES  
 09/30/1999 - 09/30/2002 FY01: \$0 Total: \$298,134  
*Prin. Invest.:* O SCRIVEN  
*Tech. Officer:* MSFC/D O FRAIZER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 8 227 SPELMAN COLLEGE 4002**  
 SPELMAN COLLEGE MODEL INSITUATIONS FOR EXCELLENCE  
 06/26/2001 - 06/26/2006 FY01: \$1,508,300 Total: \$1,508,300  
*Prin. Invest.:* E FALCONER  
*Tech. Officer:* MSFC/W LOVE, MSFC/E ORDONEZ  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3619 UNIV OF GEORGIA 4003**  
 MULTIWAVELENGTH MODELING OF NOVA ATMOSPHERES  
 12/06/1996 - 04/30/2001 FY01: \$0 Total: \$290,329  
*Prin. Invest.:* P HAUSCHILD  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8376 UNIV OF GEORGIA 4004**  
 THE ROLE OF TRANSLUCENT CLOUDS IN GALACTIC STAR FORMATION  
 (L TSA98)  
 03/09/1999 - 03/14/2002 FY01: \$0 Total: \$60,000  
*Prin. Invest.:* L MAGNANI  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8425 UNIV OF GEORGIA 4005**  
 NLTE MODEL ATMOSPHERES FOR VERY LOW MASS STARS (LT SA98)  
 05/10/1999 - 05/14/2002 FY01: \$75,462 Total: \$212,115  
*Prin. Invest.:* P H HAUSCHILD  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8469 UNIV OF GEORGIA 4006**  
 THE EVALUATION OF SNOW WATER EQUIVALENT ACROSS GRA SSLAND  
 REGIONS  
 05/06/1999 - 06/30/2002 FY01: \$0 Total: \$90,185  
*Prin. Invest.:* T L MOTE  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8951 UNIV OF GEORGIA 4007**  
 TEMPERATURE DEPENDENT ELECTRON RECOMBINATION RATES & SPEC-  
 TRAL SIGNATURES OF ION REACTIONS RELEVANT TO  
 01/21/2000 - 08/31/2002 FY01: \$45,000 Total: \$85,000  
*Prin. Invest.:* N G ADAMS  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9088 UNIV OF GEORGIA 4008**  
 ULTRAVIOLET & VISIBLE EMISSION MECHANISMS IN ASTRO PHYSICS  
 02/23/2000 - 01/31/2002 FY01: \$75,000 Total: \$143,766  
*Prin. Invest.:* P C STANCIL  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 9222 UNIV OF GEORGIA 4009**  
 NON-LTE MODEL ATMOSPHERES OF HOT STARS WITH WINDS  
 04/05/2000 - 04/14/2002 FY01: \$74,491 Total: \$156,499  
*Prin. Invest.:* P H HAUSCHILDT  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9396 UNIV OF GEORGIA 4010**  
 FUSE OBSERVATIONS OF GALACTIC AND LMC NOVAE IN OUT BURST - FUSE  
 04/05/2000 - 04/30/2001 FY01: \$0 Total: \$9,084  
*Prin. Invest.:* P H HAUSCHILDT  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10551 UNIV OF GEORGIA 4011**  
 MODELING OF EXTRASOLAR GIANT PLANETS WITH IMPROVED MOLECULAR LINE OPACITIES, CONTINUUM OPACITIES, CO  
 03/09/2001 - 03/14/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* P C STANCLIL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1771 UNIV OF GEORGIA 4012**  
 COMPUTER SIULATIONS OF CONFINED QUANTUM SYSTEMS IN MICROGRAVITY  
 05/01/2001 - 01/31/2004 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* D P LANDAU  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1110 UNIV OF GEORGIA 4013**  
 CONTROLLED GROWTH OF BIOLOGIC AND ABIOTIC CARBONATES AND FEOXIDES  
 05/14/1999 - 05/13/2002 FY01: \$20,000 Total: \$30,000  
*Prin. Invest.:* C S ROMANEK  
*Tech. Officer:* JSC/E K GIBSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 8 97081 UNIV OF GEORGIA 4014**  
 LAND USE/COVER AND LAND SURFACE TEMPERATURE CHANGE MAPPING & NORMALIZED DIFFERENCE VEGETATION INDEX  
 11/04/1996 - 11/03/1999 FY01: \$0 Total: \$158,755  
*Prin. Invest.:* D P LO  
*Tech. Officer:* MSFC/T MILLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 8 233 UNIV OF GEORGIA 4015**  
 ONE SHARE OF SYNCHROTRON BEAM TIME FROM THE SOUTH EAST REGIONAL COLLABROATIVE ACCESS TEAM (SER-CAT)  
 09/13/2001 - 09/30/2004 FY01: \$375,000 Total: \$375,000  
*Prin. Invest.:* B WANG  
*Tech. Officer:* MSFC/C KUNDROT  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT 5 30017 UNIV OF GEORGIA 4016**  
 MEASUREMENT OF IN SITU GROWTH RATES OF TWO IMPORTA PRODUCERS USING FLOW CYTOMETRY AND RRNA-TARGETED  
 10/23/1996 - 12/31/1999 FY01: -\$130 Total: \$65,870  
*Prin. Invest.:* B BINDER  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 33 - OCEANOGRAPHY

## HAWAII

**NAG 1 1850 UNIV OF HAWAII AT MANOA - HONOLULU 4017**  
 STRESS RECOVERY AND ERROR ESTIMATION FOR 3-D SHELL STRUCTURES  
 08/01/1996 - 04/30/2000 FY01: \$0 Total: \$152,211  
*Prin. Invest.:* H R RIGGS  
*Tech. Officer:* LARC/J M HOUSNER  
*CASE Category:* 41 - AERONAUTICAL ENGRN

**NAG 2 1374 UNIV OF HAWAII AT MANOA - HONOLULU 4018**  
 THE EVOLUTIONARY ORIGIN & DEPLOYMENT OF HOX & PARA HOX GENES IN METAZOA  
 08/12/1999 - 07/31/2002 FY01: \$126,029 Total: \$317,888  
*Prin. Invest.:* M Q MARTINDALE  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1519 UNIV OF HAWAII AT MANOA - HONOLULU 4019**  
 THE EVOLUTION OF GRAVITY RECEPTION IN THE METAZOA  
 08/28/2001 - 08/31/2002 FY01: \$219,272 Total: \$219,272  
*Prin. Invest.:* M Q MARTINDALE  
*Tech. Officer:* ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1912 UNIV OF HAWAII AT MANOA - HONOLULU 4020**  
 GAS-PHASE COMBUSTION SYNTHESIS OF METAL AND CERAMI C NAN-PARTICLES  
 07/09/1996 - 06/24/2000 FY01: \$0 Total: \$58,761  
*Prin. Invest.:* B H CHAO  
*Tech. Officer:* GRC/S GOKOGLU  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 2663 UNIV OF HAWAII AT MANOA - HONOLULU 4021**  
 PARTICIPATION IN THE CONSOLIDATED INFRARED SPECTROMETER (CIRS) AS CO-INVESTIGATOR  
 07/21/1994 - 07/31/2000 FY01: -\$1,478 Total: \$29,191  
*Prin. Invest.:* T OWEN  
*Tech. Officer:* GSFC/V KUNDE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3370 UNIV OF HAWAII AT MANOA - HONOLULU 4022**  
 TWO EXTREMELY RED GALAXIES  
 09/06/1996 - 08/14/2001 FY01: \$0 Total: \$578,500  
*Prin. Invest.:* R D JOSEPH  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 3451 UNIV OF HAWAII AT MANOA - HONOLULU 4023**  
 ANALYSIS OF VOLCANIC ERUPTIONS AND FIRES USING LAN DSAT 7  
 10/07/1996 - 06/30/2002 FY01: \$23,500 Total: \$294,131  
*Prin. Invest.:* FLYNN, NONE  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3625 UNIV OF HAWAII AT MANOA - HONOLULU 4024**  
 SPECTRAL STUDIES OF POSSIBLE ASTEROIDAL MATERIALS  
 02/12/1997 - 10/31/2000 FY01: -\$4 Total: \$119,096  
*Prin. Invest.:* J F BELL  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3635 UNIV OF HAWAII AT MANOA - HONOLULU 4025**  
 REMOTE SENSING AND GEOLOGIC STUDIES OF PLANETARY C  
 02/12/1997 - 10/31/2000 FY01: -\$807 Total: \$209,993  
*Prin. Invest.:* B R HAWKE  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3731 UNIV OF HAWAII AT MANOA - HONOLULU 4026**  
 ADAPTIVE OPTICS IMAGING OF SOLAR SYSTEM OBJECTS  
 03/03/1997 - 12/31/1999 FY01: -\$447 Total: \$131,553  
*Prin. Invest.:* D J RODDIER  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3766 UNIV OF HAWAII AT MANOA - HONOLULU 4027**  
 MINERALOGICAL MAPPING OF THE MOON  
 02/20/1997 - 09/30/2001 FY01: \$120,000 Total: \$487,750  
*Prin. Invest.:* P G LUCEY  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3782 UNIV OF HAWAII AT MANOA - HONOLULU 4028**  
 SHARING DISCOVERIES IN PLANETARY GEOSCIENCE ON THE -ROM  
 02/25/1997 - 06/30/2000 FY01: -\$242 Total: \$192,098  
*Prin. Invest.:* G TAYLOR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 3875 UNIV OF HAWAII AT MANOA - HONOLULU 4029**  
 REGIONAL PLANETARY IMAGE CENTER  
 02/10/1997 - 11/14/2001 FY01: \$0 Total: \$197,785  
*Prin. Invest.:* E R HAWKE  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4024 UNIV OF HAWAII AT MANOA - HONOLULU 4030**  
 APPLICATIONS OF SARS TO URBAN CLIMATOLOGY: ESTIMATI MOISTURE  
 AVAILABILITY FROM RADARSAT IMAGES OF THE  
 03/17/1997 - 01/31/2001 FY01: -\$10 Total: \$130,563  
*Prin. Invest.:* B M DOUSSET  
*Tech. Officer:* GSFC/R H THOMAS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4212 UNIV OF HAWAII AT MANOA - HONOLULU 4031**  
 ORIGIN OF METEORITE PARENT BODIES AND THE MOON  
 03/19/1997 - 11/30/2001 FY01: \$461,000 Total: \$1,812,200  
*Prin. Invest.:* D KEIL  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 4223 UNIV OF HAWAII AT MANOA - HONOLULU 4032**  
 OBSERVATION AND ANALYSIS OF JOVIAN AND SATURNIAN S  
 03/26/1997 - 09/14/2001 FY01: \$0 Total: \$32,000  
*Prin. Invest.:* D J THOLEN  
*Tech. Officer:* GSFC/W HUEBNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4257 UNIV OF HAWAII AT MANOA - HONOLULU 4033**  
 MAPPING HAZARDOUS VOLCANOES WITH RADARSAT AND OTHE  
 04/10/1997 - 02/28/2001 FY01: \$0 Total: \$60,000  
*Prin. Invest.:* P MOUGINIS-MARK  
*Tech. Officer:* GSFC/R H THOMAS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4395 UNIV OF HAWAII AT MANOA - HONOLULU 4034**  
 A GLOBAL ASSESSMENT OF ACTIVE VOLCANISM, VOLCANIC INPUTS TO  
 THE ATMOSPHERE FROM THE EARTH OBSERVING  
 05/06/1997 - 12/31/2000 FY01: -\$55 Total: \$1,050,945  
*Prin. Invest.:* P J MOUGINIS-MARK  
*Tech. Officer:* GSFC/M BALTUCK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4495 UNIV OF HAWAII AT MANOA - HONOLULU 4035**  
 DISTANT COMETS IN THE EARLY SOLAR SYSTEM  
 05/06/1997 - 03/31/2002 FY01: \$97,815 Total: \$430,185  
*Prin. Invest.:* D J MEECH  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4524 UNIV OF HAWAII AT MANOA - HONOLULU 4036**  
 OBSERVATIONS OF PLANET-CROSSING ASTEROIDS  
 05/28/1997 - 02/28/2002 FY01: \$56,500 Total: \$220,894  
*Prin. Invest.:* D J THOLEN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4669 UNIV OF HAWAII AT MANOA - HONOLULU 4037**  
 THE SOLAR SYSTEM BEYOND NEPTUNE  
 06/17/1997 - 12/31/2001 FY01: \$58,000 Total: \$272,495  
*Prin. Invest.:* D C JEWITT  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4941 UNIV OF HAWAII AT MANOA - HONOLULU 4038**  
 OBSERVATIONAL INVESTIGATION OF THE SOLAR INTERIOR  
 06/23/1997 - 05/31/2001 FY01: \$88,349 Total: \$1,185,309  
*Prin. Invest.:* B J LABONTE, NONE  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 5276 UNIV OF HAWAII AT MANOA - HONOLULU 4039**  
 PHASE 1 OF CORAL REEF ECOSYSTEM PHASE 1 OF CORAL REEF  
 ECOSYSTEM  
 04/17/2000 - 04/13/2005 FY01: \$0 Total: \$291,000  
*Prin. Invest.:* M ATKINSON  
*Tech. Officer:* GSFC/D L PIERCE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6336 UNIV OF HAWAII AT MANOA - HONOLULU 4040**  
 A COMPARATIVE STUDY OF X-RAY & LENSING MASS DETERM INATIONS  
 FOR THE MOST X-RAY LUMINOUS CLUSTERS IN  
 10/02/1997 - 03/14/2001 FY01: \$0 Total: \$17,800  
*Prin. Invest.:* H EBELING  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6340 UNIV OF HAWAII AT MANOA - HONOLULU 4041**  
 AIRCRAFT RADIATION & AEROSOL MSMTS. NEAR HAWAII: SATELLITE  
 VALIDATION AT THE MOBY BUOY & THE HOT SI  
 10/02/1997 - 05/31/2002 FY01: \$156,762 Total: \$846,282  
*Prin. Invest.:* J N PORTER  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6433 UNIV OF HAWAII AT MANOA - HONOLULU 4042**  
 A SYSTEM FOR ACQUISITION DISEMINATION OF EARTH SCI ENCE DATA VIA  
 THEINTERNET  
 10/17/1997 - 04/14/2000 FY01: -\$1,213 Total: \$828,810  
*Prin. Invest.:* T NEILSEN  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6442 UNIV OF HAWAII AT MANOA - HONOLULU 4043**  
 UNDERSTANDING SEASONAL-TO-INTERANNUAL FLUCTUATIONS OF THE  
 NORTH PACIFIC SUBTROPICAL GYRE THROUGH MO  
 11/13/1997 - 09/30/2000 FY01: -\$249 Total: \$126,971  
*Prin. Invest.:* B QIU  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6561 UNIV OF HAWAII AT MANOA - HONOLULU 4044**  
 SPECTROSCOPIC OBSERVATIONS OF THE PLANETS  
 12/09/1997 - 03/31/2002 FY01: \$0 Total: \$159,000  
*Prin. Invest.:* D OWEN  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6753 UNIV OF HAWAII AT MANOA - HONOLULU 4045**  
 A MG II SPECTRAL ATLAS AND FLUX CATALOG FOR LATE- TYPE STARS IN  
 THEHYADES CLUSTER  
 01/12/1998 - 01/14/2000 FY01: \$0 Total: \$45,066  
*Prin. Invest.:* T SIMON  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6829 UNIV OF HAWAII AT MANOA - HONOLULU 4046**  
 OUTER SOLAR SYSTEM NOMENCLATURE  
 01/15/1998 - 01/14/2002 FY01: \$0 Total: \$14,750  
*Prin. Invest.:* T OWEN  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7038 UNIV OF HAWAII AT MANOA - HONOLULU 4047**  
 WEAK LENSING FROM SPACE\_ - ATP  
 02/24/1998 - 03/31/2002 FY01: \$81,012 Total: \$246,327  
*Prin. Invest.:* N KAISER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7056 UNIV OF HAWAII AT MANOA - HONOLULU 4048**  
 SUBMILLIMETER STUDIES OF COMETS  
 02/27/1998 - 02/28/2002 FY01: \$0 Total: \$123,564  
*Prin. Invest.:* D JEWITT  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7139 UNIV OF HAWAII AT MANOA - HONOLULU 4049**  
 REMOTE RAMAN ANALYSIS FOR PLANETARY LANDERS  
 03/04/1998 - 03/31/2002 FY01: \$0 Total: \$417,763  
*Prin. Invest.:* S K SHARMA  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7383 UNIV OF HAWAII AT MANOA - HONOLULU 4050**  
 ARCHITECTURE AND IMPLEMENTATION CONSIDERATION OF A HIGH-  
 SPEED VIBERBI DECODER FOR REED-MULLER SUBC  
 05/12/1998 - 09/14/2001 FY01: \$50,000 Total: \$249,000  
*Prin. Invest.:* G UEHARA  
*Tech. Officer:* GSFC/W H MILLER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 7485 UNIV OF HAWAII AT MANOA - HONOLULU 4051**  
 TO ESTABLISH SUPPORT FOR AN INTERNATIONAL PACIFIC RESEARCH  
 CENTER (IPRC) AT THE UNIV. SCHOOL OF OCEA  
 06/03/1998 - 04/30/2001 FY01: \$0 Total: \$1,000,000  
*Prin. Invest.:* L MAGAARD  
*Tech. Officer:* GSFC/P GLOERSEN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 7513 UNIV OF HAWAII AT MANOA - HONOLULU 4052**  
 HYPERSPECTRAL REMOTE SENSING OF CORAL REEFS IN A TROPICAL  
 ESTUARY  
 07/28/1998 - 09/30/2001 FY01: \$0 Total: \$230,712  
*Prin. Invest.:* M J ATKINSON  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7578 UNIV OF HAWAII AT MANOA - HONOLULU 4053**  
 FUNDING FOR POST-ERUPTION HAZARDS AT MT. PINATUBO , PHIL-  
 IPPINES(SENH98-0118)  
 08/04/1998 - 07/31/2002 FY01: \$262,000 Total: \$717,500  
*Prin. Invest.:* P J MOUGINIS-MARK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7730 UNIV OF HAWAII AT MANOA - HONOLULU 4054**  
 INTERACTIVE TEACHING USING LANDSAT 5 AND LANDSAT 7 DATA  
 09/29/1998 - 06/14/2002 FY01: \$30,433 Total: \$90,533  
*Prin. Invest.:* L P FLYNN  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7855 UNIV OF HAWAII AT MANOA - HONOLULU 4055**  
 THERMAL INFRARED MEASUREMENTS OF THE MOON AND MERCURY  
 12/07/1998 - 11/30/2001 FY01: \$63,499 Total: \$171,584  
*Prin. Invest.:* D G LUCEY  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7868 UNIV OF HAWAII AT MANOA - HONOLULU 4056**  
 CHEMISTRY AND MINERALOGY OF SURFACE UNITS ON EUROPA AND IO  
 01/13/1999 - 12/31/2000 FY01: -\$581 Total: \$49,419  
*Prin. Invest.:* D P FANALE  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7963 UNIV OF HAWAII AT MANOA - HONOLULU 4057**  
 THE FIFTH PLANETARY VOLCANOLOGY FIELD WORKSHOP  
 12/15/1998 - 10/31/2001 FY01: \$0 Total: \$46,000  
*Prin. Invest.:* S K ROWLAND  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8002 UNIV OF HAWAII AT MANOA - HONOLULU 4058**  
 SOLAR LIMB SHAPE, RADIUS AND OSCILLATION STUDIES USING SOHO/MDI  
 01/12/1999 - 01/14/2002 FY01: \$124,811 Total: \$362,429  
*Prin. Invest.:* J R KUHN  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8118 UNIV OF HAWAII AT MANOA - HONOLULU 4059**  
 A PRELIMINARY AEROSOL CLIMATOLOGY FOR THE PACIFIC BOUNDARY LAYER & FREE TROPOSPHERE  
 01/29/1999 - 01/31/2002 FY01: \$111,000 Total: \$333,000  
*Prin. Invest.:* A D CLARKE  
*Tech. Officer:* GSFC/M MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8216 UNIV OF HAWAII AT MANOA - HONOLULU 4060**  
 FIP, FIT, OR MAD? ANALYSIS OF HIGH SIGNAL-TO-NOISE ASCA SPECTRA OF CORONAL STARS (ADP98)  
 02/08/1999 - 02/14/2002 FY01: \$22,527 Total: \$67,497  
*Prin. Invest.:* T SIMON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8253 UNIV OF HAWAII AT MANOA - HONOLULU 4061**  
 FROM DETECTION TO COMPREHENSION: UNDERSTANDING THE PHYSICAL MECHANISMS DRIVING CLUSTER X-RAY EVOLUTION  
 02/19/1999 - 12/31/2001 FY01: \$143,000 Total: \$405,000  
*Prin. Invest.:* H EBELING  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8275 UNIV OF HAWAII AT MANOA - HONOLULU 4062**  
 NON-ICE CONSTITUENTS OF THE ICY GALILEAN SATELLITE SURFACES  
 03/25/1999 - 12/31/2000 FY01: -\$479 Total: \$176,521  
*Prin. Invest.:* T B MCCORD  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8298 UNIV OF HAWAII AT MANOA - HONOLULU 4063**  
 A SURVEY FOR MASSIVE PLANETS BY DIRECT IMAGING WITH ADVANCED ADAPTIVE OPTICS  
 02/23/1999 - 02/28/2002 FY01: \$135,000 Total: \$369,000  
*Prin. Invest.:* D J RODDIER  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8300 UNIV OF HAWAII AT MANOA - HONOLULU 4064**  
 RADIATIVE BALANCE & BEHAVIOR OF THE SEASONAL MARS POLAR CAPS  
 03/05/1999 - 03/14/2002 FY01: \$60,000 Total: \$177,000  
*Prin. Invest.:* T MCCORD  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8330 UNIV OF HAWAII AT MANOA - HONOLULU 4065**  
 SOLAR-C: SCATTER-FREE OBSERVATORY FOR LIMB ACTIVE REGIONS AND CORONAE  
 04/30/1999 - 04/30/2002 FY01: \$199,167 Total: \$506,785  
*Prin. Invest.:* J R KUHN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8421 UNIV OF HAWAII AT MANOA - HONOLULU 4066**  
 SCIENTIFIC RESEARCH FOR DESIGN REFERENCE MISSION FOR NEXT GENERATION SPACE TELESCOPE  
 04/02/1999 - 04/14/2001 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* D N HALL  
*Tech. Officer:* GSFC/E SMITH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8593 UNIV OF HAWAII AT MANOA - HONOLULU 4067**  
 1999 BIOASTRONOMY MEETING  
 06/04/1999 - 05/31/2001 FY01: \$0 Total: \$40,000  
*Prin. Invest.:* T C OWEN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8713 UNIV OF HAWAII AT MANOA - HONOLULU 4068**  
 MINERALOGY AND ISOTOPE CHEMISTRY OF CA-AL-RICH INCLUSIONS, CHONDRULES & MATRIX IN THE CV CHONDRITE  
 08/04/1999 - 07/31/2002 FY01: \$24,000 Total: \$70,500  
*Prin. Invest.:* K KEIL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8745 UNIV OF HAWAII AT MANOA - HONOLULU 4069**  
 LOCAL TSUNAMIS IN HAWAII: HAZARD ASSESSMENT & EMERGENCY RESPONSE  
 08/24/1999 - 08/31/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* G J FRYER  
*Tech. Officer:* GSFC/E PAYLOR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8748 UNIV OF HAWAII AT MANOA - HONOLULU 4070**  
 A REAL-TIME SIMULATION PACKAGE FOR STORM SURGE AND WAVE RUNUP PACIFIC  
 08/25/1999 - 08/30/2002 FY01: \$0 Total: \$400,000  
*Prin. Invest.:* K F CHEUNG  
*Tech. Officer:* GSFC/E PAYLOR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8751 UNIV OF HAWAII AT MANOA - HONOLULU 4071**  
 DEVELOPMENT OF A UV/VISIBLE-OPTIMIZED CCD FOR WFC3 ON HST  
 09/08/1999 - 09/14/2001 FY01: \$0 Total: \$93,500  
*Prin. Invest.:* G LUPPINO  
*Tech. Officer:* GSFC/E CHENG  
*CASE Category:* 13 - PHYSICS

**NAG 5 8757 UNIV OF HAWAII AT MANOA - HONOLULU 4072**  
 IMAGING, GEOCODING AND ENVIRONMENTAL MONITORING IN HAWAII AND THE WEST PACIFIC  
 08/24/1999 - 02/28/2002 FY01: \$0 Total: \$400,000  
*Prin. Invest.:* M BEVIS  
*Tech. Officer:* GSFC/E PAYLOR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8863 UNIV OF HAWAII AT MANOA - HONOLULU 4073**  
 LABORATORY INVESTIGATIONS OF VOLATILE TRAPPING IN COMETS  
 10/20/1999 - 09/30/2001 FY01: \$0 Total: \$80,000  
*Prin. Invest.:* T C OWEN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8870 UNIV OF HAWAII AT MANOA - HONOLULU 4074**  
 VOLATILE EVOLUTION  
 01/10/2000 - 06/30/2001 FY01: \$0 Total: \$72,347  
*Prin. Invest.:* F P FANALE  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8903 UNIV OF HAWAII AT MANOA - HONOLULU 4075**  
 REMOTE SENSING AND GEOLOGIC STUDIES OF PLANETARY CRUSTS  
 12/28/1999 - 12/31/2001 FY01: \$70,400 Total: \$137,280  
*Prin. Invest.:* B HAWKE, NONE  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8920 UNIV OF HAWAII AT MANOA - HONOLULU 4076**  
 A GLOBAL ASSESSMENT OF ACTIVE VOLCANISM FROM THE EARTH  
 OBSERVING SYSTEM  
 01/24/2000 - 12/31/2001 FY01: \$0 Total: \$405,000  
*Prin. Invest.:* P J MOUGINIS-MARK  
*Tech. Officer:* GSFC/E D PAYLOR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8921 UNIV OF HAWAII AT MANOA - HONOLULU 4077**  
 THE FIFTH PLANETARY VOLCANOLOGY FIELD WORKSHOP  
 01/06/2000 - 12/31/2001 FY01: \$0 Total: \$10,000  
*Prin. Invest.:* S K ROWLAND  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8979 UNIV OF HAWAII AT MANOA - HONOLULU 4078**  
 FINDING THE ONSET OF CONVECTION IN MAIN SEQUENCE STARS - FUSE  
 01/24/2000 - 01/31/2002 FY01: \$0 Total: \$68,700  
*Prin. Invest.:* T SIMON, NONE  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8983 UNIV OF HAWAII AT MANOA - HONOLULU 4079**  
 PROPERTIES OF ICE ON THE SURFACE OF EUROPA AND THE OTHER ICY  
 GALILEAN SATELLITES  
 01/24/2000 - 01/31/2002 FY01: \$45,000 Total: \$85,000  
*Prin. Invest.:* G HANSEN  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8989 UNIV OF HAWAII AT MANOA - HONOLULU 4080**  
 OBSERVATIONS OF THE PLUTO-CHARON SYSTEM  
 01/27/2000 - 03/31/2001 FY01: \$0 Total: \$10,360  
*Prin. Invest.:* D J THOLEN  
*Tech. Officer:* GSFC/T H MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8991 UNIV OF HAWAII AT MANOA - HONOLULU 4081**  
 ASTEROID PROCESSING ON EROS  
 01/24/2000 - 01/31/2001 FY01: \$0 Total: \$65,000  
*Prin. Invest.:* P G LUCEY  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9038 UNIV OF HAWAII AT MANOA - HONOLULU 4082**  
 VALIDATION AND ANALYSIS OF SRTM AND VCL DATA OVER TROPICAL  
 VOLCANOES.  
 02/10/2000 - 02/14/2002 FY01: \$74,000 Total: \$113,000  
*Prin. Invest.:* P J MOUGINIS-MARK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9042 UNIV OF HAWAII AT MANOA - HONOLULU 4083**  
 ANALYSIS OF HIPPARCHOS MARGINAL PARALLAXES - ADP 99  
 02/22/2000 - 02/28/2002 FY01: \$0 Total: \$45,059  
*Prin. Invest.:* W D HEACOX  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9166 UNIV OF HAWAII AT MANOA - HONOLULU 4084**  
 ORIGIN & EVOLUTION OF STRUCTURE IN THE UNIVERSE DETERMINED  
 FROM THE X-RAYEVOLUTION OF GALAXY  
 03/08/2000 - 03/15/2002 FY01: \$0 Total: \$67,564  
*Prin. Invest.:* J HENRY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9190 UNIV OF HAWAII AT MANOA - HONOLULU 4085**  
 SHARING DISCOVERIES IN PLANETARY GEOSCIENCE ON THE WORLD  
 WIDE WEB AND CD-ROM  
 03/07/2000 - 03/14/2002 FY01: \$65,000 Total: \$130,000  
*Prin. Invest.:* G TAYLOR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9238 UNIV OF HAWAII AT MANOA - HONOLULU 4086**  
 A CALIBRATION OF THE CLUSTER FLUX MEASUREMENTS IN THE ROSAT  
 ALL-SKY SURVEY - ADP 99  
 03/09/2000 - 03/14/2002 FY01: \$0 Total: \$30,321  
*Prin. Invest.:* H EBELING  
*Tech. Officer:* GSFC/R OLIVERSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9252 UNIV OF HAWAII AT MANOA - HONOLULU 4087**  
 REAL-TIME LABORATORY FOR REMOTE SENSING  
 03/10/2000 - 02/28/2002 FY01: \$499,832 Total: \$748,199  
*Prin. Invest.:* T NIELSEN  
*Tech. Officer:* HQ/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9354 UNIV OF HAWAII AT MANOA - HONOLULU 4088**  
 FULLERENES: A NEW CARRIER-PHASE FOR NOBLE GASES IN METEOR-  
 ITES  
 04/03/2000 - 10/31/2001 FY01: \$0 Total: \$40,000  
*Prin. Invest.:* K KEIL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9413 UNIV OF HAWAII AT MANOA - HONOLULU 4089**  
 TRACKING ERUPTIONS & FIRES WITHIN THE RING OF FIRE  
 04/07/2000 - 04/30/2002 FY01: \$175,666 Total: \$290,333  
*Prin. Invest.:* L FLYNN  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9511 UNIV OF HAWAII AT MANOA - HONOLULU 4090**  
 INTERSTELLAR ORGANIC MOLECULES AND THE ORIGIN OF LIFE: THE  
 ROLE OF EXOGENOUS DELIVERY  
 05/03/2000 - 06/30/2002 FY01: \$90,000 Total: \$174,780  
*Prin. Invest.:* K KEIL  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9576 UNIV OF HAWAII AT MANOA - HONOLULU 4091**  
 THE DIVERSITY OF MARTIAN VOLCANIC FEATURES AS SEEN IN MOC  
 IMAGES AND MOLATOPOGRAPHIC DATA  
 05/17/2000 - 04/30/2002 FY01: \$58,000 Total: \$115,700  
*Prin. Invest.:* P MOUGINIS-MARK  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9580 UNIV OF HAWAII AT MANOA - HONOLULU 4092**  
 A VOLCANIC PLUME DISPERSION MONITORING AND PREDICT ION  
 CAPABILITY  
 05/09/2000 - 09/30/2002 FY01: \$0 Total: \$213,210  
*Prin. Invest.:* S BUSINGER  
*Tech. Officer:* GSFC/E PAYLOR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9757 UNIV OF HAWAII AT MANOA - HONOLULU 4093**  
 CONTROLS ON THE VARIABILITY OF PHYTOPLANKTON BIO- MASS &  
 PRODUCTIVITY IN THE NORTHERN PACIFIC CENTRA  
 06/23/2000 - 12/31/2001 FY01: \$122,917 Total: \$198,558  
*Prin. Invest.:* R R BIDIGARE  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9765 UNIV OF HAWAII AT MANOA - HONOLULU 4094**  
 GEOCHEMICAL STUDIES OF THE LUNAR CRUST  
 07/03/2000 - 06/30/2002 FY01: \$25,000 Total: \$49,000  
*Prin. Invest.:* B HAWKE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9896 UNIV OF HAWAII AT MANOA - HONOLULU 4095**  
 MAPPING THE STELLAR X-RAY EMISSION BEYOND 1 GYR IN SPACE AND  
 TIME  
 09/06/2000 - 09/14/2001 FY01: \$0 Total: \$7,000  
*Prin. Invest.:* T SIMON  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9921 UNIV OF HAWAII AT MANOA - HONOLULU 4096**  
 X-RAY EMISSION FROM BROWN DWARFS: A SEQUENCE OF TEMPERA-  
 TURES AND AGES?  
 09/05/2000 - 09/14/2001 FY01: \$0 Total: \$7,800  
*Prin. Invest.:* W BRANDNER  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9992 UNIV OF HAWAII AT MANOA - HONOLULU 4097**  
 SEARCH FOR X-RAY EMISSION IN THE NEAREST KNOWN BROWN DWARF  
 09/20/2000 - 08/31/2002 FY01: \$14,000 Total: \$30,000  
*Prin. Invest.:* E MARTIN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9994 UNIV OF HAWAII AT MANOA - HONOLULU 4098**  
 RXJ1821+6828: TEMPERATURE DISTRIBUTION AND METALLI CITY FOR A  
 Z=0.81 CLUSTER  
 09/14/2000 - 08/31/2002 FY01: \$16,000 Total: \$38,500  
*Prin. Invest.:* I M GIOIA  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10025 UNIV OF HAWAII AT MANOA - HONOLULU 4099**  
 HARD X-RAYS FROM A COMPLETE SAMPLE OF THE BRIGHTES T ULTRALU-  
 MINOUS INFRARED GALAXIES  
 09/27/2000 - 09/30/2001 FY01: \$0 Total: \$32,400  
*Prin. Invest.:* D B SANDERS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10041 UNIV OF HAWAII AT MANOA - HONOLULU 4100**  
 MEASURING THE MASS DISTRIBUTION IN Z~0.2 CLUSTER LENSES WITH  
 XMM, HST AND CFHT  
 10/03/2000 - 09/30/2001 FY01: \$11,000 Total: \$11,000  
*Prin. Invest.:* H EBELING  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10045 UNIV OF HAWAII AT MANOA - HONOLULU 4101**  
 DATA-INTENSIVE RESEARCH & MODEL DEVELOPMENT AT THE INTERNA-  
 TIONAL PACIFIC RESEARCH CENTER  
 09/28/2000 - 09/30/2001 FY01: \$750,000 Total: \$1,000,000  
*Prin. Invest.:* J MCCREARY  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10085 UNIV OF HAWAII AT MANOA - HONOLULU 4102**  
 THE X-RAY TEMPERATURE FUNCTION AND STRUCTURE OF CLUSTERS AT  
 Z=0.6-1  
 11/07/2000 - 11/14/2001 FY01: \$5,162 Total: \$5,162  
*Prin. Invest.:* H EBELING  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10111 UNIV OF HAWAII AT MANOA - HONOLULU 4103**  
 MONITORING SURFACE DEFORMATION AT HAWAIIAN & OTHER BASALTIC  
 VOLCANOES WITH RADARSAT INTERFEROMETRY  
 11/20/2000 - 11/30/2001 FY01: \$20,185 Total: \$20,185  
*Prin. Invest.:* F AMELUNG  
*Tech. Officer:* GSFC/K PARTINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10128 UNIV OF HAWAII AT MANOA - HONOLULU 4104**  
 AN XMM STUDY OF LOW-ACTIVITY CORONAL STARS OF 1-2 SOLAR  
 MASSES  
 11/28/2000 - 11/30/2001 FY01: \$4,500 Total: \$4,500  
*Prin. Invest.:* T SIMON  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10133 UNIV OF HAWAII AT MANOA - HONOLULU 4105**  
 PARTICIPATION IN PLANET-B NMS TEAM  
 12/12/2000 - 12/14/2001 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* T C OWEN  
*Tech. Officer:* GSFC/J E RICHARDS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10141 UNIV OF HAWAII AT MANOA - HONOLULU 4106**  
 NEW OPPORTUNITIES THROUGH MINORITY INITIATIVES IN SPACE SCIENCE  
 12/19/2000 - 12/31/2001 FY01: \$249,950 Total: \$249,950  
*Prin. Invest.:* R A CROWE  
*Tech. Officer:* HQ/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10228 UNIV OF HAWAII AT MANOA - HONOLULU 4107**  
 THE SIXTH PLANETARY VOLCANOLOGY FIELD WORKSHOP  
 01/04/2001 - 01/14/2002 FY01: \$48,000 Total: \$48,000  
*Prin. Invest.:* S K ROWLAND  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10229 UNIV OF HAWAII AT MANOA - HONOLULU 4108**  
 VOLATILE EVOLUTION  
 01/04/2001 - 01/14/2002 FY01: \$76,000 Total: \$76,000  
*Prin. Invest.:* F P FANALE  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10237 UNIV OF HAWAII AT MANOA - HONOLULU 4109**  
 REGIONAL PLANETARY IMAGE CENTER  
 01/08/2001 - 01/14/2002 FY01: \$50,300 Total: \$50,300  
*Prin. Invest.:* B R HAWKE  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10427 UNIV OF HAWAII AT MANOA - HONOLULU 4110**  
 EVOLUTION OF DUST AROUND STARS  
 01/16/2001 - 02/28/2002 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* D JEWITT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10437 UNIV OF HAWAII AT MANOA - HONOLULU 4111**  
 PHYSICAL PROPERTIES OF COMETRAY NUCLEUS CANDIDATES  
 02/20/2001 - 02/28/2002 FY01: \$55,500 Total: \$55,500  
*Prin. Invest.:* D JEWITT  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10514 UNIV OF HAWAII AT MANOA - HONOLULU 4112**  
 STABILITY & BEHAVIOR OF HYDRATED/HYDROXYLATED MATERIALS IN COLD SOLAR SYSTEM ENVIRONMENTS  
 03/05/2001 - 03/31/2002 FY01: \$75,000 Total: \$75,000  
*Prin. Invest.:* T MCCORD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10564 UNIV OF HAWAII AT MANOA - HONOLULU 4113**  
 A DEEP X-RAY SURVEY OF LOW-MASS PMS STARS IN NGC 2264  
 03/15/2001 - 03/14/2002 FY01: \$19,133 Total: \$19,133  
*Prin. Invest.:* T SIMON  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10610 UNIV OF HAWAII AT MANOA - HONOLULU 4114**  
 CHRONOLOGY OF THE EARLY SOLAR NEBULA: DISTRIBUTION OF 26Al INCHONDRULES FROM PRIMITIVE C  
 03/16/2001 - 03/14/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* A KROT, NONE  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10640 UNIV OF HAWAII AT MANOA - HONOLULU 4115**  
 EFFECTS OF VOLCANIC ERUPTIONS ON THE NATURAL ENVIRONMENT  
 03/20/2001 - 03/31/2002 FY01: \$250,000 Total: \$250,000  
*Prin. Invest.:* P MOUGINIS-MARK  
*Tech. Officer:* GSFC/E D PAYLOR, II  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10646 UNIV OF HAWAII AT MANOA - HONOLULU 4116**  
 HIGH TEMPERATURES AND DISKS AROUND PMS STARS FUSE SPECTRA OF THREE HERBIGAEBE STARS - FUSE 2000  
 03/27/2001 - 05/31/2002 FY01: \$23,500 Total: \$23,500  
*Prin. Invest.:* T SIMON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10704 UNIV OF HAWAII AT MANOA - HONOLULU 4117**  
 A LIGHTWEIGHT FTIR SPECTROMETER FOR IN SITU GAS ANALYSIS  
 05/01/2001 - 03/31/2002 FY01: \$110,940 Total: \$110,940  
*Prin. Invest.:* P LUCEY  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10750 UNIV OF HAWAII AT MANOA - HONOLULU 4118**  
 SPATIAL STATISTICS OF LARGE ASTRONOMICAL DATABASES AN ALGORITHMIC APPROACH  
 05/03/2001 - 04/14/2002 FY01: \$75,000 Total: \$75,000  
*Prin. Invest.:* I SZAPUDI  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10773 UNIV OF HAWAII AT MANOA - HONOLULU 4119**  
 A CALIBRATION OF THE CLUSTER FLUX MEASUREMENTS IN THE ROSAT ALL-SKYSURVEY  
 04/20/2001 - 04/30/2002 FY01: \$55,000 Total: \$55,000  
*Prin. Invest.:* H EBELING  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10909 UNIV OF HAWAII AT MANOA - HONOLULU 4120**  
 APPLICATION OF A THERMO-RHEOLOGICAL LAVA FLOW MODEL TO MARTIAN CONDITIONS  
 05/09/2001 - 05/14/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* S ROWLAND  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11138 UNIV OF HAWAII AT MANOA - HONOLULU 4121**  
 PARTICIPATION ON THE CASSINI-HUYGENS GAS CHROMATO- GRAPH-  
 MASS SPECTROMETER(GCMS) TEAM  
 07/25/2001 - 07/31/2005 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* T C OWEN *Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/W T KASPRZAK  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11362 UNIV OF HAWAII AT MANOA - HONOLULU 4122**  
 FLOW-EJECTA CRATER POPULATION ON MARS & CHRONOLOGY OF  
 MAJOR GEOLOGIC EVENTS  
 09/26/2001 - 09/30/2004 FY01: \$84,000 Total: \$84,000  
*Prin. Invest.:* K KEIL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 20704 UNIV OF HAWAII AT MANOA - HONOLULU 4123**  
 A LIGHTWEIGHT FTIR SPECTROMETER FOR IN SITU GAS ANALYSIS  
 04/09/2001 - 04/30/2001 FY01: \$0 Total: \$0  
*Prin. Invest.:* P LUCEY  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1798 UNIV OF HAWAII AT MANOA - HONOLULU 4124**  
 RESEARCH, "CURVATURE-BASED WAVEFRONT SENSOR FOR USE ON  
 EXTENDED, ARBITRARY, LOW CONTRAST SCENES"  
 04/25/2001 - 04/24/2004 FY01: \$215,000 Total: \$215,000  
*Prin. Invest.:* B J LABONTE  
*Tech. Officer:* MSFC/A KEYS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 2 98077 UNIV OF HAWAII AT MANOA - HONOLULU 4125**  
 DEVELOPMENT OF ADVANCED NEAR INFRARED FOCAL PLANE  
 TECHNOLOGY  
 08/04/1998 - 06/30/2003 FY01: \$2,706,106 Total: \$3,698,106  
*Prin. Invest.:* D N HALL  
*Tech. Officer:* ARC/K W HODAPP  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 30951 UNIV OF HAWAII AT MANOA - HONOLULU 4126**  
 INTERPRETATION OF GALILEO PROBE MASS SPECTROMETER DATA  
 01/15/1991 - 04/30/2000 FY01: \$0 Total: \$280,168  
*Prin. Invest.:* T C OWENS  
*Tech. Officer:* GSFC/J R RICHARDS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 97136 UNIV OF HAWAII AT MANOA - HONOLULU 4127**  
 MEASUREMENTS OF AEROSOL, OCEAN & SKY PROPERTIES AT THE HOT  
 SITE IN THE CENTRAL PACIFIC  
 09/29/1997 - 03/28/2001 FY01: \$0 Total: \$396,097  
*Prin. Invest.:* J PORTER  
*Tech. Officer:* GSFC/C MCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 99180 UNIV OF HAWAII AT MANOA - HONOLULU 4128**  
 LASER RANGING OPERATION, REPAIR & MAINTENANCE OF LURE  
 OBSERVATORY FACILITY, MAUI, HI.  
 08/19/1999 - 08/18/2004 FY01: \$490,000 Total: \$1,150,000  
*Prin. Invest.:* D O'GARA  
*Tech. Officer:* GSFC/J MCGARRY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NASW 5062 UNIV OF HAWAII AT MANOA - HONOLULU 4129**  
 OPERATION AND MAINTENANCE OF THE INFRARED TELESCOPE FACILITY  
 01/31/1996 - 01/31/2001 FY01: \$0 Total: \$14,916,140  
*Prin. Invest.:* D N HALL, R JOSEPH  
*Tech. Officer:* HQ/E BARKER  
*CASE Category:* 11 - ASTRONOMY

**NCC 1 315 UNIV OF HAWAII AT MANOA - HONOLULU 4130**  
 SIZE RESOLVED AEROSOL NUCLEI AND PHYSICO-CHEMISTRY FOR PEM-  
 TROPICS B ABOARD P-3B, REF NRA-97-MTPE-13  
 08/17/1998 - 08/31/2002 FY01: \$0 Total: \$346,930  
*Prin. Invest.:* A D CLARKE, V KAPUSTIN  
*Tech. Officer:* LARC/J M HOELL, LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 416 UNIV OF HAWAII AT MANOA - HONOLULU 4131**  
 AEROSOL PHYSICO-CHEMISTRY: P-3B AIRCRAFT MEASURE- MENTS FOR  
 TRACE-P. NRA00-OES-01.  
 09/25/2000 - 09/30/2003 FY01: \$108,248 Total: \$217,825  
*Prin. Invest.:* A D CLARKE  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 3 696 UNIV OF HAWAII AT MANOA - HONOLULU 4132**  
 FLAME DESIGN - A NOVEL APPROACH TO CLEAN, EFFICIENT DIFFUSION  
 FLAMES  
 03/25/1999 - 01/13/2003 FY01: \$15,414 Total: \$46,016  
*Prin. Invest.:* B CHAO  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 373 UNIV OF HAWAII AT MANOA - HONOLULU 4133**  
 PARTICIPATION IN THE COMPOSITE INFRARED SPECTROMETER (CIRS)  
 PROJECT AS CO-INVESTIGATOR  
 01/12/1999 - 01/14/2001 FY01: \$0 Total: \$18,000  
*Prin. Invest.:* T C OWEN  
*Tech. Officer:* GSFC/G L BJORAKER  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 461 UNIV OF HAWAII AT MANOA - HONOLULU 4134**  
 QUANTITATIVE ANALYSIS OF HOT SPOTS USING EO-1 & LAND SAT 7.  
 02/28/2000 - 12/31/2001 FY01: \$30,000 Total: \$54,365  
*Prin. Invest.:* L P FLYNN  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 538 UNIV OF HAWAII AT MANOA - HONOLULU 4135**  
 THE NASA INFRARED TELESCOPE FACILITY: SOLAR SYSTEM OBSERVA-  
 TIONS AND MISSION SUPPORT  
 02/12/2001 - 01/31/2002 FY01: \$3,198,459 Total: \$3,198,459  
*Prin. Invest.:* R KUDRITZKI  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30179 UNIV OF HAWAII AT MANOA - HONOLULU 4136**  
 PHYSICAL MODELING OF MULTI-SPECTRAL DATA TO CHARACTERIZE  
 DEPTH & BOTTOM-TYPE IN NEARSHORE MARINE CA  
 08/12/1999 - 08/31/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* C FLETCHER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



**NGT 5 30207 UNIV OF HAWAII AT MANOA - HONOLULU 4137**  
 SOURCES AND ISOTOPIC COMPOSITIONS OF NITROUS OXIDE FROM THE  
 SUBTROPIC NORTH PACIFIC & EASTERN TROPIC  
 08/19/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* B POPP, NONE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40021 UNIV OF HAWAII AT MANOA - HONOLULU 4138**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 02/13/1997 - 01/31/2001 FY01: -\$165,524 Total: \$1,433,254  
*Prin. Invest.:* D TAYLOR  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40076 UNIV OF HAWAII AT MANOA - HONOLULU 4139**  
 HAWAII SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/08/2001 - 01/31/2002 FY01: \$588,324 Total: \$588,324  
*Prin. Invest.:* G TAYLOR  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50017 UNIV OF HAWAII AT MANOA - HONOLULU 4140**  
 THE LINK BETWEEN INTERACTIONS, INFRARED EMISSION A OF GALAXIES:  
 A DETAILED STUDY OF A COMPLETE SAMP  
 07/14/1997 - 06/30/2000 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* J E BARMES  
*Tech. Officer:* GSFC/A NURRIDIN  
*CASE Category:* 99 - MULTIINTERDISCIPL, OTHER

**NGT 5 50175 UNIV OF HAWAII AT MANOA - HONOLULU 4141**  
 A COMPLETE SAMPLE OF X-RAY SELECTED GALAXY CLUSTERS FROM  
 THE ROSAT NORTHECLIPTIC POLE SURVEY  
 05/22/1998 - 06/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J HENRY/MULLIS  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50319 UNIV OF HAWAII AT MANOA - HONOLULU 4142**  
 THE CHANGING FACE OF A NEW VOLCANIC LANDSCAPE SYSTEM: RATES,  
 CAUSES & HAZARDS/STUDENT: JOHN BAILEY  
 08/16/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* P MOUGINIS-MARK  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50357 UNIV OF HAWAII AT MANOA - HONOLULU 4143**  
 A STUDY OF PLANETARY SYSTEM FORMATION & EVOLUTION WITH A DUAL  
 CHANNEL ADAPTIVE OPTICS IMAGING POLAR  
 05/14/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D JEWITT  
*Tech. Officer:* GSFC/K E BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4828 UNIV OF HAWAII SYSTEM 4144**  
 X-RAY TEMPERATURES FOR A COMPLETE SAMPLE OF DISTAN  
 06/20/1997 - 06/30/2000 FY01: -\$59 Total: \$18,841  
*Prin. Invest.:* J HENRY  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6799 UNIV OF HAWAII WINDWARD COMM COLLEGE 4145**  
 ESTABLISHING A RS/GIS EDUCATIONAL TRAINING AND ENVIRONMENTAL  
 MONITORING CENTER IN HAWAII  
 02/27/1998 - 02/29/2000 FY01: -\$80 Total: \$92,934  
*Prin. Invest.:* J E CIOTTI  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## IDAHO

**NAG 5 7537 BOISE STATE UNIV 4146**  
 INVESTIGATION OF PHYSICAL PROCESS DYNAMICS DURING COLD  
 SEASON FLOODING.  
 06/18/1998 - 06/30/2002 FY01: \$0 Total: \$109,909  
*Prin. Invest.:* P DAWSON  
*Tech. Officer:* GSFC/E ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10982 IDAHO STATE UNIV 4147**  
 WILDFIRE EFFECTS ON RANGELAND ECOSYSTEMS AND LIVE STOCK  
 GRAZING IN IDAHO  
 06/12/2001 - 06/14/2002 FY01: \$348,889 Total: \$348,889  
*Prin. Invest.:* KT WEBER  
*Tech. Officer:* GSFC/W TURNER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9052 UNIV OF IDAHO - MOSCOW, IDAHO 4148**  
 NOVA ONLINE ESS  
 02/14/2000 - 09/14/2002 FY01: \$74,835 Total: \$149,834  
*Prin. Invest.:* M R ODELL  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9846 UNIV OF IDAHO - MOSCOW, IDAHO 4149**  
 STUDY OF LAND-ATMOSPHERE INTERACTIONS USING SATELLITE DATA  
 ASSIMILATION  
 08/01/2000 - 07/31/2002 FY01: \$0 Total: \$19,084  
*Prin. Invest.:* R J QUALLS  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9876 UNIV OF IDAHO - MOSCOW, IDAHO 4150**  
 LAND SURFACE MODELING & DATA ASSIMILATION WITH IN SITU & REMOTE  
 SENSING DATA FROM CASES-97  
 08/22/2000 - 07/14/2002 FY01: \$46,399 Total: \$121,988  
*Prin. Invest.:* R QUALLS  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10210 UNIV OF IDAHO - MOSCOW, IDAHO 4151**  
 LEWIS & CLARK REDISCOVERY PROJECT: LIFE-LONG LEARNING ONLINE  
 (L3)  
 01/03/2001 - 12/31/2001 FY01: \$1,831,000 Total: \$1,831,000  
*Prin. Invest.:* J A TEASDALE  
*Tech. Officer:* GSFC/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## ILLINOIS

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11112 UNIV OF IDAHO - MOSCOW, IDAHO 4152**  
 VALIDATION OF THE ATMOSPHERIC INFRARED SOUNDER (AIRS) OVER  
 THE ANTARCTIC PLATEAU (AQUA-0080-033) NR  
 07/12/2001 - 08/31/2002 FY01: \$99,319 Total: \$99,319  
*Prin. Invest.:* V P WALDEN  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 2 1174 UNIV OF IDAHO - MOSCOW, IDAHO 4153**  
 ANALYZING THE IMPACT OF RISK AND TASK ANALYSIS AND HUMAN  
 FACTORS PRICIPLES ON THE OUTCOME OF ....  
 04/24/2000 - 04/14/2002 FY01: \$135,867 Total: \$260,670  
*Prin. Invest.:* L T OSTROM  
*Tech. Officer:* ARC/B G KANKE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 5 395 UNIV OF IDAHO - MOSCOW, IDAHO 4154**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/13/1999 - 05/31/2002 FY01: \$11,500 Total: \$508,298  
*Prin. Invest.:* R GILL  
*Tech. Officer:* HQ/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 577 UNIV OF IDAHO - MOSCOW, IDAHO 4155**  
 IDAHO NASA EPSCOR PROGRAM  
 08/17/2001 - 07/31/2004 FY01: \$125,000 Total: \$125,000  
*Prin. Invest.:* J TEASDALE  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40056 UNIV OF IDAHO - MOSCOW, IDAHO 4156**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 02/12/1997 - 02/28/2001 FY01: \$97,953 Total: \$1,329,787  
*Prin. Invest.:* J TEASDALE  
*Tech. Officer:* GSFC/D E DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40108 UNIV OF IDAHO - MOSCOW, IDAHO 4157**  
 IDAHO SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/02/2001 - 02/28/2002 FY01: \$532,325 Total: \$532,325  
*Prin. Invest.:* J TEASDALE  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## ILLINOIS

**NAG 1 2263 BRADLEY UNIV 4158**  
 EFFECTS OF SELECTED TASK PERFORMANCE CRITERIA AT INITIATING  
 ADAPTIVE TASK REALLOCATIONS  
 01/12/2000 - 11/01/2000 FY01: -\$1,027 Total: \$24,727  
*Prin. Invest.:* D A MONTGOMERY  
*Tech. Officer:* LARC/L J PRINZEL, LARC/A T POPE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 5 9734 CHICAGO STATE UNIV 4159**  
 THUNDERSTORM OBSERVATIONS AND RESEARCH  
 06/27/2000 - 06/30/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* R SOLAKIEWICZ  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 5414 DEPAUL UNIV 4160**  
 DEVELOPING, EVALUATING & APPLYING A COMPUTATIONAL MODEL OF  
 INFORMATION NAVIGATION  
 12/19/2000 - 12/31/2001 FY01: \$16,920 Total: \$16,920  
*Prin. Invest.:* C S MILLER  
*Tech. Officer:* ARC/R W REMINGTON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 272 DEPAUL UNIV 4161**  
 OSS EDUCATION AND OUTREACH BROKER/FACILITATOR PROG RAM  
 02/24/1998 - 03/14/2002 FY01: \$245,000 Total: \$865,000  
*Prin. Invest.:* C C NARASIMHAN  
*Tech. Officer:* GSFC/J ROSENTHAL  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1827 FINCH UNIV HEALTH SCI / CHICAGO MED SCH 4162**  
 CRYSTALLIZATION OF THE MITOCHONDRIAL METABOLITE TRANSPORT  
 PROTEINS  
 09/13/2001 - 11/30/2004 FY01: \$72,000 Total: \$72,000  
*Prin. Invest.:* R S KAPLAN  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 8 1723 ILLINOIS INST OF TECHNOLOGY 4163**  
 A WARNING SYSTEM FOR EARLY DETECTION OF COLLAPSE OF STRUC-  
 TURES DURING FIRE  
 06/05/2000 - 06/04/2001 FY01: -\$221 Total: \$19,779  
*Prin. Invest.:* M OZBAY  
*Tech. Officer:* GRC/S GARG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 798 ILLINOIS INST OF TECHNOLOGY 4164**  
 MODELING NONLINEAR ACOUSTIC STANDING WAVES IN RESO NATORS:  
 THEORY AND EXPERIMENT  
 05/16/2000 - 04/30/2003 FY01: \$50,000 Total: \$100,000  
*Prin. Invest.:* D RAMAN  
*Tech. Officer:* GRC/B M STEINETZ  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 9584 ILLINOIS STATE UNIV 4165**  
 DETERMINATION OF THE MAGNETOTAIL CURRENT SHEET STR UCTURE  
 USING NONLINEARDYNAMICS MODELING AND GEOTA  
 05/25/2000 - 05/31/2002 FY01: \$54,089 Total: \$103,989  
*Prin. Invest.:* D HOLLAND  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1262 ILLINOIS STATE UNIV 4166**  
 RESEARCH JOVE  
 01/17/1997 - 08/31/2000 FY01: \$0 Total: \$51,000  
*Prin. Invest.:* D HOLLAND  
*Tech. Officer:* MSFC/J F DOWNDY, MSFC/J R PRUITT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 1512 JUDSON COLLEGE-ELGIN ILLINOIS 4167**  
 EFFECTS OF OSCILLATORY ACCELERATIONS ON BACTERIAL PROLIFER-  
 ATION & RESPONSE TO ANTIBIOTICS  
 08/17/2001 - 07/31/2002 FY01: \$65,889 Total: \$65,889  
*Prin. Invest.:* E A JUERGENSEMEYER  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 1 2269**                      **KNOX COLLEGE**                      **4168**  
 INVESTIGATION OF CHEMICALLY TREATED TEST-STRIPS FOR OZONE  
 MEASUREMENT  
 02/19/2000 – 09/30/2000                      FY01: -\$818                      Total: \$11,209  
*Prin. Invest.:* L C BUSH  
*Tech. Officer:* LARC/J FISHMAN, LARC/R J DE YOUNG  
*CASE Category:* 12 – CHEMISTRY

**NAG 1 2313**                      **NORTHWESTERN UNIV**                      **4169**  
 MECHANICS OF NANOTUBES & NANOTUBE/POLYMER COMPOSITES  
 07/19/2000 – 07/19/2003                      FY01: \$52,234                      Total: \$105,234  
*Prin. Invest.:* R S RUOFF  
*Tech. Officer:* LARC/T S GATES  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 1 01058**                      **NORTHWESTERN UNIV**                      **4170**  
 SURFACE TEMPLATED GROWTH & ASSEMBLY OF CARBON NANOTUBE  
 ARRAYS  
 05/29/2001 – 05/28/2002                      FY01: \$100,000                      Total: \$100,000  
*Prin. Invest.:* C A MIRKIN  
*Tech. Officer:* LARC/J D JORDAN  
*CASE Category:* 11 – ASTRONOMY

**NAG 2 1527**                      **NORTHWESTERN UNIV**                      **4171**  
 MATHEMATICAL AND COMPUTATIONAL ANALYSIS OF CENTRAL CARBON  
 PATHWAYS FOR EFFICIENT METABOLIC ENGINEER  
 09/14/2001 – 09/14/2002                      FY01: \$62,587                      Total: \$62,587  
*Prin. Invest.:* V HATZIMMANIKATIS  
*Tech. Officer:* ARC/J HINES, ARC/P FUNG  
*CASE Category:* 43 – CHEMICAL ENGR

**NAG 3 1737**                      **NORTHWESTERN UNIV**                      **4172**  
 THEORY OF SOLIDIFICATION  
 04/18/1995 – 05/31/2000                      FY01: \$0                      Total: \$754,000  
*Prin. Invest.:* S H DAVIS  
*Tech. Officer:* GRC/A CHART  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 3 1823**                      **NORTHWESTERN UNIV**                      **4173**  
 COARSENING IN SOLID-LIQUID MIXTURES  
 04/01/1996 – 05/31/2001                      FY01: \$0                      Total: \$837,375  
*Prin. Invest.:* P W VOORHEES  
*Tech. Officer:* GRC/T K GLASGOW  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 3 1855**                      **NORTHWESTERN UNIV**                      **4174**  
 CONTROLL OF FLOWING LIQUID FILMS BY ELECTROSTATIC FIELDS IN  
 SPACE  
 04/26/1996 – 05/31/2001                      FY01: \$0                      Total: \$480,000  
*Prin. Invest.:* S G BANKOFF, R A SCHLUTER, M J MIKSIS  
*Tech. Officer:* GRC/R A WILKINSON  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 3 1863**                      **NORTHWESTERN UNIV**                      **4175**  
 COMBUSTION OF ROTATING SPHERICAL PREMIXED AND DIFFUSION  
 FLAMES IN MICROGRAVITY  
 07/02/1996 – 12/31/2000                      FY01: \$0                      Total: \$211,968  
*Prin. Invest.:* S H SOHRAB  
*Tech. Officer:* GRC/N D PILTCH  
*CASE Category:* 46 – MECHANICAL ENGR

**NAG 3 1892**                      **NORTHWESTERN UNIV**                      **4176**  
 THE MICROMECHANICS OF THE MOVING CONTACT LINE  
 06/01/1996 – 05/31/2001                      FY01: \$0                      Total: \$320,000  
*Prin. Invest.:* S LICHTER  
*Tech. Officer:* GRC/M WEISLOGEL  
*CASE Category:* 13 – PHYSICS

**NAG 3 1932**                      **NORTHWESTERN UNIV**                      **4177**  
 NONLINEAR RELAXATION AND FLUCTUATIONS IN A NON-EQUILIBRIUM  
 NEAR CRITICAL LIQ WITH A TEMP GRADIENT  
 07/29/1996 – 02/14/2001                      FY01: \$8,000                      Total: \$252,999  
*Prin. Invest.:* A Z PATASHINSKI, G A ZIMMERLI  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 3 2113**                      **NORTHWESTERN UNIV**                      **4178**  
 COMPLEX DYNAMICS IN MARANGONI CONVECTION WITH ROTATION  
 03/04/1998 – 01/03/2002                      FY01: \$95,000                      Total: \$370,000  
*Prin. Invest.:* H RIECKE  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 46 – MECHANICAL ENGR

**NAG 3 2209**                      **NORTHWESTERN UNIV**                      **4179**  
 FILTRATION COMBUSTION FOR MICROGRAVITY APPLICATIONS: (1)  
 SMOLDERING (2) COMBUSTION SYNTHESIS OF A  
 11/17/1998 – 11/11/2002                      FY01: \$122,500                      Total: \$386,500  
*Prin. Invest.:* B J MATKOWSKY  
*Tech. Officer:* GRC/S A GOGOKLU  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 3 2364**                      **NORTHWESTERN UNIV**                      **4180**  
 COMPETING INSTABILITIES AND THE SPATIO-TEMPORAL DYNAMICS OF  
 INTERFACIAL WAVE PATTERNS  
 03/20/2000 – 11/30/2003                      FY01: \$90,250                      Total: \$130,250  
*Prin. Invest.:* M SILBER  
*Tech. Officer:* GRC/C E NIEDERHAUS  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 3 2369**                      **NORTHWESTERN UNIV**                      **4181**  
 INTERFACIAL DYNAMICS INTERFACIAL DYNAMICS  
 04/03/2000 – 11/30/2003                      FY01: \$72,451                      Total: \$136,583  
*Prin. Invest.:* D H DAVIS  
*Tech. Officer:* GRC/H C DEGROH  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 3 2474**                      **NORTHWESTERN UNIV**                      **4182**  
 COARSENING IN SOLID-LIQUID MIXTURES-2 (CSLM-2) COARSENING IN  
 SOLID-LIQUID MIXTURES-2 (CSLM-2)  
 07/24/2000 – 11/30/2005                      FY01: \$169,074                      Total: \$220,470  
*Prin. Invest.:* P W VOORHEES  
*Tech. Officer:* GRC/W B DUVAL  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 3 2485**                      **NORTHWESTERN UNIV**                      **4183**  
 ATOMIC-SCALE STUDIES OF EVOLVING MICROSTRUCTURES OF NICKEL-  
 BASED SUPERALLOYS: A GRADUATE TRAINING  
 08/22/2000 – 08/31/2001                      FY01: \$0                      Total: \$25,000  
*Prin. Invest.:* D N SEIDMAN  
*Tech. Officer:* GRC/R D NOEBE  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 3 2511**                      **NORTHWESTERN UNIV**                      **4184**  
 MODELING MICROGRAVITY NON-PREMIXED COMBUSTION SYST EMS  
 12/07/2000 - 11/15/2004                      FY01: \$70,000                      Total: \$70,000  
*Prin. Invest.:* D MATALON  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2628**                      **NORTHWESTERN UNIV**                      **4185**  
 DEVELOPMENT OF HIGH-CONDUCTIVE POLYELECTROLYTES FOR LI  
 BATTERIES  
 06/01/2001 - 12/31/2003                      FY01: \$90,000                      Total: \$90,000  
*Prin. Invest.:* D F SHRIVER  
*Tech. Officer:* GRC/R S BALDWIN  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 4354**                      **NORTHWESTERN UNIV**                      **4186**  
 MARINER 10 COLOR AND ALBEDO OF MERCURY AND THE MOO  
 04/24/1997 - 03/31/2001                      FY01: \$0                      Total: \$181,679  
*Prin. Invest.:* D S ROBINSON  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 5094**                      **NORTHWESTERN UNIV**                      **4187**  
 THE DEVELOPMENT OF A FOCUSING SYSTEM FOR 40-100 KEV X-RAYS  
 11/22/1996 - 03/31/2002                      FY01: \$0                      Total: \$497,000  
*Prin. Invest.:* M P ULMER  
*Tech. Officer:* GSFC/L W GURKIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 7011**                      **NORTHWESTERN UNIV**                      **4188**  
 THEORETICAL STUDIES OF X-RAY BURSTS IN ACCRETING N EUTRON  
 STARS\_ - ATP  
 02/18/1998 - 02/14/2001                      FY01: \$0                      Total: \$211,710  
*Prin. Invest.:* R E TAAM  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8294**                      **NORTHWESTERN UNIV**                      **4189**  
 LESSER THARSIS VOLCANOES: STYLES OF ERUPTION AND R ELATIONS  
 TOTHARIS FLOOD VOLCANISM  
 02/23/1999 - 03/31/2002                      FY01: \$55,000                      Total: \$132,200  
*Prin. Invest.:* M S ROBINSON  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9188**                      **NORTHWESTERN UNIV**                      **4190**  
 A MULTI-WAVELENGTH STUDY OF THE INNER 50 PC-REGION AT THE  
 GALACTIC GALACTIC CENTER (LTS99)  
 03/07/2000 - 03/14/2002                      FY01: \$46,907                      Total: \$75,425  
*Prin. Invest.:* F YUSEF-ZADEH  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9272**                      **NORTHWESTERN UNIV**                      **4191**  
 SMALL-SCALE STRUCTURE IN THE DIFFUSE INTERSTELLAR MEDIUM  
 (LTS99)  
 03/16/2000 - 03/14/2002                      FY01: \$92,183                      Total: \$181,895  
*Prin. Invest.:* D MEYER  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10306**                      **NORTHWESTERN UNIV**                      **4192**  
 ANDEAN MOUNTAIN BUILDING: AN INTEGRATED TOPOGRAPH IC, GPS,  
 SEISMOLOGICAL AND NUMERICAL STUDY (SENH99)  
 01/30/2001 - 03/14/2002                      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* S STEIN  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10323**                      **NORTHWESTERN UNIV**                      **4193**  
 SMALL-SCALE INTERSTELLAR STRUCTURE TOWARD THE OPEN CLUSTER  
 CHI PERSEI (FUSE 00)  
 01/30/2001 - 01/31/2002                      FY01: \$71,700                      Total: \$71,700  
*Prin. Invest.:* D M MEYER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10324**                      **NORTHWESTERN UNIV**                      **4194**  
 THE PHYSICAL CHARACTER OF SMALL-SCALE INTERSTELLAR STRUC-  
 TURES (FUSE 00)  
 01/30/2001 - 01/31/2002                      FY01: \$45,100                      Total: \$45,100  
*Prin. Invest.:* J T LAUROESCH  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10465**                      **NORTHWESTERN UNIV**                      **4195**  
 ANOMALOUS OXYGEN AND KRYPTON ABUNDANCES IN INTER- STELLAR  
 GAS (FUSE 00)  
 03/02/2001 - 02/28/2002                      FY01: \$66,200                      Total: \$66,200  
*Prin. Invest.:* D M MEYER, NONE  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10598**                      **NORTHWESTERN UNIV**                      **4196**  
 COLLABORATIVE EFFORT BETWEEN NASA AND PROFESSOR ME L ULMER  
 03/16/2001 - 03/31/2002                      FY01: \$40,000                      Total: \$40,000  
*Prin. Invest.:* M ULMER  
*Tech. Officer:* GSFC/W ZHANG  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10847**                      **NORTHWESTERN UNIV**                      **4197**  
 ALBEDO, COLOR, AND TOPOGRPHIC STUDIES OF THE MOON AND  
 MERCURY  
 05/03/2001 - 05/14/2002                      FY01: \$31,000                      Total: \$31,000  
*Prin. Invest.:* M S ROBINSON  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1660**                      **NORTHWESTERN UNIV**                      **4198**  
 EVOLUTION OF DENDRITE MORPHOLOGY DURING ISOTHERMAL COARS-  
 ENING  
 04/24/2000 - 11/30/2003                      FY01: \$95,000                      Total: \$135,000  
*Prin. Invest.:* J ALKEMPER  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1053**                      **NORTHWESTERN UNIV**                      **4199**  
 RESEARCH FOR ROTATION MEMBRANE WATER PURIFICATION  
 12/10/1998 - 12/14/2001                      FY01: \$168,693                      Total: \$520,029  
*Prin. Invest.:* R M LJEPTOW  
*Tech. Officer:* JSC/N PACKMAN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1297**                      **NORTHWESTERN UNIV**                      **4200**  
 PILOT STUDY: ACOUSTIC ATTENUATION AS A REAL-TIME GA SEOUS  
 PROCESS CONTROL MONITOR  
 05/01/2001 - 04/30/2002                      FY01: \$56,758                      Total: \$56,758  
*Prin. Invest.:* R M LUEPTOW  
*Tech. Officer:* JSC/D RUSSO  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAS 5 98153**                      **NORTHWESTERN UNIV**                      **4201**  
 CONSTELLATION X-RAY MISSION  
 06/22/1998 - 12/15/2001                      FY01: \$0                      Total: \$120,047  
*Prin. Invest.:* M P ULMER  
*Tech. Officer:* GSFC/J GRADY, GSFC/R MAUK  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 1 01002**                      **NORTHWESTERN UNIV**                      **4202**  
 NANO-, MICRO- & MACRO-MECHANICS OF NANOREINFORCED POLY-  
 MERIC MATERIALS  
 12/13/2000 - 08/31/2003                      FY01: \$73,467                      Total: \$73,467  
*Prin. Invest.:* L C BRINSON, NONE  
*Tech. Officer:* LARC/T S GATES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 2 1013**                      **NORTHWESTERN UNIV**                      **4203**  
 PROPHECY: A HIERARCHICAL TOOL FOR MODELING & ANALYZING  
 PARALLEL SCIENTIFIC APPLICATIONS  
 01/27/1998 - 09/30/2001                      FY01: \$64,847                      Total: \$269,931  
*Prin. Invest.:* V E TAYLOR  
*Tech. Officer:* ARC/A GRADY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1017**                      **NORTHWESTERN UNIV**                      **4204**  
 ARTICULATE SOFTWARE FOR SPACE-RELATED OUTREACH ACTIVITIES  
 02/05/1998 - 01/31/2000                      FY01: \$0                      Total: \$222,130  
*Prin. Invest.:* K D FORBUS  
*Tech. Officer:* ARC/M H SHIRLEY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1098**                      **NORTHWESTERN UNIV**                      **4205**  
 AN INVESTIGATION OF THE EFFECTS OF OUTSOURCING MAINTENANCE  
 ON TASK PERFORMANCE  
 03/15/1999 - 12/31/2001                      FY01: \$123,564                      Total: \$295,136  
*Prin. Invest.:* E J CZEPIEL  
*Tech. Officer:* ARC/B G KANKI, ARC/M CONNORS  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 3 870**                      **NORTHWESTERN UNIV**                      **4206**  
 SYNTHESIS, MICROSTRUCTURE AND PROPERTIES OF NICKEL ALUMINIDE  
 FOAMS  
 02/28/2001 - 02/28/2002                      FY01: \$49,967                      Total: \$49,967  
*Prin. Invest.:* D C DUNAND  
*Tech. Officer:* GRC/M V NATHAL  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 3 52378**                      **NORTHWESTERN UNIV**                      **4207**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 06/21/2001 - 08/31/2002                      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* D N SEIDMAN  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 88**                      **NORTHWESTERN UNIV**                      **4208**  
 DEVELOPMENT OF A MOVING GRID RETARDER FOR SUBMILLI METER  
 POLARIMETRY OF SGR B2 (STUDENT: DAVID CHUS)  
 05/26/1999 - 06/30/2002                      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* G NOVAK  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 90**                      **NORTHWESTERN UNIV**                      **4209**  
 HIGH DETECTION EFFICIENCY PHOTON COUNTERS AT 1064N M AND THEIR  
 USE IN A NOVEL QUANTUM IMAGING SCHEME  
 06/03/1999 - 08/31/2002                      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* P KUMAR  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 5 50172**                      **NORTHWESTERN UNIV**                      **4210**  
 KILOHERTZ QPO NATURE AND ORIGINS USING RXTE  
 05/22/1998 - 06/30/2001                      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* MILLER, D LEE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50198**                      **NORTHWESTERN UNIV**                      **4211**  
 IMPROVED FEM DYNAMIC SUBSTRUCTURING THROUGH WAVE-BASED  
 JOINT MODELS  
 06/18/1998 - 08/31/2001                      FY01: \$0                      Total: \$60,500  
*Prin. Invest.:* T IGUSA  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 50211**                      **NORTHWESTERN UNIV**                      **4212**  
 STABILITY OF DIFFUSION FLAMES IN MICROGRAVITY  
 07/10/1998 - 06/30/2001                      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* M MATALON  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 50263**                      **NORTHWESTERN UNIV**                      **4213**  
 RAPIDLY PROPAGATING BUOYANT FILTRATION COMBUSTION WAVES WITH  
 APPLICATIONS TO SMOLDERING & COMBUSTION  
 07/09/1999 - 06/30/2002                      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* B J MATKOWSKY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTIDISCIPLINARY, OTHER

**NGT 5 50368**                      **NORTHWESTERN UNIV**                      **4214**  
 THE EFFECT OF GRAIN BOUNDARIES DURING COARSENING IN SOLID-  
 LIQUID MIXTURES (STUDENT: DAVID ROW)  
 06/18/2001 - 08/31/2002                      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* P VOORHEES  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTIDISCIPLINARY, OTHER

**NAG 5 7662**                      **SOUTHERN ILLINOIS UNIV - CARBONDALE**                      **4215**  
 COMPREHENSIVE MODELS OF THE NEAR-EARTH MAGNETIC FIELD:  
 INTERPRETATION OF THE LITHOSPHERE  
 09/09/1998 - 09/14/2002                      FY01: \$18,500                      Total: \$111,000  
*Prin. Invest.:* D RAVAT  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7771 SOUTHERN ILLINOIS UNIV - CARBONDALE 4216**  
 GEOLOGIC INTERPRETATION OF SATELLITE ALTITUDE CRUS TAL  
 MAGNETIC ANOMALY DATA  
 11/12/1998 - 10/31/2001 FY01: \$22,500 Total: \$133,000  
*Prin. Invest.:* D RAVAT  
*Tech. Officer:* GSFC/P T TAYLOR  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9832 SOUTHERN ILLINOIS UNIV - CARBONDALE 4217**  
 GEOLOGICAL ANALYSIS IF THE MARTIAN CRUSTAL MAGNETIC ANOMALIES  
 07/26/2000 - 07/31/2002 FY01: \$24,000 Total: \$42,000  
*Prin. Invest.:* D RAVAT  
*Tech. Officer:* GSFC/P TAYLOR  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 8 1812 SOUTHERN ILLINOIS UNIV - CARBONDALE 4218**  
 ANISOTROPIC EFFECT IN LAMINATE COMPOSITES USING LASER HEATING  
 05/08/2001 - 10/09/2001 FY01: \$38,000 Total: \$38,000  
*Prin. Invest.:* T CHU  
*Tech. Officer:* MSFC/S RUSSELL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 1 01026 SOUTHERN ILLINOIS UNIV - CARBONDALE 4219**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/12/2001 - 06/30/2004 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* J SCOTT  
*Tech. Officer:* LARC/R TRIPATHI, LARC/J WILSON  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NGT 5 50321 SOUTHERN ILLINOIS UNIV - CARBONDALE 4220**  
 ASSESSING MASS WASTING & LANDSLIDE SUSCEPTIBILITY USING GIS &  
 REMOTELY SENSED IMAGERY, SANTA CRUZ IS  
 08/17/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* N PINTER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 6050 UNIV OF CHICAGO 4221**  
 CONFERENCE: THE DEVELOPMENTAL BASIS OF EVOLUTIONARY CHANGE  
 05/25/2001 - 04/30/2002 FY01: \$18,583 Total: \$18,583  
*Prin. Invest.:* N H PATEL  
*Tech. Officer:* ARC/R D MAC-ELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 3228 UNIV OF CHICAGO 4222**  
 ABUNDANCES AND PHYSICAL CONDITIONS FOR INDIVIDUALS  
 INTERSTELLAR CLOUDS  
 05/07/1996 - 04/30/2001 FY01: \$0 Total: \$479,600  
*Prin. Invest.:* D E WELTY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3687 UNIV OF CHICAGO 4223**  
 ACCRETION AND OUTFLOW PHENOMENA IN YOUNG STELLAR O  
 01/15/1997 - 01/14/2002 FY01: \$100,000 Total: \$557,400  
*Prin. Invest.:* A KONIGL  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3986 UNIV OF CHICAGO 4224**  
 ISOTOPIC STUDIES OF THE MOON AND METEORITES  
 02/26/1997 - 03/31/2001 FY01: \$0 Total: \$1,030,000  
*Prin. Invest.:* D N CLAYTON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 4462 UNIV OF CHICAGO 4225**  
 MILLIMETER APERTURE SYNTHESIS POLARIMETRY AND THE N OF  
 PROTO-PLANETARY DISKS  
 06/09/1997 - 09/30/2000 FY01: \$0 Total: \$158,776  
*Prin. Invest.:* D E CARLSTROM  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4476 UNIV OF CHICAGO 4226**  
 CHEMICAL ASPECTS OF THE ORIGIN OF THE SOLAR SYSTEM  
 06/09/1997 - 11/30/2001 FY01: \$220,000 Total: \$1,081,000  
*Prin. Invest.:* D GROSSMAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4777 UNIV OF CHICAGO 4227**  
 PHYSICAL INVESTIGATORS RELATED TO RAIN AND RETRIEV OF RAIN AND  
 LATENT HEATING  
 06/20/1997 - 06/30/2001 FY01: \$0 Total: \$278,668  
*Prin. Invest.:* R C SRIVASTAVA  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4953 UNIV OF CHICAGO 4228**  
 TURBULENT CONVECTION AND ITS ROLE IN ACOUSTIC EMIS  
 06/23/1997 - 04/30/2002 FY01: \$45,847 Total: \$364,844  
*Prin. Invest.:* D CATTANEO  
*Tech. Officer:* GSFC/M J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 5072 UNIV OF CHICAGO 4229**  
 EXPERIMENTS IN HIGH ENERGY ASTROPHYSICS  
 05/03/1996 - 05/31/2001 FY01: -\$10,024 Total: \$1,930,000  
*Prin. Invest.:* D MULLER  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5178 UNIV OF CHICAGO 4230**  
 STUDY OF A TRANSITION RADIATION DETECTOR FOR THE ACCESS  
 MISSION  
 03/30/1998 - 06/30/2001 FY01: \$0 Total: \$379,600  
*Prin. Invest.:* S P SWORDY  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5179 UNIV OF CHICAGO 4231**  
 ORIGINS OF GALACTIC COSMIC RADIATION: TESTING ALTERNATE MODELS  
 WITH RADIOACTIVE & STABLE ISOTOPE  
 03/09/1998 - 03/31/2002 FY01: \$0 Total: \$116,000  
*Prin. Invest.:* J A SIMPSON  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

## NASA'S UNIVERSITY PROGRAM

ILLINOIS

**NAG 5 5223** **UNIV OF CHICAGO** **4232**  
 GRANT NAG5-5223 - HIGH ENERGY ANTIMATTER TELESCOPE (HEAT) PI  
 DR. DIETRICH MULLER  
 03/16/1999 - 11/30/2001 FY01: \$105,000 Total: \$485,000  
*Prin. Invest.:* D MULLER  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5229** **UNIV OF CHICAGO** **4233**  
 GRANT NAG5-5229 STUDIES OF THE COSMIC RADIATION AT HIGH ENER-  
 GIES PI PROF SWORDY  
 03/16/1999 - 11/30/2001 FY01: \$304,000 Total: \$752,000  
*Prin. Invest.:* SWORDY  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5305** **UNIV OF CHICAGO** **4234**  
 EXPERIMENTS IN HIGH ENERGY ASTROPHYSICS: THE TRACER PROJECT  
 01/09/2001 - 11/30/2001 FY01: \$400,000 Total: \$400,000  
*Prin. Invest.:* D MULLER  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6405** **UNIV OF CHICAGO** **4235**  
 STRUCTURE, KINEMATICS & ABUNDANCES IN LOCAL ISM (LTSA)  
 10/10/1997 - 10/14/2001 FY01: \$70,700 Total: \$263,099  
*Prin. Invest.:* P FRISCH  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6489** **UNIV OF CHICAGO** **4236**  
 DEVELOPMENT OF FREQUENCY SELECTIVE BOLOMETERS  
 01/15/1998 - 10/31/2001 FY01: \$0 Total: \$339,295  
*Prin. Invest.:* D MEYER  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6625** **UNIV OF CHICAGO** **4237**  
 WORKSHOP ON INTERSTELLAR DUST IN THE SOLAR SYSTEM  
 11/19/1997 - 11/30/2000 FY01: \$0 Total: \$25,000  
*Prin. Invest.:* P D FRISCH  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6693** **UNIV OF CHICAGO** **4238**  
 THE PRACTICAL AND OBSERVATIONAL INVESTIGATIONS OF LAGRANGIAN-  
 MEAN TRACER TRANSPORT IN THE STRATOSPHERE  
 12/04/1997 - 12/31/2000 FY01: \$0 Total: \$285,882  
*Prin. Invest.:* D NAKAMURA  
*Tech. Officer:* GSFC/C JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6972** **UNIV OF CHICAGO** **4239**  
 MASS LOSS KINETICS AND ISOTOPE FRACTIONATION OF MOL TEN CAI  
 COMPOSITIONS  
 03/13/1998 - 05/31/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* F M RICHTER  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7077** **UNIV OF CHICAGO** **4240**  
 BOUNDARY CONDITIONS OF THE HELIOSPHERE  
 02/23/1998 - 04/30/2001 FY01: \$0 Total: \$197,100  
*Prin. Invest.:* P C FRISCH  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7163** **UNIV OF CHICAGO** **4241**  
 DEVELOPMENT OF A MINIATURIZED LOW-ENERGY SOLAR NEU TRON  
 DETECTOR FOR APPLICATION TO NEAR-SUNEXPLORA  
 03/12/1998 - 04/14/2001 FY01: \$0 Total: \$109,823  
*Prin. Invest.:* R MCKIBBEN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7212** **UNIV OF CHICAGO** **4242**  
 NUCLEOSYNTHETIC ISOTOPIC ANOMALIES  
 03/26/1998 - 03/31/2001 FY01: \$0 Total: \$75,000  
*Prin. Invest.:* R CLAYTON  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7307** **UNIV OF CHICAGO** **4243**  
 KINETICS OF VOLATILIZATION OF INTERSTELLAR GRAINS  
 04/22/1998 - 03/31/2001 FY01: \$0 Total: \$158,800  
*Prin. Invest.:* L GROSSMAN  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7731** **UNIV OF CHICAGO** **4244**  
 RADIATIVE-DYNAMIC PROBLEMS RELATED TO THE ATMOSPHERE OF  
 EARLY MARS  
 09/24/1998 - 09/30/2002 FY01: \$70,352 Total: \$219,256  
*Prin. Invest.:* R PIERREHUMBERT  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7986** **UNIV OF CHICAGO** **4245**  
 GALAXY CLUSTERS AS COSMOLOGICAL PROBES: ANALYSES OF X-RAY,  
 LENSING, AND SUNYAEV ZEL'DOVICH MEASUREMENTS  
 01/03/1999 - 12/31/2001 FY01: \$126,954 Total: \$381,902  
*Prin. Invest.:* J E CARLSTROM  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8032** **UNIV OF CHICAGO** **4246**  
 ASTROPHYSICAL STUDIES WITH IMP SATELLITE DATA  
 01/19/1999 - 12/31/2001 FY01: \$100,297 Total: \$240,297  
*Prin. Invest.:* C LOPATE  
*Tech. Officer:* GSFC/J KING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8163** **UNIV OF CHICAGO** **4247**  
 THE JOURNEY OF THE SUN - A VIRTUAL REALITY SIMULATION  
 02/08/1999 - 01/31/2002 FY01: \$130,100 Total: \$363,125  
*Prin. Invest.:* P C FRISCH  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8539 UNIV OF CHICAGO 4248**  
 PRIOR GRANT:NAG5-3253 CONTINUATION OF MAP SCIENCE SUPPORT  
 ACTIVITIES BEING IMPLEMENTED BY THE MAP  
 08/17/1999 - 08/14/2002 FY01: \$212,562 Total: \$307,723  
*Prin. Invest.:* S MEYER  
*Tech. Officer:* GSFC/C BENNETT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8571 UNIV OF CHICAGO 4249**  
 PERIODIC, QUASI-PERIODIC, AND BURSTING BEHAVIOR OF NEUTRON  
 STAR X-RAY SOURCES  
 05/25/1999 - 12/31/1999 FY01: -\$2,790 Total: \$30,973  
*Prin. Invest.:* M MILLER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8708 UNIV OF CHICAGO 4250**  
 RADIO INTERFEROMETRIC STUDIES OF COMETS AND ASTEROIDS  
 07/20/1999 - 12/31/2001 FY01: \$0 Total: \$60,000  
*Prin. Invest.:* P PALMER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9016 UNIV OF CHICAGO 4251**  
 PROPOSAL TO THE NASA ESS HPCC PROGRAM  
 02/01/2000 - 01/31/2001 FY01: \$0 Total: \$29,335  
*Prin. Invest.:* D OLSON  
*Tech. Officer:* GSFC/D SPICER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 9063 UNIV OF CHICAGO 4252**  
 DISK-DRIVEN OUTFLOWS IN ACTIVE GALACTIC NUCLEI - ATP-99  
 02/14/2000 - 02/14/2002 FY01: \$62,231 Total: \$119,145  
*Prin. Invest.:* A KONIGL  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9083 UNIV OF CHICAGO 4253**  
 STATISTICAL METHODOLOGY FOR DETECTION OF OZONE TURNA ROUND  
 UNDER DIFFERENT DATA CONDITIONS  
 02/16/2000 - 02/28/2001 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* G C TIAO  
*Tech. Officer:* GSFC/P K BHARTIA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9303 UNIV OF CHICAGO 4254**  
 LABORATORY STUDIES OF HETEROGENEOUS CHEMISTRY IN THE UPPER  
 TROPOSPHERE. NRA-97-OASTT-01 DATED JANUA  
 03/22/2000 - 03/31/2002 FY01: \$0 Total: \$76,130  
*Prin. Invest.:* D ABBATT  
*Tech. Officer:* GSFC/R LAWRENCEQ  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9362 UNIV OF CHICAGO 4255**  
 SUPPORT FOR THE 63RD ANNUAL METEORITICAL SOCIETY MEETING  
 CHICAGO, AUGUST 28-SEPTEMBER  
 03/30/2000 - 03/31/2001 FY01: \$0 Total: \$23,000  
*Prin. Invest.:* A M DAVIS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9378 UNIV OF CHICAGO 4256**  
 MASS LOSS KINETICS AND ISOTOPE FRACTIONATION OF MOLTEN CAI  
 COMPOSITIONS  
 04/03/2000 - 03/31/2003 FY01: \$60,000 Total: \$117,000  
*Prin. Invest.:* F RICHTER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9510 UNIV OF CHICAGO 4257**  
 REFRACTORY INCLUSIONS IN CARBONACEOUS CHONDRITES  
 04/25/2000 - 04/30/2002 FY01: \$92,000 Total: \$180,000  
*Prin. Invest.:* A M DAVIS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9583 UNIV OF CHICAGO 4258**  
 SEARCH FOR NEW VIBRATIONAL AND ELECTRONIC SPECTRA OF MOLECULAR  
 IONS OF ASTROPHYSICAL INTEREST  
 05/09/2000 - 05/14/2001 FY01: \$0 Total: \$65,940  
*Prin. Invest.:* T OKA  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9767 UNIV OF CHICAGO 4259**  
 PATHFINDER ALPHA PROTON X-RAY SPECTROMETER DATA ANALYSIS &  
 INTERPRETATION (ID#: 19963)  
 06/28/2000 - 06/30/2001 FY01: \$0 Total: \$70,000  
*Prin. Invest.:* T ECONOMOU  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9800 UNIV OF CHICAGO 4260**  
 SIDEROPHILE ELEMENT MICROANALYSIS BY LASER ABLATION ICPMS  
 07/14/2000 - 06/30/2002 FY01: \$50,000 Total: \$100,000  
*Prin. Invest.:* M HUMAYUN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10370 UNIV OF CHICAGO 4261**  
 ABUNDANCES AND PHYSICAL CONDITIONS IN THE SMC ISM (FUSE 00)  
 02/08/2001 - 04/30/2002 FY01: \$64,700 Total: \$64,700  
*Prin. Invest.:* D E WELTY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10634 UNIV OF CHICAGO 4262**  
 ISOTOPIC STUDIES OF THE MOON AND METEORITES  
 03/17/2001 - 03/14/2002 FY01: \$170,000 Total: \$170,000  
*Prin. Invest.:* R CLAYTON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10759 UNIV OF CHICAGO 4263**  
 STUDIES OF GAMMA-RAY BURSTS (LISA 2000)  
 04/23/2001 - 04/30/2002 FY01: \$63,000 Total: \$63,000  
*Prin. Invest.:* D Q LAMB  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 10831 UNIV OF CHICAGO 4264**  
 FAST DYNAMOS AND THE ORIGIN OF SMALL SCALE PHOTO SPHERIC  
 FIELDS  
 04/26/2001 - 04/30/2002 FY01: \$107,051 Total: \$107,051  
*Prin. Invest.:* F CATTANEO  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10840 UNIV OF CHICAGO 4265**  
 CMB AND ITS RELATION TO LARGE-SCALE STRUCTURE (ATP 2000)  
 05/11/2001 - 05/14/2002 FY01: \$68,821 Total: \$68,821  
*Prin. Invest.:* W HU  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10878 UNIV OF CHICAGO 4266**  
 COSMIC RAY INTERSTELLAR PROPAGATION (ATP 2000)  
 05/08/2001 - 05/31/2002 FY01: \$21,082 Total: \$21,082  
*Prin. Invest.:* J J CONNELL  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11005 UNIV OF CHICAGO 4267**  
 BOUNDARY CONDITIONS OF THE HELIOSPHERE: FLUCTUATIONS IN  
 NEARBY INTERSTELLAR GAS  
 06/05/2001 - 05/31/2002 FY01: \$79,908 Total: \$79,908  
*Prin. Invest.:* P C FRISCH  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11043 UNIV OF CHICAGO 4268**  
 PATHFINDER ALPHA PROTON X-RAY SPECTROMETER DATA ANALYSIS &  
 INTERPRETATION  
 06/13/2001 - 05/31/2002 FY01: \$110,000 Total: \$110,000  
*Prin. Invest.:* T ECONOMOU  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1096 UNIV OF CHICAGO 4269**  
 GENESIS PHASE C/D  
 04/02/1999 - 04/11/2002 FY01: \$27,500 Total: \$69,100  
*Prin. Invest.:* M HUMAYYO  
*Tech. Officer:* JSC/K CYR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1306 UNIV OF CHICAGO 4270**  
 SUPPORT DATA ACQUISITION FROM SPADUS INSTRUMENT  
 05/23/2001 - 09/30/2001 FY01: \$29,413 Total: \$29,413  
*Prin. Invest.:* A J TUZZOLINO  
*Tech. Officer:* JSC/E G STANSBERRY  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 1103 UNIV OF CHICAGO 4271**  
 NUMERICAL EXPERIMENTS ON THE DYNAMICS OF GALAXIES  
 04/01/1999 - 08/31/2001 FY01: \$0 Total: \$5,000  
*Prin. Invest.:* R N MILLER  
*Tech. Officer:* ARC/B F SMITH  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 63 UNIV OF CHICAGO 4272**  
 USING POP-UP DETECTOR ARRAYS FOR POLARIMETRY  
 06/04/1998 - 06/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R H HILDERBRAND  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 86 UNIV OF CHICAGO 4273**  
 MEASUREMENTS OF ANISOTROPY IN THE COSMIC MICROWAVE BACK-  
 GROUND WITH THE TOPHAT-SPINNER TELESCOPE/STU  
 05/20/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* S MEYER  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 50173 UNIV OF CHICAGO 4274**  
 X-RAY AND SUNYAEV-ZELDOVICH IMAGING OF GALAXY CLUSTERS AS  
 COSMOLOGICAL PROBE  
 05/22/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J E CARLSTROM/REESE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 11 - ASTRONOMY

**NGT 8 52906 UNIV OF CHICAGO 4275**  
 CONSTRAINING COSMOLOGY WITH THE CHANGDRA AND XMM OBSERVA-  
 TORIES  
 05/25/2001 - 07/01/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J CARLSTROM  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 1 01065 UNIV OF ILLINOIS - CHICAGO CIRCLE 4276**  
 TELECOLLABORATIVE DESIGN & SIMULATION IN IMMERSIVE VIRTUAL ENVI-  
 RONMENT  
 05/29/2001 - 11/30/2004 FY01: \$61,000 Total: \$61,000  
*Prin. Invest.:* P BANERJEE  
*Tech. Officer:* LARC/C A SANDRIDGE  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 2 1172 UNIV OF ILLINOIS - CHICAGO CIRCLE 4277**  
 DATA INTENSIVE COMPUTING OF HYBRID SYSTEM DATA  
 01/12/1998 - 12/31/2000 FY01: \$0 Total: \$180,000  
*Prin. Invest.:* R GROSSMAN  
*Tech. Officer:* ARC/G MEYER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 2 1358 UNIV OF ILLINOIS - CHICAGO CIRCLE 4278**  
 AN ULTRASTRUCTURAL STUDY OF DEVELOPMENT IN VESTIBULAR HAIR  
 CELLS, & THEIR CELLULAR RESPONSES TO HYP  
 07/23/1999 - 06/30/2002 FY01: \$121,517 Total: \$308,883  
*Prin. Invest.:* A LYSAKOWSKI  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1905 UNIV OF ILLINOIS - CHICAGO CIRCLE 4279**  
 FLUID DYNAMICS AND SOLIDIFICATION OF MOLTEN SOLER DROPLETS  
 IMPACTING ON A SUBSTRATE IN MICROGRAVITY  
 06/10/1996 - 08/25/2000 FY01: \$0 Total: \$358,020  
*Prin. Invest.:* D POULIKAKOS, NONE  
*Tech. Officer:* GRC/W DUVAL  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2450 UNIV OF ILLINOIS - CHICAGO CIRCLE 4280**  
 DESIGN OF GEAR DRIVES WITH HIGH GEAR RATIO DESIGN OF GEAR  
 DRIVES WITH HIGH GEAR RATIO  
 06/09/2000 - 09/30/2002 FY01: \$80,000 Total: \$120,000  
*Prin. Invest.:* D L LITVIN  
*Tech. Officer:* GRC/R F HANDSCHUH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2456 UNIV OF ILLINOIS - CHICAGO CIRCLE 4281**  
 MOLTEN-METAL DROPLET DEPOSITION ON A MOVING SUBSTRATE IN  
 MICROGRAVITY: AIDING THE DEVELOPMENT OF NO  
 06/08/2000 - 11/30/2003 FY01: \$78,074 Total: \$116,276  
*Prin. Invest.:* D M MEGARIDIS  
*Tech. Officer:* GRC/W B DUVAL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 7600 UNIV OF ILLINOIS - CHICAGO CIRCLE 4282**  
 PARAMETERIZATION OF AN ANSIOTHERMAL VEGETATION  
 07/21/1998 - 07/14/2000 FY01: -\$7,866 Total: \$42,140  
*Prin. Invest.:* R D CRAGO  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9209 UNIV OF ILLINOIS - CHICAGO CIRCLE 4283**  
 UNIV OF CHICAGO TOPHAT COLLABORATION  
 03/16/2000 - 03/14/2001 FY01: \$32,398 Total: \$82,398  
*Prin. Invest.:* S MEYER  
*Tech. Officer:* GSFC/E CHENG  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9427 UNIV OF ILLINOIS - CHICAGO CIRCLE 4284**  
 ANTARCTIC DRY VALLEY LAKES: ANALOGS OF ANICENT MARTIAN LACUS-  
 TRINE SYSTEMS  
 04/11/2000 - 04/14/2003 FY01: \$67,200 Total: \$130,502  
*Prin. Invest.:* P DORAN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10334 UNIV OF ILLINOIS - CHICAGO CIRCLE 4285**  
 CARRIER LIFE TIME ENHANCEMENT USING HGCDTE/CDZNT STRAINED-  
 LAYER SUPERLATTICES FOR NEAR ROOM  
 01/31/2001 - 12/31/2001 FY01: \$257,233 Total: \$257,233  
*Prin. Invest.:* C GREIN  
*Tech. Officer:* GSFC/R MARTINEAU  
*CASE Category:* 13 - PHYSICS

**NAG 5 10398 UNIV OF ILLINOIS - CHICAGO CIRCLE 4286**  
 HIGH SPEED/HIGH ACCURACY MICRO-MIRRORS FOR ADAPT- ABLE  
 SURFACES AND MULTIPLE SHUTTERS  
 02/13/2001 - 01/31/2002 FY01: \$167,383 Total: \$167,383  
*Prin. Invest.:* A FEINERMAN  
*Tech. Officer:* GSFC/M DUTTA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1248 UNIV OF ILLINOIS - CHICAGO CIRCLE 4287**  
 THREE DIMENSIONAL VELOCITY FIELD CHARACTERIZATION IN A  
 BRIDGMAN APPARATUS  
 04/30/1996 - 04/29/2001 FY01: \$0 Total: \$400,000  
*Prin. Invest.:* S S CHA  
*Tech. Officer:* MSFC/P DOTY, MSFC/R POWER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1261 UNIV OF ILLINOIS - CHICAGO CIRCLE 4288**  
 RESEARCH "COMBUSTION SYNTHESIS OF MATERIALS IN MICROGRAVITY"  
 04/25/1996 - 04/30/2001 FY01: \$0 Total: \$483,531  
*Prin. Invest.:* K BREZINSKY  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1473 UNIV OF ILLINOIS - CHICAGO CIRCLE 4289**  
 MICROGRAVITY INVESTIGATION OF DYNAMIC OXYGEN ABSORPTION IN  
 MOLTEN SOLDER JETTING  
 04/13/1998 - 01/31/2002 FY01: \$95,000 Total: \$358,333  
*Prin. Invest.:* C MEGARIDIS  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAS 3 99189 UNIV OF ILLINOIS - CHICAGO CIRCLE 4290**  
 DEFECT ENGINEERING & RELIABILITY STUDY OF SIC HIGH -POWER  
 DEVICES  
 09/09/1999 - 12/31/2000 FY01: \$0 Total: \$260,034  
*Prin. Invest.:* K SHENAI  
*Tech. Officer:* GRC/P J GEORGE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 655 UNIV OF ILLINOIS - CHICAGO CIRCLE 4291**  
 EXPERIMENTS AND MODEL DEVELOPMENT FOR INVESTIGATION OF  
 SOOTING AND RADIATION EFFECTS IN MICROGRAVITY  
 12/29/1998 - 01/04/2003 FY01: \$5,846 Total: \$191,606  
*Prin. Invest.:* Y CHOI  
*Tech. Officer:* GRC/D L LURBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 665 UNIV OF ILLINOIS - CHICAGO CIRCLE 4292**  
 INVESTIGATION OF SOOTING AND RADIATION EFFECTS IN MICROGRAVITY  
 DROPLET COMBUSTION USING JAPAN'S JAMI  
 02/02/1999 - 01/03/2000 FY01: \$0 Total: \$25,155  
*Prin. Invest.:* M Y CHOI  
*Tech. Officer:* GRC/D L LURBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 688 UNIV OF ILLINOIS - CHICAGO CIRCLE 4293**  
 GRAVITATIONAL EFFECTS ON PARTIALLY-PREMIXED FLAMES GRAVITA-  
 TIONAL EFFECTS ON PARTIALLY-PREMIXED FLAME  
 03/16/1999 - 03/09/2003 FY01: \$104,500 Total: \$262,508  
*Prin. Invest.:* D K PURI  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 694 UNIV OF ILLINOIS - CHICAGO CIRCLE 4294**  
 THE EXTINCTION OF LOW STRAIN RATE DIFFUSION FLAMES BY AN AGENT  
 IN MICROGRAVITY  
 03/22/1999 - 03/21/2003 FY01: \$29,211 Total: \$72,476  
*Prin. Invest.:* I K PURI  
*Tech. Officer:* GRC/S L OLSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 50155 UNIV OF ILLINOIS - CHICAGO CIRCLE 4295**  
 MODELLING OF SOOTING AND RADIATION EFFECTS IN DROP SAMUEL  
 MANZELLO  
 09/11/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* M CHOI  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50214 UNIV OF ILLINOIS - CHICAGO CIRCLE 4296**  
 EXPERIMENTAL INVESTIGATION OF ENVIRONMENT OXYGEN CONTENT IN  
 SOLDER JET TECHNOLOGY (STUDENT: ERIC  
 07/22/1998 - 07/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* C M MEGARIDIS, NONE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 2221 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4297**  
 EVALUATION INTERACTIONS BETWEEN CHEMICAL AND CLIMATE  
 PROCESSES IN THE TROPOSPHERE & STRATOSPHER  
 08/20/1999 - 07/31/2002 FY01: \$57,538 Total: \$168,770  
*Prin. Invest.:* D J WUBBLES  
*Tech. Officer:* LARC/G MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01026 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4298**  
 DEFINING THE RELATIONSHIP BETWEEN HUMAN ERROR CLASSES AND  
 TECHNOLOGY INTERVENTION STRATEGIES  
 02/01/2001 - 12/31/2001 FY01: \$85,076 Total: \$85,076  
*Prin. Invest.:* D A WIEGMANN, E M RANTANEN  
*Tech. Officer:* LARC/B J BOLAND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01035 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4299**  
 DEV OF NANOCRYSTALLINE TIA1 ALLOYS FOR SPACE APPLICATIONS  
 02/21/2001 - 09/30/2001 FY01: \$67,196 Total: \$67,196  
*Prin. Invest.:* R S AVERBACK  
*Tech. Officer:* LARC/S J HALES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 01114 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4300**  
 JOHN C. HOUBOLT PAPERS  
 08/16/2001 - 08/20/2002 FY01: \$33,560 Total: \$33,560  
*Prin. Invest.:* W J MAHER  
*Tech. Officer:* LARC/R E MCKINLEY, LARC/W P GIBERT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1120 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4301**  
 SEAMLESS DISPLAYS FOR AIRCRAFT LANDING  
 03/27/1997 - 01/31/2002 FY01: \$93,250 Total: \$387,293  
*Prin. Invest.:* C D WICKENS  
*Tech. Officer:* ARC/D C FOYLE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 2 1126 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4302**  
 ADVANCEMENTS IN 3-D NUMERICAL MODELING OF DUCTILE FRACTURE  
 04/11/1997 - 03/31/2001 FY01: \$0 Total: \$584,233  
*Prin. Invest.:* R H DODDS, JR.  
*Tech. Officer:* ARC/R W HAMPTON, ARC/J C NEWMAN, JR.  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 2 1250 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4303**  
 APPLICATION/SYSTEM ZOS INNERFACE CAPABILITIES  
 08/14/1998 - 12/31/1999 FY01: -\$99 Total: \$99,901  
*Prin. Invest.:* K NAHRSTEDT  
*Tech. Officer:* ARC/K A FREEMAN, ARC/B H WHITAKER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1282 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4304**  
 INCREMENTAL TRANSFER OF TRAINING EFFECTIVENESS OF AVIATION  
 TRAINING DEVICES  
 01/13/1999 - 01/31/2002 FY01: \$79,154 Total: \$278,259  
*Prin. Invest.:* H L TAYLOR, G L BRADSHAW, T W EMANUEL  
*Tech. Officer:* ARC/I BARSHI  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 2 1406 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4305**  
 QOS PROGRAMMING AND DEVELOPMENT ENVIRONMENT  
 05/08/2000 - 03/31/2002 FY01: \$100,000 Total: \$200,000  
*Prin. Invest.:* K NAHRSTEDT  
*Tech. Officer:* ARC/K A FREEMAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1424 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4306**  
 NEXT GENERATION MODELING OF DAMAGE TOLERANCE FOR RISK  
 ASSESSMENT & MITIGATION IN HIGH PERFORMANCE S  
 07/20/2000 - 07/14/2002 FY01: \$193,858 Total: \$268,858  
*Prin. Invest.:* R H DODDS  
*Tech. Officer:* ARC/T L PANONTIN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 1926 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4307**  
 PREDICTION OF MACROSCOPIC PROPERTIES IN LIQUID HELIUM FROM  
 COMPUTER SIMULATION  
 07/19/1996 - 06/08/2001 FY01: \$20,000 Total: \$495,000  
*Prin. Invest.:* D M CEPERLEY, N GOLDENFIELD  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 1988 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4308**  
 A STUDY OF ICE ACCRETION PHYSICS TO IMPROVE THE PREDICTION OF  
 ICE ACCRETION ON AIRCRAFTS  
 11/15/1996 - 10/31/2000 FY01: \$0 Total: \$294,988  
*Prin. Invest.:* M B BRAGG  
*Tech. Officer:* GRC/D N ANDERSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2122 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4309**  
 FLUID PHYSICS OF FOAM EVOLUTION AND FLOW FLUID PHYSICS OF FOAM  
 EVOLUTION AND FLOW  
 02/13/1998 - 01/06/2002 FY01: \$119,090 Total: \$400,345  
*Prin. Invest.:* H AREF  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2135 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4310**  
 SMART ICING SYSTEMS SMART ICING SYSTEMS  
 03/05/1998 - 11/30/2002 FY01: \$445,000 Total: \$1,395,000  
*Prin. Invest.:* M B BRAGG, P G VOUHARIS, N B SURTER  
*Tech. Officer:* GRC/T H BOND, GRC/M G PETAPCZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2236 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4311**  
 DEVELOPMENT OF GRID TECHNOLOGIES FOR SEMI-AUTOMATED ANALYSIS  
 OF ICING EFFECTS ON AIR FOILS  
 02/22/1999 - 11/30/2000 FY01: \$0 Total: \$90,000  
*Prin. Invest.:* K D LEE  
*Tech. Officer:* GRC/Y K CHOO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2263 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4312**  
 WIDEBAND CDMA FOR A SATCOM BASED AVIONICS NETWORK WIDEBAND  
 CDMA FOR A SATCOM BASED AVIONICS NETWORK  
 05/03/1999 - 03/31/2002 FY01: \$0 Total: \$108,598  
*Prin. Invest.:* U MADHOW  
*Tech. Officer:* GRC/K S CHUN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2271 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4313**  
 AERODYNAMICS FLOWFIELD CHARACTERIZATION FOR ICING AERODY-  
 NAMICS FLOWFIELD CHARACTERIZATION FOR ICING  
 06/28/1999 - 12/04/2000 FY01: -\$186 Total: \$87,140  
*Prin. Invest.:* D B BRAGG  
*Tech. Officer:* GRC/H E ADDY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2314 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4314**  
 DEVELOPMENT OF A NEW SHAPE OPTIMIZATION TOOL FOR 3 D TRAN-  
 SONIC COMPRESSORS BASED ON NAVIER-STOKES PH  
 12/30/1999 - 03/31/2002 FY01: \$35,000 Total: \$89,808  
*Prin. Invest.:* K D LEE  
*Tech. Officer:* GRC/E R MCFARLAND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2516 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4315**  
 SMOLDER-EDGE-WAVES AND EDGE-FLAMES SMOLDER-EDGE-WAVES  
 AND EDGE-FLAMES  
 12/22/2000 - 11/30/2004 FY01: \$64,911 Total: \$64,911  
*Prin. Invest.:* J D BUCKMASTER  
*Tech. Officer:* GRC/M C HICKS  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 3 2555 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4316**  
 RECONFIGURABLE ANTENNAS FOR HIGH DATA RATE MULTI-B EAM  
 COMMUNICATION SYSTEMS  
 03/01/2001 - 02/28/2004 FY01: \$101,749 Total: \$101,749  
*Prin. Invest.:* D BERNHARD  
*Tech. Officer:* GRC/R R ROMANOFISKY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2599 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4317**  
 DEEP ET CHING OF AIN USING INDUCTIVELY-COUPLED-PLA SMA REAC-  
 TIVE ION ETCHING METHOD  
 04/27/2001 - 07/31/2001 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* I ADESIDAPrin. Invest.: NONE  
*Tech. Officer:* GRC/R S OKOJIE  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2623 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4318**  
 VIRTUAL ICING RESEARCH TUNNEL VIRTUAL ICING RESEARCH TUNNEL  
 05/31/2001 - 05/31/2004 FY01: \$47,780 Total: \$47,780  
*Prin. Invest.:* E LOTH  
*Tech. Officer:* GRC/M G POTAPCZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 2040 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4319**  
 EOSDIS VERSION O STANDARD DATA FORMAT SUPPORT  
 07/16/1992 - 12/31/2001 FY01: \$889,852 Total: \$3,384,897  
*Prin. Invest.:* M FOLK  
*Tech. Officer:* GSFC/C CARLISLE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 3661 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4320**  
 THE LAND SURFACE COMPONENT OF THE CLIMATE SYSTEM: .....  
 12/19/1996 - 08/14/2000 FY01: \$0 Total: \$225,899  
*Prin. Invest.:* P KUMAR  
*Tech. Officer:* GSFC/R D KOSTER, GSFC/E T ENGMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3923 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4321**  
 RADIATION HYDRODYNAMICS AND THE CHEMICAL  
 02/19/1997 - 02/14/2000 FY01: \$0 Total: \$232,980  
*Prin. Invest.:* M L NORMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4414 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4322**  
 "MODELING STUDIES TO REDUCE UNCERTAINTIES IN EVALU HSCT  
 AIRCRAFT EFFECTS ON THE GLOBAL ATMOSPHERE"  
 05/06/1997 - 08/31/2000 FY01: \$0 Total: \$182,681  
*Prin. Invest.:* D J WUEBBLES  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4858 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4323**  
 REMOTE SENSING OF CANOPY PROPERTIES FOR A FOREST U CO2  
 ENRICHMENT  
 07/08/1997 - 05/31/2000 FY01: -\$241 Total: \$214,144  
*Prin. Invest.:* D DELUCIA  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 5241 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4324**  
 A SOUNDING ROCKET INVESTIGATION PI DR. C GARDNER  
 02/12/1999 - 02/08/2002 FY01: \$48,056 Total: \$105,690  
*Prin. Invest.:* C GARDNER  
*Tech. Officer:* GSFC/W JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6836 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4325**  
 ATMOSPHERIC FORCING OF GREENLAND ICE SHEET  
 01/08/1998 - 12/31/2000 FY01: \$0 Total: \$214,785  
*Prin. Invest.:* J WALSH  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7003 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4326**  
 ENERGETICS OF SUPERNOVA REMNANTS  
 02/09/1998 - 07/31/2000 FY01: \$0 Total: \$140,900  
*Prin. Invest.:* Y CHU  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7152 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4327**  
 ROTATING AND BINARY NEUTRON STARS IN GENERAL RELATIVITY - ATP  
 03/05/1998 - 03/14/2001 FY01: \$0 Total: \$166,136  
*Prin. Invest.:* S L SHAPIRO  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7170 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4328**  
 CHARACTERIZING MULTISCALE INTERACTION OF HYDROLOGI C  
 PROCESSES USING MULTISENSOR SATELLITE DATA  
 03/30/1998 - 12/31/2000 FY01: \$0 Total: \$113,658  
*Prin. Invest.:* P KUMAR  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7404 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4329**  
 MODELLING X-RAY CLUSTERS: EVOLUTION AND REALISTIC PHYSICS  
 05/15/1998 - 05/31/2001 FY01: \$0 Total: \$51,460  
*Prin. Invest.:* M L NORMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8103 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4330**  
 ORIGIN OF X-RAY EMISSION FROM PLANETARY NEBULAE-AD P 98  
 02/05/1999 - 07/31/2000 FY01: \$0 Total: \$32,000  
*Prin. Invest.:* Y CHU  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8104 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4331**  
 ORIGIN OF X-RAY EMISSION FROM PLANETARY NEBULAE-AD P 98  
 02/05/1999 - 01/31/2001 FY01: \$0 Total: \$78,000  
*Prin. Invest.:* U CHU  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8221 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4332**  
 "REDUCING UNCERTAINTIES IN UNDERSTANDING THE POTEN TIAL  
 EFFECTS OF HSCTAIRCRAFT ON THE GLOBAL ATMO  
 02/10/1999 - 02/14/2000 FY01: -\$11,684 Total: \$38,316  
*Prin. Invest.:* D J WUEBBLES  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8418 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4333**  
 SUPERNOVA FALLBACK AND THE EMERGENCE OF BLACK HOLE S AND  
 NEUTRON STARS (ATP 98)  
 03/25/1999 - 04/30/2002 FY01: \$81,000 Total: \$189,000  
*Prin. Invest.:* S L SHAPIRO*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8424 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4334**  
 X-RAY SPECTRA AND VARIABILITY OF ACCRETING NEUTRON STARS-  
 ATP- 98  
 04/15/1999 - 04/14/2002 FY01: \$201,930 Total: \$298,030  
*Prin. Invest.:* F K LAMB  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8479 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4335**  
 EARLY EVOLUTION: THE UNIVERSAL ANCESTOR AND ORIGIN OF MODERN  
 CELL  
 05/04/1999 - 04/30/2002 FY01: \$170,000 Total: \$500,140  
*Prin. Invest.:* G OLSEN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8514 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4336**  
 ISAIA: INTEROPERABLE SYSTEMS FOR ARCHIVAL INFORMATION ACCESS  
 06/10/1999 - 05/31/2001 FY01: \$0 Total: \$39,996  
*Prin. Invest.:* R PLANTE  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8521 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4337**  
 RADIO INTERFEROMETRIC STUDIES OF COMETS & ASTEROID  
 06/25/1999 - 06/30/2001 FY01: \$0 Total: \$60,000  
*Prin. Invest.:* L SYNDER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8555 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4338**  
 MULTISCALE ESTIMATION, ERROR PROPAGATION AND SCALE EFFECTS IN  
 THE DYNAMICAL RESPONSE OF SOIL-MOISTUR  
 06/21/1999 - 06/30/2001 FY01: \$65,367 Total: \$109,044  
*Prin. Invest.:* P KUMAR  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8569 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4339**  
 THE WAVES EXPLORER  
 05/25/1999 - 08/31/2001 FY01: \$0 Total: \$800,000  
*Prin. Invest.:* G R SWENSON  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8740 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4340**  
 SIMULATION OF TURBULENT MIXING AND PROPAGATION OF NUCLEAR  
 BURNING IN THESURFACE LAYERS OF ACCRETING  
 08/12/1999 - 07/30/2001 FY01: \$0 Total: \$47,000  
*Prin. Invest.:* F LAMB  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8781 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4341**  
 INTEGRATED BIOMIMETIC SENSORS USING ARTIFICIAL HAIR CELLS  
 08/27/1999 - 08/31/2002 FY01: \$137,459 Total: \$309,085  
*Prin. Invest.:* C LIU  
*Tech. Officer:* GSFC/S DAVIDSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8871 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4342**  
 CORE ANGULAR MOMENTUM & THE IERS COORDINATING CTR/ SUB-CEN-  
 TERS ACTIVITYFOR MONITORING GLOBAL GEOPHY  
 10/19/1999 - 08/31/2002 FY01: \$0 Total: \$59,200  
*Prin. Invest.:* X SONG  
*Tech. Officer:* GSFC/B F CHAO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9020 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4343**  
 INTERFACES IN N51D - FUSE  
 02/03/2000 - 02/14/2001 FY01: \$0 Total: \$36,300  
*Prin. Invest.:* Y CHU  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9180 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4344**  
 EVOLUTIONARY MODELS OF COLD, MAGNETIZED, INTERSTEL LAR  
 CLOUDS (ATP 99)  
 03/07/2000 - 03/14/2002 FY01: \$50,566 Total: \$102,076  
*Prin. Invest.:* C F GAMMIE  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10011 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4345**  
 HOT GAS IN AND AROUND THE SUPERGIANT SHELL LMC-2  
 09/25/2000 - 09/30/2002 FY01: \$16,400 Total: \$49,400  
*Prin. Invest.:* Y CHU  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10037 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4346**  
 HOT GAS IN WIND BLOWN BUBBLES  
 09/27/2000 - 09/30/2002 FY01: \$16,000 Total: \$34,000  
*Prin. Invest.:* Y CHU  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10042 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4347**  
 NGC 7009: TESTING THE WIND-WIND INTERACTION FORMA TION OF  
 PLANETARY NEBULAE  
 09/27/2000 - 09/30/2002 FY01: \$16,200 Total: \$33,200  
*Prin. Invest.:* Y CHU  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10072 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4348**  
 GRAVITY WAVE STUDIES AT ALBUQUERQUE, NM  
 10/23/2000 - 10/31/2001 FY01: \$33,600 Total: \$33,600  
*Prin. Invest.:* G R SWENSON  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10182 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4349**  
 HOT GAS IN PLANETARY NEBULAE FUSE 2000  
 01/25/2001 - 01/31/2002 FY01: \$59,700 Total: \$59,700  
*Prin. Invest.:* R A GRUENDL  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10303 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4350**  
 MAPPING HOT GAS IN A PRISTINE H, SC II REGION - FUSE - 2000  
 01/25/2001 - 01/31/2002 FY01: \$68,100 Total: \$68,100  
*Prin. Invest.:* Y CHU  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10491 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4351**  
 RADIO INTERFEROMETRIC IMAGING OF COMETS  
 02/27/2001 - 02/28/2002 FY01: \$32,600 Total: \$32,600  
*Prin. Invest.:* L SNYDER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10754 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4352**  
 GRAVITY WAVES AND AIRGLOW PHASE MEASUREMENTS STUDY  
 04/20/2001 - 04/30/2002 FY01: \$49,879 Total: \$49,879  
*Prin. Invest.:* G SWENSON  
*Tech. Officer:* GSFC/F HERREO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10781 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4353**  
 ROTATING AND BINARY STARS IN GENERAL RELATIVITY (A TP 2000)  
 04/20/2001 - 04/30/2002 FY01: \$89,315 Total: \$89,315  
*Prin. Invest.:* S L SHAPIRO  
*Tech. Officer:* GSFC/R J OLIVERSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10942 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4354**  
 A TROPOSPHERE/STRATOSPHERE/MESOSPHERE GCM STUDY OF EEP ON  
 ATMOSPHERIC CHEMICAL COMPOSITION & TROPOS  
 05/15/2001 - 06/30/2002 FY01: \$112,796 Total: \$112,796  
*Prin. Invest.:* M E SCHLESINGER  
*Tech. Officer:* GSFC/J F SPANN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11011 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4355**  
 INTERFEROMETRIC OBSERVATIONS OF MID-LATITUDE SPORADIC-E  
 RADAR ECHOES ATFT MACON, NC, & A STUDY  
 06/07/2001 - 06/14/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* E KUDEKI  
*Tech. Officer:* GSFC/R PFAFF  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11016 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4356**  
 CONTACT BINARY STARS (ATP 2000)  
 06/12/2001 - 06/14/2002 FY01: \$41,454 Total: \$41,454  
*Prin. Invest.:* R F WEBBINK  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11159 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4357**  
 HOT BUBBLES IN EVOLVED SUPERNOVA REMNANTS  
 08/06/2001 - 08/14/2002 FY01: \$22,034 Total: \$22,034  
*Prin. Invest.:* J R DICKEL  
*Tech. Officer:* GSFC/R MUTSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1249 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4358**  
 ADAPTIVE GRID METHODS FOR PHASE FIELD MODELS OF MICROSTRUC-  
 TURE DEVELOPMENT  
 04/16/1996 - 08/15/2001 FY01: \$0 Total: \$490,000  
*Prin. Invest.:* J A DANTZIG  
*Tech. Officer:* MSFC/P DOTY, MSFC/R POWER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1376 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4359**  
 R/S "PARTICLE INTERACTION POTENTIALS & PROTEIN CRYSTAL QUALITY  
 UNDER DR. CHARLES F. ZUKOSKI."  
 07/01/1997 - 11/30/2000 FY01: \$0 Total: \$446,000  
*Prin. Invest.:* C F ZOKOSKI  
*Tech. Officer:* MSFC/J R ROGERS, MSFC/J P DOWNEY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 8 1453 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4360**  
 MODELS OF MAGNETIC DAMPING FOR BRIDGMAN SEMI- CONDUCTOR  
 CRYSTAL GROWTH  
 05/23/1998 - 01/31/2002 FY01: \$95,000 Total: \$358,333  
*Prin. Invest.:* J S WALKER  
*Tech. Officer:* MSFC/G TALLEY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1471 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4361**  
 COLLOIDAL STABILITY IN COMPLEX FLUIDS  
 04/23/1998 - 01/31/2002 FY01: \$95,000 Total: \$366,333  
*Prin. Invest.:* J A LEWIS  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1657 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4362**  
 RESEARCH ENTITLED, "PHASE FIELD MODELING OF MICROSTRUCTURE IN  
 MICROGRAVITY  
 06/14/2000 - 11/30/2003 FY01: \$57,000 Total: \$107,000  
*Prin. Invest.:* J A DANTZIG, N D GOLDEFELD  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1705 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4363**  
 MODELS TO OPTIMIZE THE BENEFITS OF ROTATING MAGNETIC FIELDS  
 FOR SEMICONDUCTOR CRYSTAL GROWTH IN SP  
 06/09/2000 - 11/30/2002 FY01: \$61,750 Total: \$91,750  
*Prin. Invest.:* J S WALKER  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1751 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4364**  
 ADVANCED MODELING OF LOW CYCLE FATIGUE CRACK GROWTH IN  
 METALS  
 10/31/2000 - 10/30/2004 FY01: \$164,500 Total: \$164,500  
*Prin. Invest.:* R H DODDS, JR, P SOFRONIS, K D HJELMSTAD  
*Tech. Officer:* MSFC/B MCGILL, MSFC/G R SWANSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1760 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4365**  
 PREDICTION OF PROPERTIES LIQUID HELIUM FROM COMPUTER SIMULA-  
 TION  
 04/26/2001 - 04/30/2005 FY01: \$81,000 Total: \$81,000  
*Prin. Invest.:* D M CEPERLEY  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 8 1803 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4366**  
 OPTIMAL TRAJECTORY ANALYSIS FOR FUTURE PROPULSION SYSTEMS  
 04/16/2001 - 04/14/2002 FY01: \$49,894 Total: \$49,894  
*Prin. Invest.:* V L COVERSTON  
*Tech. Officer:* MSFC/K SORENSON  
*CASE Category:* 13 - PHYSICS

**NAG 9 1371 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4367**  
 YAW CONTROL OF A LIFTING BODY RE-ENTRY VEHICLE AT HIGH ANGLE  
 OF ATTACK  
 07/27/2001 - 08/01/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* M BRAGG  
*Tech. Officer:* JSC/R BURTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 309 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4368**  
 EVAL PEM-TROPICS B OBSERVAT: UNCERTAIN ANALYSES & EFFECTS ON  
 DEEP CONVECTIVE MIX'G ON TROPOSPH CHEM  
 07/22/1998 - 07/31/2001 FY01: \$1 Total: \$108,369  
*Prin. Invest.:* D WUEBBLER, D WUEBBLES  
*Tech. Officer:* LARC/J L RAPER, LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 1214 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4369**  
 COMPUTATIONAL MODEL OF PILOT SITUATION AWARENESS ERRORS  
 02/08/2001 - 10/31/2001 FY01: \$55,525 Total: \$55,525  
*Prin. Invest.:* C D WICKENS, J MCCARLEY  
*Tech. Officer:* ARC/B BEARD  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 1230 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4370**  
 STOCHASTIC ANYTIME SEARCH WITH APPLICATIONS IN AUTONOMOUS  
 PLANNING & SCHEDULING  
 03/25/2001 - 11/30/2001 FY01: \$75,000 Total: \$75,000  
*Prin. Invest.:* B J WAH  
*Tech. Officer:* ARC/R MORRIS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 3 780 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4371**  
 MICROSTRIP ANTENNAS WITH BROADBAND INTEGRATED PHASE  
 SHIFTING  
 03/09/2000 - 02/28/2001 FY01: \$0 Total: \$19,536  
*Prin. Invest.:* D BERNHARD  
*Tech. Officer:* GRC/R R ROMANOFFSKY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 852 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4372**  
 EXPERIMENTAL STUDY OF ICED AIRFOIL AERODYNAMICS  
 01/23/2001 - 12/17/2003 FY01: \$122,663 Total: \$122,663  
*Prin. Invest.:* M BRAGG  
*Tech. Officer:* GRC/H E ADDY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 2 52244 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4373**  
 NON-LINEAR ALFVEN WAVES, AMBIPOLAR DIFFUSION & STAR FORMATION  
 08/05/1998 - 12/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* T MOUSCHOVIAS  
*Tech. Officer:* ARC/A BARNES  
*CASE Category:* 11 - ASTRONOMY

**NGT 2 52271 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4374**  
 FUNCTIONALLY GRADED MATERIAL APPLICATIONS TO ADVANCE  
 THERMAL PROTECTION SYSTEMS  
 09/14/2000 - 09/14/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* G H PAULINO  
*Prin. Invest.:* NONE  
*Tech. Officer:* ARC/T L PANONTIN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 3 52345 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4375**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 07/28/1998 - 08/20/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J S MOORE  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 43 - CHEMICAL ENGR

## INDIANA

## NASA'S UNIVERSITY PROGRAM

**NGT 3 52357 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4376**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT  
 RESEARCH PROGRAM  
 07/15/1999 - 09/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* M BRAGGS  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 84 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4377**  
 NEW GRANT FOR GSRP STUDENT - DANIEL BULLOK  
 05/18/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* P SAYLOR  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 40030 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4378**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRA  
 12/19/1996 - 01/31/2001 FY01: -\$8,894 Total: \$1,820,987  
*Prin. Invest.:* W C SOLOMON  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40073 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4379**  
 ILLINOIS SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2002 FY01: \$483,894 Total: \$483,894  
*Prin. Invest.:* W C SOLOMON, NONE  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50228 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4380**  
 SOFTWARE-IMPLEMENTED ADAPTIVE FAULT TOLERANCE THRO UGH  
 DYNAMICALLYRECONFIGURABLE AGENTS  
 10/29/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R K IYER  
*Tech. Officer:* HQ/S MCGEE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50238 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4381**  
 CAPILLARY ELECTROKINETIC TRANSPORT FOR CONVEYING SAMPLE TO  
 ANALYTICAL INSTRUMENTATION: DESIGN, DEV  
 05/28/1999 - 06/30/2000 FY01: -\$1,327 Total: \$20,673  
*Prin. Invest.:* A SCHEELINE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50326 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4382**  
 BIOGEOCHEMICAL CYCLES & CLIMATE CHANGE; POTENTIAL FEEDBACKS  
 & INTERACTIONS/STUDENT: VAISHALI NAIK  
 08/17/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D WUEBBLES  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50343 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4383**  
 NUMERICAL STUDIES OF GENERAL RELATIVISTIC MAGNETO- HYDRODY-  
 NAMICS AS APPLIED TO ACTIVE GALACTIC NUCLE  
 05/14/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R GAMMIE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 33 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4384**  
 TRAINING GRANT  
 06/04/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* S R WHITE  
*Tech. Officer:* JSC/D G SICKOREZ  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

## INDIANA

**NAG 5 11261 BALL STATE UNIV 4385**  
 INNOVATIVE USES OF HYPERSPECTRAL IMAGERY FOR MONI TORING  
 SPATIALLY DISTRIBUTED ECOSYSTEM  
 08/27/2001 - 08/31/2004 FY01: \$63,111 Total: \$63,111  
*Prin. Invest.:* A F RAHMAN  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2588 INDIANA STATE UNIV 4386**  
 NANOSTRUCTURED SINGLE-ION SOLID POLYMER ELECTROLYT ES FOR  
 LITHIUM BATTERIES  
 04/30/2001 - 06/30/2004 FY01: \$95,000 Total: \$95,000  
*Prin. Invest.:* D W ZWANZIGER  
*Tech. Officer:* GRC/D BRITTON  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2207 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4387**  
 LOW-EMISSION SELF-COOLED COMBUSTION WAVE ROTOR LOW-EMIS-  
 SION SELF-COOLED COMBUSTION WAVE ROTOR  
 11/13/1998 - 06/30/2001 FY01: \$0 Total: \$53,078  
*Prin. Invest.:* R NALIM  
*Tech. Officer:* GRC/D E PAXON  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2260 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4388**  
 IMPLEMENTATION OF LOAD BALANCING TECHNIQUES FOR PA RALLEL  
 COMPUTATIONS WITH DISTRIBUTED SYSTEMS  
 04/20/1999 - 09/30/2001 FY01: \$110,000 Total: \$259,278  
*Prin. Invest.:* A ECER  
*Tech. Officer:* GRC/T BABRAUCKAS  
*CASE Category:* 22 - COMPUTERSCIENCE

**NAG 3 2325 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4389**  
 WAVE FAN AND HYBRID PULSE DETONATION ENGINE WAVE FAN AND  
 HYBRID PULSE DETONATION ENGINE  
 02/03/2000 - 02/28/2001 FY01: \$0 Total: \$61,426  
*Prin. Invest.:* D NALIM  
*Tech. Officer:* GRC/G E WELSH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2399 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4390**  
 NEW COMPUTATIONAL METHOD FOR MASSIVELY PARALLEL CO MPUTA-  
 TIONAL FLUID DYNAMICS  
 04/19/2000 - 05/23/2002 FY01: \$28,975 Total: \$122,772  
*Prin. Invest.:* D HSU  
*Tech. Officer:* GRC/M LIOU  
*CASE Category:* 41 - AERONAUTICAL ENGR



**NAG 8 1586 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4391**  
 SELF RENEWAL REPLICATION OF HEMATOPOIETIC STEM CELLS IN  
 MICROGRAVITY  
 03/01/1999 - 11/30/2002 FY01: \$165,300 Total: \$465,300  
*Prin. Invest.:* C M TRAYCOFF  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 50203 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4392**  
 PARATHYROID HORMONE MODULATES THE RESPONSE OF OSTE OBLAST-  
 LIKE CELLS TO MECHANICAL STIMULATION  
 07/01/1998 - 06/30/2001 FY01: \$0 Total: \$39,600  
*Prin. Invest.:* R L DUCN  
*Tech. Officer:* HQ/A NURRIDDIN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 50291 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4393**  
 EFFECTS OF INTEGRIN-EXTRACELLULAR MATRIX ADHESION IN FLUID  
 SHEAR-INDUCED PROSTAGLAND IN METABOLISM  
 07/06/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* F PAVALKO, NONE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT 5 50366 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4394**  
 ACTIVATION, ADAPTATION AND RESTORATION OF THE MECH ANICAL  
 RESPONSE OF OSTE OBLASTS TO FLUID SHEAR/STU  
 06/12/2001 - 06/30/2002 FY01: \$20,400 Total: \$20,400  
*Prin. Invest.:* R DUNCAN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50373 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4395**  
 CAPILLARY FRACTAL PERFUSION PATTERNS MAY PROTECT THE LUNG  
 DURING MICROGRAVITY/STUDENT:ERIC JARYSZAK  
 06/26/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* W WAGNER, NONE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1449 INDIANA UNIV - BLOOMINGTON 4396**  
 HYPERGRAVITY EFFECTS ON THE MATERNAL-FETAL SYSTEM  
 10/19/2000 - 10/14/2001 FY01: \$23,740 Total: \$23,740  
*Prin. Invest.:* J R ALBERTS  
*Tech. Officer:* ARC/A E RONCA, ARC/E M HOLTON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 4295 INDIANA UNIV - BLOOMINGTON 4397**  
 3D SIMULATIONS OF GRAVITATIONAL INSTABILITIES IN P PROTOSTELLAR  
 DISKS  
 04/04/1997 - 06/30/2002 FY01: \$53,000 Total: \$183,000  
*Prin. Invest.:* D H DURISEN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5167 INDIANA UNIV - BLOOMINGTON 4398**  
 GPS MEASUREMENTS OF LOCALIZED DEFORMATION IN THE T  
 07/17/1997 - 07/14/2001 FY01: \$0 Total: \$81,000  
*Prin. Invest.:* M W HAMBURGER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 5224 INDIANA UNIV - BLOOMINGTON 4399**  
 HEAT HIGH ENERGY ANTIMATTER TELESCOPE PI PROF. JAMES MUSSER  
 02/03/1999 - 11/30/2001 FY01: \$100,000 Total: \$419,200  
*Prin. Invest.:* J MUSSEER  
*Tech. Officer:* WFF/B MERRIT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6773 INDIANA UNIV - BLOOMINGTON 4400**  
 COBE AND THE STRUCTURE OF THE GALACTIC INTERSTELLA R MEDIUM  
 01/22/1998 - 01/31/2002 FY01: \$0 Total: \$125,600  
*Prin. Invest.:* STEIMAN-CAMERON  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7619 INDIANA UNIV - BLOOMINGTON 4401**  
 FUNDING FOR "LITHOSPHERIC RHEOLOGY AND GEODYNAMIC  
 PROCESSES FROM INTEGRATION OF GEODETIC, GRAVITY AN  
 07/24/1998 - 09/30/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* M W HAMBURGER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8582 INDIANA UNIV - BLOOMINGTON 4402**  
 GPS MEASUREMENT OF CRUSTAL DEFORMATION AT TAAL VOLCA NO, PHILLI-  
 PINES  
 06/08/1999 - 12/14/2000 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* M W HAMBURGER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9236 INDIANA UNIV - BLOOMINGTON 4403**  
 FUSE OBSERVATIONS OF GALACTIC AND LMC NOVAE IN OUT BURST -  
 FUSE  
 03/09/2000 - 03/14/2002 FY01: \$0 Total: \$27,330  
*Prin. Invest.:* S SHORE  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9369 INDIANA UNIV - BLOOMINGTON 4404**  
 PETROLOGIC EVOLUTION OF LUNAR AND METEORITE PARENT BODY  
 REGOLITH  
 04/03/2000 - 03/31/2001 FY01: \$0 Total: \$14,000  
*Prin. Invest.:* A BASU  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9852 INDIANA UNIV - BLOOMINGTON 4405**  
 MEETING IN THE MIDDLE: THE CHALLENGE OF MESO-LEVEL INTEGRATION  
 08/07/2000 - 07/31/2001 FY01: \$0 Total: \$16,000  
*Prin. Invest.:* E F MORAN  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10459 INDIANA UNIV - BLOOMINGTON 4406**  
 PETROLOGIC EVOLUTION OF LUNAR & METEORITE PARENT BODY REGO-  
 LITH  
 02/21/2001 - 02/28/2002 FY01: \$20,458 Total: \$20,458  
*Prin. Invest.:* A BASU  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

## INDIANA

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1770**                    **INDIANA UNIV - BLOOMINGTON**                    **4407**  
 THEORETICAL STUDIES OF LORENTZ AND CPT SYMMETRY  
 05/01/2001 - 08/31/2005                    FY01: \$48,000                    Total: \$48,000  
*Prin. Invest.:* V A KOSTELECKY  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 9 01103**                    **INDIANA UNIV - BLOOMINGTON**                    **4408**  
 CYCLOTRON FACILITY-HIGH ENERGY RADIATION EFFECTS TESTING  
 06/27/2001 - 09/28/2001                    FY01: \$1,524,477                    Total: \$1,524,477  
*Prin. Invest.:* J CAMERON, NONE  
*Tech. Officer:* JSC/W CULPEPPER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 9 98121**                    **INDIANA UNIV - BLOOMINGTON**                    **4409**  
 RADIATION TESTING & ANALYTICAL SUPPORT SERVICES  
 09/03/1998 - 09/02/2000                    FY01: \$0                    Total: \$150,250  
*Prin. Invest.:* C FOSTER  
*Tech. Officer:* JSC/W CULPEPPER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 2 1035**                    **INDIANA UNIV - BLOOMINGTON**                    **4410**  
 CASE-BASED CAPTURE & REUSE OF AEROSPACE DESIGN RATIONALE  
 05/07/1998 - 07/31/2001                    FY01: \$0                    Total: \$392,092  
*Prin. Invest.:* D B LEAKE  
*Tech. Officer:* ARC/M E LIVINGSTON, ARC/W VAN DALSEM  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1216**                    **INDIANA UNIV - BLOOMINGTON**                    **4411**  
 INTEGRATED INTELLIGENT SUPPORT FOR KNOWLEDGE CAPTURE,  
 REFINEMENT AND SHARING  
 03/08/2001 - 02/28/2002                    FY01: \$148,000                    Total: \$148,000  
*Prin. Invest.:* D B LEAKE  
*Tech. Officer:* ARC/M G SHAFTO, ARC/W J CLANCEY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 334**                    **INDIANA UNIV - BLOOMINGTON**                    **4412**  
 HUMAN AND PHYSICAL DIMENSIONS OF LAND USE/COVER CHANGE IN  
 ANAZONIA: FOREST REGENERATION AND LANDSCAPE  
 06/16/1998 - 12/31/2001                    FY01: \$90,090                    Total: \$571,929  
*Prin. Invest.:* E MORAN  
*Tech. Officer:* GSFC/D DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 1 01009**                    **INDIANA UNIV - BLOOMINGTON**                    **4413**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/05/2001 - 06/30/2004                    FY01: \$12,000                    Total: \$12,000  
*Prin. Invest.:* S D JOHNSON  
*Tech. Officer:* LARC/P S MINER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 3 873**                    **MANCHESTER COLLEGE**                    **4414**  
 INTERCALATION OF GRAPHITE FIBERS FOR SPACE POWER APPLICATIONS  
 03/13/2001 - 02/20/2002                    FY01: \$15,668                    Total: \$15,668  
*Prin. Invest.:* G W CLARK  
*Tech. Officer:* GRC/C HUNG  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 2109**                    **PURDUE UNIV**                    **4415**  
 LASER SPOT HEATING SYSTEM FOR TRANSITION DETECTION IN CRYO-  
 GENIC WIND TUNNELS  
 09/14/1998 - 06/30/2000                    FY01: -\$262                    Total: \$99,738  
*Prin. Invest.:* J P SULLIVAN, NONE  
*Tech. Officer:* LARC/B T UPCHURCH, LARC/C J OBARA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2119**                    **PURDUE UNIV**                    **4416**  
 GENETIC ALGORITHM APPROACHES FOR ACTUATOR PLACEMENT  
 12/09/1998 - 06/30/2000                    FY01: -\$62                    Total: \$20,519  
*Prin. Invest.:* W A CROSSLEY  
*Tech. Officer:* LARC/S L PADULA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2262**                    **PURDUE UNIV**                    **4417**  
 ACTUATOR PLACEMENT VIA GENETIC ALGORITHM FOR AIRCRAFT  
 MORPHING  
 01/19/2000 - 03/31/2001                    FY01: -\$46                    Total: \$29,954  
*Prin. Invest.:* W A CROSSLEY  
*Tech. Officer:* LARC/S L PADULA, LARC/J L ROGERS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01027**                    **PURDUE UNIV**                    **4418**  
 MECHANISMS OF BOUNDARY-LAYER TRANSITION ON RESUABLE LAUNCH  
 VEHICLES  
 02/05/2001 - 01/31/2002                    FY01: \$50,000                    Total: \$50,000  
*Prin. Invest.:* S P SCHNEIDER  
*Tech. Officer:* LARC/S A BERRY, LARC/J N MOSS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01073**                    **PURDUE UNIV**                    **4419**  
 MODELING OF NANO MATERIALS MY 1/3  
 05/09/2001 - 12/31/2003                    FY01: \$80,000                    Total: \$80,000  
*Prin. Invest.:* C T SUN  
*Tech. Officer:* LARC/T S GATES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 01083**                    **PURDUE UNIV**                    **4420**  
 AUTONOMOUS NAVIGATION FOR ALTERNATE ACCESS TO THE INTERNA-  
 TIONAL SPACE STATION  
 05/18/2001 - 05/17/2003                    FY01: \$49,283                    Total: \$49,283  
*Prin. Invest.:* J L GARRISON  
*Tech. Officer:* LARC/J ANTOL  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 01115**                    **PURDUE UNIV**                    **4421**  
 DESIGN METHODS AND OPTIMIZATION FOR MORPHING AIRCRAFT  
 08/15/2001 - 08/14/2004                    FY01: \$20,000                    Total: \$20,000  
*Prin. Invest.:* W A CROSSLEY, T A WEISSHAAR  
*Tech. Officer:* LARC/S L PADULA, LARC/J L ROGERS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1344**                    **PURDUE UNIV**                    **4422**  
 A GRAVIRESPONSIVE TIME-KEEPING PROTEIN OF THE PLANT & ANIMAL  
 CELL SURFACE  
 07/21/1999 - 07/31/2002                    FY01: \$241,842                    Total: \$500,234  
*Prin. Invest.:* D J MORRE  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1389** **PURDUE UNIV** **4423**  
 ELUCIDATING THE MECHANISM OF MECHANICAL-STRESS INHIBITION OF  
 PLANT GROWTH  
 12/21/1999 - 06/30/2002 FY01: \$20,000 Total: \$41,407  
*Prin. Invest.:* C MITCHELL  
*Tech. Officer:* ARC/R MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1403** **PURDUE UNIV** **4424**  
 AERODYNAMIC SHAPE AND STRUCTURAL TOPOLOGY DESIGN OF ROTOR  
 CROSS SECTIONS USING A GENETIC ALGORITHM  
 04/20/2000 - 06/30/2001 FY01: \$0 Total: \$29,999  
*Prin. Invest.:* W A CROSSLEY  
*Tech. Officer:* ARC/S B KOTTAPALLI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 1730** **PURDUE UNIV** **4425**  
 3-D UNSTEADY AERODYNAMICS AND AEROELASTICITY OF ADVANCED  
 TURBOPROPS  
 02/01/1995 - 06/30/2001 FY01: \$33,200 Total: \$533,235  
*Prin. Invest.:* S FLEETER  
*Tech. Officer:* GRC/D H BUFFUM  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2095** **PURDUE UNIV** **4426**  
 ON THE DEVELOPMENT OF SUPERSONIC JET NOISE PREDICTION METH-  
 ODOLOGY  
 12/22/1997 - 11/30/2001 FY01: \$0 Total: \$104,186  
*Prin. Invest.:* A S LYRINTZIS  
*Tech. Officer:* GRC/J R SCOTT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2169** **PURDUE UNIV** **4427**  
 FORCED RESPONSE PREDICTIONS OF TURBOMACHINERY BLADE ROWS  
 05/29/1998 - 08/01/2000 FY01: \$0 Total: \$62,732  
*Prin. Invest.:* S FLEETER  
*Tech. Officer:* GRC/D C JANETZKE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2217** **PURDUE UNIV** **4428**  
 SCRAMJET SCALING AND INTERACTIONS TESTING SCRAMJET SCALING AND  
 INTERACTIONS TESTING  
 12/15/1998 - 11/30/2001 FY01: \$0 Total: \$191,080  
*Prin. Invest.:* S MURTHY, NONE  
*Tech. Officer:* GRC/S R THOMAS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2246** **PURDUE UNIV** **4429**  
 THE 14TH SYMPOSIUM ON AIR BREATHING ENGINES THE 14TH SYMPO-  
 SIUM ON AIR BREATHING ENGINES  
 03/22/1999 - 09/30/2000 FY01: \$0 Total: \$5,100  
*Prin. Invest.:* S MURTHY  
*Tech. Officer:* GRC/M THARP  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2336** **PURDUE UNIV** **4430**  
 INVESTIGATION OF CRITICAL HEAT FLUX IN REDUCED GRAVITY USING  
 PHOTOMICROGRAPHIC TECHNIQUES  
 02/22/2000 - 11/30/2003 FY01: \$76,000 Total: \$116,000  
*Prin. Invest.:* I MUDAWAR  
*Tech. Officer:* GRC/M HANSA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2413** **PURDUE UNIV** **4431**  
 MHD BYPASS ENERGY CYCLE FOR JET ENGINE MHD BYPASS ENERGY  
 CYCLE FOR JET ENGINE  
 06/28/2000 - 12/31/2001 FY01: \$40,000 Total: \$70,000  
*Prin. Invest.:* S MURTHY  
*Tech. Officer:* GRC/I BLANKSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2453** **PURDUE UNIV** **4432**  
 TECHNICAL SUPPORT FOR THE PUBLICATION OF THE AEROSPACE  
 STRUCTURAL METALS HANDBOOK #ODF01  
 06/07/2000 - 03/31/2001 FY01: \$0 Total: \$10,000  
*Prin. Invest.:* C GIBSON  
*Tech. Officer:* GRC/J REAGAN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2532** **PURDUE UNIV** **4433**  
 THE 15TH INTERNATIONAL SYMPOSIUM ON AIR BREATHING ENGINES  
 (ISABE)  
 01/24/2001 - 06/30/2002 FY01: \$5,100 Total: \$5,100  
*Prin. Invest.:* S MURTHY  
*Tech. Officer:* GRC/M THARP  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2536** **PURDUE UNIV** **4434**  
 THREE-DIMENSIONAL UNSTEADY AERODYNAMICS AND AEROELASTICITY  
 OF ADVANCED TURBOPROPS  
 03/01/2001 - 02/28/2002 FY01: \$46,000 Total: \$46,000  
*Prin. Invest.:* D FLEETER  
*Tech. Officer:* GRC/E MCFARLAND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2550** **PURDUE UNIV** **4435**  
 ROBUST SATELLITE COMMUNICATIONS FOR AIR TRAFFIC CONTROL SPS  
 #D135  
 02/27/2001 - 09/30/2001 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* D S LEHNERT  
*Tech. Officer:* GRC/K CHUN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2635** **PURDUE UNIV** **4436**  
 A LASER SCANNING PSP/TSP SYSTEM FOR PROPULSION APPLICATIONS  
 06/20/2001 - 06/30/2002 FY01: \$49,242 Total: \$49,242  
*Prin. Invest.:* D P SULLIVAN  
*Tech. Officer:* GRC/T BENCIC  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3975** **PURDUE UNIV** **4437**  
 RESEARCH ON METHODS FOR ANALYSIS OF MULTI-SPECTRAL DATA  
 02/26/1997 - 01/31/2000 FY01: -\$9 Total: \$535,671  
*Prin. Invest.:* D A LANGREBE  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3992** **PURDUE UNIV** **4438**  
 THE ANALYSIS AND PARAMETERIZATION OF SHORTWAVE RAD  
 ATMOSPHERES  
 02/26/1997 - 05/31/2002 FY01: \$0 Total: \$296,000  
*Prin. Invest.:* D HARSHVARDHAN  
*Tech. Officer:* GSFC/K H BERGMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## INDIANA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 4304** **PURDUE UNIV** **4439**  
 CHEMICAL STUDIES OF METEORITES  
 04/14/1997 - 02/28/2001 FY01: \$0 Total: \$330,000  
*Prin. Invest.:* D E LIPSCHUTZ  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6971** **PURDUE UNIV** **4440**  
 MACHINE LEARNING TO IMPROVE LAND COVER CLASSIFICATIONS FROM  
 MULTISENSOR AND MULTITEMPORAL DATA  
 03/12/1998 - 02/28/2001 FY01: \$0 Total: \$81,113  
*Prin. Invest.:* C E BRODLEY  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7387** **PURDUE UNIV** **4441**  
 A SEARCH FOR PULSATIONS IN HMXB SYSTEMS  
 05/07/1998 - 05/31/2000 FY01: -\$86 Total: \$9,081  
*Prin. Invest.:* J P FINLEY  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7388** **PURDUE UNIV** **4442**  
 THE ORBITAL DECAY RATE AND SYSTEM PARAMETERS OF 4U 1700-37  
 05/07/1998 - 05/31/2000 FY01: -\$121 Total: \$8,379  
*Prin. Invest.:* J P FINLEY  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7727** **PURDUE UNIV** **4443**  
 QUANTIFYING THE INDIRECT RADIATIVE FORCING OF SULFATE AEROSOLS BY A HYBRID TECHNIQUE.  
 10/21/1998 - 10/14/2001 FY01: \$89,000 Total: \$284,508  
*Prin. Invest.:* H HARSHVARDHAN  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7741** **PURDUE UNIV** **4444**  
 OPTIMIZATION OF THE GODDARD PROFILING (GPROF) ALGORITHM FOR  
 SUBTROPICAL AND EXTRATROPICAL RAINFALL  
 10/28/1998 - 08/14/2000 FY01: -\$34,641 Total: \$112,339  
*Prin. Invest.:* G W PETTY  
*Tech. Officer:* GSFC/R W LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7954** **PURDUE UNIV** **4445**  
 INCREASING PUBLIC BENEFITS OF EXISTING NASA EARTH SCIENCES  
 DATA: MULTI-PURPOSE APPLICATIONS IN AN  
 12/31/1998 - 10/31/2000 FY01: -\$7,582 Total: \$152,418  
*Prin. Invest.:* B A ENGEL  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8155** **PURDUE UNIV** **4446**  
 LABORATORY STUDIES OF DIACETYLENE AND CYANOACETYLENE  
 PHOTOCHEMISTRY: ROUTES TO COMPLEX MOLECULES  
 02/17/1999 - 05/31/2002 FY01: \$96,000 Total: \$324,406  
*Prin. Invest.:* T ZWIER  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9098** **PURDUE UNIV** **4447**  
 LONG-TERM X-RAY VARIABILITY OF CYG X-1: ORBITAL MODULATION,  
 INTENSITY DIPS, FLARES, STATE TRANSIT  
 02/18/2000 - 02/28/2002 FY01: \$0 Total: \$19,999  
*Prin. Invest.:* W CUI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9822** **PURDUE UNIV** **4448**  
 A COMPARISON OF THE IMPACT OF PRECIPITATION ON THE TROPICAL  
 PACIFIC & NORTH INDIAN OCEAN MIXED LAYER  
 07/24/2000 - 11/30/2001 FY01: \$171,500 Total: \$194,194  
*Prin. Invest.:* C A CLAYTON  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9998** **PURDUE UNIV** **4449**  
 RELATIVISTIC ASTROPHYSICS IN BLACK HOLE & LOW-MASS NEUTRON  
 STAR X-RAY BINARIES - LTSA98  
 09/21/2000 - 01/31/2002 FY01: \$52,149 Total: \$105,317  
*Prin. Invest.:* W CUI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10061** **PURDUE UNIV** **4450**  
 AN EXPERIMENTAL ECONOMIC ANALYSIS OF NASA'S MISSION ACQUISITION  
 PROCESS  
 10/31/2000 - 10/31/2001 FY01: \$140,000 Total: \$140,000  
*Prin. Invest.:* C NOUSSAIR  
*Tech. Officer:* GSFC/P ULRICH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10262** **PURDUE UNIV** **4451**  
 FORMATION & EARLY EVOLUTION OF THE SOLAR SYSTEM  
 01/09/2001 - 12/31/2001 FY01: \$22,400 Total: \$22,400  
*Prin. Invest.:* B PICKETT  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10422** **PURDUE UNIV** **4452**  
 CHEMICAL STUDIES OF METEORITES  
 02/15/2001 - 02/28/2002 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* M LIPSCHUTZ  
*Tech. Officer:* GSFC/JBOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10735** **PURDUE UNIV** **4453**  
 PROBING PREBIOTIC PROCESSES WITH PEPTIDE SELF REPLICATION  
 04/19/2001 - 04/30/2002 FY01: \$130,000 Total: \$130,000  
*Prin. Invest.:* J A CHMIELEWSKI  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10747** **PURDUE UNIV** **4454**  
 OPTIMIZATION OF GPS TRACKING LOOPS FOR SPACECRAFT NAVIGATION  
 IN HEO/GEO ORBITS.  
 04/17/2001 - 01/31/2002 FY01: \$20,000 Total: \$20,000  
*Prin. Invest.:* J L GARRISON  
*Tech. Officer:* GSFC/J A LEITNER  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

## NASA'S UNIVERSITY PROGRAM

## INDIANA

**NAG 5 11080**                      **PURDUE UNIV**                      **4455**  
 MOLA-SUPPORTED PRECISION GEOSPATIAL PROCESSING OF MOCA  
 IMAGES:MODELS, ALGORITHMS AND EVALUATION  
 08/06/2001 - 08/14/2003      FY01: \$53,000                      Total: \$53,000  
*Prin. Invest.:* J SHAN  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1147**                      **PURDUE UNIV**                      **4456**  
 BIOLOGICAL PARTICLE SEPARATION IN LOW GRAVITY  
 08/03/1995 - 08/02/2000      FY01: -\$1,793                      Total: \$534,421  
*Prin. Invest.:* J MORRE  
*Tech. Officer:* MSFC/L KARR  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1233**                      **PURDUE UNIV**                      **4457**  
 RESEARCH "DEVELOPMENT OF ATMOSPHERIC PHYSICAL RET. USING  
 SATELLITE DATA FROM MICROWAVE SOUNDING,ETC  
 12/04/1996 - 01/21/2002      FY01: \$0                      Total: \$198,156  
*Prin. Invest.:* G W PETTY  
*Tech. Officer:* MSFC/B L APENTA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1515**                      **PURDUE UNIV**                      **4458**  
 VARIABILITY AND PREDICTABILITY OF LAND-ATMOSPHERE INTERACTIONS:  
 OBSERVATIONAL AND MODELING STUDIES  
 05/15/1998 - 05/31/2001      FY01: \$0                      Total: \$168,057  
*Prin. Invest.:* R OGLESBY  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 8 1691**                      **PURDUE UNIV**                      **4459**  
 EXPERIMENTAL AND NUMERICAL INVESTIGATIONS OF GROWTH  
 MORPHOLOGIES OF PERITECTIC REACTIONS  
 06/01/2000 - 11/30/2003      FY01: \$76,000                      Total: \$116,000  
*Prin. Invest.:* D JOHNSON  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1782**                      **PURDUE UNIV**                      **4460**  
 RESEARCH GRANT ENTITLED "MAGNETIC FIELD GRADIENT LEVITATION  
 SYSTEM FOR PHYSICS AND BIOPHYSICS"  
 04/30/2001 - 04/29/2005      FY01: \$110,000                      Total: \$110,000  
*Prin. Invest.:* N M LAVRENDEAN  
*Tech. Officer:* GRC/Y R HICKS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1833**                      **PURDUE UNIV**                      **4461**  
 ENGINEERING A RIBOZYME FOR DIFFRACTIVE PROPERTIES  
 09/05/2001 - 11/30/2004      FY01: \$40,000                      Total: \$40,000  
*Prin. Invest.:* B L GOLDEN  
*Tech. Officer:* MSFC/B V GUYNES  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1281**                      **PURDUE UNIV**                      **4462**  
 HUMAN FACTORS RESEARCH/ORGANIZATIONAL LEARNING USING THE  
 INTRANET  
 03/07/2001 - 12/31/2001      FY01: \$25,000                      Total: \$25,000  
*Prin. Invest.:* G SALVENDY  
*Tech. Officer:* JSC/B J WOOLFORD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1292**                      **PURDUE UNIV**                      **4463**  
 CONTROL CREW NETWORK COMMUNICATIONS DURING ROUTINE & NON-  
 ROUTINE EVENTS  
 05/14/2001 - 09/30/2002      FY01: \$145,618                      Total: \$145,618  
*Prin. Invest.:* B S CALDWELL, NONE  
*Tech. Officer:* JSC/B WOOLFORD  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1385**                      **PURDUE UNIV**                      **4464**  
 COLD WIRE MEASUREMENTS IN THE BODY FLAP CAVITY OF AN X-38  
 MODEL  
 09/24/2001 - 09/30/2002      FY01: \$10,493                      Total: \$10,493  
*Prin. Invest.:* S P SCHNEIDER  
*Tech. Officer:* JSC/C H CAMPBELL, JSC/S M FITZGERALD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG13 00001**                      **PURDUE UNIV**                      **4465**  
 EVALUATING REMOTE SENSING TECHNOLOGY FOR SITE SPECIFIC AGRI-  
 CULTURE AND NATIONAL RESOURCES  
 02/18/2000 - 03/19/2002      FY01: \$283,104                      Total: \$482,343  
*Prin. Invest.:* C J JOHANNSEN  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 00008**                      **PURDUE UNIV**                      **4466**  
 SIMULATION AND VISUALIZATION OF CAVITATING VENTURI FLOWS - REF  
 #SPS0D086  
 01/29/2001 - 12/31/2001      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* D HEISTER  
*Tech. Officer:* SSC/R E FIELD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 3 00132**                      **PURDUE UNIV**                      **4467**  
 NRA 8-23 ADVANCED DESIGN CONCEPTS FOR SPACE SOLAR POWER  
 05/12/2000 - 12/31/2000      FY01: \$0                      Total: \$75,000  
*Prin. Invest.:* N AVAILABLE  
*Tech. Officer:* GRC/N AVAILABLE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 1 01042**                      **PURDUE UNIV**                      **4468**  
 COMBINATORIAL MULTIOBJECTIVE OPTIMIZATION USING GENETIC ALGO-  
 RITHMS  
 04/10/2001 - 04/09/2002      FY01: \$30,003                      Total: \$30,003  
*Prin. Invest.:* W A CROSSLEY  
*Tech. Officer:* LARC/S L PADULA, LARC/J L ROGERS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1245**                      **PURDUE UNIV**                      **4469**  
 MACHINE LEARNING & DATA MINING FOR IMPROVED INTELLIGENT DATA  
 UNDERSTANDING OF HIGH DIMENSIONAL EART  
 04/05/2001 - 02/28/2002      FY01: \$133,000                      Total: \$133,000  
*Prin. Invest.:* C BRODLEY  
*Tech. Officer:* ARC/C A HLAVKA, ARC/J COUGHLAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 358**                      **PURDUE UNIV**                      **4470**  
 DYNAMICAL SYSTEMS THEORY, NUMERICAL METHODS, OPTIMIZATION  
 STRATEGIES & THEIR APPLICATION TO TRAJECT  
 08/26/1998 - 07/31/2002      FY01: \$21,158                      Total: \$299,347  
*Prin. Invest.:* K C HOWELL  
*Tech. Officer:* GSFC/D FOLTA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 52198** **PURDUE UNIV** **4471**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 07/08/1998 - 10/31/2001 FY01: \$12,001 Total: \$66,001  
*Prin. Invest.:* G L ROTH  
*Tech. Officer:* LARC/D W BARTLETT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 2 52225** **PURDUE UNIV** **4472**  
 TOPOLOGY DESIGN OF ROTOR BLADES FOR AERODYNAMICS & STRUCTURAL CONSIDERATIONS  
 07/29/1997 - 06/30/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* W A CROSSLEY  
*Tech. Officer:* ARC/S R KOTTAPALLI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 2 52285** **PURDUE UNIV** **4473**  
 THE ROLE OF DIFFERENTIAL GENE EXPRESSION IN MECHANICAL DWARFING OF PLANTS  
 09/25/2001 - 09/14/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* C A MITCHELL  
*Tech. Officer:* ARC/C A CONLEY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 30040** **PURDUE UNIV** **4474**  
 EFFECT OF ANTHROPOGENIC AEROSOL ON CLOUD OPTICAL PROPERTIES: A CASE STUDY OF THE EASTERN U.S.  
 10/17/1996 - 02/28/2001 FY01: -\$22,034 Total: \$65,966  
*Prin. Invest.:* D HARSHVARDHAN  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 30163** **PURDUE UNIV** **4475**  
 DEVELOPMENT, EVALUATION, AND APPLICATION OF A FAST TIME RESPONSE MASS SPECTROMETRIC METHOD FOR QUANTIFICATION  
 08/31/1998 - 08/31/2001 FY01: \$0 Total: \$65,600  
*Prin. Invest.:* P B SHEPSON, BARKET  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40043** **PURDUE UNIV** **4476**  
 THE NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 01/30/1997 - 02/28/2001 FY01: \$0 Total: \$973,750  
*Prin. Invest.:* D ANDRISANI  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40114** **PURDUE UNIV** **4477**  
 INDIANA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/06/2001 - 02/28/2002 FY01: \$256,250 Total: \$256,250  
*Prin. Invest.:* D ANDRISANI  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50130** **PURDUE UNIV** **4478**  
 SEARCH FOR A SPECTROSCOPIC SIGNATURE OF TRIPLET METALS  
 09/10/1997 - 06/30/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* T ZWIER  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50222** **PURDUE UNIV** **4479**  
 MODELING MULTITHREADING ON MIMD COMPUTERS  
 09/25/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* L H JAMIESON, TEANY  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 50275** **PURDUE UNIV** **4480**  
 LOW-THRUST GRAVITY-ASSIST TRAJECTORY DESIGN STUDENT: THERESA J. DEBBAN  
 06/20/2000 - 07/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* J M LONGUSKI  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50336** **PURDUE UNIV** **4481**  
 SPECTROSCOPY & KINETICS OF METASTABLE DIACETYLENE: IMPROVING MODELS OF TITAN'S ATMOSPHERIC CHEMISTRY  
 05/04/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* T ZWEIR  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 5184** **TAYLOR UNIV** **4482**  
 DROPPS: THE DISTRIBUTION AND ROLE OF PARTICLES IN THE POLAR SUMMER MESOSPHERE USING COORDINATED ROCK SAMPLES  
 03/13/1998 - 09/30/2001 FY01: \$0 Total: \$172,075  
*Prin. Invest.:* H D VOSS  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 8077** **TAYLOR UNIV** **4483**  
 SOURCE-LOSS/CONE INVESTIGATION  
 01/20/1999 - 01/31/2002 FY01: \$25,000 Total: \$124,994  
*Prin. Invest.:* H D VOSS  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 2179** **UNIV OF NOTRE DAME** **4484**  
 WAKE DEVELOPMENT AND STRUCTURE IN ADVERSE PRESSURE GRADIENT FLOW  
 04/06/1999 - 07/31/2000 FY01: \$0 Total: \$56,154  
*Prin. Invest.:* F O THOMAS, R C NELSON  
*Tech. Officer:* LARC/J B ANDERS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2214** **UNIV OF NOTRE DAME** **4485**  
 COLLAPSE OF CRACKED RECTANGULAR PLATES UNDER BIAXIAL LOADING  
 07/21/1999 - 07/11/2000 FY01: -\$4,149 Total: \$17,067  
*Prin. Invest.:* E CORONA  
*Tech. Officer:* LARC/J H STARNES, JR., LARC/R D YOUNG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2240** **UNIV OF NOTRE DAME** **4486**  
 ADVANCED INFO TECHNOLOGY IN SIMULATION BASED LIFE CYCLE DESIGN UNDER UNCERTAINTY - NRA-98-LARC-8  
 09/20/1999 - 09/30/2002 FY01: \$65,238 Total: \$143,270  
*Prin. Invest.:* J E RENAUD  
*Tech. Officer:* LARC/J L ROSEY  
*CASE Category:* 49 - ENGINEERING, OTHER

## NASA'S UNIVERSITY PROGRAM

INDIANA

**NAG 1 2264**                      **UNIV OF NOTRE DAME**                      **4487**  
 FREE-STREAM TURBULENCE LEVEL MEASUREMENTS  
 01/24/2000 - 08/31/2000                      FY01: \$0                      Total: \$59,645  
*Prin. Invest.:* T C CORKE  
*Tech. Officer:* LARC/K D WRIGHT  
*CASE Category:* 13 - PHYSICS

**NAG 1 01020**                      **UNIV OF NOTRE DAME**                      **4488**  
 ACOUSTIC SOURCE MODELING AND CONTROL FOR HIGH BY-PASS JET ENGINES  
 01/24/2001 - 01/31/2002                      FY01: \$63,380                      Total: \$63,380  
*Prin. Invest.:* T C CORKE, F O THOMAS  
*Tech. Officer:* LARC/K W KINZIE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2213**                      **UNIV OF NOTRE DAME**                      **4489**  
 MECHANISTIC STUDIES OF COMBUSTION AND STRUCTURE FORMATION DURING SYNTHESIS OF ADVANCED MATERIALS  
 01/15/1999 - 11/17/2002                      FY01: \$92,625                      Total: \$270,125  
*Prin. Invest.:* A VARMA  
*Tech. Officer:* GRC/R FRIEDMAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2366**                      **UNIV OF NOTRE DAME**                      **4490**  
 DIFFUSIVE COARSENING OF LIQUID FOAMS IN MICROGRAVITY  
 03/28/2000 - 11/30/2003                      FY01: \$75,215                      Total: \$125,215  
*Prin. Invest.:* D A GLAZIER  
*Tech. Officer:* GRC/F P CHIARMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2384**                      **UNIV OF NOTRE DAME**                      **4491**  
 EXPERIMENTAL AND THEORETICAL STUDIES OF WET GRANULAR MEDIA  
 04/06/2000 - 11/30/2003                      FY01: \$19,847                      Total: \$69,847  
*Prin. Invest.:* D BARBASI  
*Tech. Officer:* GRC/J H AGUI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2418**                      **UNIV OF NOTRE DAME**                      **4492**  
 NASA GRADUATE STUDENT DOCTORAL BUDGET PROJECT NASA GRADUATE STUDENT DOCTORAL BUDGET PROJECT  
 05/09/2000 - 12/01/2001                      FY01: \$0                      Total: \$252,500  
*Prin. Invest.:* S JOHNSON  
*Tech. Officer:* GRC/R LAWRENCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 4 206**                      **UNIV OF NOTRE DAME**                      **4493**  
 AN EXPERIMENTAL STUDY OF BOUNDARY LAYER RELAMINARIZATION  
 05/15/2000 - 09/30/2001                      FY01: \$0                      Total: \$20,025  
*Prin. Invest.:* D O THOMAS  
*Tech. Officer:* DFRC/D FISHER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 4573**                      **UNIV OF NOTRE DAME**                      **4494**  
 DETECTION OF EXTRA-SOLAR PLANETS VIA GRAVITATIONAL  
 09/05/1997 - 07/14/2001                      FY01: \$0                      Total: \$140,000  
*Prin. Invest.:* D BENNETT  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8099**                      **UNIV OF NOTRE DAME**                      **4495**  
 GEOCHEMICAL EVOLUTION OF THE MOON  
 02/03/1999 - 08/14/2001                      FY01: \$0                      Total: \$79,000  
*Prin. Invest.:* D R NEAL  
*Tech. Officer:* HQ/JBOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8355**                      **UNIV OF NOTRE DAME**                      **4496**  
 ERROR CONTROL CODING TECHNIQUES FOR SPACE AND SATELLITE COMMUNICATIONS; GSFC CONTROL #3453.  
 03/18/1999 - 02/28/2002                      FY01: \$0                      Total: \$110,000  
*Prin. Invest.:* D J COSTELLO, JR.  
*Tech. Officer:* GSFC/W H MILLER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 9364**                      **UNIV OF NOTRE DAME**                      **4497**  
 SUPERNOVAE AND THE UNIVERSE (LTSA - 99)  
 04/25/2000 - 04/30/2002                      FY01: \$102,519                      Total: \$221,152  
*Prin. Invest.:* P GARNAVICH  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9731**                      **UNIV OF NOTRE DAME**                      **4498**  
 THE MICROLENSING PLANET SEARCH PROJECT  
 06/20/2000 - 02/28/2002                      FY01: \$48,000                      Total: \$93,000  
*Prin. Invest.:* D BENNETT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 13 - PHYSICS

**NAG 5 10503**                      **UNIV OF NOTRE DAME**                      **4499**  
 ERROR CONTROL CODING TECHNIQUES FOR SPACE & SATELLITE COMMUNICATIONS  
 03/01/2001 - 02/28/2002                      FY01: \$70,000                      Total: \$70,000  
*Prin. Invest.:* D J COSTELLO  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10638**                      **UNIV OF NOTRE DAME**                      **4500**  
 GEOCHEMICAL EVOLUTION OF THE MOON & METEORITES  
 03/17/2001 - 03/14/2002                      FY01: \$30,000                      Total: \$30,000  
*Prin. Invest.:* C NEAL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NCC 1 395**                      **UNIV OF NOTRE DAME**                      **4501**  
 TURBULENT WAKE DEVELOPMENT IN PRESSURE GRADIENT  
 05/08/2000 - 07/14/2001                      FY01: \$28,277                      Total: \$48,277  
*Prin. Invest.:* R C NELSON, F O THOMAS  
*Tech. Officer:* LARC/J B ANDERS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 01054**                      **UNIV OF NOTRE DAME**                      **4502**  
 TURBULENT WAKE DEVELOPMENT IN PRESSURE GRADIENT  
 06/25/2001 - 07/14/2002                      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* F O THOMAS, R C NELSON  
*Tech. Officer:* LARC/J B ANDERS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1014**                      **UNIV OF NOTRE DAME**                      **4503**  
 EXPERIMENTAL INVESTIGATION OF UNSTEADY ASPECTS OF HIGH FLOWS  
 02/01/1998 - 01/14/2002      FY01: \$31,053                      Total: \$199,080  
*Prin. Invest.:* F O THOMAS, S OLSON, R C NELSON  
*Tech. Officer:* ARC/J C ROSS, ARC/D SATRAN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 466**                      **UNIV OF NOTRE DAME**                      **4504**  
 FUNDAMENTAL PROCESSES OF ATOMIZATION IN FLUID-FLUID FLOWS  
 04/16/1996 - 04/15/2001      FY01: \$0                      Total: \$519,994  
*Prin. Invest.:* M J MCCREADY, H C CHANG, D T LEIGHTON  
*Tech. Officer:* GRC/J B MCGUILLEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 770**                      **UNIV OF NOTRE DAME**                      **4505**  
 EFFECTS OF NONUNIFORM FLOWS ON SOUND GENERATION AND PROPAGATION  
 02/10/2000 - 09/30/2001      FY01: \$0                      Total: \$103,727  
*Prin. Invest.:* D ATASSI  
*Tech. Officer:* GRC/J R SCOTT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 775**                      **UNIV OF NOTRE DAME**                      **4506**  
 ENHANCED DESIGN OF TURBO-JET LPT BY ACTIVE SEPARATION CONTROL  
 02/16/2000 - 12/15/2002      FY01: \$110,372                      Total: \$170,372  
*Prin. Invest.:* P C CORKE  
*Tech. Officer:* GRC/D ASHPIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 8490**                      **VALPARISO UNIV**                      **4507**  
 VALIDATION OF H2O & O3 MEASUREMENTS FROM SAGE III USING TRAJECTORY MAPPING & CONSTITUENT RECONSTRUCTION  
 05/19/1999 - 10/31/2001      FY01: \$0                      Total: \$66,156  
*Prin. Invest.:* G A MORRIS  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## IOWA

**NAG 5 6854**                      **DRAKE UNIV**                      **4508**  
 WIRE OBSERVATIONS OF THE CIRCUMSTELLAR REGIONS OF EVOLVED MASSIVE STARS.  
 02/19/1998 - 02/14/2001      FY01: \$0                      Total: \$49,000  
*Prin. Invest.:* A MARSTON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 1 1933**                      **IOWA STATE UNIV**                      **4509**  
 DEVELOPMENT OF ENHANCED X-RAY INSPECTION  
 05/21/1997 - 05/19/2001      FY01: \$1                      Total: \$233,901  
*Prin. Invest.:* J GRAY, J BASART  
*Tech. Officer:* LARC/W P WINFREE, LARC/F R PARKER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 01040**                      **IOWA STATE UNIV**                      **4510**  
 NEW APPROACHES TO INVERTING NDE DATA MY 1/3  
 03/15/2001 - 12/31/2001      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* S S UPDA, J R BOWLER  
*Tech. Officer:* LARC/W P WINFREE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 2 1471**                      **IOWA STATE UNIV**                      **4511**  
 VERIFICATION OF CONTROLLERS BASED ON ADAPTIVE NEURAL NETWORKS  
 05/01/2001 - 04/14/2002      FY01: \$66,301                      Total: \$66,301  
*Prin. Invest.:* A KELKAR  
*Tech. Officer:* ARC/M R LOWRY, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2342**                      **IOWA STATE UNIV**                      **4512**  
 MODELING SURFACE ICING ROUGHNESS AND SURFACE WATER TRANSPORT  
 03/01/2000 - 12/31/2000      FY01: \$0                      Total: \$80,184  
*Prin. Invest.:* A ROTHMAYER  
*Tech. Officer:* GRC/M G POTAPCZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2540**                      **IOWA STATE UNIV**                      **4513**  
 DEVELOPMENT OF CHEMICALLY AND THERMALLY ROBUST LITHIUM FAST ION CONDUCTING CHALCOGENIDE GLASSES  
 02/08/2001 - 01/13/2002      FY01: \$75,000                      Total: \$75,000  
*Prin. Invest.:* S W MARTIN  
*Tech. Officer:* GRC/N H HAGEDORN  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2571**                      **IOWA STATE UNIV**                      **4514**  
 MODELING SURFACE ICING ROUGHNESS & SURFACE WATER TRANSPORT  
 03/30/2001 - 02/25/2002      FY01: \$87,597                      Total: \$87,597  
*Prin. Invest.:* A P ROTHMAYER  
*Tech. Officer:* GRC/M G POTAPCZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 7070**                      **IOWA STATE UNIV**                      **4515**  
 COORDINATED OBSERVATIONS OF TELESCOPIC LAC OBJECTS  
 03/04/1998 - 03/14/2000      FY01: -\$31                      Total: \$23,869  
*Prin. Invest.:* M A CATANESE  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7133**                      **IOWA STATE UNIV**                      **4516**  
 ATMOSPHERIC DYNAMICS DEDUCED FROM UARS USING MIDDLE ATMOSPHERE ISAMSCARBOT MONOXIDE AND UPPER TROPOPAUSE  
 03/16/1998 - 04/30/2002      FY01: \$0                      Total: \$176,922  
*Prin. Invest.:* D L STANFORD  
*Tech. Officer:* GSFC/A DOUGLASS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7271**                      **IOWA STATE UNIV**                      **4517**  
 SMALL SCALE TROPOPAUSE DYNAMICS AND TOMS TOTAL OZONE  
 05/05/1998 - 05/14/2002      FY01: \$27,500                      Total: \$239,000  
*Prin. Invest.:* S L STANFORD  
*Tech. Officer:* GSFC/S CHANDRA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE



**NAG 5 7423** **IOWA STATE UNIV** **4518**  
 XTE PROPOSAL (30260) - CORRELATED OBSERVATIONS OF MARKARIAN  
 501  
 05/26/1998 - 05/31/2000 FY01: -\$6 Total: \$9,161  
*Prin. Invest.:* M A CATANESE  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7530** **IOWA STATE UNIV** **4519**  
 ANALYSES FOR THE CLIMATOLOGY AND SHORT-TERM VARIABILITY OF  
 THEATMOSPHERIC GENERALCIRCULA  
 06/12/1998 - 06/14/2002 FY01: \$0 Total: \$216,000  
*Prin. Invest.:* T CHEN  
*Tech. Officer:* GSFC/S SCHUBERT  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7561** **IOWA STATE UNIV** **4520**  
 COUPLED ATMOSPHERE-SNOW MODEL EVALUATION OF REGIONAL  
 SNOWMELT  
 06/29/1998 - 06/30/2002 FY01: \$0 Total: \$270,000  
*Prin. Invest.:* W J GUTOWSKI, JR.  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7756** **IOWA STATE UNIV** **4521**  
 DYNAMICS OF THE ASTEROID ENVIRONMENT  
 12/09/1998 - 10/31/1999 FY01: -\$14 Total: \$17,986  
*Prin. Invest.:* D J SCHEERES  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8293** **IOWA STATE UNIV** **4522**  
 DIAGNOSIS AND SIMULATION OF THE SOUTHEAST ASIAN-INDUCED WAVE-  
 TRAIN THAT OCCURS DURING TROPICAL PACI  
 02/25/1999 - 02/28/2002 FY01: \$35,242 Total: \$101,626  
*Prin. Invest.:* T C CHEN  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8352** **IOWA STATE UNIV** **4523**  
 THEORETICAL MODELS FOR SEISMOLOGICAL STUDIES OF HOT COMPACT  
 STARS\_(ATP98  
 03/01/1999 - 02/28/2002 FY01: \$68,133 Total: \$194,059  
*Prin. Invest.:* S D KAWALER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8465** **IOWA STATE UNIV** **4524**  
 THE RESPONSE OF THE SOLAR ATMOSPHERE TO TIME-VARYING AND  
 SPATIALLY INHOMOGENEOUS BOUNDARY CONDIT  
 04/21/1999 - 03/31/2002 FY01: \$45,128 Total: \$130,214  
*Prin. Invest.:* L A WILLSON  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8892** **IOWA STATE UNIV** **4525**  
 MINIATURIZED LIQUID CHROMATOGRAPHY  
 12/07/1999 - 11/30/2000 FY01: \$0 Total: \$84,314  
*Prin. Invest.:* M PORTER  
*Tech. Officer:* GSFC/G FOGELMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1637** **IOWA STATE UNIV** **4526**  
 AN ADVANCED ENTRY GUIDANCE CONCEPT BASED ON TRAJECTORY  
 REGULATION  
 10/28/1999 - 01/31/2002 FY01: \$35,692 Total: \$105,974  
*Prin. Invest.:* P LU  
*Tech. Officer:* MSFC/G DUKEMAN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1681** **IOWA STATE UNIV** **4527**  
 DYNAMICAL SELECTION OF THREE-DIMENSIONAL INTERFACE PATTERNS  
 IN DIRECTIONAL SOLIDIFICATION.  
 05/25/2000 - 11/30/2003 FY01: \$165,300 Total: \$185,300  
*Prin. Invest.:* R K TRIVETI  
*Tech. Officer:* MSFC/A JACKSON  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 9 1115** **IOWA STATE UNIV** **4528**  
 EXAMINATION OF BACTERIA MATERIALS  
 05/10/1999 - 05/09/2004 FY01: \$15,000 Total: \$45,000  
*Prin. Invest.:* P A BAZLINSKI  
*Tech. Officer:* JSC/E K GIBSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1184** **IOWA STATE UNIV** **4529**  
 EXPERIMENTS TO DETERMINE THE AERODYNAMIC COEFFICIENT OF THE  
 X38 PARAFOL  
 01/28/2000 - 12/31/2001 FY01: \$13,200 Total: \$23,200  
*Prin. Invest.:* L M LILJEGREN, NONE  
*Tech. Officer:* JSC/R L BARTON, JSC/W D GOODRICH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 9 1191** **IOWA STATE UNIV** **4530**  
 RAPID SPECIFIC CHEMICAL SENSORS AND TEST KIT  
 02/28/2000 - 01/31/2003 FY01: \$230,154 Total: \$491,761  
*Prin. Invest.:* M D PORTER  
*Tech. Officer:* JPL/D JAN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 1 01038** **IOWA STATE UNIV** **4531**  
 SYNTHESIS METHODS FOR ROBUST PASSIFICATION AND CONTROL - 11  
 03/20/2001 - 07/31/2001 FY01: \$9,132 Total: \$9,132  
*Prin. Invest.:* A G KELKAR  
*Tech. Officer:* LARC/S M JOSHI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 01039** **IOWA STATE UNIV** **4532**  
 AN INTEGRATED APPROACH TO NOISE CONTROL WITH APPLICATIONS TO  
 AIRCRAFT CABINS  
 03/28/2001 - 01/31/2004 FY01: \$68,063 Total: \$68,063  
*Prin. Invest.:* A G KELKAR  
*Tech. Officer:* LARC/S M JOSHI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 01047** **IOWA STATE UNIV** **4533**  
 PREDICTIVE AND NEURAL PREDICTIVE CONTROL OF UNCERTAIN  
 SYSTEMS - II  
 04/17/2001 - 02/28/2003 FY01: \$12,198 Total: \$12,198  
*Prin. Invest.:* A G KELKAR  
*Tech. Officer:* LARC/P J HALEY  
*CASE Category:* 21 - MATHEMATICS

**NCC 2 5349** **IOWA STATE UNIV** **4534**  
 PROPOSAL FOR JOINT RESEARCH EXCHANGE BETWEEN NASA & ISU  
 09/03/1999 - 12/31/2000 FY01: \$0 Total: \$109,500  
*Prin. Invest.:* M S GORDON  
*Tech. Officer:* ARC/W M HUO, ARC/R L JAFFE  
*CASE Category:* 12 - CHEMISTRY

**NCC 2 5379** **IOWA STATE UNIV** **4535**  
 STOKES CODE FOR COMPUTING MAGNETO-HYDRODYNAMIC FLOW FIELDS  
 04/07/2000 - 04/30/2002 FY01: \$30,000 Total: \$58,000  
*Prin. Invest.:* J C TANNEHILL  
*Tech. Officer:* ARC/U B MEHTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 846** **IOWA STATE UNIV** **4536**  
 QUENCHING OF PARTIAL-GAS COMBUSTIBLE MIXTURES USING ELECTRIC PARTICULATE SUSPENSION (EPS) AND DISPERSED PARTICLES  
 01/09/2001 - 12/07/2004 FY01: \$84,996 Total: \$84,996  
*Prin. Invest.:* G M COLVER  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 4 122** **IOWA STATE UNIV** **4537**  
 RECONFIGURABLE FLIGHT CONTROL SYSTEM DESIGN  
 04/28/1999 - 04/28/2001 FY01: -\$7 Total: \$48,993  
*Prin. Invest.:* P LU  
*Tech. Officer:* DFRC/J BURKEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 8 98** **IOWA STATE UNIV** **4538**  
 INTERFACE PATTERN SELECTION CRITERION FOR CELLULAR STRUCTURES IN DIRECTIONAL SOLIDIFICATION  
 06/28/1996 - 06/30/2002 FY01: \$214,000 Total: \$1,024,543  
*Prin. Invest.:* R K TRIVEDI  
*Tech. Officer:* MSFC/M HAMMOND  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 9 100** **IOWA STATE UNIV** **4539**  
 60 DAY DEFINITION PHASE  
 08/01/1999 - 10/03/2004 FY01: \$425,000 Total: \$1,225,000  
*Prin. Invest.:* D OLSEN  
*Tech. Officer:* JSC/H LANE  
*CASE Category:* 55 - AGRICULTURE

**NGT 3 52332** **IOWA STATE UNIV** **4540**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 06/11/1997 - 06/30/2000 FY01: -\$61 Total: \$65,939  
*Prin. Invest.:* A ROTHMAYER  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 3 52380** **IOWA STATE UNIV** **4541**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT RESEARCHERS PROGRAM  
 06/29/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D ROTHMAYER  
*Tech. Officer:* GRC/F J MONTGOMERY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 30419** **IOWA STATE UNIV** **4542**  
 INTERANNUAL VARIATION OF THE NORTH AMERICAN MONSOON RAINFALL STUDENT: JIN-HO YOON  
 09/06/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* T CHEN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40027** **IOWA STATE UNIV** **4543**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 01/09/1997 - 01/31/2001 FY01: -\$18,374 Total: \$1,796,026  
*Prin. Invest.:* W J BYRD  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40081** **IOWA STATE UNIV** **4544**  
 IOWA STATE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/08/2001 - 01/31/2002 FY01: \$493,374 Total: \$493,374  
*Prin. Invest.:* W J BYRD  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52895** **IOWA STATE UNIV** **4545**  
 OPTIMAL EARTH-MARS TRANSFER TRAJECTORIES USING ADVANCED PROPULSION SYSTEM  
 05/25/2001 - 07/01/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* P LU  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 8 52903** **IOWA STATE UNIV** **4546**  
 MORPHOLOGICAL SELECTION DURING ALLOW SOLIDIFICATION  
 05/25/2001 - 07/01/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R NAPOLITANO  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 1907** **UNIV OF IOWA** **4547**  
 IMPACT OF MINERAL AEROSOLS AND ASIAN EMISSIONS ON THE CHEMISTRY OF THE TROPOSPHERE  
 03/19/1997 - 03/31/2000 FY01: -\$122,343 Total: \$216,471  
*Prin. Invest.:* G R CARMICHAEL  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2305** **UNIV OF IOWA** **4548**  
 IMPACT OF MINERAL AND OTHER AEROSOLS AND ASIAN EMISSIONS ON THE CHEMISTRY OF THE TROPOSPHERE  
 06/15/2000 - 03/31/2003 FY01: \$121,000 Total: \$211,000  
*Prin. Invest.:* G R CARMICHAEL, H LEVY  
*Tech. Officer:* LARC/G L MADDREA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 2 571** **UNIV OF IOWA** **4549**  
 "CONTINUING ANALYSIS AND INTERPRETATION OF DATA FROM PIONEER 10 AND PIONEER 11"  
 05/23/1989 - 12/31/1999 FY01: \$0 Total: \$1,265,482  
*Prin. Invest.:* J A VAN ALLEN  
*Tech. Officer:* ARC/L E LASHER, ARC/R O FIMMEL  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

IOWA

**NAG 2 1167** **UNIV OF IOWA** **4550**  
 VIDEO ENGRAVING FOR MOBILE ROBOTICS  
 11/19/1997 - 08/31/2000 FY01: \$0 Total: \$77,199  
*Prin. Invest.:* G W THOMAS  
*Tech. Officer:* ARC/M H SIMS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2128** **UNIV OF IOWA** **4551**  
 PLASMA DUST CRYSTALLIZATION PLASMA DUST CRYSTALLIZATION  
 02/27/1998 - 12/31/2002 FY01: \$124,000 Total: \$459,000  
*Prin. Invest.:* J A GOREE  
*Tech. Officer:* GRC/R B ROGERS  
*CASE Category:* 13 - PHYSICS

**NAG 3 2368** **UNIV OF IOWA** **4552**  
 RIVULET DYNAMICS WITH VARIABLE GRAVITY AND WIND SHEAR  
 04/03/2000 - 11/30/2003 FY01: \$75,951 Total: \$125,932  
*Prin. Invest.:* D S MARSHALL  
*Tech. Officer:* GRC/C E NIEDERHAUS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2375** **UNIV OF IOWA** **4553**  
 THEORY AND SIMULATION OF GROUND-BASED AND MICROGRA VITY  
 DUSTY PLASMA EXPERIMENTS  
 03/28/2000 - 11/30/2003 FY01: \$100,000 Total: \$140,000  
*Prin. Invest.:* A BHATTACHARJEE  
*Tech. Officer:* GRC/R B ROGERS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3716** **UNIV OF IOWA** **4554**  
 BALLOONING INSTABILITIES OF THIN CURRENT SHEETS  
 01/24/1997 - 01/31/2001 FY01: \$0 Total: \$253,128  
*Prin. Invest.:* A BHATTACHARJEE  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 4266** **UNIV OF IOWA** **4555**  
 STUDY OF AURORAL ELECTRON ACCELERATION BY KINETIC  
 03/25/1997 - 05/14/2001 FY01: \$0 Total: \$261,100  
*Prin. Invest.:* D F OTANI  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 13 - PHYSICS

**NAG 5 4497** **UNIV OF IOWA** **4556**  
 COMPREHENSIVE INVESTIGATION OF 2FP RADIO EMISSIONS THE DAYSIDE  
 AND NIGHTSIDE AURORAL REGIONS  
 05/06/1997 - 05/31/2000 FY01: \$0 Total: \$113,060  
*Prin. Invest.:* D MENIETTI  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 4755** **UNIV OF IOWA** **4557**  
 GROUND-BASED RADAR-RAINFALL ESTIMATION FOR THE GUA VALIDA  
 TION SITES  
 06/27/1997 - 08/30/2000 FY01: \$0 Total: \$820,786  
*Prin. Invest.:* W F KRAJEWSKI  
*Tech. Officer:* GSFC/G M HEYMSFIELD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 5051** **UNIV OF IOWA** **4558**  
 PLASMA TURBULENCE IN THE INTERSTELLAR MEDIUM: SIMILARITY TO  
 HELIOSPHERIC TURBULENCE & ROLE IN...  
 01/25/1996 - 09/30/2000 FY01: \$0 Total: \$152,000  
*Prin. Invest.:* S R SPANGLER  
*Tech. Officer:* GSFC/H C NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5232** **UNIV OF IOWA** **4559**  
 ROCKET AURORAL CORRELATOR EXPERIMENT PI DR. CRAIG KLETZING  
 02/12/1999 - 02/09/2002 FY01: \$75,400 Total: \$373,657  
*Prin. Invest.:* C A KLETZING  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5319** **UNIV OF IOWA** **4560**  
 PLASMA DIAGNOSTIC FOR THE HIBAR EXPERIMENT PLASMA DIAGNOSTIC  
 FOR THE HIBAR EXPERIMENT  
 03/19/2001 - 02/28/2004 FY01: \$78,966 Total: \$78,966  
*Prin. Invest.:* C A KLETZING  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6127** **UNIV OF IOWA** **4561**  
 THEORETICAL STUDIES OF TYPE III SOLAR RADIO BURSTS  
 08/04/1997 - 07/14/2001 FY01: \$0 Total: \$130,840  
*Prin. Invest.:* D CAIRNS  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6369** **UNIV OF IOWA** **4562**  
 LANGMUIR-LIKE WAVES AND RADIATION IN PLANETARY FOR  
 09/25/1997 - 08/31/2001 FY01: \$0 Total: \$87,000  
*Prin. Invest.:* D H CAIRNS  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 6525** **UNIV OF IOWA** **4563**  
 KINETIC ALFVEN WAVE ELECTRON ACCELERATION ON AUROR AL FIELD  
 LINES  
 11/25/1997 - 02/28/2001 FY01: \$0 Total: \$72,074  
*Prin. Invest.:* D A KLETZING  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 7187** **UNIV OF IOWA** **4564**  
 RESTORATION AND ARCHIVING OF THE ISEE 1 AND 2 PLAS MA WAVE  
 INVESTIGATION DATA SETS  
 03/26/1998 - 03/31/2002 FY01: \$0 Total: \$134,117  
*Prin. Invest.:* D ANDERSON  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7390** **UNIV OF IOWA** **4565**  
 GENERATION AND SCATTERING OF RADIATION OBSERVED BY VOYAGER  
 IN THE OUTER HELIOSPHERE  
 05/07/1998 - 02/28/2002 FY01: \$0 Total: \$43,200  
*Prin. Invest.:* I H CAIRNS  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7684**                      **UNIV OF IOWA**                      **4566**  
 FUNDING OF THE ANALYSIS OF PLASMA MEASUREMENTS FOR THE  
 GEOTAIL EXTENDED MISSION / FUNDING FOR YR 1  
 09/09/1998 - 09/30/2002      FY01: \$103,333                      Total: \$1,270,000  
*Prin. Invest.:* L A FRANK  
*Tech. Officer:* GSFC/D H FAIRFIELD  
*CASE Category:* 13 - PHYSICS

**NAG 5 7710**                      **UNIV OF IOWA**                      **4567**  
 A PROPOSAL FOR STUDYING GEOMAGNETIC STORMS FROM THE ANAL-  
 YSES AND INTER. OF PLASMA WAVE DATA  
 09/23/1998 - 10/31/2001      FY01: \$0                      Total: \$460,000  
*Prin. Invest.:* R R ANDERSON  
*Tech. Officer:* GSFC/D H FAIRFIELD  
*CASE Category:* 13 - PHYSICS

**NAG 5 7712**                      **UNIV OF IOWA**                      **4568**  
 FUNDING FOR VIS ON THE POLAR SPACECRAFT FOR THE EXTENDED  
 MISSION  
 09/28/1998 - 03/31/2002      FY01: \$546,606                      Total: \$1,978,606  
*Prin. Invest.:* L A FRANK  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 7943**                      **UNIV OF IOWA**                      **4569**  
 POLAR PLASMA WAVE INVESTIGATION DATA ANALYSIS IN THE EXTENDED  
 MISSION  
 01/27/1999 - 11/30/2001      FY01: \$276,000                      Total: \$1,018,757  
*Prin. Invest.:* D GURNATT  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8119**                      **UNIV OF IOWA**                      **4570**  
 GGS-POLAR-HYDRA EXTENDED MISSION SCIENCE INVESTIGATION  
 01/29/1999 - 12/31/2001      FY01: \$446,000                      Total: \$1,696,000  
*Prin. Invest.:* J SCUDDER  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8873**                      **UNIV OF IOWA**                      **4571**  
 COUPLING SATELLITE REMOTE SENSING & UNSTEADY FLOW MODELING  
 FOR DISCHARGE ESTIMATION  
 11/16/1999 - 10/31/2002      FY01: \$53,282                      Total: \$141,702  
*Prin. Invest.:* A BRADLEY  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8918**                      **UNIV OF IOWA**                      **4572**  
 ANALYSIS AND MODELING OF JOVIAN RADIO EMISSIONS OBSERVED BY  
 GALILEO  
 01/18/2000 - 06/30/2002      FY01: \$55,000                      Total: \$105,000  
*Prin. Invest.:* J MENIETTI  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9499**                      **UNIV OF IOWA**                      **4573**  
 NEW GRANT EXTEND SOLAR MAX: COLLISIONLESS RECOMME NDATION  
 THEORY AND HIGH RESOLUTION SIMULATIONS  
 05/04/2000 - 05/14/2002      FY01: \$30,000                      Total: \$100,000  
*Prin. Invest.:* J SCUDDER  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9561**                      **UNIV OF IOWA**                      **4574**  
 WAVE AND PARTICLE INTERACTIONS IN THE HIGH AND LOW -ALTITUDE  
 AURORAL REGION DURING RISING SOLARACTI  
 05/04/2000 - 05/14/2002      FY01: \$20,000                      Total: \$90,041  
*Prin. Invest.:* D GURNETT  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9664**                      **UNIV OF IOWA**                      **4575**  
 GROUND-BASED RAINFALL ESTIMATION STUDIES FOR TRMM VALIDATION  
 06/08/2000 - 12/14/2001      FY01: \$198,000                      Total: \$208,000  
*Prin. Invest.:* W F KRAJEWSKI  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9964**                      **UNIV OF IOWA**                      **4576**  
 X-RAY EMISSION FROM SINGLE WOLF-RAYET STARS  
 09/25/2000 - 09/30/2002      FY01: \$14,000                      Total: \$32,581  
*Prin. Invest.:* R IGNACE  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9974**                      **UNIV OF IOWA**                      **4577**  
 A PROPOSAL FOR CLUSTER II WIDEBAND (WBD) PLASMA WAVE INVE-  
 STIGATION MISSION OPERATIONS & DATA  
 09/21/2000 - 10/31/2001      FY01: \$486,130                      Total: \$786,130  
*Prin. Invest.:* D GURNETT  
*Tech. Officer:* GSFC/M GOLDSTEIN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10329**                      **UNIV OF IOWA**                      **4578**  
 BALLOONING INSTABILITIES OF COLLISIONLESS THIN CURRENT SHEETS:  
 A MECHANISM FOR SUBSTORM ONSET  
 01/29/2001 - 01/31/2002      FY01: \$40,000                      Total: \$40,000  
*Prin. Invest.:* A BHATTACHARJEE  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11117**                      **UNIV OF IOWA**                      **4579**  
 PLASMA MEASUREMENTS FOR GEOTAIL  
 08/08/2001 - 09/30/2002      FY01: \$400,000                      Total: \$400,000  
*Prin. Invest.:* L FRANK  
*Tech. Officer:* GSFC/DFAIRFIELD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1352**                      **UNIV OF IOWA**                      **4580**  
 FOR RESEARCH "REAL TIME MONITORING OF PROTEIN CONCENTRATION  
 IN SOLUTION TO CONTROL NUCLEATION...  
 06/02/1997 - 08/31/2001      FY01: \$82,899                      Total: \$573,441  
*Prin. Invest.:* M A ARNOLD  
*Tech. Officer:* MSFC/B GYNES, MSFC/J MAYO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1386** **UNIV OF IOWA** **4581**  
 RESEARCH " THERMODYNAMICS OF PROTEIN CRYSTALLIZA- TION AND  
 LINKS TO CRYSTAL QUALITY"  
 06/23/1997 - 10/31/2001 FY01: \$155,128 Total: \$716,126  
*Prin. Invest.:* J M WIENCEK  
*Tech. Officer:* MSFC/B GUYNES, MSFC/J MAYO  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1425** **UNIV OF IOWA** **4582**  
 R/S SHORT TERM QUANTITATIVE PRECIPITATION FORE- CASTING USING  
 MULTI-SENSOR REMOTE SENSING AND ETA  
 01/14/1998 - 05/31/2001 FY01: \$0 Total: \$117,940  
*Prin. Invest.:* W F KRAJEWSKI  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1588** **UNIV OF IOWA** **4583**  
 REJUBENATION OF SPENT MEDIA VIA SUPPORTED EMU- LATION LIQUID  
 MEMBRANES  
 03/19/1999 - 11/30/2002 FY01: \$177,650 Total: \$510,650  
*Prin. Invest.:* J WIENECK  
*Tech. Officer:* MSFC/B GUYNES, MSFC/D CHAFEE  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1591** **UNIV OF IOWA** **4584**  
 EVALUATING OXIDATIVE STREE IN VIRALLY-INFECTED CELLS IN  
 SIMULATED MICROGRAVITY  
 03/19/1999 - 11/30/2002 FY01: \$135,850 Total: \$376,850  
*Prin. Invest.:* V G RODGERS  
*Tech. Officer:* JSC/M ANDERSON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1592** **UNIV OF IOWA** **4585**  
 R/S MONITORING AND CONTROL OF ROTATING WALL VESSELS AND  
 APPLICATION TO THE STUDY OF PROSTATE  
 03/30/1999 - 11/30/2002 FY01: \$266,950 Total: \$658,950  
*Prin. Invest.:* D W MURHAMMER  
*Tech. Officer:* JSC/S GONDA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1593** **UNIV OF IOWA** **4586**  
 R/S EXTREMOPHILIC INTERFACIAL SYSTEMS FOR WASTE PROCESSING IN  
 SPACE  
 03/15/1999 - 11/30/2002 FY01: \$105,450 Total: \$316,450  
*Prin. Invest.:* T L PEEPLES  
*Tech. Officer:* MSFC/B GUYNES, MSFC/D CHAFEE  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1835** **UNIV OF IOWA** **4587**  
 NONINVASIVE NEAR-INFRARED MONITORS FOR PROTEIN SRYSTALLIZA-  
 TION  
 08/30/2001 - 11/30/2004 FY01: \$124,000 Total: \$124,000  
*Prin. Invest.:* M A ARNOLD  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 5 30730** **UNIV OF IOWA** **4588**  
 ISTP PROJECT'S WIDEBAND PLASMA WAVE INVESTIGATION  
 01/30/1990 - 12/18/2000 FY01: \$0 Total: \$6,404,840  
*Prin. Invest.:* D GURNETT  
*Tech. Officer:* GSFC/J L CHRISTENSEN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 422** **UNIV OF IOWA** **4589**  
 REGIONAL SCALE FORECASTING AND EXPERIMENT-SPECIFIC EMISSION  
 ESTIMATES OF GAS AND AEROSOL DISTRIBUTION  
 09/26/2000 - 06/30/2003 FY01: \$68,661 Total: \$105,551  
*Prin. Invest.:* G R CARMICHAEL  
*Prin. Invest.:* NONE  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 3 666** **UNIV OF IOWA** **4590**  
 REFLIGHT OF ELF (ENCLOSED LAMINAR FLAMES) INVESTIG ATION  
 02/02/1999 - 01/03/2003 FY01: \$81,700 Total: \$225,575  
*Prin. Invest.:* D CHEN  
*Tech. Officer:* GRC/D P STOCKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 8 94** **UNIV OF IOWA** **4591**  
 EQUIAXIED DENDRITIC SOLIDIFICATION EXPERIMENT (EDSE)  
 05/31/1996 - 01/31/2005 FY01: \$199,500 Total: \$916,480  
*Prin. Invest.:* C BECKERMANN  
*Tech. Officer:* MSFC/A JACKMAN, MSFC  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 199** **UNIV OF IOWA** **4592**  
 DENDRITIC ALLOY SOLIDIFICATION EXPERIMENT (DASE)  
 04/12/2000 - 11/30/2003 FY01: \$166,250 Total: \$186,250  
*Prin. Invest.:* C BECKERMANN  
*Tech. Officer:* GSFC/P DOTY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 5 30199** **UNIV OF IOWA** **4593**  
 ASSESSMENT OF THE IMPACT OF ASIAN EMISSIONS ON A LOCAL,  
 REGIONAL & GLOBAL SCALE/STUDENT: SARATHG  
 08/25/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* G CARMICHAEL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50156** **UNIV OF IOWA** **4594**  
 MICROVASCULAR ALTERATIONS IN SIMULATED MICROGRAVIT  
 09/11/1997 - 12/15/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* C V GISOLFI  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT 5 50377** **UNIV OF IOWA** **4595**  
 ARCHAICAL CHAPERONINS CAN BE USED TO EXTEND THE FUNCTIONAL  
 RANGE OF CONDITIONS IN WHICH ENZYMES  
 09/05/2001 - 09/14/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* T PEEPLES  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## KANSAS

**NAG 5 8633** **FORT HAYS STATE UNIV** **4596**  
 A STUDY OF THE SEASONAL & INTERANNUAL VARIABILITY OF ICE  
 PRODUCTION & HEAT TRANSPORT IN BAFFIN BAY  
 07/01/1999 - 06/30/2000 FY01: \$0 Total: \$39,542  
*Prin. Invest.:* J HEINRICHS  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## KANSAS

## NASA'S UNIVERSITY PROGRAM

**NAG 1 2234**                      **KANSAS STATE UNIV**                      **4597**  
 FURTHER INVEST OF RECEDING HORIZON-BASED CON- TROLLERS &  
 NEURAL NETWORK-BASED GPC SYSTEMS  
 08/20/1999 - 06/12/2000      FY01: \$0                      Total: \$21,884  
*Prin. Invest.:* A G KELKAR  
*Tech. Officer:* LARC/P J HALEY  
*CASE Category:* 21 - MATHEMATICS

**NAG 2 1209**                      **KANSAS STATE UNIV**                      **4598**  
 MODEL CONSTRUCTION FOR FINITE STATE VERIFICATION: APPLICATION  
 OF ABSTRACT INTERPRETATION & PARTIAL  
 05/01/1998 - 03/31/2000      FY01: \$0                      Total: \$443,064  
*Prin. Invest.:* D A SCHMIDT  
*Tech. Officer:* ARC/M R LOWRY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1274**                      **KANSAS STATE UNIV**                      **4599**  
 DIFFERENTIATION OF BONE MARROW MACROPHAGES IN SPAC E-PHASE  
 A  
 12/28/1998 - 05/31/2002      FY01: \$337,293                      Total: \$586,604  
*Prin. Invest.:* S K CHAPES  
*Tech. Officer:* ARC/W E HINDS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2360**                      **KANSAS STATE UNIV**                      **4600**  
 GELATION IN AEROSOLS: NON-MEAN-FIELD AGGREGATION KINETICS  
 03/27/2000 - 11/30/2003      FY01: \$80,001                      Total: \$120,000  
*Prin. Invest.:* C SORENSEN  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 13 - PHYSICS

**NAG 5 6213**                      **KANSAS STATE UNIV**                      **4601**  
 LAND-COVER CHANGE IN THE GREAT PLAINS: PREDICTING IMPACTS OF  
 REGIONAL FOREST EXPANSION ON BIOGEOCH  
 10/24/1997 - 07/31/2001      FY01: \$0                      Total: \$485,000  
*Prin. Invest.:* D JOHNSON  
*Tech. Officer:* GSFC/A JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11337**                      **KANSAS STATE UNIV**                      **4602**  
 SCALING UP THE ECOSYSTEM CONSEQUENCES OF FOREST EX PANSION  
 IN THE GREAT PLAINS REGION  
 09/07/2001 - 09/14/2002      FY01: \$194,762                      Total: \$194,762  
*Prin. Invest.:* L JOHNSON  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1687**                      **KANSAS STATE UNIV**                      **4603**  
 RESEARCH ENTITLED, "NANOCRYSTAL SUPERLATTICES: SYNTHESIS AND  
 PROPERTIES"  
 06/01/2000 - 11/30/2003      FY01: \$66,500                      Total: \$101,500  
*Prin. Invest.:* C M KLABUNDE  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1702**                      **KANSAS STATE UNIV**                      **4604**  
 RESEARCH, "CRYSTAL GROWTH OF NEW FAMILIES OF FERROELASTIC  
 MATERIALS"  
 06/07/2000 - 11/30/2003      FY01: \$85,500                      Total: \$125,500  
*Prin. Invest.:* M D HOLLINGSWORTH  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 1 225**                      **KANSAS STATE UNIV**                      **4605**  
 GENERALIZED PREDICTIVE AND NEURAL GENERALIZED PREDICTIVE  
 CONTROL AEROSPACE SYSTEMS  
 05/07/1996 - 05/15/2000      FY01: -\$1                      Total: \$127,618  
*Prin. Invest.:* A G KELKAR  
*Tech. Officer:* LARC/P J HALEY, ARC/D I SOLOWAY  
*CASE Category:* 21 - MATHEMATICS

**NCC 1 226**                      **KANSAS STATE UNIV**                      **4606**  
 PASSIVITY-BASED ROBUST CONTROL OF AEROSPACE SYST  
 04/09/1996 - 04/08/2000      FY01: -\$1                      Total: \$115,875  
*Prin. Invest.:* D G KELKAR  
*Tech. Officer:* LARC/D M JOSHI  
*CASE Category:* 41 - AERONAUTICAL ENGRN

**NCC 1 348**                      **KANSAS STATE UNIV**                      **4607**  
 SYNTHESIS METHODS FOR ROBUST PASSIFICATION AND CONTROL OF  
 LINEAR, TIME-INVARIANT (LT) SYSTEMS  
 06/29/1999 - 12/31/2000      FY01: -\$9,138                      Total: \$18,362  
*Prin. Invest.:* A G KELKAR  
*Tech. Officer:* LARC/S M JOSHI  
*CASE Category:* 41 - AERONAUTICAL ENGRN

**NCC 1 400**                      **KANSAS STATE UNIV**                      **4608**  
 PREDICTIVE AND NEURAL PREDICTIVE CONTROL OF UNCERTAIN  
 SYSTEMS  
 05/31/2000 - 12/31/2000      FY01: -\$12,198                      Total: \$12,721  
*Prin. Invest.:* A G KELKAR  
*Tech. Officer:* LARC/P J HALEY  
*CASE Category:* 21 - MATHEMATICS

**NCC 5 234**                      **KANSAS STATE UNIV**                      **4609**  
 ASPECTS AND CONTROL OF TIDAL SEDIMENTATION AND THE EXTRAC-  
 TION AND MODELING OF TIDAL PARAMETERS FROM  
 12/12/1997 - 09/30/2001      FY01: \$0                      Total: \$75,000  
*Prin. Invest.:* A ARCHER  
*Tech. Officer:* GSFC/B BILLS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 01011**                      **UNIV OF KANSAS**                      **4610**  
 ESTIMATION OF UNSTEADY AERODYNAMIC MODELS FROM FLIGHT TEST  
 DATA  
 12/08/2000 - 11/11/2002      FY01: \$62,572                      Total: \$62,572  
*Prin. Invest.:* C E LAN  
*Tech. Officer:* LARC/J M BRANDON  
*CASE Category:* 41 - AERONAUTICAL ENGRN

**NAG 5 4358**                      **UNIV OF KANSAS**                      **4611**  
 STUDIES IN PLANETARY AERONOMY  
 04/17/1997 - 08/31/2001      FY01: \$0                      Total: \$273,759  
*Prin. Invest.:* D E CRAVENS  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4990**                      **UNIV OF KANSAS**                      **4612**  
 DEVELOPMENT OF LAND USE MAPPING AND PROTOCOL FOR T A MULTI-  
 TEMPORAL REMOTE SENSING APPLICATION  
 06/27/1997 - 09/30/2000      FY01: \$0                      Total: \$440,431  
*Prin. Invest.:* K P PRICE  
*Tech. Officer:* GSFC/A J TUYAHOV  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## NASA'S UNIVERSITY PROGRAM

## KANSAS

**NAG 5 7053** **UNIV OF KANSAS** **4613**  
 ANALYSIS OF AIRCRAFT LASER ALTIMETER DATA FROM GREENLAND  
 02/25/1998 - 02/28/2002 FY01: \$0 Total: \$90,772  
*Prin. Invest.:* D A BRAATEN  
*Tech. Officer:* GSFC/R THOMAS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7516** **UNIV OF KANSAS** **4614**  
 TRACKING INTERNAL LAYERS OF THE GREENLAND ICE SHEET USING  
 AIRBORNE RADIO ECHO SOUNDER IMAGES  
 06/04/1998 - 05/31/2001 FY01: \$0 Total: \$49,291  
*Prin. Invest.:* J GAUCH  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8758** **UNIV OF KANSAS** **4615**  
 MEASUREMENT OF THE THICKNESS OF THE GREENLAND ICE SHEET &  
 HIGH RESOLUTION MAPPING OF INTERNAL LAYERS  
 08/24/1999 - 12/31/2001 FY01: \$222,578 Total: \$547,701  
*Prin. Invest.:* S GOGINENI  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9840** **UNIV OF KANSAS** **4616**  
 REMOTE SENSING OF EAST ANTARCTIC ICE STREAMS  
 07/26/2000 - 03/31/2002 FY01: \$0 Total: \$113,221  
*Prin. Invest.:* S GOGINENI  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9841** **UNIV OF KANSAS** **4617**  
 INCUBATING COMMERCIAL REMOTE SENSING PRODUCTS  
 07/28/2000 - 01/14/2002 FY01: \$75,000 Total: \$100,000  
*Prin. Invest.:* K P PRICE  
*Tech. Officer:* GSFC/A J TUYAHOV  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11106** **UNIV OF KANSAS** **4618**  
 VALIDATION OF AMSR-E & AMSU/HSB LEVEL 1 BRIGHTNESS TEMPERATURES &  
 LEVEL 2 CLOUD & PRECIPITATION  
 07/13/2001 - 08/31/2002 FY01: \$84,273 Total: \$84,273  
*Prin. Invest.:* R BENNARTZ  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG13 01008** **UNIV OF KANSAS** **4619**  
 LINKING REMOTE SENSING, LAND USE, AND CARBON SEQUESTRATION:  
 INSIGHTS LEAD TO LANDSCAPE SCALE  
 09/18/2001 - 09/17/2003 FY01: \$997,800 Total: \$997,800  
*Prin. Invest.:* K P PRICE  
*Tech. Officer:* SSC/B DAVIS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99009** **UNIV OF KANSAS** **4620**  
 CONSORTIUM FOR PRODUCTS AND TECHNOLOGY TO SUPPORT THE  
 GREAT PLAINS AGROECOSYSTEM  
 03/01/1999 - 03/01/2002 FY01: \$0 Total: \$1,550,000  
*Prin. Invest.:* E A MARTINKO  
*Tech. Officer:* SSC/C HILL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 99019** **UNIV OF KANSAS** **4621**  
 REMOTE SENSING-BASED GEOSTATISTICAL MODELING FOR CONIFEROUS  
 FOREST INVENTORY & CHARACTERIZATION  
 08/10/1999 - 08/09/2002 FY01: \$230,000 Total: \$430,000  
*Prin. Invest.:* M JAKUBAUSKAS  
*Tech. Officer:* SSC/R MCKALLIP  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAS 1 99052** **UNIV OF KANSAS** **4622**  
 DEVELOPMENT OF A HYBRID RF/LASER RADAR  
 03/08/1999 - 03/07/2002 FY01: \$177,606 Total: \$583,648  
*Prin. Invest.:* C ALLEN  
*Tech. Officer:* LARC/J HILL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 3 00162** **UNIV OF KANSAS** **4623**  
 NRA 99-OES-08 ESTO AIST SBI  
 08/01/2000 - 08/02/2002 FY01: \$198,000 Total: \$305,462  
*Prin. Invest.:* G J P EVANS  
*Tech. Officer:* GRC/K BHASIN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 168** **UNIV OF KANSAS** **4624**  
 KANSAS SPACE AND LIFE SCIENCES, GEOPHYSICAL INFORM AERONAUTICS  
 AND FLIGHT ENGINEERING TECHNOLOGY (K-01/27/1997 - 12/31/2001  
 FY01: \$500,000 Total: \$2,500,000  
*Prin. Invest.:* D R DOWNING  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 415** **UNIV OF KANSAS** **4625**  
 EPSCOR PREPARATION PROGRAM  
 06/24/1999 - 03/01/2002 FY01: \$0 Total: \$450,000  
*Prin. Invest.:* D DOWNING  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 3 52361** **UNIV OF KANSAS** **4626**  
 NASA GRADUATE STUDENT RESEARCHERS PROGRAM NASA GRADUATE  
 STUDENT RESEARCHERS PROGRAM  
 08/18/1999 - 08/14/2002 FY01: \$27,500 Total: \$49,500  
*Prin. Invest.:* R TAGHAVI  
*Tech. Officer:* GRC/M MEYER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 30404** **UNIV OF KANSAS** **4627**  
 DETERMINATION OF THERMAL RESPONSE PATTERNS FROM LAND  
 SURFACES & THEIR RELATIONSHIP WITH CLIMATIC  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S EGBERT  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40065** **UNIV OF KANSAS** **4628**  
 KANSAS/NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 09/16/1998 - 03/31/2001 FY01: \$0 Total: \$637,500  
*Prin. Invest.:* D R DOWNING  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

KENTUCKY

NASA'S UNIVERSITY PROGRAM

**NGT 5 40121 UNIV OF KANSAS 4629**  
 KANSAS SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/20/2001 - 03/31/2002 FY01: \$212,500 Total: \$212,500  
*Prin. Invest.:* D R DOWNING  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50073 UNIV OF KANSAS 4630**  
 A HIGH RESOLUTION RADAR CHARACTERIZATION OF ICE IN TERRESTRIAL LIFE  
 08/26/1997 - 07/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R G PLUMB  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50161 UNIV OF KANSAS 4631**  
 ESTIMATING SOIL MOISTURE OVER 4 TALLGRASS PRAIRIE USING ERS-2 SAR  
 10/02/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J HARRINGTON  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50219 UNIV OF KANSAS 4632**  
 DEVELOPMENT OF RADAR SYSTEM FOR ACCUMULATION MEASUREMENT-  
 SESSF STUDENT: PANNIRSELVAM  
 09/17/1998 - 02/28/2002 FY01: \$7,839 Total: \$73,839  
*Prin. Invest.:* G S PRASAD  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 1491 UNIV OF KANSAS MEDICAL CENTER 4633**  
 LONG-TERM SIMULATED MICROGRAVITY INHIBITS SPERMATOGENESIS IN  
 ADULT MALE RATS  
 07/11/2001 - 06/30/2002 FY01: \$111,762 Total: \$111,762  
*Prin. Invest.:* J S TASH  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 11038 UNIV OF KANSAS MEDICAL CENTER 4634**  
 STUDIES IN PLANETARY AERONOMY  
 06/14/2001 - 08/31/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* T E CRAVENS  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 3 1985 WICHITA STATE UNIV 4635**  
 MODERNIZE AND EXPAND THE WATER IMPINGEMENT DATA BASE FOR  
 AIRCRAFT SURFACES  
 11/12/1996 - 03/15/2000 FY01: -\$82 Total: \$396,893  
*Prin. Invest.:* M PAPADAKIS  
*Tech. Officer:* GRC/C S BIDWELL  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2137 WICHITA STATE UNIV 4636**  
 PILOT SIMULATOR TRAINING FOR AIRCRAFT ICING PILOT SIMULATOR  
 TRAINING FOR AIRCRAFT ICING  
 03/06/1998 - 10/31/2001 FY01: \$202,060 Total: \$1,014,319  
*Prin. Invest.:* D ELLIS, M PAOADAKIS  
*Tech. Officer:* GRC/T H BOND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2324 WICHITA STATE UNIV 4637**  
 WATER DROPLET IMPINGEMENT PROGRAM - PHASE II WATER DROPLET  
 IMPINGEMENT PROGRAM - PHASE II  
 02/01/2000 - 11/30/2001 FY01: \$125,656 Total: \$201,434  
*Prin. Invest.:* D PAPADAKIS  
*Tech. Officer:* GRC/C BIDWELL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3435 WICHITA STATE UNIV 4638**  
 SPECTROSCOPIC PROPERTIES OF SUB STELLAR OBJECTS  
 10/01/1996 - 09/30/2001 FY01: \$79,400 Total: \$303,500  
*Prin. Invest.:* D ALEXANDER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NCA 1 106 WICHITA STATE UNIV 4639**  
 GENERAL AVIATION PROGRAM/AGATE  
 02/24/1995 - 10/31/2001 FY01: \$795,833 Total: \$5,207,161  
*Prin. Invest.:* H WILLIFORD, D ELLIS  
*Tech. Officer:* LARC/W E RICKS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCA 3 111 WICHITA STATE UNIV 4640**  
 JOINT SPONSORED RESEARCH AGREEMENT - ICHING RESEARCH H  
 02/22/1996 - 03/31/2001 FY01: \$0 Total: \$374,101  
*Prin. Invest.:* D ELLIS  
*Tech. Officer:* GRC/T H BOND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 624 WICHITA STATE UNIV 4641**  
 TAILPLANE ICING PROGRAM - PHASE II TAILPLANE ICING PROGRAM -  
 PHASE II  
 06/08/1998 - 11/30/2001 FY01: \$37,952 Total: \$464,712  
*Prin. Invest.:* M PAPADAKIS, D ELLIS  
*Tech. Officer:* GRC/T P RATVASKY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 8 202 WICHITA STATE UNIV 4642**  
 "ROLE OF THE FILLER WIRE COMPOSITIONS IN CRACK NUCLEATION AND  
 PROPAGATION OF ALUMINUM WELDS"  
 06/08/2000 - 10/16/2001 FY01: \$0 Total: \$62,000  
*Prin. Invest.:* G E TALIA  
*Tech. Officer:* MSFC/A C NUNES, MSFC/C K RUSSELL  
*CASE Category:* 47 - METAL & MATERIALS ENGR

KENTUCKY

**NAG 1 01036 UNIV OF KENTUCKY 4643**  
 DEV/APPLIC OF MAGNETOELASTIC & MAGNETOACOUSTIC REMOTE  
 QUERY ENVIRONMENTAL SENSORS  
 06/05/2001 - 06/30/2004 FY01: \$157,770 Total: \$157,770  
*Prin. Invest.:* V SINGH, E DICKEY, C A GRIMES  
*Tech. Officer:* LARC/C H ROLLINS  
*CASE Category:* 49 - ENGINEERING, OTHER



**NAG 2 1121 UNIV OF KENTUCKY 4644**  
 CARBON NANOTUBULES: BUILDING BLOCKS FOR NANOMETER -SCALE  
 ENGINEERING  
 02/25/1997 - 10/31/1999 FY01: \$651 Total: \$137,576  
*Prin. Invest.:* S B SINNOTT  
*Tech. Officer:* ARC/C LEVIT, ARC/D A BAILEY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1363 UNIV OF KENTUCKY 4645**  
 BIOMIMETIC DETECTION SCHEMES ON A MICROCENTRIFUGE PLATFORMS  
 (LABCD)  
 07/27/1999 - 07/14/2002 FY01: \$264,020 Total: \$698,526  
*Prin. Invest.:* S DAUNERT  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2099 UNIV OF KENTUCKY 4646**  
 LARGE EDDY SIMULATION OF FLOWS IN TURBINE CASCADES USING  
 CONSERVATIVE UPWIND-BIASED 5TH ORDER NUMBE  
 12/23/1997 - 11/30/2001 FY01: \$25,000 Total: \$275,277  
*Prin. Invest.:* P G HVANG  
*Tech. Officer:* GRC/D E ASHPIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2567 UNIV OF KENTUCKY 4647**  
 MAGNETICALLY ASSISTED COMBUSTION EXPERIMENT (MACE)  
 03/16/2001 - 12/31/2004 FY01: \$10,000 Total: \$10,000  
*Prin. Invest.:* K SAITO  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2613 UNIV OF KENTUCKY 4648**  
 AN EXPERIMENTAL AND COMPUTATIONAL INVESTIGATION OF OSCIL-  
 LATING AIRFOIL UNSTEADY AERODYNAMICS AT LAR  
 06/06/2001 - 05/31/2005 FY01: \$46,221 Total: \$46,221  
*Prin. Invest.:* V CAPECE  
*Tech. Officer:* GRC/D MIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 3841 UNIV OF KENTUCKY 4649**  
 GAS DYNAMICS IN ACTIVE GALACTIC NUCLEI: BROAD LINE  
 02/28/1997 - 02/14/2001 FY01: \$0 Total: \$182,500  
*Prin. Invest.:* I SHLOSMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4235 UNIV OF KENTUCKY 4650**  
 THEORETICAL STUDIES OF INFRARED EMISSION FROM STAR  
 03/24/1997 - 09/30/2001 FY01: \$0 Total: \$253,900  
*Prin. Invest.:* D A VERNER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4594 UNIV OF KENTUCKY 4651**  
 IN-SITU, REMOTE CHEMICAL SENSORS BASED ON THIN MAG  
 05/12/1997 - 01/14/2001 FY01: \$0 Total: \$376,695  
*Prin. Invest.:* C A GRIMES  
*Tech. Officer:* GSFC/D JAN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 6937 UNIV OF KENTUCKY 4652**  
 QUANTITATIVE X-RAY - UV LINE AND CONTINUUM SPECTRO SCOPY WITH  
 APPLICATION TO AGN  
 04/29/1998 - 06/30/2001 FY01: \$0 Total: \$64,700  
*Prin. Invest.:* G FERLAND  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7031 UNIV OF KENTUCKY 4653**  
 DATA ANALYSIS OF SPECTRAL ENERGY DISTRIBUTIONS OF YOUNG  
 STELLAR OBJECTS  
 02/18/1998 - 02/14/2001 FY01: \$0 Total: \$220,473  
*Prin. Invest.:* M ELITZUR  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8165 UNIV OF KENTUCKY 4654**  
 QUANTITATIVE X-RAY - UV LINE AND CONTINUUM SPECTRO SCOPY WITH  
 APPLICATION TO AGN  
 02/09/1999 - 09/30/2001 FY01: \$0 Total: \$116,805  
*Prin. Invest.:* G J FERLAND  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8212 UNIV OF KENTUCKY 4655**  
 FUNDAMENTAL PROBLEMS IN ASTROPHYSICAL PLASMAS (LTS A98)  
 02/26/1999 - 02/28/2002 FY01: \$80,885 Total: \$233,719  
*Prin. Invest.:* G J FERLAND  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10518 UNIV OF KENTUCKY 4656**  
 DUST EVOLUTION IN THE EARLY UNIVERSE AND GALACTIC SYSTEMS:  
 OBSERVATIONAL CONSEQUENCES & COSMOLOGICAL  
 03/07/2001 - 03/14/2003 FY01: \$168,387 Total: \$168,387  
*Prin. Invest.:* M ELITZUR  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/E DWEK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10823 UNIV OF KENTUCKY 4657**  
 CENTRAL REGIONS IN DISK GALAXIES (ATP 2000)  
 05/01/2001 - 05/14/2002 FY01: \$70,204 Total: \$70,204  
*Prin. Invest.:* I SHLOSMAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAS 1 01099 UNIV OF KENTUCKY 4658**  
 A VERIFIED DESIGN TOOL FOR LARGE APERTURE MEMBRANE TELE-  
 SCOPE MIRRORS  
 07/11/2001 - 01/31/2002 FY01: \$126,594 Total: \$126,594  
*Prin. Invest.:* S W SMITH  
*Tech. Officer:* LARC/R S PAPPA  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 1 385 UNIV OF KENTUCKY 4659**  
 FIGURE CONTROL OF LIGHTWEIGHT OPTICAL STRUCTURES (NASA HQS  
 COMPETITION)  
 03/15/2000 - 12/31/2002 FY01: \$85,000 Total: \$185,000  
*Prin. Invest.:* J A MAIN  
*Tech. Officer:* LARC/R S PAPPA  
*CASE Category:* 46 - MECHANICAL ENGR

## KENTUCKY

## NASA'S UNIVERSITY PROGRAM

**NCC 2 5193**                      **UNIV OF KENTUCKY**                      **4660**  
 TEMPERATURE FLUCTUATIONS IN THE ORION NEBULA AND NEBULAR  
 ABUNDANCE SCALE  
 11/01/1996 - 05/31/2000      FY01: -\$1                      Total: \$53,986  
*Prin. Invest.:* D J FERLAND  
*Tech. Officer:* ARC/D GOORITCH  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5383**                      **UNIV OF KENTUCKY**                      **4661**  
 COMPUTATIONAL INVESTIGATIONS OF CARBON NANOTUBE MATERIALS  
 05/22/2000 - 06/30/2000      FY01: -\$40,385                      Total: \$4,487  
*Prin. Invest.:* S SINNOT  
*Tech. Officer:* ARC/M MEYYA, ARC/H PARTRIDGE 111  
*CASE Category:* 43 - CHEMICAL ENGR

**NCC 2 5386**                      **UNIV OF KENTUCKY**                      **4662**  
 SIMULATIONS OF CARBON NANOTUBES IN NANOELECTRONICS AND BIO-  
 MATERIALS APPLICATIONS  
 06/08/2000 - 08/31/2001      FY01: \$0                      Total: \$25,000  
*Prin. Invest.:* M MENON  
*Tech. Officer:* ARC/H PATRIDGE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5405**                      **UNIV OF KENTUCKY**                      **4663**  
 FUNDAMENTAL PROBLEMS IN PLASMA ASTROPHYSICS: THE THERMAL  
 EQUILIBRIUM OF NGC 7009  
 10/24/2000 - 10/31/2001      FY01: \$10,250                      Total: \$10,250  
*Prin. Invest.:* G J FERLAND  
*Tech. Officer:* ARC/D GOORTVITCH  
*CASE Category:* 11 - ASTRONOMY

**NCC 3 590**                      **UNIV OF KENTUCKY**                      **4664**  
 TURBULENCE & TRANSITION MODELING OF LOW PRESSURE T URBINE  
 FLOWS  
 12/17/1997 - 12/31/2002      FY01: \$80,000                      Total: \$419,754  
*Prin. Invest.:* G HUANG  
*Tech. Officer:* GRC/D E ASHPIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 01006**                      **UNIV OF KENTUCKY**                      **4665**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/05/2001 - 06/30/2004      FY01: \$12,000                      Total: \$12,000  
*Prin. Invest.:* S W SMETH  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52223**                      **UNIV OF KENTUCKY**                      **4666**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 09/10/1999 - 08/23/2001      FY01: \$12,000                      Total: \$44,000  
*Prin. Invest.:* M ROCHE, J MAIN  
*Tech. Officer:* LARC/G C HORNER  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 71**                      **UNIV OF KENTUCKY**                      **4667**  
 GSRP TRAINING GRANT - GEORGE NELSON - SHAPE TUNING OF  
 EXTREMELY LARGE ORBITAL TELESCOPE MIRRORS  
 06/09/1998 - 11/30/2001      FY01: \$0                      Total: \$68,000  
*Prin. Invest.:* J A MAIN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52869**                      **UNIV OF KENTUCKY**                      **4668**  
 INVESTIGATING THE EFFECTS OF FOAM INFLATED DEPLOYABLE SPACE-  
 CRAFT STRUCTURES  
 07/27/1998 - 05/18/2000      FY01: -\$6,338                      Total: \$37,662  
*Prin. Invest.:* J A MAIN  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 11040**                      **UNIV OF LOUISVILLE**                      **4669**  
 GENERAL CIRCULATION OF PLANETARY ATMOSPHERES  
 06/13/2001 - 06/14/2002      FY01: \$91,000                      Total: \$91,000  
*Prin. Invest.:* T DOWLING  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1509**                      **UNIV OF LOUISVILLE**                      **4670**  
 SHORT TERM QUANTITATIVE PRECIPITATION FORECASTING USING MULTI-  
 SENSOR REMOTE SENSING AND ETA MODEL  
 03/04/1998 - 02/02/2000      FY01: -\$7,454                      Total: \$77,070  
*Prin. Invest.:* M N FRENCH  
*Tech. Officer:* MSFC/J SIMONDS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5373**                      **UNIV OF LOUISVILLE**                      **4671**  
 MICROARRAY ANALYSIS OF MICROGRAVITY-DEPENDENT GENE EXPRES-  
 SIONS IN NORMAL HUMAN FIBROBLASTS  
 03/30/2000 - 04/14/2002      FY01: \$90,250                      Total: \$185,250  
*Prin. Invest.:* E WANG  
*Tech. Officer:* ARC/J W HINES, ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5374**                      **UNIV OF LOUISVILLE**                      **4672**  
 CLONING AND FUNCTIONAL CHARACTERIZATION OF NOVEL GENES  
 WHOSE EXPRESSIONS ARE MICROGRAVITY-DEPEN...  
 03/30/2000 - 04/14/2002      FY01: \$90,250                      Total: \$185,250  
*Prin. Invest.:* E WANG  
*Tech. Officer:* ARC/J W HINES, ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 8762**                      **WESTERN KENTUCKY UNIV**                      **4673**  
 STARBASE NETWORK  
 08/27/1999 - 09/14/2002      FY01: \$0                      Total: \$1,915,000  
*Prin. Invest.:* C H MCGRUDER, 111  
*Tech. Officer:* GSFC/JD ROSENHAL  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 222**                      **WESTERN KENTUCKY UNIV**                      **4674**  
 TO SUPPORT THE KENTUCKY NASA EXPERIMENTAL PROGRAM COMPETI-  
 TIVE RESEARCH  
 08/11/1997 - 06/30/2002      FY01: \$0                      Total: \$1,800,000  
*Prin. Invest.:* R HACKNEY  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 396**                      **WESTERN KENTUCKY UNIV**                      **4675**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/13/1999 - 05/31/2002      FY01: \$0                      Total: \$450,000  
*Prin. Invest.:* R HACKNEY  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

LOUISIANA

**NCC 5 571 WESTERN KENTUCKY UNIV 4676**  
 KENTUCKY NASA EPSCOR PROGRAM  
 07/16/2001 - 07/31/2002 FY01: \$700,000 Total: \$700,000  
*Prin. Invest.:* R HACKNEY  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 3 52353 WESTERN KENTUCKY UNIV 4677**  
 SYNTHESIS AND CHARACTERIZATION OF ELECTRON-BEAM CU RED AND  
 THERMAL CURED BISMALIMIDE-TRIAZINE COPOL  
 06/24/1999 - 07/31/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* W PAN  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 12 - CHEMISTRY

**NGT 5 40051 WESTERN KENTUCKY UNIV 4678**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRA  
 01/30/1997 - 02/28/2003 FY01: \$0 Total: \$1,046,684  
*Prin. Invest.:* R HACKNEY  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40105 WESTERN KENTUCKY UNIV 4679**  
 KENTUCKY SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 03/06/2001 - 02/28/2003 FY01: \$262,650 Total: \$262,650  
*Prin. Invest.:* R HACKNEY  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## LOUISIANA

**NAG 8 1392 GRAMBLING STATE UNIV 4680**  
 R/S "NLO POLYMERS THAT HAVE ENHANCED THERMAL STABILITY AND  
 LOW ALIGNMENT DECAY"  
 07/23/1997 - 10/31/2000 FY01: -\$2,203 Total: \$285,512  
*Prin. Invest.:* C WALTON  
*Tech. Officer:* MSFC/B PENN  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1020 LOUISIANA STATE UNIV - BATON ROUGE 4681**  
 DEVELOPMENTAL ANALYSIS OF SEEDS GROWN ON MIR  
 01/18/1996 - 11/30/1999 FY01: \$0 Total: \$371,575  
*Prin. Invest.:* M E MUSGRAVE  
*Tech. Officer:* ARC/C M WINGET, ARC/G C JAHNS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1320 LOUISIANA STATE UNIV - BATON ROUGE 4682**  
 A RADAPPERTIZATION PROTOCOL FOR SAMPLES RETURNED T O EARTH  
 FROM MARS  
 05/10/1999 - 04/14/2001 FY01: \$0 Total: \$58,800  
*Prin. Invest.:* J R BATTISTA  
*Tech. Officer:* ARC/D L DEVINCENZI  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 2 1460 LOUISIANA STATE UNIV - BATON ROUGE 4683**  
 DEVELOPMENT OF A PROTOCOL FOR STERILING MINERAL SA MPLES  
 RETURNED TO EARTH FROM MARS USING GAMMA RAD  
 03/08/2001 - 10/31/2001 FY01: \$42,446 Total: \$42,446  
*Prin. Invest.:* J R BATTISTA  
*Tech. Officer:* ARC/L E BEBOUT, ARC/D DIVINCENZI  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1511 LOUISIANA STATE UNIV - BATON ROUGE 4684**  
 THE EFFECTS OF MICROGRAVITY ON PROTEIN-LIGAND INTE RACTAC-  
 TIONS  
 07/23/2001 - 07/31/2002 FY01: \$89,523 Total: \$89,523  
*Prin. Invest.:* V J LICATA  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2361 LOUISIANA STATE UNIV - BATON ROUGE 4685**  
 THEORETICAL AND EXPERIMENTAL INVESTIGATION OF THE STABILITY OF  
 AN EVAPORATING CONSTRAINED VAPOR BUBB  
 04/03/2000 - 11/30/2003 FY01: \$43,700 Total: \$71,200  
*Prin. Invest.:* H WONG, NONE  
*Tech. Officer:* GRC/J SKARDA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3082 LOUISIANA STATE UNIV - BATON ROUGE 4686**  
 ACCRETION ONTO MAGNETIC DEGENERATE STARS  
 09/22/1995 - 09/30/1999 FY01: -\$3,262 Total: \$170,681  
*Prin. Invest.:* G CHANMUGAM  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5064 LOUISIANA STATE UNIV - BATON ROUGE 4687**  
 THE ADVANCED THIN IONIZATION CALORIMETER (ATIC) BALLOON EXPERI-  
 MENT  
 05/03/1996 - 05/06/2001 FY01: \$75,000 Total: \$2,481,800  
*Prin. Invest.:* J P WEFEL  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 5127 LOUISIANA STATE UNIV - BATON ROUGE 4688**  
 MINUTE OF ARC RESOLUTION GAMMA-RAY IMAGING EXPERIMENT  
 (MARGIE)  
 07/02/1997 - 09/30/2000 FY01: \$0 Total: \$149,825  
*Prin. Invest.:* M CHERRY  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5177 LOUISIANA STATE UNIV - BATON ROUGE 4689**  
 TRANSITION RADIATION DETECTORS FOR HIGH ENERGY MEASUREMENTS  
 ON ACCESS  
 04/24/1998 - 03/31/2002 FY01: \$0 Total: \$240,000  
*Prin. Invest.:* M L CHERRY  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5208 LOUISIANA STATE UNIV - BATON ROUGE 4690**  
 ULTRA-LONG DURATION MISSION CONCEPT FOR PROPOSAL FOR A  
 MINUTE-OF-ARC RESOLUTION GAMMA-RAY EXPERIMNT  
 09/24/1998 - 11/30/2001 FY01: \$99,430 Total: \$210,000  
*Prin. Invest.:* M CHERRY  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 5297 LOUISIANA STATE UNIV - BATON ROUGE 4691**  
 SIFTER SIFTER  
 06/12/2000 - 12/31/2001 FY01: \$0 Total: \$41,500  
*Prin. Invest.:* M L CHERRY  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

## LOUISIANA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 5306 LOUISIANA STATE UNIV - BATON ROUGE 4692**  
 ADVANCED THIN IONIZATION CARLORIMETER BALLOON EXPERIMENT  
 01/09/2001 - 11/30/2003 FY01: \$345,000 Total: \$345,000  
*Prin. Invest.:* J P WEFEL  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5307 LOUISIANA STATE UNIV - BATON ROUGE 4693**  
 INITIAL FUNDING FOR THE ABOVE REFERENCED GRANT IN THE AMOUNT  
 OF 55KPI: FAZELY/LSU; GRANT TITLE:  
 06/05/2001 - 11/30/2003 FY01: \$55,000 Total: \$55,000  
*Prin. Invest.:* D FAZELY  
*Tech. Officer:* WFF/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5323 LOUISIANA STATE UNIV - BATON ROUGE 4694**  
 A WIDE-FIELD HIGH-RESOLUTION HARD X-RAY/GAMMA-RAY IMAGING  
 TELESCOPE FOR ULTRA LONG BALLOON MISSION  
 03/21/2001 - 11/30/2003 FY01: \$132,500 Total: \$132,500  
*Prin. Invest.:* M L CHERRY  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 7355 LOUISIANA STATE UNIV - BATON ROUGE 4695**  
 A CGRO TARGET OF OPPORTUNITY PROPOSAL FOR FLARING BLAZARS  
 04/29/1998 - 01/14/2000 FY01: -\$600 Total: \$1,900  
*Prin. Invest.:* J STACY  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7933 LOUISIANA STATE UNIV - BATON ROUGE 4696**  
 EXTRAGALACTIC INTERSTELLAR DUST\_ (LISA - NEW)  
 12/14/1998 - 12/31/2001 FY01: \$59,162 Total: \$191,989  
*Prin. Invest.:* G C CLAYTON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8100 LOUISIANA STATE UNIV - BATON ROUGE 4697**  
 A SURVEY OF ACTIVE GALAXIES AND HIGH-LATITUDE GAMMA A-RAY  
 SOURCES USING COMPTEL ALL-SKY MAXIMUM-LIK  
 01/25/1999 - 01/31/2001 FY01: \$0 Total: \$7,500  
*Prin. Invest.:* J STACY  
*Tech. Officer:* GSFC/J NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8497 LOUISIANA STATE UNIV - BATON ROUGE 4698**  
 NUMERICAL HYDRODYNAMICS OF MASS-TRANSFERRING BINAR IES (ATP  
 - 98)  
 05/18/1999 - 04/30/2002 FY01: \$60,000 Total: \$176,520  
*Prin. Invest.:* J FRANK  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9203 LOUISIANA STATE UNIV - BATON ROUGE 4699**  
 MOVING BEYOND THE STANDARD PARADIGM/THE IMPORTANCE OF  
 INTERSTELLAR DUST FROM THE MILKY WAY TO HIGH R  
 03/16/2000 - 03/14/2002 FY01: \$43,804 Total: \$103,706  
*Prin. Invest.:* G CLAYTON  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9245 LOUISIANA STATE UNIV - BATON ROUGE 4700**  
 WORLD DELTAS: A BASELINE AND CHANGES.  
 03/14/2000 - 03/31/2002 FY01: \$124,357 Total: \$197,937  
*Prin. Invest.:* O HUH  
*Tech. Officer:* GSFC/H FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9709 LOUISIANA STATE UNIV - BATON ROUGE 4701**  
 USING IR EMISSION TO CONSTRAIN THE ROLE OF DUST IN GALAXIES  
 07/25/2000 - 06/30/2002 FY01: \$49,825 Total: \$98,726  
*Prin. Invest.:* G C CLAYTON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10185 LOUISIANA STATE UNIV - BATON ROUGE 4702**  
 FAR-ULTRAVIOLET INTERSTELLAR EXTINCTION IN THE LARGE MAGEL-  
 LANIC CLOUD - FUSE-2000  
 01/25/2001 - 01/31/2002 FY01: \$73,200 Total: \$73,200  
*Prin. Invest.:* G C CLAYTON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1731 LOUISIANA STATE UNIV - BATON ROUGE 4703**  
 ADVANCED LIGHT WEIGHT MAGNET PROGRAM  
 07/25/2000 - 07/31/2002 FY01: \$61,000 Total: \$94,256  
*Prin. Invest.:* R G GOODRICH  
*Tech. Officer:* MSFC/T ROBERTSON  
*CASE Category:* 13 - PHYSICS

**NAG 8 1845 LOUISIANA STATE UNIV - BATON ROUGE 4704**  
 SECOND GENERATION SPACE LAUNCH INITIATIVES: AN EXPLORATION AND  
 ROADMAP TOSOLVING PROBLEMS.  
 07/26/2001 - 08/29/2001 FY01: \$9,999 Total: \$9,999  
*Prin. Invest.:* B SARKER  
*Tech. Officer:* MSFC/E SHAW  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG10 139 LOUISIANA STATE UNIV - BATON ROUGE 4705**  
 PLANT REPRODUCTIVE DEVELOPMENT IN MICROGRAVITY  
 06/07/1994 - 12/31/2000 FY01: -\$44 Total: \$533,464  
*Prin. Invest.:* M E MUSGRAVE  
*Tech. Officer:* KSC/W M KNOTT  
*CASE Category:* 55 - AGRICULTURE

**NAS 8 01042 LOUISIANA STATE UNIV - BATON ROUGE 4706**  
 MECHANICS OF GRANULAR MATERIAL MGM III  
 03/23/2001 - 02/28/2003 FY01: \$120,000 Total: \$120,000  
*Prin. Invest.:* K ALSHIBLI  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 2 5320 LOUISIANA STATE UNIV - BATON ROUGE 4707**  
 SCALABLE SIMULATION& DATA MANAGEMENT FOR COMPUTATI ONAL  
 NANO-ELECTRONICS ON THE INFORMATION POWER GRI  
 05/10/1999 - 08/31/2001 FY01: \$58,000 Total: \$190,000  
*Prin. Invest.:* A NAKANO  
*Tech. Officer:* ARC/S SAINI  
*CASE Category:* 22 - COMPUTER SCIENCE

## NASA'S UNIVERSITY PROGRAM

LOUISIANA

**NCC 2 5440**      **LOUISIANA STATE UNIV - BATON ROUGE**      **4708**  
 MULTISCALE SIMULATIONS OF PROTEIN NANOTUBES ON A G RID  
 07/02/2001 - 06/30/2003      FY01: \$95,000      Total: \$95,000  
*Prin. Invest.:* P VASHISTA, R K KALIA, A NAKANO  
*Tech. Officer:* ARC/M MEYYAPPAN, ARC/H PATRIDGE  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 5 167**      **LOUISIANA STATE UNIV - BATON ROUGE**      **4709**  
 NASA EPSCOR PROGRAM  
 11/02/1996 - 10/31/2001      FY01: \$0      Total: \$2,300,000  
*Prin. Invest.:* J P WEFEL  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 393**      **LOUISIANA STATE UNIV - BATON ROUGE**      **4710**  
 NASA EPSCOR PREPARATION PROGRAM  
 05/13/1999 - 08/14/2002      FY01: -\$485      Total: \$450,000  
*Prin. Invest.:* J WEFEL  
*Tech. Officer:* HQ/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 201**      **LOUISIANA STATE UNIV - BATON ROUGE**      **4711**  
 ADVANCED FLIGHT CONTROLLER DESIGN FOR X-33 USING TRAJECTORY  
 LINEARIZATION  
 04/24/2000 - 09/30/2000      FY01: -\$844      Total: \$50,938  
*Prin. Invest.:* J ZHU  
*Tech. Officer:* MSFC/C E HALL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40035**      **LOUISIANA STATE UNIV - BATON ROUGE**      **4712**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 02/13/1997 - 02/28/2001      FY01: -\$127,760      Total: \$845,990  
*Prin. Invest.:* J P WEFEL  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40115**      **LOUISIANA STATE UNIV - BATON ROUGE**      **4713**  
 LOUISIANA SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 03/06/2001 - 02/28/2002      FY01: \$384,010      Total: \$384,010  
*Prin. Invest.:* J WEFEL  
*Tech. Officer:* HQ/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT13 52743**      **LOUISIANA STATE UNIV - BATON ROUGE**      **4714**  
 A TESTING OF REMOTE SENSING METHODS AT THE BROUSSARD MOUNDS  
 ITE  
 07/12/2000 - 07/31/2002      FY01: \$22,000      Total: \$44,000  
*Prin. Invest.:* B S GOODWIN  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4293**      **NORTHEAST LOUISIANA UNIV**      **4715**  
 ANCIENT CRUST AND LACUSTRINE PLAIN SITES FOR MARS  
 04/18/1997 - 09/30/2001      FY01: \$0      Total: \$30,000  
*Prin. Invest.:* D A DE HON  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1206**      **SOUTHEASTERN LOUISIANA UNIV**      **4716**  
 JOVE  
 09/25/1995 - 08/31/2000      FY01: -\$8,687      Total: \$97,498  
*Prin. Invest.:* W A PARKISON, W N NORTON, W N NORTON  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 2 1159**      **SOUTHERN UNIV & A&M COLLEGE**      **4717**  
 AIR TRAFFIC CONTROL USING NEURAL NETWORKS  
 08/25/1997 - 03/31/2000      FY01: \$0      Total: \$204,000  
*Prin. Invest.:* S K TRIVEDI  
*Tech. Officer:* ARC/G S LEE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1273**      **SOUTHERN UNIV & A&M COLLEGE**      **4718**  
 INTERACTIVE CLASSIFICATION TECHNOLOGY  
 12/29/1998 - 12/31/2000      FY01: -\$30,434      Total: \$162,044  
*Prin. Invest.:* C DEBESSONET  
*Tech. Officer:* ARC/P NORVIG  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1468**      **SOUTHERN UNIV & A&M COLLEGE**      **4719**  
 INTEGRATED APPROACH TO REASONING UNDER MULTIPLE PE RSPEC-  
 TIVES  
 03/28/2001 - 03/14/2002      FY01: \$88,670      Total: \$88,670  
*Prin. Invest.:* C DEBESSONER  
*Tech. Officer:* ARC/R MORRIS, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 1825**      **SOUTHERN UNIV & A&M COLLEGE**      **4720**  
 DEVELOPMENT OF INTEGRATED METHODOLOGY FOR ENGINE C  
 OMPONENT DESIGN AND DESIGN OPTIMIZATION  
 04/17/1996 - 06/30/2000      FY01: -\$7      Total: \$359,993  
*Prin. Invest.:* R A MIRSHAMS, B Q LI  
*Tech. Officer:* GRC/L BERKE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2076**      **SOUTHERN UNIV & A&M COLLEGE**      **4721**  
 KNOWLEDGE PRESERVATION FOR DESIGN OF ROCKET SYSTEM S  
 09/26/1997 - 09/15/2001      FY01: \$0      Total: \$100,000  
*Prin. Invest.:* D MOREMAN, J DYER  
*Tech. Officer:* GRC/D F NOGA  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 5066**      **SOUTHERN UNIV & A&M COLLEGE**      **4722**  
 THE ADVANCED THIN IONIZATION CALORIMETER (ATIC) BALLOON EXPER-  
 IMENT  
 06/17/1996 - 06/30/2001      FY01: \$0      Total: \$497,500  
*Prin. Invest.:* A R FAZELY  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 7157**      **SOUTHERN UNIV & A&M COLLEGE**      **4723**  
 DEVELOPMENT OF BALLOON-BORNE X-RAY/GAMMA DETECTORS FOR  
 STUDIES OF HIGH ENERGY ASTROPHYSICAL SOURCE  
 03/11/1998 - 02/28/2002      FY01: \$0      Total: \$297,660  
*Prin. Invest.:* J STACY  
*Tech. Officer:* GSFC/J TUELLER  
*CASE Category:* 13 - PHYSICS

**NAG 5 8552 SOUTHERN UNIV & A&M COLLEGE 4724**  
 PROGRAM TO INCREASE THE PURSUIT OF EDUCATION AND LEARNING IN  
 ENGINEERING AND SCIENCE  
 06/15/1999 - 09/30/2001 FY01: \$0 Total: \$1,000,000  
*Prin. Invest.:* D BAGAYOKO  
*Tech. Officer:* GSFC/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10253 SOUTHERN UNIV & A&M COLLEGE 4725**  
 PARTNERSHIPS IN ASTRONOMY & ASTROPHYSICS EDUCATION &  
 RESEARCH AT SOUTHERN UNIV  
 01/10/2001 - 01/14/2002 FY01: \$210,000 Total: \$210,000  
*Prin. Invest.:* G STACY  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1495 SOUTHERN UNIV & A&M COLLEGE 4726**  
 RELATIONSHIP BETWEEN STRUCTURE AND MAGNETIC AND ELECTRON  
 TRANSPORT PROPERTIES IN R1-AXMN03  
 06/01/1998 - 05/31/2002 FY01: \$0 Total: \$238,892  
*Prin. Invest.:* H L LAWRENCE  
*Tech. Officer:* MSFC/D SCHMIDT  
*CASE Category:* 13 - PHYSICS

**NAG 8 1536 SOUTHERN UNIV & A&M COLLEGE 4727**  
 MODELING AND ANALYSIS OF HEAT-ACTIVATED THERMAL COUPLES  
 06/08/1998 - 06/30/2001 FY01: \$0 Total: \$298,750  
*Prin. Invest.:* M A STUNNLEFIELD  
*Tech. Officer:* MSFC/G GORDON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1625 SOUTHERN UNIV & A&M COLLEGE 4728**  
 FIBERGLAST INSTRUMENT DEVELOPMENT  
 09/22/1999 - 08/31/2001 FY01: \$99,510 Total: \$199,020  
*Prin. Invest.:* J G STACY  
*Tech. Officer:* MSFC/G J FISHMAN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 8 1627 SOUTHERN UNIV & A&M COLLEGE 4729**  
 EDUCATION GRANT "AN INTEGRATED THEORY AND LAB LEARNING  
 EXPERIENCE  
 09/09/1999 - 09/08/2002 FY01: \$0 Total: \$140,582  
*Prin. Invest.:* L L LAURENCE  
*Tech. Officer:* MSFC/W J LOVE, MSFC/A C BEAM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1633 SOUTHERN UNIV & A&M COLLEGE 4730**  
 VIRTUAL REALITY INNOVATIONS IN TRAINING AND SCIENCE, ENGINEERING  
 AND MATHEMATICS EDUCATION.  
 09/15/1999 - 07/31/2000 FY01: \$0 Total: \$99,354  
*Prin. Invest.:* M C DUNN  
*Tech. Officer:* MSFC/A BEAM, MSFC/W LOVE  
*CASE Category:* 21 - MATHEMATICS

**NAG10 210 SOUTHERN UNIV & A&M COLLEGE 4731**  
 RESEARCH & EDUCATION EXPERIENCES FOR MINORITY UNDERGRAD-  
 UATES IN COMPOSITE MATERIAL  
 09/01/1997 - 01/31/2001 FY01: -\$9,909 Total: \$390,091  
*Prin. Invest.:* S S CHEHL  
*Tech. Officer:* KSC/S MCDANIELS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG13 98003 SOUTHERN UNIV & A&M COLLEGE 4732**  
 NOISE REMOVAL DECONVOLUTION AND VIBRATION RELAXA- TION STUDIES  
 TO ENHANCE PLUME DIAGNOSTIC TECH.  
 03/11/1998 - 05/14/2002 FY01: \$0 Total: \$299,772  
*Prin. Invest.:* A AMINI  
*Tech. Officer:* SSC/B B ST. CYR  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG13 98013 SOUTHERN UNIV & A&M COLLEGE 4733**  
 MATHEMATICS AND SCIENCE ENRICHMENT ACTIVITES FOR MIDDLE AND  
 HIGH SCHOOL STUDENTS  
 07/15/1998 - 06/30/2002 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* M SUBBLEFIELD  
*Tech. Officer:* SSC/A JOYCE  
*CASE Category:* 21 - MATHEMATICS

**NCC 8 138 SOUTHERN UNIV & A&M COLLEGE 4734**  
 RESEARCH "COMPOSITE TRUSS DESIGN OPTIMIZATION"  
 07/15/1997 - 07/14/2000 FY01: \$0 Total: \$331,966  
*Prin. Invest.:* C WANG  
*Tech. Officer:* MSFC/D FORD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 156 SOUTHERN UNIV & A&M COLLEGE 4735**  
 FOR RESEARCH ENTITLED: "STRUCTURAL MATERIALS FAILURE ANALYSIS  
 DATABASE"  
 09/28/1998 - 08/31/2001 FY01: \$48,638 Total: \$198,638  
*Prin. Invest.:* J DYER  
*Tech. Officer:* MSFC/G JERMAN  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC13 00010 SOUTHERN UNIV & A&M COLLEGE 4736**  
 PROGRAM TO INCREASE PURSUIT OF EDUCATION AND LEARNING IN ENGI-  
 NEERING AND SCIENCES (PIPLINES)  
 09/25/2000 - 09/24/2002 FY01: \$913,800 Total: \$1,828,800  
*Prin. Invest.:* D BAGAYOKO  
*Prin. Invest.:* NONE  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT13 52720 SOUTHERN UNIV & A&M COLLEGE 4737**  
 1999 NASA/ASEE SUMMER FACILITY FELLOWSHIP PROGRAM AT STENNIS  
 SPACE CENTER  
 04/01/1999 - 09/30/2000 FY01: -\$2,778 Total: \$202,222  
*Prin. Invest.:* E HILDRETH  
*Tech. Officer:* SSC/A JOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT13 52744 SOUTHERN UNIV & A&M COLLEGE 4738**  
 RESEARCH DESIGN AND METHODOLOGY FOR A REMOTE SENSING  
 SYSTEM TO PROVIDE NASA/SSC SAFETY  
 07/12/2000 - 07/31/2001 FY01: -\$12,425 Total: \$9,575  
*Prin. Invest.:* G M LANE  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG13 52 SOUTHERN UNIV - NEW ORLEANS 4739**  
 NASA/SUNO PARTNERSHIP FOR EXCELLENCE IN MATH & SCIENCE EDUCA-  
 TION  
 06/30/1997 - 04/30/2000 FY01: -\$58,748 Total: \$328,389  
*Prin. Invest.:* P HEATH, R PERRY  
*Tech. Officer:* JSC/N SULLIVAN  
*CASE Category:* 21 - MATHEMATICS

**NAG 2 1378** **TULANE UNIV** **4740**  
 EFFECT OF SIMULATED MICROGRAVITY ON GENE EXPRESSION IN THE  
 ENTERIC PATHOGEN SALMONELLA TYPHIMURIUM  
 08/19/1999 - 07/31/2002 FY01: \$130,416 Total: \$334,716  
*Prin. Invest.:* C A NICKERSON  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1362** **TULANE UNIV** **4741**  
 FOR RESEARCH--PRODUCTION OF 125 DIOH D3 BY RENAL EPITHELIAL  
 CELLS IN SIMULATED MICROGRAVITY CULTURE  
 06/01/1997 - 11/30/2001 FY01: \$50,000 Total: \$740,000  
*Prin. Invest.:* T HAMMOND  
*Tech. Officer:* JSC/S R GONDA  
*CASE Category:* 56 - MEDICL

**NAG 9 826** **TULANE UNIV** **4742**  
 CELL CULTIVATION  
 08/09/1995 - 01/15/2001 FY01: \$0 Total: \$424,000  
*Prin. Invest.:* K O'CONNOR  
*Tech. Officer:* JSC/N PELLIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1344** **TULANE UNIV** **4743**  
 GENETICALLY ENGINEERED COLLAGEN II FOR SMART BIOMATERIALS  
 08/22/2001 - 09/30/2004 FY01: \$44,000 Total: \$44,000  
*Prin. Invest.:* T HAMMOND  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 56 - MEDICL

**NAG 9 1350** **TULANE UNIV** **4744**  
 NOVEL TISSUE ASSEMBLIES; MODELS FOR ENTERIC PATHOGENESIS  
 08/08/2001 - 09/30/2004 FY01: \$63,000 Total: \$63,000  
*Prin. Invest.:* C A NICKERSON  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 56 - MEDICL

**NAG 9 1351** **TULANE UNIV** **4745**  
 SPATIAL ORGANIZATION WITHIN PROSTATE CANCER SPHEROIDS  
 08/01/2001 - 09/30/2004 FY01: \$74,000 Total: \$74,000  
*Prin. Invest.:* K C O'CONNOR, S CLEJAN, D C R. DE KEE  
*Tech. Officer:* JSC/D RIIN  
*CASE Category:* 56 - MEDICL

**NGT13 52722** **TULANE UNIV** **4746**  
 DYNAMIC PARTICLE PROCESSES & BIOGEOCHEMICAL MATERIAL FLUX IN  
 RIVER DOMINATED OCEAN MARGINS  
 07/28/1999 - 07/31/2001 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* B MCKEE  
*Tech. Officer:* JSC/R TRAVIS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT13 52745** **TULANE UNIV** **4747**  
 SOURCE AND TRANSPORT OF ORGANIC CARBON IN THE WATER COLUMN  
 AND SEDIMENT OF THE MISSISSIPPI PLUME  
 07/12/2000 - 07/31/2001 FY01: -\$14,637 Total: \$7,355  
*Prin. Invest.:* J CORBINO, T BIANCHI  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 1906** **UNIV OF NEW ORLEANS** **4748**  
 GROWTH AND MORPHOLOGY OF PHASE SEPARATING SUPERCRITICAL  
 FLUIDS  
 06/10/1996 - 06/09/2000 FY01: \$0 Total: \$474,998  
*Prin. Invest.:* J P DROSKE  
*Tech. Officer:* GRC/W B ALSTON  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2447** **UNIV OF NEW ORLEANS** **4749**  
 GEOPHYSICAL FLOW EXPERIMENT IN A ROTATING SPHERICAL  
 CAPACITOR  
 05/30/2000 - 11/30/2003 FY01: \$100,880 Total: \$135,015  
*Prin. Invest.:* J HEGSETH  
*Tech. Officer:* GRC/F P CHIARAMONTEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1116** **UNIV OF NEW ORLEANS** **4750**  
 JOVE  
 01/10/1995 - 05/31/2000 FY01: -\$2,112 Total: \$141,852  
*Prin. Invest.:* J J HEGSETH, M L JOHNSON, J J HOWARD  
*Tech. Officer:* MSFC/F SIX  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 5376** **UNIV OF NEW ORLEANS** **4751**  
 LIFE IN EXTREME ENVIRONMENTS RESEARCH  
 03/30/2000 - 03/31/2001 FY01: \$0 Total: \$15,000  
*Prin. Invest.:* Z ROSENZWEIG  
*Tech. Officer:* ARC/M T FLYNN, ARC/J HINES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 8 223** **UNIV OF NEW ORLEANS** **4752**  
 DEVELOPMENT OF INNOVATIVE ADVANCED COMPOSITE MANUFACTURING TECHNOLOGIES UTILIZING NCAM/LOUISIANA PARTNERSHIP  
 03/19/2001 - 03/18/2006 FY01: \$2,700,000 Total: \$2,700,000  
*Prin. Invest.:* J N CRISP  
*Tech. Officer:* MSFC/J VICKERS, MSFC/M NIEDERMEYER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT13 52714** **UNIV OF NEW ORLEANS** **4753**  
 DIONNEI-MELISSA DEBOSE/USING SINDA/FLUENT TO DEVELOP COMPUTER  
 MODEL APPLICATIONS FOR SSC  
 10/09/1997 - 07/31/2000 FY01: \$0 Total: \$55,000  
*Prin. Invest.:* E RUSSO  
*Tech. Officer:* SSC/A JOYCE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT13 52719** **UNIV OF NEW ORLEANS** **4754**  
 THERMAL AND MECHANICAL ANALYSIS OF HYDROGEN TRANSFER  
 VALVES  
 07/13/1998 - 07/31/2000 FY01: -\$2,419 Total: \$107,581  
*Prin. Invest.:* Y TRAYHAM  
*Tech. Officer:* SSC/A JOYCE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT13 52721** **UNIV OF NEW ORLEANS** **4755**  
 NUMERICAL ANALYSIS OF THERMAL STRATIFICATION AND BEYSERING IN  
 LIQUID PROPELLANT STORAGE TANKS  
 07/22/1999 - 07/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* K M AKYUZLU  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 21 - MATHEMATICS

**NGT13 52740 UNIV OF NEW ORLEANS 4756**  
 OPTIMIZATION OF SPACE FLIGHT SYTEM GROUND-BASED PROCESSING  
 05/22/2000 - 05/31/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* R SAXTON  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT13 52749 UNIV OF NEW ORLEANS 4757**  
 FACTORS AFFECTING THE EARLY LIFE HISTORY OF FISHES IN LAKE PONT-  
 CHATRAIN, LOUISIANA  
 06/08/2001 - 06/30/2004 FY01: \$21,650 Total: \$21,650  
*Prin. Invest.:* J CORBINO  
*Tech. Officer:* SSC/R MILLER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1423 UNIV OF SOUTHWESTERN LOUISIANA 4758**  
 ANALYSIS OF THE GRAVISENSING SYSTEM IN CHARA  
 07/18/2000 - 06/30/2002 FY01: \$96,669 Total: \$148,994  
*Prin. Invest.:* K H HASENSTEIN  
*Tech. Officer:* ARC/R D MACELROY, ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG10 190 UNIV OF SOUTHWESTERN LOUISIANA 4759**  
 RESPONSE SYSTEM OF PLANTS  
 03/25/1996 - 09/30/2002 FY01: \$135,000 Total: \$577,358  
*Prin. Invest.:* K H HASENSTEIN  
*Tech. Officer:* KSC/W M KNOTT  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1609 XAVIER UNIV - LOUISIANA 4760**  
 "TEACHER AND CURRICULUM ENHANCEMENT PROGRAM"  
 05/25/1999 - 05/24/2002 FY01: \$200,000 Total: \$600,000  
*Prin. Invest.:* R P HALE  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 21 - MATHEMATICS

**NAG13 53 XAVIER UNIV - LOUISIANA 4761**  
 PROJECT KAIZEN SAME  
 06/19/1997 - 06/17/2000 FY01: -\$24,724 Total: \$352,147  
*Prin. Invest.:* R P HALE  
*Tech. Officer:* SSC/N SULLIVAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 98006 XAVIER UNIV - LOUISIANA 4762**  
 SEEING THE EARTH: USING REMOTE SENSING TECHNOLOGIES TO STIR  
 IMAGINATION OF STUDENTS  
 04/20/1998 - 10/19/2001 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* S O'CONNOR  
*Tech. Officer:* JSC/R TRAVIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 90084 XAVIER UNIV - LOUISIANA 4763**  
 SOAR 2 SUMMER BRIDGE PROGRAM  
 09/09/1997 - 04/30/2001 FY01: \$0 Total: \$590,023  
*Prin. Invest.:* G BAKER  
*Tech. Officer:* GSFC/L RANDOLPH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 90086 XAVIER UNIV - LOUISIANA 4764**  
 SOAR 2 SUMMER BRIDGE PROGRAM  
 05/07/2001 - 04/30/2002 FY01: \$150,000 Total: \$150,000  
*Prin. Invest.:* A Z CHATTERS  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## MAINE

**NAG 5 6002 UNIV OF MAINE - ORONO 4765**  
 SOILS, WATER, PEOPLE, AND PIXELS: A STUDY OF NANG  
 09/11/1997 - 07/14/2000 FY01: \$0 Total: \$569,993  
*Prin. Invest.:* R RINDFUSS  
*Tech. Officer:* HQ/A JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6041 UNIV OF MAINE - ORONO 4766**  
 TIME-SERIES FOREST CHANGE, LAND-COVER/LAND-USE CON ECONOMIC  
 DRIVING FORCES IN THE NORTHERN PETEN DIS  
 07/23/1997 - 07/31/2001 FY01: \$0 Total: \$232,000  
*Prin. Invest.:* S SADER  
*Tech. Officer:* GSFC/A JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6558 UNIV OF MAINE - ORONO 4767**  
 BIOLOGICAL-PHYSICAL COUPLING IN THE GULF OF MAINE: SATELLITE  
 AND MODEL SSTUDIES IN PHYTOPLANKTON VA  
 10/27/1997 - 10/31/2000 FY01: \$0 Total: \$351,586  
*Prin. Invest.:* A C THOMAS  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/J A MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6604 UNIV OF MAINE - ORONO 4768**  
 PHYTOPLANKTON VARIABILITY IN EASTERN BOUNDARY CURR ENTS:  
 CONNECTIONS TO PHYSICAL FORCING  
 12/11/1997 - 11/30/2001 FY01: \$109,650 Total: \$498,939  
*Prin. Invest.:* A THOMAS  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8712 UNIV OF MAINE - ORONO 4769**  
 MONITORING THE MESOAMERICAN BIOLOGICAL CORRIDOR  
 07/26/1999 - 05/31/2002 FY01: \$90,054 Total: \$270,168  
*Prin. Invest.:* S A SADER  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9913 UNIV OF MAINE - ORONO 4770**  
 RASCAL-A REMOTE AUTONOMOUS SYSTEM FOR THE CONTROL OF ALTI-  
 METRY  
 09/14/2000 - 09/14/2002 FY01: \$0 Total: \$12,619  
*Prin. Invest.:* G S HAMILTON  
*Tech. Officer:* GSFC/J ZWALLY  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9959 UNIV OF MAINE - ORONO 4771**  
 CIS NET: IN SITU AND REMOTE MONITORING OF PRODUCTIVITY AND  
 NUTRIENT CYCLES IN PUGET SOUND  
 09/12/2000 - 12/31/2001 FY01: \$71,709 Total: \$147,267  
*Prin. Invest.:* M PERRY  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10035 UNIV OF MAINE - ORONO 4772**  
 SURFACE GPS MEASUREMENTS FOR ICE SHEET MASS BALANCE & FIDU-  
 CIAL CONTROL OF ALTIMETRY  
 10/24/2000 - 12/31/2001 FY01: \$40,742 Total: \$40,742  
*Prin. Invest.:* G HAMILTON  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



**NAG 5 10620**                      **UNIV OF MAINE - ORONO**                      **4773**  
 MULTI-SENSOR & MODELING ANALYSES OF GULF OF MAINE PHYTO-  
 PLANKTON VARIABILITY  
 03/19/2001 - 03/31/2002                      FY01: \$120,823                      Total: \$120,823  
*Prin. Invest.:* A THOMAS  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11132**                      **UNIV OF MAINE - ORONO**                      **4774**  
 ASTTEX VALIDATION MOORING  
 07/26/2001 - 07/31/2002                      FY01: \$20,000                      Total: \$20,000  
*Prin. Invest.:* D A BYRNE  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 98008**                      **UNIV OF MAINE - ORONO**                      **4775**  
 FOREST MONITORING AND MULTISENSOR RESEARCH IN MAINE'S  
 INDUSTRIAL FOREST  
 04/30/1998 - 04/29/2002                      FY01: \$250,000                      Total: \$650,000  
*Prin. Invest.:* S SADER  
*Tech. Officer:* JSC/B GRAHAM  
*CASE Category:* 55 - AGRICULTURE

**NGT 5 30353**                      **UNIV OF MAINE - ORONO**                      **4776**  
 THE ROLE OF CLAY MINERALOGY ON SOIL C ACCUMULATION & LOSS  
 ALONG A TROPICAL FOREST ELEVATION (CLIMATE  
 08/24/2000 - 08/31/2002                      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* L M MAYER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30426**                      **UNIV OF MAINE - ORONO**                      **4777**  
 DISTRIBUTION OF SNOW ACCUMULATION AND MASS BALANCE ACROSS  
 THE WESTANTARCTIC ICESHEET/STUDENT  
 09/19/2001 - 09/30/2004                      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* G HAMILTON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT13 52751**                      **UNIV OF MAINE - ORONO**                      **4778**  
 NEURAL NETWORK MODELING OF CHLOROPHYLL-A CONCENTRATION  
 FROM REMOTE SENSING DATA  
 06/08/2001 - 06/30/2004                      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* W SLADE  
*Tech. Officer:* SSC/R MILLER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9128**                      **UNIV OF SOUTHERN MAINE**                      **4779**  
 ACCESS EARTH: PROMOTING ACCESSIBILITY TO THE EARTH SYSTEM  
 SCIENCES FOR PERSONS WITH DISABILITIES  
 03/01/2000 - 02/28/2002                      FY01: \$84,666                      Total: \$145,277  
*Prin. Invest.:* S M LOCKE  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## MARYLAND

**NAG 5 2829**                      **BOWIE STATE UNIV**                      **4780**  
 MODEL-BASED VQ FOR MULTISPECTRAL EARTH IMAGE DATA COMPRES-  
 SION  
 12/14/1994 - 06/30/2001                      FY01: \$0                      Total: \$164,231  
*Prin. Invest.:* M MAREBOYANA  
*Tech. Officer:* GSFC/J TILTON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6476**                      **BOWIE STATE UNIV**                      **4781**  
 ASSESSING THE IMPACT OF EXPANDING URBAN LAND USE ON AGRICUL-  
 TURAL PRODUCTIVITY USING REMOTE S  
 12/08/1997 - 12/14/2001                      FY01: \$0                      Total: \$471,184  
*Prin. Invest.:* W LAWRENCE  
*Tech. Officer:* GSFC/M LIMHOFF  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7225**                      **BOWIE STATE UNIV**                      **4782**  
 SIECA IS A PROGRAM FOR COLLEGE INTERNS.  
 04/09/1998 - 06/14/2000                      FY01: \$0                      Total: \$386,129  
*Prin. Invest.:* J LANGDON  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 7669**                      **BOWIE STATE UNIV**                      **4783**  
 SUPPORT FOR DATA ANALYSIS, PRESENTATION, FIELD & MEETING  
 TRAVEL NASA/DOD LEGACY CENTRAL AMERICA DEPL  
 09/28/1998 - 09/30/2001                      FY01: \$0                      Total: \$163,957  
*Prin. Invest.:* W LAWRENCE  
*Tech. Officer:* GSFC/M LIMHOFF  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8370**                      **BOWIE STATE UNIV**                      **4784**  
 A FAST TRACK PLAN TOWARD TEACHER CERTIFICATION FOR THE PUBLIC  
 SCHOOL SYSTEM OF PRINCE GEORGE'S C  
 03/12/1999 - 02/28/2002                      FY01: \$200,000                      Total: \$600,000  
*Prin. Invest.:* D W CRIM  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8787**                      **BOWIE STATE UNIV**                      **4785**  
 TRAINING UNDERGRADUATES IN SPACE SCIENCE AND SATELITE OPERA-  
 TION AND TECHNOLOGY  
 08/31/1999 - 11/30/2001                      FY01: \$0                      Total: \$200,000  
*Prin. Invest.:* N WAKIM  
*Tech. Officer:* GSFC/P CROUSE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9458**                      **BOWIE STATE UNIV**                      **4786**  
 A 2000 SUMMER INST IN ENGINEERING & COMPUTER  
 04/14/2000 - 10/31/2001                      FY01: \$0                      Total: \$207,900  
*Prin. Invest.:* D LANGDON  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9544**                      **BOWIE STATE UNIV**                      **4787**  
 GODDARD STUDENT INTERNSHIP PROGRAM (GSIP)  
 05/03/2000 - 05/14/2001                      FY01: \$0                      Total: \$49,868  
*Prin. Invest.:* N T WAKIM  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9843** **BOWIE STATE UNIV** **4788**  
 PROJECT ACCESS (ACADEMY FOR THE COLLABORATIVE ENHANCEMENT  
 OF STUDENT SKILLS)  
 08/07/2000 - 09/30/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* A L GASKINS-NEDD  
*Tech. Officer:* GSFC/C HOLLINGSWORTH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10034** **BOWIE STATE UNIV** **4789**  
 CONTINUED SUPPORT OF EOS-IDS URBAN IMPACTS ON GLOB AL  
 PRODUCTIVITY  
 10/10/2000 - 12/14/2001 FY01: \$59,901 Total: \$59,901  
*Prin. Invest.:* W LAWRENCE  
*Tech. Officer:* GSFC/M L IMHOFF  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10697** **BOWIE STATE UNIV** **4790**  
 TO MANAGE A 2001 SUMMER INST IN ENGINEERING & COMPUTER  
 APPLICATIONS PROGRAM  
 04/24/2001 - 04/30/2002 FY01: \$207,800 Total: \$207,800  
*Prin. Invest.:* D LANGDON  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11361** **BOWIE STATE UNIV** **4791**  
 BOWIE SEEKS TO INTEGRATE THE WIRE MISSION INTO ITS BSOCC  
 PROGRAM TO PROVIDE OPPORTUNITIES TO ST  
 09/27/2001 - 09/30/2003 FY01: \$64,000 Total: \$64,000  
*Prin. Invest.:* N T WAKIM  
*Tech. Officer:* GSFC/P L CROUSE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 232** **BOWIE STATE UNIV** **4792**  
 MODEL INSTS FOR EXCELLENCE - PERIOD OF PERF  
 09/22/1997 - 09/30/2000 FY01: \$0 Total: \$4,765,804  
*Prin. Invest.:* N WAKIM  
*Tech. Officer:* GSFC/L RANDOLPH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 235** **BOWIE STATE UNIV** **4793**  
 AN AGENT-BASED INFORMATION PROCESSING SYSTEM CO-OP AGREE-  
 MENT WITH BOWIE S  
 11/07/1997 - 06/14/2001 FY01: \$0 Total: \$150,000  
*Prin. Invest.:* S SRIVASTAVA  
*Tech. Officer:* GSFC/W TRUSZKOWSKI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 446** **BOWIE STATE UNIV** **4794**  
 ANALYSIS & MODIFICATION OF NASA WEB BASED SOFTWARE  
 07/10/2000 - 07/14/2001 FY01: \$0 Total: \$70,082  
*Prin. Invest.:* D CARVALO  
*Tech. Officer:* GSFC/H PARK  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 507** **BOWIE STATE UNIV** **4795**  
 FOLIAR OPTICAL PROPERTY MEASUREMENTS OF BOREAL SPECIES (A  
 CONTINUATION OF THE BOREAL RESEARCH PROGRAM)  
 08/07/2000 - 08/14/2002 FY01: \$0 Total: \$23,625  
*Prin. Invest.:* W T LAWRENCE  
*Tech. Officer:* GSFC/E MIDDLETON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 516** **BOWIE STATE UNIV** **4796**  
 MODEL INSTS FOR EXCELLENCE  
 10/05/2000 - 09/30/2001 FY01: \$1,529,000 Total: \$1,529,000  
*Prin. Invest.:* N T WAKIM  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9375** **CAPITOL COLLEGE** **4797**  
 SUMMER 2000 PRE-ENGINEERING PROGRAM AT CAPITOL COLLEGE  
 03/31/2000 - 04/30/2001 FY01: \$0 Total: \$53,900  
*Prin. Invest.:* D JARRELL  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10560** **CAPITOL COLLEGE** **4798**  
 2001 PRE-ENGINEERING PROGRAM AT CAPITOL COLLEGE.  
 03/14/2001 - 09/30/2001 FY01: \$55,000 Total: \$55,000  
*Prin. Invest.:* D MENCHAN  
*Tech. Officer:* GSFC/D JARRELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 400** **CHARLES COUNTY COMMUNITY COLLEGE** **4799**  
 LABORATORY INVESTIGATION OF THE FORMATION, PROPERTIES AND  
 METAMORPHISM OF PRE-SOLAR MATERIALS  
 05/14/1999 - 05/31/2002 FY01: \$25,464 Total: \$67,586  
*Prin. Invest.:* G KRAUSE  
*Tech. Officer:* GSFC/J A NUTH  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 2043** **JOHNS HOPKINS UNIV** **4800**  
 INFERRING ASPECTS OF TRANSPORT AND MIXING IN THE STRATOSP-  
 HERE AND TROPOSPHERE FROM CHEMICAL TRACER  
 04/01/1998 - 09/30/2001 FY01: \$0 Total: \$208,022  
*Prin. Invest.:* D W WAUGH  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2194** **JOHNS HOPKINS UNIV** **4801**  
 DYNAMICAL COUPLING OF THE TROPOSPHERE WITH THE POLAR STRATO-  
 SPHERE  
 05/14/1999 - 04/30/2002 FY01: \$45,658 Total: \$124,376  
*Prin. Invest.:* D W WAUGH  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2257** **JOHNS HOPKINS UNIV** **4802**  
 METHODS FOR REFLECTED GLOBAL POSITIONING SYSTEM (GPS) DATA  
 COLLECTION AND ANALYSIS  
 01/11/2000 - 09/30/2001 FY01: \$110,700 Total: \$339,000  
*Prin. Invest.:* M S ASHER, R K RANEY, T ELFOUHAILI  
*Tech. Officer:* LARC/S J KATZBERG, GSFC/J L GARRISON  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 1 2270** **JOHNS HOPKINS UNIV** **4803**  
 PHOTOLYSIS RATE COEFFICIENT CALCULATIONS IN SUPPORT OF SOLVE  
 CAMPAIGN  
 02/17/2000 - 09/30/2001 FY01: \$0 Total: \$188,000  
*Prin. Invest.:* S A LLOYD  
*Tech. Officer:* LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## NASA'S UNIVERSITY PROGRAM

MARYLAND

**NAG 1 2304**                      **JOHNS HOPKINS UNIV**                      **4804**  
 NONDESTRUCTIVE EVALUATION OF SPACECRAFT & AIRCRAFT WIRING  
 06/06/2000 - 06/30/2003                      FY01: \$100,000                      Total: \$150,000  
*Prin. Invest.:* J M GREEN  
*Tech. Officer:* LARC/W P WINFREE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 2329**                      **JOHNS HOPKINS UNIV**                      **4805**  
 COMPREHENSIVE ASSESSMENT OF HEALTH AND THE AIR- CRAFT CABIN  
 ENVIRONMENT: PHASE I  
 09/26/2000 - 09/30/2002                      FY01: \$0                      Total: \$458,005  
*Prin. Invest.:* P S LEES  
*Tech. Officer:* LARC/R R ARTCLIFF  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01059**                      **JOHNS HOPKINS UNIV**                      **4806**  
 INTEGRATED POWER SOURCE DEVELOPMENT  
 04/12/2001 - 10/30/2001                      FY01: \$25,000                      Total: \$25,000  
*Prin. Invest.:* P D SCHWARTZ, A L LEW  
*Tech. Officer:* LARC/Q A SHAMS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 2 1392**                      **JOHNS HOPKINS UNIV**                      **4807**  
 NSTARS PROJECT SUPPORT AND RESEARCH ON NEARBY STAR S  
 02/01/2000 - 12/31/2001                      FY01: \$0                      Total: \$116,988  
*Prin. Invest.:* T HENRY  
*Tech. Officer:* ARC/L CAROFF  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1476**                      **JOHNS HOPKINS UNIV**                      **4808**  
 KNOWLEDGE RETENTION TOOLS FOR LONG DURATION MISSIO NS  
 04/20/2001 - 04/14/2002                      FY01: \$180,000                      Total: \$180,000  
*Prin. Invest.:* K J HEERES  
*Tech. Officer:* ARC/H STEWART, ARC/M SHIRLEY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1477**                      **JOHNS HOPKINS UNIV**                      **4809**  
 MINIME DIAGNOSTICS ENGINE DEVELOPMENT SUPPORT  
 04/20/2001 - 10/31/2001                      FY01: \$150,000                      Total: \$150,000  
*Prin. Invest.:* K J HEERES  
*Tech. Officer:* ARC/M SHIRLEY, ARC/H STEWART  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 1815**                      **JOHNS HOPKINS UNIV**                      **4810**  
 EXPERIMENTAL INVESTIGATION; POOL BOILING HEAT TRAN SFER  
 ENHANCEMENT IN THE PRESENCE OF ELECTRIC FIEL  
 03/25/1996 - 05/14/2002                      FY01: \$0                      Total: \$352,889  
*Prin. Invest.:* D HERMAN  
*Tech. Officer:* GRC/H K NAHRA, GRC/B MOTIL  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 1923**                      **JOHNS HOPKINS UNIV**                      **4811**  
 MARANGONI EFF ON DROP DEFORM & BREAK UP IN A EXTEN FLOW: THE  
 ROLE OF SURFACTANT PHYS CHEMISTRY  
 07/18/1996 - 07/17/2000                      FY01: \$0                      Total: \$305,955  
*Prin. Invest.:* K J STEBE  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 1924**                      **JOHNS HOPKINS UNIV**                      **4812**  
 ACOUSTIC BUBBLE REMOVAL FROM BOILING SURFACES  
 07/18/1996 - 12/31/2000                      FY01: \$0                      Total: \$377,518  
*Prin. Invest.:* A PROSPERETTI, H N OGUZ, E H TRINH  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 1954**                      **JOHNS HOPKINS UNIV**                      **4813**  
 SURFACTANT BASED CRITICAL PHENOMENA IN MICROGRAVIT Y  
 08/19/1996 - 08/31/2001                      FY01: \$0                      Total: \$241,500  
*Prin. Invest.:* M E PAULATIS  
*Tech. Officer:* GRC/B SINGH  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 2118**                      **JOHNS HOPKINS UNIV**                      **4814**  
 PRODUCTION AND REMOVAL OF GAS BUBBLES IN MICROGRAVIT Y  
 02/26/1998 - 01/07/2002                      FY01: \$75,866                      Total: \$296,198  
*Prin. Invest.:* H N OGUZ  
*Tech. Officer:* GRC/H K NAHRA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2333**                      **JOHNS HOPKINS UNIV**                      **4815**  
 ANALYTICAL AND EXPERIMENTAL INVESTIGATIONS OF A HY DROCARBON  
 FUELED AIR-AUGMENTED ROCKET ENGINE CYCL  
 02/16/2000 - 12/31/2001                      FY01: \$246,612                      Total: \$301,612  
*Prin. Invest.:* T RICE  
*Tech. Officer:* GRC/T D SMITH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2362**                      **JOHNS HOPKINS UNIV**                      **4816**  
 ACOUSTIC BUBBLE REMOVAL FROM BOILING SURFACES AND ITS OPTI-  
 MIZATION  
 04/03/2000 - 11/30/2003                      FY01: \$80,987                      Total: \$126,252  
*Prin. Invest.:* A PROSPERETTI  
*Tech. Officer:* GRC/M M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2460**                      **JOHNS HOPKINS UNIV**                      **4817**  
 DESIGN OF EXHAUST NOZZLES FOR THE RBCC-GTX CONCEPT DESIGN  
 OF EXHAUST NOZZLES FOR THE RBCC-GTX CONCEPT  
 06/09/2000 - 02/01/2002                      FY01: \$48,033                      Total: \$93,033  
*Prin. Invest.:* T RICE  
*Tech. Officer:* GRC/T D SMITH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2569**                      **JOHNS HOPKINS UNIV**                      **4818**  
 PULSED DETONATION WAVE ENGINE COMPONENT DESIGN AND ANALYSIS  
 STUDY  
 03/23/2001 - 11/30/2002                      FY01: \$180,000                      Total: \$180,000  
*Prin. Invest.:* P WALTRUP  
*Tech. Officer:* GRC/H D PERKINS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 2232**                      **JOHNS HOPKINS UNIV**                      **4819**  
 RECEIVER DESIGN, PERFORMANCE ANALYSIS, AND EVALUATION FOR  
 SPACE-BORNE LASER ALTIMETERS AND . . .  
 04/08/1993 - 09/30/1999                      FY01: -\$502                      Total: \$829,305  
*Prin. Invest.:* M DAVIDSON, X SUN  
*Tech. Officer:* GSFC/P MILLAR  
*CASE Category:* 45 - ELECTRICAL ENGR

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 3255**                    **JOHNS HOPKINS UNIV**                    **4820**  
 THE STRUCTURE OF ACTIVE GALACTIC NUCLEI  
 06/06/1996 - 12/31/2001                    FY01: \$0                    Total: \$317,700  
*Prin. Invest.:* G A KRISS  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3448**                    **JOHNS HOPKINS UNIV**                    **4821**  
 FAR ULTRAVIOLET SPECTROSCOPIC EXPLORER (FUZE) OUTR EACH  
 INITIATIVE.  
 10/04/1996 - 10/14/2000                    FY01: \$0                    Total: \$85,000  
*Prin. Invest.:* D MOOS, D HOLMES  
*Tech. Officer:* GSFC/D R MENGERS, GSFC/O FINGUEROA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 3485**                    **JOHNS HOPKINS UNIV**                    **4822**  
 DIFFUSE IONIZED GAS IN GALACTIC ENVIRONMENTS  
 10/31/1996 - 10/31/2001                    FY01: \$125,200                    Total: \$561,400  
*Prin. Invest.:* K R SEMBACH  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3503**                    **JOHNS HOPKINS UNIV**                    **4823**  
 THE EVOLUTION AND CLUSTERING OF GALAXIES AT Z=1 AN  
 11/27/1996 - 11/30/2001                    FY01: \$253,900                    Total: \$648,611  
*Prin. Invest.:* A S SZALAY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3542**                    **JOHNS HOPKINS UNIV**                    **4824**  
 A MULTIWAVELENGTH STUDY OF MOLECULES IN THE INTERSTELLAR  
 MEDIUM  
 11/27/1996 - 03/31/2000                    FY01: \$3,693                    Total: \$119,493  
*Prin. Invest.:* D A NEUFELD  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4168**                    **JOHNS HOPKINS UNIV**                    **4825**  
 PLANETARY AERONOMY  
 03/15/1997 - 02/28/2002                    FY01: \$89,000                    Total: \$426,943  
*Prin. Invest.:* D F STROBEL  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4261**                    **JOHNS HOPKINS UNIV**                    **4826**  
 WINDOWLESS FUV LAMPS  
 04/14/1997 - 12/31/2001                    FY01: \$48,000                    Total: \$202,316  
*Prin. Invest.:* D R MCCANDLISS  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4365**                    **JOHNS HOPKINS UNIV**                    **4827**  
 CONTINUATION OF THE VOYAGER INTERSTELLAR MISSION:  
 04/23/1997 - 03/31/2002                    FY01: \$0                    Total: \$1,900,000  
*Prin. Invest.:* D M KRIMIGIS  
*Tech. Officer:* GSFC/C P HOLMES  
*CASE Category:* 13 - PHYSICS

**NAG 5 4549**                    **JOHNS HOPKINS UNIV**                    **4828**  
 ANALYSIS OF EMIC WAVE GENERATION AND PROPAGATION U  
 05/06/1997 - 04/30/2000                    FY01: \$0                    Total: \$210,000  
*Prin. Invest.:* D E ERLANDSON  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 4664**                    **JOHNS HOPKINS UNIV**                    **4829**  
 ION CYCLOTRON WAVES: AN ISTP STUDY  
 06/25/1997 - 05/31/2001                    FY01: \$0                    Total: \$131,931  
*Prin. Invest.:* D J ANDERSON  
*Tech. Officer:* GSFC/J G GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 5047**                    **JOHNS HOPKINS UNIV**                    **4830**  
 WIND-WAVE-CURRENT COUPLED MODEL  
 08/22/1995 - 09/30/2002                    FY01: \$0                    Total: \$346,239  
*Prin. Invest.:* O PHILLIPS  
*Tech. Officer:* GSFC/S R LONG, GSFC/N E HUANG  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 5122**                    **JOHNS HOPKINS UNIV**                    **4831**  
 ROCKET AND LABORATORY EXPERIMENTS IN ASTRONOMY  
 02/21/1997 - 02/28/2002                    FY01: \$0                    Total: \$2,031,000  
*Prin. Invest.:* P D FELDMAN  
*Tech. Officer:* GSFC/B J FLOWERS  
*CASE Category:* 13 - PHYSICS

**NAG 5 5198**                    **JOHNS HOPKINS UNIV**                    **4832**  
 DENSITY TEMPERATURE & MEASUREMENTS FOR ICON ROCKET EXPERI-  
 MENT  
 05/21/1998 - 04/11/2001                    FY01: \$0                    Total: \$68,805  
*Prin. Invest.:* J H YEE  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5301**                    **JOHNS HOPKINS UNIV**                    **4833**  
 GRANT ENTITLED: ALTIMETER SEA-STATE BIAS MODEL STUDY  
 07/18/2000 - 07/17/2003                    FY01: \$24,967                    Total: \$74,699  
*Prin. Invest.:* D R THOMPSON  
*Tech. Officer:* WFF/D C VANDEMARK, WFF/D W HANCOCK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 5314**                    **JOHNS HOPKINS UNIV**                    **4834**  
 SUPPORT OF THE INTERNATIONAL WORKSHOP ENTITLED: COUPLING  
 COASTAL OCEAN, COASTAL ATMOSPHERE WIND  
 03/22/2001 - 12/31/2001                    FY01: \$35,000                    Total: \$35,000  
*Prin. Invest.:* E GROSS  
*Tech. Officer:* GSFC/S R LONG, GSFC/N E HUANG  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 5315**                    **JOHNS HOPKINS UNIV**                    **4835**  
 ROCKET AND LABORATORY STUDIES IN ASTRONOMY ROCKET AND  
 LABORATORY STUDIES IN ASTRONOMY  
 02/14/2001 - 02/28/2004                    FY01: \$420,000                    Total: \$420,000  
*Prin. Invest.:* P D FELDMAN  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6113**                    **JOHNS HOPKINS UNIV**                    **4836**  
 PROJECT ULYSSES HI-SCALE DATA ANALYSIS PHASE ACTIV  
 07/28/1997 - 12/31/2001      FY01: \$402,000                    Total: \$1,616,000  
*Prin. Invest.:* R E GOLD  
*Tech. Officer:* GSFC/N JONESS  
*CASE Category:* 13 - PHYSICS

**NAG 5 6178**                    **JOHNS HOPKINS UNIV**                    **4837**  
 CRITICAL COMPARISON OF SUBSTORM TRIGGER MODELS AGA HE NEAR-  
 EARTH TAIL  
 07/28/1997 - 05/14/2002      FY01: \$77,338                    Total: \$296,538  
*Prin. Invest.:* D OHTANI  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 13 - PHYSICS

**NAG 5 6182**                    **JOHNS HOPKINS UNIV**                    **4838**  
 MAGNETIC FIELD-ALIGNED ELECTRODYNAMICS OF THE MIDD  
 07/30/1997 - 12/31/2000      FY01: \$0                    Total: \$120,000  
*Prin. Invest.:* D H MAUK  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 6400**                    **JOHNS HOPKINS UNIV**                    **4839**  
 SPACE OBSERVATIONS OF STARBURST GALAXIES (L TSA)  
 10/10/1997 - 09/30/2002      FY01: \$142,700                    Total: \$677,200  
*Prin. Invest.:* T HECKMAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6764**                    **JOHNS HOPKINS UNIV**                    **4840**  
 MONITORING OF NGC 4151  
 12/30/1997 - 12/31/2000      FY01: -\$1                    Total: \$44,999  
*Prin. Invest.:* G KRISS  
*Tech. Officer:* GSFC/R POLIDAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7080**                    **JOHNS HOPKINS UNIV**                    **4841**  
 PYROTECHNIC ROCK CHIPPER  
 03/10/1998 - 07/31/2002      FY01: \$81,602                    Total: \$247,576  
*Prin. Invest.:* A F CHENG  
*Tech. Officer:* GSFC/BCAMPBELL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7186**                    **JOHNS HOPKINS UNIV**                    **4842**  
 INFRARED INVESTIGATION OF COMETARY VOLATILES  
 03/25/1998 - 02/28/2002      FY01: \$0                    Total: \$200,056  
*Prin. Invest.:* H WEAVER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7227**                    **JOHNS HOPKINS UNIV**                    **4843**  
 TOMS VALIDATION AND UTLS PHOTOCHEMISTRY USING ER-2 AND  
 GROUND BASED DATASETS  
 04/14/1998 - 09/30/2001      FY01: \$74,966                    Total: \$232,117  
*Prin. Invest.:* S A LLOYD  
*Tech. Officer:* GSFC/E HILSEN RATH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7361**                    **JOHNS HOPKINS UNIV**                    **4844**  
 MIDDLEWORLD TRANSPORT WITHIN THREE-DIMENSIONAL MOD ELS:  
 CHARACTERIZATION AND SENSITIVITIES TO MODEL  
 05/06/1998 - 09/30/2001      FY01: \$0                    Total: \$140,918  
*Prin. Invest.:* D W WAUGH  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7552**                    **JOHNS HOPKINS UNIV**                    **4845**  
 TROPOSPHERIC AND STRATOSPHERIC COMPOSITION RETRIEVALS USING  
 THE STELLAR OCCULTATION TECHNIQUE  
 06/22/1998 - 08/31/2002      FY01: \$0                    Total: \$482,813  
*Prin. Invest.:* J YEE  
*Tech. Officer:* GSFC/J A KAYE  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 7697**                    **JOHNS HOPKINS UNIV**                    **4846**  
 PROPOSAL TITLED "A PROPOSAL TO INVESTGATE OUTSTAND ING PROB-  
 LEMS IN ASTRONOMY BY THE INSTRUMENT DEFIN  
 09/17/1998 - 11/30/2001      FY01: \$3,467,002                    Total: \$6,543,435  
*Prin. Invest.:* H FORD  
*Tech. Officer:* GSFC/J JELETIC  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7724**                    **JOHNS HOPKINS UNIV**                    **4847**  
 QUANTITATIVE MAGNETOSPHERIC DYNAMICS FROM POLAR UV AND  
 VISIBLE IMAGERS  
 09/24/1998 - 03/31/2002      FY01: \$230,000                    Total: \$821,200  
*Prin. Invest.:* C I MENG, NONE  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7769**                    **JOHNS HOPKINS UNIV**                    **4848**  
 GRAVITY WAVES IN JUPITER'S UPPER ATMOSPHERE  
 01/15/1999 - 08/31/2001      FY01: \$0                    Total: \$125,000  
*Prin. Invest.:* D STROBEL  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7797**                    **JOHNS HOPKINS UNIV**                    **4849**  
 TURBULENCE IN MAGNETOTAIL PLASMA SHEET  
 12/15/1998 - 12/31/2001      FY01: \$93,904                    Total: \$272,087  
*Prin. Invest.:* D Y LUI  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7863**                    **JOHNS HOPKINS UNIV**                    **4850**  
 SATELLITE BOMBARDMENT MODEL WITH DATA CONSTRAINTS  
 01/11/1999 - 12/31/2001      FY01: \$0                    Total: \$174,228  
*Prin. Invest.:* C P PARANICAS  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7920**                    **JOHNS HOPKINS UNIV**                    **4851**  
 ISTEP: SOLAR WIND, FORESHOCK, AND MAGNETOSHEATH PR OCESSSES  
 12/15/1998 - 02/28/2002      FY01: \$107,000                    Total: \$311,000  
*Prin. Invest.:* D G SIBECK  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 7921**                    **JOHNS HOPKINS UNIV**                    **4852**  
 SOLAR FILAMENTS AT 1 AU  
 12/10/1998 - 12/31/2001    FY01: \$96,319                    Total: \$278,713  
*Prin. Invest.:* D M RUST  
*Tech. Officer:* GSFC/D CLING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8007**                    **JOHNS HOPKINS UNIV**                    **4853**  
 OPTIMIZED ANALYSIS OF RADAR ICE SOUNDER DATA  
 01/06/1999 - 12/31/2000    FY01: \$0                    Total: \$100,000  
*Prin. Invest.:* B L GOTWOLS  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8019**                    **JOHNS HOPKINS UNIV**                    **4854**  
 CORONAL MASS EJECTION EVENTS: COMPARATIVE GEOEFFEC TIVENESS  
 FROM SOLAR MINIMUM THROUGH SOLAR MAXIMU  
 01/06/1999 - 12/31/2001    FY01: \$86,486                    Total: \$238,636  
*Prin. Invest.:* N J FOX  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8037**                    **JOHNS HOPKINS UNIV**                    **4855**  
 HIGH-LATITUDE ELECTRIC FIELD MODELS REFERENCED TO IMF ORIENTA-  
 TION AND AURORAL CONFIGURATION  
 01/11/1999 - 06/30/2000    FY01: \$0                    Total: \$59,992  
*Prin. Invest.:* R A GREENWALD  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8061**                    **JOHNS HOPKINS UNIV**                    **4856**  
 GPS-BASED FALLING SPHERE DEVELOPMENT  
 01/12/1999 - 06/30/2000    FY01: \$0                    Total: \$83,461  
*Prin. Invest.:* F MORGAN  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 8062**                    **JOHNS HOPKINS UNIV**                    **4857**  
 ANALYSIS OF 3-D IMAGERY OF POLAR MESOSPHERIC CLOUD S  
 OBSERVED FROM MSX  
 01/12/1999 - 01/14/2002    FY01: \$0                    Total: \$185,500  
*Prin. Invest.:* D MORRISON  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 8122**                    **JOHNS HOPKINS UNIV**                    **4858**  
 ANALYSIS OF OPTICAL OBSERVATIONS OF TOPSIDE MOLECU LAR IONS IN  
 THEPOLAR REGIONS  
 02/03/1999 - 12/31/2001    FY01: \$0                    Total: \$181,600  
*Prin. Invest.:* J J YEE  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 8149**                    **JOHNS HOPKINS UNIV**                    **4859**  
 DEV. OF MISSION INDEPENDENCE DATA FORMAT FOR PARTI CLE FIELD  
 MEASUREMENT WITH APPLICATIONTO AMPTE/C  
 02/05/1999 - 12/31/2001    FY01: \$114,100                    Total: \$356,989  
*Prin. Invest.:* S R NYLUND  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8171**                    **JOHNS HOPKINS UNIV**                    **4860**  
 SPATIAL VARIATIONS IN ROCK SPECTRAL PROPERTIES AT THE SAGAN  
 MEMORIALSTATION  
 02/22/1999 - 02/28/2002    FY01: \$42,000                    Total: \$116,000  
*Prin. Invest.:* S L MURCHIE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8191**                    **JOHNS HOPKINS UNIV**                    **4861**  
 ENERGETIC ION INTERACTIONS WITH THE GALILEAN SATEL LITES  
 04/21/1999 - 03/31/2001    FY01: \$0                    Total: \$31,391  
*Prin. Invest.:* D MAUK  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8279**                    **JOHNS HOPKINS UNIV**                    **4862**  
 RECONCILING STARBURSTS AND NORMAL STAR FORMATION (ADP98)  
 02/25/1999 - 05/14/2001    FY01: \$0                    Total: \$48,051  
*Prin. Invest.:* G R MEURER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8331**                    **JOHNS HOPKINS UNIV**                    **4863**  
 FLARE GENESIS EXPERIMENT  
 05/05/1999 - 12/31/2001    FY01: \$121,353                    Total: \$520,789  
*Prin. Invest.:* D M RUST  
*Tech. Officer:* GSFC/WWAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8347**                    **JOHNS HOPKINS UNIV**                    **4864**  
 OPTIMAL COADDITION OF DITHERED IMAGES USING THE KA RHUNEN-  
 LOEVE TRANSFORM  
 02/25/1999 - 02/28/2001    FY01: \$0                    Total: \$174,900  
*Prin. Invest.:* A S SZALAY, NONE  
*Tech. Officer:* GSFC/J BREDEDAMP  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 8361**                    **JOHNS HOPKINS UNIV**                    **4865**  
 ISTP MISSION DATA INTERFACES FOR DARN  
 03/12/1999 - 04/14/2001    FY01: \$0                    Total: \$340,000  
*Prin. Invest.:* R GREEWALD  
*Tech. Officer:* GSFC/S CURTIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8516**                    **JOHNS HOPKINS UNIV**                    **4866**  
 MINIATURIZED ENERGETIC PARTICLE DETECTOR DEVELOP MENT  
 06/14/1999 - 05/31/2002    FY01: \$160,881                    Total: \$456,327  
*Prin. Invest.:* R L MCNUTT  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8548**                    **JOHNS HOPKINS UNIV**                    **4867**  
 IMPLEMENTATION OF ALGORITHMS FOR HIGH SPEED AUTONO MOUS CCD  
 DATA REDUCTION  
 05/18/1999 - 05/14/2001    FY01: \$0                    Total: \$21,250  
*Prin. Invest.:* G MURPHY  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

MARYLAND

**NAG 5 8572**                      **JOHNS HOPKINS UNIV**                      **4868**  
 CLOUD & WATER VAPOR EFFECTS ON CLIMATE SENSITIVITY  
 06/02/1999 - 11/30/2001      FY01: \$180,000                      Total: \$500,000  
*Prin. Invest.:* A ARKING  
*Tech. Officer:* GSFC/W LAU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8590**                      **JOHNS HOPKINS UNIV**                      **4869**  
 STANDARDIZED SKY PARTITIONING FOR THE NEXT GENERATION  
 ASTRONOMY AND SPACE ARCHIVES  
 06/03/1999 - 05/31/2001      FY01: \$0                      Total: \$190,828  
*Prin. Invest.:* A SZALAY  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8655**                      **JOHNS HOPKINS UNIV**                      **4870**  
 "CROSSLINK TRANSCEIVER DEVELOPMENT IN SUPPORT OF THE NASA/  
 DOD UNIV NANO-SATELLITE PROGRAM."  
 08/19/1999 - 05/31/2001      FY01: \$0                      Total: \$370,119  
*Prin. Invest.:* P A STADTER  
*Tech. Officer:* GSFC/J BRISTOW  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 8665**                      **JOHNS HOPKINS UNIV**                      **4871**  
 CROSSLINK NAVIGATION AND COMMUNICATION SYSTEM FOR MULTIPLE  
 DISTRIBUTED SPACECRAFT.  
 08/17/1999 - 08/31/2002      FY01: \$229,170                      Total: \$474,781  
*Prin. Invest.:* P A STADTER  
*Tech. Officer:* GSFC/G H MUCKLOW  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 8687**                      **JOHNS HOPKINS UNIV**                      **4872**  
 ADVANCED TECHNIQUES FOR ENERGETIC ION AND NEUTRAL ATOM TOF/  
 IMAGING SENSORS  
 07/20/1999 - 07/31/2002      FY01: \$0                      Total: \$139,443  
*Prin. Invest.:* D G MITCHELL  
*Tech. Officer:* GSFC/G H MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8688**                      **JOHNS HOPKINS UNIV**                      **4873**  
 DATA COMPRESSION FOR TIME SERIES AND SPECTRAL DATA  
 07/20/1999 - 07/31/2002      FY01: \$0                      Total: \$204,374  
*Prin. Invest.:* S HAWKINS, 111  
*Tech. Officer:* GSFC/G H MUCKLOW  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8741**                      **JOHNS HOPKINS UNIV**                      **4874**  
 ADVANCED AUTOMATION CONCEPTS IN SPACEFLIGHT DYNAMICS & SPACE  
 NAVIGATION.  
 08/17/1999 - 02/28/2001      FY01: \$0                      Total: \$147,275  
*Prin. Invest.:* P STADTER  
*Tech. Officer:* GSFC/J BRISTOW  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 8800**                      **JOHNS HOPKINS UNIV**                      **4875**  
 GEOTAIL ENERGETIC PARTICLES AND ION COMPOSITION (EPIC)  
 PROGRAM.  
 11/29/1999 - 12/31/2000      FY01: \$0                      Total: \$494,988  
*Prin. Invest.:* D WILLIAMS  
*Tech. Officer:* GSFC/D FAIRFIELD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8841**                      **JOHNS HOPKINS UNIV**                      **4876**  
 ULTRA-BROAD BANDWIDTH ELECTRO-OPTIC MODULATOR WITH  
 CASCADED BRAGG GRATINGS.  
 09/22/1999 - 09/30/2000      FY01: \$0                      Total: \$19,563  
*Prin. Invest.:* D B KHURGIN  
*Tech. Officer:* GSFC/H C SHAW  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 8852**                      **JOHNS HOPKINS UNIV**                      **4877**  
 ADAPTIVE INSTRUMENT MODULE (AIM) GRANT NAG5-8403 BEGIN:9/1/99 -  
 END: 8/30/00  
 09/30/1999 - 07/31/2000      FY01: \$0                      Total: \$116,308  
*Prin. Invest.:* R CONDE, NONE  
*Tech. Officer:* GSFC/P J LUERS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 8862**                      **JOHNS HOPKINS UNIV**                      **4878**  
 HIGH RESOLUTION IMAGING FROM THE STRATOSPHERE: ATMOSPHERIC  
 SEEING AND TETHER DYNAMICS  
 10/22/1999 - 10/14/2001      FY01: \$0                      Total: \$10,000  
*Prin. Invest.:* H FORD  
*Tech. Officer:* GSFC/T GRUNER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 8955**                      **JOHNS HOPKINS UNIV**                      **4879**  
 ABUNDANCES IN OXYGEN-RICH SUPERNOVA REMNANTS: OBSERVATION-  
 AL TESTS OF U NUCLEOSYNTHESIS MODELS - FUSE  
 01/24/2000 - 01/31/2002      FY01: \$0                      Total: \$38,500  
*Prin. Invest.:* J A MORSE  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8964**                      **JOHNS HOPKINS UNIV**                      **4880**  
 INVESTIGATION OF MAGNETOSPHERIC WAVEGUIDE MODE USING  
 SATELLITE & RADAR OBSERVATIONS  
 02/23/2000 - 02/28/2002      FY01: \$69,597                      Total: \$132,997  
*Prin. Invest.:* K TAKAHASHI  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8965**                      **JOHNS HOPKINS UNIV**                      **4881**  
 THE HOTTEST STARS IN M31 AND M33 - FUSE  
 01/24/2000 - 01/31/2002      FY01: \$0                      Total: \$28,000  
*Prin. Invest.:* L BIANCHI  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8994**                      **JOHNS HOPKINS UNIV**                      **4882**  
 EMISSION AND ABSORPTION LINE STUDIES OF SYMBIOTIC BINARIES:  
 MASS LOSS AND SHOCK DIAGNOSTICS - FUSE  
 01/24/2000 - 01/31/2001      FY01: \$0                      Total: \$40,800  
*Prin. Invest.:* S R MCCANDLISS  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9012**                      **JOHNS HOPKINS UNIV**                      **4883**  
 THE FAR UV-SPECTRA OF STARBURSTS - FUSE  
 02/08/2000 - 01/31/2002      FY01: \$0                      Total: \$120,700  
*Prin. Invest.:* T M HECKMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9078**                      **JOHNS HOPKINS UNIV**                      **4884**  
 INVESTIGATION OF THE MAGNETIC FIELD LINE STRETCHING AT  
 SUBSTORM ONSET  
 02/23/2000 - 02/28/2002      FY01: \$82,391                      Total: \$148,291  
*Prin. Invest.:* K LIU  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9109**                      **JOHNS HOPKINS UNIV**                      **4885**  
 SIMULATING TRANSIENT PROCESSES AT THE MAGNETOPAUSE  
 02/23/2000 - 02/28/2003      FY01: \$77,388                      Total: \$148,388  
*Prin. Invest.:* H KU  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9113**                      **JOHNS HOPKINS UNIV**                      **4886**  
 CRYOSAT SCIENCE ADVISORY GROUP  
 02/28/2000 - 02/28/2001      FY01: \$0                      Total: \$19,372  
*Prin. Invest.:* K RANEY  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9118**                      **JOHNS HOPKINS UNIV**                      **4887**  
 ELECTROMAGNETIC ION CYCLOTRON WAVES ON AURORAL FIELD LINES  
 02/24/2000 - 04/30/2002      FY01: \$0                      Total: \$33,000  
*Prin. Invest.:* R E ERLANDSON  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9186**                      **JOHNS HOPKINS UNIV**                      **4888**  
 THE CLUSTERING OF GALAXIES & DARK MATTER AT INTERMEDIATE  
 REDSHIFTS (ATP 99)  
 03/07/2000 - 03/14/2001      FY01: -\$13,076                      Total: \$37,000  
*Prin. Invest.:* A S SZALAY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9187**                      **JOHNS HOPKINS UNIV**                      **4889**  
 PREDICTING THE SPECTRA OF GALACTIC BLACK HOLES (ATP 99)  
 03/07/2000 - 03/14/2002      FY01: \$91,354                      Total: \$186,533  
*Prin. Invest.:* J H KROLIK  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9219**                      **JOHNS HOPKINS UNIV**                      **4890**  
 HOT MASSIVE STARS IN LOCAL GROUP GALAXIES: A MULTI-WAVELENGTH  
 SPECTRAL ANALYSIS.  
 03/13/2000 - 03/14/2002      FY01: \$103,294                      Total: \$203,724  
*Prin. Invest.:* L BIANCHI  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9220**                      **JOHNS HOPKINS UNIV**                      **4891**  
 MAPPING LARGE-SCALE STRUCTURE IN THE UNIVERSE  
 03/13/2000 - 03/14/2001      FY01: -\$28,728                      Total: \$69,202  
*Prin. Invest.:* B S JAIN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9240**                      **JOHNS HOPKINS UNIV**                      **4892**  
 ANALYSIS OF POLAR MESOSPHERIC CLOUDS USING SPECTROGRAPHIC  
 IMAGES ON A SATELLITE  
 03/13/2000 - 02/28/2002      FY01: \$76,487                      Total: \$146,387  
*Prin. Invest.:* J CARBARY  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9278**                      **JOHNS HOPKINS UNIV**                      **4893**  
 A SPECTRAL STUDY OF A NEW CLASS OF RADIO QUASARS  
 03/16/2000 - 07/14/2000      FY01: \$0                      Total: \$663  
*Prin. Invest.:* E PERLMAN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9296**                      **JOHNS HOPKINS UNIV**                      **4894**  
 INNOVATIVE APPROACHES TO LITTORAL ALTIMETRY FOR PREDICTION &  
 MONITORING OF NEAR-SHORE SEA  
 04/13/2000 - 09/14/2001      FY01: \$18,750                      Total: \$75,000  
*Prin. Invest.:* R K RANEY  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9367**                      **JOHNS HOPKINS UNIV**                      **4895**  
 LOW-COST PLANETARY MISSIONS  
 04/03/2000 - 03/31/2001      FY01: \$0                      Total: \$35,000  
*Prin. Invest.:* S KRIMIGIS  
*Tech. Officer:* GSFC/D GOLOMBEKS  
*CASE Category:* 99 - MULTI-INTERDISCIPL, OTHER

**NAG 5 9426**                      **JOHNS HOPKINS UNIV**                      **4896**  
 SENSITIVITY OF COUPLED LAND-ATMOSPHERE BOUNDARY LAYER  
 DYNAMICS TO SURFACE HETEROGENEITY USING  
 04/11/2000 - 04/30/2002      FY01: \$198,109                      Total: \$334,300  
*Prin. Invest.:* M B PARLANGE  
*Tech. Officer:* GSFC/K H BERGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9432**                      **JOHNS HOPKINS UNIV**                      **4897**  
 SPACE PHYSICS DATA MARKUP LANGUAGE  
 04/18/2000 - 04/14/2002      FY01: \$113,900                      Total: \$223,900  
*Prin. Invest.:* D MORRISON  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 13 - PHYSICS

**NAG 5 9456**                      **JOHNS HOPKINS UNIV**                      **4898**  
 ADAPTIVE INSTRUMENT MODULE (AIM)  
 04/13/2000 - 01/31/2002      FY01: \$0                      Total: \$78,692  
*Prin. Invest.:* R F CONDE  
*Tech. Officer:* GSFC/P LUERS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 9533**                      **JOHNS HOPKINS UNIV**                      **4899**  
 A SPECTRAL STUDY OF A NEW CLASS OF RADIO QUASARS (ADP98)  
 04/28/2000 - 10/31/2000      FY01: \$0                      Total: \$20,945  
*Prin. Invest.:* E S PEARLMAN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY



## NASA'S UNIVERSITY PROGRAM

MARYLAND

**NAG 5 9558**                      **JOHNS HOPKINS UNIV**                      **4900**  
 SOLAR CYCLE UV VARIATION INFLUENCE ON SUBSTORM AURORAL SURGES  
 05/16/2000 – 05/14/2001                      FY01: \$0                      Total: \$49,995  
*Prin. Invest.:* P NEWELL  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 5 9569**                      **JOHNS HOPKINS UNIV**                      **4901**  
 NEW ISTEP SOLAR MAX: CONTINUED INTEGRATION OF INTE RBALL INTO ISTEP  
 05/08/2000 – 05/14/2001                      FY01: \$0                      Total: \$60,989  
*Prin. Invest.:* D G SIBECK  
*Tech. Officer:* GSFC/M DESCH  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 5 9719**                      **JOHNS HOPKINS UNIV**                      **4902**  
 MOLECULAR AND ATOMIC LASER MASS ANALYSIS (MALMA) INSTRUMENTATION FOR IN-SITU STUDIES OF PLANETARY  
 06/20/2000 – 06/30/2001                      FY01: \$0                      Total: \$40,000  
*Prin. Invest.:* R W MCENTIRE  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9837**                      **JOHNS HOPKINS UNIV**                      **4903**  
 CONTEMPORANEOUS XMM & HST OBSERVATIONS OF SEYFERT GALAXIES  
 11/06/2000 – 11/14/2001                      FY01: \$14,505                      Total: \$14,505  
*Prin. Invest.:* M E KAISER  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9872**                      **JOHNS HOPKINS UNIV**                      **4904**  
 A LOW POWER CROSSLINK TRANSCIEVER FOR NANOSAT COMMUNICATIONS EXPERIMENT  
 08/10/2000 – 09/30/2001                      FY01: \$0                      Total: \$400,000  
*Prin. Invest.:* P STADTER  
*Tech. Officer:* GSFC/J BRISTOW  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 5 9878**                      **JOHNS HOPKINS UNIV**                      **4905**  
 ASTROPHYSICAL PROPERTIES OF ACCRETING BLACK HOLES IN NORMAL GALAXY NUCLEUS (LISA 99)  
 08/28/2000 – 08/31/2001                      FY01: \$0                      Total: \$40,000  
*Prin. Invest.:* E COLBERT  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9903**                      **JOHNS HOPKINS UNIV**                      **4906**  
 ACTIVITIES TO SUPPORT SCIENCE PLANNING AND COORDINATION IN ASSOCIATION WITH THE INTERNATIONAL SOLAR  
 08/30/2000 – 09/30/2001                      FY01: \$62,817                      Total: \$78,814  
*Prin. Invest.:* N J FOX  
*Tech. Officer:* GSFC/R A HOFFMAN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9910**                      **JOHNS HOPKINS UNIV**                      **4907**  
 THE X-RAY PROPERTIES OF ULTRALUMINOUS GALAXIES: COSMOLOGICAL IMPLICATIONS  
 09/05/2000 – 09/30/2002                      FY01: \$16,600                      Total: \$37,600  
*Prin. Invest.:* T HECKMAN  
*Tech. Officer:* GSFC/R M MUSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9948**                      **JOHNS HOPKINS UNIV**                      **4908**  
 STARBURST-DRIVEN OUTFLOWS & THE EVOLUTION OF DWARF GALAXIES  
 09/07/2000 – 08/31/2002                      FY01: \$16,200                      Total: \$39,200  
*Prin. Invest.:* T HECKMAN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9963**                      **JOHNS HOPKINS UNIV**                      **4909**  
 CHARACTERIZING THE X-RAY SPECTRUM OF THE GALACTIC HALO  
 09/22/2000 – 09/30/2002                      FY01: \$15,900                      Total: \$39,900  
*Prin. Invest.:* W BLAIR  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9968**                      **JOHNS HOPKINS UNIV**                      **4910**  
 REMM, RADIATION ENVIRONMENT MINI-MONITOR. SUPPORT FOR NASA NANOSAT PROGRAM DEVELOPMENT OF ENVIRONMENT  
 10/30/2000 – 10/31/2001                      FY01: \$130,000                      Total: \$130,000  
*Prin. Invest.:* A GARRISON-DARRIN  
*Tech. Officer:* GSFC/J BARTH  
*CASE Category:* 13 – PHYSICS

**NAG 5 9988**                      **JOHNS HOPKINS UNIV**                      **4911**  
 VALIDATION OF MSX/UVISI STELLAR OCCULTATION RETRIEVALS OF LOWER STRATOSPHERE/UPPER TROPOSPHERE  
 10/04/2000 – 09/30/2002                      FY01: \$155,000                      Total: \$155,000  
*Prin. Invest.:* J YEE  
*Tech. Officer:* GSFC/A C AIKIN  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 5 10060**                      **JOHNS HOPKINS UNIV**                      **4912**  
 SUPERDARN CONTRIBUTIONS TO TIMED/CEDAR COLLABORATIVE STUDIES  
 10/23/2000 – 04/30/2002                      FY01: \$225,000                      Total: \$225,000  
*Prin. Invest.:* R A GREENWALD  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 10084**                      **JOHNS HOPKINS UNIV**                      **4913**  
 FLAT PLASMA SPECTROMETER  
 11/07/2000 – 11/14/2001                      FY01: \$167,226                      Total: \$167,226  
*Prin. Invest.:* J L CHAMPION  
*Tech. Officer:* GSFC/F HERRERO  
*CASE Category:* 13 – PHYSICS

**NAG 5 10176**                      **JOHNS HOPKINS UNIV**                      **4914**  
 THE PHYSICAL PROPERTIES OF THE INTRA-CLUSTER MEDIUM AT Z 1  
 12/18/2000 – 12/31/2001                      FY01: \$8,300                      Total: \$8,300  
*Prin. Invest.:* H FORD  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10234**                      **JOHNS HOPKINS UNIV**                      **4915**  
 A SELF-HEALING SPACECRAFT ARCHITECTURE FOR LONG DURATION  
 LOW POWER MISSION.  
 01/30/2001 – 12/31/2001                      FY01: \$91,924                      Total: \$91,924  
*Prin. Invest.:* B ANDREWS  
*Tech. Officer:* GSFC/P LUERS  
*CASE Category:* 45 – ELECTRICAL ENGR

**NAG 5 10241**                      **JOHNS HOPKINS UNIV**                      **4916**  
 VARIABILITY EMISSIVITY CONTROLLER CONCEPTS & RISK MITIGATION  
 PATH  
 01/08/2001 – 01/14/2002                      FY01: \$108,679                      Total: \$108,679  
*Prin. Invest.:* R OSIANDER  
*Tech. Officer:* GSFC/D DOUGLAS  
*CASE Category:* 46 – MECHANICAL ENGR

**NAG 5 10242**                      **JOHNS HOPKINS UNIV**                      **4917**  
 GEOTAIL ENERGETIC PARTICLE AND ION COMPOSITION (EPIC) PROGRAM  
 01/12/2001 – 12/31/2001                      FY01: \$430,000                      Total: \$430,000  
*Prin. Invest.:* R MCENTIRE  
*Tech. Officer:* GSFC/M ACUNA  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 5 10248**                      **JOHNS HOPKINS UNIV**                      **4918**  
 INVESTIGATION OF SUPERNOVA REMNANT SHOCKS IN THE VELA-PUPPIS  
 REGION  
 02/12/2001 – 02/14/2002                      FY01: \$61,900                      Total: \$61,900  
*Prin. Invest.:* R SANKRIT  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10261**                      **JOHNS HOPKINS UNIV**                      **4919**  
 CONTINUED PARTICIPATION IN CRYOSAT SCIENCE ADVISORY GROUP  
 01/09/2001 – 12/31/2001                      FY01: \$25,956                      Total: \$25,956  
*Prin. Invest.:* R RANEY  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 10281**                      **JOHNS HOPKINS UNIV**                      **4920**  
 COMPARATIVE MAGNETOSPHERES INVESTIGATION OF PLASMA INJEC-  
 TION PHENOMENA  
 01/23/2001 – 01/31/2002                      FY01: \$67,852                      Total: \$67,852  
*Prin. Invest.:* B MAUK  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 10285**                      **JOHNS HOPKINS UNIV**                      **4921**  
 STRUCTURE OF THE MAGNETOPAUSE  
 01/23/2001 – 01/31/2002                      FY01: \$69,449                      Total: \$69,449  
*Prin. Invest.:* D G SIBECK  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 10302**                      **JOHNS HOPKINS UNIV**                      **4922**  
 THE FAR-UV SPECTRA OF POWERFUL STARBURSTS – FUSE- 00  
 01/25/2001 – 01/31/2002                      FY01: \$103,210                      Total: \$103,210  
*Prin. Invest.:* T M HECKMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10304**                      **JOHNS HOPKINS UNIV**                      **4923**  
 SEARCH FOR X-RAY SPECTRAL FEATURES IN BL LAC OBJECTS MKN 180  
 AND 1ES1517+656  
 01/29/2001 – 01/31/2002                      FY01: \$500                      Total: \$500  
*Prin. Invest.:* J H KROLIK  
*Tech. Officer:* GSFC/R MUSHOTSKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10355**                      **JOHNS HOPKINS UNIV**                      **4924**  
 SMALL-SCALE INTERSTELLAR STRUCTURE TOWARD THE OPEN CLUSTER  
 CHI PERSEI – FUSE 00  
 02/13/2001 – 02/14/2002                      FY01: \$10,000                      Total: \$10,000  
*Prin. Invest.:* S D FRIEDMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10364**                      **JOHNS HOPKINS UNIV**                      **4925**  
 CENTRAL STARS OF PLANETARY NEBULAE IN THE LARGE MAGELLANIC  
 CLOUD-FUSE00  
 02/05/2001 – 02/14/2002                      FY01: \$65,700                      Total: \$65,700  
*Prin. Invest.:* L BIANCHI  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10380**                      **JOHNS HOPKINS UNIV**                      **4926**  
 MOLECULAR HYDROGEN FLUORESCENCE IN IC 63 (FUSE 00)  
 02/08/2001 – 02/14/2002                      FY01: \$72,500                      Total: \$72,500  
*Prin. Invest.:* R SANKRIT  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10394**                      **JOHNS HOPKINS UNIV**                      **4927**  
 O VI EMISSION FROM THE INTERSTELLAR MEDIUM (FUSE 00)  
 02/12/2001 – 02/14/2002                      FY01: \$79,000                      Total: \$79,000  
*Prin. Invest.:* R L SHELTON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10397**                      **JOHNS HOPKINS UNIV**                      **4928**  
 "PROGRAMMABLE CIRCUIT INTERCONNECT USING MEMS LIQUID-METAL  
 MICROSWITCHES".  
 02/12/2001 – 01/14/2002                      FY01: \$376,889                      Total: \$376,889  
*Prin. Invest.:* R EDWARDS  
*Tech. Officer:* GSFC/P YEP  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 5 10402**                      **JOHNS HOPKINS UNIV**                      **4929**  
 DETECTOR ANALOG INTERFACE APPLICATION SPECIFIC INTEGRATED  
 CIRCUIT (ASIC)  
 02/27/2001 – 01/14/2002                      FY01: \$147,012                      Total: \$147,012  
*Prin. Invest.:* D STROHBEHN  
*Tech. Officer:* GSFC/J F SUTTON  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 5 10403**                      **JOHNS HOPKINS UNIV**                      **4930**  
 SYMBIOTIC BINARIES LABORATORIES FOR WIND STUDIES (FUSE 00)  
 02/15/2001 – 02/14/2002                      FY01: \$53,000                      Total: \$53,000  
*Prin. Invest.:* S R MCCANDLISS  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10405**                      **JOHNS HOPKINS UNIV**                      **4931**  
 FUSE SPECTROSCOPY OF HOT POST-AGB STARS IN GLOBULA R CLUSTERS - FUSE  
 03/28/2001 - 03/31/2002                      FY01: \$31,540                      Total: \$31,540  
*Prin. Invest.:* W V DIXON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10464**                      **JOHNS HOPKINS UNIV**                      **4932**  
 CONCEPT STUDY FOR INFRARED BASED BUS SYSTEM (IRCOM M)  
 03/05/2001 - 03/14/2002                      FY01: \$160,000                      Total: \$160,000  
*Prin. Invest.:* M G DARRIN  
*Tech. Officer:* GSFC/P J LUERS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 10475**                      **JOHNS HOPKINS UNIV**                      **4933**  
 ISTEP: NONLINEAR DYNAMICS OF THE MAGNETOSPHERE FROM AURORAL ACTIVITY  
 02/27/2001 - 02/28/2002                      FY01: \$91,138                      Total: \$91,138  
*Prin. Invest.:* A LUI  
*Tech. Officer:* GSFC/J SPAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10479**                      **JOHNS HOPKINS UNIV**                      **4934**  
 ISTEP: TRANSIENT EVENTS AT THE MAGNETOPAUSE & IN THE IONOSPHERE  
 02/27/2001 - 02/28/2002                      FY01: \$69,923                      Total: \$69,923  
*Prin. Invest.:* D G SIBECK  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10511**                      **JOHNS HOPKINS UNIV**                      **4935**  
 A DETAILED STUDY OF TWO OPTICALLY-SELECTED, HIGH- REDSHIFT CLUSTERS OF GALAXIES  
 03/02/2001 - 09/14/2002                      FY01: \$42,635                      Total: \$42,635  
*Prin. Invest.:* L M LUBIN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10562**                      **JOHNS HOPKINS UNIV**                      **4936**  
 NANOSAT CROSSLINK TRANSCIEVER FOR NEAR-TERM DISTRIBUTED SPACECRAFT TECHNOLOGY DEMONSTRATION MI  
 03/16/2001 - 03/14/2002                      FY01: \$350,000                      Total: \$350,000  
*Prin. Invest.:* P A STADTER  
*Tech. Officer:* GSFC/S P HUGHES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10597**                      **JOHNS HOPKINS UNIV**                      **4937**  
 PROPOSED ACTIVITIES FOR SUPERDARN GROUND-BASED INVESTIGATION IN SUPPORT OF ISTEP SOLAR MAX AND CLUST  
 03/19/2001 - 03/31/2002                      FY01: \$140,000                      Total: \$140,000  
*Prin. Invest.:* R GREENWALD  
*Tech. Officer:* GSFC/S CURTIS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10647**                      **JOHNS HOPKINS UNIV**                      **4938**  
 DIFFUSION & WEAK STELLAR WINDS IN HOT B SUBDWARFS - LTSA-2000  
 03/27/2001 - 06/30/2002                      FY01: \$20,500                      Total: \$20,500  
*Prin. Invest.:* P CHAYER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10650**                      **JOHNS HOPKINS UNIV**                      **4939**  
 CNO ABUNDANCES IN LMC BN AND BC SUPERGIANTS (FUSE 00)  
 04/04/2001 - 04/14/2002                      FY01: \$10,824                      Total: \$10,824  
*Prin. Invest.:* A FULLERTON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10693**                      **JOHNS HOPKINS UNIV**                      **4940**  
 LASER/EVOLVED-GAS TIME-OF-FLIGHT MASS SPECTROMETER AND SAMPLE HANDLING SYSTEM FOR IN SITU COMPOSITIO  
 04/16/2001 - 04/14/2002                      FY01: \$146,599                      Total: \$146,599  
*Prin. Invest.:* W BRINCKERHOFF  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10742**                      **JOHNS HOPKINS UNIV**                      **4941**  
 PARALLEL SCANNING FOR THE NVO.  
 04/12/2001 - 04/30/2002                      FY01: \$100,000                      Total: \$100,000  
*Prin. Invest.:* P Z KUNSZT  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10762**                      **JOHNS HOPKINS UNIV**                      **4942**  
 HIGH-REDSHIFT QUASAR HOSTS AND ENVIRONMENTS (LTSA 2000)  
 04/23/2001 - 04/30/2002                      FY01: \$45,372                      Total: \$45,372  
*Prin. Invest.:* S RIDGWAY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10769**                      **JOHNS HOPKINS UNIV**                      **4943**  
 BLACK HOLES IN ACTIVE GALACTIC NUCLEI (LTSA 2000)  
 04/23/2001 - 04/30/2002                      FY01: \$95,000                      Total: \$95,000  
*Prin. Invest.:* T YAQOOB  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10778**                      **JOHNS HOPKINS UNIV**                      **4944**  
 STUDY FOR SPACE APPLICATION SWITCH/HUB FOR ETHERNET  
 05/18/2001 - 05/30/2002                      FY01: \$100,000                      Total: \$100,000  
*Prin. Invest.:* P EISENREICH  
*Tech. Officer:* GSFC/E WEBB  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 10787**                      **JOHNS HOPKINS UNIV**                      **4945**  
 SOLAR ENERGETIC PARTICLE EVENTS IN THE INNER HELIO SPHERE AND DEEP SPACE: A MODEL FOR FORECASTING PRO  
 04/27/2001 - 04/30/2002                      FY01: \$80,990                      Total: \$80,990  
*Prin. Invest.:* D LARIO  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10798**                      **JOHNS HOPKINS UNIV**                      **4946**  
 CONCEPT STUDY FOR THE "THE PRIMORDIAL EXPLORER" PRIME MISSION  
 AO-99-OSS-05  
 04/30/2001 - 04/30/2002                      FY01: \$418,500                      Total: \$418,500  
*Prin. Invest.:* D ZHENG  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10807**                      **JOHNS HOPKINS UNIV**                      **4947**  
 THE GALACTIC HALO AND LOCAL BUBBLE (LTSA 2000)  
 04/23/2001 - 04/30/2002      FY01: \$68,854                      Total: \$68,854  
*Prin. Invest.:* C A NORMAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10836**                      **JOHNS HOPKINS UNIV**                      **4948**  
 INTERPLANETARY SHOCK PREDICTION USING REAL TIME ENERGETIC  
 PARTICLE OBSERVATIONS  
 04/27/2001 - 04/30/2002      FY01: \$80,564                      Total: \$80,564  
*Prin. Invest.:* G HO  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10849**                      **JOHNS HOPKINS UNIV**                      **4949**  
 GLOBAL MAGNETOSPHERE/IONOSPHERE SPECIFICATION: LOW EARTH  
 ORBIT CONSTELLATION OBSERVATIONS& GLOBAL  
 05/07/2001 - 05/14/2002      FY01: \$100,000                      Total: \$100,000  
*Prin. Invest.:* B J ANDERSON  
*Tech. Officer:* GSFC/J F SPANN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10900**                      **JOHNS HOPKINS UNIV**                      **4950**  
 SOLAR PROTON PENETRATION AT HIGH LATITUDES: MODEL CALCULA-  
 TIONS OF CUTOFF LATITUDES & VARIATIONS WIT  
 05/07/2001 - 05/14/2002      FY01: \$68,242                      Total: \$68,242  
*Prin. Invest.:* R B DECKER  
*Tech. Officer:* GSFC/J F SPANN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10902**                      **JOHNS HOPKINS UNIV**                      **4951**  
 A STATISTICAL MODEL OF HIGH-LATITUDE CONVECTION REFRENCED TO  
 AURORAL BOUNDARIES  
 05/07/2001 - 05/14/2002      FY01: \$76,028                      Total: \$76,028  
*Prin. Invest.:* J M RUOHONIEMI  
*Tech. Officer:* GSFC/J F SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10916**                      **JOHNS HOPKINS UNIV**                      **4952**  
 FUV AND OPTICAL SPECTROSCOPY OF HOT POST-AGB STARS IN GLOB-  
 ULAR CLUSTERS  
 05/10/2001 - 05/14/2002      FY01: \$49,400                      Total: \$49,400  
*Prin. Invest.:* W V DIXON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10921**                      **JOHNS HOPKINS UNIV**                      **4953**  
 INVESTIGATING THE EXCITATION MECHANISM FOR COMETARY X-RAY,  
 EUV, AND FUV EMISSIONS  
 05/21/2001 - 06/30/2002      FY01: \$52,500                      Total: \$52,500  
*Prin. Invest.:* H A WEAVER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10922**                      **JOHNS HOPKINS UNIV**                      **4954**  
 EVOLUTIONARY SYNTHESIS OF EARLY-TYPE GALAXIES (ATP 00)  
 05/21/2001 - 05/31/2002      FY01: \$105,582                      Total: \$105,582  
*Prin. Invest.:* M A HOUDASHELT  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10941**                      **JOHNS HOPKINS UNIV**                      **4955**  
 WINTER-SUMMER ASYMMETRY OF IONOSPHERIC ELECTRO- DYNAMICS  
 05/15/2001 - 05/14/2002      FY01: \$38,000                      Total: \$38,000  
*Prin. Invest.:* S OHTANI  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10957**                      **JOHNS HOPKINS UNIV**                      **4956**  
 OBSERVATIONS OF O VI EMISSION IN THE HOT HALO OF NGC 891 (FUSE  
 00)  
 05/30/2001 - 05/31/2002      FY01: \$12,006                      Total: \$12,006  
*Prin. Invest.:* C HOWK  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10971**                      **JOHNS HOPKINS UNIV**                      **4957**  
 PREPARING FOR MULTI-SPACECRAFT MISSIONS: AURORAL SPACE-TIME  
 SCALES AND MAGNETOTAL ASSIMILATION MOD  
 05/25/2001 - 05/31/2002      FY01: \$59,900                      Total: \$59,900  
*Prin. Invest.:* S WING  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10998**                      **JOHNS HOPKINS UNIV**                      **4958**  
 A SOLAR BOLOMETRIC IMAGER FOR STUDYING SOLAR ENERGY INPUT TO  
 EARTH  
 06/07/2001 - 05/31/2002      FY01: \$386,254                      Total: \$386,254  
*Prin. Invest.:* D M RUST  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 11029**                      **JOHNS HOPKINS UNIV**                      **4959**  
 TOMS DATA VALIDATION: SOLAR FLUX, QUIKTOMS AND TOTAL OZONE  
 RETRIEVALS AT HIGH LATITUDES.  
 06/25/2001 - 06/30/2002      FY01: \$44,000                      Total: \$44,000  
*Prin. Invest.:* S A LLOYD  
*Tech. Officer:* GSFC/R MCPETERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11034**                      **JOHNS HOPKINS UNIV**                      **4960**  
 ATMOSPHERIC LOSS PROCESSES AT IO  
 06/20/2001 - 05/31/2002      FY01: \$88,000                      Total: \$88,000  
*Prin. Invest.:* B MAUK  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11035**                      **JOHNS HOPKINS UNIV**                      **4961**  
 RADIATION FIELD MODELING & DATA ANALYSIS IN SUPPORT OF NASA  
 STRATOSPHEREAND UPPER TROPOSPHERE  
 06/20/2001 - 06/14/2002      FY01: \$49,955                      Total: \$49,955  
*Prin. Invest.:* S A LLOYD  
*Tech. Officer:* GSFC/M KURYLO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11051**                      **JOHNS HOPKINS UNIV**                      **4962**  
 SATURN'S UPPER ATMOSPHERIC STRUCTURE AS DERIVED FROM A  
 RE-ANALYSIS OF THE VOYAGER ULTRAVIOLET  
 06/20/2001 - 06/14/2002      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* R J VERVACK, JR  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## NASA'S UNIVERSITY PROGRAM

MARYLAND

**NAG 5 11060**                      **JOHNS HOPKINS UNIV**                      **4963**  
 LOW ENGERGY CHARGED PARTICLES ON THE VOYAGER INTER STELLAR MISSION  
 06/28/2001 – 06/30/2002                      FY01: \$475,000                      Total: \$475,000  
*Prin. Invest.:* S M KRIMIGIS  
*Tech. Officer:* GSFC/V W JONES  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 5 11116**                      **JOHNS HOPKINS UNIV**                      **4964**  
 NEW RADIATION FACILITIES PLANNING SUPPORT.  
 08/06/2001 – 02/14/2002                      FY01: \$40,000                      Total: \$40,000  
*Prin. Invest.:* J KINNISON  
*Tech. Officer:* GSFC/R REED  
*CASE Category:* 13 – PHYSICS

**NAG 5 11193**                      **JOHNS HOPKINS UNIV**                      **4965**  
 AN AUTOMATED SYSTEM FOR THE REDUCTION AND ANALYSIS OF X-RAY DATA FROM GALAXIES  
 08/29/2001 – 01/31/2002                      FY01: \$72,700                      Total: \$72,700  
*Prin. Invest.:* A F PTAK  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 5 11211**                      **JOHNS HOPKINS UNIV**                      **4966**  
 INFERENCES FROM TOPOGRAPHY ON THE EMPLACEMENT OF FLUIDIZED EJECTA ON MARS  
 08/09/2001 – 08/14/2002                      FY01: \$53,000                      Total: \$53,000  
*Prin. Invest.:* O BARNOUIN-JHA  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 11283**                      **JOHNS HOPKINS UNIV**                      **4967**  
 INFERRING STRATOSPHERIC AND TROPOSPHERIC TRANSPORT FROM CHEMICAL TRACER MEASUREMENTS  
 08/17/2001 – 08/31/2004                      FY01: \$92,581                      Total: \$92,581  
*Prin. Invest.:* D WAUCH  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 11297**                      **JOHNS HOPKINS UNIV**                      **4968**  
 DETAILED MODELING AND ANALYSIS OF THE CPFM DATASET  
 08/22/2001 – 08/31/2002                      FY01: \$52,090                      Total: \$52,090  
*Prin. Invest.:* W SWARTZ  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 11332**                      **JOHNS HOPKINS UNIV**                      **4969**  
 TIME-RESOLVED STUDY OF FLUORESCENCE IN FLUORESCENT PROTEIN BIOSENSORS  
 09/28/2001 – 08/31/2002                      FY01: \$32,408                      Total: \$32,408  
*Prin. Invest.:* J B KHURGIN  
*Tech. Officer:* GSFC/H SHAW  
*CASE Category:* 45 – ELECTRICAL ENGR

**NAG 8 1257**                      **JOHNS HOPKINS UNIV**                      **4970**  
 RESEARCH "MEASUREMENT OF LIQUID-TO-SOLID NUCLEATION RATES IN UNDERCOOLED METALLIC MELTS  
 04/18/1996 – 04/17/2000                      FY01: \$0                      Total: \$260,000  
*Prin. Invest.:* J L KATZ  
*Tech. Officer:* MSFC/P DOWNEY, MSFC/D WOODARD  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 8 1377**                      **JOHNS HOPKINS UNIV**                      **4971**  
 R/S "NOVEL MICROGRAVITY OPTICAL TECHNIQUE FOR MOLECULARLY ENGINEERING ELECTROPHORETIC MEDIA.  
 07/23/1997 – 11/30/2001                      FY01: \$0                      Total: \$457,000  
*Prin. Invest.:* D WIRTZ  
*Tech. Officer:* MSFC/B GUYNES, MSFC/J MAYO  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 8 1527**                      **JOHNS HOPKINS UNIV**                      **4972**  
 AXAF INTERDISCIPLINARY SCIENTIST  
 03/30/1998 – 09/30/2001                      FY01: \$112,000                      Total: \$366,000  
*Prin. Invest.:* R GIACCONI, C NORMAN  
*Tech. Officer:* MSFC/M SMITH, MSFC/B HAMBRICK  
*CASE Category:* 11 – ASTRONOMY

**NAG 8 1648**                      **JOHNS HOPKINS UNIV**                      **4973**  
 RBCC ACCESS TO SPACE ASSESSMENT  
 11/24/1999 – 03/31/2001                      FY01: \$0                      Total: \$96,583  
*Prin. Invest.:* P J WALTRUP  
*Tech. Officer:* MSFC/C M MC ARTHUR  
*CASE Category:* 42 – ASTRONAUTICAL ENGR

**NAG 8 1695**                      **JOHNS HOPKINS UNIV**                      **4974**  
 DEVELOPMENT OF A NEUTRON SPECTROMETER TO ASSESS BIOLOGICAL RADIATION DAMAGE BEHIND SPACECRAFT MAT.  
 05/01/2000 – 11/30/2003                      FY01: \$85,500                      Total: \$130,500  
*Prin. Invest.:* R MAUER  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 9 1146**                      **JOHNS HOPKINS UNIV**                      **4975**  
 CALCIUM KINETICS DURING SPACE FLIGHT  
 09/14/1999 – 09/30/2003                      FY01: \$76,725                      Total: \$110,325  
*Prin. Invest.:* K O O'BRIEN  
*Tech. Officer:* SSC/S M SMITH  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 9 1220**                      **JOHNS HOPKINS UNIV**                      **4976**  
 DEFINITION PHASE MARTIAN NEUTRON ENERGY SPECTROMETER  
 04/10/2000 – 08/11/2000                      FY01: \$0                      Total: \$123,440  
*Prin. Invest.:* R H MAURER  
*Tech. Officer:* JSC/T A SULLIVAN  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 9 1345**                      **JOHNS HOPKINS UNIV**                      **4977**  
 AWARD BASIC GRANT  
 07/27/2001 – 09/30/2004                      FY01: \$41,000                      Total: \$41,000  
*Prin. Invest.:* J L HARDEN  
*Tech. Officer:* KSC/D RISIN  
*CASE Category:* 43 – CHEMICAL ENGR

**NAG13 00045**                      **JOHNS HOPKINS UNIV**                      **4978**  
 POLARIZATION DEPENDENCE OF GPS SIGNALS REFLECTED FROM THE OCEAN SURFACE  
 10/12/2000 – 10/11/2002                      FY01: \$119,850                      Total: \$119,850  
*Prin. Invest.:* D R THOMPSON  
*Tech. Officer:* SSC/R MILLER  
*CASE Category:* 33 – OCEANOGRAPHY

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAS 3 01146**                      **JOHNS HOPKINS UNIV**                      **4979**  
 EPIREP/FIS ARCHITECTURE WORK  
 04/30/2001 - 02/28/2002      FY01: \$190,122                      Total: \$190,122  
*Prin. Invest.:* L BACHMAN  
*Tech. Officer:* GRC/G CHOMOS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 5 00166**                      **JOHNS HOPKINS UNIV**                      **4980**  
 DEVELOPMENT OF SOLID STATE UV SOURCE  
 06/14/2000 - 07/13/2001      FY01: \$99,631                      Total: \$273,851  
*Prin. Invest.:* J KANG  
*Tech. Officer:* GSFC/F SELDON- JONES  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAS 5 01072**                      **JOHNS HOPKINS UNIV**                      **4981**  
 SUN EARTH CONNECTION LIVING WITH A STAR PROGRAM LETTER CONTRACT.  
 12/21/2000 - 12/20/2012      FY01: \$1,447,000                      Total: \$1,447,000  
*Prin. Invest.:* N AVAILABLE  
*Tech. Officer:* GSFC/J E ROBINSON  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 30403**                      **JOHNS HOPKINS UNIV**                      **4982**  
 SPACE TELESCOPE IMAGING SPECTROGRAPH PROGRAM SUPPORT  
 02/04/1988 - 06/30/2003      FY01: \$290,000                      Total: \$2,795,865  
*Prin. Invest.:* W MOOS  
*Tech. Officer:* GSFC/D VITABLANO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 5 31373**                      **JOHNS HOPKINS UNIV**                      **4983**  
 EOS INVESTIGATION  
 12/13/1991 - 12/14/2001      FY01: \$0                      Total: \$385,000  
*Prin. Invest.:* J SALISBURY  
*Tech. Officer:* GSFC/H BLODGET  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 32865**                      **JOHNS HOPKINS UNIV**                      **4984**  
 DESIGN & DEVELOPMENT OF ADVANCED CAMERA SCIENCE  
 08/25/1995 - 06/30/2003      FY01: \$469,400                      Total: \$3,725,677  
*Prin. Invest.:* D FORD, D ILLINGWORTH  
*Tech. Officer:* GSFC/C KREBS  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAS 5 32985**                      **JOHNS HOPKINS UNIV**                      **4985**  
 PHASE C/D DESIGN AND DEVELOPMENT OF THE FAR ULTRA- VOILET SPECTROSCOPIC EXPLORER (FUSE) MISSION  
 11/22/1995 - 12/07/2002      FY01: \$10,201,386                      Total: \$140,638,386  
*Prin. Invest.:* H W MOOS  
*Tech. Officer:* GSFC/D R MENGERS  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 97179**                      **JOHNS HOPKINS UNIV**                      **4986**  
 TIMED PHASE C/D LETTER CONTRACT  
 06/16/1997 - 09/09/2001      FY01: \$9,020,168                      Total: \$120,130,864  
*Prin. Invest.:* D GRANT  
*Tech. Officer:* GSFC/J J WOLFF  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 97271**                      **JOHNS HOPKINS UNIV**                      **4987**  
 AEROSPACE RESEARCH, DESIGN, AND DEVELOPMENT TASKS FOR NASA  
 10/01/1997 - 09/30/2002      FY01: \$91,336,152                      Total: \$206,759,485  
*Prin. Invest.:* T COUGHLIN  
*Tech. Officer:* GSFC/J WOLFF  
*CASE Category:* 11 - ASTRONOMY

**NCC 1 01019**                      **JOHNS HOPKINS UNIV**                      **4988**  
 ADAPTIVE DATA ANALYSIS AND PROCESSING TECHNOLOGY (ADAPT)---NRA-99-OES-08  
 01/16/2001 - 03/10/2004      FY01: \$159,017                      Total: \$159,017  
*Prin. Invest.:* M A DARRIN, M A DARRIN  
*Tech. Officer:* LARC/M E BEATTY, III  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 812**                      **JOHNS HOPKINS UNIV**                      **4989**  
 USING SURFACTANTS TO CONTROL BUBBLE GROWTH COALESCENCE IN NUCLEATE POOL BOILING  
 07/06/2000 - 05/31/2004      FY01: \$94,940                      Total: \$151,940  
*Prin. Invest.:* K J STEBE  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 447**                      **JOHNS HOPKINS UNIV**                      **4990**  
 COOPERATIVE RESEARCH IN HIGH ENERGY ASTROPHYSICS BETWEEN JHU AND GSFC  
 12/21/1999 - 12/31/2001      FY01: \$262,512                      Total: \$502,512  
*Prin. Invest.:* E T VISHNIAC  
*Tech. Officer:* GSFC/K E WEAVER  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 500**                      **JOHNS HOPKINS UNIV**                      **4991**  
 ATMOSPHERIC TRANSPORT: COMPARISON OF OBSERVATIONS AND MODELS  
 05/08/2000 - 05/14/2002      FY01: \$35,223                      Total: \$69,499  
*Prin. Invest.:* D WAUGH  
*Tech. Officer:* GSFC/A R DOUGLASS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 40029**                      **JOHNS HOPKINS UNIV**                      **4992**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRA  
 01/24/1997 - 01/31/2001      FY01: -\$21,673                      Total: \$1,748,327  
*Prin. Invest.:* R C HENRY  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40079**                      **JOHNS HOPKINS UNIV**                      **4993**  
 MARYLAND SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2002      FY01: \$496,673                      Total: \$496,673  
*Prin. Invest.:* R C HENRY  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50259**                      **JOHNS HOPKINS UNIV**                      **4994**  
 PROTEIN CRYSTALLIZATION AT INTERFACE STUDENT: JEFFREY ERICKSON  
 07/07/1999 - 06/30/2001      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* K J STEBE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

NASA'S UNIVERSITY PROGRAM

MARYLAND

**NGT 5 50268**                      **JOHNS HOPKINS UNIV**                      **4995**  
 SURFACTANT FACILITATED SPREADING  
 07/08/1999 - 06/30/2002                      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* K J STEBE/VAN NGUYE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50328**                      **JOHNS HOPKINS UNIV**                      **4996**  
 THE IMPACT OF DATA CONSTRAINTS IN GLOBAL CLIMATE MODELS  
 (STUDENT: ANDREA MOLOD)  
 08/17/2000 - 08/31/2002                      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* D WAUGH  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50372**                      **JOHNS HOPKINS UNIV**                      **4997**  
 SYNTHESIS, GROWTH KINETICS, AND ASSEMBLY OF NANO PARTICLES  
 06/13/2001 - 07/31/2002                      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* P C SEARSON  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 50**                      **JOHNS HOPKINS UNIV**                      **4998**  
 AN INVESTIGATION OF THE ADDITIVITY AND LINEARITY  
 07/05/2000 - 07/09/2002                      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* J DICELLO  
*Tech. Officer:* JSC/F A CUCINOTTA  
*CASE Category:* 56 - MEDICL

**NAG 5 10230**                      **LOYOLA COLLEGE**                      **4999**  
 APPLICATION OF GRADIENT-DESCENT IMAGE REGISTRATION TO  
 SATELLITE IMAGERY.  
 01/16/2001 - 01/31/2002                      FY01: \$24,811                      Total: \$24,811  
*Prin. Invest.:* P EASTMAN  
*Tech. Officer:* GSFC/J LE MOIGNE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 4401**                      **MORGAN STATE UNIV**                      **5000**  
 MODELING AND CHANGE POINT DETECTION IN MODIS ENGIN  
 04/18/1997 - 12/31/2000                      FY01: \$0                      Total: \$36,000  
*Prin. Invest.:* J SMID  
*Tech. Officer:* GSFC/B MARKHAMR  
*CASE Category:* 21 - MATHEMATICS

**NAG 5 7136**                      **MORGAN STATE UNIV**                      **5001**  
 CHARACTERIZATION AND SIMULATION OF GALLIUM NITRIDE ULTRAVIO-  
 LETPHOTODETECTORS  
 03/16/1998 - 08/30/2001                      FY01: \$0                      Total: \$300,000  
*Prin. Invest.:* C J SCOTT  
*Tech. Officer:* GSFC/B MOTT  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 8574**                      **MORGAN STATE UNIV**                      **5002**  
 SEM MULTIPURPOSE FACILITY/PHASE I  
 07/21/1999 - 07/14/2002                      FY01: -\$4,106                      Total: \$1,098,252  
*Prin. Invest.:* H WILLIAMS  
*Tech. Officer:* GSFC/P HOLLOWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8857**                      **MORGAN STATE UNIV**                      **5003**  
 INVESTIGATION OF THE MAGNETIC & ELECTRONIC PROPER TIES OF  
 METAL & METAL OXIDE FILMS & MULTILAYER FOR  
 09/28/1999 - 09/30/2001                      FY01: \$100,000                      Total: \$200,000  
*Prin. Invest.:* C WILLIAMS  
*Tech. Officer:* GSFC/J CHITWOOD  
*CASE Category:* 13 - PHYSICS

**NAG 5 8860**                      **MORGAN STATE UNIV**                      **5004**  
 SCIENCE ENGINEERING & MATHEMATICS (SEM) ENRICH MENT PROGRAM  
 FOR BALTIMORE MIDDLE & HIGH SCHOOL  
 09/28/1999 - 07/14/2001                      FY01: \$0                      Total: \$357,205  
*Prin. Invest.:* H WILLIAMS  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9215**                      **MORGAN STATE UNIV**                      **5005**  
 FORGING A PARTNERSHIP: A TWENTY-FIRST CENTURY APPR OACH TO  
 THE INVESTIGATION OF SCIENTIFIC& TECHNOL  
 03/09/2000 - 12/14/2001                      FY01: \$0                      Total: \$850,000  
*Prin. Invest.:* E DELOATCH  
*Tech. Officer:* GSFC/G SOFFEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 9710**                      **MORGAN STATE UNIV**                      **5006**  
 A PROPOSAL FOR NASA-RELATED RESEARCH CAPACITY BUIL DING AND  
 OUTREACH BUILDING AND OUTREACHAT MORGAN  
 06/29/2000 - 12/30/2001                      FY01: \$0                      Total: \$1,600,000  
*Prin. Invest.:* D N WILLIAMS  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9895**                      **MORGAN STATE UNIV**                      **5007**  
 WIDEBAND, LOW POWER SAMPLE-AND-HOLD CIRCUIT FOR DIGITAL  
 MICROWAVE RADIOMETRY.  
 08/29/2000 - 08/31/2001                      FY01: \$0                      Total: \$6,200  
*Prin. Invest.:* D WHITE  
*Tech. Officer:* GSFC/J PIEDMEIER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 10104**                      **MORGAN STATE UNIV**                      **5008**  
 SPACE TECHNOLOGY 5 PROJECT. APPLICATION OF PRODUC- TION  
 DESIGN CONSIDERATIONS TO NANO-SATELLITES  
 12/13/2000 - 12/14/2001                      FY01: \$5,000                      Total: \$5,000  
*Prin. Invest.:* G CHEN  
*Tech. Officer:* GSFC/J OBERRIGHT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10913**                      **MORGAN STATE UNIV**                      **5009**  
 DEVELOPING A SSPA UTILIZING WIDE BAND GAP SEMICON- DUCTOR  
 MATERIAL  
 05/22/2001 - 09/30/2001                      FY01: \$13,244                      Total: \$13,244  
*Prin. Invest.:* C WHITE  
*Tech. Officer:* GSFC/D NGUYEN  
*CASE Category:* 45 - ELECTRICAL ENGR

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10934**                    **MORGAN STATE UNIV**                    **5010**  
 IMAGE REGISTRATION AND FUSION FOR FUTURE FORMATION FLYING  
 SYSTEMS  
 06/06/2001 - 06/14/2002                    FY01: \$18,000                    Total: \$18,000  
*Prin. Invest.:* D COLE-RHODES  
*Tech. Officer:* GSFC/J MOIGNE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10947**                    **MORGAN STATE UNIV**                    **5011**  
 A PROPOSAL CAPACITY BUILDING FOR NASA RELATED AND OUTREACH AT  
 MORGAN STATE UNIV  
 05/25/2001 - 05/31/2002                    FY01: \$1,600,000                    Total: \$1,600,000  
*Prin. Invest.:* D N WILLIAMS  
*Tech. Officer:* GSFC/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11229**                    **MORGAN STATE UNIV**                    **5012**  
 EXAMINE SAMPLES OF CARBON CARBONADOS.  
 08/15/2001 - 08/14/2002                    FY01: \$3,000                    Total: \$3,000  
*Prin. Invest.:* E C HAMMOND  
*Tech. Officer:* GSFC/P TAYLOR  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 8 1847**                    **MORGAN STATE UNIV**                    **5013**  
 POLYMERIZATION OF ADVANCED THERMOSETS IN MICROGRAVITY TO  
 DEVELOP ULTRA LOW POLYMERS  
 08/06/2001 - 07/31/2002                    FY01: \$99,966                    Total: \$99,966  
*Prin. Invest.:* A KENNEDY  
*Tech. Officer:* MSFC/E ORDONEZ  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 9 998**                    **MORGAN STATE UNIV**                    **5014**  
 SMART-SENSOR DESIGN INCORPORATING SIGNAL PROCESSING FOR  
 DATA-COMPRESSION AND FEATURE ENHANCEMENT  
 03/31/1998 - 08/31/2001                    FY01: \$0                    Total: \$300,000  
*Prin. Invest.:* J E WHITNEY  
*Tech. Officer:* JSC/K KRISHEN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 122**                    **MORGAN STATE UNIV**                    **5015**  
 MORGAN NETWORK RESOURCE TRAINING SITE  
 08/15/1995 - 08/14/2000                    FY01: \$0                    Total: \$2,873,523  
*Prin. Invest.:* W LUPTON  
*Tech. Officer:* GSFC/J BENNETT  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 204**                    **MORGAN STATE UNIV**                    **5016**  
 THE MAGNETIC, TRANSPORT AND STRUCTURAL PROPERTIES OF  
 MAGNETIC OXIDE FILMS  
 06/11/1997 - 12/31/1999                    FY01: \$0                    Total: \$224,712  
*Prin. Invest.:* C WILLIAMS, NONE  
*Tech. Officer:* GSFC/J S CHITWOOD  
*CASE Category:* 13 - PHYSICS

**NCC 5 532**                    **MORGAN STATE UNIV**                    **5017**  
 NRTS CONTINUATION/MUSPIN NRTS PROGRAM.  
 02/01/2001 - 01/31/2002                    FY01: \$350,000                    Total: \$350,000  
*Prin. Invest.:* W LUPTON  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 565**                    **MORGAN STATE UNIV**                    **5018**  
 SIGE ADC FOR DIGITAL MICROWAVE RADIOMETRY  
 06/22/2001 - 06/14/2002                    FY01: \$40,000                    Total: \$40,000  
*Prin. Invest.:* C WHITE  
*Tech. Officer:* GSFC/J PIEDMEIER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 488**                    **TOWSON STATE UNIV**                    **5019**  
 MULTI-AGENT SYSTEMS IN SPACECRAFT: INTELLIGENT AGENTS AND  
 AGENT COMMUNITY MANAGEMENT  
 04/14/2000 - 08/31/2001                    FY01: \$25,000                    Total: \$49,205  
*Prin. Invest.:* B N NAG  
*Tech. Officer:* GSFC/W TRUSZKOWSKI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 6249**                    **U OF MD CTR FOR ENVIR SCI - CAMBRIDGE**                    **5020**  
 TIMES-SCALES OF LAND-USE CHANGE AND EXPORT OF NITROGEN FROM  
 THE COASTAL ZONE  
 08/19/1997 - 08/31/2001                    FY01: \$0                    Total: \$350,351  
*Prin. Invest.:* P R FISHER  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6286**                    **U OF MD CTR FOR ENVIR SCI - CAMBRIDGE**                    **5021**  
 REMOTE OBSERVATIONS AND MODELING OF PHYTOPLANKTON  
 09/10/1997 - 08/31/2002                    FY01: \$111,094                    Total: \$753,539  
*Prin. Invest.:* L HARDING  
*Tech. Officer:* GSFC/J HARDING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6387**                    **U OF MD CTR FOR ENVIR SCI - CAMBRIDGE**                    **5022**  
 MODELLING N2 AND CO2 FIXATION BY THE OCEANIC DIAZOTROPHIC  
 CYANOBACTERIUM TRICHODESMIUM  
 10/18/1997 - 09/30/2001                    FY01: \$0                    Total: \$239,144  
*Prin. Invest.:* R G HOOD  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7455**                    **U OF MD CTR FOR ENVIR SCI - CAMBRIDGE**                    **5023**  
 INTEGRATING REMOTE AND IN SITU SENSING TO DETECT AND PREDICT  
 CHANGE IN THE COASTAL ZONE  
 07/28/1998 - 07/31/2000                    FY01: \$0                    Total: \$50,696  
*Prin. Invest.:* T C MALONE  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7602**                    **U OF MD CTR FOR ENVIR SCI - CAMBRIDGE**                    **5024**  
 REMOTE OBSERVATIONS IN THE CHOPTANK RIVER INDEX SITE: OCEAN  
 COLOR, SALINITY, TEMPERATURE AND C  
 07/21/1998 - 08/31/2002                    FY01: \$95,040                    Total: \$447,423  
*Prin. Invest.:* L W HARDING  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9527**                    **U OF MD CTR FOR ENVIR SCI - CAMBRIDGE**                    **5025**  
 WORKSHOP: DESIGN & IMPLEMENTATION PLAN FOR A HARMFUL ALGAL  
 BLOOMS OBSERVING SYSTEM (HABSOS), A  
 04/28/2000 - 04/30/2001                    FY01: \$0                    Total: \$25,000  
*Prin. Invest.:* T MALONE  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



**NAG 5 11083 U OF MD CTR FOR ENVIR SCI - CAMBRIDGE 5026**  
EFFECTS OF LAND USE, SOILS & HUMAN POPULATIONS ON EXPORT OF  
WATER, C, N, & P FROM THE MID-ATLANTIC  
07/19/2001 - 08/14/2002 FY01: \$81,621 Total: \$81,621  
*Prin. Invest.:* T FISHER  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11302 U OF MD CTR FOR ENVIR SCI - CAMBRIDGE 5027**  
INDICES OF NUTRIENT ENRICHMENT IN U.S. ATLANTIC ESTUARIES FROM-  
REMOTE SENSING OF OCEAN COLOR AND  
08/30/2001 - 08/31/2005 FY01: \$72,963 Total: \$72,963  
*Prin. Invest.:* L HARDING  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 5 00195 U OF MD CTR FOR ENVIR SCI - CAMBRIDGE 5028**  
R&D TO SUPPORT GSFC'S SIMBIOS PROJECT  
12/18/2000 - 11/30/2001 FY01: \$114,713 Total: \$114,713  
*Prin. Invest.:* L W HARDING  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC 5 493 U OF MD CTR FOR ENVIR SCI - CAMBRIDGE 5029**  
REMOTE SENSING OF FOREST COMPOSITION AND STRUCTURE IN THE  
CENTRAL APPALACHIANS USING EO-1 HYPE  
04/19/2000 - 12/31/2001 FY01: \$68,198 Total: \$136,279  
*Prin. Invest.:* P A TOWNSEND  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 1195 UNIV OF MD - BIOTECH INST COLLEGE PARK 5030**  
OCCURRENCE OF V CHOLERAЕ IN THE BAY OF BENGAL & APPLICATION  
OF REMOTE SENSING METHODS FOR PREDICTION  
03/26/1998 - 03/31/2002 FY01: \$32,449 Total: \$141,067  
*Prin. Invest.:* R R COLWELL  
*Tech. Officer:* ARC/B L WOOD, ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 8 175 UNIV OF MD - BIOTECH INST COLLEGE PARK 5031**  
R/S MICROBIAL RESISTANCE TO SOLAR RADIATION: DNA DAMAGE AND  
APPLICATION OF REPAIR ENZYMES IN BIOTECH  
01/15/1999 - 11/30/2002 FY01: \$89,500 Total: \$289,500  
*Prin. Invest.:* J DI RUAGIERO  
*Tech. Officer:* JSC/S GONDA  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 1 1832 UNIV OF MARYLAND - COLLEGE PARK 5032**  
DEVELOPMENT OF CORRECTIONS FOR BIOMASS BURNING EFFECTS IN  
VERSION TWO OF GEWEX SRB ALGORITHM  
04/30/1996 - 04/30/2000 FY01: -\$94 Total: \$260,609  
*Prin. Invest.:* R T PINKER  
*Tech. Officer:* LARC/A B CARLSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 1880 UNIV OF MARYLAND - COLLEGE PARK 5033**  
LARGE EDDY SIMULATION OF THE SOUND EMISSION FROM UNSTEADY  
FLOW SEPARATION  
11/25/1996 - 11/30/1999 FY01: -\$1 Total: \$140,000  
*Prin. Invest.:* U PIOMELLI  
*Tech. Officer:* LARC/J L THOMAS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 1897 UNIV OF MARYLAND - COLLEGE PARK 5034**  
INVESTIGATION OF TROPICAL TROPOSPHERIC WATER VAPOR MY 1/3  
02/13/1997 - 02/12/2000 FY01: -\$1 Total: \$168,000  
*Prin. Invest.:* A E DESSLER  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2024 UNIV OF MARYLAND - COLLEGE PARK 5035**  
DIRECT MEASUREMENTS OF TROPOSPHERIC OZONE FROM TOMS DATA  
03/26/1998 - 01/31/2001 FY01: \$1 Total: \$351,001  
*Prin. Invest.:* R D HUDSON  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2285 UNIV OF MARYLAND - COLLEGE PARK 5036**  
INTERACTION OF A BOUNDARY LAYER WITH A TURBULANT WAKE  
03/30/2000 - 03/31/2003 FY01: \$54,997 Total: \$104,953  
*Prin. Invest.:* U PIOMELLI  
*Tech. Officer:* LARC/C L STREETT/J L THOMAS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01084 UNIV OF MARYLAND - COLLEGE PARK 5037**  
WHIRL FLUTTER OF TWO BLADED PROPELLOR/PYLON SYSTEM  
05/17/2001 - 03/14/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* I CHOPRA  
*Tech. Officer:* LARC/A S POTOTZKY, LARC/R G KVATERNIK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1311 UNIV OF MARYLAND - COLLEGE PARK 5038**  
INSENSITIVITY OF CONTROL SYSTEM PERFORMANCE TO CONTROLLER &  
SYSTEM PARAMETERS  
03/17/1999 - 01/14/2001 FY01: \$0 Total: \$35,143  
*Prin. Invest.:* W S LEVINE  
*Tech. Officer:* ARC/M B TISCHLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1329 UNIV OF MARYLAND - COLLEGE PARK 5039**  
EVALUATION OF METHODOLOGY FOR TESTING AND ANALYSIS OF  
ADVANCED ROTOR SYSTEMS  
06/01/1999 - 04/30/2001 FY01: \$0 Total: \$137,436  
*Prin. Invest.:* I CHOPRA  
*Tech. Officer:* ARC/W G WARBRODT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1352 UNIV OF MARYLAND - COLLEGE PARK 5040**  
MECHANOSENSITIVE CHANNELS IN BACTERIA: FUNCTIONAL DOMAINS &  
MECHANISMS OF GATING  
07/27/1999 - 07/31/2002 FY01: \$56,471 Total: \$359,055  
*Prin. Invest.:* S I SUKHAREV  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1405 UNIV OF MARYLAND - COLLEGE PARK 5041**  
QUAD TILTROTOR COMPUTATIONAL FLUID DYNAMICS PROGRAM  
04/28/2000 - 04/30/2002 FY01: \$300,000 Total: \$589,999  
*Prin. Invest.:* F SCHMITZ, J BAEDER  
*Tech. Officer:* ARC/R A STRAWN, ARC/C TUNG  
*CASE Category:* 41 - AERONAUTICAL ENGR

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 2 1407 UNIV OF MARYLAND - COLLEGE PARK 5042**  
 DYNAMICS OF HELICOPTERS WITH ON-BLADE CONTROLS  
 05/22/2000 - 05/31/2002 FY01: \$29,313 Total: \$71,849  
*Prin. Invest.:* R CELI  
*Tech. Officer:* ARC/M B TISCHER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 1867 UNIV OF MARYLAND - COLLEGE PARK 5043**  
 CRITICAL DYNAMICS FOR AMBIENT TEMPERATURE AND LOW TEMPERATURE PHASE TRANSITIONS  
 05/09/1996 - 01/31/2001 FY01: \$16,320 Total: \$438,320  
*Prin. Invest.:* R A FERRELL  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2106 UNIV OF MARYLAND - COLLEGE PARK 5044**  
 UNIV RESEARCH AND TRAINING PROGRAM IN HYPERSONIC PROPULSION/AIRFRAME INTEGRATION  
 02/05/1998 - 09/30/1999 FY01: -\$2,597 Total: \$147,403  
*Prin. Invest.:* M J LEWIS  
*Tech. Officer:* GRC/S R THOMAS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2139 UNIV OF MARYLAND - COLLEGE PARK 5045**  
 SPECTRAL ELEMENT SIMULATIONS OF THERMAL CONVECTION IN A ROTATING HEMISPHERICAL SHELL WITH RADIAL GRADIENTS  
 03/17/1998 - 01/05/2001 FY01: \$0 Total: \$101,000  
*Prin. Invest.:* A DEANE  
*Tech. Officer:* GRC/A CHAIT  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2206 UNIV OF MARYLAND - COLLEGE PARK 5046**  
 INVESTIGATION OF POB BOILING HEAT TRANSFER MECHANISMS IN MICROGRAVITY USING AN ARRAY OF SURFACE MOUNTED HEAT SENSORS  
 10/28/1998 - 05/31/2001 FY01: \$0 Total: \$177,300  
*Prin. Invest.:* J KIM  
*Tech. Officer:* GRC/J B MCQUILLEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2223 UNIV OF MARYLAND - COLLEGE PARK 5047**  
 ROBUST DIAGNOSIS OF PLANETARY GEARTRAIN FAULTS  
 01/08/1999 - 11/24/2001 FY01: \$72,000 Total: \$244,015  
*Prin. Invest.:* D J PINES  
*Tech. Officer:* GRC/D G LEWICKI  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2228 UNIV OF MARYLAND - COLLEGE PARK 5048**  
 SUBCOOLED POOL BOILING HEAT TRANSFER MECHANISMS IN MICROGRAVITY: TERRIER-IMPROVED ORION SOUNDING ROCKET  
 02/12/1999 - 10/12/2000 FY01: -\$88 Total: \$36,026  
*Prin. Invest.:* P KIM  
*Tech. Officer:* GRC/J MCQUILLEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2337 UNIV OF MARYLAND - COLLEGE PARK 5049**  
 DATA-BASE ON FUEL AIR MIXING AND COMBUSTION FOR NAUTICAL COMBUSTION  
 02/24/2000 - 02/02/2005 FY01: \$104,507 Total: \$144,507  
*Prin. Invest.:* A K GUPTA  
*Tech. Officer:* GRC/R R TACINA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2479 UNIV OF MARYLAND - COLLEGE PARK 5050**  
 GEOPHYSICAL FLOW EXPERIMENT IN A ROTATING SPHERICAL CAPACITOR, UM #000508-7778  
 07/26/2000 - 11/30/2003 FY01: \$41,621 Total: \$57,486  
*Prin. Invest.:* D DEANE  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2480 UNIV OF MARYLAND - COLLEGE PARK 5051**  
 PROPULSION/AIRFRAME INTEGRATION FOR HYPERSONIC ACCESS-TO-SPACE  
 07/27/2000 - 09/30/2001 FY01: \$0 Total: \$74,306  
*Prin. Invest.:* D J LEWIS  
*Tech. Officer:* GRC/D T PALAC  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2568 UNIV OF MARYLAND - COLLEGE PARK 5052**  
 MATERIAL PROPERTIES GOVERNING COCURRENT FLAME SPREAD IN MICROGRAVITY  
 03/20/2001 - 11/30/2004 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* J L TORERO  
*Tech. Officer:* GRC/G A RUFF  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 2754 UNIV OF MARYLAND - COLLEGE PARK 5053**  
 PREPARATION OF FLIGHT OPERATIONS AND INTERGRATION OF THE CELIAS EXPERIMENT ON THE SOHO SPACECRAFT  
 10/18/1994 - 10/31/1999 FY01: -\$201,054 Total: \$1,636,677  
*Prin. Invest.:* F I PAVICH  
*Tech. Officer:* GSFC/A POLAND  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 2963 UNIV OF MARYLAND - COLLEGE PARK 5054**  
 SOLAR CYCLE DYNAMICS OF SOLAR MAGNETOSPHERIC AND HELIOSPHERIC PARTICLES AND LONG-TERM ATMOSPHERIC...  
 06/09/1995 - 09/30/2000 FY01: \$0 Total: \$4,114,335  
*Prin. Invest.:* G M MASON  
*Tech. Officer:* GSFC/T T VON ROSENINGE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 3361 UNIV OF MARYLAND - COLLEGE PARK 5055**  
 ISO DATA ANALYSIS IN PROGRAM FOR RESEARCH TO BE CONDUCTED AT THE UMD  
 08/28/1996 - 08/31/2001 FY01: \$0 Total: \$196,200  
*Prin. Invest.:* D G CURRLA  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3454 UNIV OF MARYLAND - COLLEGE PARK 5056**  
 TERRESTRIAL MONITORING AT HIGH SPATIAL RESOLUTION: THE ROLE OF LANDSAT-TYPESENSORS IN MISSION....  
 10/07/1996 - 06/01/2002 FY01: \$122,138 Total: \$1,695,179  
*Prin. Invest.:* S N GOWARD  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3455 UNIV OF MARYLAND - COLLEGE PARK 5057**  
 ENHANCED ANTARCTIC RESEARCH WITH LANDSAT: ICE SHEET DYNAMICS, HISTORY, AND CARTOGRAPHY  
 10/07/1996 - 06/30/2001 FY01: \$16,000 Total: \$228,438  
*Prin. Invest.:* M A FAHNSTOCK  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3548 UNIV OF MARYLAND - COLLEGE PARK 5058**  
 RADAR BACKSCATTER MODELING AND ALGORITHM DEVELOPE NT FOR  
 FORREST PARAMETERSRETRIEVAL FROM SAR DATA  
 11/27/1996 - 11/30/1999 FY01: -\$75 Total: \$319,071  
*Prin. Invest.:* S LIANG, G SUN  
*Tech. Officer:* GSFC/J RANSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3678 UNIV OF MARYLAND - COLLEGE PARK 5059**  
 TROPOSPHERIC CONVECTION AND STRATOSPHERE-TROPOSPHE ON  
 PHOTOCHEMISTRY, AEROSOLS, AND CLIMATE  
 01/04/1997 - 01/14/2001 FY01: \$0 Total: \$830,000  
*Prin. Invest.:* K E PICKERING  
*Tech. Officer:* GSFC/M D HALL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 3836 UNIV OF MARYLAND - COLLEGE PARK 5060**  
 LOW LUMINOSITY ACCRETION ONTO COMPACT OBJECTS  
 02/11/1997 - 08/14/2001 FY01: \$0 Total: \$219,000  
*Prin. Invest.:* J L WANG  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3840 UNIV OF MARYLAND - COLLEGE PARK 5061**  
 MAGNETOHYDRODYNAMIC MODELS OF THE COLD INTERSTELLA  
 02/14/1997 - 02/14/2002 FY01: \$0 Total: \$217,500  
*Prin. Invest.:* E C OSTRIKER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3960 UNIV OF MARYLAND - COLLEGE PARK 5062**  
 THE EFFECT OF VARIATIONS IN PACIFIC FRESH-WATER AN INDIAN OCEAN  
 02/18/1997 - 01/31/2002 FY01: \$0 Total: \$350,884  
*Prin. Invest.:* R WAJSOWICZ  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 4056 UNIV OF MARYLAND - COLLEGE PARK 5063**  
 SATELLITE BASED IDENTIFICATION OF LINKED VEGETATIO SURFACE  
 TEMPERATURE ANOMALY AREAS  
 03/11/1997 - 03/14/2001 FY01: \$0 Total: \$400,350  
*Prin. Invest.:* J R TOWNSEND  
*Tech. Officer:* GSFC/C J TUCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4080 UNIV OF MARYLAND - COLLEGE PARK 5064**  
 OBSERVATIONS OF COMETS AND ASTEROIDS  
 04/11/1997 - 11/30/2001 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* D F A'HEARN  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4092 UNIV OF MARYLAND - COLLEGE PARK 5065**  
 A SPECTROSCOPIC INVESTIGATION INTO THE "MISSING UV  
 03/10/1997 - 12/31/1999 FY01: -\$6 Total: \$135,040  
*Prin. Invest.:* D C BALACHANDRAN  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4152 UNIV OF MARYLAND - COLLEGE PARK 5066**  
 CROSS CORRELATION OF SOLAR WIND PLASMA PARAMETERS SOHO AND  
 SWE ON WIND  
 03/25/1997 - 03/31/2000 FY01: \$0 Total: \$147,530  
*Prin. Invest.:* D A COPLAN  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 13 - PHYSICS

**NAG 5 4186 UNIV OF MARYLAND - COLLEGE PARK 5067**  
 A STUDY WITH ALTIMETRY OF LOW FREQUENCY VARIABILIT KUROSHIO  
 EXTENSION  
 04/01/1997 - 03/31/2001 FY01: \$4,451 Total: \$194,265  
*Prin. Invest.:* L WANG  
*Tech. Officer:* GSFC/N MAYNARD  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 4278 UNIV OF MARYLAND - COLLEGE PARK 5068**  
 GLOBAL MHD SIMULATION OF THE SOLAR NEBULA  
 04/01/1997 - 03/31/2000 FY01: \$0 Total: \$144,586  
*Prin. Invest.:* P M STONE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4313 UNIV OF MARYLAND - COLLEGE PARK 5069**  
 A SPACE PHYSICS ANALYSIS AND PLANNING TOOL  
 05/09/1997 - 12/31/2001 FY01: \$0 Total: \$312,500  
*Prin. Invest.:* D C GOODRICH  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 4429 UNIV OF MARYLAND - COLLEGE PARK 5070**  
 A LABORATORY AND OBSERVATIONAL STUDY OF THE CHEMIC PROTO-  
 STELLAR NEBULAE  
 05/06/1997 - 09/30/2000 FY01: \$0 Total: \$137,670  
*Prin. Invest.:* D G MUNDY  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4638 UNIV OF MARYLAND - COLLEGE PARK 5071**  
 DEVELOPMENT OF ION AND ELECTRON PLASMA INSTRUMENT W DESIGN  
 CONCEPTS FOR THE MINIMUM SOLAR MISSION  
 05/30/1997 - 09/30/2000 FY01: \$0 Total: \$18,951  
*Prin. Invest.:* M A COPLAN  
*Tech. Officer:* GSFC/E C SITTLER  
*CASE Category:* 13 - PHYSICS

**NAG 5 4740 UNIV OF MARYLAND - COLLEGE PARK 5072**  
 THEORETICAL MODELS OF COMETARY OBSERVATIONS  
 06/04/1997 - 05/31/2000 FY01: -\$5,256 Total: \$44,481  
*Prin. Invest.:* D F A'HEARN  
*Tech. Officer:* GSFC/W HUEBNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4811 UNIV OF MARYLAND - COLLEGE PARK 5073**  
 DEFORESTRATION AND DEGRADATION IN SOUTHERN AND CEN  
 06/25/1997 - 10/31/2001 FY01: \$0 Total: \$580,000  
*Prin. Invest.:* S PRINCE  
*Tech. Officer:* GSFC/G C GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 5062 UNIV OF MARYLAND - COLLEGE PARK 5074**  
 THE ADVANCED THIN IONIZATION CALORIMETER (ATIC) BALLOON EXPERIMENT  
 03/29/1996 - 09/30/2001 FY01: \$0 Total: \$1,534,597  
*Prin. Invest.:* E S SEO  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MARRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5083 UNIV OF MARYLAND - COLLEGE PARK 5075**  
 PROTON MAGNETIC SPECTROMETER FOR CUSP MEASUREMENTS  
 06/14/1996 - 12/31/1999 FY01: -\$204 Total: \$221,061  
*Prin. Invest.:* M A COPLAN  
*Tech. Officer:* GSFC/L W CURKIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5155 UNIV OF MARYLAND - COLLEGE PARK 5076**  
 OPTIMIZED CALORIMETER FOR ACCESS MEASUREMENTS OF Z-1-26 NUCLEI AND ELECTRONS  
 03/26/1998 - 03/31/2002 FY01: \$0 Total: \$247,200  
*Prin. Invest.:* E S SEO  
*Tech. Officer:* GSFC/B A MERRITT/  
*CASE Category:* 13 - PHYSICS

**NAG 5 5204 UNIV OF MARYLAND - COLLEGE PARK 5077**  
 COSMIC-RAY ORIGIN, ACCELERATION, AND PROPAGATION SELECTED UNDER THE PRESIDENTIAL EARLY CAREER AWARD  
 06/24/1998 - 06/30/2003 FY01: \$100,000 Total: \$400,000  
*Prin. Invest.:* E S SEO  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5225 UNIV OF MARYLAND - COLLEGE PARK 5078**  
 GRANT NAG5-5225 FOR ANTIMATTER AND COSMIC RAY STUDIES USING BESS. PI DR. EUN-SUK SEO  
 03/16/1999 - 03/11/2002 FY01: \$95,000 Total: \$281,100  
*Prin. Invest.:* E S SEO  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5249 UNIV OF MARYLAND - COLLEGE PARK 5079**  
 COSMIC RAY ENERGETICS AND MASS (CREAM) COSMIC RAY ENERGETICS AND MASS (CREAM)  
 03/13/2000 - 11/30/2002 FY01: \$1,060,000 Total: \$2,088,200  
*Prin. Invest.:* E SEO  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5263 UNIV OF MARYLAND - COLLEGE PARK 5080**  
 SOUNDING ROCKET EXPERIMENT TO EXPLORE ELECTRO-DYNAMICS COUPLING  
 03/02/2000 - 02/21/2003 FY01: \$98,377 Total: \$160,277  
*Prin. Invest.:* M A COPLAN  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5308 UNIV OF MARYLAND - COLLEGE PARK 5081**  
 FIRST YEAR FUNDING FOR NAG5-5308 FIRST YEAR FUNDING FOR NAG5-5308  
 02/01/2001 - 11/30/2003 FY01: \$250,000 Total: \$250,000  
*Prin. Invest.:* E S SEO  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6004 UNIV OF MARYLAND - COLLEGE PARK 5082**  
 CHARACTERIZING LAND-COVER HETEROGENEITY AND LAND-C SENSOR SATELLITE DATA  
 08/28/1997 - 03/14/2001 FY01: \$0 Total: \$573,934  
*Prin. Invest.:* D DEFRIES  
*Tech. Officer:* GSFC/G C GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6059 UNIV OF MARYLAND - COLLEGE PARK 5083**  
 COLLISIONLESS SHOCK PHENOMENA IN THE SOLAR ATMOSPHERIC RADIO EMISSION  
 07/29/1997 - 06/30/2001 FY01: \$0 Total: \$139,548  
*Prin. Invest.:* D THEJAPPA  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6190 UNIV OF MARYLAND - COLLEGE PARK 5084**  
 MAGNETIC RECONNECTION AND ASSOCIATED WAVE AND PARTICLE LION-LESS PLASMA  
 08/13/1997 - 06/30/2000 FY01: -\$149 Total: \$139,851  
*Prin. Invest.:* D F DRAKE  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 6257 UNIV OF MARYLAND - COLLEGE PARK 5085**  
 RESEARCH IN SOLAR RADIO ASTRONOMY AT SHORT WAVELENGTHS  
 08/27/1997 - 08/31/2000 FY01: \$0 Total: \$149,000  
*Prin. Invest.:* D KUNDU  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6282 UNIV OF MARYLAND - COLLEGE PARK 5086**  
 DETECTING THE LOCATION, SPATIAL EXTENT, RATES AND TROPICAL DEFORESTATION  
 09/22/1997 - 12/31/1999 FY01: -\$681 Total: \$497,424  
*Prin. Invest.:* J TOWNSHEND  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6319 UNIV OF MARYLAND - COLLEGE PARK 5087**  
 COMBINING REMOTE SENSING AND HYDROLOGICAL MODELING ENERGY BALANCE STUDIES  
 09/11/1997 - 12/31/2000 FY01: \$0 Total: \$453,762  
*Prin. Invest.:* R DUBAYAH  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6421 UNIV OF MARYLAND - COLLEGE PARK 5088**  
 GLOBAL VEGETATION DYNAMICS  
 09/26/1997 - 06/30/2001 FY01: \$0 Total: \$693,429  
*Prin. Invest.:* S D PRINCE  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6459 UNIV OF MARYLAND - COLLEGE PARK 5089**  
 VALIDATING MODIS/MISR LAND SURFACE REFLECTING AND ALBEDO PRODUCTS  
 10/14/1997 - 09/30/2001 FY01: \$66,980 Total: \$360,529  
*Prin. Invest.:* S LIANG  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6464 UNIV OF MARYLAND - COLLEGE PARK 5090**  
 EOS VALIDATION ACTIVITY IN A DESERT ENCROACHMENT ZONE OF SUB-SAHEL AFRICA  
 10/14/1997 - 09/30/2001 FY01: \$78,888 Total: \$495,819  
*Prin. Invest.:* R PINKER  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6483 UNIV OF MARYLAND - COLLEGE PARK 5091**  
 EVALUATION OF OPERATIONAL LONGWAVE RADIATION BUDGET PARAMETERS USING THE GOES SOUNDERS  
 11/18/1997 - 06/30/2002 FY01: \$209,834 Total: \$839,848  
*Prin. Invest.:* P ELLINGSON  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6526 UNIV OF MARYLAND - COLLEGE PARK 5092**  
 MECHANOSENSITIVE ION CHANNELS IN BACTERIA  
 04/02/1998 - 02/28/2000 FY01: -\$1 Total: \$243,243  
*Prin. Invest.:* S I SUKHAVREV  
*Tech. Officer:* GSFC/L P CHAMBERS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 6547 UNIV OF MARYLAND - COLLEGE PARK 5093**  
 ORIGIN AND IMPACT OF NUCLEAR ACTIVITY IN GALAXIES (L TSA)  
 10/29/1997 - 10/31/2001 FY01: \$32,300 Total: \$117,452  
*Prin. Invest.:* S VEILLEUX  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6630 UNIV OF MARYLAND - COLLEGE PARK 5094**  
 COREGISTRATION, THRESHOLDING, AND STOCHASTIC METHODS OF VALIDATION OF RAINFALL ESTIMATES FROM SPA  
 12/05/1997 - 01/14/2001 FY01: -\$45 Total: \$164,955  
*Prin. Invest.:* B KEDEM  
*Tech. Officer:* GSFC/O A THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6667 UNIV OF MARYLAND - COLLEGE PARK 5095**  
 EVALUATION OF ACCURACIES IN GEOPHYSICAL PARAMETERS DERIVED FROM PATHFINDER DATA  
 12/10/1997 - 12/31/2001 FY01: \$0 Total: \$363,808  
*Prin. Invest.:* P PINKER  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6682 UNIV OF MARYLAND - COLLEGE PARK 5096**  
 INTERANNUAL VARIABILITY, TRENDS, AND TRACER CORRELATIONS IN THE UARS DATA SET  
 12/08/1997 - 11/30/2001 FY01: \$0 Total: \$158,542  
*Prin. Invest.:* D B CONSIDINE  
*Tech. Officer:* GSFC/A DOUGLASS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6699 UNIV OF MARYLAND - COLLEGE PARK 5097**  
 ENHANCED METADATA EXTRACTION FOR NASA'S REGIONAL VALIDATION CENTERS SYSTEM  
 12/12/1997 - 03/31/2002 FY01: \$42,000 Total: \$189,770  
*Prin. Invest.:* J JAJA  
*Tech. Officer:* GSFC/J LEMONIGNE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 6750 UNIV OF MARYLAND - COLLEGE PARK 5098**  
 ANALYSIS TOOLS FOR IR LINE AND CONTINUUM OBSERVATIONS; COBE AND THE STRUCTURE OF THE GALACTIC I  
 01/12/1998 - 01/14/2002 FY01: \$0 Total: \$208,147  
*Prin. Invest.:* M WOLFIRE  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6970 UNIV OF MARYLAND - COLLEGE PARK 5099**  
 MACHINE LEARNING TO IMPROVE LAND COVER CLASSIFICATIONS FROM MULTISENSOR AND MULTITEMPORAL DATA  
 03/12/1998 - 09/30/2001 FY01: \$61,178 Total: \$305,083  
*Prin. Invest.:* R E DEFRIES  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7058 UNIV OF MARYLAND - COLLEGE PARK 5100**  
 ICE FLOW IN THE NORTHEAST GREENLAND ICE STREAM: MEASUREMENT AND ANALYSIS  
 03/04/1998 - 02/28/2002 FY01: \$0 Total: \$272,998  
*Prin. Invest.:* M FAHNESTOCK  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7069 UNIV OF MARYLAND - COLLEGE PARK 5101**  
 TRANSPORT OF ENERGETIC PARTICLES IN THE GALAXY - A TP  
 03/02/1998 - 02/28/2001 FY01: \$0 Total: \$202,993  
*Prin. Invest.:* A LUKASIAK  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7111 UNIV OF MARYLAND - COLLEGE PARK 5102**  
 SOLAR WIND AND SUPRATHERMAL ION COMPOSITION ON WIND  
 03/25/1998 - 03/14/2001 FY01: \$0 Total: \$1,075,000  
*Prin. Invest.:* G GLOECKLER  
*Tech. Officer:* GSFC/K OBILVIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7141 UNIV OF MARYLAND - COLLEGE PARK 5103**  
 PIONEER 10/11 AND ULYSSES STUDY OF ENERGETIC PARTICLES IN THE HELIOSPHERE  
 03/12/1998 - 02/28/2001 FY01: \$0 Total: \$329,500  
*Prin. Invest.:* F B MCDONALD  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7145 UNIV OF MARYLAND - COLLEGE PARK 5104**  
 EMISSION PROCESSES ASSOCIATED WITH SOLAR TYPE III RADIO BURSTS  
 03/23/1998 - 04/14/2002 FY01: \$24,796 Total: \$162,414  
*Prin. Invest.:* T GOLLA  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7263 UNIV OF MARYLAND - COLLEGE PARK 5105**  
 VERTICAL TRANSPORT PROCESSES IN THE SASS/GMI CHEMICAL TRANSPORT MODEL: DEVELOPMENT, EVALUATION, AND  
 04/29/1998 - 04/30/2001 FY01: \$0 Total: \$170,883  
*Prin. Invest.:* K PICKERING  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 7419 UNIV OF MARYLAND - COLLEGE PARK 5106**  
SIMULATION OF RADIOACTIVE TRACERS TO EVALUATE TRANSPORT AND  
SCAVENGING IN THE GMI CORE MODEL  
06/29/1998 - 04/30/2001 FY01: \$0 Total: \$162,321  
*Prin. Invest.:* D CONSIDINE  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7536 UNIV OF MARYLAND - COLLEGE PARK 5107**  
BOREAL ECOSYSTEM-ATMOSPHERE INFORMATION SYSTEMS DESIGN  
AND OPERATION  
06/18/1998 - 12/31/1999 FY01: -\$147 Total: \$89,779  
*Prin. Invest.:* K HUMMERICK  
*Tech. Officer:* GSFC/F HALL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7587 UNIV OF MARYLAND - COLLEGE PARK 5108**  
TERRESTRIAL ENVIRONMENTAL VARIABLES DERIVED FROM EOS PLAT-  
FORM  
06/29/1998 - 07/31/2001 FY01: \$0 Total: \$241,817  
*Prin. Invest.:* S N GOWARD  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7628 UNIV OF MARYLAND - COLLEGE PARK 5109**  
LEARNING CONTROLLERS FOR ENHANCED AUTONOMY OF SPACE  
ROBOTS  
08/24/1998 - 04/30/2000 FY01: \$0 Total: \$64,930  
*Prin. Invest.:* D SANNER  
*Tech. Officer:* HQ/D LAVERY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7634 UNIV OF MARYLAND - COLLEGE PARK 5110**  
ISOTOPIC AND GEOCHEMICAL INVESTIGATIONS OF METEORITES  
09/10/1998 - 07/31/2002 FY01: \$0 Total: \$209,000  
*Prin. Invest.:* R J WALKER  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7678 UNIV OF MARYLAND - COLLEGE PARK 5111**  
MISSION OPERATIONS AND DATA ANALYSIS OF THE CELIAS EXPER-  
IMENTON SOHO PRIOR GRANT 2754  
09/17/1998 - 04/30/2001 FY01: \$0 Total: \$400,000  
*Prin. Invest.:* F IPAVICH  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7762 UNIV OF MARYLAND - COLLEGE PARK 5112**  
WIND/SOHO GUEST OBSERVER PROGRAM FOR STUDY OF SOLAR ENER-  
GETIC PARTICLES AND GALACTIC  
12/24/1998 - 09/30/2001 FY01: \$87,200 Total: \$251,100  
*Prin. Invest.:* F B MCDONALD  
*Tech. Officer:* GSFC/M GUHATHAKURTA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7842 UNIV OF MARYLAND - COLLEGE PARK 5113**  
OBSERVING SYSTEM SIMULATION EXPERIMENTS AND 4DDA ASSOCIATED  
WITH CAMEX3  
11/27/1998 - 11/30/2001 FY01: \$0 Total: \$270,000  
*Prin. Invest.:* D ZHANG  
*Tech. Officer:* GSFC/A F NEGRI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7901 UNIV OF MARYLAND - COLLEGE PARK 5114**  
EIT STUDIES OF LARGE SCALE STRUCTURES IN THE SOLAR CORONA  
12/02/1998 - 12/14/2000 FY01: \$0 Total: \$138,357  
*Prin. Invest.:* M R KUNDU  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7958 UNIV OF MARYLAND - COLLEGE PARK 5115**  
DYNAMICS OF DUST IN THE JOVIAN SYSTEM  
01/27/1999 - 02/28/2001 FY01: \$0 Total: \$99,321  
*Prin. Invest.:* D P HAMILTON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8029 UNIV OF MARYLAND - COLLEGE PARK 5116**  
THIS GRANT WILL CONDUCT BASIC SCIENTIFIC RESEARCH IN THE  
PHYSICS OF SOLAR FLARES; INCREASING  
01/15/1999 - 04/01/2000 FY01: -\$2,652 Total: \$108,006  
*Prin. Invest.:* E J SCHMAHL  
*Tech. Officer:* GSFC/C J CRANNELL  
*CASE Category:* 13 - PHYSICS

**NAG 5 8033 UNIV OF MARYLAND - COLLEGE PARK 5117**  
SUPPORT OF DATA ACCESS FOR THE IMP-8 UMD EXPERIMENT  
01/19/1999 - 01/31/2002 FY01: \$5,630 Total: \$16,937  
*Prin. Invest.:* F IPAVICH  
*Tech. Officer:* GSFC/J KING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8079 UNIV OF MARYLAND - COLLEGE PARK 5118**  
A PROPOSAL TO ASSIST IN THE INTERPRETATION OF DATA FROM THE  
COSMIC RAY ISOTOPE SPECTROMETER EXPERIMENT  
01/14/1999 - 12/31/2001 FY01: \$48,600 Total: \$140,400  
*Prin. Invest.:* D LUKASIAK  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8105 UNIV OF MARYLAND - COLLEGE PARK 5119**  
GEOMORPHOLOGICAL ANALYSIS OF TERRAINS ON EARTH AND  
MARSPOP: 2/1/99-1/31/00  
02/19/1999 - 05/31/2001 FY01: \$0 Total: \$107,623  
*Prin. Invest.:* R DUBAYAH  
*Tech. Officer:* GSFC/J B GARVIN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8121 UNIV OF MARYLAND - COLLEGE PARK 5120**  
GENERATION OF A CONSISTENT TERRESTRIAL NET PRIMARY PRODUCTION  
DATA SET: PART II  
01/26/1999 - 12/31/2001 FY01: \$9,124 Total: \$187,510  
*Prin. Invest.:* S D PRINCE  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

## MARYLAND

**NAG 5 8177 UNIV OF MARYLAND - COLLEGE PARK 5121**  
 DISTRIBUTION OF IJRS SPECIAL ISSUE ON GLOBAL AND REGIONAL LAND  
 COVER CHARACTERIZATION FROM REMOTE  
 02/09/1999 - 12/31/2000 FY01: \$0 Total: \$15,037  
*Prin. Invest.:* R DEFRIES  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8179 UNIV OF MARYLAND - COLLEGE PARK 5122**  
 INTERNATIONAL FORUM ON BRDF  
 02/12/1999 - 12/30/2000 FY01: \$0 Total: \$14,993  
*Prin. Invest.:* S LIANG  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8189 UNIV OF MARYLAND - COLLEGE PARK 5123**  
 OCCULTATION SYSTEM UPGRADE  
 03/08/1999 - 03/14/2002 FY01: \$0 Total: \$128,231  
*Prin. Invest.:* M F A'HEARN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8192 UNIV OF MARYLAND - COLLEGE PARK 5124**  
 RESEARCH IN SOLAR RADIO ASTRONOMY AT SHORT WAVELENGTHS  
 05/13/1999 - 05/31/2002 FY01: \$182,255 Total: \$342,214  
*Prin. Invest.:* M R KUNDU, NONE  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8230 UNIV OF MARYLAND - COLLEGE PARK 5125**  
 COMPARISON OF THE RADIATIVE AND PHYSIOLOGICAL EFFECTS OF  
 DOUBLED CO2 ON THE GLOBAL CLIMATE AND DEVELOPMENT  
 03/01/1999 - 11/30/2000 FY01: \$0 Total: \$151,808  
*Prin. Invest.:* L BOUNOUA  
*Tech. Officer:* GSFC/J G COLLATZ  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8263 UNIV OF MARYLAND - COLLEGE PARK 5126**  
 SALINITY EFFECTS ON INTRA-SEASONAL TO INTERANNUAL VARIABILITY  
 OF COUPLED CLIMATE PREDICTION MODELS  
 02/22/1999 - 12/31/2001 FY01: \$149,463 Total: \$429,840  
*Prin. Invest.:* R MURTUGUDDE  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8289 UNIV OF MARYLAND - COLLEGE PARK 5127**  
 DYNAMICAL DIAGNOSIS OF THE NSIPP ATMOSPHERIC AND COUPLED  
 MODEL SIMULATIONS  
 02/24/1999 - 02/28/2002 FY01: \$101,935 Total: \$302,305  
*Prin. Invest.:* S NIGAM  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8366 UNIV OF MARYLAND - COLLEGE PARK 5128**  
 SURFACE RADIATION BUDGETS FOR LBA  
 03/08/1999 - 02/28/2002 FY01: \$100,457 Total: \$290,045  
*Prin. Invest.:* R T PINKER  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8398 UNIV OF MARYLAND - COLLEGE PARK 5129**  
 CONDUCT RESEARCH IN RAREFIED GAS DYNAMICS TO SUPPORT THE  
 DEVELOPMENT OF NASA'S GLOBAL ELECTRODYNAMICS  
 05/10/1999 - 05/14/2002 FY01: \$37,000 Total: \$150,000  
*Prin. Invest.:* D J LEWIS  
*Tech. Officer:* GSFC/J FLORA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8411 UNIV OF MARYLAND - COLLEGE PARK 5130**  
 ISTP GGS SOLARMAX  
 03/16/1999 - 02/28/2001 FY01: \$0 Total: \$640,000  
*Prin. Invest.:* K PAPAIOPOULOS  
*Tech. Officer:* GSFC/S CURTIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8459 UNIV OF MARYLAND - COLLEGE PARK 5131**  
 EQ-S MISSIONS OPERATIONS AND DATA ANALYSIS  
 04/19/1999 - 04/14/2002 FY01: \$51,041 Total: \$139,871  
*Prin. Invest.:* J DRAKE  
*Tech. Officer:* GSFC/M HESSE  
*CASE Category:* 13 - PHYSICS

**NAG 5 8528 UNIV OF MARYLAND - COLLEGE PARK 5132**  
 ENSEMBLE OCEAN-ATMOSPHERE PERTURBATIONS WITH GROWING  
 ENSO USING BREEDING  
 05/26/1999 - 05/31/2002 FY01: \$194,706 Total: \$584,118  
*Prin. Invest.:* E KALNAY  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8575 UNIV OF MARYLAND - COLLEGE PARK 5133**  
 DEVELOPMENT OF PROCEDURES FOR SELECTING LANDSAT SCENES FOR  
 EARTH SYSTEM SCIENCE  
 06/07/1999 - 12/31/2000 FY01: \$0 Total: \$69,968  
*Prin. Invest.:* J TOWNSHEND  
*Tech. Officer:* GSFC/C J TUCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8583 UNIV OF MARYLAND - COLLEGE PARK 5134**  
 PLUME IMPINGEMENT MODELING FOR SPACECRAFT DESIGN  
 06/08/1999 - 06/14/2001 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* M J LEWIS  
*Tech. Officer:* GSFC/M RHEE  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 8595 UNIV OF MARYLAND - COLLEGE PARK 5135**  
 PHYSICAL & BIOGEOCHEMICAL PROCESSES WITH THE INDIA OCEAN: A  
 STUDY OF ANNUAL & INTERANNUAL VARIABILITY  
 06/07/1999 - 11/30/2001 FY01: \$0 Total: \$272,923  
*Prin. Invest.:* R MURTUGUDDE  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8596 UNIV OF MARYLAND - COLLEGE PARK 5136**  
 YEAR 1 FUNDING FROM HPCC/ESS PROJECT FOR PROPOSAL TITLE: AN  
 ADAPTIVE MHD CODE BASED ON CHARACTERIZATION  
 06/11/1999 - 06/14/2002 FY01: \$43,620 Total: \$146,327  
*Prin. Invest.:* A DEANE  
*Tech. Officer:* GSFC/J R FISCHER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8613 UNIV OF MARYLAND - COLLEGE PARK 5137**  
 CLIMATE CHANGE, EXTREME COASTAL WATER LEVEL EVENTS AND  
 COASTAL EROSION  
 06/11/1999 - 12/31/2000 FY01: \$0 Total: \$72,761  
*Prin. Invest.:* B DOUGLAS  
*Tech. Officer:* GSFC/E PAYLOR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8621 UNIV OF MARYLAND - COLLEGE PARK 5138**  
 ANALYSIS OF DATA FROM THE SWE EXPERIMENT ON THE WIND SPACE-  
 CRAFT  
 06/16/1999 - 03/31/2001 FY01: \$0 Total: \$31,144  
*Prin. Invest.:* M COPLAN, NONE  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8678 UNIV OF MARYLAND - COLLEGE PARK 5139**  
 ROLE OF GRAY SQUIRRELS IN MAINTAINING LIFE CYCLE  
 07/09/1999 - 08/31/2002 FY01: \$0 Total: \$18,885  
*Prin. Invest.:* L W ADAMS  
*Tech. Officer:* GSFC/D E WALTER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 8711 UNIV OF MARYLAND - COLLEGE PARK 5140**  
 DEVELOPMENT OF A HIGH SPEED, HIGH FUNCTIONALITY, RELIABLE FIBER  
 OPTICS SWITCH MODULE BASED ON RESON  
 07/21/1999 - 09/30/2000 FY01: \$0 Total: \$45,000  
*Prin. Invest.:* D DAGENAIS  
*Tech. Officer:* GSFC/H C SHAW  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 8764 UNIV OF MARYLAND - COLLEGE PARK 5141**  
 MODELS & ALGORITHMS FOR FOREST DYNAMIC STUDIES IN SIBERIA &  
 NORTHEASTERN CHINA USING MULTI-SATELLITE  
 09/10/1999 - 11/30/2002 FY01: \$115,291 Total: \$224,080  
*Prin. Invest.:* G SUN  
*Tech. Officer:* GSFC/K J RANSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8789 UNIV OF MARYLAND - COLLEGE PARK 5142**  
 CENTRAL AFRICA REGIONAL PROGRAM FOR THE ENVIRONMENT  
 09/03/1999 - 08/31/2000 FY01: \$0 Total: \$76,729  
*Prin. Invest.:* N T LAPORTE-GOETZ  
*Tech. Officer:* GSFC/C J TUCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8809 UNIV OF MARYLAND - COLLEGE PARK 5143**  
 COMBINING HYDROLOGICAL MODELING AND REMOTE SENSING FOR  
 APPLIED MACROSCALE WATER AND ENERGY BALAN  
 09/08/1999 - 09/30/2000 FY01: \$0 Total: \$66,163  
*Prin. Invest.:* R DUBAYAH  
*Tech. Officer:* GSFC/E WOOD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8833 UNIV OF MARYLAND - COLLEGE PARK 5144**  
 THE REDSHIFT DEPENDENCE OF THE INTERACTION- ACTIVITY CONNEC-  
 TION AMONG ULTRALUMINOUS STARBURST  
 09/12/2000 - 09/14/2002 FY01: \$8,325 Total: \$17,432  
*Prin. Invest.:* P J TEUBEN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8842 UNIV OF MARYLAND - COLLEGE PARK 5145**  
 AWARD FUNDING TO THE UNIV OF MARYLAND FOR PROPOSAL ENTITLED  
 "OCTOBER ASTROPHYSICS CONFER  
 09/24/1999 - 09/30/2002 FY01: \$25,000 Total: \$75,000  
*Prin. Invest.:* J D TRASCO  
*Tech. Officer:* GSFC/D NORTON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8849 UNIV OF MARYLAND - COLLEGE PARK 5146**  
 SOLAR FLARE PHYSICS  
 12/16/1999 - 01/14/2001 FY01: \$0 Total: \$118,283  
*Prin. Invest.:* E J SCHMAHL  
*Tech. Officer:* GSFC/B R DENNIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8877 UNIV OF MARYLAND - COLLEGE PARK 5147**  
 SOLAR CYCLE DYNAMICS STUDIES WITH SAMPEX  
 11/24/1999 - 11/30/2001 FY01: \$756,000 Total: \$1,550,000  
*Prin. Invest.:* G MASON  
*Tech. Officer:* GSFC/T VON ROSENGINGE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8936 UNIV OF MARYLAND - COLLEGE PARK 5148**  
 AN INVESTIGATION OF TROPICAL UPPER TROPOSPHERIC HUMIDITY  
 01/18/2000 - 11/30/2001 FY01: \$112,117 Total: \$259,155  
*Prin. Invest.:* A DESSLER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9075 UNIV OF MARYLAND - COLLEGE PARK 5149**  
 ULTRA-WIDEBAND MICROWAVE SPECTROMETERS FOR HETEROD YNE  
 SPECTROSCOPY  
 02/16/2000 - 02/28/2002 FY01: \$100,000 Total: \$228,000  
*Prin. Invest.:* A HARRIS  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9108 UNIV OF MARYLAND - COLLEGE PARK 5150**  
 MAGNETIC RECONNECTION & ASSOCIATED WAVE & PARTICLE SIGNA-  
 TURES IN COLLISIONLESS PLASMA  
 02/23/2000 - 02/28/2003 FY01: \$91,362 Total: \$176,162  
*Prin. Invest.:* J F DRAKE  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9150 UNIV OF MARYLAND - COLLEGE PARK 5151**  
 CENTER FOR SATELLITE AND HYBRID COMMUNICATION NETWORKS, NASA  
 COMMERCIAL SPACE CENTER  
 03/03/2000 - 09/01/2001 FY01: \$0 Total: \$1,000,000  
*Prin. Invest.:* J BARAS  
*Tech. Officer:* GSFC/R DEPAULA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9151 UNIV OF MARYLAND - COLLEGE PARK 5152**  
 UNDERGRADUATE AND GRADUATE STUDENT TRAINING IN AERONAUTICS  
 RESEARCH (STAR)  
 03/02/2000 - 02/28/2001 FY01: \$27,000 Total: \$53,798  
*Prin. Invest.:* M GAVRILAS  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 41 - AERONAUTICAL ENGR



**NAG 5 9167 UNIV OF MARYLAND - COLLEGE PARK 5153**  
 EVOLUTIONARY MODELS OF COLD, MAGNETIZED, INTERSTEL LAR  
 CLOUDS (ATP 99)  
 03/15/2000 - 03/14/2002 FY01: \$90,530 Total: \$173,503  
*Prin. Invest.:* E OSTRIKER  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9228 UNIV OF MARYLAND - COLLEGE PARK 5154**  
 ESTABLISHMENT OF CENTER FOR ADVANCED INFORMATION  
 TECHNOLOGY  
 03/20/2000 - 02/28/2002 FY01: \$0 Total: \$2,000,000  
*Prin. Invest.:* G L GEOFFROY  
*Tech. Officer:* GSFC/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9271 UNIV OF MARYLAND - COLLEGE PARK 5155**  
 PDRS IN GALAXIES: FROM THE LOCAL UNIVERSE TO HIGH Z STARBURSTS  
 (L TSA 99)  
 03/15/2000 - 03/14/2002 FY01: \$84,083 Total: \$130,777  
*Prin. Invest.:* M WOLFIRE  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9282 UNIV OF MARYLAND - COLLEGE PARK 5156**  
 MISSION OPERATIONS & DATA ANALYSIS FOR THE CELIAS/ MT OF EXPERI-  
 MENT  
 04/06/2000 - 04/30/2002 FY01: \$350,000 Total: \$750,000  
*Prin. Invest.:* F I PAVICH  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9319 UNIV OF MARYLAND - COLLEGE PARK 5157**  
 AN INTEGRATED FOREST MONITORING SYSTEM FOR CENTRAL ASIA  
 03/22/2000 - 03/31/2002 FY01: \$120,224 Total: \$201,720  
*Prin. Invest.:* N LAPORTE, NONE  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9329 UNIV OF MARYLAND - COLLEGE PARK 5158**  
 INTER-ANNUAL LAND SURFACE VARIATION  
 03/24/2000 - 04/30/2002 FY01: \$221,967 Total: \$382,505  
*Prin. Invest.:* S D PRINCE  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9337 UNIV OF MARYLAND - COLLEGE PARK 5159**  
 IMPROVEMENTS IN LANDSAT PATHFINDER METHODS FOR MON ITORING  
 TROPICAL DEFORESTATION & THEIR EXTENSION  
 03/27/2000 - 04/30/2002 FY01: \$119,255 Total: \$291,348  
*Prin. Invest.:* J R TOWNSHEND  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9338 UNIV OF MARYLAND - COLLEGE PARK 5160**  
 MONITORING FOREST DYNAMICS IN NORTHEASTEN CHINA IN SUPPORT  
 OF GOF C  
 03/31/2000 - 04/30/2002 FY01: \$105,741 Total: \$176,441  
*Prin. Invest.:* G SUN  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9339 UNIV OF MARYLAND - COLLEGE PARK 5161**  
 TOWARDS METHODOLOGIES FOR GLOBAL MONITORING OF FOR EST  
 COVER CHARACTERISTICS WITH COARSE  
 03/31/2000 - 04/30/2002 FY01: \$114,324 Total: \$191,624  
*Prin. Invest.:* R DEFRIES  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9411 UNIV OF MARYLAND - COLLEGE PARK 5162**  
 UNDERSTANDING WATER, ENERGY AND CLIMATE: A GEWEX GLOBAL  
 WATER & ENERGY BIDGET PATHFINDER DATA SET  
 04/10/2000 - 04/30/2002 FY01: \$48,533 Total: \$78,333  
*Prin. Invest.:* R DUBAYAH  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9440 UNIV OF MARYLAND - COLLEGE PARK 5163**  
 CONTRIBUTION OF EMISSIONS FROM BOREAL FOREST FIRES  
 04/13/2000 - 04/30/2002 FY01: \$222,068 Total: \$398,951  
*Prin. Invest.:* K KASISCHKE  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9447 UNIV OF MARYLAND - COLLEGE PARK 5164**  
 TERRESTRIAL HYDROLOGY & CLIMATE STUDIES USING EOS- ERA DATA  
 04/12/2000 - 04/14/2003 FY01: \$90,478 Total: \$151,972  
*Prin. Invest.:* R DUBAYAH  
*Tech. Officer:* GSFC/P HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9481 UNIV OF MARYLAND - COLLEGE PARK 5165**  
 WORKSHOP: DESIGN & IMPLEMENTATION PLAN FOR A HARM FUL ALGAL  
 BLOOMS OBSERVING SYSTEM (HABSOS), A  
 04/19/2000 - 04/30/2001 FY01: \$0 Total: \$0  
*Prin. Invest.:* T MALONE  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9524 UNIV OF MARYLAND - COLLEGE PARK 5166**  
 A STUDY OF INTERANNUAL AND DECADEAL VARIABILITY IN THE PACIFIC  
 04/26/2000 - 05/31/2001 FY01: \$0 Total: \$43,526  
*Prin. Invest.:* L WANG  
*Tech. Officer:* GSFC/E LINSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9560 UNIV OF MARYLAND - COLLEGE PARK 5167**  
 2000 ASEE-NASA SUMMER FACULTY FELLOWSHIP PROGRAM (AERO-  
 NAUTICS AND SPACE RESEARCH)  
 05/09/2000 - 09/14/2001 FY01: \$4,000 Total: \$309,000  
*Prin. Invest.:* M GAVRILAS  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9575 UNIV OF MARYLAND - COLLEGE PARK 5168**  
 THE PHYSICAL & CHEMICAL STRUCTURE OF CIRCUMSTELLAR DISKS &  
 ENVELOPES  
 05/10/2000 - 04/30/2001 FY01: \$0 Total: \$40,000  
*Prin. Invest.:* L MUNDY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 13 - PHYSICS

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9620 UNIV OF MARYLAND - COLLEGE PARK 5169**  
 A GLOBAL NETWORK OF SITES FOR ASSESSING BIOGEOCHEMICAL &  
 BIOPHYSICAL CONSEQUENCES OF LAND COVER DIS  
 05/18/2000 - 05/14/2002 FY01: \$141,709 Total: \$231,709  
*Prin. Invest.:* R DEFRIES  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9621 UNIV OF MARYLAND - COLLEGE PARK 5170**  
 A FEDERATION INTEROPERABILITY SUBSTRATE USING MOCHA  
 05/19/2000 - 10/14/2001 FY01: \$0 Total: \$40,000  
*Prin. Invest.:* N ROUSSOPOULOS  
*Tech. Officer:* GSFC/C CHEUNG  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9632 UNIV OF MARYLAND - COLLEGE PARK 5171**  
 INVESTIGATIONS OF THE TROPICAL TROPOPAUSE REGION  
 06/07/2000 - 05/31/2002 FY01: \$103,485 Total: \$202,968  
*Prin. Invest.:* A DESSLER  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9634 UNIV OF MARYLAND - COLLEGE PARK 5172**  
 IMPROVED GLOBAL SCALE MODELS FOR SURFACE RADIATION BUDGETS  
 05/26/2000 - 04/30/2002 FY01: \$165,000 Total: \$239,000  
*Prin. Invest.:* R T PINKER  
*Tech. Officer:* GSFC/R CURAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9644 UNIV OF MARYLAND - COLLEGE PARK 5173**  
 SUPPORT FOR THE GOCF BOREAL FOREST WORKSHOP, NASA SIBERIAN  
 NETWORK AND EWG BOREAL FOREST PROJECT AC  
 06/01/2000 - 05/31/2001 FY01: \$36,130 Total: \$86,713  
*Prin. Invest.:* E S KASISCHKE  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9672 UNIV OF MARYLAND - COLLEGE PARK 5174**  
 TROPOSPHERIC CONVECTION & STRATOSPHERE-TROPOSPHERE  
 EXCHANGE: EFFECTS ON PHOTOCHEMISTRY, AEROSOLS  
 06/12/2000 - 05/31/2002 FY01: \$260,031 Total: \$435,801  
*Prin. Invest.:* K E PICKERING  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9674 UNIV OF MARYLAND - COLLEGE PARK 5175**  
 ADVANCING GLACIOLOGICAL APPLICATIONS OF REMOTE SENSING WITH  
 EO-1  
 06/09/2000 - 06/14/2001 FY01: \$0 Total: \$17,389  
*Prin. Invest.:* M FAHNESTOCK  
*Tech. Officer:* GSFC/R BINDSCHADLER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9750 UNIV OF MARYLAND - COLLEGE PARK 5176**  
 "WIDE-FIELD IMAGING INTERFEROMETRY"  
 07/20/2000 - 07/31/2002 FY01: \$22,520 Total: \$37,460  
*Prin. Invest.:* L G MUNDY  
*Tech. Officer:* GSFC/D LEISAWITZ  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9755 UNIV OF MARYLAND - COLLEGE PARK 5177**  
 NEW ISTP SOLAR MAX GRANT: LFM IONOSPHERIC MODULE AT SOLAR  
 MAXIMUM  
 06/28/2000 - 06/30/2001 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* K PAPAPOPOULOS  
*Tech. Officer:* GSFC/S CURTIS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9756 UNIV OF MARYLAND - COLLEGE PARK 5178**  
 PERIODIC, QUASI-PERIODIC, AND BURSTING BEHAVIOR OF NEUTRON  
 STAR X-RAY SOURCES  
 06/28/2000 - 06/30/2002 FY01: \$0 Total: \$40,020  
*Prin. Invest.:* M MILLER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9761 UNIV OF MARYLAND - COLLEGE PARK 5179**  
 RESEARCH IN SUPPORT OF THE COMMUNITY COORDINATED MODELING  
 CENTER  
 07/06/2000 - 06/30/2001 FY01: \$0 Total: \$84,444  
*Prin. Invest.:* A DEANE, NONE  
*Tech. Officer:* GSFC/M HESSE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9793 UNIV OF MARYLAND - COLLEGE PARK 5180**  
 SUPRATHERMAL THROUGH ENERGETIC PARTICLE DETECTOR (STEP)  
 SUBSYSTEM OF THEEPACT EXPERIMENT ON THE WIN  
 07/27/2000 - 01/31/2002 FY01: \$0 Total: \$62,000  
*Prin. Invest.:* G M MASON  
*Tech. Officer:* GSFC/T VONROSENGINGE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9809 UNIV OF MARYLAND - COLLEGE PARK 5181**  
 STUDY OF LAND-ATMOSPHERE INTERACTIONS USING SATEL- LITE DATA  
 ASSIMILATION  
 07/18/2000 - 07/31/2002 FY01: \$6,539 Total: \$46,561  
*Prin. Invest.:* R DUBAYAH  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9827 UNIV OF MARYLAND - COLLEGE PARK 5182**  
 VARIABILITY ASSESSMENT OF TMI SNAPSHOTS & QUALITY CONTROLLING  
 N-SENSOR DATA  
 08/23/2000 - 08/31/2001 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* B KEDEM  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9890 UNIV OF MARYLAND - COLLEGE PARK 5183**  
 RAREFIED FLOW AERODYNAMICS FOR STABILITY & CONTROL OF FORMA-  
 TION-FLYING SATELLITES  
 08/23/2000 - 08/31/2002 FY01: \$75,000 Total: \$150,000  
*Prin. Invest.:* M J LEWIS  
*Tech. Officer:* GSFC/M CONCHA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9892 UNIV OF MARYLAND - COLLEGE PARK 5184**  
 NASA-CENTRAL AFRICAN REGIONAL PROGRAM FOR THE ENVIRONMENT  
 (CARPE) ACTIVITY  
 08/24/2000 - 08/31/2002 FY01: \$0 Total: \$80,000  
*Prin. Invest.:* C O JUSTICE  
*Tech. Officer:* GSFC/C J TUCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9893 UNIV OF MARYLAND - COLLEGE PARK 5185**  
 CARPE FOREST COVER & INFORMATION SYSTEM - REVISED  
 08/29/2000 - 08/31/2001 FY01: \$160,941 Total: \$205,306  
*Prin. Invest.:* C O JUSTICE  
*Tech. Officer:* GSFC/C J TUCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9916 UNIV OF MARYLAND - COLLEGE PARK 5186**  
 REPROCESSING OF GOES NOAA/NESDIS SURFACE RADIATION BUDGET  
 PRODUCTS FOR GCIP  
 09/01/2000 - 08/31/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* R T PINKER  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9935 UNIV OF MARYLAND - COLLEGE PARK 5187**  
 X-RAY PERIODOCOTY & THE BROAD IRON K LINE IN IRAS 18325-5926  
 09/06/2000 - 09/14/2002 FY01: \$0 Total: \$10,500  
*Prin. Invest.:* A J YOUNG  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9961 UNIV OF MARYLAND - COLLEGE PARK 5188**  
 PRECISION RIGID BODY CONTROL OF A SATELLITE CONSTELLATION.  
 09/20/2000 - 09/30/2001 FY01: \$0 Total: \$70,000  
*Prin. Invest.:* E M ATKINS  
*Tech. Officer:* GSFC/T STENGLE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10090 UNIV OF MARYLAND - COLLEGE PARK 5189**  
 COMPARISON OF THE RADIATIVE & PHYSIOLOGICAL EFFECT OF DOUBLED  
 CO2 ON THE GLOBAL CLIMATE & THE  
 11/29/2000 - 11/30/2001 FY01: \$82,803 Total: \$82,803  
*Prin. Invest.:* L BOUNOUA  
*Tech. Officer:* GSFC/G J COLLATZ  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10097 UNIV OF MARYLAND - COLLEGE PARK 5190**  
 INTEGRATING RADAR DATA WITH OTHER SATELLITE IMAGERY TO ESTI-  
 MATE NET PRIMARYPRODUCTIVITY IN  
 11/20/2000 - 10/31/2001 FY01: \$141,700 Total: \$141,700  
*Prin. Invest.:* E KASISCHKE  
*Tech. Officer:* GSFC/K PARTINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10126 UNIV OF MARYLAND - COLLEGE PARK 5191**  
 RECENT ADVANCES IN REMOTE SENSING OF BIOPHYSICAL VARIABLES  
 12/11/2000 - 12/14/2001 FY01: \$5,920 Total: \$5,920  
*Prin. Invest.:* S GOETZ  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10175 UNIV OF MARYLAND - COLLEGE PARK 5192**  
 MILLIMETER OBSERVATIONS OF MEV-ENERGY ELECTRONS IN CONJUNC-  
 TION WITH THE HESSI MISSION  
 12/18/2000 - 12/31/2001 FY01: \$68,900 Total: \$68,900  
*Prin. Invest.:* S WHITE  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10179 UNIV OF MARYLAND - COLLEGE PARK 5193**  
 MICROWAVE EMISSION DEPTH IN FIRN AND LONG-TERM ACCUMULATION  
 RATES FROM INTERNAL LAYER DISTRIBUTION  
 01/10/2001 - 02/28/2002 FY01: \$111,438 Total: \$111,438  
*Prin. Invest.:* M FAHNESTOCK  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10180 UNIV OF MARYLAND - COLLEGE PARK 5194**  
 SOLAR FLARE PHYSICS  
 01/11/2001 - 01/14/2002 FY01: \$113,888 Total: \$113,888  
*Prin. Invest.:* E J SCHUMAHL  
*Tech. Officer:* GSFC/B DENNIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10235 UNIV OF MARYLAND - COLLEGE PARK 5195**  
 NASA/UMD: MONITORING THE STATE OF THE RAINFOREST IN THE  
 REPUBLIC DEMOCRATIC OF THE CONGO  
 02/05/2001 - 02/14/2002 FY01: \$45,291 Total: \$45,291  
*Prin. Invest.:* C J TUCKER  
*Tech. Officer:* GSFC/C J TUCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10298 UNIV OF MARYLAND - COLLEGE PARK 5196**  
 NONLOCAL KINETIC ANALYSIS OF MAGNETOTAIL THIN CURRENT SHEET  
 STRUCTURE & DYNAMICS DURING SUBSTORMS  
 01/24/2001 - 01/31/2002 FY01: \$82,323 Total: \$82,323  
*Prin. Invest.:* S SHARMA  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10388 UNIV OF MARYLAND - COLLEGE PARK 5197**  
 IMPROVED SIBERIAN LANDSCAPE MAPPING USING SRTM AND VCL DATA  
 02/08/2001 - 02/14/2002 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* G SUN  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10425 UNIV OF MARYLAND - COLLEGE PARK 5198**  
 ISOTOPIC & GEOCHEMICAL INVESTIGATIONS OF METEORITES  
 02/15/2001 - 07/31/2002 FY01: \$75,000 Total: \$75,000  
*Prin. Invest.:* R WALKER  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10502 UNIV OF MARYLAND - COLLEGE PARK 5199**  
 NANOTECHNOLOGY OPTICS FOR INFRARED ASTRONOMY  
 02/28/2001 - 02/28/2002 FY01: \$11,775 Total: \$11,775  
*Prin. Invest.:* L G MUNDY  
*Tech. Officer:* GSFC/M M FREUND  
*CASE Category:* 11 - ASTRONOMY

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10527 UNIV OF MARYLAND - COLLEGE PARK 5200**  
 SATELLITE MAPPING OF THE AFRICAN & ASIAN ARID & SEMI-ARID BOUNDARIES  
 03/09/2001 - 03/14/2002 FY01: \$75,636 Total: \$75,636  
*Prin. Invest.:* D R TOWNSEND  
*Tech. Officer:* GSFC/C J TUCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10540 UNIV OF MARYLAND - COLLEGE PARK 5201**  
 MISSION OPERATIONS & DATA ANALYSIS FOR THE SOLAR WIND & SUPRA-THERMAL ION COMPOSITION INVESTIGATION  
 03/22/2001 - 03/14/2002 FY01: \$175,000 Total: \$175,000  
*Prin. Invest.:* G GLOEKLER  
*Tech. Officer:* GSFC/M ACUNA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10563 UNIV OF MARYLAND - COLLEGE PARK 5202**  
 AUTOMATION OF SAMPEX ORBIT DETERMINATION  
 03/19/2001 - 03/14/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* B SHAPIRO  
*Tech. Officer:* GSFC/J TOTH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10585 UNIV OF MARYLAND - COLLEGE PARK 5203**  
 CHAPMAN CONFERENCE ON STORM -SUBSTORMS RELATION SHIPS: TRAVEL GRANT  
 03/13/2001 - 01/14/2002 FY01: \$10,000 Total: \$10,000  
*Prin. Invest.:* A S SHARMA  
*Tech. Officer:* GSFC/M GUHATHAKURTA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10596 UNIV OF MARYLAND - COLLEGE PARK 5204**  
 NEW ISTEP THEORY GRANT  
 03/16/2001 - 03/31/2002 FY01: \$300,000 Total: \$300,000  
*Prin. Invest.:* K PAPANOPOULIS  
*Tech. Officer:* GSFC/S CURTIS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10611 UNIV OF MARYLAND - COLLEGE PARK 5205**  
 THE STRUCTURE OF YOUNG STELLAR SYSTEMS: ESTABLISHING THE INITIAL CONDITIONS FOR PLANET FORMATION  
 03/17/2001 - 03/31/2002 FY01: \$45,000 Total: \$45,000  
*Prin. Invest.:* L MUNDY  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10626 UNIV OF MARYLAND - COLLEGE PARK 5206**  
 ADVANCED MHD MODELS FOR SOLAR WIND TURBULENCE  
 03/22/2001 - 03/31/2002 FY01: \$153,474 Total: \$153,474  
*Prin. Invest.:* A DEANE  
*Tech. Officer:* GSFC/D GOLDSTEIN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10746 UNIV OF MARYLAND - COLLEGE PARK 5207**  
 SEA ICE VARIABILITY, TRENDS AND CLIMATE CHANGE  
 04/17/2001 - 04/30/2002 FY01: \$65,000 Total: \$65,000  
*Prin. Invest.:* K Y VINNIKOV  
*Tech. Officer:* GSFC/D CAVALIERI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10751 UNIV OF MARYLAND - COLLEGE PARK 5208**  
 WITS: THE WEB INFRARED TOOLSHED.  
 04/13/2001 - 04/14/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* M G WOLFIRE  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10810 UNIV OF MARYLAND - COLLEGE PARK 5209**  
 RADIO & PLASMA WAVES ASSOCIATED WITH CORONAL MASS EJECTIONS  
 04/30/2001 - 04/30/2002 FY01: \$20,000 Total: \$20,000  
*Prin. Invest.:* T GOLLA, NONE  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10819 UNIV OF MARYLAND - COLLEGE PARK 5210**  
 APPLICATIONS IN DEPLOYMENT DYNAMICS AND CONTROL  
 04/24/2001 - 09/30/2001 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* P KRISHNAPRASAD  
*Tech. Officer:* GSFC/D FOLTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10858 UNIV OF MARYLAND - COLLEGE PARK 5211**  
 LAND COVER LAND USE CHANGE PROJECT SCIENTIST SUPPORT  
 05/03/2001 - 04/30/2002 FY01: \$197,665 Total: \$197,665  
*Prin. Invest.:* C JUSTICE  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10859 UNIV OF MARYLAND - COLLEGE PARK 5212**  
 INTER-COMPARISON OF GLOBAL SCALE ECOLOGICAL MODELS  
 05/02/2001 - 04/30/2002 FY01: \$67,000 Total: \$67,000  
*Prin. Invest.:* S PRINCE  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10882 UNIV OF MARYLAND - COLLEGE PARK 5213**  
 PREDICTION OF THE THREE DIMENSIONAL STRUCTURE OF THE SOLAR WIND AT THE EARTH FROM L1 ORBIT  
 05/03/2001 - 04/30/2002 FY01: \$98,686 Total: \$98,686  
*Prin. Invest.:* C S GOODRICH  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10895 UNIV OF MARYLAND - COLLEGE PARK 5214**  
 TOWARDS UNDERSTANDING STARBURST GALAXIES AT LOW & HIGH REDSHIFT (FUSE 2000)  
 05/14/2001 - 05/31/2002 FY01: \$36,000 Total: \$36,000  
*Prin. Invest.:* T LANZ  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10898 UNIV OF MARYLAND - COLLEGE PARK 5215**  
 DEVELOPMENT OF ALGORITHMS FOR MONITORING & MAPPING FIRE BURNED AREAS OF NORTH AMERICA'S BOREAL & TEM  
 05/22/2001 - 04/30/2002 FY01: \$88,718 Total: \$88,718  
*Prin. Invest.:* L ZHANQUING  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

## MARYLAND

**NAG 5 10929 UNIV OF MARYLAND - COLLEGE PARK 5216**  
 SOLAR ULTRAVIOLET RADIATION AND THE ORIGIN OF LIFE ON EARTH  
 (FUSE 2000)  
 05/14/2001 - 05/31/2002 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* T LANZ  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10958 UNIV OF MARYLAND - COLLEGE PARK 5217**  
 ANALYSIS OF SOLAR WIND DATA FROM MTOFON SOHO & SWE ON WIND  
 05/30/2001 - 05/31/2002 FY01: \$25,703 Total: \$25,703  
*Prin. Invest.:* M COPLAN, NONE  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 13 - PHYSICS

**NAG 5 10959 UNIV OF MARYLAND - COLLEGE PARK 5218**  
 IMPROVING HURRICANE FORECASTS THROUGH 3D RETRIEVAL & 4D VAR  
 ASSIMILATION IN THE GEOS DATA SYSTEM ASS  
 06/04/2001 - 06/14/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* D ZHANG, NONE  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10981 UNIV OF MARYLAND - COLLEGE PARK 5219**  
 INTRASEASONAL VARIABILITY IN THE INDIAN OCEAN  
 05/31/2001 - 06/30/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* R MURTUGUDDE  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11054 UNIV OF MARYLAND - COLLEGE PARK 5220**  
 STUDIES OF THE SOLAR MODULATION OF GALACTIC AND ANOMALOUS  
 COSMIC RAYS IN THE HELIOSPHERE  
 06/20/2001 - 06/14/2002 FY01: \$70,000 Total: \$70,000  
*Prin. Invest.:* F B MCDONALD  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11091 UNIV OF MARYLAND - COLLEGE PARK 5221**  
 THE PROPAGATION OF HIGH-ENERGY COSMIC RAYS IN THE GALAXY  
 07/06/2001 - 07/14/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* F B MCDONALD  
*Tech. Officer:* GSFC/F C JONES  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11149 UNIV OF MARYLAND - COLLEGE PARK 5222**  
 SPATIAL PREDICTIVE MODELING AND REMOTE SENSING OF LAND USE  
 CHANGE IN THE CHESAPEAKE BAY WATERSHED  
 07/26/2001 - 08/14/2003 FY01: \$76,666 Total: \$76,666  
*Prin. Invest.:* N BOCKSTAEL  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11151 UNIV OF MARYLAND - COLLEGE PARK 5223**  
 GLOBAL 3D MODEL STUDIES OF POLAR PROCESSES & RADIONUCLIDES  
 WITH APPLICATION TO THE GLOBAL  
 07/27/2001 - 07/31/2004 FY01: \$77,909 Total: \$77,909  
*Prin. Invest.:* D CONSIDINE  
*Tech. Officer:* GSFC/P DE COLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11161 UNIV OF MARYLAND - COLLEGE PARK 5224**  
 LAND USE LAND CHANGE AROUND PROTECTED AREAS IN LCL UC SITES:  
 SYNTHESIS OF RATES, CONSEQUENCES FOR  
 08/08/2001 - 08/14/2004 FY01: \$25,402 Total: \$25,402  
*Prin. Invest.:* R DEFRIES  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11246 UNIV OF MARYLAND - COLLEGE PARK 5225**  
 EVALUATION OF ASIAN OUTFLOW USING A STRETCHED GRID CTM  
 08/16/2001 - 08/14/2004 FY01: \$50,343 Total: \$50,343  
*Prin. Invest.:* D ALLEN  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11247 UNIV OF MARYLAND - COLLEGE PARK 5226**  
 TRENDS IN TOTAL AND PROFILE OZONE SORTED BY METEOROLOGICAL  
 REGIMES  
 08/16/2001 - 08/14/2004 FY01: \$99,999 Total: \$99,999  
*Prin. Invest.:* R HUDSON  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11251 UNIV OF MARYLAND - COLLEGE PARK 5227**  
 BURNED AREA MAPPING IN SOUTHERN AFRICA: CASE STUDY SYNTHESIS  
 AND REGIONAL APPLICATION OF MOD  
 08/20/2001 - 08/14/2004 FY01: \$131,572 Total: \$131,572  
*Prin. Invest.:* D ROY  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11252 UNIV OF MARYLAND - COLLEGE PARK 5228**  
 BEYOND POTENTIAL VEGETATION: IMPROVING MODEL CARBON PROJEC-  
 TIONS OF THE LAND SURFACE USING LUDAR RE  
 08/20/2001 - 08/14/2004 FY01: \$78,629 Total: \$78,629  
*Prin. Invest.:* R DUBAYAH, NONE  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11274 UNIV OF MARYLAND - COLLEGE PARK 5229**  
 MOORING BASED OPTICAM MEASUREMENTS IN THE TROPICAL ATLANTIC  
 OCEAN  
 08/22/2001 - 08/31/2002 FY01: \$60,522 Total: \$60,522  
*Prin. Invest.:* A SUBRAMANIAN  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11276 UNIV OF MARYLAND - COLLEGE PARK 5230**  
 REPRESENTATION IN THE GMI MODEL AND EFFECTS ON CHEMISTRY AND  
 CLIMATE  
 08/22/2001 - 08/31/2004 FY01: \$54,842 Total: \$54,842  
*Prin. Invest.:* K PICKERING  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11291 UNIV OF MARYLAND - COLLEGE PARK 5231**  
 AN INVESTIGATION OF THE INDO-PACIFIC CLIMATE IN THE NSIPP  
 COUPLEDCLIMATE SYSTEM  
 08/22/2001 - 08/31/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* R WAJSOWICZ  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11306 UNIV OF MARYLAND - COLLEGE PARK 5232**  
 GLOBAL FOREST COVER ASSESSMENT  
 08/31/2001 - 08/31/2002 FY01: \$240,266 Total: \$240,266  
*Prin. Invest.:* J TOWNSHEND  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11313 UNIV OF MARYLAND - COLLEGE PARK 5233**  
 OPTIMAL PLANNING & CONTROL OF A VIRTUAL RIGID BODY SATELLITE  
 CONSTELLATION.  
 09/05/2001 - 09/14/2002 FY01: \$82,630 Total: \$82,630  
*Prin. Invest.:* R SANNER  
*Tech. Officer:* GSFC/S STRARIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1027 UNIV OF MARYLAND - COLLEGE PARK 5234**  
 RADIO JET STUDY  
 01/27/1994 - 09/30/2000 FY01: \$0 Total: \$665,000  
*Prin. Invest.:* A S WILSON  
*Tech. Officer:* MSFC/ME ROSENTHAL  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1440 UNIV OF MARYLAND - COLLEGE PARK 5235**  
 SEARCH FOR SPIN-MASS INTERACTION WITH A SUPER- CONDUCTING  
 DIFFERENTIAL ANGULAR ACCELEROMETER  
 02/02/1998 - 12/31/2002 FY01: \$95,000 Total: \$401,000  
*Prin. Invest.:* H J PAIK, M V MOODY  
*Tech. Officer:* MSFC/J W POE  
*CASE Category:* 13 - PHYSICS

**NAG 8 1755 UNIV OF MARYLAND - COLLEGE PARK 5236**  
 STUDIES OF RADIO JETS AND THE NARROW LINE REGIONS OF ACTIVE  
 GALAXIES WITH THE ADVANCED X-RAY ASTROPH  
 01/16/2001 - 09/30/2001 FY01: \$124,000 Total: \$124,000  
*Prin. Invest.:* A S WILSON  
*Tech. Officer:* MSFC/M SMITH  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1762 UNIV OF MARYLAND - COLLEGE PARK 5237**  
 THEORY OF PHASE TRANSITIONS AND SIMULATIONS IN USPERFLUID  
 HELIUM OF COSMOLOGICAL PHENOMENA  
 04/26/2001 - 02/01/2005 FY01: \$84,166 Total: \$84,166  
*Prin. Invest.:* R FERRELL  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1116 UNIV OF MARYLAND - COLLEGE PARK 5238**  
 RESEARCH IN SPACE AND TELEROBOTICS  
 06/04/1999 - 12/31/2000 FY01: \$0 Total: \$500,000  
*Prin. Invest.:* D AKIN  
*Tech. Officer:* JSC/C J CULBERT, JSC/C R PRICE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1180 UNIV OF MARYLAND - COLLEGE PARK 5239**  
 GRANT DEVELOPMENT/TESTING OF MECH COUNTERSPRESSURE SPACE  
 SUIT GLOVE  
 12/14/1999 - 12/31/2002 FY01: \$143,000 Total: \$293,000  
*Prin. Invest.:* D L AKIN  
*Tech. Officer:* JSC/B WOOLFORD  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1290 UNIV OF MARYLAND - COLLEGE PARK 5240**  
 RESEARCH IN SPACE & TELEROBOTICS  
 04/04/2001 - 03/31/2002 FY01: \$500,000 Total: \$500,000  
*Prin. Invest.:* D AKIN  
*Tech. Officer:* JSC/C CULBERT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1920 UNIV OF MARYLAND - COLLEGE PARK 5241**  
 COMPUTER SIMULATIONS OF THE VARIABLE SPECIFIC IMPULSE MAGNE-  
 TOPLASMA ROCKET  
 06/23/2000 - 12/31/2001 FY01: \$50,000 Total: \$130,000  
*Prin. Invest.:* R SAGDEEV  
*Tech. Officer:* JSC/F R CHANG-DIAZ  
*CASE Category:* 13 - PHYSICS

**NAG13 98001 UNIV OF MARYLAND - COLLEGE PARK 5242**  
 ENHANCING EARTH SYSTEM SCIENCES USING COMMERCIAL TERRES-  
 TRIAL REMOTE SENSING SYSTEMS  
 11/03/1997 - 02/24/2002 FY01: \$200,135 Total: \$797,015  
*Prin. Invest.:* S GOWARD  
*Tech. Officer:* SSC/J JENNER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99011 UNIV OF MARYLAND - COLLEGE PARK 5243**  
 MID ATLANTIC RESAC CONSORTIUM SAME  
 03/01/1999 - 03/01/2002 FY01: \$0 Total: \$1,730,000  
*Prin. Invest.:* S D PRINCE  
*Tech. Officer:* SSC/C HILL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 5 00192 UNIV OF MARYLAND - COLLEGE PARK 5244**  
 R & D TO SUPPORT GSFC'S SIMBIOS PROJECT  
 12/18/2000 - 11/30/2001 FY01: \$260,821 Total: \$260,821  
*Prin. Invest.:* A SUBRAMANIAM  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 31365 UNIV OF MARYLAND - COLLEGE PARK 5245**  
 EOS EXECUTION PHASE  
 01/02/1992 - 12/14/2001 FY01: \$721,000 Total: \$4,464,390  
*Prin. Invest.:* C JUSTICE  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 5 31732 UNIV OF MARYLAND - COLLEGE PARK 5246**  
 R & D STUDIES IN BIOSPHERE-ATMOSPHERE INTERACTIONS  
 11/22/1991 - 12/31/1999 FY01: \$0 Total: \$753,400  
*Prin. Invest.:* C JUSTICE  
*Tech. Officer:* GSFC/P SELLERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## NASA'S UNIVERSITY PROGRAM

## MARYLAND

**NAS 5 96060 UNIV OF MARYLAND - COLLEGE PARK 5247**  
 DEFINITION PHASE ACTIVITIES ASSOCIATED WITH THE MODIS  
 INSTRUMENT OF THE EOS  
 07/25/1996 - 12/14/2001 FY01: \$433,000 Total: \$1,891,000  
*Prin. Invest.:* J TOWNSHEND  
*Tech. Officer:* GSFC/D TOLL  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 96062 UNIV OF MARYLAND - COLLEGE PARK 5248**  
 DEFINITION PHASE ACTIVITIES ASSOCIATED WITH MODIS INSTRUMENT OF  
 THE EOS  
 07/02/1996 - 12/14/2001 FY01: \$403,000 Total: \$2,096,562  
*Prin. Invest.:* E VERMONTE  
*Tech. Officer:* GSFC/D TOLL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 97160 UNIV OF MARYLAND - COLLEGE PARK 5249**  
 VEGETATION CANOPY LIDAR MISSION FOR ESSP  
 05/15/1997 - 05/31/2002 FY01: \$6,099,428 Total: \$34,068,680  
*Prin. Invest.:* R DUBAYAH  
*Tech. Officer:* GSFC/J ROBINSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 5 99211 UNIV OF MARYLAND - COLLEGE PARK 5250**  
 AWARD - SAMPEX MISSION SUPPORT  
 08/27/1999 - 08/26/2002 FY01: \$90,000 Total: \$270,000  
*Prin. Invest.:* W FOURNEY  
*Tech. Officer:* GSFC/T STENGLE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NASW 00004 UNIV OF MARYLAND - COLLEGE PARK 5251**  
 MESSENGER DISCOVERY PROJECTS (PI'S MANAGE PROJECT ORBIT &  
 EXPLOR PLANET MERCURY PHASE B  
 03/14/2000 - 02/29/2004 FY01: \$13,461,929 Total: \$14,244,398  
*Prin. Invest.:* M F A'HEARN  
*Tech. Officer:* JPL/D JARRETT  
*CASE Category:* 11 - ASTRONOMY

**NASW 00028 UNIV OF MARYLAND - COLLEGE PARK 5252**  
 JOINT US/RUSSIAN RESEARCH SPACE SCIENCES (JURRISS) PROGRAM  
 SUPPORT SERVICE/OPTION DATE 8/5/2002  
 12/06/2000 - 08/05/2002 FY01: \$219,800 Total: \$219,800  
*Prin. Invest.:* L MUKHIN, R SAGDEEV  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 75 - POLITICAL SCIENCE

**NCC 2 944 UNIV OF MARYLAND - COLLEGE PARK 5253**  
 CENTER FOR ROTORCRAFT EDUCATION & RESEARCH  
 02/23/1996 - 12/31/2000 FY01: \$0 Total: \$3,797,988  
*Prin. Invest.:* I CHOPRA  
*Tech. Officer:* ARC/Y H YU, ARC/J M DAVIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1129 UNIV OF MARYLAND - COLLEGE PARK 5254**  
 WAVERIDER-BASED REENTRY CONFIGURATIONS FOR THE SHARP FLIGHT  
 EXPERIMENT  
 07/13/1999 - 12/14/2001 FY01: \$0 Total: \$66,608  
*Prin. Invest.:* M J LEWIS  
*Tech. Officer:* ARC/P KOLODZIEJ, ARC/D J RASKY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1146 UNIV OF MARYLAND - COLLEGE PARK 5255**  
 EVALUATION OF METHODOLOGY FOR TESTING AND ANALYSIS OF  
 ADVANCED ROTOR SYSTEMS  
 12/01/1999 - 03/31/2002 FY01: \$100,000 Total: \$296,025  
*Prin. Invest.:* F HARRIS, I CHROPA, G PRICE  
*Tech. Officer:* ARC/W WARBRODT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5348 UNIV OF MARYLAND - COLLEGE PARK 5256**  
 THE EVOLUTION OF DUST IN THE MULTIPHASE INTERSTELLAR MEDIUM  
 09/01/1999 - 09/14/2001 FY01: \$0 Total: \$33,199  
*Prin. Invest.:* M G WOLFIRE, NONE  
*Tech. Officer:* ARC/D J HOLLENBACH, ARC/R E YOUNG  
*CASE Category:* 11 - ASTRONOMY

**NCC 3 528 UNIV OF MARYLAND - COLLEGE PARK 5257**  
 CENTER FOR SATELLITE AND HYBRID COMMUNICATION NETWORKS  
 01/30/1997 - 11/30/2001 FY01: \$1,000,000 Total: \$3,430,000  
*Prin. Invest.:* J S BARAS  
*Tech. Officer:* GRC/J W BAGWELL, GRC/K B BHASIN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 686 UNIV OF MARYLAND - COLLEGE PARK 5258**  
 STUDIES ON THE BEHAVIOR OF HIGHLY PRE-HEATED AIR F LAMES IN  
 MICROGRAVITY  
 03/11/1999 - 01/11/2003 FY01: \$95,000 Total: \$273,500  
*Prin. Invest.:* A K GUPTA  
*Tech. Officer:* GRC/D STOCKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 783 UNIV OF MARYLAND - COLLEGE PARK 5259**  
 POOL BOILING HEAT TRANSFER MECHANISMS IN MICROGRAVITY AND  
 PARTIAL GRAVITY  
 03/13/2000 - 11/30/2003 FY01: \$120,000 Total: \$195,000  
*Prin. Invest.:* J KIM  
*Tech. Officer:* GRC/J B MCQUILLEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 804 UNIV OF MARYLAND - COLLEGE PARK 5260**  
 FLAMMABILITY DIAGRAMS OF COMBUSTIBLE MATERIALS IN  
 MICROGRAVITY  
 05/25/2000 - 04/30/2004 FY01: \$74,124 Total: \$129,092  
*Prin. Invest.:* D L, NONE  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 919 UNIV OF MARYLAND - COLLEGE PARK 5261**  
 TRANSITION FROM IGNITION TO FLAME GROWTH UNDER EXTENSIVE  
 RADIATION IN D-D  
 09/27/2001 - 09/30/2005 FY01: \$69,300 Total: \$69,300  
*Prin. Invest.:* T KASHIWAGI  
*Tech. Officer:* GRC/S OLSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 55 UNIV OF MARYLAND - COLLEGE PARK 5262**  
 JOINT CENTER FOR EARTH SYSTEM SCIENCE  
 09/22/1993 - 09/30/1999 FY01: \$0 Total: \$5,402,993  
*Prin. Invest.:* R D HUDSON  
*Tech. Officer:* GSFC/F EINAUDI, GSFC/C E COTE  
*CASE Category:* 11 - ASTRONOMY

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NCC 5 128 UNIV OF MARYLAND - COLLEGE PARK 5263**  
 A STUDY OF THE DEVELOPMENT OF REMOTE SENSING ALGORITHMS  
 WITH EMPHASIS ON USING THE MODIS INSTR.  
 01/18/1996 - 02/14/2000 FY01: -\$250 Total: \$960,474  
*Prin. Invest.:* A J FLAG  
*Tech. Officer:* GSFC/S SAMADI, GSFC/E MASUOKA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 150 UNIV OF MARYLAND - COLLEGE PARK 5264**  
 GRAND CHALLENGE APPLICATIONS  
 09/04/1996 - 06/30/2000 FY01: \$0 Total: \$962,000  
*Prin. Invest.:* P LYSTER  
*Tech. Officer:* GSFC/J R FISCHER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 5 180 UNIV OF MARYLAND - COLLEGE PARK 5265**  
 THIS GRANT PROVIDES POST-DOC SUPPORT, FELLOWSHIPS, LABORATORY FOR HIGH ENERGY ASTROPHYSICS  
 02/06/1997 - 01/31/2002 FY01: \$1,587,049 Total: \$8,219,607  
*Prin. Invest.:* J D TRASCO  
*Tech. Officer:* GSFC/A HARDING  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 190 UNIV OF MARYLAND - COLLEGE PARK 5266**  
 SUPPORT OF THE EARTH SYSTEM SCIENCE INTERDISCIPLIN  
 04/04/1997 - 03/31/2002 FY01: \$0 Total: \$600,000  
*Prin. Invest.:* D TOWNSHEND  
*Tech. Officer:* GSFC/R C HARRISS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 238 UNIV OF MARYLAND - COLLEGE PARK 5267**  
 COOPERATIVE RESEARCH AGREEMENT FOR SPACE LASER RES MD, A  
 JAMES CLARK SCHOOL OF ENGINEERING & NASA/G  
 09/18/1997 - 04/30/2002 FY01: \$135,000 Total: \$2,514,055  
*Prin. Invest.:* D CHRISTOU  
*Tech. Officer:* GSFC/R AFZAL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 243 UNIV OF MARYLAND - COLLEGE PARK 5268**  
 RANGER TELEROBOTIC FLIGHT EXPERIMENT  
 11/03/1997 - 09/30/2002 FY01: \$0 Total: \$9,611,377  
*Prin. Invest.:* D AKIN  
*Tech. Officer:* GSFC/J PARRISH  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 300 UNIV OF MARYLAND - COLLEGE PARK 5269**  
 A LANDCOVER EARTH SCIENCE INFORMATION PARTNERSHIP  
 04/21/1998 - 02/28/2002 FY01: \$1,451,662 Total: \$5,092,162  
*Prin. Invest.:* J TOWNSENDE, NONE  
*Tech. Officer:* GSFC/M MAIDEN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 353 UNIV OF MARYLAND - COLLEGE PARK 5270**  
 FUNDS ARE PROVIDED FOR THE GRANT PROPOSAL BY THE UNIVERSITY  
 RESEARCH FOUNDATION FOR ENVIRONET TO  
 08/04/1998 - 12/31/2001 FY01: -\$1,444 Total: \$298,556  
*Prin. Invest.:* C F MARTIN  
*Tech. Officer:* GSFC/H PARK  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 372 UNIV OF MARYLAND - COLLEGE PARK 5271**  
 COOPERATIVE RESEARCH IN SPACE SCIENCE WITH THE UNIVERSITY OF  
 MARYLAND  
 12/22/1998 - 12/31/2001 FY01: \$476,931 Total: \$1,728,063  
*Prin. Invest.:* J D TRASCO  
*Tech. Officer:* GSFC/T KOSTIUK  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 374 UNIV OF MARYLAND - COLLEGE PARK 5272**  
 EARTH SCIENCE INTER-DISCIPLINARY CENTER  
 01/20/1999 - 08/31/2002 FY01: \$828,535 Total: \$2,981,322  
*Prin. Invest.:* M BROWN  
*Tech. Officer:* GSFC/R HARTLE, GSFC/C COTE  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 408 UNIV OF MARYLAND - COLLEGE PARK 5273**  
 PROTOTYPE IMPLEMENTATION OF A RESEARCH ENVIRONMENT FOR  
 ADVANCED LANDSAT MONITORING (REALM)  
 05/17/1999 - 04/30/2002 FY01: \$100,045 Total: \$473,680  
*Prin. Invest.:* S GOWARD  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 417 UNIV OF MARYLAND - COLLEGE PARK 5274**  
 RANGER TELEROBOTICS FLIGHT EXPERIMENT  
 08/25/1999 - 08/30/2001 FY01: \$0 Total: \$3,645,192  
*Prin. Invest.:* D L AKIN  
*Tech. Officer:* GSFC/D LAVERY  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 449 UNIV OF MARYLAND - COLLEGE PARK 5275**  
 A STUDY OF THE DEVELOPMENT OF REMOTE SENSING ALGORITHMS  
 02/08/2000 - 12/31/2001 FY01: \$232,012 Total: \$515,894  
*Prin. Invest.:* D ROY  
*Tech. Officer:* GSFC/E J MASUOKA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 462 UNIV OF MARYLAND - COLLEGE PARK 5276**  
 E0-1 VALIDATION AND EVALUATION FOR AGRICULTURAL MONITORING  
 02/29/2000 - 12/31/2001 FY01: \$155,026 Total: \$242,283  
*Prin. Invest.:* S LIANG  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 464 UNIV OF MARYLAND - COLLEGE PARK 5277**  
 EVALUATION OF SOFTWARE ENGINEERING METHODOLOGIES  
 02/29/2000 - 02/14/2002 FY01: \$227,539 Total: \$633,539  
*Prin. Invest.:* D R BASILI  
*Tech. Officer:* GSFC/D E JAMISON  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 5 497 UNIV OF MARYLAND - COLLEGE PARK 5278**  
 SUMMER INST ON ATMOSPHERIC AND HYDROSPHERIC SCIENCES  
 04/19/2000 - 09/30/2001 FY01: \$0 Total: \$92,807  
*Prin. Invest.:* F BAER  
*Tech. Officer:* GSFC/R HARTLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE



**NCC 5 552 UNIV OF MARYLAND - COLLEGE PARK 5279**  
 SUMMER INST ON ATMOSPHERIC AND HYDROSPHERIC SCIENCES  
 04/24/2001 - 04/30/2002 FY01: \$114,929 Total: \$114,929  
*Prin. Invest.:* F BAER  
*Tech. Officer:* GSFC/R HARTLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 1 52158 UNIV OF MARYLAND - COLLEGE PARK 5280**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/23/1997 - 06/30/2000 FY01: -\$18,543 Total: \$47,457  
*Prin. Invest.:* M LEWIS  
*Tech. Officer:* LARC/C E COCKRELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 52214 UNIV OF MARYLAND - COLLEGE PARK 5281**  
 SHAPE MEMORY ALLOY ACTURATION FOR ACTIVE TUNING OF  
 COMPOSITE SHAFTS  
 07/17/1996 - 08/31/2000 FY01: -\$5,907 Total: \$68,093  
*Prin. Invest.:* I CHOPRA  
*Tech. Officer:* ARC/K Q NGYUEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 2 52273 UNIV OF MARYLAND - COLLEGE PARK 5282**  
 CENTER FOR ROTORCRAFT EDUCATION & RESEARCH  
 01/09/2001 - 04/30/2002 FY01: \$916,829 Total: \$916,829  
*Prin. Invest.:* CHOPRA  
*Tech. Officer:* ARC/Y YU, ARC/A  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 3 52367 UNIV OF MARYLAND - COLLEGE PARK 5283**  
 SYNTHESIS OF MOLECULARLY DISPERSED CERAMIC POLYMER NANO-  
 COMPOSITES  
 06/14/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D C WILSON JR  
*Tech. Officer:* GRC/F MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 50 UNIV OF MARYLAND - COLLEGE PARK 5284**  
 DEVELOPMENT OF A RATCHETLESS WRENCH FOR EXTRAVEHIC  
 06/23/1997 - 06/30/2000 FY01: -\$7,638 Total: \$58,362  
*Prin. Invest.:* D L AKIN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 60 UNIV OF MARYLAND - COLLEGE PARK 5285**  
 MEASUREMENT OF FIBER STRAIN IN TERMINATED FIBER CONNECTOR  
 ASSEMBLIES USING IN-FIBER BRAGG GRATING A  
 10/24/1997 - 08/14/2000 FY01: -\$1,088 Total: \$64,912  
*Prin. Invest.:* T MEAD  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NGT 5 62 UNIV OF MARYLAND - COLLEGE PARK 5286**  
 1998 ASEE-NASA SUMMER FACULTY FELLOWSHIP PROGRAM ( AERO-  
 NAUTICS AND SPACE RESEARCH)  
 04/22/1998 - 09/30/1999 FY01: -\$2,510 Total: \$356,741  
*Prin. Invest.:* M GAVRILAS  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 99 UNIV OF MARYLAND - COLLEGE PARK 5287**  
 ESTIMATION OF TROPICAL FOREST ABOVEGROUND USING LARGE FOOT-  
 PRINT LIDAR  
 08/20/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* R DUBAYAH, J DRAKE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 100 UNIV OF MARYLAND - COLLEGE PARK 5288**  
 GLOBAL CLIMATE CHANGE AND CHOLERA: MODELING OF CHO LERA  
 OCCURRENCE IN SELECTED COASTAL AREAS USING S  
 08/23/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* E RUSSEK-COHEN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 107 UNIV OF MARYLAND - COLLEGE PARK 5289**  
 FEASIBILITY OF ATMOSPHERIC PENETRATION FOR SATELLITE FORMA-  
 TION FLYING EXPERIMENTS/STUDENT: JOS SCHU  
 06/07/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D PINES  
*Tech. Officer:* GSFC/G SOFFEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 116 UNIV OF MARYLAND - COLLEGE PARK 5290**  
 INVESTIGATION OF LIBRATION ORBITS IN THE EARTH-MOO N  
 SYSTEM(STUDENT): RAQUEL JARABEK  
 06/04/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D SHAPIRO  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NGT 5 30142 UNIV OF MARYLAND - COLLEGE PARK 5291**  
 THE EFFECT OF WARM TROPICAL ATLANTIC SST ON EARLY SEASON  
 CARIBBEAN RAIN-FALL  
 08/27/1998 - 08/31/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* A VERNEKAR, TAYLOR  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30196 UNIV OF MARYLAND - COLLEGE PARK 5292**  
 TORNADOES: COHERENT FLOW STRUCTURES IN ATMOSPHERIC TURBU-  
 LENCE  
 08/18/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* F BAER/NAWRI  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30377 UNIV OF MARYLAND - COLLEGE PARK 5293**  
 ANALYSIS OF MOPITT DATA FOR INVESTIGATION OF BOREAL FOREST  
 FIREEMISSIONS/EDWARD J. HYER  
 08/13/2001 - 08/31/2004 FY01: \$21,989 Total: \$21,989  
*Prin. Invest.:* E KASISCHKE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50083 UNIV OF MARYLAND - COLLEGE PARK 5294**  
 CHEMISTRY IN COMETS HALE-BOPP AND HYAKUTAKE  
 09/05/1997 - 06/30/2000 FY01: -\$9,225 Total: \$56,775  
*Prin. Invest.:* A HEARN  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50217 UNIV OF MARYLAND - COLLEGE PARK 5295**  
 CONVECTIVE EFFECTS ON TROPOSPHERIC OZONE CHEMISTRY STUDIED  
 WITH ACOUPLED CLOUD/CHEMISTRY MOD  
 09/15/1998 - 08/31/2001 FY01: \$0 Total: \$53,077  
*Prin. Invest.:* K PICKERING  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 5328 UNIV OF MARYLAND - EASTERN SHORE 5296**  
 RESEARCH PARTICIPATION IN AIRBORNE OCEANOGRAPHIC LIDAR ON  
 LONG RANGE MISSIONS  
 03/19/2001 - 03/31/2002 FY01: \$27,623 Total: \$27,623  
*Prin. Invest.:* D R LEVIN  
*Tech. Officer:* GSFC/W B KRABILL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8501 UNIV OF MARYLAND - EASTERN SHORE 5297**  
 UNIV OF MARYLAND EASTERN SHORE PRE-COLLEGE TO COLLEGE ENGI-  
 NEERING BRIDGE PROGRAM  
 05/12/1999 - 07/30/2000 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* M WILSON  
*Tech. Officer:* WFF/D MENCHAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 9243 UNIV OF MARYLAND - EASTERN SHORE 5298**  
 PRE-COLLEGE ACTIVITIES FOR ENHANCING MINORITY PARTICIPATION IN  
 ENGINEERING.  
 03/13/2000 - 03/14/2002 FY01: \$97,217 Total: \$194,773  
*Prin. Invest.:* G SINGH  
*Tech. Officer:* GSFC/M STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10122 UNIV OF MARYLAND - EASTERN SHORE 5299**  
 MATHEMATICS, ENGINEERING, SCIENCE ENRICHMENT PRE- COLLEGE  
 PROGRAM  
 11/28/2000 - 11/30/2001 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* T DUBE  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 437 UNIV OF MARYLAND - EASTERN SHORE 5300**  
 DESIGN & DEVELOPMENT OF TETHERED BLIMP-BORNE MULTI-SPECTRAL  
 IMAGING DEVICE  
 10/07/1999 - 01/14/2001 FY01: \$0 Total: \$32,500  
*Prin. Invest.:* E BOYD  
*Tech. Officer:* GSFC/R WESCOTT  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 5339 UNIV OF MARYLAND BALTIMORE 5301**  
 ASSIST GSFC CODE 972 DURING CAMEX-4 PROJECT A  
 07/12/2001 - 09/30/2001 FY01: \$9,000 Total: \$9,000  
*Prin. Invest.:* W MCMILLAN  
*Tech. Officer:* WFF/F SCHMIDLIN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1573 UNIV OF MARYLAND BALTIMORE 5302**  
 IONS AND PROTEIN ASSOCIATION: AW AND PROTEIN CRYSTALS  
 01/19/1999 - 11/30/2002 FY01: \$118,750 Total: \$362,750  
*Prin. Invest.:* K COLLINS  
*Tech. Officer:* MSFC/B GUYNE  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 5 544 UNIV OF MARYLAND BALTIMORE 5303**  
 IDENTIFICATION FOR RISK FACTORS FOR CHILDHOOD ASTH MA.  
 03/22/2001 - 03/31/2002 FY01: \$439,608 Total: \$439,608  
*Prin. Invest.:* D BLAISDELL  
*Tech. Officer:* GSFC/J P GALLOWAY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 2022 UNIV OF MARYLAND BALTIMORE COUNTY 5304**  
 A CLIMATOLOGY OF TROPOSPHERIC CO OVER THE CENTRAL AND SOUTH-  
 ASTERN UNITED STATES AND THE SOUTHWESTERN  
 03/12/1998 - 03/11/2002 FY01: \$15,000 Total: \$234,120  
*Prin. Invest.:* W W MCMILLAN, G MORRIS, L STROW  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6460 UNIV OF MARYLAND BALTIMORE COUNTY 5305**  
 VALIDATION OF MOPITT COLUMN & PROFILE CO FROM SPAC EBORNE,  
 AIRBORNE, & GROUND-BASED INTERFEROMETERS  
 10/14/1997 - 09/30/2002 FY01: \$60,588 Total: \$317,893  
*Prin. Invest.:* W MCMILLAN  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6675 UNIV OF MARYLAND BALTIMORE COUNTY 5306**  
 VALIDATION OF CLOUD OPTICAL DEPTHS RETRIEVED FROM EOS/MODIS  
 DATA  
 12/01/1997 - 09/30/2002 FY01: \$84,198 Total: \$309,020  
*Prin. Invest.:* A MARSHAK  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6681 UNIV OF MARYLAND BALTIMORE COUNTY 5307**  
 ASSIMILATION OF WIND OBSERVATIONS FROM THE HIGH RESOLUTION  
 DOPPLERIMAGER  
 12/05/1997 - 11/30/2001 FY01: \$0 Total: \$430,241  
*Prin. Invest.:* D TANGBORN  
*Tech. Officer:* GSFC/C JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6996 UNIV OF MARYLAND BALTIMORE COUNTY 5308**  
 A STUDY OF UNCERTAINTIES FOR MODIS CLOUD RETRIEVAL S OF  
 OPTICAL THICKNESS AND EFFECTIVE RADIUS  
 02/06/1998 - 12/14/2001 FY01: \$0 Total: \$202,354  
*Prin. Invest.:* D PLATNICK  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7385 UNIV OF MARYLAND BALTIMORE COUNTY 5309**  
 X-RAY SPECTROSCOPY OF ACTIVE GALACTIC NUCLEI: (LT SA)  
 05/15/1998 - 06/30/2002 FY01: \$216,715 Total: \$570,610  
*Prin. Invest.:* T J TURNER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7563 UNIV OF MARYLAND BALTIMORE COUNTY 5310**  
 MODELING OF SHORTWAVE RADIATION FIELDS USING ATMOSPHERIC  
 RADIATION MEASUREMENTS (ARM) AND LANDSAT D  
 06/29/1998 - 06/30/2001 FY01: \$4,000 Total: \$275,720  
*Prin. Invest.:* A MARSHAK  
*Tech. Officer:* GSFC/W WISCOMBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7774 UNIV OF MARYLAND BALTIMORE COUNTY 5311**  
 CLOUDLESS SCENE IDENTIFICATION FOR AEROSOL RETRIEVAL FROM  
 TOMS MEASUREMENTS  
 10/28/1998 - 10/31/2001 FY01: \$0 Total: \$128,000  
*Prin. Invest.:* O TORRES  
*Tech. Officer:* GSFC/M I MISCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7909 UNIV OF MARYLAND BALTIMORE COUNTY 5312**  
 TRMM PRECIPITATION RADAR: DEVELOPMENT OF A RAIN RETRIEVAL  
 ALGORITHM USING GROUND VALIDATION DATA  
 12/08/1998 - 12/14/2002 FY01: \$140,965 Total: \$278,035  
*Prin. Invest.:* E AMITAI  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8231 UNIV OF MARYLAND BALTIMORE COUNTY 5313**  
 USE OF DATA FROM TRMM FIELD CAMPAIGNS IN IMPROVED INITIALIZA-  
 TION AND VALIDATION OF HIGH RESOLUTION  
 03/03/1999 - 03/14/2002 FY01: \$0 Total: \$156,420  
*Prin. Invest.:* B S FERRIER  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8379 UNIV OF MARYLAND BALTIMORE COUNTY 5314**  
 VARIATIONAL ASSIMILATION OF TRMM-DERIVED PRECIPITATION  
 OBSERVATIONS FOR THE IMPROVEMENT OF NUMERICAL  
 04/14/1999 - 04/14/2001 FY01: \$0 Total: \$50,393  
*Prin. Invest.:* W S OLSON  
*Tech. Officer:* GSFC/R W LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9054 UNIV OF MARYLAND BALTIMORE COUNTY 5315**  
 INNOVATIVE ANALYSIS OF GRAVITY MAPPING MISSION DATA  
 02/10/2000 - 12/31/2001 FY01: \$12,500 Total: \$50,000  
*Prin. Invest.:* E C PAVLIS  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9346 UNIV OF MARYLAND BALTIMORE COUNTY 5316**  
 UNDERSTANDING TON S180? (ADP - 99)  
 03/31/2000 - 06/30/2001 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* T J TURNER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9588 UNIV OF MARYLAND BALTIMORE COUNTY 5317**  
 LABORATORY QUANTITATIVE SPECTROSCOPY OF MOLECULES OF  
 ATMOSPHERIC RELEVANCE  
 05/11/2000 - 12/31/2001 FY01: \$77,197 Total: \$128,630  
*Prin. Invest.:* J M SIROTA  
*Tech. Officer:* GSFC/M KURYLO  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9645 UNIV OF MARYLAND BALTIMORE COUNTY 5318**  
 A COMPARATIVE STUDY OF FOREST MAPPING METHODS AND ALGO-  
 RITHMS: TOWARDS OPTIMAL SOLUTIONS FOR OPERATIO  
 06/12/2000 - 06/30/2002 FY01: \$60,204 Total: \$124,699  
*Prin. Invest.:* Y SOHN, NONE  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9698 UNIV OF MARYLAND BALTIMORE COUNTY 5319**  
 IMPROVEMENT OF CONVECTIVE/STRATIFORM SEPARATION & LATENT  
 HEATING PROFILE ESTIMATION FROM TRMM  
 07/21/2000 - 11/30/2001 FY01: \$107,963 Total: \$220,963  
*Prin. Invest.:* W S OLSON  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9699 UNIV OF MARYLAND BALTIMORE COUNTY 5320**  
 ORGANIZATION, STRUCTURE, AND EVOLUTION OF TROPICAL CONVEC-  
 TIONS IN SOUTH CHINA SEA MONSOON AND THEIR  
 07/27/2000 - 05/31/2002 FY01: \$80,000 Total: \$126,667  
*Prin. Invest.:* J WANG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9707 UNIV OF MARYLAND BALTIMORE COUNTY 5321**  
 US INDIA COLLABORATIVE RESEARCH ON MONSOON PREDICTABILITY  
 06/16/2000 - 08/31/2002 FY01: \$23,856 Total: \$47,712  
*Prin. Invest.:* A MEHTA, NONE  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9718 UNIV OF MARYLAND BALTIMORE COUNTY 5322**  
 INVESTIGATIONS OF MARITIME & CONTINENTAL TROPICAL CONVECTIVE  
 SYSTEMS USING DATA FROM TRMM FIELD E  
 06/19/2000 - 06/30/2002 FY01: \$89,766 Total: \$145,766  
*Prin. Invest.:* J B HALVERSON  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9816 UNIV OF MARYLAND BALTIMORE COUNTY 5323**  
 CLIMATOLOGY AND EVOLUTION OF CONVECTIVE SYSTEMS COMBINING  
 SURFACE RADAR & GEOSTATIONARY INFRARED SA  
 07/21/2000 - 07/31/2002 FY01: \$75,000 Total: \$118,750  
*Prin. Invest.:* T M RICKENBACH  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9954 UNIV OF MARYLAND BALTIMORE COUNTY 5324**  
 MYERHOFF SCHOLARSHIP PROGRAM  
 09/08/2000 - 09/14/2001 FY01: \$0 Total: \$200,000  
*Prin. Invest.:* E B BAKER  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9995 UNIV OF MARYLAND BALTIMORE COUNTY 5325**  
 A SPECTRAL STUDY OF A NEW CLASS OF RADIO QUASARS  
 09/20/2000 - 03/31/2002 FY01: \$0 Total: \$21,878  
*Prin. Invest.:* E S PERLMAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9996 UNIV OF MARYLAND BALTIMORE COUNTY 5326**  
 VARIABILITY AND HARD-X-RAY SPECTRA OF BL LACERTAE OBJECTS  
 09/21/2000 - 06/30/2001 FY01: \$0 Total: \$2,790  
*Prin. Invest.:* E PERLMAN  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9997 UNIV OF MARYLAND BALTIMORE COUNTY 5327**  
 THE PHYSICS OF EXTRAGALACTIC RADIO/OPTICAL/X-RAY JETS  
 09/20/2000 - 03/14/2002 FY01: \$55,000 Total: \$101,603  
*Prin. Invest.:* E S PERLMAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10024 UNIV OF MARYLAND BALTIMORE COUNTY 5328**  
 DIAGNOSTICS OF THE ISM IN INTERMEDIATE REDSHIFT GALAXIES USING  
 BACKGROUND BL LACS  
 09/27/2000 - 09/30/2001 FY01: \$0 Total: \$5,080  
*Prin. Invest.:* E S PERLMAN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10086 UNIV OF MARYLAND BALTIMORE COUNTY 5329**  
 THE X-RAY TEMPERATURE FUNCTION AND STRUCTURE OF CLUSTERS AT  
 Z=0.6-1  
 11/07/2000 - 11/14/2001 FY01: \$6,213 Total: \$6,213  
*Prin. Invest.:* E S PERLMAN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10109 UNIV OF MARYLAND BALTIMORE COUNTY 5330**  
 HIGH RESOLUTION X-RAY PROPERTIES OF BL LACS: AN XMM SURVEY  
 01/26/2001 - 01/31/2002 FY01: \$45,045 Total: \$45,045  
*Prin. Invest.:* E S PERLMAN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10206 UNIV OF MARYLAND BALTIMORE COUNTY 5331**  
 QUANTITATIVE INFRARED SPECTROSCOPY FOR STUDIES OF BROWN  
 DWARFS & EXTRASOLAR GIANT PLANETS  
 12/28/2000 - 12/31/2001 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* D STEVERT  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10347 UNIV OF MARYLAND BALTIMORE COUNTY 5332**  
 VALIDATION OF CLOUD MODEL MICROPHYSICS & RAIN RATE ESTIMATION  
 WITH HIGH-RESOLUTION MICROWAVE OBSERVA  
 02/01/2001 - 09/30/2002 FY01: \$128,752 Total: \$128,752  
*Prin. Invest.:* G M SKOFRONICK-JACK  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10687 UNIV OF MARYLAND BALTIMORE COUNTY 5333**  
 CALIBRATION & NAVIGATION OF RAW INSAT IMAGERY & APPLICATION FOR  
 CLIMATE VARIABILITY ANALYSES  
 04/04/2001 - 04/14/2002 FY01: \$59,150 Total: \$59,150  
*Prin. Invest.:* G I MOLNAR  
*Tech. Officer:* GSFC/A J NEGRİ  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10876 UNIV OF MARYLAND BALTIMORE COUNTY 5334**  
 STUDY OF SOLAR AND SPECTRAL GRADIENCE VARIATIONS BASED ON  
 SOHO/VIRGO AND MDI  
 05/15/2001 - 11/30/2001 FY01: \$111,389 Total: \$111,389  
*Prin. Invest.:* J M PAP  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10969 UNIV OF MARYLAND BALTIMORE COUNTY 5335**  
 DERIVING MICROPHYSICAL CLOUD PROFILES USING AIR- BORNE ACTIVE  
 & WIDEBAND PASSIVE MICROWAVE OBSERVA  
 06/06/2001 - 06/14/2002 FY01: \$28,596 Total: \$28,596  
*Prin. Invest.:* G SKOFRONICK-JACK  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11020 UNIV OF MARYLAND BALTIMORE COUNTY 5336**  
 SCATTERING & ABSORPTION PROPERTIES OF NONSPHERICAL /INHOMO-  
 GENEUS AEROSOLS& ICE CRYSTALS:  
 06/22/2001 - 06/30/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* P YANG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11092 UNIV OF MARYLAND BALTIMORE COUNTY 5337**  
 UNDERSTANDING ARK 564 (ADP 2000)  
 07/09/2001 - 09/30/2002 FY01: \$47,536 Total: \$47,536  
*Prin. Invest.:* T J TURNER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11115 UNIV OF MARYLAND BALTIMORE COUNTY 5338**  
 STUDIES OF THE UPPER ATMOSPHERIC INNER CORE REGION OF HURRI-  
 CANES USING THENASA ER-2 DROPWINDSONDE  
 07/26/2001 - 07/31/2002 FY01: \$152,789 Total: \$152,789  
*Prin. Invest.:* J B HALVERSON  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11150 UNIV OF MARYLAND BALTIMORE COUNTY 5339**  
 MARS WATER CONSTRAINTS FROM VOLCANIC LANDFORM TOPO GRAPHY  
 07/26/2001 - 07/31/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* S SAKIMOTO  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11156 UNIV OF MARYLAND BALTIMORE COUNTY 5340**  
 BBAERI AIRS OCEAN VALIDATION EXPERIMENT: BOAVE" AQUA-0056-0064  
 08/01/2001 - 08/31/2004 FY01: \$80,439 Total: \$80,439  
*Prin. Invest.:* W MCMILLAN  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11174 UNIV OF MARYLAND BALTIMORE COUNTY 5341**  
 CONSTRAINTS ON WATER ON MARS FROM EXPLOSIVE VOLCAN ISM LAND-  
 FORMTOPOGRAPHY  
 09/05/2001 - 09/30/2001 FY01: \$13,000 Total: \$13,000  
*Prin. Invest.:* S SAKIMOTO  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

MARYLAND

**NAG 5 11206 UNIV OF MARYLAND BALTIMORE COUNTY 5342**  
 MODELING OF SHORTWAVE RADIATION FIELDS USING ATMOSPHERIC  
 RADIATION MEASUREMENTS (ARM) & LANDSAT DATA  
 08/14/2001 - 06/30/2002 FY01: \$114,205 Total: \$114,205  
*Prin. Invest.:* A MARSHAK  
*Tech. Officer:* GSFC/W WISCOMBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11230 UNIV OF MARYLAND BALTIMORE COUNTY 5343**  
 OBSERVATIONALLY-BASED PROCESS EVALUATION OF MODEL TRANSPORT:  
 IMPROVING ATMOSPHERIC MODELS AND THE G  
 08/16/2001 - 08/14/2004 FY01: \$115,145 Total: \$115,145  
*Prin. Invest.:* S STRAHAN  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11269 UNIV OF MARYLAND BALTIMORE COUNTY 5344**  
 MICROPHYSICAL PROPERTIES OF CRYSTALLINE PARTICLES  
 DERIVED FROM AIRBORNE LADAR MEASUREMENTS  
 08/22/2001 - 08/31/2004 FY01: \$67,295 Total: \$67,295  
*Prin. Invest.:* J REICHARDT  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11284 UNIV OF MARYLAND BALTIMORE COUNTY 5345**  
 STATISTICAL INVESTIGATIONS OF SUBGRID SCALE VARIABILITY IN THE  
 UT/LS  
 08/17/2001 - 08/31/2004 FY01: \$73,791 Total: \$73,791  
*Prin. Invest.:* L SPARLING  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11326 UNIV OF MARYLAND BALTIMORE COUNTY 5346**  
 VARIATIONS IN THE SOLAR RADIATION ENERGY OUTPUT ON TIME SCALES  
 OF YEARS AND THE SOLAR CYCLE  
 09/05/2001 - 05/14/2003 FY01: \$20,378 Total: \$20,378  
*Prin. Invest.:* J PAP  
*Tech. Officer:* GSFC/C JACKSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 9 1190 UNIV OF MARYLAND BALTIMORE COUNTY 5347**  
 EFFECTS OF EXPOSURE TO HEAVY PARTICLES  
 01/20/2000 - 01/19/2003 FY01: \$178,062 Total: \$335,749  
*Prin. Invest.:* B M RABIN  
*Tech. Officer:* JSC/F A CUCINOTTA  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAS 1 99107 UNIV OF MARYLAND BALTIMORE COUNTY 5348**  
 PICASSO-CENA SCIENCE TEAM SUPPORT FOR AEROSOL RETRIEVAL  
 STUDIES  
 11/02/1999 - 11/01/2002 FY01: \$124,187 Total: \$129,187  
*Prin. Invest.:* R M HOFF  
*Tech. Officer:* LARC/G G GIBSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 00173 UNIV OF MARYLAND BALTIMORE COUNTY 5349**  
 PARTICIPATION IN THE OZONE MONITORING INSTRUMENT SCIENCE TEAM.  
 06/06/2000 - 10/31/2004 FY01: \$118,644 Total: \$188,644  
*Prin. Invest.:* O TORRES  
*Tech. Officer:* GSFC/J C RIVERA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 00203 UNIV OF MARYLAND BALTIMORE COUNTY 5350**  
 R & D TO SUPPORT GSFC'S SIMBIOS PROJECT  
 12/15/2000 - 11/30/2001 FY01: \$125,014 Total: \$125,014  
*Prin. Invest.:* M WANG  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 01110 UNIV OF MARYLAND BALTIMORE COUNTY 5351**  
 OZONE MONITORING INSTRUMENT (OMI) SCIENCE TEAM  
 04/18/2001 - 10/31/2004 FY01: \$127,932 Total: \$127,932  
*Prin. Invest.:* A KRUEGER  
*Tech. Officer:* GSFC/J C RIVERA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 31378 UNIV OF MARYLAND BALTIMORE COUNTY 5352**  
 EOS EXECUTION PHASE  
 12/16/1991 - 12/14/2001 FY01: \$480,000 Total: \$3,088,000  
*Prin. Invest.:* L L STROW  
*Tech. Officer:* GSFC/E R KREINS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 5 99141 UNIV OF MARYLAND BALTIMORE COUNTY 5353**  
 COMPACT HYPERSPECTRAL MAPPER FOR ENVIRONMENTAL APPLICATIONS  
 (CHYMER).  
 02/08/1999 - 12/15/2001 FY01: -\$56,344 Total: \$469,836  
*Prin. Invest.:* S JANZ  
*Tech. Officer:* GSFC/J HARTLEY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 1252 UNIV OF MARYLAND BALTIMORE COUNTY 5354**  
 DISTRIBUTED DATA MINING FOR LARGE NASA DATABASES  
 04/10/2001 - 02/28/2002 FY01: \$156,000 Total: \$156,000  
*Prin. Invest.:* H KARGUPTA  
*Tech. Officer:* ARC/J SKILES, ARC/J COUGHLAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 339 UNIV OF MARYLAND BALTIMORE COUNTY 5355**  
 JOINT CENTER FOR EARTH SYSTEM TECHNOLOGY NEW AWARD  
 07/01/1998 - 06/30/2002 FY01: \$2,555,684 Total: \$11,033,288  
*Prin. Invest.:* D CHRISTOU, R HOFF  
*Tech. Officer:* GSFC/R AFZAL, GSFC/C E COTE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 361 UNIV OF MARYLAND BALTIMORE COUNTY 5356**  
 DESKTOP STEREOSCOPIC VISUALIZATION AND ANALYSIS OF MULTI-DI-  
 MENSIONAL DATA SETS  
 09/08/1998 - 09/14/2001 FY01: \$0 Total: \$129,876  
*Prin. Invest.:* D S EBERT  
*Tech. Officer:* GSFC/A ROBERTS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 367 UNIV OF MARYLAND BALTIMORE COUNTY 5357**  
 LHEA/JMBC COOPERATIVE AGREEMENT (LUCA)  
 10/20/1998 - 12/31/2001 FY01: \$612,863 Total: \$1,028,605  
*Prin. Invest.:* M J HENRIKSEN  
*Tech. Officer:* GSFC/N E WHITE  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 494 UNIV OF MARYLAND BALTIMORE COUNTY 5358**  
 ESTABLISHMENT OF GODDARD EARTH SCIENCE & TECHN CTR ESTAB-  
 LISHING GODDARD EARTH SCIENCE AND TECHNOLOGY  
 05/11/2000 - 05/10/2005 FY01: \$6,960,835 Total: \$9,787,006  
*Prin. Invest.:* R CURRAN  
*Tech. Officer:* GSFC/R HARTLE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## MASSACHUSETTS

**NAG 1 2057 BOSTON COLLEGE 5359**  
 ENHANCEMENT OF SOLID STATE LASER OUTPUT VIA INTERI ONIC ENERGY  
 TRANSFER  
 04/24/1998 - 01/31/2001 FY01: \$0 Total: \$242,971  
*Prin. Invest.:* B DIBARTOIO, B WALSH  
*Tech. Officer:* LARC/N P BARNES, LARC/J C BARNES  
*CASE Category:* 13 - PHYSICS

**NAG 1 01019 BOSTON COLLEGE 5360**  
 INVESTIGATIONS OF FUNDAMENTAL PROCESSES IN LASER SOLIDS WITH  
 REMOTE SENSING APPLICATIONS  
 01/25/2001 - 11/30/2003 FY01: \$142,260 Total: \$142,260  
*Prin. Invest.:* B DIBARTOLO, B WALSH  
*Tech. Officer:* LARC/N P BARNES, LARC/J C BARNES  
*CASE Category:* 13 - PHYSICS

**NAG 1 01067 BOSTON COLLEGE 5361**  
 NATO ADVANCED STUDY INST ON SPECTROSCOPY WITH SPATIALLY  
 CONFINED STRUCTURES  
 04/18/2001 - 08/17/2001 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* B DIBARTOLOL  
*Tech. Officer:* LARC/J C BARNES  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10824 BOSTON COLLEGE 5362**  
 STAR FORMATION IN MSX INFRARED DARK CLOUDS (L TSA 2000)  
 05/01/2001 - 05/14/2002 FY01: \$87,882 Total: \$87,882  
*Prin. Invest.:* S J CAREY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10833 BOSTON COLLEGE 5363**  
 THE MAGNETIC STRUCTURE OF CMES: A COMPARISON OF HALO CMES  
 WITH MAGNETIC CLOUDS AT 1 AU  
 04/27/2001 - 04/30/2002 FY01: \$64,760 Total: \$64,760  
*Prin. Invest.:* D F WEBB  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1432 BOSTON UNIV 5364**  
 INTEGRATION OF ATMOSPHERIC, LABORATORY, & SATELITE DATA TO  
 ESTIMATE BIOSPHERIC SOURCES OF OXYGENATE  
 08/15/2000 - 08/14/2002 FY01: \$42,000 Total: \$80,000  
*Prin. Invest.:* R B MYNENI  
*Tech. Officer:* ARC/C S POTTER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 1844 BOSTON UNIV 5365**  
 DETERMINATION OF INTERFACIAL RHEOLOGICAL PROPERTIE S THROUGH  
 MICROGRAVITY OSCILLATIONS OF BUBBLES DR  
 05/03/1996 - 08/31/2000 FY01: \$0 Total: \$272,000  
*Prin. Invest.:* A NADIM  
*Tech. Officer:* GRC/B SINGH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 2121 BOSTON UNIV 5366**  
 RHEOLOGY OF FOAM NEAR THE ORDER-DISORDER TRANSITIO N  
 02/17/1998 - 08/31/2000 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* R G HOLT, J G MCDANIEL  
*Tech. Officer:* GRC/R B ROGERS  
*CASE Category:* 13 - PHYSICS

**NAG 3 2143 BOSTON UNIV 5367**  
 SONOLUMINESCENCE IN SPACE: THE CRITICAL ROLE OF B OUYANCY IN  
 STABILITY AND EMISSION MECHANISMS  
 04/10/1998 - 01/08/2002 FY01: \$162,500 Total: \$517,500  
*Prin. Invest.:* R G HOLT, R A ROY  
*Tech. Officer:* GRC/N R HALL  
*CASE Category:* 13 - PHYSICS

**NAG 3 2392 BOSTON UNIV 5368**  
 RHEOLOGY OF FOAM NEAR THE ORDER-DISORDER PHASE TRA NSITION  
 04/18/2000 - 11/30/2003 FY01: \$80,000 Total: \$130,000  
*Prin. Invest.:* D HOLT  
*Tech. Officer:* GRC/R B ROGERS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 690 BOSTON UNIV 5369**  
 A SOUNDING ROCKET PROGRAM IN EXTREME AND FAR UV INTERFER-  
 OMETRY  
 04/29/1992 - 01/31/2001 FY01: \$0 Total: \$2,352,044  
*Prin. Invest.:* S CHAKRABARTI  
*Tech. Officer:* GSFC/R H PLESS  
*CASE Category:* 13 - PHYSICS

**NAG 5 3384 BOSTON UNIV 5370**  
 TOWARD A REFINED UNDERSTANDING OF THE HIGH-ENERGY  
 GAMMA-RAY UNIVERSE  
 08/28/1996 - 08/31/2001 FY01: \$0 Total: \$365,000  
*Prin. Invest.:* J R MATTOX  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3439 BOSTON UNIV 5371**  
 MONITORING CHANGE IN TEMPERATE CONIFEROUS FOREST E COSYS-  
 TEMS  
 10/07/1996 - 12/31/2001 FY01: \$50,854 Total: \$915,007  
*Prin. Invest.:* C WOODCOCK  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3748 BOSTON UNIV 5372**  
 THE MAGNETOSPHERIC MAPPING MISSION  
 03/10/1997 - 03/14/2001 FY01: -\$31 Total: \$199,969  
*Prin. Invest.:* D E SPENCE  
*Tech. Officer:* GSFC/R HOWARD  
*CASE Category:* 13 - PHYSICS

**NAG 5 3839** **BOSTON UNIV** **5373**  
 FREQUENCY STRATIFICATION OF THE NONTHERMAL EMISSIONS  
 02/24/1997 - 02/28/2001 FY01: \$1,000 Total: \$287,000  
*Prin. Invest.:* A P MARSCHER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3999** **BOSTON UNIV** **5374**  
 A SILICON ANODE DETECTOR WITH INTEGRATED ELECTRONICS  
 03/06/1997 - 02/28/2001 FY01: \$0 Total: \$491,700  
*Prin. Invest.:* D CHAKRABARTI  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4246** **BOSTON UNIV** **5375**  
 USE OF ENERGETIC NEUTRAL ATOMS AS DIAGNOSTICS OF M PROCESSES  
 03/26/1997 - 04/30/2001 FY01: \$0 Total: \$262,266  
*Prin. Invest.:* D MENDILLO  
*Tech. Officer:* GSFC/J GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 4273** **BOSTON UNIV** **5376**  
 SEPARATING SPATIAL AND TEMPORAL VARIATIONS OF THE NEARLY COLO-  
 CATED SATELLITES  
 04/04/1997 - 04/30/2001 FY01: \$0 Total: \$222,632  
*Prin. Invest.:* D E SPENCE  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 4707** **BOSTON UNIV** **5377**  
 USE OF NASA'S GLOBAL POSITIONING SYSTEM (GPS) MONITORING STUDIES OF  
 IONOSPHERIC STRUCTURE AND VARIABILITY  
 06/11/1997 - 05/31/2001 FY01: \$0 Total: \$200,000  
*Prin. Invest.:* D MENDILLO  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5137** **BOSTON UNIV** **5378**  
 SPECTRE: STUDENT-RUN PROGRAM FOR EXOATMOSPHERIC  
 COLLECTING TECHNOLOGIES & ROCKET EXPERIMENTS  
 04/14/1997 - 12/31/2000 FY01: -\$2 Total: \$43,193  
*Prin. Invest.:* S CHAKRABARTI  
*Tech. Officer:* GSFC/W JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5251** **BOSTON UNIV** **5379**  
 A SUBORBITAL RESEARCH PROGRAM IN ULTRAVIOLET HIGH RESOLUTION  
 AND IMAGING SPECTROSCOPY PI CHAKRABARTI  
 02/04/2000 - 02/03/2003 FY01: \$351,490 Total: \$652,929  
*Prin. Invest.:* S CHAKRABARTI  
*Tech. Officer:* WFF/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6214** **BOSTON UNIV** **5380**  
 MODELING AND FORECASTING EFFECTS OF LAND-USE CHANGE  
 SOCIOECONOMIC DRIVERS  
 08/18/1997 - 06/30/2001 FY01: \$0 Total: \$312,042  
*Prin. Invest.:* D K KAUFMANN  
*Tech. Officer:* GSFC/G C GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6658** **BOSTON UNIV** **5381**  
 ULYSSES DATA ANALYSIS: MAGNETIC TOPOLOGY OF HELIO SPHERIC  
 STRUCTURES  
 11/20/1997 - 06/30/2001 FY01: \$0 Total: \$203,772  
*Prin. Invest.:* N CROOKER  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6716** **BOSTON UNIV** **5382**  
 THERMAL AND HYDROLOGIC SIGNATURE OF SOIL CONTROLS ON EVAPORATION:  
 A COMBINED ENERGY AND WATER  
 12/10/1997 - 06/30/2000 FY01: -\$695 Total: \$148,119  
*Prin. Invest.:* G SALVUCCI  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6755** **BOSTON UNIV** **5383**  
 ANALYSIS AND MODELING OF COMET HALE-BOPP'S MULTIPLE TAILS  
 12/16/1997 - 02/28/2001 FY01: \$0 Total: \$96,000  
*Prin. Invest.:* M MENDILLO  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6926** **BOSTON UNIV** **5384**  
 THE CLUSTER II RAPID RESPONSE EFFORT AT BOSTON UNIVERSITY-PRELAUNCH  
 ACTIVITY  
 02/05/1998 - 10/31/2000 FY01: -\$8 Total: \$202,780  
*Prin. Invest.:* T FRITZ  
*Tech. Officer:* GSFC/L CHRISTENSEN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 7049** **BOSTON UNIV** **5385**  
 WIND DATA ANALYSIS: GLOBAL HELIOSPHERIC STRUCTURES  
 02/26/1998 - 06/30/2002 FY01: \$10,000 Total: \$127,700  
*Prin. Invest.:* N U CROOKER  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7217** **BOSTON UNIV** **5386**  
 GEOMETRIC OPTICAL MODELING OF DIRECTIONAL THERMAL RADIANCE  
 FOR IMPROVEMENT OF LAND SURFACE TEMPERATURE  
 04/17/1998 - 12/31/2001 FY01: \$34,086 Total: \$300,236  
*Prin. Invest.:* X LI  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7218** **BOSTON UNIV** **5387**  
 MACHINE LEARNING TO IMPROVE LAND COVER CLASSIFICATIONS FROM  
 MULTISENSOR AND MULTITEMPORAL DATA  
 04/09/1998 - 04/14/2001 FY01: \$0 Total: \$84,433  
*Prin. Invest.:* M FRIEDL  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7331** **BOSTON UNIV** **5388**  
 XTE PROPOSAL MULTIWAVEBAND MONITORING OF THE RADIO GALAXY  
 3C 120  
 04/24/1998 - 04/30/2000 FY01: -\$46 Total: \$10,454  
*Prin. Invest.:* A MARSCHER  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7452** **BOSTON UNIV** **5389**  
 SIMULATIONS AND THEORY OF THE FARLEY-BUNEMAN INSTABILITY IN THE E-REGION IONOSPHERE  
 07/10/1998 - 08/31/2001 FY01: \$0 Total: \$157,357  
*Prin. Invest.:* M OPPENHEIM  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 7472** **BOSTON UNIV** **5390**  
 ADVANCED DATA SETS FROM FUSION OF AVHRR AND SEAWIFS DATA  
 06/16/1998 - 06/30/2001 FY01: \$0 Total: \$70,775  
*Prin. Invest.:* R MYNENI  
*Tech. Officer:* GSFC/C TUCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7677** **BOSTON UNIV** **5391**  
 STUDIES BY THE CAMMICE INVESTIGATION TEAM DURING THE EXTENDED MISSION OF GGSPOL  
 09/18/1998 - 09/30/2001 FY01: \$360,000 Total: \$1,335,607  
*Prin. Invest.:* T FRITZ  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7706** **BOSTON UNIV** **5392**  
 STUDIES OF MAGNETOSPHERIC ENERGETIC PARTICLES IN THE SOLAR MAXIMUM AREA  
 10/01/1998 - 12/31/2001 FY01: \$75,000 Total: \$355,000  
*Prin. Invest.:* H E SPENCER  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7861** **BOSTON UNIV** **5393**  
 DYNAMICS OF JOVIAN UPPER ATMOSPHERES FROM STELLAR OCCULTATIONS  
 01/07/1999 - 03/31/2000 FY01: -\$7,633 Total: \$23,096  
*Prin. Invest.:* D A YOUNG  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8012** **BOSTON UNIV** **5394**  
 INVESTIGATIONS INTO THE ORIGIN OF THE MOON'S ATMOSPHERE: OBSERVATIONS AND MODELING  
 01/13/1999 - 12/31/2000 FY01: \$0 Total: \$132,420  
*Prin. Invest.:* M MENDILLO  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8039** **BOSTON UNIV** **5395**  
 MULTIPoint ENERGETIC NEUTRAL ATOM STUDIES WITH POLAR, GEOTAIL, AND TIROS  
 01/11/1999 - 01/14/2001 FY01: \$0 Total: \$59,748  
*Prin. Invest.:* H E SPENCE  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8135** **BOSTON UNIV** **5396**  
 "SIGNATURES OF MAGNETOPAUSE RECONNECTION".  
 01/29/1999 - 01/31/2002 FY01: \$241,909 Total: \$607,075  
*Prin. Invest.:* G L SISCOE  
*Tech. Officer:* GSFC/J GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 8147** **BOSTON UNIV** **5397**  
 AN AUDIO-MULTIMEDIA WORKSTATION: SCIENCE DATA ANALYSIS USING SONIFICATION AND SIMULTANEOUS  
 02/04/1999 - 12/31/2000 FY01: \$0 Total: \$176,485  
*Prin. Invest.:* J D SULLIVAN  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8584** **BOSTON UNIV** **5398**  
 INVESTIGATION OF AERODYNAMIC AND RADIOMETRIC LAND SURFACE TEMPERATURES  
 06/21/1999 - 06/30/2002 FY01: \$22,835 Total: \$65,906  
*Prin. Invest.:* M A FRIEDL  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8659** **BOSTON UNIV** **5399**  
 COLLECTION OF LAI & FPAR DATA OVER THE TERRA CORE SITES  
 08/31/1999 - 08/31/2000 FY01: \$0 Total: \$25,000  
*Prin. Invest.:* R MYNENI  
*Tech. Officer:* GSFC/J PRIVETTE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8666** **BOSTON UNIV** **5400**  
 DIRECT ESTIMATION OF THE FORM AND SCALE-DEPENDENCE OF SOIL MOISTURE CONTROL ON LAND SURFACE WATER  
 07/01/1999 - 12/31/2000 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* G D SALVUCCI  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8756** **BOSTON UNIV** **5401**  
 GRAVITATIONAL LENSING: RECENT PROGRESS AND FUTURE GOALS CONFERENCE  
 08/25/1999 - 06/30/2001 FY01: \$0 Total: \$13,996  
*Prin. Invest.:* T BRAINERD  
*Tech. Officer:* GSFC/L KALUZIENSKI  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9110** **BOSTON UNIV** **5402**  
 SUBSTORM EVOLUTION IN THE NEAR-EARTH PLASMA SHEET  
 02/23/2000 - 02/28/2002 FY01: \$94,598 Total: \$182,498  
*Prin. Invest.:* G ERICKSON  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9161** **BOSTON UNIV** **5403**  
 RXTE OBSERVATIONS OF SELECTED BLAZARS - ADP - 99  
 03/08/2000 - 03/14/2002 FY01: \$0 Total: \$23,580  
*Prin. Invest.:* A MARSCHER  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9191** **BOSTON UNIV** **5404**  
 SUPPORT FOR SCIENTIFIC EVALUATION OF RAPID ORBIT PERFORMANCE  
 03/08/2000 - 03/14/2001 FY01: \$0 Total: \$72,855  
*Prin. Invest.:* T FRITZ  
*Tech. Officer:* GSFC/L CHRISTENSEN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER



**NAG 5 9444** **BOSTON UNIV** **5405**  
 SIMULATIONS & THEORY OF ELECTRON PHASE-SPACE HOLES OBSERVED  
 IN THE AURORAL IONOSPHERE  
 04/13/2000 - 12/31/2001 FY01: \$0 Total: \$37,000  
*Prin. Invest.:* M OPPENHEIM  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9547** **BOSTON UNIV** **5406**  
 MULTI-DECADAL PATHFINDER DATA SETS OF GLOBAL LAND BIOPHYSICAL  
 VARIABLES FROM AVHRR & MODIS & THEIR  
 05/16/2000 - 05/31/2002 FY01: \$73,570 Total: \$150,000  
*Prin. Invest.:* R MYNENI  
*Tech. Officer:* GSFC/DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9557** **BOSTON UNIV** **5407**  
 MULTIPPOINT ENERGETIC NEUTRAL ATOM IMAGING WITH POLAR GEOTAIL  
 AND TIROS  
 05/16/2000 - 05/14/2002 FY01: \$0 Total: \$58,999  
*Prin. Invest.:* H SPENCE  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9562** **BOSTON UNIV** **5408**  
 NEW ISTP SOLAR MAX: CUSP ENERGETIC PARTICLES  
 05/09/2000 - 05/14/2001 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* J CHEN  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9582** **BOSTON UNIV** **5409**  
 A LARGE FORMAT, MINIATURIZED, PHOTON COUNTING IMAGING SYSTEM  
 WITH MICRO-CHANNEL PLATE PORE-LIMITED  
 05/09/2000 - 05/14/2002 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* S CHAKRABARTI  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 13 - PHYSICS

**NAG 5 10108** **BOSTON UNIV** **5410**  
 THE CLUSTER RAPID ON-ORBIT OPERATIONS AND DATA VERIFICATION  
 12/28/2000 - 12/31/2001 FY01: \$502,000 Total: \$502,000  
*Prin. Invest.:* T FRITZ  
*Tech. Officer:* GSFC/M GOLDSTEIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 10156** **BOSTON UNIV** **5411**  
 RETRIEVING LAI AND FPAR FROM MERIS DATA WITH ADVANCED ALGO-  
 RITHMS  
 12/18/2000 - 12/31/2001 FY01: \$89,641 Total: \$89,641  
*Prin. Invest.:* R B MYNENI  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10286** **BOSTON UNIV** **5412**  
 USE OF ENERGETIC NEUTRAL ATOMS AS DIAGNOSTICS OF MAGNETO-  
 SPHERIC PROCESSES AT JUPITER  
 01/23/2001 - 01/31/2002 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* M MENDILLO  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10419** **BOSTON UNIV** **5413**  
 CONSTELLATION PATHFINDER TECHNOLOGY DEVELOPMENT: SYSTEMS  
 INTEGRATION AND MANUFACTURABILITY.  
 03/13/2001 - 03/14/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* D SPENCE  
*Tech. Officer:* GSFC/P BUCHANAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10496** **BOSTON UNIV** **5414**  
 HIGH DEFINITION IMAGES OF MERCURY'S SURFACE AND EXTENDED  
 ATMOSPHERE  
 02/28/2001 - 02/28/2002 FY01: \$55,000 Total: \$55,000  
*Prin. Invest.:* J BAUMGARDNER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10801** **BOSTON UNIV** **5415**  
 CONCEPT STUDY FOR THE "A SMALL EXPLORER MISSION FOR SPEC-  
 TROSCOPY & PHOTOMETRY OF IGM'S DIFFUSE  
 04/30/2001 - 04/30/2002 FY01: \$450,000 Total: \$450,000  
*Prin. Invest.:* P CHAKRABARTI  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10808** **BOSTON UNIV** **5416**  
 INFRARED STUDIES OF 13CO CLUMPS IN THE GRS (LISA 2 000)  
 04/25/2001 - 04/30/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* J M JACKSON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10856** **BOSTON UNIV** **5417**  
 HELIOSPHERIC CURRENT SHEET STRUCTURE  
 05/01/2001 - 04/30/2002 FY01: \$71,950 Total: \$71,950  
*Prin. Invest.:* N U CROOKER  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 10881** **BOSTON UNIV** **5418**  
 HELIOSPHERIC CONSEQUENCES OF CORONAL MASS EJECTION  
 05/14/2001 - 05/31/2002 FY01: \$71,950 Total: \$71,950  
*Prin. Invest.:* N U CROOKER  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11077** **BOSTON UNIV** **5419**  
 IONOSPHERE VARIABILITY AND STORMS ON MARS  
 08/06/2001 - 08/14/2003 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* M MENDILLO  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11165** **BOSTON UNIV** **5420**  
 MODELING STUDIES OF TITAN'S THERMOSPHERE, IONOSPHERE, AND  
 AURORA  
 08/06/2001 - 08/14/2004 FY01: \$40,198 Total: \$40,198  
*Prin. Invest.:* M MENDILLO  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 11263** **BOSTON UNIV** **5421**  
 LAND SURFACE ALBEDO FROM MERIS REFLECTIONS USING MODIS  
 DIRECTIONALFACTORS  
 08/29/2001 - 12/31/2003 FY01: \$22,607 Total: \$22,607  
*Prin. Invest.:* C SCHAAF  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11338** **BOSTON UNIV** **5422**  
 THE EFFECTS OF AGRICULTURAL EXPANSION ON REGIONAL HYDROLOGY  
 IN SETURKEY  
 09/07/2001 - 09/15/2004 FY01: \$191,205 Total: \$191,205  
*Prin. Invest.:* G SALVUCCI  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1522** **BOSTON UNIV** **5423**  
 DIRECT USE OF SATELLITE REMOTE SENSING IN THE ESTIMATION OF  
 HYDROLOGIC TRANSPORTS.  
 05/22/1998 - 09/30/2001 FY01: \$0 Total: \$134,869  
*Prin. Invest.:* G D SALVUCCI  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 31369** **BOSTON UNIV** **5424**  
 MODERATE RESOLUTION IMAGING SPECTROMETER INVESTIGATION -  
 LAND COVER CHANGES  
 12/30/1991 - 12/14/2001 FY01: \$645,000 Total: \$5,389,303  
*Prin. Invest.:* W STRAHLER  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 96061** **BOSTON UNIV** **5425**  
 MODIS  
 09/27/1996 - 12/14/2001 FY01: \$384,000 Total: \$1,985,000  
*Prin. Invest.:* R B MYNENI  
*Tech. Officer:* GSFC/D TOLL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 1233** **BOSTON UNIV** **5426**  
 A BENCHMARK DATASET OF MULTIDIMENSIONAL EARTH SCIENCE  
 SATELLITE DATA FOR TESTING OF LEARNING ALGORITHMS  
 03/30/2001 - 02/28/2002 FY01: \$97,000 Total: \$97,000  
*Prin. Invest.:* R B MYNENI  
*Tech. Officer:* ARC/J C OUGHLAN, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 9 127** **BOSTON UNIV** **5427**  
 MICRO GRAVITY INDUCED CHANGES IN CONTROL OF MUSCLES  
 05/11/2001 - 05/31/2004 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* C J DE LUCA  
*Tech. Officer:* JSC/M ANDERSON  
*CASE Category:* 56 - MEDICINE

**NGT 1 52199** **BOSTON UNIV** **5428**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 07/20/1998 - 06/30/2001 FY01: \$12,000 Total: \$66,000  
*Prin. Invest.:* K P HARLING, B DI BARTOLO  
*Tech. Officer:* LARC/J C BARNES, LARC/P BARNES  
*CASE Category:* 13 - PHYSICS

**NGT 5 30223** **BOSTON UNIV** **5429**  
 RELATION BETWEEN INTERANNUAL VARIABILITY IN ATMOSPHERIC CO<sub>2</sub>,  
 SEA (ENSO) AND LAND SURFACE TEMPERATURE  
 09/20/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* R MYNENI, L ZHOU  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30401** **BOSTON UNIV** **5430**  
 URBANIZATION AS A COMPONENT OF GLOBAL CHANGE. STUDENT: ANNE-  
 MARIE SCHNEIDE  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* C WOODSTOCK  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPLINARY, OTHER

**NGT 5 30405** **BOSTON UNIV** **5431**  
 ESTIMATION OF LAND SURFACE ENERGY BALANCE AND SURFACE  
 PROPERTIES USING REMOTELY-SENSED OBSERVATION  
 08/16/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* M FRIEDL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPLINARY, OTHER

**NGT 5 50171** **BOSTON UNIV** **5432**  
 TOMOGRAPHIC IMAGING OF THE HOT INTERSTELLAR MEDIA USING  
 ULTRAVIOLET SPECTROSCOPY  
 06/03/1998 - 06/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* S CHAKRABARTI  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 50288** **BOSTON UNIV** **5433**  
 SIMULATION OF PLASMA TURBULENCE IN THE AURORAL IONOSPHERE  
 06/26/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* M OPPENHEIM  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPLINARY, OTHER

**NGT 5 50307** **BOSTON UNIV** **5434**  
 GENE EXPRESSION PROFILE OF UNLOADED SKELETAL MUSCLE -  
 STUDENT: ERIC STEVENSON  
 07/06/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* S KANDARIAN  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPLINARY, OTHER

**NGT 5 50309** **BOSTON UNIV** **5435**  
 A PROSTHETIC FOOT SOLE FOR THE MITIGATION OF BALANCE DEFICITS  
 CAUSED BY REDUCED PLANTAR SENSATION  
 07/07/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* L ODDSSON  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPLINARY, OTHER

**NAG 3 2386** **BRANDEIS UNIV** **5436**  
 NUCLEATION OF COLLOIDAL AND PROTEIN CRYSTALS IN THE VICINITY OF  
 A METASTABLE CRITICAL POINT  
 04/07/2000 - 11/30/2003 FY01: \$95,000 Total: \$170,000  
*Prin. Invest.:* D FRADEN  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 6100** **BRANDEIS UNIV** **5437**  
 THE GRAYBIEL LABORATORY ROTATING ROOM RESEARCH FACILITY  
 10/02/1997 - 08/31/2000 FY01: \$0 Total: \$825,418  
*Prin. Invest.:* D LACKNER  
*Tech. Officer:* GSFC/V SCHNEIDER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1037** **BRANDEIS UNIV** **5438**  
 MOTOR ADAPTATION TO CORIOLIS AND CONTACT  
 07/01/1998 - 06/30/2001 FY01: \$266,364 Total: \$811,776  
*Prin. Invest.:* J LACKNER  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1038** **BRANDEIS UNIV** **5439**  
 ADAPTATION IN ARTIFICIAL GRAVITY ENVIRONMENTS  
 06/25/1998 - 08/30/2001 FY01: \$250,350 Total: \$617,290  
*Prin. Invest.:* J LACKNER  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1263** **BRANDEIS UNIV** **5440**  
 DEVELOPING PROCEDURES FOR ALLEVIATING ASTRONAUTS POST  
 FLIGHT DISTR OF POSTURE AND LOCOMOTION  
 12/06/2000 - 11/30/2003 FY01: \$309,386 Total: \$309,386  
*Prin. Invest.:* J R LACKNER  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 1443** **CLARK UNIV** **5441**  
 COFFEE HARVEST OPTIMIZATION USING UAV PLATFORMS FOR THE  
 ACQUISITION OF HIGH SPATIAL RESOLUTION REAL  
 09/27/2000 - 12/31/2000 FY01: \$0 Total: \$90,000  
*Prin. Invest.:* S R HERWITZ  
*Tech. Officer:* ARC/S S WEGENER, ARC/R S HIPSKIN  
*CASE Category:* 55 - AGRICULTURE

**NAG 5 6046** **CLARK UNIV** **5442**  
 LAND-USE COVER IN THE SOUTHERN YUCATAN PENINSULA R  
 07/31/1997 - 02/25/2001 FY01: \$0 Total: \$530,000  
*Prin. Invest.:* B TURNER  
*Tech. Officer:* GSFC/A JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8559** **CLARK UNIV** **5443**  
 PIXELING THE SOCIAL USING REMOTELY SENSED INFORMATION IN  
 SOCIAL SCIENCE MODELS  
 07/08/1999 - 06/30/2002 FY01: \$116,917 Total: \$344,368  
*Prin. Invest.:* J GEOGHEGAN  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11134** **CLARK UNIV** **5444**  
 LCLUC-SYPR II  
 07/26/2001 - 07/31/2002 FY01: \$99,824 Total: \$99,824  
*Prin. Invest.:* B TURNER  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1270** **CLARK UNIV** **5445**  
 COFFEE HARVEST OPTIMIZATION USING UAV PLATFORMS FOR THE  
 ACQUISITION OF HIGH SPATIAL RESOLUTION REAL  
 06/07/2001 - 06/14/2002 FY01: \$840,000 Total: \$840,000  
*Prin. Invest.:* S HERWITZ  
*Tech. Officer:* ARC/S S WEGENER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 97** **CLARK UNIV** **5446**  
 INTEGRATED ASSESSMENT AND PROJECTION OF LAND-USE/ COVER  
 CHANGE IN THE SOUTHERN YUCATAN PENINSULAR  
 08/24/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* B L TURNER, S MANSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30061** **CLARK UNIV** **5447**  
 DIAGNOSIS OF SPATIAL AND TEMPORAL PATTERNS OF DRY LAND-AT-  
 MOSPHERE WATER EXCHANGE IN THE TROPICAL SAV  
 09/10/1997 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* L LEWIS  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30129** **CLARK UNIV** **5448**  
 IDENTIFYING THE BIOPHYSICAL & HUMAN DIMENSIONS OF LAND  
 DEGRADATION IN THE SEMI-ARID KAROO, SOUTH AFR  
 10/08/1997 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* B TURNER  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30147** **CLARK UNIV** **5449**  
 IDENTIFYING THE LAND-MANAGEMENT INSTS AND LANDSCAPE  
 PATTERNS GOVERNING SAVANNA FIRE REGI  
 08/31/1998 - 08/31/2002 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* B L TURNER, 11  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30153** **CLARK UNIV** **5450**  
 LINKING REMOTE SENSING AND SOCIAL ANALYSIS: CAUSAL INFLUENCES  
 OF TRANSITIONING ECONOMIES ON  
 08/28/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* B L TURNER, 11, HAAN  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30197** **CLARK UNIV** **5451**  
 CONSERVATION IN THE SOUTHERN YUCATAN PENINSULAR REGION,  
 MEXICO: LINKING LANDSCAPE ECOLOGY AND SOCIA  
 08/18/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* B L TURNER, 11  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30217** **CLARK UNIV** **5452**  
 SOCIALIZING MIOMBO GEOLOGY: CHANGE IN WOODLAND USE AND ITS  
 MEANING FOR SUSTAINABLE LIVELIHOODS/STUD  
 08/24/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* B L TURNER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1796** **COLLEGE OF THE HOLY CROSS** **5453**  
 FOR RESEARCH "TRANSIENT DENDRITIC SOLIDIFICATION EXPERIMENT"  
 03/07/2001 - 02/23/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* M KOSS  
*Tech. Officer:* MSFC/A JACKSON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 2007** **HARVARD UNIV** **5454**  
 IN-SITU DETECTION OF OH, HO<sub>2</sub>, ClO, BRO, NO<sub>2</sub>, ClONO<sub>2</sub>, H<sub>2</sub>O, AND O<sub>3</sub>  
 FROM THE ER-2  
 02/18/1998 - 03/31/2001 FY01: -\$1 Total: \$5,928,959  
*Prin. Invest.:* J G ANDERSON  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2025** **HARVARD UNIV** **5455**  
 ANALYSIS OF INTERANNUAL AND LONG TERM VARIATIONS OF STRATO-  
 SPHERIC TRANSPORT OF OZONE AND DEVELOP-  
 03/19/1998 - 01/31/2001 FY01: \$1 Total: \$345,001  
*Prin. Invest.:* S C WOFSY  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2126** **HARVARD UNIV** **5456**  
 ANALYSIS AND MODELING OF PEM-TROPICS (B) DATA MY 1/3  
 02/02/1999 - 12/31/2001 FY01: \$1 Total: \$328,001  
*Prin. Invest.:* D J JACOB, J A LOGAN  
*Tech. Officer:* LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2307** **HARVARD UNIV** **5457**  
 GLOBAL THREE-DIMENSIONAL MODELING STUDIES OF TROPOSPHERIC  
 OZONE  
 06/28/2000 - 03/31/2003 FY01: \$211,001 Total: \$481,001  
*Prin. Invest.:* D J JACOB  
*Tech. Officer:* LARC/G L MADDREA, HQ/P DE COLA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2328** **HARVARD UNIV** **5458**  
 ANALYSIS OF ASIAN OUTFLOW OVER THE PACIFIC USING OBSERVATIONS  
 FROM TRACE-P, NRA 00-OES-01  
 09/20/2000 - 06/30/2003 FY01: \$115,469 Total: \$224,059  
*Prin. Invest.:* D J JACOB  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01095** **HARVARD UNIV** **5459**  
 CHEMISTRY, DYNAMICS, AND RADIATION OF OZONE LOSS AIRBORNE  
 MEAS OF OH, HO<sub>2</sub>, NO<sub>2</sub>, ClO, BRO, IO, ClONO<sub>2</sub>  
 07/18/2001 - 12/31/2003 FY01: \$1,999,722 Total: \$1,999,722  
*Prin. Invest.:* J G ANDERSON  
*Tech. Officer:* LARC/L R POOLE, LARC/G L MADDREA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1300** **HARVARD UNIV** **5460**  
 FREE RADICALS & REACTIVE INTERMEDIATES FOR THE SAGE III OZONE  
 LOSS & VALIDATION EXPERIMENT SOLVE MI  
 03/09/1999 - 11/30/2000 FY01: \$0 Total: \$519,444  
*Prin. Invest.:* J G ANDERSON  
*Tech. Officer:* ARC/E P CONDON, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1304** **HARVARD UNIV** **5461**  
 IN SITU MEASUREMENT OF CONCENTRATION OF ATMOSPHERIC CO<sub>2</sub> IN  
 THE SAGE-2 OZONE LOSS &...: BALLOON MEAS  
 03/19/1999 - 12/31/2001 FY01: \$0 Total: \$309,500  
*Prin. Invest.:* S C WOFSY  
*Tech. Officer:* ARC/E P CONDON, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1310** **HARVARD UNIV** **5462**  
 IN SITU MEASUREMENT OF CONCENTRATION OF ATMOSPHERIC CO<sub>2</sub> IN  
 THE SAGE-3 OZONE LOSS & VALIDATION EXPER  
 03/19/1999 - 12/31/2001 FY01: \$119,500 Total: \$437,000  
*Prin. Invest.:* S C WOFSY  
*Tech. Officer:* ARC/E P CONDON, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1417** **HARVARD UNIV** **5463**  
 BIOMECHANICS OF ARABIDOPSIS THALIANA WAVY ROOT DEVELOPMENT  
 07/11/2000 - 06/30/2002 FY01: \$52,740 Total: \$121,609  
*Prin. Invest.:* N M HOLBROOK  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1509** **HARVARD UNIV** **5464**  
 CONTROL OF CELL MECHANICS AND FUNCTION BY CELL MICROENVIRON-  
 MENT  
 07/26/2001 - 07/31/2002 FY01: \$112,405 Total: \$112,405  
*Prin. Invest.:* N WANG  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2284** **HARVARD UNIV** **5465**  
 PHYSICS OF COLLOIDS IN SPACE PHYSICS OF COLLOIDS IN SPACE  
 08/02/1999 - 06/30/2004 FY01: \$378,125 Total: \$831,125  
*Prin. Invest.:* D WEITZ  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2376** **HARVARD UNIV** **5466**  
 MICROGRAVITY DRIVEN INSTABILITIES IN GAS-FLUIDIZED BEDS  
 03/27/2000 - 11/30/2003 FY01: \$19,000 Total: \$49,000  
*Prin. Invest.:* D A WEITZ  
*Tech. Officer:* GRC/B MOTIL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2381** **HARVARD UNIV** **5467**  
 FABRICATION OF PHOTONIC STRUCTURE WITH COLLOIDAL ENGINEERING  
 04/07/2000 - 11/30/2003 FY01: \$76,000 Total: \$136,000  
*Prin. Invest.:* D A WHITE  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2492** **HARVARD UNIV** **5468**  
 ENGINEERING OF NOVEL BIOCOLLOIDAL SUSPENSIONS ENGINEERING OF  
 NOVEL BIOCOLLOIDAL SUSPENSIONS  
 10/17/2000 - 11/30/2003 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* D A WEITZ  
*Tech. Officer:* GRC/D GRIFFIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3553** **HARVARD UNIV** **5469**  
 AN INVESTIGATION OF THE COUPLING BETWEEN TROPOSPHERIC OZONE,  
 SULFATE AEROSOLS AND CLIMATE.....  
 12/05/1996 - 08/31/2000 FY01: \$0 Total: \$990,000  
*Prin. Invest.:* D JACOB  
*Tech. Officer:* GSFC/D RIND  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3645** **HARVARD UNIV** **5470**  
 EVOLUTION OF PROTEROZOIC MICROORGANISMS AND ENVIRO  
 03/05/1997 - 11/30/2001 FY01: \$0 Total: \$353,808  
*Prin. Invest.:* D H KNOLL  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4174** **HARVARD UNIV** **5471**  
 PALEOSOLS AS INDICATORS OF ATMOSPHERIC EVOLUTION  
 03/24/1997 - 09/30/2000 FY01: \$0 Total: \$465,967  
*Prin. Invest.:* D D HOLLAND  
*Tech. Officer:* GSFC/M A MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 4216** **HARVARD UNIV** **5472**  
 CCD PHOTOMETRY STUDY OF KUIPER BELT OBJECTS  
 04/09/1997 - 02/29/2000 FY01: -\$10,009 Total: \$69,408  
*Prin. Invest.:* D X SASSELOV  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4302** **HARVARD UNIV** **5473**  
 CROSS SECTION MEASUREMENTS FOR SOLAR COSMIC RAY ST  
 04/12/1997 - 06/30/2001 FY01: \$0 Total: \$82,034  
*Prin. Invest.:* D SISTERTON  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4348** **HARVARD UNIV** **5474**  
 ABSOLUTE TRANSITION PROBABILITIES FOR LINES IN THE ASTROPHYSICAL  
 ATOMS, MOLECULES AND IONS  
 04/17/1997 - 12/31/2001 FY01: \$90,000 Total: \$426,197  
*Prin. Invest.:* W H PARKINSON  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4430** **HARVARD UNIV** **5475**  
 ISOTOPIC STUDIES OF SOLAR SYSTEMS ORIGINS  
 05/06/1997 - 02/28/2002 FY01: \$45,000 Total: \$178,000  
*Prin. Invest.:* D B JACOBSEN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4522** **HARVARD UNIV** **5476**  
 DEVELOPMENT OF HOT-ELECTRON MICROBOLOMETERS FOR OB COSMIC  
 MICROWAVE BACKGROUND RADIATION  
 05/28/1997 - 12/31/1999 FY01: -\$122,937 Total: \$144,021  
*Prin. Invest.:* P NAHUM  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4713** **HARVARD UNIV** **5477**  
 CRYSTAL-LIQUID DENSITY INVERSIONS IN LUNAR AND PLA  
 06/17/1997 - 06/30/2000 FY01: -\$117 Total: \$69,883  
*Prin. Invest.:* D G AGEE  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4720** **HARVARD UNIV** **5478**  
 TUNGSTEN ISOTOPE STUDIES OF METEORITES  
 06/17/1997 - 03/31/2001 FY01: \$0 Total: \$75,000  
*Prin. Invest.:* D B JACOBSEN  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5103** **HARVARD UNIV** **5479**  
 DEVELOPMENT OF EXITE3, IMAGING DETECTORS AND A LONG-DURATION  
 BALLOON GONDOLA  
 02/11/1997 - 06/30/2001 FY01: \$0 Total: \$616,629  
*Prin. Invest.:* J E GRINDLAY  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5279** **HARVARD UNIV** **5480**  
 DEVELOPMENT OF A HARD X-RAY IMAGING DETECTOR AND SURVEY  
 TELESCOPE (EXITE 3) FOR AN LDB MISSION  
 05/31/2000 - 05/18/2002 FY01: \$222,855 Total: \$422,811  
*Prin. Invest.:* G GRINDLAY  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6554** **HARVARD UNIV** **5481**  
 LABORATORY STUDIES IN UV AND EUV SOLAR PHYSICS  
 10/24/1997 - 05/31/2000 FY01: \$0 Total: \$290,231  
*Prin. Invest.:* D H PARKINSON  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 7039** **HARVARD UNIV** **5482**  
 STRUCTURE AND EVOLUTION OF X-RAY CLUSTERS: THEORY AND IM-  
 PPLICATIONS FOR AXAF -ATP  
 02/25/1998 - 02/14/2002 FY01: \$0 Total: \$269,824  
*Prin. Invest.:* A LOEB  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7201 HARVARD UNIV 5483**  
 GLOBAL THREE-DIMENSIONAL MODELING OF THE EFFECTS OF A SUBSONIC AIRCRAFT ON OZONE  
 03/24/1998 - 03/31/2001 FY01: \$0 Total: \$495,343  
*Prin. Invest.:* D JACOB  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7534 HARVARD UNIV 5484**  
 LONG-TERM NET ECOSYSTEM EXCHANGE AT THE BOREAS NORTHERN OLD BLACKSPRUCE SITE: MECHANISMS FOR  
 06/11/1998 - 05/31/2002 FY01: \$213,603 Total: \$1,159,850  
*Prin. Invest.:* S C WORSY  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7616 HARVARD UNIV 5485**  
 FUNDING FOR 'INVESTIGATIONS OF THE GEODYNAMIC USING SATELLITE MAGNETIC FIELD OBSERVATIONS' (SENH98-0)  
 07/22/1998 - 07/14/2001 FY01: \$37,000 Total: \$224,000  
*Prin. Invest.:* J BLOXHAM  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7768 HARVARD UNIV 5486**  
 STUDYING THE SUPERNOVA HISTORY OF THE UNIVERSE WITH THE NEXT GENERATION SPACE TELESCOPE  
 01/11/1999 - 01/14/2002 FY01: \$0 Total: \$56,348  
*Prin. Invest.:* R KIRSHNER  
*Tech. Officer:* GSFC/E SMITH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7859 HARVARD UNIV 5487**  
 PHOTOABSORPTION CROSS SECTIONS AND THEIR TEMPERATURE DEPENDENCE FOR CO<sub>2</sub> AND H<sub>2</sub>O IN THE 170 NM TO 200  
 01/06/1999 - 12/31/2001 FY01: \$65,000 Total: \$183,875  
*Prin. Invest.:* W H PARKINSON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8467 HARVARD UNIV 5488**  
 STUDIES OF STAR AND PLANETARY SYSTEM FORMATION  
 05/03/1999 - 07/31/2001 FY01: -\$19,712 Total: \$20,288  
*Prin. Invest.:* A W CAMERON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8727 HARVARD UNIV 5489**  
 ORIGIN OF QUASAR ABSORPTION LINES IN A COSMOLOGICAL CONTEXT  
 08/10/1999 - 12/31/2000 FY01: -\$8 Total: \$69,698  
*Prin. Invest.:* L E HERNQUIST  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8779 HARVARD UNIV 5490**  
 CLOUDS AND WATER VAPOR IN THE CLIMATE SYSTEM  
 08/30/1999 - 02/28/2001 FY01: \$0 Total: \$898,876  
*Prin. Invest.:* J ANDERSON  
*Tech. Officer:* GSFC/R CURRAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9019 HARVARD UNIV 5491**  
 1. H<sub>2</sub> IN HH2: FLUORESCENCE OR COLLISIONS? - FUSE 2. NON-RADIATIVE SHOCKS IN THE CYGNUS LOOP - FUSE  
 02/02/2000 - 01/31/2002 FY01: \$0 Total: \$61,100  
*Prin. Invest.:* J C RAYMOND  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9521 HARVARD UNIV 5492**  
 MEASUREMENT & ANALYSIS OF THE SPATIAL & TEMPORAL VARIABILITY OF OROGRAPHIC PRECIPITATION IN THE  
 04/26/2000 - 10/31/2000 FY01: \$0 Total: \$72,860  
*Prin. Invest.:* A P BARROS  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9571 HARVARD UNIV 5493**  
 ISOTOPIC STUDIES OF THE FORMATION & EARLY DIFFERENTIATION OF PLANETS  
 05/08/2000 - 04/30/2001 FY01: \$0 Total: \$15,000  
*Prin. Invest.:* S B JACOBSEN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9643 HARVARD UNIV 5494**  
 CHEMISTRY, AEROSOLS, AND CLIMATE: TROPOSPHERIC UNIFIED SIMULATION (CACTUS)  
 06/28/2000 - 05/31/2002 FY01: \$313,667 Total: \$630,667  
*Prin. Invest.:* D J JACOB  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9823 HARVARD UNIV 5495**  
 MEASUREMENT, ANALYSIS, & MODELING OF THE SPATIAL & TEMPORAL VARIABILITY OF OROGRAPHIC PRECIP.  
 07/24/2000 - 11/30/2001 FY01: \$114,000 Total: \$225,420  
*Prin. Invest.:* A P BARROS  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10040 HARVARD UNIV 5496**  
 ON THE ORIGIN OF DIPS IN 4U1915-05  
 10/03/2000 - 09/30/2002 FY01: \$7,400 Total: \$7,400  
*Prin. Invest.:* J E GRINDLAY  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10046 HARVARD UNIV 5497**  
 XMM OBSERVATIONS OF LARGE CORE CLUSTERS  
 09/28/2000 - 09/30/2002 FY01: \$0 Total: \$8,100  
*Prin. Invest.:* J E GRINDLAY  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10105 HARVARD UNIV 5498**  
 X-RAY SPECTROSCOPY OF LOW-LUMINOSITY ACTIVE GALACTIC NUCLEI WITH XMM  
 12/18/2000 - 12/31/2001 FY01: \$4,865 Total: \$4,865  
*Prin. Invest.:* R NARAYAN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10484** HARVARD UNIV 5499  
 ISOTOPIC STUDIES OF THE FORMATION & EARLY DIFFERENTIATION OF PLANETS  
 03/05/2001 - 03/31/2002 FY01: \$70,000 Total: \$70,000  
 Prin. Invest.: S JACOBSEN  
 Tech. Officer: GSFC/J BOYCE  
 CASE Category: 12 - CHEMISTRY

**NAG 5 10631** HARVARD UNIV 5500  
 THE EVOLUTION OF ATMOSPHERIC OXYGEN AND THE COMPOSITION OF SEAWATER  
 03/17/2001 - 03/14/2002 FY01: \$150,000 Total: \$150,000  
 Prin. Invest.: H D HOLLAND  
 Tech. Officer: GSFC/M MEYER  
 CASE Category: 11 - ASTRONOMY

**NAG 5 10780** HARVARD UNIV 5501  
 MODELS OF LOW-LUMINOSITY ACCRETION FLOWS (ATP 2000)  
 04/20/2001 - 04/30/2002 FY01: \$94,389 Total: \$94,389  
 Prin. Invest.: R NARAYAN  
 Tech. Officer: GSFC/R J OLIVERSEN  
 CASE Category: 11 - ASTRONOMY

**NAG 5 10792** HARVARD UNIV 5502  
 2001 7TH INTERNATIONAL PRECIPITATION CONFERENCE  
 04/24/2001 - 12/31/2001 FY01: \$27,900 Total: \$27,900  
 Prin. Invest.: A P BARROS  
 Tech. Officer: GSFC/P R HOUSER  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10906** HARVARD UNIV 5503  
 THE ORIGINS OF AUTOTROPHY: DISTRIBUTION, DIVERSITY AND EVOLUTION OF RUBISCO  
 05/22/2001 - 07/31/2002 FY01: \$90,000 Total: \$90,000  
 Prin. Invest.: C M CAVANAUGH  
 Tech. Officer: GSFC/M MEYER  
 CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 11154** HARVARD UNIV 5504  
 FLUXES OF CARBON, WATER, AND ENERGY IN A BOREAL FOREST-PEAT ECOSYSTEM: SHORT TERM VARIANCE, LONG  
 08/02/2001 - 07/31/2002 FY01: \$189,403 Total: \$189,403  
 Prin. Invest.: S C WOFSY  
 Tech. Officer: GSFC/D E WICKLAND  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11270** HARVARD UNIV 5505  
 EVALUATION AND INTERCOMPARISON OF TROPOSPHERIC CHEMISTRY SIMULATIONS FOR GLOBAL MODEL INITIATIVE (GM)  
 08/22/2001 - 08/31/2004 FY01: \$145,130 Total: \$145,130  
 Prin. Invest.: D JACOB  
 Tech. Officer: GSFC/P DECOLA  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1256** HARVARD UNIV 5506  
 KINETICS OF NUCLEATION AND GROWTH FROM UNDERCOOLED MELTS  
 05/24/1996 - 05/22/2001 FY01: \$0 Total: \$700,000  
 Prin. Invest.: M J AZIZ, F SPAEPEN  
 Tech. Officer: MSFC/P DOTY  
 CASE Category: 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1680** HARVARD UNIV 5507  
 "GLASS FORMATION, NUCLEATION AND DIFFUSION IN METALLIC MELTS"  
 06/06/2000 - 11/30/2003 FY01: \$95,000 Total: \$140,000  
 Prin. Invest.: F A SPAEPEN, M J AZIZ  
 Tech. Officer: MSFC/P DOTY  
 CASE Category: 47 - METAL & MATERIALS ENGR

**NAG 8 1822** HARVARD UNIV 5508  
 RESEARCH ENTITLED, "STUDY OF METASTABILITY OF HYDROGEN AGAINST A TRANSITION TO PRESSURE"  
 06/29/2001 - 07/15/2002 FY01: \$99,972 Total: \$99,972  
 Prin. Invest.: I F SILVERA  
 Tech. Officer: MSFC/S D BAI  
 CASE Category: 43 - CHEMICAL ENGR

**NAS 1 18946** HARVARD UNIV 5509  
 SAGE III SCIENCE SUPPORT; P.I. - WOFSY  
 11/28/1989 - 01/31/2005 FY01: \$80,000 Total: \$503,930  
 Prin. Invest.: S C WOFSY  
 Tech. Officer: LARC/G MADDREA  
 CASE Category: 19 - PHYSICAL SCIENCE, OTHER

**NCC 2 897** HARVARD UNIV 5510  
 LIGHTWEIGHT HIGH-PRECISION, FAST RESPONSE INSTRUMENT FOR AIRBORNE CO2 MEASUREMENTS FOR UAVS  
 03/22/1995 - 12/31/1999 FY01: -\$5,300 Total: \$1,049,504  
 Prin. Invest.: S C WOFSY  
 Tech. Officer: ARC/S S WEGENER  
 CASE Category: 31 - ATMOSPHERIC SCIENCE

**NCC 2 1053** HARVARD UNIV 5511  
 THE PLANETARY CONTEXT OF BIOLOGICAL EVOLUTION  
 09/14/1998 - 06/30/2003 FY01: \$856,664 Total: \$2,322,169  
 Prin. Invest.: A H KNOLL  
 Tech. Officer: ARC/R A GRAYMES, ARC/W W DOLCI  
 CASE Category: 59 - LIFE SCIENCE, OTHER

**NCC 2 1236** HARVARD UNIV 5512  
 PROBABILISTIC REASONING FOR COMPLEX DYNAMIC SYSTEMS  
 04/11/2001 - 02/28/2002 FY01: \$66,000 Total: \$66,000  
 Prin. Invest.: A J PFEFFER  
 Tech. Officer: ARC/R A MORRIS, ARC/D J CLANCY  
 CASE Category: 22 - COMPUTER SCIENCE

**NCC 5 341** HARVARD UNIV 5513  
 NET ECOSYSTEM EXCHANGE OF CO2 AND H2O FROM PRIMARY TROPICAL FOREST IN CENTRAL AMAZONIA  
 07/07/1998 - 12/31/2001 FY01: \$295,000 Total: \$1,362,000  
 Prin. Invest.: S C WOFSY  
 Tech. Officer: GSFC/D W DEERING  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 101** HARVARD UNIV 5514  
 NATURAL SELECTION IN ELEMENTS OF PHOTOSYNTHESIS STUDENT: LUCAS MIX  
 05/25/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
 Prin. Invest.: C CAVANAUGH  
 Tech. Officer: GSFC/G A SOFFEN  
 CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 30144**                      **HARVARD UNIV**                      **5515**  
 THE EFFECTS OF ADJANCENCY ARRANGEMENTS ON PLANT DIVERSITY IN  
 THE ASPEN PARKLAND ALBERTA  
 08/27/1998 - 08/31/2000      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* R FORMAN, ALEXANDER  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30152**                      **HARVARD UNIV**                      **5516**  
 BIOLOGICAL AND PHYSICAL CONTROLS ON EVAPOTRANSPIRATION IN A  
 MID-LATITUDE FOREST  
 08/28/1998 - 08/31/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* S C WOFSY, LIN  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30205**                      **HARVARD UNIV**                      **5517**  
 NITRIC ACID AND NITROGEN DIOXIDE FLUX MEASUREMENTS OVER A  
 NORTH-AMERICAN FOREST/STUDENT: CASSANDRA H  
 08/19/1999 - 08/31/2002      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* S C WOFSY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30336**                      **HARVARD UNIV**                      **5518**  
 LABORATORY STUDIES OF TROPOSPHERIC SOURCES & SINKS OF THE  
 HYDROXYL RADICAL: OXIDATION OF ALKENE  
 08/21/2000 - 08/31/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* J ANDERSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30366**                      **HARVARD UNIV**                      **5519**  
 CHARACTERIZING THE HYDROLOGICAL AND ENVIRONMENTAL CONTROLS  
 ON THE CARBON BALANCE OF BOREAL FORESTS/AL  
 08/13/2001 - 08/31/2004      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* S WOFSY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30410**                      **HARVARD UNIV**                      **5520**  
 A NEW METHOD FOR IN SITU MEASUREMENTS OF THE ISOTOPIC  
 COMPOSITION OF WATER IN THE TROPICAL UPPER  
 08/15/2001 - 08/31/2004      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* J ANDERSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50020**                      **HARVARD UNIV**                      **5521**  
 OBSERVATIONS AND INSTRUMENTATION DEVELOPMENT TO STUDY  
 STARS  
 07/14/1997 - 06/30/2000      FY01: -\$265                      Total: \$43,735  
*Prin. Invest.:* J GRINDLEY  
*Tech. Officer:* GSFC/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50028**                      **HARVARD UNIV**                      **5522**  
 A COMBINED X-RAY AND GRAVITATIONAL LENSING DETERMINATIONS OF  
 GALAXIES  
 07/14/1997 - 08/31/2000      FY01: -\$1,546                      Total: \$42,454  
*Prin. Invest.:* L HERNQUIST, FOX  
*Tech. Officer:* GSFC/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50244**                      **HARVARD UNIV**                      **5523**  
 A KINEMATIC SURVEY OF NEARBY FIELD GALAXIES (STUDENT: SHEILA  
 KANNAPPAN)  
 06/02/1999 - 06/30/2001      FY01: \$0                      Total: \$33,000  
*Prin. Invest.:* R KIRSHNER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50258**                      **HARVARD UNIV**                      **5524**  
 STUDIES IN LOW TEMPERATURE ATOMIC PHYSICS USING A CRYOGENIC  
 HYDROGEN MASER STUDENT: MARC HUMPHREYS  
 07/07/1999 - 06/30/2002      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* W H PARKINSON  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 1857**                      **MASSACHUSETTS INST OF TECHNOLOGY**                      **5525**  
 FUNDAMENTAL ISSUES INVOLVED WITH MODE AWARENESS OF  
 ADVANCED AUTOFLIGHT SYSTEMS  
 07/24/1996 - 06/30/2000      FY01: -\$270                      Total: \$293,040  
*Prin. Invest.:* R J HANSMAN  
*Tech. Officer:* LARC/M T PALMER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 1900**                      **MASSACHUSETTS INST OF TECHNOLOGY**                      **5526**  
 TRACE GAS TRANSPORT IN THE TROPOSPHERE AND THE INTERPRETA-  
 TION OF IN SITU CONCENTRATION MEASUREMENTS  
 02/10/1997 - 02/09/2000      FY01: -\$11                      Total: \$217,990  
*Prin. Invest.:* R A PLUMB  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 1978**                      **MASSACHUSETTS INST OF TECHNOLOGY**                      **5527**  
 FAST BOUND METHODS FOR LARGE SCALE SIMULATION WITH APPLICA-  
 TION FOR ENGINEERING OPTIMIZATION  
 12/10/1997 - 12/09/2000      FY01: \$29,726                      Total: \$419,726  
*Prin. Invest.:* A T PATERN, J PERAIRE  
*Tech. Officer:* LARC/T A TANG, LARC/N M ALEXANDRIA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2027**                      **MASSACHUSETTS INST OF TECHNOLOGY**                      **5528**  
 LARGE-SCALE STRATOSPHERIC TRANSPORT PROCESSES  
 03/20/1998 - 02/28/2001      FY01: \$0                      Total: \$414,501  
*Prin. Invest.:* R A PLUMB  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2122**                      **MASSACHUSETTS INST OF TECHNOLOGY**                      **5529**  
 UNSTRUCTURED MESH METHODS FOR THE SIMULATION OF HYPERSONIC  
 FLOW  
 12/23/1998 - 03/31/2001      FY01: \$1                      Total: \$190,766  
*Prin. Invest.:* J PERAIRE  
*Tech. Officer:* LARC/K L BIBB, LARC/K J WEILMUNSTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2152**                      **MASSACHUSETTS INST OF TECHNOLOGY**                      **5530**  
 STUDIES OF TRACE GAS CHEMICAL CYCLES USING INVERSE METHODS &  
 GLOBAL CHEMICAL TRANSPORT MODELS  
 02/25/1999 - 12/31/2001      FY01: \$148,013                      Total: \$428,180  
*Prin. Invest.:* R G PRINN  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE



**NAG 1 2173 MASSACHUSETTS INST OF TECHNOLOGY 5531**  
 PHYS PROCESSES GOV'G ATMOSPHERIC TRACECONSTITUENTS MEAS'D  
 FROM A/C IN PEM-TROPICS-B (NRA-97-MTPE-04)  
 05/03/1999 - 02/28/2002 FY01: \$1 Total: \$445,112  
*Prin. Invest.:* R E NEWELL  
*Tech. Officer:* LARC/J L RAPER, LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2189 MASSACHUSETTS INST OF TECHNOLOGY 5532**  
 ALERTG SYS EVAL METHODOLOGY FOR TRAJ CORRIDOR CON-  
 FORMANCE MONITOR W/APPLIC CLOSELY SPACED PARALLE  
 04/28/1999 - 05/31/2000 FY01: -\$29 Total: \$70,388  
*Prin. Invest.:* J K KUCHAR  
*Tech. Officer:* LARC/M C WALLER, LARC/T S ABBOTT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2203 MASSACHUSETTS INST OF TECHNOLOGY 5533**  
 TRACER EVOLUTION AT HIGHER LATITUDES IN WINTER (SOLVE)  
 06/17/1999 - 09/30/2001 FY01: \$8,319 Total: \$24,820  
*Prin. Invest.:* R PLUMB  
*Tech. Officer:* LARC/G MADDREA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2239 MASSACHUSETTS INST OF TECHNOLOGY 5534**  
 REQUIREMENT ENGINEERING FOR SOFTWARE INTEGRITY AND SAFETY  
 (NRA 98-LARC-8)  
 09/23/1999 - 09/30/2002 FY01: \$166,397 Total: \$352,740  
*Prin. Invest.:* N LEVESON  
*Tech. Officer:* LARC/D E ECKMARDT  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 2275 MASSACHUSETTS INST OF TECHNOLOGY 5535**  
 DEVELOPMENT OF AN OUTPUT-BASED ADAPTIVE METHOD FOR MULTI-DI-  
 MENSIONAL EULER AND NAVIER STOKES SIMUL-  
 02/29/2000 - 12/31/2001 FY01: \$85,066 Total: \$165,279  
*Prin. Invest.:* D L DARMOTAL  
*Tech. Officer:* LARC/J L THOMAS/W K ANDERSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2306 MASSACHUSETTS INST OF TECHNOLOGY 5536**  
 USE OF GTE, MOZAIC, SONEX AND UARS-MLS DATA IN UNDERSTANDING  
 TROPOSPHERIC CRITICAL TO MODEL DEV.  
 06/08/2000 - 03/31/2003 FY01: \$90,000 Total: \$180,000  
*Prin. Invest.:* R E NEWELL  
*Tech. Officer:* LARC/D L MODDREA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01025 MASSACHUSETTS INST OF TECHNOLOGY 5537**  
 PERFORMANCE AND RELIABILITY OPTIMIZATION FOR AERO- SPACE  
 SYSTEMS SUBJECT TO UNCERTAINTY & DEGRADATIO  
 02/16/2001 - 12/31/2001 FY01: \$90,351 Total: \$90,351  
*Prin. Invest.:* D W MILLER  
*Tech. Officer:* LARC/P G MAGHAMI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01102 MASSACHUSETTS INST OF TECHNOLOGY 5538**  
 ACTIVE TAILORING OF A FLEXIBLE WING USING LANGLEY MACRO-FIBER  
 COMPOSITE (MFC) ACTUATORS  
 06/20/2001 - 06/30/2002 FY01: \$39,988 Total: \$39,988  
*Prin. Invest.:* , C CESNIK  
*Tech. Officer:* LARC/H K WILKIE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 729 MASSACHUSETTS INST OF TECHNOLOGY 5539**  
 MODELING INFORMATION PROCESSING IN FLIGHT MANAGEM ENT  
 08/27/1991 - 06/30/2001 FY01: \$0 Total: \$994,962  
*Prin. Invest.:* T B SHERIDAN  
*Tech. Officer:* ARC/S C LOZITO, ARC/E J HARTZELL  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 2 855 MASSACHUSETTS INST OF TECHNOLOGY 5540**  
 ARCHIVING OF PLANETARY RING DATA  
 07/16/1993 - 03/31/2000 FY01: -\$399 Total: \$111,981  
*Prin. Invest.:* J L ELLIOT  
*Tech. Officer:* ARC/J N CUZZI  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1111 MASSACHUSETTS INST OF TECHNOLOGY 5541**  
 INVESTIGATON OF ALERT ZONE & DISPLAY CONCEPTS FOR FREE FLIGHT  
 02/14/1997 - 08/31/2000 FY01: \$0 Total: \$360,478  
*Prin. Invest.:* J K KUCHAR  
*Tech. Officer:* ARC/S C LOZITO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1128 MASSACHUSETTS INST OF TECHNOLOGY 5542**  
 DEPARTURES PLANNING AT BUSY AIRPORTS  
 05/09/1997 - 05/31/2000 FY01: -\$1,515 Total: \$548,485  
*Prin. Invest.:* A R ODONI, R J HANSMAN, E FERON  
*Tech. Officer:* ARC/D R ISSACSON, ARC/S C ATKINS  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 2 1136 MASSACHUSETTS INST OF TECHNOLOGY 5543**  
 SDSI IMPLEMENTATION  
 07/11/1997 - 11/30/2000 FY01: \$0 Total: \$153,149  
*Prin. Invest.:* R L RIVEST  
*Tech. Officer:* ARC/Y K LIU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1272 MASSACHUSETTS INST OF TECHNOLOGY 5544**  
 APPLYING ATC AUTOMATION TO ADDRESS ENVIRONMENTAL C ONSIDERA-  
 TIONS  
 12/22/1998 - 02/28/2002 FY01: \$168,651 Total: \$486,178  
*Prin. Invest.:* J P CLARKE  
*Tech. Officer:* ARC/T TOBIAS, ARC/T J DAVIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1299 MASSACHUSETTS INST OF TECHNOLOGY 5545**  
 HUMAN PERFORMANCE CONSIDERATIONS FOR SHARED INFORM ATION IN  
 DATALINKED AIR TRAFFIC MANAGEMENT SYSTEM  
 03/03/1999 - 07/31/2002 FY01: \$206,177 Total: \$370,533  
*Prin. Invest.:* R J HANSMAN  
*Tech. Officer:* ARC/S C LOZITO  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 2 1338 MASSACHUSETTS INST OF TECHNOLOGY 5546**  
 SOFTWARE DESIGN FOR AIR-TRAFFIC CONTROL  
 07/19/1999 - 07/14/2001 FY01: \$0 Total: \$100,530  
*Prin. Invest.:* D N JACKSON, J CHAPIN  
*Tech. Officer:* ARC/M M ESHOW, ARC/K Y TUNG-CATE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1350 MASSACHUSETTS INST OF TECHNOLOGY 5547**  
 EFFECT OF GROWTH STARVATION UNDER SIMULATED MICRO- GRAVITY  
 ON THE BACTERIAL STRESS & SECONDARY METAB  
 07/21/1999 - 07/14/2002 FY01: \$217,880 Total: \$599,947  
*Prin. Invest.:* A L DEMAIN  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1388 MASSACHUSETTS INST OF TECHNOLOGY 5548**  
 HYBRID ADAPTIVE METHODS FOR THE DEVELOPMENT OF MOD EL-BASED  
 AUTONOMOUS ROBOTIC SYSTEMS  
 12/01/1999 - 11/30/2001 FY01: \$300,000 Total: \$790,000  
*Prin. Invest.:* B C WILLIAMS  
*Tech. Officer:* ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1425 MASSACHUSETTS INST OF TECHNOLOGY 5549**  
 MODELING & ANALYSIS OF MULTIPLE ALERTING SYSTEM IN TERATIONS  
 07/26/2000 - 10/31/2001 FY01: \$111,097 Total: \$171,097  
*Prin. Invest.:* J K KUCHAR  
*Tech. Officer:* ARC/S C LOZITO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1458 MASSACHUSETTS INST OF TECHNOLOGY 5550**  
 SURFACE GENERATION & CARTESIAN MESH SUPPORT  
 02/27/2001 - 02/28/2002 FY01: \$50,139 Total: \$50,139  
*Prin. Invest.:* R HAIMES  
*Tech. Officer:* ARC/M J AFTOSMIS, ARC/G KLUPFER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1463 MASSACHUSETTS INST OF TECHNOLOGY 5551**  
 SELF-DIRECTED COOPERATIVE PLANETARY ROVERS  
 03/16/2001 - 02/28/2002 FY01: \$270,961 Total: \$270,961  
*Prin. Invest.:* S ZILBERSTEIN  
*Tech. Officer:* ARC/R A MORRIS, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1466 MASSACHUSETTS INST OF TECHNOLOGY 5552**  
 UNIFYING MODEL-BASED SEQUENCE EXECUTION & FAULT PR OTECTION  
 FOR SPACE VEHICLES  
 03/23/2001 - 03/14/2003 FY01: \$471,560 Total: \$471,560  
*Prin. Invest.:* B WILLIAMS  
*Tech. Officer:* ARC/R MORRIS, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1482 MASSACHUSETTS INST OF TECHNOLOGY 5553**  
 UNDERSTANDING THE DYNAMICS OF AGILE SMALL-SCALE RO TORCRAFT  
 05/09/2001 - 04/30/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* E FERON, NONE  
*Tech. Officer:* ARC/M B TISCHER, ARC/B R LAKINSMITH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1515 MASSACHUSETTS INST OF TECHNOLOGY 5554**  
 DEVELOPMENT OF STOCHASTIC MODELS AND MODULES AND I NTERAC-  
 TIVE COMMUNICATION CAPABILITIES FOR THE MIT  
 08/08/2001 - 07/31/2002 FY01: \$65,000 Total: \$65,000  
*Prin. Invest.:* J P CLARKE  
*Tech. Officer:* ARC/L A MEYN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 1845 MASSACHUSETTS INST OF TECHNOLOGY 5555**  
 DYNAMICS OF THE MOLTEN CONTACT LINE  
 05/20/1996 - 05/19/2001 FY01: \$0 Total: \$520,000  
*Prin. Invest.:* A A SONIN  
*Tech. Officer:* GRC/M M HASAN  
*CASE Category:* 13 - PHYSICS

**NAG 3 1879 MASSACHUSETTS INST OF TECHNOLOGY 5556**  
 MODELING OF PULSED PLASMA THRUSTER PLUMES  
 05/22/1996 - 11/30/2000 FY01: \$0 Total: \$483,000  
*Prin. Invest.:* J B HOWARD  
*Tech. Officer:* GRC/J E BROOKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2019 MASSACHUSETTS INST OF TECHNOLOGY 5557**  
 A GEOMETRY BASED INFA- STRUCTURE FOR COMPUTATIONAL ANALYSIS  
 03/05/1997 - 02/04/2001 FY01: -\$121 Total: \$368,934  
*Prin. Invest.:* R HAIMES  
*Tech. Officer:* GRC/G J FOLLEN, GRC/C LAWRENCE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2051 MASSACHUSETTS INST OF TECHNOLOGY 5558**  
 THREE DIMENSIONAL AERODYNAMIC INSTABILITIES IN MU LTI-STAGE  
 AXIAL COMPRESSORS  
 05/27/1997 - 07/31/2000 FY01: -\$788 Total: \$161,956  
*Prin. Invest.:* C S TAN  
*Tech. Officer:* GRC/A K OWEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2052 MASSACHUSETTS INST OF TECHNOLOGY 5559**  
 IDENTIFICATION AND CONTROL OF ROTATING STALL MODES IN AXIAL  
 COMPRESSORS  
 05/27/1997 - 03/31/2001 FY01: \$15,000 Total: \$669,476  
*Prin. Invest.:* J PADUANO  
*Tech. Officer:* GRC/M BRIGHT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2078 MASSACHUSETTS INST OF TECHNOLOGY 5560**  
 AERODYNAMICS OF ADVANCED SUBSONIC TRANSPORT INTEGR ATED FAN  
 BYPASS DUCT SYSTEM AND ITS DESIGN  
 12/18/1997 - 08/31/2001 FY01: \$0 Total: \$211,012  
*Prin. Invest.:* C S TAN  
*Prin. Invest.:* NONE  
*Tech. Officer:* GRC/J J ADAMCZYK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2101 MASSACHUSETTS INST OF TECHNOLOGY 5561**  
 THREE-DIMENSIONAL AERODYNAMIC INSTABILITIES IN MUL TI-STAGE  
 AXIAL COMPRESSORS  
 12/23/1997 - 11/23/2001 FY01: \$49,500 Total: \$289,769  
*Prin. Invest.:* C S TAN  
*Tech. Officer:* GRC/K L SUDER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2155 MASSACHUSETTS INST OF TECHNOLOGY 5562**  
 AN INTEROMETRIC INVESTIGATION OF CONTACT LINE DYNA MICS IN  
 SPREADING POLYMERMELTS AND SOLUTIONS  
 04/21/1998 - 01/19/2002 FY01: \$82,650 Total: \$357,650  
*Prin. Invest.:* G H MCKINLEY  
*Tech. Officer:* GRC/N R HALL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2178 MASSACHUSETTS INST OF TECHNOLOGY 5563**  
 INTEGRATED HUMAN CENTERED SYSTEMS ANALYSIS OF FUNCTIONAL  
 REQUIREMENTS FOR COCKPIT ICING INFORMATION  
 07/08/1998 - 12/31/2001 FY01: \$87,336 Total: \$239,975  
*Prin. Invest.:* R J HANSMAN  
*Tech. Officer:* GRC/A REEHORST  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2179 MASSACHUSETTS INST OF TECHNOLOGY 5564**  
 INTRA-ENGINE TRACE SPECIES CHEMISTRY  
 06/30/1998 - 12/31/2000 FY01: \$0 Total: \$539,491  
*Prin. Invest.:* L WAITZ  
*Tech. Officer:* GRC/C C WEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2320 MASSACHUSETTS INST OF TECHNOLOGY 5565**  
 AEROTHERMAL PROBABILISTIC DESIGN OF COMPRESSOR BLADES  
 01/13/2000 - 03/13/2002 FY01: \$134,614 Total: \$258,555  
*Prin. Invest.:* D M DARMOFAL  
*Tech. Officer:* GRC/S PAI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2321 MASSACHUSETTS INST OF TECHNOLOGY 5566**  
 CHARACTERIZATION OF AEROMECHANICS RESPONSE AND INSTABILITY  
 IN FANS, COMPRESSORS, AND TURBINE BLADES  
 01/13/2000 - 11/30/2001 FY01: \$41,034 Total: \$91,034  
*Prin. Invest.:* D S TAN  
*Tech. Officer:* GRC/G L STEFKO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2503 MASSACHUSETTS INST OF TECHNOLOGY 5567**  
 INTRA-ENGINE TRACE SPECIES CHEMISTRY INTRA-ENGINE TRACE  
 SPECIES CHEMISTRY  
 11/21/2000 - 11/30/2001 FY01: \$92,166 Total: \$92,166  
*Prin. Invest.:* D A WAITZ  
*Tech. Officer:* GRC/N LIU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 2506 MASSACHUSETTS INST OF TECHNOLOGY 5568**  
 MICROFABRICATED LIQUID ROCKET MOTORS MICROFABRICATED LIQUID  
 ROCKET MOTORS  
 11/21/2000 - 11/30/2001 FY01: \$128,686 Total: \$128,686  
*Prin. Invest.:* D H EPSTEIN  
*Tech. Officer:* GRC/S SCHNEIDER  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 3 2523 MASSACHUSETTS INST OF TECHNOLOGY 5569**  
 CAPRI USING A GEOMETRIC FOUNDATION FOR COMPUTATIONAL ANALYSIS  
 AND DESIGN  
 01/17/2001 - 09/30/2003 FY01: \$109,920 Total: \$109,920  
*Prin. Invest.:* R HAIMES  
*Tech. Officer:* GRC/G FOLLEN  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 4 157 MASSACHUSETTS INST OF TECHNOLOGY 5570**  
 DEVELOPMENT OF AN UNSTRUCTURED MESH CODE FOR FLOWS ABOUT  
 COMPLETE VEHICLES  
 08/27/1998 - 05/31/2001 FY01: -\$88 Total: \$78,741  
*Prin. Invest.:* J PERAIRE  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3550 MASSACHUSETTS INST OF TECHNOLOGY 5571**  
 ASSESSMENT OF GEOPHYSICAL SIGNALS IN GLOBAL GEODETIC DATA  
 12/14/1996 - 11/30/2000 FY01: -\$20 Total: \$399,460  
*Prin. Invest.:* T A HERRING  
*Tech. Officer:* GSFC/P TAYLOR  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3558 MASSACHUSETTS INST OF TECHNOLOGY 5572**  
 ACCRETING BLACK HOLES - AN ALL OUT EFFORT  
 12/14/1996 - 12/14/2001 FY01: \$52,000 Total: \$182,003  
*Prin. Invest.:* W H LEWIN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3726 MASSACHUSETTS INST OF TECHNOLOGY 5573**  
 AMAZON DEFORESTATION & REGIONAL CLIMATE  
 02/12/1997 - 02/28/2001 FY01: \$0 Total: \$317,531  
*Prin. Invest.:* R L BRAS  
*Tech. Officer:* GSFC/R KAKAR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 3727 MASSACHUSETTS INST OF TECHNOLOGY 5574**  
 DEVELOPMENT OF OLIGONUCLEOTIDE PROBES TO STUDY THE PROCHLORO-  
 COCCUS STRAINS WITH DIFFERING PHOTOSYNTHESIS  
 02/20/1997 - 02/14/2001 FY01: \$0 Total: \$164,761  
*Prin. Invest.:* S W CHISHOLM  
*Tech. Officer:* GSFC/J A YODER  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 3915 MASSACHUSETTS INST OF TECHNOLOGY 5575**  
 SOLAR SYSTEM DYNAMICS  
 02/21/1997 - 09/30/2001 FY01: \$120,000 Total: \$613,900  
*Prin. Invest.:* J WISDOM  
*Tech. Officer:* GSFC/D G SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3939 MASSACHUSETTS INST OF TECHNOLOGY 5576**  
 SMALL MAIN-BELT SPECTROSCOPIC SURVEY  
 02/12/1997 - 12/31/2001 FY01: \$0 Total: \$570,720  
*Prin. Invest.:* D P BINZEL  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3940 MASSACHUSETTS INST OF TECHNOLOGY 5577**  
 STELLAR OCCULTATION STUDIES OF PLUTO, TRITON  
 02/12/1997 - 11/30/2001 FY01: \$0 Total: \$494,752  
*Prin. Invest.:* D L ELLIOT  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3974 MASSACHUSETTS INST OF TECHNOLOGY 5578**  
 ADVANCED GLOBAL ATMOSPHERIC GASES EXPERIMENT (AGAGE)  
 02/26/1997 - 01/31/2002 FY01: \$453,924 Total: \$2,337,117  
*Prin. Invest.:* R G PRINN  
*Tech. Officer:* GSFC/M J KURYLO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 3977 MASSACHUSETTS INST OF TECHNOLOGY 5579**  
 COLLISION PROCESSES INVOLVING ATMOSPHERIC FREE RAD INFRARED  
 ABSORBERS  
 02/26/1997 - 09/30/2001 FY01: \$0 Total: \$287,633  
*Prin. Invest.:* P STEINFELD  
*Tech. Officer:* GSFC/P L DECOLA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4047 MASSACHUSETTS INST OF TECHNOLOGY 5580**  
 INVESTIGATION OF VENUS SURFACE PROPERTIES  
 03/10/1997 - 12/31/2001 FY01: \$0 Total: \$165,000  
*Prin. Invest.:* D G FORD  
*Tech. Officer:* GSFC/J G GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4115 MASSACHUSETTS INST OF TECHNOLOGY 5581**  
 RXTE SEARCH FOR THE CENTRIFUGAL BARRIER IN TRANSIE  
 04/17/1997 - 04/14/2000 FY01: \$1 Total: \$25,842  
*Prin. Invest.:* S RAPPAPORT  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4434 MASSACHUSETTS INST OF TECHNOLOGY 5582**  
 RESEARCH PARTICIPATION IN THE MARS ORBITING LASER  
 04/28/1997 - 12/31/2001 FY01: \$74,391 Total: \$409,282  
*Prin. Invest.:* G H PETTINGILL  
*Tech. Officer:* GSFC/D E SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4485 MASSACHUSETTS INST OF TECHNOLOGY 5583**  
 TIMING AND SPECTRAL STUDY OF 4U 1538-52  
 05/06/1997 - 04/30/2000 FY01: -\$10 Total: \$20,120  
*Prin. Invest.:* G CLARK  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4555 MASSACHUSETTS INST OF TECHNOLOGY 5584**  
 PLANETARY TECTONICS AND VOLCANISM  
 06/23/1997 - 03/31/2002 FY01: \$92,000 Total: \$689,783  
*Prin. Invest.:* D R ZUBER  
*Tech. Officer:* GSFC/H BRINTON  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4733 MASSACHUSETTS INST OF TECHNOLOGY 5585**  
 FAST TIMING AND SPECTROSCOPY OF Z SOURCES  
 06/04/1997 - 06/30/2000 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* W LEWIN  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4768 MASSACHUSETTS INST OF TECHNOLOGY 5586**  
 PHASE EQUILIBRIUM INVESTIGATIONS OF PLANETARY MATE  
 06/09/1997 - 06/30/2001 FY01: \$0 Total: \$180,000  
*Prin. Invest.:* P L GROVE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4778 MASSACHUSETTS INST OF TECHNOLOGY 5587**  
 RAINFALL-LIGHTNING RELATIONSHIPS ON A GLOBAL BASIS  
 06/18/1997 - 11/30/2000 FY01: \$0 Total: \$406,916  
*Prin. Invest.:* E R WILLIAMS  
*Tech. Officer:* GSFC/R W LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4806 MASSACHUSETTS INST OF TECHNOLOGY 5588**  
 MARS OBSERVER LASER ALTIMETER  
 08/01/1997 - 07/31/2001 FY01: \$110,565 Total: \$970,797  
*Prin. Invest.:* M T ZUBER  
*Tech. Officer:* GSFC/D E SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4807 MASSACHUSETTS INST OF TECHNOLOGY 5589**  
 GPS MEASUREMENTS OF LOCALIZED INTRACONTINENTAL DEF HAN  
 08/01/1997 - 07/31/2000 FY01: \$0 Total: \$194,000  
*Prin. Invest.:* P MOLNAR  
*Tech. Officer:* GSFC/H FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4879 MASSACHUSETTS INST OF TECHNOLOGY 5590**  
 XTE OBSERVATIONS OF PSR1259-63 NEAR APASTRON  
 07/15/1997 - 07/14/2000 FY01: \$0 Total: \$3,000  
*Prin. Invest.:* V KASPI  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4880 MASSACHUSETTS INST OF TECHNOLOGY 5591**  
 THE FACTORS CONTROLLING POLEWARD HEAT TRANSPORT IN  
 07/15/1997 - 04/30/2001 FY01: \$0 Total: \$178,640  
*Prin. Invest.:* P H STONE  
*Tech. Officer:* GSFC/A HOU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4989 MASSACHUSETTS INST OF TECHNOLOGY 5592**  
 CENTER FOR QUANTITATIVE CARDIOVASCULAR PHYSIOLOGY, ANALYSIS  
 06/27/1997 - 08/31/2001 FY01: \$0 Total: \$575,000  
*Prin. Invest.:* R COHEN  
*Tech. Officer:* GSFC/N SCHNEIDER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 5105 MASSACHUSETTS INST OF TECHNOLOGY 5593**  
 A THREE-YEAR PROGRAM OF MICRO AND NANO SYSTEM TECHNOLOGY  
 DEVELOPMENT FOR X-RAY ASTRONOMY  
 01/17/1997 - 01/31/2001 FY01: \$0 Total: \$915,000  
*Prin. Invest.:* C R CANIZARES  
*Tech. Officer:* GSFC/B FLOWERS  
*CASE Category:* 13 - PHYSICS

**NAG 5 5271 MASSACHUSETTS INST OF TECHNOLOGY 5594**  
 FIRST YEAR OF TWO YEAR EFFORT FIRST YEAR OF TWO YEAR EFFORT -  
 A PROGRAM OF  
 04/17/2000 - 04/16/2002 FY01: \$385,000 Total: \$740,000  
*Prin. Invest.:* M SCHATTENBURG  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5329 MASSACHUSETTS INST OF TECHNOLOGY 5595**  
 ADAPTATION OF GAS ELECTRON MULTIPLIER TECHNOLOGY FOR  
 ROUTINE  
 03/29/2001 - 03/31/2004 FY01: \$129,884 Total: \$129,884  
*Prin. Invest.:* A LEVINE  
*Tech. Officer:* GSFC/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6062 MASSACHUSETTS INST OF TECHNOLOGY 5596**  
 RECENT AND ACTIVE EVOLUTION OF THE EASTERN TIBETAN IPLINARY  
 STUDY  
 07/28/1997 - 07/14/2001 FY01: \$0 Total: \$151,577  
*Prin. Invest.:* B C FIELD  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6063 MASSACHUSETTS INST OF TECHNOLOGY 5597**  
 VERTICAL ACCURACY IMPROVEMENT FOR VLBI AND GPS  
 08/01/1997 - 07/14/2001 FY01: \$0 Total: \$272,990  
*Prin. Invest.:* A E NIELL  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6129 MASSACHUSETTS INST OF TECHNOLOGY 5598**  
 MODELING THE EXTENDED NEUTRAL ATMOSPHERE AND PLASM SATURN  
 08/04/1997 - 07/14/2000 FY01: -\$4 Total: \$180,996  
*Prin. Invest.:* D RICHARDSON, NONE  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6145 MASSACHUSETTS INST OF TECHNOLOGY 5599**  
 CRUSTAL DEFORMATION AND EARTHQUAKE HAZARDS IN THE REGION  
 08/21/1997 - 08/31/2000 FY01: \$0 Total: \$350,000  
*Prin. Invest.:* R E REILINGER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6304 MASSACHUSETTS INST OF TECHNOLOGY 5600**  
 GLOBAL SCALE CIRCULATION PROCESSES  
 10/10/1997 - 04/30/2000 FY01: -\$3 Total: \$203,997  
*Prin. Invest.:* D S LINDZEN  
*Tech. Officer:* GSFC/K H BERGMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6352 MASSACHUSETTS INST OF TECHNOLOGY 5601**  
 SURFACE DEFORMATION AND GRAVITY CHANGES FROM SURFA LOADS  
 09/26/1997 - 01/14/2001 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* B HAGER  
*Tech. Officer:* GSFC/E J LINSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6473 MASSACHUSETTS INST OF TECHNOLOGY 5602**  
 SHOCK EVOLUTION IN THE OUTER HELIOSPHERE  
 11/13/1997 - 10/31/2000 FY01: -\$30 Total: \$148,928  
*Prin. Invest.:* K PAULARENA  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6523 MASSACHUSETTS INST OF TECHNOLOGY 5603**  
 STUDIES OF TECHNIQUES FOR THE DETECTION OF PLANETS OF OTHER  
 SOLAR SYSTEMS  
 12/16/1997 - 06/30/2000 FY01: \$0 Total: \$45,000  
*Prin. Invest.:* B BURKE  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6710 MASSACHUSETTS INST OF TECHNOLOGY 5604**  
 PHYSICAL MECHANISMS CONTROLLING UPPER TROPOSPHERIC WATER  
 VAPOR AS REVEALED BY MLS DATA FROM U  
 12/17/1997 - 11/30/2001 FY01: \$0 Total: \$278,000  
*Prin. Invest.:* D NEWELL  
*Tech. Officer:* GSFC/A DOUGLASS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6722 MASSACHUSETTS INST OF TECHNOLOGY 5605**  
 EARLY PRECAMBRIAN CARBONATE AND EVAPORITE SEDIMENT S:  
 CONSTRAINTS ON ENVIRONMENTAL AND BIOLOGICA  
 12/16/1997 - 09/30/2000 FY01: \$0 Total: \$233,666  
*Prin. Invest.:* J GROTZINGER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7012 MASSACHUSETTS INST OF TECHNOLOGY 5606**  
 JETS IN AGN: NUMERICAL SIMULATIONS IN RELATIVISTIC MHD - ATP  
 02/19/1998 - 02/28/2002 FY01: \$0 Total: \$182,915  
*Prin. Invest.:* M H VAN PUTTEN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7194 MASSACHUSETTS INST OF TECHNOLOGY 5607**  
 ATLANTIC OCEAN PROCESSES FROM SUBPOLAR REGIONS TO THE  
 SOUTHERN SUBTROPICAL GYRE: MODEL/DATA COMPAR  
 03/26/1998 - 04/30/2001 FY01: \$45,160 Total: \$498,840  
*Prin. Invest.:* P RIZZOLI  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7204 MASSACHUSETTS INST OF TECHNOLOGY 5608**  
 PARTICIPATION IN THE GISS EOS PROPOSAL  
 03/25/1998 - 07/14/2000 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* P H STONE  
*Tech. Officer:* GSFC/D RIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7279 MASSACHUSETTS INST OF TECHNOLOGY 5609**  
 XTE PROPOSAL - DOES PRECESSION OF THE ACCRETION DISK OF SMC  
 X-1 CAUSE A VARIATION IN THE PULSE PR  
 04/15/1998 - 04/14/2001 FY01: \$0 Total: \$10,125  
*Prin. Invest.:* G W CLARK  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7359 MASSACHUSETTS INST OF TECHNOLOGY 5610**  
 MO & DA ON THE SWIE INSTRUMENT ON THE WIND SPACECRAFT  
 05/05/1998 - 09/30/2001 FY01: \$0 Total: \$502,000  
*Prin. Invest.:* A LARARUS  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

MASSACHUSETTS

NASA'S UNIVERSITY PROGRAM

**NAG 5 7375 MASSACHUSETTS INST OF TECHNOLOGY 5611**  
 XTE PROPOSAL - SPECTRAL AND TIMING INVESTIGATIONS OF DWARF  
 NOVAE SELECTED INHARD X-RAYS  
 05/12/1998 - 05/31/2000 FY01: -\$248 Total: \$6,498  
*Prin. Invest.:* R A REMILLARD  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7475 MASSACHUSETTS INST OF TECHNOLOGY 5612**  
 THE VALUE OF DISTRIBUTED MODELING TO FLOOD FORECASTING  
 06/18/1998 - 08/31/2002 FY01: \$0 Total: \$382,143  
*Prin. Invest.:* R BRASS  
*Tech. Officer:* GSFC/E ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7480 MASSACHUSETTS INST OF TECHNOLOGY 5613**  
 XTE PROPOSAL (30269) - BL LACS IN X-RAY OUTBURST  
 06/01/1998 - 05/31/2000 FY01: -\$207 Total: \$5,805  
*Prin. Invest.:* R A REMILLARD  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7481 MASSACHUSETTS INST OF TECHNOLOGY 5614**  
 XTE PROPOSAL (30079) - SIMULTANEOUS RXTE AND RADIO OBSERVA-  
 TIONS OF THE RAPID BURSTER IN OUTBURST  
 06/01/1998 - 05/31/2000 FY01: -\$1 Total: \$4,999  
*Prin. Invest.:* W LEWIN  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7487 MASSACHUSETTS INST OF TECHNOLOGY 5615**  
 THIS PR PROVIDES FUNDING TO A MIT GRANT ON "PASSIVE MICROWAVE  
 STUDIES OF ATMOSPHERIC PRECIPITATION A  
 06/05/1998 - 11/30/2001 FY01: \$0 Total: \$355,000  
*Prin. Invest.:* D STAELIN  
*Tech. Officer:* GSFC/J C SHIUE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7517 MASSACHUSETTS INST OF TECHNOLOGY 5616**  
 XTE PROPOSAL (30137) TARGET OF OPPORTUNITY POSITIONING OF  
 TRANSIENT X-RAY PULSARS  
 06/04/1998 - 06/14/2000 FY01: -\$46 Total: \$6,769  
*Prin. Invest.:* D CHAKRABARTY  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7525 MASSACHUSETTS INST OF TECHNOLOGY 5617**  
 USE OF SATELLITE REMOTE SENSING TO STUDY THE ROLE OF RAINFO-  
 RESTS IN TROPICAL CLIMATE  
 06/08/1998 - 12/31/2002 FY01: \$99,993 Total: \$311,993  
*Prin. Invest.:* E ELTAHIR  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7794 MASSACHUSETTS INST OF TECHNOLOGY 5618**  
 INTERCALIBRATION AND CROSS-CORRELATION OF ACE AND WIND SOLAR  
 WIND DATA  
 12/10/1998 - 09/30/2002 FY01: \$69,243 Total: \$203,205  
*Prin. Invest.:* D J LAZARUS  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7839 MASSACHUSETTS INST OF TECHNOLOGY 5619**  
 STRUCTURAL DYNAMICS & CONTROLS ANALYSES, SIMULATIONS, AND  
 TESTBEDS FOR THE NEXT GENERATION SPACE T  
 12/16/1998 - 12/14/2001 FY01: \$111,982 Total: \$412,910  
*Prin. Invest.:* D W MILLER  
*Tech. Officer:* GSFC/G MOSIER  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 7857 MASSACHUSETTS INST OF TECHNOLOGY 5620**  
 A SYNTHESIS OF THE GLOBAL WAVE OBSERVATIONS OF THE OCEANIC  
 CIRCULATION  
 12/10/1998 - 11/30/2001 FY01: \$275,090 Total: \$787,330  
*Prin. Invest.:* C WUNSCH  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7967 MASSACHUSETTS INST OF TECHNOLOGY 5621**  
 A SEARCH FOR THE SOLAR SOURCES OF HIGH-SPEED SOLAR WIND  
 STREAMS  
 01/15/1999 - 12/14/2001 FY01: \$98,645 Total: \$288,490  
*Prin. Invest.:* D J LAZARUS  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7990 MASSACHUSETTS INST OF TECHNOLOGY 5622**  
 RELATIVISTIC ASTROPHYSICS IN BLACK HOLE AND LOW-MASS NEUTRON  
 STAR X-RAY BINARIES - LTSA98  
 01/22/1999 - 08/14/2000 FY01: \$0 Total: \$33,532  
*Prin. Invest.:* W CUI  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8031 MASSACHUSETTS INST OF TECHNOLOGY 5623**  
 REDUCTION AND SCIENTIFIC ANALYSIS OF DATA FROM IMP -8  
 01/19/1999 - 12/31/2001 FY01: \$122,546 Total: \$312,734  
*Prin. Invest.:* A J LAZARUS, NONE  
*Tech. Officer:* GSFC/J KING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8045 MASSACHUSETTS INST OF TECHNOLOGY 5624**  
 SCIENTIFIC ANALYSIS OF DATA FOR THE ISTP/SOLARMAX PROGRAM  
 01/11/1999 - 01/14/2002 FY01: \$0 Total: \$99,954  
*Prin. Invest.:* A J LAZARUS  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8063 MASSACHUSETTS INST OF TECHNOLOGY 5625**  
 PULSAR WIND NEBULAE, SPACE VELOCITIES, & SUPERNOVA REMNANT  
 ASSOCIATIONS LTSA 98  
 01/13/1999 - 01/14/2002 FY01: \$48,000 Total: \$144,000  
*Prin. Invest.:* V M KASPI  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8224 MASSACHUSETTS INST OF TECHNOLOGY 5626**  
 "THEORY AND MODELING OF STRATOSPHERIC AGE DISTRIBUTIONS"  
 02/10/1999 - 08/14/2000 FY01: \$0 Total: \$73,316  
*Prin. Invest.:* R PLUMB  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8244 MASSACHUSETTS INST OF TECHNOLOGY 5627**  
 SEARCH FOR ORBITAL DECAY IN LMC X-4  
 02/10/1999 - 02/14/2000 FY01: -\$87 Total: \$10,555  
*Prin. Invest.:* S A RAPPAPORT  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8368 MASSACHUSETTS INST OF TECHNOLOGY 5628**  
 FORMATION AND EVOLUTION OF BINARY SYSTEMS CONTAINING COLLAPSED STARS(ATP 98)  
 03/01/1999 - 04/30/2002 FY01: \$55,000 Total: \$161,810  
*Prin. Invest.:* S A RAPPAPORT  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8460 MASSACHUSETTS INST OF TECHNOLOGY 5629**  
 THEORETICAL STUDIES OF BINARY SYSTEMS CONTAINING COLLAPSED STARS  
 04/16/1999 - 04/14/2002 FY01: \$82,608 Total: \$237,669  
*Prin. Invest.:* F A RASIO  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8617 MASSACHUSETTS INST OF TECHNOLOGY 5630**  
 TWO-WAY BIOSPHERE-ATMOSPHERE INTERACTIONS: THEIR IMPLICATIONS FOR SATELLITE OBSERVATIONS OF REGIONS  
 06/14/1999 - 06/30/2002 FY01: \$75,183 Total: \$199,247  
*Prin. Invest.:* E B ELTAHIR  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8668 MASSACHUSETTS INST OF TECHNOLOGY 5631**  
 DIRECT DEPOSITION OF OPTICAL BLOCKING FILTERS ON CCD X-RAY DETECTORS  
 07/07/1999 - 09/30/2001 FY01: \$0 Total: \$172,793  
*Prin. Invest.:* M W BAUTZ  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8707 MASSACHUSETTS INST OF TECHNOLOGY 5632**  
 IMPLICATIONS OF LUNAR PROSPECTOR DATA FOR LUNAR GEOPHYSICS  
 07/20/1999 - 07/31/2002 FY01: \$45,000 Total: \$172,347  
*Prin. Invest.:* M T ZUBER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8720 MASSACHUSETTS INST OF TECHNOLOGY 5633**  
 INVESTIGATION OF SOLAR WIND CORRELATIONS & MODIFICATIONS NEAR EARTH USING MULTI-SPACECRAFT OBSERVATIONS  
 08/03/1999 - 07/31/2002 FY01: \$24,000 Total: \$70,500  
*Prin. Invest.:* J I RICHARDSON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8776 MASSACHUSETTS INST OF TECHNOLOGY 5634**  
 RESIN-SPINNING OF SYNTHETIC POLYMER FIBERS WITH SILK-LIKE PROPERTIES  
 08/31/1999 - 08/31/2002 FY01: \$166,250 Total: \$385,000  
*Prin. Invest.:* G MCKINLEY  
*Tech. Officer:* GSFC/R CROUCH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8814 MASSACHUSETTS INST OF TECHNOLOGY 5635**  
 TEMPO OF THE PERMIAN MASS EXTINCTIONS & RECOVERIES  
 09/29/1999 - 04/01/2002 FY01: \$114,000 Total: \$228,000  
*Prin. Invest.:* S A BOWRING  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8887 MASSACHUSETTS INST OF TECHNOLOGY 5636**  
 LABORATORY STUDIES OF HOMOGENEOUS & HETEROGENEOUS CHEMICAL PROCESSES OF IMPORTANCE IN THE UPPER ATMOSPHERE  
 12/02/1999 - 12/31/2001 FY01: \$199,995 Total: \$399,610  
*Prin. Invest.:* M MOLINA  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8947 MASSACHUSETTS INST OF TECHNOLOGY 5637**  
 MODELING THE EXTENDED NEUTRAL ATMOSPHERE & PLASMA ENVIRONMENT NEAR SATURN/FOLLOW-ON TO NAG5-6129  
 01/18/2000 - 07/14/2002 FY01: \$63,200 Total: \$122,734  
*Prin. Invest.:* J D RICHARDSON  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9057 MASSACHUSETTS INST OF TECHNOLOGY 5638**  
 NEW GPS SITES ON THE ARABIAN PLATE TO EXPAND THE IGS NETWORK & TO SUPPORT MEASUREMENTS OF THE RED SEA  
 02/15/2000 - 02/28/2001 FY01: \$4,500 Total: \$18,000  
*Prin. Invest.:* R E REILINGER, NONE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9080 MASSACHUSETTS INST OF TECHNOLOGY 5639**  
 DEVELOPMENT OF SOLID-STATE LOCAL-OSCILLATOR SOURCE FOR TERAHERTZ FREQUENCIES  
 02/17/2000 - 02/28/2003 FY01: \$144,000 Total: \$282,000  
*Prin. Invest.:* Q HU  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9117 MASSACHUSETTS INST OF TECHNOLOGY 5640**  
 SELF-ORGANIZED CRITICALITY, MULTIFRACTALS, & INTERMITTENT TURBULENCE IN EARTH'S MAGNETOSPHERE  
 02/24/2000 - 02/28/2002 FY01: \$46,637 Total: \$88,637  
*Prin. Invest.:* T CHANG  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9120 MASSACHUSETTS INST OF TECHNOLOGY 5641**  
 NEW ENERGETIC RADIO PULSARS: AN ARCHIVAL X-RAY SURVEY - ADP 99  
 02/29/2000 - 02/28/2002 FY01: \$0 Total: \$29,166  
*Prin. Invest.:* V M KASPI, NONE  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9135 MASSACHUSETTS INST OF TECHNOLOGY 5642**  
 RXTE OBSERVATIONS OF BLACK HOLE CANDIDATES ADP99  
 02/28/2000 - 06/30/2002 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* W H LEWIN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9143 MASSACHUSETTS INST OF TECHNOLOGY 5643**  
 APPLICATIONS OF AIRBORNE & ORBITAL LASER ALTIMETRY FOR COASTAL  
 PROCESSES & MARINE STATIC GRAVITY  
 02/29/2000 - 02/28/2002 FY01: \$79,936 Total: \$126,436  
*Prin. Invest.:* M T ZURBER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9164 MASSACHUSETTS INST OF TECHNOLOGY 5644**  
 LONG-TERM MONITORING OF ANOMALOUS X-RAY PULSARS WITH RXTE -  
 ADP 99  
 03/08/2000 - 03/14/2002 FY01: \$0 Total: \$58,265  
*Prin. Invest.:* D CHAKRABARTY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9184 MASSACHUSETTS INST OF TECHNOLOGY 5645**  
 ACCRETING NEUTRON STARS AS ASTROPHYSICAL LABORATORIES  
 LTSA-99  
 03/07/2000 - 03/14/2002 FY01: \$122,730 Total: \$240,744  
*Prin. Invest.:* D CHAKRABARTY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9185 MASSACHUSETTS INST OF TECHNOLOGY 5646**  
 TIMING THE MILLISECOND X-RAY PULSAR WITH RXTE - ADP - 99  
 03/07/2000 - 03/14/2002 FY01: \$0 Total: \$58,866  
*Prin. Invest.:* D CHAKRABARTY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9189 MASSACHUSETTS INST OF TECHNOLOGY 5647**  
 X-RAY PULSAR STUDIES WITH RXTE - ADP 99  
 03/08/2000 - 03/14/2002 FY01: \$20,000 Total: \$40,000  
*Prin. Invest.:* S RAPPAPORT  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9211 MASSACHUSETTS INST OF TECHNOLOGY 5648**  
 A SEARCH FOR EVIDENCE OF NON-THERMAL EMISSION FROM THE  
 SUPERNOVA REMNANTS 37A/B (ADP 99)  
 03/09/2000 - 03/14/2002 FY01: \$0 Total: \$7,709  
*Prin. Invest.:* G ALLEN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9235 MASSACHUSETTS INST OF TECHNOLOGY 5649**  
 A MEASUREMENT OF THE NON-THERMAL X-RAY EMISSION OF THE  
 SUPERNOVA REMNANT J1713.7-3946 - ADP 99  
 03/09/2000 - 03/14/2002 FY01: \$0 Total: \$8,769  
*Prin. Invest.:* G ALLEN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9237 MASSACHUSETTS INST OF TECHNOLOGY 5650**  
 A STUDY OF THE NON-THERMAL X-RAY EMISSION OF SHELL -TYPE  
 SUPERNOVA REMNANTS - LTSA99  
 03/09/2000 - 03/14/2002 FY01: \$104,200 Total: \$204,300  
*Prin. Invest.:* G ALLEN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9445 MASSACHUSETTS INST OF TECHNOLOGY 5651**  
 CARBONATE PLATFORM DEVELOPMENT & STROMATOLITE MORPHOGENESIS:  
 CONSTRAINTS ON ENVIRONMENTAL & BIOLOGIC  
 05/01/2000 - 04/30/2001 FY01: \$0 Total: \$117,750  
*Prin. Invest.:* J GROTZINGER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9525 MASSACHUSETTS INST OF TECHNOLOGY 5652**  
 PHASE EQUILIBRIUM INVESTIGATIONS OF PLANETARY MATERIALS  
 04/28/2000 - 06/30/2002 FY01: \$61,000 Total: \$122,000  
*Prin. Invest.:* T L GROVE, NONE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9616 MASSACHUSETTS INST OF TECHNOLOGY 5653**  
 SOLAR WIND ACCELERATION, HEATING, & EVOLUTION WITH WAVE-PARTICLE  
 05/23/2000 - 04/30/2002 FY01: \$69,144 Total: \$107,441  
*Prin. Invest.:* T CHANG  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9622 MASSACHUSETTS INST OF TECHNOLOGY 5654**  
 DEVELOPMENT OF 25-YEAR IMP 8 BOW SHOCK CROSSING LIST, INGESTION  
 OF THIS LIST TO CDWEB, & ENHANCEMENT  
 05/19/2000 - 05/31/2002 FY01: \$21,849 Total: \$42,764  
*Prin. Invest.:* K PAULARENA  
*Tech. Officer:* GSFC/J KING  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9637 MASSACHUSETTS INST OF TECHNOLOGY 5655**  
 THE USE OF TRMM LIS & GEOSTATIONARY IR DATA TO STUDY LAND-OCEAN  
 DIFFERENCES IN CONVECTION & THEIR RE  
 07/07/2000 - 11/30/2001 FY01: \$92,396 Total: \$143,286  
*Prin. Invest.:* E R WILLIAMS  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9640 MASSACHUSETTS INST OF TECHNOLOGY 5656**  
 APPLICATIONS OF TRMM PRODUCTS IN HYDROLOGIC STUDIES OVER THE  
 AMAZON REGION  
 07/07/2000 - 11/30/2001 FY01: \$307,000 Total: \$446,131  
*Prin. Invest.:* R L BRAS  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9763 MASSACHUSETTS INST OF TECHNOLOGY 5657**  
 OPTICAL INTERFEROMETER STUDIES OF OTHER PLANETARY SYSTEMS  
 06/27/2000 - 06/30/2002 FY01: \$0 Total: \$70,000  
*Prin. Invest.:* B F BURKE  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9962 MASSACHUSETTS INST OF TECHNOLOGY 5658**  
 DISENTANGLING X-RAY EMISSION PROCESSES IN VELA-LIKE PULSARS  
 09/22/2000 - 09/30/2002 FY01: \$16,000 Total: \$36,625  
*Prin. Invest.:* B M GAENSLER  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 10008 MASSACHUSETTS INST OF TECHNOLOGY 5659**  
 STUDYING THE INTERGALACTIC MEDIUM THROUGH X-RAY ABSORPTION LINES  
 09/25/2000 - 09/30/2002 FY01: \$16,500 Total: \$44,500  
*Prin. Invest.:* C R CANIZARES  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10107 MASSACHUSETTS INST OF TECHNOLOGY 5660**  
 XMM OBSERVATIONS OF LOW MASS GROUPS  
 12/01/2000 - 11/30/2001 FY01: \$28,000 Total: \$28,000  
*Prin. Invest.:* D S DAVIS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10192 MASSACHUSETTS INST OF TECHNOLOGY 5661**  
 XMM OBSERVATIONS OF BLACK-HOLE X-RAY BINARIES IN OUTBURST  
 12/28/2000 - 12/31/2001 FY01: \$22,900 Total: \$22,900  
*Prin. Invest.:* W LEWIN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10328 MASSACHUSETTS INST OF TECHNOLOGY 5662**  
 COMPOSITION OF HYDRATED M AND E-CLASS ASTEROIDS: A SEARCH FOR ANALOGS  
 01/26/2001 - 01/31/2002 FY01: \$23,000 Total: \$23,000  
*Prin. Invest.:* A RIVKIN  
*Tech. Officer:* GSFC/D SENKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10389 MASSACHUSETTS INST OF TECHNOLOGY 5663**  
 RELIEF EVOLUTION IN TECTONICALLY ACTIVE MOUNTAIN RANGERS  
 02/08/2001 - 02/14/2002 FY01: \$50,049 Total: \$50,049  
*Prin. Invest.:* K X WHIPPLE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10440 MASSACHUSETTS INST OF TECHNOLOGY 5664**  
 AGENT BASED SOFTWARE FOR THE AUTONOMOUS CONTROL OF FORMATION FLYING SPACECRAFT PROPOSAL 864  
 03/07/2001 - 03/14/2002 FY01: \$366,548 Total: \$366,548  
*Prin. Invest.:* D P HOW  
*Tech. Officer:* GSFC/N J DENNEY  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 10444 MASSACHUSETTS INST OF TECHNOLOGY 5665**  
 STELLAR OCCULTATION STUDIES OF SMALL BODIES IN THE OUTER SOLAR SYSTEM  
 02/20/2001 - 01/31/2002 FY01: \$133,900 Total: \$133,900  
*Prin. Invest.:* J ELLIOT  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10522 MASSACHUSETTS INST OF TECHNOLOGY 5666**  
 PHASE EQUILIBRIUM AND KINETIC INVESTIGATIONS OF PLANETARY MATERIALS  
 03/03/2001 - 04/01/2001 FY01: \$0 Total: \$0  
*Prin. Invest.:* D L GROVE, NONE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10604 MASSACHUSETTS INST OF TECHNOLOGY 5667**  
 WATER OF HYDRATION ON C-CLASS ASTEROIDS: DOES SIZE MATTER  
 03/15/2001 - 03/14/2002 FY01: \$35,934 Total: \$35,934  
*Prin. Invest.:* A RIVKIN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10613 MASSACHUSETTS INST OF TECHNOLOGY 5668**  
 HIGH SENSITIVITY OPTICAL TECHNIQUES FOR ATMOSPHERIC SPECTROSCOPY, KINETICS, AND REMOTE SENSING  
 03/27/2001 - 03/31/2002 FY01: \$76,121 Total: \$76,121  
*Prin. Invest.:* J I STEINFELD  
*Tech. Officer:* GSFC/M KURYLO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10684 MASSACHUSETTS INST OF TECHNOLOGY 5669**  
 DYNAMICS OF LANDSCAPE CHANGE IN RAPIDLY ERODING REGIONS  
 03/30/2001 - 03/31/2002 FY01: \$75,313 Total: \$75,313  
*Prin. Invest.:* R L BRAS  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10711 MASSACHUSETTS INST OF TECHNOLOGY 5670**  
 A PARTICLE PHYSICS EXPERIMENT IN SPACE  
 04/06/2001 - 03/31/2002 FY01: \$10,000,000 Total: \$10,000,000  
*Prin. Invest.:* S C TING  
*Tech. Officer:* GSFC/M SISTILLI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10728 MASSACHUSETTS INST OF TECHNOLOGY 5671**  
 APPLICATION OF EXPERIMENTAL PETROLOGY TO AID IN THE INTERPRETATION OF THE MARS PATHFINDER ROCK  
 04/10/2001 - 04/30/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* T GROVE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10793 MASSACHUSETTS INST OF TECHNOLOGY 5672**  
 ATLANTIC OCEAN PROCESSES FROM SUBPOLAR REGIONS TO THE SOUTHERN SUBTROPICAL GYRE: MODEL/DATA COMPAR  
 04/25/2001 - 10/31/2001 FY01: \$69,010 Total: \$69,010  
*Prin. Invest.:* P RIZZOLI  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10815 MASSACHUSETTS INST OF TECHNOLOGY 5673**  
 LOW-MASS X-RAY BINARIES WITH RXTE (ADP 2000)  
 05/03/2001 - 05/14/2002 FY01: \$40,171 Total: \$40,171  
*Prin. Invest.:* W H LEWIN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10915 MASSACHUSETTS INST OF TECHNOLOGY 5674**  
 MO&DA FOR THE FARADAY CUP PORTION OF THE WIND SWE EXPERIMENT  
 05/21/2001 - 05/31/2002 FY01: \$120,000 Total: \$120,000  
*Prin. Invest.:* A LAZARUS  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

MASSACHUSETTS

NASA'S UNIVERSITY PROGRAM

**NAG 5 11113 MASSACHUSETTS INST OF TECHNOLOGY 5675**  
 PLANETARY TOPOGRAPHY AND GRAVITY  
 07/18/2001 - 07/31/2002 FY01: \$249,999 Total: \$249,999  
*Prin. Invest.:* M T ZUBER  
*Tech. Officer:* GSFC/D E SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11268 MASSACHUSETTS INST OF TECHNOLOGY 5676**  
 SDM VIRTUALNESS PROJECT  
 08/17/2001 - 11/30/2002 FY01: \$300,000 Total: \$300,000  
*Prin. Invest.:* J KLEIN  
*Tech. Officer:* GSFC/T MATURO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11285 MASSACHUSETTS INST OF TECHNOLOGY 5677**  
 LARGE-SCALE ATMOSPHERIC TRANSPORT PROCESSES  
 08/17/2001 - 08/31/2004 FY01: \$149,675 Total: \$149,675  
*Prin. Invest.:* R A PLUMB  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1253 MASSACHUSETTS INST OF TECHNOLOGY 5678**  
 RESEARCH "APPLICATION OF PARALLEL COMPUTING FOR TWO AND  
 THREE D MODELING OF BULK CRYSTAL GROWTH  
 06/24/1996 - 06/30/2001 FY01: \$0 Total: \$584,927  
*Prin. Invest.:* R A BROWN  
*Tech. Officer:* MSFC/P DOTY, MSFC/R POWER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1435 MASSACHUSETTS INST OF TECHNOLOGY 5679**  
 TOWARDS PRECISION EXPERIMENTS WITH BOSE-EINSTEIN CONDENSATES  
 02/03/1998 - 01/31/2003 FY01: \$63,650 Total: \$339,650  
*Prin. Invest.:* W KETTERLE  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 8 1487 MASSACHUSETTS INST OF TECHNOLOGY 5680**  
 IDENTIFICATION AND CONTROL OF GRAVITY RELATED DEFECT FORMATION DURING MELT GROWTH OF ELECTROOPTI  
 02/13/1998 - 01/31/2002 FY01: \$164,750 Total: \$601,495  
*Prin. Invest.:* A WITT  
*Tech. Officer:* MSFC/M PURVEY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1524 MASSACHUSETTS INST OF TECHNOLOGY 5681**  
 DIRECT USE OF SATELLITE REMOTE SENSING IN THE ESTIMATION OF HYDROLOGIC TRANSPORTS  
 05/22/1998 - 08/31/2001 FY01: \$0 Total: \$434,701  
*Prin. Invest.:* D ENTEKHABI  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1659 MASSACHUSETTS INST OF TECHNOLOGY 5682**  
 KINETIC EVOLUTION OF STABLE AND METASTABLE STATES IN PROTEIN SOLUTIONS.  
 05/10/2000 - 11/30/2003 FY01: \$104,500 Total: \$164,500  
*Prin. Invest.:* G BENEDEK  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1685 MASSACHUSETTS INST OF TECHNOLOGY 5683**  
 THE ROLE OF CONVECTION AND GROWTH COMPETITION IN PHASE SELECTION IN MICROGRAVITY  
 05/11/2000 - 11/30/2003 FY01: \$167,200 Total: \$252,200  
*Prin. Invest.:* M C FLEMING  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1688 MASSACHUSETTS INST OF TECHNOLOGY 5684**  
 FORCES DURING MANUFACTURE AND ASSEMBLY OF MICROSCALE DISCRETE ELECTRONIC COMPONENTS.  
 05/17/2000 - 11/30/2003 FY01: \$74,100 Total: \$162,962  
*Prin. Invest.:* M CIMA  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1689 MASSACHUSETTS INST OF TECHNOLOGY 5685**  
 FROM OXYGEN GENERATION TO METAL PRODUCTION: IN-SITU RESOURCE UTILIZATION BY MOLTEN OXIDE ELECTROLYSIS  
 06/05/2000 - 11/30/2003 FY01: \$85,500 Total: \$125,500  
*Prin. Invest.:* R SADOWAY  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1768 MASSACHUSETTS INST OF TECHNOLOGY 5686**  
 INCREMENTAL FUNDING FOR TOWARDS PRECISION EXPERIMENTS WITH BOSE EINSTEIN CONDENSATES II  
 05/14/2001 - 05/13/2005 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* W KETTERLE  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 9 836 MASSACHUSETTS INST OF TECHNOLOGY 5687**  
 MICROGRAVITY TISSUE ENGINEERING  
 09/19/1995 - 08/31/2000 FY01: \$0 Total: \$4,371,496  
*Prin. Invest.:* L E FREED  
*Tech. Officer:* JSC/N R PELLIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1003 MASSACHUSETTS INST OF TECHNOLOGY 5688**  
 MICROGRAVITY INVESTIGATION & CREW REACTION IN 0-G  
 04/29/1998 - 12/31/2001 FY01: \$0 Total: \$268,557  
*Prin. Invest.:* D J NEWMAN, S BECK  
*Tech. Officer:* JSC/B WOOLFORD  
*CASE Category:* 56 - MEDICL

**NAG 9 1004 MASSACHUSETTS INST OF TECHNOLOGY 5689**  
 ADVANCED DISPLAYS & CONTROLS FOR 6 DOF ORIENTATION  
 05/06/1998 - 06/10/2002 FY01: \$90,241 Total: \$543,296  
*Prin. Invest.:* C M OMAN  
*Tech. Officer:* JSC/J DETROVE  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1078 MASSACHUSETTS INST OF TECHNOLOGY 5690**  
 SPACE STATION HUMAN FACTORS  
 01/21/1999 - 01/28/2000 FY01: -\$93 Total: \$22,907  
*Prin. Invest.:* J P CLARKE  
*Tech. Officer:* JSC/H A ALDRIDGE  
*CASE Category:* 49 - ENGINEERING, OTHER

## NASA'S UNIVERSITY PROGRAM

## MASSACHUSETTS

**NAG 9 1089 MASSACHUSETTS INST OF TECHNOLOGY 5691**  
 ROBOTIC TECHNOLOGY AND FUTURE SPACE SUIT DEVELOPMENT  
 03/05/1999 - 02/28/2002 FY01: \$249,303 Total: \$562,946  
*Prin. Invest.:* D J NEWMAN  
*Tech. Officer:* JSC/B J WOOLFORD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 9 1224 MASSACHUSETTS INST OF TECHNOLOGY 5692**  
 FOKKER-PLANCK STUDIES OF HELICON OPERATON-VASIMR E XPERIMENT  
 03/23/2000 - 01/31/2002 FY01: \$65,000 Total: \$145,000  
*Prin. Invest.:* K MOLVIG, O V BATISHCHAV  
*Tech. Officer:* JSC/F R CHANG-DIAZ  
*CASE Category:* 13 - PHYSICS

**NAS 1 18690 MASSACHUSETTS INST OF TECHNOLOGY 5693**  
 MID-DECK 0-GRAVITY DYNAMICS EXPERIMENT  
 12/06/1988 - 09/30/1999 FY01: -\$133 Total: \$6,063,712  
*Prin. Invest.:* E CROWLEY  
*Tech. Officer:* LARC/L G CLARK, LARC/S M BECK  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAS 3 01153 MASSACHUSETTS INST OF TECHNOLOGY 5694**  
 INTRA ENGINE TRACE SPECIES CHEMISTRY  
 05/09/2001 - 08/10/2001 FY01: \$225,000 Total: \$225,000  
*Prin. Invest.:* I A WAITZ  
*Tech. Officer:* GRC/N S LIU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 5 30612 MASSACHUSETTS INST OF TECHNOLOGY 5695**  
 ALL SKY MONITOR INSTRUMENTS  
 12/15/1989 - 11/15/2003 FY01: \$814,000 Total: \$27,357,767  
*Prin. Invest.:* H BRADT  
*Tech. Officer:* GSFC/W DAVIS  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 31376 MASSACHUSETTS INST OF TECHNOLOGY 5696**  
 RECURSIVE ESTIMATION OF GEOGRAPHICAL PRODUCTS WITH AIRS/AMSU  
 DATA (EOS INVESTIGATION)  
 01/10/1992 - 12/14/2001 FY01: \$260,000 Total: \$1,953,000  
*Prin. Invest.:* D H STAELIN, P W ROSENKRANZ  
*Tech. Officer:* GSFC/E KREINS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAS 5 31728 MASSACHUSETTS INST OF TECHNOLOGY 5697**  
 ACQUISITION OF VLBI CORRELATOR  
 03/19/1992 - 11/30/2000 FY01: \$0 Total: \$9,022,390  
*Prin. Invest.:* A R WHITNEY  
*Tech. Officer:* GSFC/B WILDES  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAS 5 99007 MASSACHUSETTS INST OF TECHNOLOGY 5698**  
 GLAS SCIENCE TEAM  
 12/02/1998 - 12/01/2002 FY01: \$175,000 Total: \$465,000  
*Prin. Invest.:* T A HERRING  
*Tech. Officer:* GSFC/G SMITH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 99181 MASSACHUSETTS INST OF TECHNOLOGY 5699**  
 TRIANA FARADAY CUP.  
 03/17/1999 - 01/01/2001 FY01: \$18,632 Total: \$467,083  
*Prin. Invest.:* A J LAZARUS  
*Tech. Officer:* GSFC/K W OGILVIE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 5 99198 MASSACHUSETTS INST OF TECHNOLOGY 5700**  
 PROVIDE PERSONNEL, FACILITIES, & EQUIPMENT NECESSARY TO SUPPORT  
 THE SPACE GEODESY PROGRAM.  
 04/23/1999 - 04/22/2004 FY01: \$1,513,595 Total: \$3,942,622  
*Prin. Invest.:* G CARRIGAN  
*Tech. Officer:* GSFC/W WILDES  
*CASE Category:* 31 - ATMOSPHERICSCIENCE

**NAS 8 37716 MASSACHUSETTS INST OF TECHNOLOGY 5701**  
 CONDUCT AN X-RAY IMAGING SPECTROSCOPY SCIENTIFIC INVESTIGATION  
 07/23/1990 - 12/31/1999 FY01: -\$71,800 Total: \$77,956,200  
*Prin. Invest.:* G RICKER  
*Tech. Officer:* MSFC/N B CUMINGS  
*CASE Category:* 11 - ASTRONOMY

**NAS 8 38249 MASSACHUSETTS INST OF TECHNOLOGY 5702**  
 AXAF (HETGS)  
 07/13/1990 - 03/01/2002 FY01: \$1,875,000 Total: \$28,623,000  
*Prin. Invest.:* C R CANIZARES  
*Tech. Officer:* MSFC/M E ROSENTHAL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 9 00097 MASSACHUSETTS INST OF TECHNOLOGY 5703**  
 UNIQUE FLIGHT AND BASELINE DATA COLLECTION HARDWARE AND  
 DEVELOP  
 10/24/2000 - 10/25/2005 FY01: \$774,887 Total: \$774,887  
*Prin. Invest.:* C M OMAN  
*Tech. Officer:* JSC/D K BAUMAN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAS 9 19536 MASSACHUSETTS INST OF TECHNOLOGY 5704**  
 ROLE OF VISUAL CUES IN SPATIAL ORIENTATION  
 03/19/1996 - 09/30/2000 FY01: -\$3,183 Total: \$995,644  
*Prin. Invest.:* C M OMAN  
*Tech. Officer:* SSC/S SAWYER  
*CASE Category:* 56 - MEDICL

**NASW 4690 MASSACHUSETTS INST OF TECHNOLOGY 5705**  
 HIGH ENERGY TRANSIENT EXPERIMENT TO DETERMINE ORIGIN & NATURE  
 OF GAMMA-RAY BURSTS  
 03/30/1992 - 11/29/2002 FY01: \$1,945,105 Total: \$26,192,859  
*Prin. Invest.:* G RICKER  
*Tech. Officer:* HQ/D GILMAN, HQ/L KALUZIENSKI  
*CASE Category:* 13 - PHYSICS

**NCC 1 323 MASSACHUSETTS INST OF TECHNOLOGY 5706**  
 AEROELASTIC ANALYSIS OF ACTIVE TWIST ROTOR SYSTEM FOR  
 HELICOPTER VIBRATION REDUCTION  
 12/22/1998 - 10/31/2001 FY01: \$35,999 Total: \$180,429  
*Prin. Invest.:* C E CESNIK, N W NAGOOD  
*Tech. Officer:* LARC/M L WILBUR, LARC/W K WILKIE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 415 MASSACHUSETTS INST OF TECHNOLOGY 5707**  
 PHYSICAL PROCESSES INFLUENCING ATMOSPHERIC TRACE CONSTITUENTS MEASURED FROM AIRCRAFT IN TRACE-P (IS NRA)  
 09/21/2000 - 06/30/2003 FY01: \$145,791 Total: \$302,433  
*Prin. Invest.:* R E NEWELL  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 570 MASSACHUSETTS INST OF TECHNOLOGY 5708**  
 PRINCIPAL INVESTIGATOR IN A BOX  
 12/29/1988 - 01/31/2001 FY01: \$0 Total: \$2,098,309  
*Prin. Invest.:* L R YOUNG  
*Tech. Officer:* ARC/S LAU, ARC/D A ROSENTHAL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 985 MASSACHUSETTS INST OF TECHNOLOGY 5709**  
 AUTOMATED FLUID FEATURE EXTRACTION FROM TRANSIENT SIMULATIONS  
 04/01/1997 - 12/31/2000 FY01: -\$2,717 Total: \$169,612  
*Prin. Invest.:* R HAIMES  
*Tech. Officer:* ARC/D L KAO, ARC/A VAZIRI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1044 MASSACHUSETTS INST OF TECHNOLOGY 5710**  
 DRIVING PARAMETERS FOR DISTRIBUTED & CENTRALIZED AIR TRANSPORTATION ARCHITECTURES  
 06/24/1998 - 09/30/2000 FY01: \$0 Total: \$142,039  
*Prin. Invest.:* E FERON  
*Tech. Officer:* ARC/B SRIDHAR, ARC/K BILIMORIA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1121 MASSACHUSETTS INST OF TECHNOLOGY 5711**  
 MARSCAPE  
 05/21/1999 - 12/31/2001 FY01: \$0 Total: \$150,000  
*Prin. Invest.:* J K SALISBURY  
*Tech. Officer:* ARC/H THOMAS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 1147 MASSACHUSETTS INST OF TECHNOLOGY 5712**  
 IMPLEMENTATION ISSUES FOR DEPARTURE PLANNING SYSTEMS  
 12/07/1999 - 11/30/2001 FY01: \$249,714 Total: \$490,247  
*Prin. Invest.:* E FERON, R J HANSMAN  
*Tech. Officer:* ARC/S ATKINS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1150 MASSACHUSETTS INST OF TECHNOLOGY 5713**  
 SAFETY METRICS FOR HUMAN-COMPUTER CONTROLLED SYSTEM  
 12/28/1999 - 12/31/2000 FY01: \$0 Total: \$195,940  
*Prin. Invest.:* N LEVESON  
*Tech. Officer:* ARC/S YASSINI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1209 MASSACHUSETTS INST OF TECHNOLOGY 5714**  
 DISTRIBUTED & CENTRALIZED CONFLICT MANAGEMENT UNDER TRAFFIC FLOW MANAGEMENT CONSTRAINTS  
 12/04/2000 - 11/14/2001 FY01: \$63,957 Total: \$63,957  
*Prin. Invest.:* E FERON  
*Tech. Officer:* ARC/K BILIMORIA, ARC/B SRIDHAR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1223 MASSACHUSETTS INST OF TECHNOLOGY 5715**  
 APPROACHES TO HUMAN CENTERED SOFTWARE DEVELOPMENT  
 03/23/2001 - 02/28/2002 FY01: \$182,000 Total: \$182,000  
*Prin. Invest.:* N G LEVESON  
*Tech. Officer:* ARC/P M JONES, ARC/M SHAFTO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1235 MASSACHUSETTS INST OF TECHNOLOGY 5716**  
 A HYBRID DISCRETE/CONTINUOUS SYSTEM FOR HEALTH MANAGEMENT  
 04/03/2001 - 02/28/2002 FY01: \$235,000 Total: \$235,000  
*Prin. Invest.:* B C WILLIAMS  
*Tech. Officer:* ARC/R MORRIS, ARC/D J CLANCY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1237 MASSACHUSETTS INST OF TECHNOLOGY 5717**  
 MULTI-RESOLUTION PLANNING IN LARGE UNCERTAIN ENVIRONMENTS  
 04/06/2001 - 02/28/2002 FY01: \$129,000 Total: \$129,000  
*Prin. Invest.:* L KAELEBLING  
*Tech. Officer:* ARC/R MORRIS, ARC/D CLANCY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1269 MASSACHUSETTS INST OF TECHNOLOGY 5718**  
 USING CAPRI WITHIN NASA'S INTELLIGENT SYNTHESIS ENVIRONMENT  
 06/01/2001 - 09/30/2001 FY01: \$74,975 Total: \$74,975  
*Prin. Invest.:* R HAIMES  
*Tech. Officer:* ARC/J REUTHER, ARC/D KONTINOS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 3 610 MASSACHUSETTS INST OF TECHNOLOGY 5719**  
 THE EXTENSIONAL RHEOLOGY OF NON-NEWTONIAN MATERIAL EXTENSIONAL RHEOLOGY EXPERIMENT (ERE)  
 04/21/1998 - 02/09/2003 FY01: \$190,000 Total: \$740,000  
*Prin. Invest.:* G H MCKINLEY  
*Tech. Officer:* GRC/N R HALL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 3 632 MASSACHUSETTS INST OF TECHNOLOGY 5720**  
 MIT ENGINEERING INTERSHIP PROGRAM  
 06/30/1998 - 06/20/2002 FY01: \$36,645 Total: \$154,645  
*Prin. Invest.:* I A WATZ  
*Tech. Officer:* GRC/L POVINELLI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 875 MASSACHUSETTS INST OF TECHNOLOGY 5721**  
 HIGH SPECIFIC IMPULSE HALL THRUSTERS  
 03/21/2001 - 03/31/2004 FY01: \$401,796 Total: \$401,796  
*Prin. Invest.:* D MARTINEZ-SANCHEZ  
*Tech. Officer:* GRC/S OLESON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 4 123 MASSACHUSETTS INST OF TECHNOLOGY 5722**  
 DESIGN & EVALUATION OF FLIGHT CONTROL SYSTEMS  
 04/28/1999 - 05/31/2001 FY01: \$0 Total: \$83,321  
*Prin. Invest.:* J D PADUANO  
*Tech. Officer:* DFRC/T MAINE, DFRC/J BURKEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 244 MASSACHUSETTS INST OF TECHNOLOGY 5723**  
 BIOGEOCHEMICAL CYCLES USING MODELS AND DATA  
 10/24/1997 - 06/30/2001 FY01: \$0 Total: \$727,000  
*Prin. Invest.:* J MARSHALL  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 330 MASSACHUSETTS INST OF TECHNOLOGY 5724**  
 DEVELOPMENT OF ACCURATE STRUCTURE FOR MOUNTING AND ALIGNING  
 THIN FOILX-RAY MIRRORS.  
 05/07/1998 - 11/14/2000 FY01: \$0 Total: \$168,177  
*Prin. Invest.:* M SCHATTEBURG  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/R PETRE  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 416 MASSACHUSETTS INST OF TECHNOLOGY 5725**  
 SOIL MOISTURE DATA ASSIMILATION FOR CONTINENTAL- SCALE LAND  
 SURFACE HYDROLOGY APPLICATIONS  
 08/04/1999 - 07/31/2002 FY01: \$82,472 Total: \$216,639  
*Prin. Invest.:* D MCLAUGHLIN  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 525 MASSACHUSETTS INST OF TECHNOLOGY 5726**  
 FABRICATION AND METROLOGY OF HIGH-PRECISION FOIL MIRROR  
 MOUNTING ELEMENT CONSTELLATION X-PROPOSAL  
 01/08/2001 - 01/14/2002 FY01: \$105,000 Total: \$105,000  
*Prin. Invest.:* M SCHATTEBURG  
*Tech. Officer:* GSFC/R PETRE  
*CASE Category:* 11 - ASTRONOMY

**NCC 8 174 MASSACHUSETTS INST OF TECHNOLOGY 5727**  
 R/S MICROGRAVITY TISSUE ENGINEERING  
 03/31/1999 - 11/30/2002 FY01: \$853,100 Total: \$2,339,763  
*Prin. Invest.:* L FREED  
*Tech. Officer:* JSC/N R PELLIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 3 52360 MASSACHUSETTS INST OF TECHNOLOGY 5728**  
 GRADUATE STUDENT RESEARCHER PROGRAM GRADUATE STUDENT  
 RESEARCHER PROGRAM  
 07/15/1999 - 06/30/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* G H MCKINLEY  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 30188 MASSACHUSETTS INST OF TECHNOLOGY 5729**  
 THE IMPACT OF GLACIAL EROSION ON THE RELIEF STRUCTURE OF  
 MOUNTAIN BELTS STUDENT: SIMON BROCKLEHURS  
 08/19/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* K X WHIPPLE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30189 MASSACHUSETTS INST OF TECHNOLOGY 5730**  
 TEMPORAL VARIABILITY OF AIR - SEA GAS FLUXES: ESTIMATION &  
 INCORPORATION INTO AN INVERSE MODEL OF  
 08/18/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* J MARSHALL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30190 MASSACHUSETTS INST OF TECHNOLOGY 5731**  
 ADJOINT SENSITIVITY ANALYSIS OF THE COUPLED LAND- ATMOSPHERE  
 SYSTEM/STUDENT: STEVEN A. MARGULIS  
 08/19/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* D ENTEKHABI  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30200 MASSACHUSETTS INST OF TECHNOLOGY 5732**  
 AN INVESTIGATION OF STRATOSPHERIC TRANSPORT USING THE "LEAKY  
 PIPE" MODEL STUDENT: JESSICA NEU  
 08/24/1999 - 08/31/2000 FY01: -\$1 Total: \$21,999  
*Prin. Invest.:* R A PLUMB  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30212 MASSACHUSETTS INST OF TECHNOLOGY 5733**  
 THE SIGNATURE OF CLIMATIC & TECTONIC PROCESSES IN ALLUVIAL  
 FANS: A NUMERICAL MODELING & REMOTE SENSING  
 08/20/1999 - 08/31/2002 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* R L BRAS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30334 MASSACHUSETTS INST OF TECHNOLOGY 5734**  
 MULTIPHASE AND HETEROGENEOUS PROCESSES IN ATMOSPHERIC  
 CHEMISTRY  
 08/17/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* B TROUT  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30337 MASSACHUSETTS INST OF TECHNOLOGY 5735**  
 DYNAMICS & SCALES OF VARIABILITY IN THE LABRADOR SEA: STATE  
 ESTIMATION USING AN EDDY-RESOLVING  
 08/21/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* C WUNSCH  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30339 MASSACHUSETTS INST OF TECHNOLOGY 5736**  
 EFFECTS OF VEGETATION DYNAMICS ON ARROYO & GULLY EVOLUTION &  
 SUSCEPTIBILITY TO CLIMATE CHANGE  
 08/21/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* R BRAS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40048 MASSACHUSETTS INST OF TECHNOLOGY 5737**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 01/24/1997 - 01/31/2001 FY01: \$0 Total: \$1,839,999  
*Prin. Invest.:* L R YOUNG  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40075 MASSACHUSETTS INST OF TECHNOLOGY 5738**  
 MASSACHUSETTS SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2002 FY01: \$475,000 Total: \$475,000  
*Prin. Invest.:* L YOUNG  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

MASSACHUSETTS

NASA'S UNIVERSITY PROGRAM

**NGT 5 50302 MASSACHUSETTS INST OF TECHNOLOGY 5739**  
 COMBUSTION SYNTHESIS OF FULLERENES AND FULLERENIC NANOS-  
 TRUCTURES IN MICROGRAVITY/STUDENT: ANISH GOEL  
 07/06/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* J B HOWARD  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50306 MASSACHUSETTS INST OF TECHNOLOGY 5740**  
 THE KINETICS OF COMPETITIVE GROWTH DURING RAPID SOLIDIFICATION  
 OF TERNARY STEEL ALLOYS/STUDENT JOA  
 07/06/2000 - 06/30/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* M FLEMINGS  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52860 MASSACHUSETTS INST OF TECHNOLOGY 5741**  
 CHARACTERIZATION OF THERMAL SUBSYSTEMS FOR A MICROGRAVITY  
 BRIDGMAN CRYSTAL GROWTH FURNACE  
 07/23/1998 - 08/13/2000 FY01: -\$6,667 Total: \$0  
*Prin. Invest.:* A F WITT  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 8 52880 MASSACHUSETTS INST OF TECHNOLOGY 5742**  
 IDENTIFICATION AND CONTROL OF GRAVITY RELATED DEFECT FORMA-  
 TION DURING MELT GROWTH  
 09/09/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* A WITT  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52892 MASSACHUSETTS INST OF TECHNOLOGY 5743**  
 BALANCE OF PLANT DESIGN AND ANALYSIS FOR SPACE NUCLEAR POWER  
 OPTIONS  
 07/11/2000 - 06/30/2003 FY01: \$0 Total: \$0  
*Prin. Invest.:* M MARTINEZ-SANCHEZ  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 8635 MT HOLYOKE COLLEGE 5744**  
 CO2 AND CH4 EXCHANGE IN NORTHERN PEATLANDS  
 07/07/1999 - 06/30/2002 FY01: \$91,444 Total: \$345,781  
*Prin. Invest.:* J L BUBIER  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10238 MT HOLYOKE COLLEGE 5745**  
 SUMMERMATH NASA SCHOLARS PROGRAM  
 01/04/2001 - 12/31/2001 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* J MORROW  
*Tech. Officer:* GSFC/CHOLLINGSWORTH  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 5 10424 MT HOLYOKE COLLEGE 5746**  
 SYNCHROTRON CHARACTERIZATION OF HYDROGEN & FERRIC IRON IN  
 MARTIAN METEORITES  
 02/15/2001 - 02/28/2002 FY01: \$34,000 Total: \$34,000  
*Prin. Invest.:* D DYAR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1254 NORTHEASTERN UNIV 5747**  
 THE ROLE OF DYNAMIC NUCLEATION AT MOVING BOUNDRIES IN PHASE  
 AND MICROSTRUCTURE SELECTION  
 05/10/1996 - 05/09/2001 FY01: \$0 Total: \$600,000  
*Prin. Invest.:* A KARMA, R TRIVEDI  
*Tech. Officer:* MSFC/P DOTY, MSFC/R POWER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1485 NORTHEASTERN UNIV 5748**  
 R/S MODELING OF MACROSCOPIC/MICROSCOPIC TRANSPORT AND  
 GROWTH PHENOMENA IN ZEOLITE CRYSTALS UNDER  
 04/27/1998 - 05/31/2001 FY01: \$16,150 Total: \$321,483  
*Prin. Invest.:* A SACCO  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1668 NORTHEASTERN UNIV 5749**  
 PHASE FIELD SIMULATIONS OF DENDRITIC GROWTH AT LOW UNDER-  
 COOLING: CONFRONTING THEORY AND EXPERIMENT.  
 05/23/2000 - 11/30/2003 FY01: \$85,500 Total: \$120,500  
*Prin. Invest.:* A KARMA  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 8 139 NORTHEASTERN UNIV 5750**  
 RESEARCH "CENTER FOR ADVANCED MICROGRAVITY MATERIALS PROC-  
 ESSING (CAMMP)"  
 06/27/1997 - 10/31/2001 FY01: \$2,645,000 Total: \$8,913,655  
*Prin. Invest.:* A SACCO  
*Tech. Officer:* MSFC/M NALL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 122 NORTHEASTERN UNIV 5751**  
 IMAGE PROCESSING TECHNIQUES FOR SATELLITE DATE USING RECONF-  
 IGURABLE TECHNOLOGY/STUDENT: HEATHER Q  
 07/09/2001 - 09/14/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* M LEESER  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2563 TUFTS UNIV 5752**  
 A SOLID STATE LI-ION BATTERY WITH A CONDUCTIONG PO LYMER ANODE  
 03/13/2001 - 04/30/2002 FY01: \$58,333 Total: \$58,333  
*Prin. Invest.:* D B GOLDNER  
*Tech. Officer:* GRC/N HAGEDORN  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 8115 TUFTS UNIV 5753**  
 VLA-SOHO OBSERVATIONS OF BLINKERS AND CME'S11  
 01/25/1999 - 01/31/2001 FY01: \$0 Total: \$112,000  
*Prin. Invest.:* K R LANG  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9725 TUFTS UNIV 5754**  
 VERY LARGE ARRAY OBSERVATIONS IN SUPPORT OF HESSI  
 07/06/2000 - 07/14/2001 FY01: \$0 Total: \$35,000  
*Prin. Invest.:* K R LANG  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

## MASSACHUSETTS

**NAG 5 10350 TUFTS UNIV 5755**  
 NASA'S COSMOS. FULLY FUNDS YEAR 1 OF 3  
 02/06/2001 - 02/14/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* K R LANG  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1311 TUFTS UNIV 5756**  
 JOVE RESEARCH  
 01/21/1997 - 08/31/2000 FY01: \$0 Total: \$55,000  
*Prin. Invest.:* K P LENTL  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 8 1480 TUFTS UNIV 5757**  
 STUDY OF DEVELOPMENT OF POLYMER STRUCTURE IN MICROGRAVITY  
 USING ELLIPSOMETRY  
 02/27/1998 - 01/31/2002 FY01: \$61,750 Total: \$264,720  
*Prin. Invest.:* P CEBE  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1699 TUFTS UNIV 5758**  
 RESEARCH STUDY HIEARCHICAL ASSEMBLY OF COLLAGEN  
 06/05/2000 - 11/30/2003 FY01: \$104,500 Total: \$154,500  
*Prin. Invest.:* D L KAPLAN  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 56 - MEDICL

**NAG 9 1182 TUFTS UNIV 5759**  
 MULTISENSOR ARRAY FOR MONITORING WATER QUALITY ON SPACE-  
 CRAFT & PLANETARY HABITATS  
 12/20/1999 - 12/19/2002 FY01: \$96,401 Total: \$207,876  
*Prin. Invest.:* S P KOUNAVES  
*Tech. Officer:* JPL/D JAN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 3 479 TUFTS UNIV 5760**  
 DECOUPLING THE ROLE OF INERIA AND GRAVITY ON PARTI CL DISPERSI-  
 ON  
 06/01/1996 - 05/31/2001 FY01: \$0 Total: \$295,860  
*Prin. Invest.:* C ROGERS  
*Tech. Officer:* GRC/T K GLASGOW  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 5 434 TUFTS UNIV 5761**  
 THE SCIENCE AND ENGINEERING NASA SITE OF REMOTE SENSING  
 (SENSORS).  
 09/22/1999 - 09/30/2002 FY01: \$115,418 Total: \$299,533  
*Prin. Invest.:* C ROGERS  
*Tech. Officer:* GSFC/R E GABRYS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1197 UNIV OF MASSACHUSETTS @ WORCESTER 5762**  
 EFFECTS OF GRAVITY ON CELL MOVEMENT & DEVELOPMENT  
 04/02/1998 - 10/31/2001 FY01: \$0 Total: \$502,651  
*Prin. Invest.:* Y L WANG  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1438 UNIV OF MASSACHUSETTS @ WORCESTER 5763**  
 THE EFFECT OF HYPERGRAVITY ON RETINOIC ACID SIGNAL ING IN THE  
 DEVELOPING EMBRYO  
 09/19/2000 - 09/30/2002 FY01: \$147,369 Total: \$245,929  
*Prin. Invest.:* P J MACCAFFERY  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1495 UNIV OF MASSACHUSETTS @ WORCESTER 5764**  
 EFFECTS OF CHARITY ON THE STRUCTURE AND FUNCTION O F ANIMAL  
 CELLS  
 07/09/2001 - 06/30/2002 FY01: \$99,039 Total: \$99,039  
*Prin. Invest.:* Y L WANG  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1358 UNIV OF MASSACHUSETTS @ WORCESTER 5765**  
 R/S MICROGRAVITY AND THE BIOLOGY OF NEURAL STEM CELLS  
 06/19/1997 - 11/30/2000 FY01: \$0 Total: \$584,981  
*Prin. Invest.:* W J SCHWARTZ  
*Tech. Officer:* MSFC/S R GONDA  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 9 1356 UNIV OF MASSACHUSETTS @ WORCESTER 5766**  
 MICROGRAVITY AND THE BIOLOGY OF NEURAL STEM CELLS  
 07/27/2001 - 09/30/2004 FY01: \$47,000 Total: \$47,000  
*Prin. Invest.:* W J SCHWARTZ, T M SAVARESE, H PANG LOW  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 56 - MEDICL

**NGT 5 50374 UNIV OF MASSACHUSETTS @ WORCESTER 5767**  
 GENETIC MANIPULATION OF CELL ADHESION PROTEINS TO MODIFY  
 MECHANICALRESPONSEANDTISSUE REMODELI  
 07/09/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* L BONASSAR  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2426 UNIV OF MASSACHUSETTS 5768**  
 PHASE CHANGE IN LOW AND JITTERING GRAVITY ENVIRONM ENT  
 SIMULATED VIA ELECTROMAGNETIC FIELD  
 05/19/2000 - 11/30/2003 FY01: \$59,882 Total: \$100,694  
*Prin. Invest.:* D CHARMCHI  
*Tech. Officer:* GRC/H DEGROH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 8145 UNIV OF MASSACHUSETTS 5769**  
 AUTOMATED PROCESSING OF ISIS TOPSIDE IONOGRAMS INT O ELEC-  
 TRON DENSITYPROFILES  
 02/04/1999 - 12/31/2001 FY01: \$65,200 Total: \$391,162  
*Prin. Invest.:* B REINISCH  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9611 UNIV OF MASSACHUSETTS 5770**  
 HALFWIDTHS & LINE SHIFTS OF WATER VAPOR TRANSITION IN THE 0.7 UM  
 REGION  
 05/22/2000 - 05/31/2001 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* R GAMACHE  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

MASSACHUSETTS

NASA'S UNIVERSITY PROGRAM

**NAG 5 11064 UNIV OF MASSACHUSETTS 5771**  
 THEORY IN SUPPORT OF LABORATORY SPECTROSCOPY FOR AIRS, TES  
 AND HIRDLS  
 06/28/2001 - 06/30/2002 FY01: \$25,157 Total: \$25,157  
*Prin. Invest.:* R R GAMACHE  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 1022 UNIV OF MASSACHUSETTS - AMHERST 5772**  
 GROUND-BASED MILLIMETER-WAVE MEASUREMENT OF OZONE IN THE  
 MIDDLE ATMOSPHERE  
 06/19/1989 - 12/31/2000 FY01: \$0 Total: \$1,526,585  
*Prin. Invest.:* A D PARRISH  
*Tech. Officer:* LARC/L E DEEVER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1375 UNIV OF MASSACHUSETTS - AMHERST 5773**  
 MICROGRAVITY EFFECTS ON SEED DEVELOPMENT AND MATURE ATION  
 08/20/1999 - 08/31/2002 FY01: \$118,900 Total: \$373,422  
*Prin. Invest.:* M E MUSGRAVE  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1394 UNIV OF MASSACHUSETTS - AMHERST 5774**  
 ON BOARD AUTONOMY FOR ROVERS  
 02/07/2000 - 01/31/2002 FY01: \$48,320 Total: \$94,780  
*Prin. Invest.:* S ZILBERSTEIN  
*Tech. Officer:* ARC/J BRESINA  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2452 UNIV OF MASSACHUSETTS - AMHERST 5775**  
 EMBEDDED SENSORS FOR CONDITION MONITORING OF HELIC OPTER  
 GEARBOXES PROPOSAL #100-1355  
 06/07/2000 - 09/30/2002 FY01: \$82,776 Total: \$122,766  
*Prin. Invest.:* D DANA  
*Tech. Officer:* GRC/D LEWICKI  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 3922 UNIV OF MASSACHUSETTS - AMHERST 5776**  
 ORIGIN OF QUASAR ABSORPTION LINES IN A COSMOLOGICA  
 03/24/1997 - 03/31/2001 FY01: \$0 Total: \$120,000  
*Prin. Invest.:* N KATZ  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4064 UNIV OF MASSACHUSETTS - AMHERST 5777**  
 A THEORETICAL STUDY OF PROCESSES DRIVING THE FORMA  
 03/18/1997 - 03/31/2001 FY01: \$0 Total: \$151,330  
*Prin. Invest.:* N KATZ  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4272 UNIV OF MASSACHUSETTS - AMHERST 5778**  
 A CRYOGENIC FREQUENCY MULTIPLIER CHAIN FOR 1000 GH  
 04/18/1997 - 12/31/2000 FY01: \$0 Total: \$227,684  
*Prin. Invest.:* D R ERICKSON  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4373 UNIV OF MASSACHUSETTS - AMHERST 5779**  
 PLANETARY, TECTONICS, AREAL GEOLOGY, AND GEOLOGICA  
 04/25/1997 - 01/31/2002 FY01: \$43,100 Total: \$207,145  
*Prin. Invest.:* D E MCGILL  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4652 UNIV OF MASSACHUSETTS - AMHERST 5780**  
 SHOCK AND THERMAL HISTORY OF IRON AND CHONDRITIC M  
 06/11/1997 - 02/28/2002 FY01: \$0 Total: \$522,000  
*Prin. Invest.:* D I GOLDSTEIN  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4999 UNIV OF MASSACHUSETTS - AMHERST 5781**  
 STRUCTURAL AND GEOMORPHIS EVOLUTION OF THE MARTIAN  
 07/24/1997 - 07/14/2001 FY01: \$0 Total: \$121,184  
*Prin. Invest.:* G MCGILL  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6161 UNIV OF MASSACHUSETTS - AMHERST 5782**  
 UMASS PLANET EARTH EDUCATION PROGRMS  
 08/01/1997 - 10/31/2000 FY01: \$0 Total: \$60,000  
*Prin. Invest.:* M STERNHEIM  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6612 UNIV OF MASSACHUSETTS - AMHERST 5783**  
 MILLIMETER-WAVE AND RADIO STUDIES OF SOLAR SYSTEM OBJECTS  
 02/12/1998 - 12/31/1999 FY01: -\$74,107 Total: \$74,139  
*Prin. Invest.:* F SCHLOERB  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6701 UNIV OF MASSACHUSETTS - AMHERST 5784**  
 ENVIRONMENTAL EVOLUTION. LIFE'S EFFECTS ON THE AR CHEAN AND  
 PROTEROZOIC EARTH: AN INTEGRATED RESEA  
 12/04/1997 - 01/31/2001 FY01: \$0 Total: \$256,225  
*Prin. Invest.:* L MARGULIS  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 8184 UNIV OF MASSACHUSETTS - AMHERST 5785**  
 MARTIAN POLYGONAL TERRAIN: TESTS FOR SEDIMENTARY O RIGIN OF  
 DEPOSITS  
 02/16/1999 - 03/14/2002 FY01: \$17,000 Total: \$51,300  
*Prin. Invest.:* G E MCGILL  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8197 UNIV OF MASSACHUSETTS - AMHERST 5786**  
 SCALABLE PARALLEL STATISTICAL INFERENCE AND MODEL COMPARISON  
 USING LARGE DATABASES  
 02/04/1999 - 01/31/2002 FY01: \$230,000 Total: \$685,067  
*Prin. Invest.:* M WEIENBERG  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 8718 UNIV OF MASSACHUSETTS - AMHERST 5787**  
 BOUNDARY CONDITIONS FOR THE PALEOENVIRONMENT: THE CHEMISTRY  
 OF DENSE INTERSTELLAR CLOUDS & COMETS  
 07/29/1999 - 10/14/2001 FY01: \$80,000 Total: \$159,277  
*Prin. Invest.:* W M IRVINE  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8909 UNIV OF MASSACHUSETTS - AMHERST 5788**  
 STRUCTURAL AND GEOMORPHIC EVOLUTION OF THE MARTIAN CRUST  
 01/04/2000 - 07/14/2002 FY01: \$40,400 Total: \$82,081  
*Prin. Invest.:* G E MCGILL, NONE  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8999 UNIV OF MASSACHUSETTS - AMHERST 5789**  
 THE HOT INTERSTELLAR MEDIUM\_(LTSA)  
 02/03/2000 - 01/31/2002 FY01: \$104,000 Total: \$205,886  
*Prin. Invest.:* Q WANG  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9429 UNIV OF MASSACHUSETTS - AMHERST 5790**  
 X-RAY SOURCE POPULATION IN NEARBY DISK GALAXIES- ADP-99  
 04/11/2000 - 04/14/2002 FY01: \$52,922 Total: \$99,684  
*Prin. Invest.:* Q WANG  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9630 UNIV OF MASSACHUSETTS - AMHERST 5791**  
 DUAL POL DUAL FREQUENCY ANTENNA ELEMENTS FOR INTEG RATED  
 SENSOR MODULES.  
 05/25/2000 - 04/30/2001 FY01: \$0 Total: \$59,772  
*Prin. Invest.:* K CARVER  
*Tech. Officer:* GSFC/T A DOIRON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 9652 UNIV OF MASSACHUSETTS - AMHERST 5792**  
 CONTINUED GROUND-BASED MICROWAVE MEASUREMENTS OF OZONE  
 FOR THE NETWORK FOR DETECTION OF STRATOSPHER  
 05/26/2000 - 12/31/2001 FY01: \$204,536 Total: \$371,013  
*Prin. Invest.:* A PARRISH  
*Tech. Officer:* GSFC/M KURYLO  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10515 UNIV OF MASSACHUSETTS - AMHERST 5793**  
 SHOCK & THERMAL HISTORY OF IRON, STONY IRON & CHON DRITIC  
 METEORITES  
 03/05/2001 - 03/14/2002 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* J GOLDSTEIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10649 UNIV OF MASSACHUSETTS - AMHERST 5794**  
 ASSESSING LANDFORMS AND LAND SURFACE CHANGE IN ACTIVE MOUN-  
 TAINS WITH SRTM AND ENVISAT OBSERVATION  
 04/04/2001 - 04/14/2002 FY01: \$117,715 Total: \$117,715  
*Prin. Invest.:* C C DUNCAN  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10677 UNIV OF MASSACHUSETTS - AMHERST 5795**  
 MILLIMETER-WAVE AND RADIO STUDIES OF SOLAR SYSTEM BODIES  
 04/24/2001 - 04/30/2002 FY01: \$77,200 Total: \$77,200  
*Prin. Invest.:* P SCHLOERB, NONE  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10681 UNIV OF MASSACHUSETTS - AMHERST 5796**  
 ENVIRONMENTAL EVOLUTION: ORIGIN OF THE CHIMERIC EUKARYOTE  
 03/28/2001 - 03/31/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* L MARGULIS  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10699 UNIV OF MASSACHUSETTS - AMHERST 5797**  
 PRINTED CIRCUIT DUAL-POL DUAL-FREQUENCY ANTENNA ELEMENTS  
 FOR ATIP INTEGRATEDSENSOR MODULES  
 04/18/2001 - 09/30/2002 FY01: \$82,500 Total: \$82,500  
*Prin. Invest.:* K CARVER  
*Tech. Officer:* GSFC/T DOIRON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 10783 UNIV OF MASSACHUSETTS - AMHERST 5798**  
 0.2-1 KEV EMISSION FROM THE HOT INTERGALACTIC MEDIUM (ADP 2000)  
 04/23/2001 - 04/30/2002 FY01: \$46,230 Total: \$46,230  
*Prin. Invest.:* Q WANG  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1694 UNIV OF MASSACHUSETTS - AMHERST 5799**  
 CAPILLARY WAVES AT INTERFACES: THE ROLE OF GRAVITY AND ELEC-  
 TRIC FIELDS  
 06/01/2000 - 11/30/2003 FY01: \$95,000 Total: \$155,000  
*Prin. Invest.:* T P RUSSELL  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1697 UNIV OF MASSACHUSETTS - AMHERST 5800**  
 "THIN FILM MOLECULAR SIEVE SYNTHESIS: PROCESSING MICROSTRUC-  
 TURE RELATIONSHIPS & EFFECTS OF GRAVITY"  
 06/06/2000 - 11/30/2003 FY01: \$95,000 Total: \$135,000  
*Prin. Invest.:* M TSAPATIS  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1379 UNIV OF MASSACHUSETTS - AMHERST 5801**  
 LEARNING TO EXPLOIT DYNAMICS FOR ROBOT MANIPULATORS  
 08/28/2001 - 07/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* A G BARTO  
*Tech. Officer:* JSC/T MARTIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAS 1 01058 UNIV OF MASSACHUSETTS - AMHERST 5802**  
 RESEARCH ENTITLED, "NEAR-QUANTUM-NOISE LIMITED HOT ELECTRON  
 BOLOMETRIC HETERODYNE DETECTORS  
 06/20/2001 - 06/19/2004 FY01: \$298,000 Total: \$298,000  
*Prin. Invest.:* S K YNGVESSON  
*Tech. Officer:* LARC/M N ABEDIN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

MASSACHUSETTS

NASA'S UNIVERSITY PROGRAM

**NAS 3 00121 UNIV OF MASSACHUSETTS - AMHERST 5803**  
 ALLIANCE ICING RESEARCH STUDY  
 04/30/2000 - 11/15/2000 FY01: \$0 Total: \$118,000  
*Prin. Invest.:* S SEKELSEY  
*Tech. Officer:* GRC/A REEHORST  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 5 99133 UNIV OF MASSACHUSETTS - AMHERST 5804**  
 TWO DIMENSIONAL SYNTHETIC APARTURE RADIOMETER.  
 08/03/1999 - 02/24/2002 FY01: \$70,512 Total: \$201,912  
*Prin. Invest.:* K CARVER  
*Tech. Officer:* GSFC/D LEVINE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 2 1180 UNIV OF MASSACHUSETTS - AMHERST 5805**  
 MULTI-AGENT INFORMATION ENVIRONMENT FOR INTEGRATE D DESIGN  
 AND ANALYSIS.....  
 05/16/2000 - 05/14/2002 FY01: \$0 Total: \$65,918  
*Prin. Invest.:* A DASCHMULCH  
*Tech. Officer:* ARC/M E LIVINGSTON  
*CASE Category:* 41 - AERONAUTICALENGNR

**NCC 2 1265 UNIV OF MASSACHUSETTS - AMHERST 5806**  
 MULTI-AGENT REASONING & DISTRIBUTED SEARCH IN DESI GN OF  
 COMPLEX AEROSPACE SYSTEMS  
 05/03/2001 - 04/30/2002 FY01: \$105,000 Total: \$105,000  
*Prin. Invest.:* A DESHMUKH  
*Tech. Officer:* ARC/M LIVINGSTON, ARC/F J TORRES  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 2 52276 UNIV OF MASSACHUSETTS - AMHERST 5807**  
 A DECISION-THEORY APPROACH TO AUTONOMOUS PLANETARY  
 CONTROL (STUDENT: DANIELSCOTT BERNSTEIN)  
 06/12/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S ZILBERSTEIN  
*Tech. Officer:* ARC/J BRESINA  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 30375 UNIV OF MASSACHUSETTS - AMHERST 5808**  
 REALIZING NETWORK SENSOR WEBS THROUGH THE DEVELOPM ENT OF  
 THE REMOTEINSTRUMENT DEFINITION LANGU  
 08/13/2001 - 08/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D MCLAUGHLIN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30412 UNIV OF MASSACHUSETTS - AMHERST 5809**  
 AIRBORNE CLOUD RADAR STUDIES: CLOUDSAT CALIBRATION AND  
 CLOUD/PRECIPITA- TION RETRIEVAL ALGORITHM DEV  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S SEKELSKY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 32 UNIV OF MASSACHUSETTS - AMHERST 5810**  
 TRAINING GRANT  
 06/04/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R E VAN EMMERIK  
*Tech. Officer:* JSC/D G SICKOREZ  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6605 UNIV OF MASSACHUSETTS-DARTHMOUTH 5811**  
 INTERANNUAL PHYSICAL AND BIOLOGICAL VARIABILITY OF F THE NORTH-  
 EASTU.S. COAST  
 12/11/1997 - 11/14/2000 FY01: -\$27,635 Total: \$149,003  
*Prin. Invest.:* J J BISAGNI  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9752 UNIV OF MASSACHUSETTS-DARTHMOUTH 5812**  
 REGIONAL FISHERIES APPLICATION CENTER  
 06/22/2000 - 09/30/2002 FY01: \$0 Total: \$1,831,000  
*Prin. Invest.:* B J ROTHSCHILD  
*Tech. Officer:* GSFC/D R KAHLE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10125 UNIV OF MASSACHUSETTS-DARTHMOUTH 5813**  
 A PILOT INVESTIGATION OF LOW FREQUENCY CHLOROPHYLL & PIGMENT  
 VARIABILITY OFF THE NORTHEAST  
 12/12/2000 - 12/14/2001 FY01: \$80,043 Total: \$80,043  
*Prin. Invest.:* J J BISAGNI  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4046 WELLESLEY COLLEGE 5814**  
 STRUCTURE AND DYNAMICS OF PLANETARY RINGS  
 03/10/1997 - 09/30/2001 FY01: \$0 Total: \$174,750  
*Prin. Invest.:* R G FRENCH  
*Tech. Officer:* GSFC/J G GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6222 WELLESLEY COLLEGE 5815**  
 HIGH-RESOLUTION LABORATORY MEASUREMENTS OF UV ABSO AND LINE  
 WIDTHS FOR SO2 AND N2  
 08/25/1997 - 06/30/2000 FY01: \$0 Total: \$96,200  
*Prin. Invest.:* D STARK  
*Tech. Officer:* GSFC/S HOWARD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9059 WELLESLEY COLLEGE 5816**  
 LABORATORY MEASUREMENTS OF SO2 AND N2 ABSORPTION SPECTRA  
 FOR PLANETARY ATMOSPHERES  
 02/15/2000 - 02/28/2002 FY01: \$54,800 Total: \$112,921  
*Prin. Invest.:* D STARK  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10197 WELLESLEY COLLEGE 5817**  
 DYNAMICS AND STRUCTURE OF PLANETARY RINGS  
 12/21/2000 - 12/31/2001 FY01: \$46,500 Total: \$46,500  
*Prin. Invest.:* R G FRENCH  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6455 WOODS HOLE OCEANOGRAPHIC INST 5818**  
 MODELING MESOSCALE BIOGEOCHEMICAL PROCESSES IN A T OPEX/  
 POSEIDON DIAMOND SURROUNDING THE U.S. JGOFS  
 11/04/1997 - 09/30/2001 FY01: \$0 Total: \$491,660  
*Prin. Invest.:* D J MCGILLICUDDY  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6456 WOODS HOLE OCEANOGRAPHIC INST 5819**  
 STUDYING THE ANNUAL AND INTER-ANNUAL VARIABILITY I N OCEAN  
 COLOR USING SATELLITE DATA AND GLOBAL M  
 11/03/1997 - 09/30/2000 FY01: -\$368 Total: \$301,543  
*Prin. Invest.:* D M GLOVER  
*Tech. Officer:* GSFC/J A YODER  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 7348 WOODS HOLE OCEANOGRAPHIC INST 5820**  
 STUDIES OF HEAT, SALT, AND RADIATIVE FLUXES IN THE ARCTIC USING-  
 SATELLITE AND BUOY OBSERVAT  
 04/28/1998 - 04/30/2001 FY01: \$0 Total: \$185,000  
*Prin. Invest.:* J YANG  
*Tech. Officer:* GSFC/J COMISO  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 7445 WOODS HOLE OCEANOGRAPHIC INST 5821**  
 OPTICAL CLASSIFICATION OF WATER TYPES FROM SEAWIFS DATA: A  
 HYBRIDAPPROACH USING BOTH SEMI-AN  
 06/04/1998 - 08/31/2002 FY01: \$0 Total: \$278,087  
*Prin. Invest.:* H M SOSIK  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7538 WOODS HOLE OCEANOGRAPHIC INST 5822**  
 BIOLOGICAL INTERPRETATION OF OCEAN COLOR: OBSERVAT IONS AND  
 MODELS FOR WATERS OF THE MID-ATLANTIC  
 06/16/1998 - 02/28/2001 FY01: \$0 Total: \$180,000  
*Prin. Invest.:* H M SOSIK  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7770 WOODS HOLE OCEANOGRAPHIC INST 5823**  
 STUDIES OF ANTARCTIC SEA ICE AND SOUTHERN OCEAN TE MPERATURE  
 MINIMUMLAYER USING SATELLITE AND I  
 10/22/1998 - 12/31/2001 FY01: \$64,522 Total: \$184,956  
*Prin. Invest.:* R A KRISHFIELD  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8868 WOODS HOLE OCEANOGRAPHIC INST 5824**  
 BIOLOGICAL INTERPRETATION OF OCEAN COLOR: OBSERVA TIONS &  
 MODELS FOR WATERS OF THE MID-ATLANTIC SHEL  
 01/10/2000 - 02/28/2002 FY01: \$100,000 Total: \$200,000  
*Prin. Invest.:* H SOSIK  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9422 WOODS HOLE OCEANOGRAPHIC INST 5825**  
 ISOTOPIC BIOGEOCHEMISTRY  
 04/11/2000 - 04/29/2002 FY01: \$185,000 Total: \$359,270  
*Prin. Invest.:* D M HAYES  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 9858 WOODS HOLE OCEANOGRAPHIC INST 5826**  
 STUDYING THE ANNUAL & INTER-ANNUAL VARIABILITY IN OCEAN COLOR  
 USING SATELLITEDATA & GLOBAL MARINE  
 08/07/2000 - 03/31/2002 FY01: \$95,616 Total: \$114,739  
*Prin. Invest.:* D M GLOVER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11265 WOODS HOLE OCEANOGRAPHIC INST 5827**  
 REGIONAL CARBON CYCLE MODELING AT THE BERMUDA ATLA NTIC TIME-  
 SERIES STUDY(BATS) SITE USING AN EDDY-R  
 08/31/2001 - 08/31/2004 FY01: \$133,555 Total: \$133,555  
*Prin. Invest.:* D MCGILLICUDDY  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 00198 WOODS HOLE OCEANOGRAPHIC INST 5828**  
 R & D TO SUPPORT SIMBIOS PROJECT  
 11/06/2000 - 10/30/2001 FY01: \$89,202 Total: \$89,202  
*Prin. Invest.:* J R MORRISON  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC 5 441 WOODS HOLE OCEANOGRAPHIC INST 5829**  
 SEASONAL-TO-INTERANNUAL VARIATIONS IN THE INDIAN OCEAN USING  
 THE NSIPP OCEAN MODEL SIMULATIONS  
 12/02/1999 - 11/30/2001 FY01: \$30,000 Total: \$90,000  
*Prin. Invest.:* L YU  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 33 - OCEANOGRAPHY

**NGT 5 30206 WOODS HOLE OCEANOGRAPHIC INST 5830**  
 INTERPRETATION OF VARIABILITY IN WATER COLUMN OPTI CAL PROP-  
 ERTIES THROUGH SINGLE-PARTICLE ANALYSIS  
 08/19/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* H SOSIK  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30362 WOODS HOLE OCEANOGRAPHIC INST 5831**  
 IRON CYCLING IN THE CALIFORNIA CURRENT SYSTEM: GEO CHEMICAL &  
 ECOLOGICAL MODELING/STUDENT: PAYAL PAR  
 08/24/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D M GLOVER, NONE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2395 WORCESTER POLYTECHNIC INST 5832**  
 STABILITY AND HEAT TRANSFER CHARACTERISTICS OF CON DENSING  
 FILMS IN REDUCED GRAVITY  
 04/14/2000 - 11/30/2003 FY01: \$79,445 Total: \$122,531  
*Prin. Invest.:* D C HERMANSON  
*Tech. Officer:* GRC/F CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2405 WORCESTER POLYTECHNIC INST 5833**  
 EXPERIMENTAL INVESTIGATION AND MODELING OF PULSED PLASMA  
 THRUSTER PLUMES  
 05/03/2000 - 04/30/2002 FY01: \$55,598 Total: \$105,538  
*Prin. Invest.:* D GATSONIS  
*Tech. Officer:* GRC/E J PENCIL  
*CASE Category:* 13 - PHYSICS

**NAG 3 2535 WORCESTER POLYTECHNIC INST 5834**  
 SPLASHING DROPLETS  
 01/25/2001 - 11/30/2003 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* D TRYGGVASON  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

## MICHIGAN

## NASA'S UNIVERSITY PROGRAM

**NAG 3 2545 WORCESTER POLYTECHNIC INST 5835**  
 COMPUTATIONAL MODELING OF THE EFFECT OF SECONDARY FORCES ON  
 THE PHASE DISTRIBUTION IN DISPERSED MULT  
 02/22/2001 - 02/06/2004 FY01: \$95,000 Total: \$95,000  
*Prin. Invest.:* D TRYGGVASON  
*Tech. Officer:* GRC/D F CHAO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2583 WORCESTER POLYTECHNIC INST 5836**  
 COMPUTATIONS OF BOILING IN MICROGRAVITY  
 04/04/2001 - 04/30/2002 FY01: \$72,500 Total: \$72,500  
*Prin. Invest.:* D TRYGGVASON  
*Tech. Officer:* GRC/D F CHAO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 8578 WORCESTER POLYTECHNIC INST 5837**  
 FUNDING FOR UNSOLICITED PROPOSAL FOR "STUDENT PROJECTS AT  
 THE GODDARD SPACE FLIGHT CENTER"  
 05/26/1999 - 06/30/2000 FY01: \$0 Total: \$15,000  
*Prin. Invest.:* F J LOOFT  
*Tech. Officer:* GSFC/M R BROWN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9754 WORCESTER POLYTECHNIC INST 5838**  
 STUDENT PROJECTS AT THE GODDARD SPACE FLIGHT CENTER  
 06/23/2000 - 06/30/2001 FY01: \$0 Total: \$15,000  
*Prin. Invest.:* F J LOOFT  
*Tech. Officer:* GSFC/M R BROWN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10712 WORCESTER POLYTECHNIC INST 5839**  
 STUDENT PROJECTS AT THE GODDARD SPACE FLIGHT CTR  
 04/06/2001 - 06/30/2002 FY01: \$20,000 Total: \$20,000  
*Prin. Invest.:* F J LOOFT  
*Tech. Officer:* GSFC/S J BRODEUR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1014 WORCESTER POLYTECHNIC INST 5840**  
 GENESIS DISCOVERY MISSION PHASE B  
 05/12/1998 - 06/29/2000 FY01: \$0 Total: \$133,100  
*Prin. Invest.:* K M RUTLEDGE  
*Tech. Officer:* JSC/K E CYR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 3 673 WORCESTER POLYTECHNIC INST 5841**  
 COMBUSTION CHARACTERISTICS OF FULLY-MODULATED, TURBULENT  
 DIFFUSION FLAMES IN REDUCED GRAVITY  
 02/23/1999 - 01/13/2003 FY01: \$112,067 Total: \$303,165  
*Prin. Invest.:* D C HERMANSON  
*Tech. Officer:* GRC/D P STOCKER  
*CASE Category:* 49 - ENGINEERING, OTHER

## MICHIGAN

**NAG 5 10118 ALMA COLLEGE 5842**  
 ANALYSIS OF DATA FROM THE ER-2 CLOUD PHYSICS LIDAR SYSTEM  
 12/21/2000 - 12/31/2001 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* J H GIBSON  
*Tech. Officer:* GSFC/M J MCGILL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8799 BAY MILLS COMMUNITY COLLEGE 5843**  
 YOU BE THE SCIENTIST PROGRAM  
 11/04/1999 - 03/14/2001 FY01: \$0 Total: \$45,000  
*Prin. Invest.:* R DICKINSON  
*Tech. Officer:* GSFC/M COMBERIETE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10348 CALVIN COLLEGE 5844**  
 SIMULATION OF GLOBAL GLACIO-ISOSTAS, EARTH DEFORMATION AND  
 SEA LEVEL CHANGES.  
 02/05/2001 - 01/31/2002 FY01: \$41,623 Total: \$41,623  
*Prin. Invest.:* J A CLARK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6409 GRAND VALLEY STATE UNIV 5845**  
 PROVIDES FUNDING FOR TECH SUPPORT FOR "GPS MONITORING OF  
 STRAIN ACCUMULATION IN THE NEW MAD  
 10/24/1997 - 10/31/1999 FY01: -\$455 Total: \$2,544  
*Prin. Invest.:* J WEBER  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/B BILLS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 1 01060 HOPE COLLEGE 5846**  
 THEORETICAL INVESTIGATION OF THERMO-MECHANICAL BEHAVIOR OF  
 CARBON NANOTUBE-BASED COMPOSITES USING  
 04/05/2001 - 04/04/2004 FY01: \$52,936 Total: \$52,936  
*Prin. Invest.:* J PAWLOSKE  
*Tech. Officer:* LARC/T S GATES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2520 KETTERING UNIV 5847**  
 MODELING FOR UNDERSTANDING HIGH SPECIFIC IMPULSE HALL  
 THRUSTERS  
 01/08/2001 - 11/30/2003 FY01: \$59,531 Total: \$59,531  
*Prin. Invest.:* S ROY  
*Tech. Officer:* GRC/M MANTENIEKS  
*CASE Category:* 13 - PHYSICS

**NAG 3 2638 KETTERING UNIV 5848**  
 ELECTRODE MODEL FOR MACH@MPD THRUSTER SIMULATIONS  
 ELECTRODE MODEL FOR MACH@MPD THRUSTER SIMULATIONS  
 06/21/2001 - 02/28/2002 FY01: \$19,994 Total: \$19,994  
*Prin. Invest.:* S ROY  
*Tech. Officer:* GRC/D REDDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 2213 MICHIGAN STATE UNIV 5849**  
 PENALTY-BASED FINITE ELEMENT INTERFACE TECHNOLOGY FOR ANALYSIS  
 OF HOMOGENEOUS & COMPOSITE STRUCTURES  
 07/12/1999 - 06/30/2001 FY01: -\$1 Total: \$54,655  
*Prin. Invest.:* R C AVERILL  
*Tech. Officer:* LARC/J B RANSOM  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 01048 MICHIGAN STATE UNIV 5850**  
 PARAMETRIC IDENTIFICATION OF NONLINEAR DYNAMICAL SYSTEMS  
 06/06/2001 - 09/30/2001 FY01: \$34,799 Total: \$34,799  
*Prin. Invest.:* B F FEENEY  
*Tech. Officer:* LARC/W A SILVA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2203 MICHIGAN STATE UNIV 5851**  
 CONTROL OF SHOCK-WAVE/BOUNDARY-LAYER INTERACTIONS WITH BLEED  
 09/25/1998 - 11/30/2000 FY01: \$0 Total: \$100,992  
*Prin. Invest.:* T I SHIH  
*Tech. Officer:* GRC/B P WILLIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2234 MICHIGAN STATE UNIV 5852**  
 DEVELOPMENT AND IMPLEMENTATION OF A GLOBAL BLEED B OUNDARY CONDITION  
 03/11/1999 - 01/20/2002 FY01: \$66,150 Total: \$189,150  
*Prin. Invest.:* T SHIH  
*Tech. Officer:* GRC/D DAVIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2472 MICHIGAN STATE UNIV 5853**  
 RESEARCHING EPOXY AND POLYIMIDE NANOCOMPOSITES USI NG NATURAL AND SYNTHETIC CLAYS  
 07/07/2000 - 10/06/2001 FY01: \$83,250 Total: \$119,880  
*Prin. Invest.:* T J PINNAVAIA  
*Tech. Officer:* GRC/S G CAMPBELL  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2576 MICHIGAN STATE UNIV 5854**  
 AERODYNAMICS OF AIRFOILS WITH ICE ACCRETION: CFD SIMULATIONS AND TECHNOLOGY ISSUES  
 03/26/2001 - 11/30/2003 FY01: \$70,000 Total: \$70,000  
*Prin. Invest.:* T SHIH  
*Tech. Officer:* GRC/Y CHOO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3218 MICHIGAN STATE UNIV 5855**  
 CCD SYSTEM TECHNOLOGY FOR EXTREMELY LOW BACKGROUND OBSERVATIONS  
 04/26/1996 - 09/30/2001 FY01: \$0 Total: \$497,500  
*Prin. Invest.:* E D LOH  
*Tech. Officer:* GSFC/E CHENG  
*CASE Category:* 13 - PHYSICS

**NAG 5 4810 MICHIGAN STATE UNIV 5856**  
 ACQUISITION AND ANALYSIS OF LARGE QUANTITIES OF LA MEASURING TROPICAL LAND COVER CHANGE (NRA-MTPE-03)  
 07/30/1997 - 06/30/2001 FY01: \$48,523 Total: \$631,178  
*Prin. Invest.:* D SKOLE*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/D WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6538 MICHIGAN STATE UNIV 5857**  
 CASE STUDIES AND DIAGNOSTIC MODELS OF THE INTER-ANNUAL DYNAMICS OF DEFORESTATION IN SOUTHEAST ASIA  
 04/21/1998 - 09/30/2001 FY01: \$0 Total: \$460,000  
*Prin. Invest.:* D SKOLE  
*Tech. Officer:* GSFC/A JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8053 MICHIGAN STATE UNIV 5858**  
 SOLAR CONVECTION AND OSCILLATIONS  
 01/12/1999 - 01/14/2002 FY01: \$96,000 Total: \$252,000  
*Prin. Invest.:* R F STEIN  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8317 MICHIGAN STATE UNIV 5859**  
 ENHANCING PROFESSIONAL DEVELOPMENT OF LANDSCAPE ECOLOGISTS OF THE NEXT GENERATION  
 03/26/1999 - 02/28/2001 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* J LIU  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8893 MICHIGAN STATE UNIV 5860**  
 ATOMIC FORCE MICROSCOPE LITHOGRAPHY & BEEM INVESTI GATION OF CARBON NANOTUBE INTERFACES  
 01/07/2000 - 01/14/2001 FY01: \$0 Total: \$5,000  
*Prin. Invest.:* V AYRES  
*Tech. Officer:* GSFC/J M BENAVIDES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 9232 MICHIGAN STATE UNIV 5861**  
 PATTERN TO PROCESS: RESEARCH AND APPLICATIONS FOR UNDERSTANDING MULTIPLE INTERACTIONS & FEEDBACK ON  
 04/03/2000 - 04/30/2002 FY01: \$218,611 Total: \$374,150  
*Prin. Invest.:* R WALKER  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9276 MICHIGAN STATE UNIV 5862**  
 SYNTHESIS OF HYBRID CARBON NANOTUBE/DIAMOND FILMS  
 03/16/2000 - 05/14/2001 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* D TOMANEK  
*Tech. Officer:* GSFC/H SHAW  
*CASE Category:* 13 - PHYSICS

**NAG 5 9286 MICHIGAN STATE UNIV 5863**  
 GOFD DATA & INFORMATION FOR TROPICAL FOREST ASSESS MENT & MANAGEMENT  
 03/16/2000 - 04/30/2002 FY01: \$124,226 Total: \$205,044  
*Prin. Invest.:* J Qi  
*Tech. Officer:* HQ/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9563 MICHIGAN STATE UNIV 5864**  
 SOLAR SURFACE CONVECTION  
 05/09/2000 - 05/14/2002 FY01: \$122,601 Total: \$170,954  
*Prin. Invest.:* R F STEIN  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10200 MICHIGAN STATE UNIV 5865**  
 ENHANCING PROFESSIONAL DEVELOPMENT OF LANDSCAPE ECOLOGISTS OF THE NEXT GENERATION  
 12/21/2000 - 12/31/2001 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* J LIU  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1575 MICHIGAN STATE UNIV 5866**  
 MICROGRAVITY REGULATION OF ONCOGENE EXPRESSION AND OSTEOBLAST DIFFERENTIATION.  
 02/17/1999 - 11/30/2002 FY01: \$125,400 Total: \$359,400  
*Prin. Invest.:* L R MCCABE  
*Tech. Officer:* GSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

## MICHIGAN

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1690** **MICHIGAN STATE UNIV** **5867**  
 INVESTIGATION OF SOLIDIFICATION PROCESS WITH CONVECTION USING  
 MESHLESS METHODS & VERIFICATION  
 05/16/2000 - 11/30/2003 FY01: \$95,000 Total: \$140,061  
*Prin. Invest.:* A BERNARD, M KOOCHEFAHANI, A DIAZ  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 9 1211** **MICHIGAN STATE UNIV** **5868**  
 WATER DRIVEN ALTERATION OF ROCKS & MINERALS ON MARS ASTER-  
 IODS: CLUES TO THE SEARCH FOR LIFE  
 04/04/2000 - 09/30/2002 FY01: \$0 Total: \$15,496  
*Prin. Invest.:* M A VELBEL  
*Tech. Officer:* JSC/D S MCKAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1274** **MICHIGAN STATE UNIV** **5869**  
 CENTER FOR GENOMIC AND EVOLUTIONARY STUDIES ON MICROBIAL  
 LIFE AT LOW TEMPERATURE  
 07/20/2001 - 06/30/2006 FY01: \$376,075 Total: \$376,075  
*Prin. Invest.:* M THOMASHOW, J TIEDJE, L SEPULVEDA  
*Tech. Officer:* ARC/R GRYMES, ARC/W W DOLCI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 662** **MICHIGAN STATE UNIV** **5870**  
 INVESTIGATION OF DIFFUSION FLAM TIP INSTABILITY IN MICROGRAVITY  
 01/14/1999 - 01/03/2003 FY01: \$117,421 Total: \$273,339  
*Prin. Invest.:* I S WICHMAN  
*Tech. Officer:* GRC/S OLSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 868** **MICHIGAN STATE UNIV** **5871**  
 HIGH-TEMPERATURE SHAPE-MEMORY ALLOY DEVELOPMENT FOR  
 ACTUATION ABOVE 500 C  
 02/28/2001 - 03/31/2004 FY01: \$64,500 Total: \$64,500  
*Prin. Invest.:* D S GRUMMON  
*Tech. Officer:* GRC/M V NATHAL  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 5 291** **MICHIGAN STATE UNIV** **5872**  
 MEASUREMENT AND MODELING OF THE INTER-ANNUAL DYNAMICS OF  
 DEFORESTATION AND REGROWTH IN THE BRAZIL  
 06/16/1998 - 12/31/2001 FY01: \$246,816 Total: \$961,952  
*Prin. Invest.:* D SKOLE *Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/D DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 303** **MICHIGAN STATE UNIV** **5873**  
 CREATIVE & INNOVATIVE WORKING PROTOTYPE EARTH SCIENCE  
 INFORMATION PARTNERSHIPS IN SUPPORT  
 04/09/1998 - 06/30/2002 FY01: \$697,000 Total: \$4,352,000  
*Prin. Invest.:* D SKOLE  
*Tech. Officer:* GSFC/M MAIDEN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 52216** **MICHIGAN STATE UNIV** **5874**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/01/1999 - 06/30/2001 FY01: \$12,000 Total: \$44,000  
*Prin. Invest.:* L M HUDY, A NAGUIB  
*Tech. Officer:* LARC/W M HUMPHREYS, JR.  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 30166** **MICHIGAN STATE UNIV** **5875**  
 MAPPING THE SPATIAL DISTRIBUTION OF BAMBOO IN A GIANT PANDA  
 RESERVE: A STUDY OF THE RELATIONSHIP  
 09/01/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J LIU  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30340** **MICHIGAN STATE UNIV** **5876**  
 MODELING THE SOCIO-ECONOMIC DRIVERS OF LAND USE & COVER  
 CHANGE IN SOUTH AFRICA: INTEGRATING SOCIAL S  
 08/21/2000 - 08/31/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* D J CAMPBELL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50150** **MICHIGAN STATE UNIV** **5877**  
 AN INTEGRATED ASSESSMENT OF THE CUMULATIVE IMPACTS OF ARCTIC  
 DEVELOPMENT  
 09/11/1997 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* P WEBBER  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50378** **MICHIGAN STATE UNIV** **5878**  
 ON-LINE LEARNING OF SENSOR-IMAGE STABILIZATION INSPIRED BY  
 THE VESTIBULAR SYSTEM OF SQUIRREL  
 09/17/2001 - 09/14/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* P PIERRE *Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT13 52715** **MICHIGAN STATE UNIV** **5879**  
 NASA GRADUATE STUDENT RESEARCHER PROGRAM FOR STACEY A.C.  
 NELSON  
 10/01/1997 - 08/15/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* P SORRANO  
*Tech. Officer:* SSC/A JOYCE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 1 01004** **MICHIGAN TECHNOLOGICAL UNIV** **5880**  
 GRAPHITE NANOREINFORCEMENTS FOR AEROSPACE NANO-  
 COMPOSITES  
 11/24/2000 - 09/30/2003 FY01: \$74,932 Total: \$74,932  
*Prin. Invest.:* L DRZAL  
*Tech. Officer:* LARC/J HINKLEY, LARC/T S GATES  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2088** **MICHIGAN TECHNOLOGICAL UNIV** **5881**  
 NUMERICAL STUDIES OF THE LDI AND THE LPP/LDI GAS TURBINE  
 COMBUSTOR CONCEPTS  
 12/23/1997 - 01/28/2002 FY01: \$80,000 Total: \$323,636  
*Prin. Invest.:* S L YANG  
*Tech. Officer:* GRC/R R TACINA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3689** **MICHIGAN TECHNOLOGICAL UNIV** **5882**  
 COOL STARS ATMOSPHERIC MODELS. COMPUTATIONS OF HIGH  
 01/14/1997 - 08/31/2000 FY01: \$0 Total: \$141,278  
*Prin. Invest.:* A BORYSOW  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4756 MICHIGAN TECHNOLOGICAL UNIV 5883**  
 CONTINUING THE SEARCH FOR GRAVITATIONAL LENSING IN  
 06/17/1997 - 08/31/2000 FY01: \$0 Total: \$46,000  
*Prin. Invest.:* R J NEMIROFF  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5278 MICHIGAN TECHNOLOGICAL UNIV 5884**  
 OBSERVING AND MEASURING EARLY OPTICAL LIGHT CURVES FROM  
 GAMMA-RAY BURSTS WITH LOTIS  
 06/21/2000 - 06/06/2002 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* R NEMIROFF  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6310 MICHIGAN TECHNOLOGICAL UNIV 5885**  
 LINEAR ADAPTIVE MIRROR TESTBED TO SUPPORT DIRECT DETECTION OF  
 EXTRA-SOLAR PLANETS  
 10/06/1997 - 06/14/2002 FY01: \$0 Total: \$224,768  
*Prin. Invest.:* D FTACLAS  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7051 MICHIGAN TECHNOLOGICAL UNIV 5886**  
 LAKE SUPERIOR ICE FIELD MEASUREMENTS FOR C-BAND SA R BACK-  
 SCATTER SIGNATURES AND ICE COVER AN  
 03/12/1998 - 02/28/2002 FY01: \$0 Total: \$144,425  
*Prin. Invest.:* D PILANT  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7272 MICHIGAN TECHNOLOGICAL UNIV 5887**  
 VOLCANIC PLUME ANALYSIS USING TOMS AND AVHRR DATA  
 04/30/1998 - 10/31/2001 FY01: \$0 Total: \$132,026  
*Prin. Invest.:* W ROSE  
*Tech. Officer:* GSFC/A J KRUEGER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7576 MICHIGAN TECHNOLOGICAL UNIV 5888**  
 FUNDING FOR 'APPLICATION OF TOMS DATA TO VOLCANIC HAZARD  
 MITIGATION'(SENH98-0061)  
 08/04/1998 - 07/31/2002 FY01: \$30,000 Total: \$180,000  
*Prin. Invest.:* G J BLUTH  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8796 MICHIGAN TECHNOLOGICAL UNIV 5889**  
 EARTH AND SPACE SCIENCES PROJECT SERVICES FOR NASA HPCC  
 09/21/1999 - 09/30/2002 FY01: \$189,394 Total: \$563,516  
*Prin. Invest.:* D MERKEY  
*Tech. Officer:* GSFC/J R FISCHER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10568 MICHIGAN TECHNOLOGICAL UNIV 5890**  
 ICE-SULFUR-ASH INTERACTIONS IN VOLCANIC CLOUDS: LABORATORY  
 STUDIES OF ICE NUCLEATION  
 03/12/2001 - 03/14/2002 FY01: \$82,459 Total: \$82,459  
*Prin. Invest.:* R SHAW  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11062 MICHIGAN TECHNOLOGICAL UNIV 5891**  
 VALIDATION OF TOMS VOLCANIC AEROSOL & SO2 PRODUCTS USING  
 MODIS & AVHRR  
 06/27/2001 - 06/30/2002 FY01: \$95,000 Total: \$95,000  
*Prin. Invest.:* G BLUTH  
*Tech. Officer:* GSFC/R MVPETERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1478 MICHIGAN TECHNOLOGICAL UNIV 5892**  
 R/S GRAVITY INDUCED SETTLING IN INTERCONNECTED LIQUID SOLID  
 SYSTEMS  
 02/18/1998 - 01/31/2002 FY01: \$85,000 Total: \$258,833  
*Prin. Invest.:* T H COURTNEY  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 5 76 MICHIGAN TECHNOLOGICAL UNIV 5893**  
 COLLEEN RILEY "TWO-DIMENSIONAL CHARACTERIZATION OF VOLCANIC  
 ASH-APPLICATIONS TO REMOTE SENSING ALGO  
 07/22/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* W I ROSE  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 5 120 MICHIGAN TECHNOLOGICAL UNIV 5894**  
 THE GROUNDING OF COMPOSITE MATERIALS & THE IMPACT ON EMC/  
 STUDENT: DERIK C. LOVE  
 05/31/2001 - 08/14/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* E ROTHWELL  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 5 30154 MICHIGAN TECHNOLOGICAL UNIV 5895**  
 TEMPORAL ANALYSIS OF VOLCANIC AEROSOL AND ASH TRANSPORT  
 08/28/1998 - 08/31/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* G BLUTH, BARKER  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 1 2042 UNIV OF MICHIGAN - ANN ARBOR 5896**  
 TROPOSPHERIC TRACE GAS BUDGETS: INTERACTIONS WITH AEROSOLS  
 04/23/1998 - 04/22/2001 FY01: \$0 Total: \$343,040  
*Prin. Invest.:* J E PENNER  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2142 UNIV OF MICHIGAN - ANN ARBOR 5897**  
 DEVELOPMENT AND TEST OF A 1.4 GHZ DIRECT-SAMPLING DIGITAL  
 RADIOMETER FOR STAR AND FULLY POLARIMETRIC  
 02/02/1999 - 09/30/2000 FY01: -\$1 Total: \$140,000  
*Prin. Invest.:* A W ENGLAND  
*Tech. Officer:* LARC/J W JOHNSON, LARC/R W LAWRENCE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 2181 UNIV OF MICHIGAN - ANN ARBOR 5898**  
 DATA-BASED CLIMATOLOGIES AND STUDY OF THE OZONE BUDGET IN THE  
 TROPOPAUSE  
 03/31/1999 - 12/31/2001 FY01: \$0 Total: \$40,000  
*Prin. Invest.:* M A CARROLL  
*Tech. Officer:* LARC/G R MADDREA, LARC/L POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01032 UNIV OF MICHIGAN - ANN ARBOR 5899**  
 DESIGN STUDY OF A SYNTHETIC THINNED APERTURE RADIO METER FOR  
 HURRICANE IMPACT PREDICTION  
 04/05/2001 - 12/31/2001 FY01: \$65,000 Total: \$65,000  
*Prin. Invest.:* C S RUF  
*Tech. Officer:* LARC/J W JOHNSON, LARC/R W LAWRENCE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 1861 UNIV OF MICHIGAN - ANN ARBOR 5900**  
 ON THE BOUNDARY CONDITIONS AT AN OSCILLATING CONTACT LINE: A  
 PHYSICAL/NUMERICAL EXPERIMENTAL PROGRAM  
 05/21/1996 - 08/31/2000 FY01: \$0 Total: \$392,000  
*Prin. Invest.:* M PERLIN  
*Tech. Officer:* GRC/M WEISLOGEL  
*CASE Category:* 13 - PHYSICS

**NAG 3 1878 UNIV OF MICHIGAN - ANN ARBOR 5901**  
 SOOT FORMATION IN FREELY-PROPAGATING LAMINAR PREMIXED  
 FLAMES  
 05/20/1996 - 06/30/2001 FY01: \$0 Total: \$361,254  
*Prin. Invest.:* G M FAETH  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 1900 UNIV OF MICHIGAN - ANN ARBOR 5902**  
 A STUDY OF NUCLEATE BOILING WITH FORCED CONVECTION IN  
 MICROGRAVITY  
 07/22/1996 - 07/21/2001 FY01: \$0 Total: \$199,920  
*Prin. Invest.:* P MERTE, NONE  
*Tech. Officer:* GRC/F CHIARAMONTE  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 1952 UNIV OF MICHIGAN - ANN ARBOR 5903**  
 NUMERICAL MODELING OF LIQUID-VAPOR PHASE CHANGE  
 09/06/1996 - 08/14/2000 FY01: \$0 Total: \$221,418  
*Prin. Invest.:* V S ARPACI  
*Tech. Officer:* GRC/A T CHAI  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2048 UNIV OF MICHIGAN - ANN ARBOR 5904**  
 LAMINAR SOOT PROCESSES EXPERIMENT (LSP)  
 05/06/1997 - 12/31/2000 FY01: \$0 Total: \$596,227  
*Prin. Invest.:* G M FAETH  
*Tech. Officer:* GRC/D URBAN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2082 UNIV OF MICHIGAN - ANN ARBOR 5905**  
 STRATEGY 2000: RECRUITMENT, RETENTION, RECOGNITION; A  
 BALANCED APPROACH TO DIVERSITY AND EXCELLENCE  
 09/30/1997 - 12/21/2002 FY01: \$56,000 Total: \$255,760  
*Prin. Invest.:* D E SCOTT, J W JONES  
*Tech. Officer:* GRC/A GONZALEZ, GRC/S A MERRITT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2134 UNIV OF MICHIGAN - ANN ARBOR 5906**  
 MICROSCOPIC VISUALIZATION OF FLUID FLOW IN EVAPORATION DROP-  
 LETS AND ELECTRO-OSMOTIC FLOWS  
 03/03/1998 - 01/05/2002 FY01: \$78,850 Total: \$385,850  
*Prin. Invest.:* R G LARSON  
*Tech. Officer:* GRC/D W GRIFFIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2162 UNIV OF MICHIGAN - ANN ARBOR 5907**  
 COMPUTATIONS OF BOILING IN MICROGRAVITY COMPUTATIONS OF  
 BOILING IN MICROGRAVITY  
 04/27/1998 - 02/09/2002 FY01: \$14,000 Total: \$266,000  
*Prin. Invest.:* G TRYGGVASON, D JACQMIN  
*Tech. Officer:* GRC/D F CHAO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2196 UNIV OF MICHIGAN - ANN ARBOR 5908**  
 FLUID MECHANICS OF CAPILLARY-ELASTIC INSTABILITIES IN THE  
 MICROGRAVITY ENVIRONMENT  
 09/03/1998 - 03/31/2002 FY01: \$44,000 Total: \$293,766  
*Prin. Invest.:* J B GROTBORG  
*Tech. Officer:* GRC/D F CHAO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2216 UNIV OF MICHIGAN - ANN ARBOR 5909**  
 USE OF LASER INDUCED FLOURESCENCE TO CHARACTERIZE DISCHARGE  
 CATHODE EROSIONS OF AN ION ENGINE  
 01/14/1999 - 01/24/2002 FY01: \$40,000 Total: \$124,999  
*Prin. Invest.:* A D GALLIMORE  
*Tech. Officer:* GRC/J S SOVEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2307 UNIV OF MICHIGAN - ANN ARBOR 5910**  
 DEVELOPMENT OF A TWO-STAGE ION THRUSTER DEVELOPMENT OF A  
 TWO-STAGE ION THRUSTER  
 12/03/1999 - 11/23/2002 FY01: \$20,000 Total: \$70,000  
*Prin. Invest.:* A D GALLIMORE  
*Tech. Officer:* GRC/R S JANKOVSKY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2330 UNIV OF MICHIGAN - ANN ARBOR 5911**  
 LONG-TERM RELIABILITY OF HIGH-SPEED SIGE/SI HETERO JUNCTION  
 BIPOLAR TRANSISTORS  
 02/10/2000 - 02/03/2001 FY01: \$0 Total: \$70,000  
*Prin. Invest.:* P BHATTACHARYA  
*Tech. Officer:* GRC/G PONCHAK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2332 UNIV OF MICHIGAN - ANN ARBOR 5912**  
 COMPUTATIONAL MODELING OF THE EFFECT OF SECONDARY FORCES ON  
 THE PHASE DISTRIBUTION IN DISPERSED MULTIPHASE FLOWS  
 02/11/2000 - 11/30/2003 FY01: \$0 Total: \$60,000  
*Prin. Invest.:* G TRYGGVASON  
*Tech. Officer:* GRC/D F CHAO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2346 UNIV OF MICHIGAN - ANN ARBOR 5913**  
 SYSTEMATIC IDENTIFICATION OF BLADE MISTUNING PARAMETERS FOR  
 BLISKS  
 03/07/2000 - 07/01/2001 FY01: \$0 Total: \$39,000  
*Prin. Invest.:* C PIERRE  
*Tech. Officer:* GRC/O MEHMED  
*CASE Category:* 49 - ENGINEERING, OTHER



**NAG 3 2356 UNIV OF MICHIGAN - ANN ARBOR 5914**  
 AGGREGATION AND GELATION IN SUSPENSIONS OF ANISOME TRIC  
 PARTICLES: STUDIES OF COLLOIDAL PLATELETS AN  
 03/15/2000 - 11/30/2003 FY01: \$76,000 Total: \$126,000  
*Prin. Invest.:* M D SOLOMON, NONE  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2404 UNIV OF MICHIGAN - ANN ARBOR 5915**  
 LAMINAR SOORT PROCESSES (LSP) LAMINAR SOORT PROCESSES (LSP)  
 04/27/2000 - 12/31/2002 FY01: \$76,000 Total: \$218,228  
*Prin. Invest.:* G M FAETH, NONE  
*Tech. Officer:* GRC/D URBAN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2406 UNIV OF MICHIGAN - ANN ARBOR 5916**  
 USING NONLINEARITY AND CONTACT LINES TO CONTROL FL UID FLOW IN  
 MICROGRAVITY  
 04/27/2000 - 11/30/2003 FY01: \$56,963 Total: \$106,882  
*Prin. Invest.:* M PERLIN  
*Tech. Officer:* GRC/C LEK  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2497 UNIV OF MICHIGAN - ANN ARBOR 5917**  
 MODELING THE PERFORMANCE AND LIFETIME OF ION THRUS TERS  
 10/27/2000 - 10/22/2001 FY01: \$50,653 Total: \$50,653  
*Prin. Invest.:* I D BOYD  
*Tech. Officer:* GRC/G SOULAS  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 3 2530 UNIV OF MICHIGAN - ANN ARBOR 5918**  
 LONG TERM RELIABILITY OF HIGH SPEED SIGE/SI HETERO JUNCTON  
 BIPOLAR TRANSISTORS  
 01/23/2001 - 01/31/2002 FY01: \$69,886 Total: \$69,886  
*Prin. Invest.:* P BHATTACHARYA  
*Tech. Officer:* GRC/G E PONCHAK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2582 UNIV OF MICHIGAN - ANN ARBOR 5919**  
 APPLICATION OF NANOTUBES TO WEIGHT REDUCTION IN RO TOCRAFT  
 DRIVE SYSTEMS  
 04/02/2001 - 10/01/2001 FY01: \$60,032 Total: \$60,032  
*Prin. Invest.:* P P FRIEDMAN  
*Tech. Officer:* GRC/W MORALES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2604 UNIV OF MICHIGAN - ANN ARBOR 5920**  
 ADVANCED VIBRATION ANALYSIS TOOLS AND NEW STRATEGI ES FOR  
 ROBUST DESIGN OF TURBINE ENGINE ROTORS  
 05/23/2001 - 05/31/2005 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* C PIERRE  
*Tech. Officer:* GRC/O MEHMED  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 2869 UNIV OF MICHIGAN - ANN ARBOR 5921**  
 STAR FORMATION STUDIES: DYNAMICS AND INFRARED SIGN ATURES  
 01/12/1995 - 07/14/2001 FY01: \$0 Total: \$225,000  
*Prin. Invest.:* F C ADAMS  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3168 UNIV OF MICHIGAN - ANN ARBOR 5922**  
 BUDGET OF NITROGEN COMPOUNDS IN THE GLOBAL ATMOSPHERE:  
 OBSERVATIONS-BASED CLIMATOLOGIES . . .  
 02/14/1996 - 08/31/2000 FY01: -\$1,147 Total: \$143,653  
*Prin. Invest.:* M A CARROLL, G BRASSEUR  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 3247 UNIV OF MICHIGAN - ANN ARBOR 5923**  
 THE HOT INTERSTELLAR MEDIUM IN SPIRAL, ELLIPTICALS , AND CLUS-  
 TERS OF GALAXIES  
 05/30/1996 - 04/30/2001 FY01: \$0 Total: \$516,000  
*Prin. Invest.:* J N BREGMAN  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4007 UNIV OF MICHIGAN - ANN ARBOR 5924**  
 DYNAMICAL VARIATIONS IN THE MESOSPHERE AND LOWER T AND INTER-  
 ANNUAL VARIABILITY  
 03/06/1997 - 09/30/2001 FY01: \$0 Total: \$213,729  
*Prin. Invest.:* D D SKINNER  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 4264 UNIV OF MICHIGAN - ANN ARBOR 5925**  
 THEORETICAL STUDIES AND SATELLITE DATA ANALYSIS OF LOWER THER-  
 MOSPHERE  
 04/07/1997 - 04/14/2000 FY01: \$0 Total: \$257,488  
*Prin. Invest.:* D L KILLEEN  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 4271 UNIV OF MICHIGAN - ANN ARBOR 5926**  
 STUDIES OF THE THERMOSPHERIC RESPONSE TO GEOMAGNET MINIMUM  
 CONDITIONS  
 04/03/1997 - 04/30/2000 FY01: -\$74 Total: \$219,225  
*Prin. Invest.:* D BURNS  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 4381 UNIV OF MICHIGAN - ANN ARBOR 5927**  
 STUDIES OF TENOUS PLANETARY ATMOSPHERES  
 04/29/1997 - 12/31/2001 FY01: \$55,000 Total: \$254,455  
*Prin. Invest.:* D R COMBI  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4589 UNIV OF MICHIGAN - ANN ARBOR 5928**  
 A PROGRAM FOR RESEARCH IN PLANETARY ATMOSPHERES: P COUPLED  
 CLOUD PHYSICS  
 05/23/1997 - 12/31/2001 FY01: \$0 Total: \$249,000  
*Prin. Invest.:* P K ATREYA  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4771**            **UNIV OF MICHIGAN - ANN ARBOR**            **5929**  
 STUDIES OF INNER MAGNETOSPHERIC PROCESSES AND THE UNDER-  
 LYING ATMOSPHERE AND IONOSPHERE  
 06/09/1997 - 04/30/2001            FY01: \$0            Total: \$356,438  
*Prin. Invest.:* D U KOZYRA  
*Tech. Officer:* GSFC/J M SHARBER  
*CASE Category:* 13 - PHYSICS

**NAG 5 4912**            **UNIV OF MICHIGAN - ANN ARBOR**            **5930**  
 MULTIDIMENSIONAL MHD MODEL STUDIES OF THE IONOSPHE  
 07/02/1997 - 03/31/2000            FY01: \$0            Total: \$250,000  
*Prin. Invest.:* D F NAGY  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4939**            **UNIV OF MICHIGAN - ANN ARBOR**            **5931**  
 DIGITAL TOPOGRAPHY FROM SAR INTERFEROMETRY: DETER CORREC-  
 TION OF VEGETATION HEIGHT  
 06/23/1997 - 09/30/2000            FY01: \$0            Total: \$110,777  
*Prin. Invest.:* K SARABANDI  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 5030**            **UNIV OF MICHIGAN - ANN ARBOR**            **5932**  
 SOLAR AND MAGNETOSPHERIC INPUTS TO THE MLTI REGION  
 03/03/1995 - 03/05/2005            FY01: \$86,000            Total: \$502,974  
*Prin. Invest.:* J KOZYRA  
*Tech. Officer:* GSFC/R PLESS  
*CASE Category:* 13 - PHYSICS

**NAG 5 5049**            **UNIV OF MICHIGAN - ANN ARBOR**            **5933**  
 TIDI - A TIMED DOPPLER INTERFEROMETER NEW AWARD  
 12/04/1995 - 01/31/2002            FY01: \$0            Total: \$2,249,997  
*Prin. Invest.:* T L KILLEN  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5173**            **UNIV OF MICHIGAN - ANN ARBOR**            **5934**  
 STUDY OF AN IMAGING CALORIMETER FOR ACCESS FUNDING FOR FIRST  
 YEAR OF GRANT  
 03/05/1998 - 03/31/2002            FY01: \$0            Total: \$255,000  
*Prin. Invest.:* G TARLE  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5230**            **UNIV OF MICHIGAN - ANN ARBOR**            **5935**  
 GRANT NAG5-5230 - HIGH ENERGY ANTIMATTER TELESCOPE (HEAT) PI  
 PROF. GREGORY TARLE  
 03/16/1999 - 11/30/2001            FY01: \$182,000            Total: \$590,500  
*Prin. Invest.:* G TARLE  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5262**            **UNIV OF MICHIGAN - ANN ARBOR**            **5936**  
 FIRST YEAR OF THREE YEAR EFFORT/ SOUNDING ROCKET UV  
 MEASUREMENTS  
 04/11/2000 - 03/23/2003            FY01: \$0            Total: \$150,000  
*Prin. Invest.:* J T CLARK, NONE  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5281**            **UNIV OF MICHIGAN - ANN ARBOR**            **5937**  
 CONTEMPORANEOUS OPTICAL DETECTION OF GAMMA-RAY BURSTS  
 06/14/2000 - 06/07/2003            FY01: \$260,000            Total: \$462,500  
*Prin. Invest.:* C W AKERLOFF  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5304**            **UNIV OF MICHIGAN - ANN ARBOR**            **5938**  
 GRANT NAG5-5304 CONSTRUCTION OF A HIGH PFR PULSED KU-BAND  
 RADAR FOR MEASUREMENTS OF SEA SURFACE SLOP  
 09/27/2000 - 02/28/2002            FY01: \$30,000            Total: \$30,000  
*Prin. Invest.:* K SARABANDI  
*Tech. Officer:* WFF/D C VANDEMARK, WFF/E J WALSH  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 6122**            **UNIV OF MICHIGAN - ANN ARBOR**            **5939**  
 SOHO GUEST INVESTIGATOR STUDY OF HYDROGEN LYMAN-AL WITH  
 SWAN  
 08/11/1997 - 02/28/2001            FY01: \$0            Total: \$94,236  
*Prin. Invest.:* D R COMBI  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 6203**            **UNIV OF MICHIGAN - ANN ARBOR**            **5940**  
 AN INTEGRATED MODELING STUDY FOR COORDINATED OBSER VATIONS  
 OF H<sub>2</sub>O, OH, AND H<sub>2</sub>O + EMISSIONS IN THE CO  
 10/17/1997 - 08/31/2001            FY01: \$0            Total: \$70,954  
*Prin. Invest.:* D R COMBI  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6471**            **UNIV OF MICHIGAN - ANN ARBOR**            **5941**  
 ENERGETIC PARTICLE PROPAGATION IN THE NEW MODEL FO R THE  
 HELIOSPHERIC MAGNETIC FIELD  
 11/17/1997 - 10/31/2000            FY01: \$0            Total: \$120,196  
*Prin. Invest.:* T ZURBUCHEN  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6709**            **UNIV OF MICHIGAN - ANN ARBOR**            **5942**  
 CONTINUED SCIENTIFIC STUDIES OF THE MIDDLE ATMOSPHERE BY THE  
 HIGHRESOLUTION DOPPLER IMAGER ( )  
 12/12/1997 - 12/14/2000            FY01: \$0            Total: \$789,000  
*Prin. Invest.:* D SKINNER  
*Tech. Officer:* GSFC/C JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6827**            **UNIV OF MICHIGAN - ANN ARBOR**            **5943**  
 MODELING OF COMETARY ATMOSPHERES  
 01/15/1998 - 12/31/2000            FY01: \$0            Total: \$237,584  
*Prin. Invest.:* T GOMBOSI  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6883**            **UNIV OF MICHIGAN - ANN ARBOR**            **5944**  
 COMPARATIVE STUDY OF JUPITER'S AURORA: HST UV IMA GES AND  
 SPECTRA AND GALILEO DATA  
 01/30/1998 - 12/31/2000            FY01: \$0            Total: \$152,868  
*Prin. Invest.:* J T CLARKE  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7032**            **UNIV OF MICHIGAN - ANN ARBOR**            **5945**  
 MODELS OF RELATIVISTIC EXTRAGALACTIC JETS AND THE INTERPRETATION OF VSOPDATA- ATP  
 02/17/1998 - 02/14/2000            FY01: \$0            Total: \$40,700  
*Prin. Invest.:* P A HUGHES  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7474**            **UNIV OF MICHIGAN - ANN ARBOR**            **5946**  
 HIGH RESOLUTION DOPPLER IMAGER - OPERATIONS AND ALGORITHM-MAINTENANCE  
 06/23/1998 - 06/30/2001            FY01: \$101,500            Total: \$672,000  
*Prin. Invest.:* W SKINNER  
*Tech. Officer:* GSFC/C H JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7553**            **UNIV OF MICHIGAN - ANN ARBOR**            **5947**  
 APPLICATION OF MC-ICPMS TO THE MEASUREMENT OF ISOTOPIC ANOMALIES IN ZR, MO, RU, SN, TE AND W  
 06/23/1998 - 06/30/2000            FY01: \$0            Total: \$120,000  
*Prin. Invest.:* A N HALLIDAY  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7557**            **UNIV OF MICHIGAN - ANN ARBOR**            **5948**  
 GGS/POLAR TIDE CO-INVESTIGATOR PROGRAM MO&DA SUPPLEMENTAL FUNDS  
 06/25/1998 - 06/30/2001            FY01: \$0            Total: \$124,000  
*Prin. Invest.:* A NAGEY  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7569**            **UNIV OF MICHIGAN - ANN ARBOR**            **5949**  
 PROVIDING THE GLOBAL MODELING INITIATIVE WITH MODELING AND ANALYSIS OF AEROSOLS EFFECTS  
 07/09/1998 - 07/31/2001            FY01: \$0            Total: \$225,273  
*Prin. Invest.:* J E PENNER  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7681**            **UNIV OF MICHIGAN - ANN ARBOR**            **5950**  
 DEFINING A CLIMATOLOGY AND THE EFFECTS OF ABSORBING AEROSOLS: MODELS AND MEASUREMENTS  
 09/04/1998 - 08/31/2002            FY01: \$160,000            Total: \$480,000  
*Prin. Invest.:* J PENNER  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7858**            **UNIV OF MICHIGAN - ANN ARBOR**            **5951**  
 MEASUREMENT OF ABSOLUTE DIFFERENTIAL CROSS SECTIONS FOR THE COLLISIONS OF ELECTRONS WITH PLANETARY  
 01/05/1999 - 03/31/2001            FY01: \$0            Total: \$127,100  
*Prin. Invest.:* D SHYIN  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7860**            **UNIV OF MICHIGAN - ANN ARBOR**            **5952**  
 THE SOLAR SYSTEM BEYOND PLUTO  
 01/06/1999 - 12/31/2001            FY01: \$46,005            Total: \$152,586  
*Prin. Invest.:* D M BERNSTEIN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8080**            **UNIV OF MICHIGAN - ANN ARBOR**            **5953**  
 STATE-TO-STATE RATE CONSTANTS FOR COMPUTATION OF NON-LTE INFRARED RADIATIVE TRANSFER IN THE M  
 01/15/1999 - 03/31/2002            FY01: \$95,000            Total: \$279,500  
*Prin. Invest.:* D R BARKER  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8238**            **UNIV OF MICHIGAN - ANN ARBOR**            **5954**  
 MASSIVE BLACK HOLES AND THE CENTERS OF GALAXIES (LTA98)  
 02/25/1999 - 02/28/2002            FY01: \$111,098            Total: \$261,042  
*Prin. Invest.:* D O RICHSTONE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8458**            **UNIV OF MICHIGAN - ANN ARBOR**            **5955**  
 MODELING OF X-RAY CLUSTERS (ATP 98)  
 04/15/1999 - 04/14/2002            FY01: \$43,000            Total: \$124,000  
*Prin. Invest.:* A E EVRARD  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8494**            **UNIV OF MICHIGAN - ANN ARBOR**            **5956**  
 EXTEND THE DEVELOPMENT OF THE SPACE WEATHER TOPIC, AND ALSO THE SPACE MISSIONS SECTION TO INCLUDE  
 05/04/1999 - 12/31/2000            FY01: \$0            Total: \$150,000  
*Prin. Invest.:* R M JOHNSON  
*Tech. Officer:* GSFC/A F HASLER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8630**            **UNIV OF MICHIGAN - ANN ARBOR**            **5957**  
 HIERARCHICAL INVESTIGATION OF SOCIOECONOMIC DRIVER OF DECADAL SCALE LAND-COVER CHANGES IN THE UPPER  
 08/11/1999 - 04/30/2001            FY01: \$0            Total: \$73,879  
*Prin. Invest.:* D G BROWN  
*Tech. Officer:* GSFC/J RANSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8661**            **UNIV OF MICHIGAN - ANN ARBOR**            **5958**  
 MOISTURE TRANSPORT AND RADIOBRIGHTNESS MODELS FOR COMPLEX VEGETATION  
 07/01/1999 - 06/30/2002            FY01: \$115,000            Total: \$307,050  
*Prin. Invest.:* A W ENGLAND  
*Tech. Officer:* GSFC/P T HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8715**            **UNIV OF MICHIGAN - ANN ARBOR**            **5959**  
 DYNAMICS IN THE COMET ENVIRONMENT  
 08/03/1999 - 07/31/2002            FY01: \$24,000            Total: \$70,500  
*Prin. Invest.:* D J SCHEERES  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

## MICHIGAN

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8719**            **UNIV OF MICHIGAN - ANN ARBOR**            **5960**  
 HIERARCHICAL INVESTIGATION OF SOCIOECONOMIC DRIVER S OF  
 DECADEAL SCALE LAND-COVER CHANGES IN THE UPPE  
 08/02/1999 - 04/30/2001            FY01: \$0            Total: \$51,250  
*Prin. Invest.:* D G BROWN  
*Tech. Officer:* GSFC/J RANSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8845**            **UNIV OF MICHIGAN - ANN ARBOR**            **5961**  
 CASSINI-HUYGENS GAS CHROMATOGRAPH MASS SPECTROMETE R  
 SCIENCE SUPPORT  
 10/25/1999 - 10/31/2001            FY01: \$25,000            Total: \$50,000  
*Prin. Invest.:* S K ATREYA  
*Tech. Officer:* GSFC/J E RICHARDS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8930**            **UNIV OF MICHIGAN - ANN ARBOR**            **5962**  
 SOLID EARTH AND NATURAL HAZARDS RESEARCH AND APPLU CATIONS  
 01/13/2000 - 01/14/2002            FY01: \$75,000            Total: \$150,000  
*Prin. Invest.:* K SARABANDI  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8942**            **UNIV OF MICHIGAN - ANN ARBOR**            **5963**  
 THE DISTRIBUTION OF GASES IN THE INNER COMAE OF COMETS  
 01/14/2000 - 01/14/2002            FY01: \$100,000            Total: \$220,000  
*Prin. Invest.:* M R COMBI  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8946**            **UNIV OF MICHIGAN - ANN ARBOR**            **5964**  
 STUDIES OF SOLAR WIND INTERACTION AND IONOSPHERIC PROCESSES  
 AT VENUS AND MARS  
 01/14/2000 - 03/31/2002            FY01: \$94,923            Total: \$179,923  
*Prin. Invest.:* A NAGY  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8963**            **UNIV OF MICHIGAN - ANN ARBOR**            **5965**  
 FUSE SPECTRA OF LYMAN SERIES EMISSIONS FROM THE IN TERPLANE-  
 TARY MEDIUM - FUSE  
 01/24/2000 - 01/31/2002            FY01: \$0            Total: \$38,400  
*Prin. Invest.:* J T CLARKE  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8993**            **UNIV OF MICHIGAN - ANN ARBOR**            **5966**  
 DYNAMICS IN THE EROS ENVIRONMENT  
 01/24/2000 - 12/31/2001            FY01: \$0            Total: \$66,124  
*Prin. Invest.:* D J SCHEERES  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8996**            **UNIV OF MICHIGAN - ANN ARBOR**            **5967**  
 H2 AS THE PRIMARY GAS COMPONENT AT LARGE GALACTIC RADIUS -  
 FUSE  
 01/24/2000 - 01/31/2002            FY01: \$0            Total: \$30,300  
*Prin. Invest.:* J N BREGMAN, NONE  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9017**            **UNIV OF MICHIGAN - ANN ARBOR**            **5968**  
 DYNAMICS OF THE ASTEROID ENVIRONMENT  
 02/02/2000 - 01/31/2002            FY01: \$22,000            Total: \$43,000  
*Prin. Invest.:* D J SCHEERES  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9021**            **UNIV OF MICHIGAN - ANN ARBOR**            **5969**  
 DO ELLIPTICAL GALAXY COOLING FLOWS ACTUALLY COOL? - FUSE  
 02/03/2000 - 02/14/2002            FY01: \$0            Total: \$31,000  
*Prin. Invest.:* J N BREGMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9162**            **UNIV OF MICHIGAN - ANN ARBOR**            **5970**  
 RXTE OBSERVATIONS OF SELECTED BLAZARS - ADP - 99  
 03/14/2000 - 03/14/2002            FY01: \$0            Total: \$17,425  
*Prin. Invest.:* M ALLER  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9355**            **UNIV OF MICHIGAN - ANN ARBOR**            **5971**  
 GEOMAGNETIC STORM STUDIES AT LOW LATITUDES  
 04/04/2000 - 04/14/2001            FY01: \$0            Total: \$36,200  
*Prin. Invest.:* A BURNS  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 9406**            **UNIV OF MICHIGAN - ANN ARBOR**            **5972**  
 HIGH PERFORMANCE PARALLEL METHODS FOR SPACE WEATHER SIMULA-  
 TION  
 04/10/2000 - 04/30/2002            FY01: \$165,800            Total: \$325,700  
*Prin. Invest.:* T GOMBOSI  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9464**            **UNIV OF MICHIGAN - ANN ARBOR**            **5973**  
 A MASSIVELY PARALLEL PARTICLE CODE FOR RARIFIED IONIZED &  
 NEUTRAL GAS FLOWS IN EARTH & PLANETARY  
 04/18/2000 - 04/14/2003            FY01: \$116,600            Total: \$233,600  
*Prin. Invest.:* M COMBI  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9536**            **UNIV OF MICHIGAN - ANN ARBOR**            **5974**  
 NEW GRANT EXTENDED SOLAR MAX: INVESTIGATION OF THE SOLAR-  
 WIND MAGNETOSPHER-IONOSPHERE COUPLING  
 05/04/2000 - 11/14/2001            FY01: \$0            Total: \$50,000  
*Prin. Invest.:* C CLAUER  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9762**            **UNIV OF MICHIGAN - ANN ARBOR**            **5975**  
 DESIGN STUDY OF A SYNTHETIC APERTURE PRECIPITATION RADIOMETER  
 08/03/2000 - 07/31/2002            FY01: \$95,000            Total: \$248,283  
*Prin. Invest.:* C RUF  
*Tech. Officer:* GSFC/C M PRINCIPE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 9967**            **UNIV OF MICHIGAN - ANN ARBOR**            **5976**  
 A SMALL, LIGHTWEIGHT RADIOMETER TO IMPROVE THE TEM PORAL  
 SAMPLING OF RAINFALL  
 10/30/2000 - 01/31/2001            FY01: \$21,630            Total: \$21,630  
*Prin. Invest.:* C S RUF  
*Tech. Officer:* GSFC/C D KUMMEROW  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9980**            **UNIV OF MICHIGAN - ANN ARBOR**            **5977**  
 METAL ENRICHMENT MECHANISMS IN ABELL 2199 & ABELL 3571  
 09/13/2000 - 09/14/2002            FY01: \$15,600            Total: \$31,700  
*Prin. Invest.:* J N BREGMAN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9981**            **UNIV OF MICHIGAN - ANN ARBOR**            **5978**  
 THE NATURE OF THE X-RAY EMISSION IN SA BULGES  
 09/13/2000 - 09/14/2002            FY01: \$15,600            Total: \$31,600  
*Prin. Invest.:* J N BREGMAN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10036**            **UNIV OF MICHIGAN - ANN ARBOR**            **5979**  
 A MODULAR CODE FOR A COMMUNITY VERSION OF THE MICH IGAN LSP/R  
 MODEL  
 10/31/2000 - 04/30/2002            FY01: \$35,000            Total: \$35,000  
*Prin. Invest.:* A ENGLAND  
*Tech. Officer:* GSFC/P E O'NEILL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10138**            **UNIV OF MICHIGAN - ANN ARBOR**            **5980**  
 NOZOMI NEUTRAL MASS SPECTROMETER SCIENCE SUPPORT  
 12/12/2000 - 12/14/2001            FY01: \$15,000            Total: \$15,000  
*Prin. Invest.:* S K ATREYA  
*Tech. Officer:* GSFC/J E RICHARDS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10181**            **UNIV OF MICHIGAN - ANN ARBOR**            **5981**  
 NOZOMI NEUTRAL MASS SPECTROMETER SCIENCE SUPPORT -  
 DEVELOPING UPPER ATMOSPHERIC, EXOSPHERIC MODELS  
 01/18/2001 - 01/31/2002            FY01: \$15,000            Total: \$15,000  
*Prin. Invest.:* A F NAGY  
*Tech. Officer:* GSFC/J E RICHARDS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10297**            **UNIV OF MICHIGAN - ANN ARBOR**            **5982**  
 PHYSICAL RESPONSE OF THE INNER MAGNETOSPHERE TO GE OEFFEC-  
 TIVE SOLAR WIND DRIVERS: ENERGY DISSIPATION  
 02/15/2001 - 01/31/2002            FY01: \$47,000            Total: \$47,000  
*Prin. Invest.:* K KOZYRA  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10336**            **UNIV OF MICHIGAN - ANN ARBOR**            **5983**  
 SELF-RELIANT, HIGH RESOLUTION IMAGING USING FORMAT ION FLYING  
 SPACECRAFT  
 02/07/2001 - 01/14/2002            FY01: \$355,697            Total: \$355,697  
*Prin. Invest.:* D HYLAND  
*Tech. Officer:* GSFC/J A LEITNER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10552**            **UNIV OF MICHIGAN - ANN ARBOR**            **5984**  
 ASU/MICHIGAN COLLABORATION: THE ABUNDANCE & ISOTOP IC  
 COMPOSITION OF HG IN EXTRATERRESTRIAL MATERIAL  
 03/09/2001 - 03/14/2002            FY01: \$20,000            Total: \$20,000  
*Prin. Invest.:* J BLUM  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10765**            **UNIV OF MICHIGAN - ANN ARBOR**            **5985**  
 X-RAY ABSRPTION STUDIES; COOLING FLOWS (LTS-2000)  
 04/23/2001 - 04/30/2002            FY01: \$110,000            Total: \$110,000  
*Prin. Invest.:* J N BREGMAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10805**            **UNIV OF MICHIGAN - ANN ARBOR**            **5986**  
 CONCEPT STUDY FOR THE "THE HEAVY NUCLEI EXPLORER" (HNX)  
 MISSIONAO-99-OSS-05  
 04/30/2001 - 04/30/2002            FY01: \$57,700            Total: \$57,700  
*Prin. Invest.:* D TARLE  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10806**            **UNIV OF MICHIGAN - ANN ARBOR**            **5987**  
 RXTE OBSERVATIONS OF SELECTED BLAZARS - ADP - 99  
 04/23/2001 - 04/30/2002            FY01: \$57,171            Total: \$57,171  
*Prin. Invest.:* J N BREGMAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10812**            **UNIV OF MICHIGAN - ANN ARBOR**            **5988**  
 HIGH RESOLUTION DOPPLER IMAGER - OPERATIONS AND ALGORITHM  
 MAINTENANCE.  
 05/02/2001 - 09/30/2001            FY01: \$72,500            Total: \$72,500  
*Prin. Invest.:* W R SKINNER  
*Tech. Officer:* GSFC/C H JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10850**            **UNIV OF MICHIGAN - ANN ARBOR**            **5989**  
 SUPERPOSED EPOCH ANALYSIS OF RING CURRENT GEO- EFFECTIVE-  
 NNESS RELATED TO SOLAR WIND & PLASMA SHEET  
 05/07/2001 - 05/14/2002            FY01: \$107,276            Total: \$107,276  
*Prin. Invest.:* M W LIEMOHN  
*Tech. Officer:* GSFC/J F SPANN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10887**            **UNIV OF MICHIGAN - ANN ARBOR**            **5990**  
 POLAR/TIDE  
 05/07/2001 - 05/14/2002            FY01: \$50,000            Total: \$50,000  
*Prin. Invest.:* A NAGY  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10907**            **UNIV OF MICHIGAN - ANN ARBOR**            **5991**  
 2001: A SPACETIME ODYSSEY  
 05/22/2001 - 05/31/2002            FY01: \$12,500            Total: \$12,500  
*Prin. Invest.:* K FREESE  
*Tech. Officer:* GSFC/D GOLOMBEK  
*CASE Category:* 11 - ASTRONOMY

## MICHIGAN

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10975**      **UNIV OF MICHIGAN - ANN ARBOR**      **5992**  
 A PREDICTIVE MODEL FOR THE MAGNETIC FIELD IN THE HELIOSPHERE  
 05/29/2001 - 05/31/2002      FY01: \$69,365      Total: \$69,365  
*Prin. Invest.:* L A FINK  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11000**      **UNIV OF MICHIGAN - ANN ARBOR**      **5993**  
 SOLAR WIND STRUCTURE IN THE INNER HELIOSPHERE: RATIONALE FOR  
 THE LOCATION OF THE SENTINEL MISSION  
 06/06/2001 - 05/31/2002      FY01: \$79,603      Total: \$79,603  
*Prin. Invest.:* T H ZURBUCHEN  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11004**      **UNIV OF MICHIGAN - ANN ARBOR**      **5994**  
 RESEARCH IN PLANETARY ATMOSPHERES-JUPITER & TITAN  
 06/08/2001 - 09/14/2002      FY01: \$90,000      Total: \$90,000  
*Prin. Invest.:* S K ATREYA  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11031**      **UNIV OF MICHIGAN - ANN ARBOR**      **5995**  
 INTEGRATED MODELING STUDY OF THE EFFECTS OF MAGNETOSPHERIC  
 FORCING ON THE JOVIAN IONOSPHERE-THERMOS  
 06/11/2001 - 05/30/2002      FY01: \$90,000      Total: \$90,000  
*Prin. Invest.:* J H WAITE  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11041**      **UNIV OF MICHIGAN - ANN ARBOR**      **5996**  
 MODELING OF COMETARY ATMOSPHERES  
 06/12/2001 - 06/14/2002      FY01: \$90,000      Total: \$90,000  
*Prin. Invest.:* T I GOMBOSI  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11068**      **UNIV OF MICHIGAN - ANN ARBOR**      **5997**  
 DYNAMICAL STUDIES OF THE MIDDLE ATMOSPHERE USING HIGH RESOLU-  
 TION DOPPLER IMAGER OBSERVATIONS  
 07/09/2001 - 07/14/2002      FY01: \$86,667      Total: \$86,667  
*Prin. Invest.:* W R SKINNER  
*Tech. Officer:* GSFC/C JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11084**      **UNIV OF MICHIGAN - ANN ARBOR**      **5998**  
 MODELING SIBERIAN BOREAL FOREST LAND-COVER CHANGE AND  
 CARBON UNDER CHANGING ECONOMIC PARADIGMS  
 07/20/2001 - 08/14/2002      FY01: \$96,393      Total: \$96,393  
*Prin. Invest.:* K BERGEN  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11187**      **UNIV OF MICHIGAN - ANN ARBOR**      **5999**  
 MGS MAG/ER DATA ANALYSIS USING A TIME AND MAGNETIC FIELD  
 DEPENDENT ELECTRON TRANSPORT MODEL  
 08/08/2001 - 08/31/2004      FY01: \$90,000      Total: \$90,000  
*Prin. Invest.:* M C LIEMOHN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11271**      **UNIV OF MICHIGAN - ANN ARBOR**      **6000**  
 DEVELOPING LAND COVER SCENARIOS IN METROPOLITAN AND NON-  
 METROPOLITAN MICHIGAN  
 08/23/2001 - 08/31/2004      FY01: \$119,410      Total: \$119,410  
*Prin. Invest.:* D BROWN  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11275**      **UNIV OF MICHIGAN - ANN ARBOR**      **6001**  
 TRACE GAS/AEROSOL INTERACTIONS AND GMI MODELING SUPPORT  
 08/22/2001 - 08/31/2004      FY01: \$100,051      Total: \$100,051  
*Prin. Invest.:* J PENNER  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1725**      **UNIV OF MICHIGAN - ANN ARBOR**      **6002**  
 FIELD-REVERSED END PLUGGING FOR THE GASDYNAMIC MIRROR  
 MACHINE  
 07/26/2000 - 06/30/2001      FY01: \$0      Total: \$20,000  
*Prin. Invest.:* T KAMMASH  
*Tech. Officer:* MSFC/W F EMRICH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1154**      **UNIV OF MICHIGAN - ANN ARBOR**      **6003**  
 IMPACT OF MICROGRAVITY ON DRUG AND NUTRIENT ABSORPTION  
 02/03/2000 - 01/31/2003      FY01: \$191,532      Total: \$352,052  
*Prin. Invest.:* G L AMIDON  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

**NAG 9 1167**      **UNIV OF MICHIGAN - ANN ARBOR**      **6004**  
 DEVELOP ADVANCED MILLIMETERWAVE INTERFEROMETER FOR  
 PLASMA DIAGNOSTICS  
 09/22/1999 - 06/30/2001      FY01: \$0      Total: \$44,000  
*Prin. Invest.:* B E GILCHRIST  
*Tech. Officer:* JSC/F R CHANG-DIAZ  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1251**      **UNIV OF MICHIGAN - ANN ARBOR**      **6005**  
 OPTICAL SEARCHES FOR GEOSYNCHRONOUS ORBITAL DEBRIS  
 08/01/2000 - 07/31/2002      FY01: \$0      Total: \$106,787  
*Prin. Invest.:* P O SEITZER  
*Tech. Officer:* JSC/E G STANSBERRY  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1373**      **UNIV OF MICHIGAN - ANN ARBOR**      **6006**  
 AN OPTICAL SURVEY FOR SPACE DEBRIS IN GEOSYNCHRONOUS  
 08/15/2001 - 09/30/2002      FY01: \$229,381      Total: \$229,381  
*Prin. Invest.:* P O SEITZER  
*Tech. Officer:* JSC/E G STANSBERRY  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99024**      **UNIV OF MICHIGAN - ANN ARBOR**      **6007**  
 FOREST STRUCTURE FROM MULTI-SPECTRAL FUSION™ SAME  
 08/25/1999 - 08/19/2002      FY01: \$228,000      Total: \$430,010  
*Prin. Invest.:* M DOBSON  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

MICHIGAN

**NAS 5 32989**      **UNIV OF MICHIGAN - ANN ARBOR**      **6008**  
 PROVIDE ENGINEERING SUPPORT IN THE DEFINITION DESIGN AND TEST  
 OF THE PLANET-B NMS  
 01/25/1996 - 09/30/2000      FY01: \$42,341      Total: \$1,394,596  
*Prin. Invest.:* G CARIGNAN  
*Tech. Officer:* GSFC/S WAY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 99174**      **UNIV OF MICHIGAN - ANN ARBOR**      **6009**  
 PROVIDE SUPPORT, DESIGN, DEVELOPMENT OF THE NGIMS EXPERIMENT  
 FOR THE COMET NUCLEUS TOUR (CONTOUR)  
 04/02/1999 - 08/25/2002      FY01: \$308,438      Total: \$1,904,362  
*Prin. Invest.:* G ARIGNAN  
*Tech. Officer:* GSFC/J RICHARDS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 8 37108**      **UNIV OF MICHIGAN - ANN ARBOR**      **6010**  
 STUDY ENTITLED "RESEARCH ON ORBITAL PLASMA-ELECTRODYNAMICS  
 (ROPE)."  
 04/14/1987 - 12/31/1999      FY01: \$4,765      Total: \$66,428  
*Prin. Invest.:* B GILCHRIST  
*Tech. Officer:* MSFC/M W CASTLEMANN, MSFC/R HOLDER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 8 99127**      **UNIV OF MICHIGAN - ANN ARBOR**      **6011**  
 R/S ICARUS SATELLITE FOR PROSEDS  
 06/23/1999 - 12/31/2001      FY01: \$138,397      Total: \$400,213  
*Prin. Invest.:* G E GILCHRIST  
*Tech. Officer:* MSFC/K J WELZYN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAS 8 99128**      **UNIV OF MICHIGAN - ANN ARBOR**      **6012**  
 RESEARCH ENTITLED PROCEEDS UMPS PHASE D & E  
 07/30/1999 - 12/31/2001      FY01: \$436,038      Total: \$1,040,693  
*Prin. Invest.:* B GILCHRIST  
*Tech. Officer:* MSFC/J L BALATICE, MSFC/L JOHNSON  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 1 01050**      **UNIV OF MICHIGAN - ANN ARBOR**      **6013**  
 RESPONSE OF STRONGLY ANISOTROPIC LAMINATED PANELS UNDER  
 COMBINED LOADS  
 05/08/2001 - 01/31/2002      FY01: \$50,148      Total: \$50,148  
*Prin. Invest.:* A P WAAS  
*Tech. Officer:* LARC/M P NEMETH  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 2 856**      **UNIV OF MICHIGAN - ANN ARBOR**      **6014**  
 EFFECTS OF MICROGRAVITY ON DEVELOPMENT OF THIGH MU SCLES  
 05/25/1994 - 12/31/2001      FY01: \$0      Total: \$384,998  
*Prin. Invest.:* K I CLARK, K F BARALD  
*Tech. Officer:* ARC/D A REISS-BUBENHEIM, ARC/C M WINGET  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5442**      **UNIV OF MICHIGAN - ANN ARBOR**      **6015**  
 THE EVOLUTION AND DISPERSAL OF PROTOSTELLAR DISKS  
 07/11/2001 - 06/30/2002      FY01: \$14,833      Total: \$14,833  
*Prin. Invest.:* F C ADAMS  
*Tech. Officer:* ARC/G P LAUGHIN, ARC/D J HOLLENBACH  
*CASE Category:* 11 - ASTRONOMY

**NCC 3 482**      **UNIV OF MICHIGAN - ANN ARBOR**      **6016**  
 RADIANT EXTINCTION OF GASOUS DIFFUSION FLAMES  
 06/15/1996 - 12/14/2001      FY01: \$0      Total: \$359,000  
*Prin. Invest.:* A ATREYA  
*Tech. Officer:* GRC/K SACKSTEADER  
*CASE Category:* 13 - PHYSICS

**NCC 3 656**      **UNIV OF MICHIGAN - ANN ARBOR**      **6017**  
 FLAME VORTEX INTERACTIONS IN MICROGRAVITY TO ASSES S THE  
 THEORY OF FLAME STRETCH  
 01/12/1999 - 12/03/2002      FY01: \$142,550      Total: \$350,050  
*Prin. Invest.:* J F DRISCOLL  
*Tech. Officer:* GRC/J E BROOKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 661**      **UNIV OF MICHIGAN - ANN ARBOR**      **6018**  
 FLOW/SOOT-FORMATION IN NONBOUYANT LAMINAR DIFFUSION FLAMES  
 01/21/1999 - 12/29/2002      FY01: \$94,970      Total: \$257,365  
*Prin. Invest.:* G M FAETH, NONE  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 663**      **UNIV OF MICHIGAN - ANN ARBOR**      **6019**  
 TURBULENT FLAME PROCESSES VIA VORTEX-RING DIFFUSION FLAME  
 INTERACTION  
 01/15/1999 - 12/30/2002      FY01: \$85,500      Total: \$237,819  
*Prin. Invest.:* W DAHM  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 723**      **UNIV OF MICHIGAN - ANN ARBOR**      **6020**  
 GAS SEPARATION & PRESSURIZATION FOR EXTRATERRESTRIAL EXPLO-  
 RATION  
 07/07/1999 - 12/31/2001      FY01: \$0      Total: \$40,000  
*Prin. Invest.:* M KAVIANY, NONE  
*Tech. Officer:* GRC/E S NELSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 790**      **UNIV OF MICHIGAN - ANN ARBOR**      **6021**  
 SYSTEM ON A CHIP: ACTIVE COMPONENTS OF THE RF FRONT END  
 04/04/2000 - 02/28/2003      FY01: \$199,584      Total: \$299,380  
*Prin. Invest.:* L P KATEHI  
*Tech. Officer:* GRC/G E PONCHAK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 837**      **UNIV OF MICHIGAN - ANN ARBOR**      **6022**  
 LOW COST, LOW POWER COMPONENTS FOR TRANSMIT/RECEIVE PHASE  
 ARRAY ANTENNAS  
 12/20/2000 - 12/31/2001      FY01: \$226,564      Total: \$226,564  
*Prin. Invest.:* L P KATEHI  
*Tech. Officer:* GRC/G E PONCHAK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 146**      **UNIV OF MICHIGAN - ANN ARBOR**      **6023**  
 RESEARCH FOR GRAND CHALLENGE APPLICATIONS  
 08/02/1996 - 06/30/2000      FY01: \$0      Total: \$1,400,000  
*Prin. Invest.:* T GOMBOSI  
*Tech. Officer:* GSFC/J R FISCHER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

## MICHIGAN

## NASA'S UNIVERSITY PROGRAM

**NCC 5 296 UNIV OF MICHIGAN - ANN ARBOR 6024**  
 RADAR REMOTE SENSING OF LAND-COVER AND BIOMASS IN THE  
 AMAZON  
 06/16/1998 - 12/31/2001 FY01: \$150,565 Total: \$657,456  
*Prin. Invest.:* M C DOBSON  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 383 UNIV OF MICHIGAN - ANN ARBOR 6025**  
 COLLABORATIVE EDUCATION AND PUBLIC OUTREACH ACTIVITIES BY  
 WINDOWS TO THE UNIVERSE PROJECT IN SUPPORT  
 02/24/1999 - 02/28/2001 FY01: \$485 Total: \$50,000  
*Prin. Invest.:* L FISK  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NCC 8 181 UNIV OF MICHIGAN - ANN ARBOR 6026**  
 GLOBAL SIMULATIONS OF CORE PLASMA DENSITIES, COMPOSITION AND  
 TEMPERATURE. NASA NRA98-OSS-03.  
 06/07/1999 - 06/06/2002 FY01: \$36,415 Total: \$80,401  
*Prin. Invest.:* M LIEMOHN  
*Tech. Officer:* MSFC/D GALLAGHER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 2 52257 UNIV OF MICHIGAN - ANN ARBOR 6027**  
 SEARCHING EXTRASOLAR PLANETS USING DIFFERENTIAL PHOTOMETRY  
 07/23/1999 - 07/14/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* F C ADAMS  
*Tech. Officer:* ARC/J J LISSAUER  
*CASE Category:* 11 - ASTRONOMY

**NGT 2 52269 UNIV OF MICHIGAN - ANN ARBOR 6028**  
 SIMULTANEOUS VIBRATION & BVI NOISE REDUCTION IN ROTORCRAFT  
 USING ACTIVELY CONTROLLED TRAILING-EDGE  
 08/11/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* P P FRIEDMAN, NONE  
*Tech. Officer:* ARC/W WARBRODT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 3 52348 UNIV OF MICHIGAN - ANN ARBOR 6029**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 06/15/1999 - 05/31/2002 FY01: \$9,200 Total: \$53,200  
*Prin. Invest.:* A GALLIMORE  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 3 52349 UNIV OF MICHIGAN - ANN ARBOR 6030**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT  
 RESEARCH PROGRAM  
 06/23/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* A D GALLIMORE  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 3 52365 UNIV OF MICHIGAN - ANN ARBOR 6031**  
 GRADUATE STUDENT PROGRAM GRADUATE STUDENT PROGRAM  
 06/14/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* A ATREYA  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 43 - CHEMICAL ENGR

**NGT 3 52372 UNIV OF MICHIGAN - ANN ARBOR 6032**  
 GRADUATE STUDENT RESEARCHER'S PROGRAM GRADUATE STUDENT  
 RESEARCHER'S PROGRAM  
 04/09/2001 - 01/29/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D PAVLIDIS  
*Tech. Officer:* GRC/D MONTEGANI  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 3 52377 UNIV OF MICHIGAN - ANN ARBOR 6033**  
 GRADUATE STUDENT RESEARCH  
 06/07/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* W J DAHM  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 4 52404 UNIV OF MICHIGAN - ANN ARBOR 6034**  
 DESCRIPTION OF CONTRACT GRADUATE STUDENT RESEARCHERS  
 PROGRAM  
 06/10/1997 - 08/01/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* D BERNSTEIN  
*Tech. Officer:* DFRC/K K GUPTA, DFRC/L S VOELKER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 4 52421 UNIV OF MICHIGAN - ANN ARBOR 6035**  
 MULTIVARIABLE NONLINEAR IDENTIFICATION MULTIVARIABLE NONLINEAR  
 IDENTIFICATION  
 05/11/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D S BERNSTEIN  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 4 52426 UNIV OF MICHIGAN - ANN ARBOR 6036**  
 GRADUATE RESEARCH - AEROELASTICITY AND AEROELASTIC SCALING  
 OF HYPERSONIC VEHICLES  
 07/17/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* P FRIEDMAN  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 75 UNIV OF MICHIGAN - ANN ARBOR 6037**  
 A PARALLEL ADAPTIVE MESH REFINEMENT SCHEME FOR SUPERNOVA  
 REMNANTS  
 06/16/1998 - 06/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* K POWELL, NONE  
*Tech. Officer:* GSFC/G SOFFEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 124 UNIV OF MICHIGAN - ANN ARBOR 6038**  
 DEVELOPMENT AND TESTING OF THE FAST IMAGING PLASMA SPECTROMETER  
 (STUDENT: PATRICK KOEHN)  
 06/07/2001 - 08/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* LA FISK  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 30172 UNIV OF MICHIGAN - ANN ARBOR 6039**  
 THE USE OF REMOTE SENSING METHODS FOR STUDYING FIRE-INDUCED  
 LAND COVER CHANGES IN BOREAL FORESTS  
 09/04/1998 - 05/31/2002 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* C OLSON, FRENCH  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



**NGT 5 30359**      **UNIV OF MICHIGAN - ANN ARBOR**      **6040**  
 COMPUTATIONAL METHODS FOR ADVANCED CLIMATE MODEL PREDICTIONS: A STUDY OF ADOPTIVE GRID TECHNIQUES  
 08/23/2000 - 08/31/2002      FY01: \$22,000      Total: \$44,000  
*Prin. Invest.:* J PENNER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40062**      **UNIV OF MICHIGAN - ANN ARBOR**      **6041**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE AND FELLOWSHIP PROGRAM.  
 03/15/1997 - 01/31/2001      FY01: \$0      Total: \$1,805,000  
*Prin. Invest.:* R M JOHNSON  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40118**      **UNIV OF MICHIGAN - ANN ARBOR**      **6042**  
 MICHIGAN SPACE GRANT COLLEGE AND FELLOWSHIP PROGRA M  
 03/15/2001 - 01/31/2002      FY01: \$475,000      Total: \$475,000  
*Prin. Invest.:* A D GALLIMORE  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50199**      **UNIV OF MICHIGAN - ANN ARBOR**      **6043**  
 MARKET-BASED DISTRIBUTED TASK ALLOCATION IN AUTONO MOUS SPACECRAFT  
 06/24/1998 - 08/31/2001      FY01: \$0      Total: \$66,000  
*Prin. Invest.:* M WELLMAN  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 50255**      **UNIV OF MICHIGAN - ANN ARBOR**      **6044**  
 A HYBRID KINETIC FLUID MODEL FOR THE ATMOSPHERE OF PLUTO STUDENT: AYLSHA REINARD  
 06/21/1999 - 06/30/2002      FY01: \$22,000      Total: \$66,000  
*Prin. Invest.:* L FISK  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50349**      **UNIV OF MICHIGAN - ANN ARBOR**      **6045**  
 DEVELOPMENT OF A NEW SOLID STATE DETECTOR FOR THE STUDY OF SOLAR WIND COMPOSITION/STUDENT: SUSAN LEP  
 05/08/2001 - 06/30/2002      FY01: \$22,000      Total: \$22,000  
*Prin. Invest.:* L FISK  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52864**      **UNIV OF MICHIGAN - ANN ARBOR**      **6046**  
 IDENTIFICATION OF LONG TERM CHANGE IN SOCIETY AND SETTLEMENT OF THE KHABUR DRAINAGE  
 07/28/1998 - 08/13/2002      FY01: \$0      Total: \$64,000  
*Prin. Invest.:* H T WRIGHT  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NGT 8 52888**      **UNIV OF MICHIGAN - ANN ARBOR**      **6047**  
 NUCLEAR THERMAL PROPULSION FOR SPACE EXPLORATION  
 05/18/2000 - 08/31/2003      FY01: \$22,000      Total: \$44,000  
*Prin. Invest.:* T KAMMASH  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 8 52889**      **UNIV OF MICHIGAN - ANN ARBOR**      **6048**  
 DEVELOPMENT OF FIELD EMITTER ARRY OF ELETRDYNAMIC TETHER  
 05/04/2000 - 06/30/2003      FY01: \$22,000      Total: \$44,000  
*Prin. Invest.:* B GILCHRIST  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 8 52900**      **UNIV OF MICHIGAN - ANN ARBOR**      **6049**  
 DEV OF COMPUTER MODELS FOR NUCLEAR-BASED MAGNETHOH YDRO-DYNAMIC POWER CYCLES  
 05/25/2001 - 07/01/2004      FY01: \$22,000      Total: \$22,000  
*Prin. Invest.:* I BOYD  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1279**      **WAYNE STATE UNIV**      **6050**  
 DEVELOPMENT OF STRATEGIES & TOOLS FOR ANALYSIS & C ONTROL OF LARGE AIR TRAFFIC MANAGEMENT SYSTEMS  
 01/05/1999 - 12/31/2001      FY01: \$30,000      Total: \$90,000  
*Prin. Invest.:* F LIN  
*Tech. Officer:* ARC/G MEYER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 2 1503**      **WAYNE STATE UNIV**      **6051**  
 EFFECTS OF MICROGRAVITY ON PREIMPLANTATION MOUSE D EVELOP-MENT  
 07/12/2001 - 07/14/2002      FY01: \$89,600      Total: \$89,600  
*Prin. Invest.:* D A RAPPOLEE  
*Tech. Officer:* ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2180**      **WAYNE STATE UNIV**      **6052**  
 CHARACTERIZATION OF MULTI-JUNCTION SOLAR CELLS CHARACTERIZATION OF MULTI-JUNCTION SOLAR CELLS  
 07/18/1998 - 01/04/2002      FY01: \$75,000      Total: \$225,000  
*Prin. Invest.:* P WOODYARD  
*Tech. Officer:* GRC/D BRINKER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2313**      **WAYNE STATE UNIV**      **6053**  
 A DESIGN AND ANALYSIS TOOL FOR PULSE DETONATION ENGINES  
 12/29/1999 - 02/04/2003      FY01: \$177,384      Total: \$237,384  
*Prin. Invest.:* S YU  
*Tech. Officer:* GRC/P C JORGENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2542**      **WAYNE STATE UNIV**      **6054**  
 DIRECT CALCULATIONS OF PLUME DYNAMICS AND ACOUSTIC S OF A PULSE DETONATION ENGINE BY THE SPACE-TIME  
 02/12/2001 - 02/04/2002      FY01: \$46,999      Total: \$46,999  
*Prin. Invest.:* S YU  
*Tech. Officer:* GRC/P C JORGENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 9 1183**      **WAYNE STATE UNIV**      **6055**  
 DEVELOPMENT OF HUMAN FACTORS ANALYSIS OF ADVANCED 3D VISUALIZATION FOR TELEPRESENCE  
 01/15/2000 - 01/14/2003      FY01: \$121,173      Total: \$248,723  
*Prin. Invest.:* L ZAMORANO  
*Tech. Officer:* JSC/B WOOLFORD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1189**                      **WAYNE STATE UNIV**                      **6056**  
 FROM BIOLOGICA INFORMATION PROCESSING TO ADAPTABLE ROBOTRY:  
 PRINCIPLES, MODELS & BIOMIMETIC DESIGN  
 07/14/2000 - 07/14/2002                      FY01: \$75,000                      Total: \$150,000  
*Prin. Invest.:* K PETER ZAUNER  
*Tech. Officer:* ARC/S P COLOMBANO, ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 3 580**                      **WAYNE STATE UNIV**                      **6057**  
 APPLICATION OF THE METHOD OF SPACE-TIME CONSERVATION ELEMENT  
 AND SOLUTION ELEMENT TO THE CALCULATIO  
 01/08/1998 - 11/05/2000                      FY01: \$0                      Total: \$257,819  
*Prin. Invest.:* S T YU, M C LAI  
*Tech. Officer:* GRC/P C JORGENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 1979**                      **WESTERN MICHIGAN UNIV**                      **6058**  
 NEW RESEARCH GRANT  
 12/10/1997 - 11/30/2000                      FY01: -\$179                      Total: \$149,683  
*Prin. Invest.:* W W LIU  
*Tech. Officer:* LARC/C L RUMSEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01023**                      **WESTERN MICHIGAN UNIV**                      **6059**  
 DSMC SIMULATIONS OF LAMINAR FLOW BREAKDOWN ON SPACE TRANS-  
 PORT SYSTEMS  
 04/02/2001 - 02/28/2004                      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* W W LIU  
*Tech. Officer:* LARC/J N MOSS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2529**                      **WESTERN MICHIGAN UNIV**                      **6060**  
 A UNIFIED LES/RANS APPROACH USING THE CE/SE METHOD  
 01/22/2001 - 01/17/2002                      FY01: \$61,000                      Total: \$61,000  
*Prin. Invest.:* W W LIU  
*Tech. Officer:* GRC/S CHANG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10448**                      **WESTERN MICHIGAN UNIV**                      **6061**  
 IMPROVED SIMULATIONS OF ASTROPHYSICAL PLASMAS: COMPUTATION  
 OF NEW ATOMIC DATA  
 02/20/2001 - 02/28/2002                      FY01: \$70,000                      Total: \$70,000  
*Prin. Invest.:* T GORCZYCA  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 13 - PHYSICS

**NAG10 279**                      **WESTERN MICHIGAN UNIV**                      **6062**  
 CLOSE CALL DATA SOURCES REVIEW AND ANALYSIS CLOSE CALL DATA  
 SOURCES REVIEW AND ANALYSIS  
 04/07/2000 - 09/29/2000                      FY01: \$0                      Total: \$88,872  
*Prin. Invest.:* W J HOMAN  
*Tech. Officer:* KSC/D S KEENAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1246**                      **WESTERN MICHIGAN UNIV**                      **6063**  
 FRACTAL & GEOSTATISTICAL METADATA FOR MONITORING GLOBAL  
 CHANGE USING REMOTE SENSING IMAGERY  
 04/17/2001 - 05/31/2002                      FY01: \$70,000                      Total: \$70,000  
*Prin. Invest.:* C W EMERSON  
*Tech. Officer:* ARC/J L DUNGAN, ARC/J C COUGHLIN  
*CASE Category:* 22 - COMPUTER SCIENCE

## MINNESOTA

**NAG 5 8626**                      **CONCORDIA COLLEGE IN MOORHEAD**                      **6064**  
 MARS SOLAR BALLOON GAS CHROMATOGRAPH MASS SPECTROMETER  
 06/24/1999 - 06/30/2001                      FY01: \$0                      Total: \$5,000  
*Prin. Invest.:* H L MANNING  
*Tech. Officer:* GSFC/P R MAHAFFY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8142**                      **MANKATO STATE UNIV**                      **6065**  
 AN ARTIFICIAL INTELLIGENCE CLASSIFICATION TOOL AND ITS APPLICA-  
 TION TO GAMMA-RAY BURSTS  
 02/03/1999 - 01/31/2001                      FY01: -\$22,293                      Total: \$124,886  
*Prin. Invest.:* J HAKKILA  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7366**                      **MOORHEAD STATE UNIV**                      **6066**  
 ELECTROCHEMICAL STUDY OF SILICATE MELT STRUCTURE AND COMPO-  
 NENTACTIVITIES  
 05/15/1998 - 05/31/2002                      FY01: \$0                      Total: \$67,800  
*Prin. Invest.:* R O COLSON  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11287**                      **SAINT CLOUD STATE UNIV**                      **6067**  
 SEARCH FOR CHEMICAL DIVERSITY IN COMETRAY VOLATILE S  
 08/20/2001 - 08/31/2004                      FY01: \$16,400                      Total: \$16,400  
*Prin. Invest.:* M WOMACK  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 1938**                      **UNIV OF MINNESOTA**                      **6068**  
 INVESTIGATION OF MESOSCALE VARIABILITY IN CONVECTIVE BOUNDARY  
 LAYER DEVELOPMENT USING  
 05/28/1997 - 05/31/2000                      FY01: \$0                      Total: \$79,516  
*Prin. Invest.:* K J DAVIS  
*Tech. Officer:* LARC/S ISMAIL, LARC/W T STEVENS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2242**                      **UNIV OF MINNESOTA**                      **6069**  
 STRUCTURING FORMAL RQMTS SPECIFICATIONS FOR REUSE AND  
 PRODUCT FAMILIES --- NRA 98-LARC-8  
 09/28/1999 - 06/30/2001                      FY01: \$1                      Total: \$62,055  
*Prin. Invest.:* M E HEMDAHL  
*Tech. Officer:* LARC/R W BUTLER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 01090**                      **UNIV OF MINNESOTA**                      **6070**  
 FURTHER DEVELOPMENT & DEPLOYMENT OF NANOMETER AEROSOL SIZE  
 ANALYZER (NASA) TO SUPPORT EXCAVATE  
 06/15/2001 - 01/12/2002                      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* D Y PUI, D R CHEN  
*Tech. Officer:* LARC/W R COFER, LARC/B E ANDERSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1428**                      **UNIV OF MINNESOTA**                      **6071**  
 REAL-TIME MOTION PATH PLANNING FOR AUTONOMOUS ROTOCRAFT  
 08/04/2000 - 08/31/2002                      FY01: \$60,000                      Total: \$145,373  
*Prin. Invest.:* Y J ZHAO  
*Tech. Officer:* ARC/M S WHALLEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1470**                      **UNIV OF MINNESOTA**                      **6072**  
 COMPREHENSIVE COMPUTER SIMULATION OF AIR TRAFFIC SYSTEM  
 04/09/2001 - 03/31/2002      FY01: \$59,297                      Total: \$59,297  
*Prin. Invest.:* Y J ZHAO  
*Tech. Officer:* ARC/J E ROBINSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1474**                      **UNIV OF MINNESOTA**                      **6073**  
 ATOMIC FORCE MICROSCOPY OF THERMAL INSULATION MATERIALS WITH AEROGELS  
 04/13/2001 - 03/31/2002      FY01: \$13,646                      Total: \$13,646  
*Prin. Invest.:* J MAPS  
*Tech. Officer:* ARC/L J SALERNO, ARC/S M JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 3 1975**                      **UNIV OF MINNESOTA**                      **6074**  
 ROBUST NONLINEAR FEEDBACK CONTROL OF AIRCRAFT PROPELLSION SYSTEMS  
 10/22/1996 - 10/31/2000      FY01: \$0                      Total: \$226,384  
*Prin. Invest.:* W L GARRARD, G T BALAS  
*Tech. Officer:* GRC/S GARG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2187**                      **UNIV OF MINNESOTA**                      **6075**  
 DEVELOPMENT OF A CALIBRATION SYSTEM FOR EVALUATING INSTRUMENTS FOR MEASURING AEROSOLS AND PARTICULATES  
 08/06/1998 - 01/12/2001      FY01: \$0                      Total: \$174,000  
*Prin. Invest.:* D H PUI  
*Tech. Officer:* GRC/T M SANDERS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2275**                      **UNIV OF MINNESOTA**                      **6076**  
 FEASIBILITY STUDY OF A MICROSCALE PARTICULATE CLASSIFIER (MIPAC)  
 07/01/1999 - 10/20/1999      FY01: -\$2,516                      Total: \$44,984  
*Prin. Invest.:* D H PUI  
*Tech. Officer:* GRC/P S GREENBERG  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2435**                      **UNIV OF MINNESOTA**                      **6077**  
 FEASIBILITY STUDY OF A MICROSCALE PARTICULATE CLASSIFIER (MIPAC)  
 05/31/2000 - 09/30/2001      FY01: \$25,000                      Total: \$75,000  
*Prin. Invest.:* D H PUI  
*Tech. Officer:* GRC/P S GREENBERG  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2468**                      **UNIV OF MINNESOTA**                      **6078**  
 DEVELOPMENT OF A LOW-COST, SOFTWARE RECONFIGURABLE LABORATORY FOR FIRST COURSE ON ELECTRIC DRIVES AND POWER ELECTRONICS  
 06/26/2000 - 08/31/2003      FY01: \$0                      Total: \$10,000  
*Prin. Invest.:* P MOHAN  
*Tech. Officer:* GRC/B H KENNY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2600**                      **UNIV OF MINNESOTA**                      **6079**  
 NEW POLYMER ELECTROLYTE SYSTEMS  
 05/01/2001 - 05/31/2004      FY01: \$125,000                      Total: \$125,000  
*Prin. Invest.:* W H SMYRL  
*Tech. Officer:* GRC/NH HAGEDORN  
*CASE Category:* 12 - CHEMISTRY

**NAG 4 205**                      **UNIV OF MINNESOTA**                      **6080**  
 APPLICATION OF GAIN-SCHEDULED MULTIVARIABLE CONTROL TECHNIQUES TO THE F/A-18 SYSTEMS RESEARCH AIRCRAFT  
 04/06/2000 - 03/30/2001      FY01: \$0                      Total: \$45,000  
*Prin. Invest.:* G J BAIAS  
*Tech. Officer:* DFRC/M STEPHENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3735**                      **UNIV OF MINNESOTA**                      **6081**  
 STUDY FOR AN AURORAL MULTI-PROBE SATELLITE MISSION  
 03/03/1997 - 02/28/2002      FY01: \$0                      Total: \$200,000  
*Prin. Invest.:* D A CATTELL  
*Tech. Officer:* GSFC/R HOWARD  
*CASE Category:* 13 - PHYSICS

**NAG 5 3998**                      **UNIV OF MINNESOTA**                      **6082**  
 WEB EXPLORATION TOOLS FOR A FAST FEDERATED OPTICAL NETWORK  
 03/06/1997 - 02/28/2000      FY01: \$0                      Total: \$225,911  
*Prin. Invest.:* P M HUMPHREYS  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 4466**                      **UNIV OF MINNESOTA**                      **6083**  
 A THREE-DIMENSIONAL, TIME-DEPENDENT MODEL OF THE IONOSPHERE WITH THE IONOSPHERE  
 05/21/1997 - 04/30/2000      FY01: -\$15,448                      Total: \$208,215  
*Prin. Invest.:* D L LYSAK  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5113**                      **UNIV OF MINNESOTA**                      **6084**  
 THE PROPAGATION OF UH COSMIC RAY NUCLEI FUNDING FOR FIRST YEAR OF GRANT  
 04/09/1997 - 03/31/2000      FY01: \$0                      Total: \$37,280  
*Prin. Invest.:* C J WADDINGTON  
*Tech. Officer:* GSFC/H C NEDDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 5172**                      **UNIV OF MINNESOTA**                      **6085**  
 A VERY HIGH TIME RESOLUTION ROCKET INVESTIGATION OF IONOSPHERIC PLASMA PHYSICS ASSOCIATED WITH ATMOSPHERIC  
 03/30/1998 - 03/31/2002      FY01: \$0                      Total: \$557,127  
*Prin. Invest.:* J R WYGANT  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5182**                      **UNIV OF MINNESOTA**                      **6086**  
 TIME DEPENDENT SIMULATION OF NONLINEAR COSMIC-RAY ACCELERATION IN SHOCKS: A POWERFUL NEW APPROACH  
 03/26/1998 - 08/31/2001      FY01: \$0                      Total: \$132,290  
*Prin. Invest.:* T W JONES  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5214**                      **UNIV OF MINNESOTA**                      **6087**  
 PHASE A GRANT STUDY FOR IMEX PROJECT P I - PROF J WYGANT  
 10/08/1998 - 10/31/2003      FY01: \$147,585                      Total: \$557,085  
*Prin. Invest.:* J WYGANT  
*Tech. Officer:* GSFC/D PIERCE  
*CASE Category:* 13 - PHYSICS

**NAG 5 6191 UNIV OF MINNESOTA 6088**  
 TITLE: MORPHOLOGICAL ANALYSIS OF BRAIDED RIVERS U  
 08/13/1997 - 05/31/2001 FY01: \$0 Total: \$84,254  
*Prin. Invest.:* E FOUFOULA-GEORGI  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6797 UNIV OF MINNESOTA 6089**  
 RHEOLOGY OF DIABASE: IMPLICATIONS FOR TECTONICS O N VENUS AND  
 MARS  
 02/19/1998 - 03/31/2001 FY01: \$0 Total: \$263,596  
*Prin. Invest.:* D L KOHLSTEDT  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7094 UNIV OF MINNESOTA 6090**  
 RARE GAS AND NITROGEN STUDIES ON LUNAR, METEORITIC , AND SELEC-  
 TED TERRESTRIAL MATERIALS  
 05/20/1998 - 03/14/2002 FY01: \$180,000 Total: \$652,000  
*Prin. Invest.:* R O PEPIN  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7202 UNIV OF MINNESOTA 6091**  
 CONTINUING DATA ANALYSIS OF THE WAVES EXPERIMENT O N THE WIND  
 SPACECRAFT  
 04/22/1998 - 02/28/2001 FY01: \$0 Total: \$738,516  
*Prin. Invest.:* P KELLOGG  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7462 UNIV OF MINNESOTA 6092**  
 SOLAR WIND COUPLING TO THE MAGNETOSPHERE: ANALYSIS OF MULTI-  
 SPACECRAFT OBSERVATIONS IN SOLAR WIND  
 11/12/1998 - 12/31/2001 FY01: \$88,101 Total: \$260,721  
*Prin. Invest.:* N LIN  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7599 UNIV OF MINNESOTA 6093**  
 REGIONAL HYDROLOGIC SIMULATION MODEL TO STUDY AQUI FER-  
 ATMOSPHERE INTER- ACTIONS ON INTERANNUAL-DECA  
 07/21/1998 - 06/30/2002 FY01: \$0 Total: \$250,000  
*Prin. Invest.:* M PERSON  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7715 UNIV OF MINNESOTA 6094**  
 SPATIO-TEMPORAL ORGANIZATION AND SPACE-TIME DOWNSC ALING OF  
 TROPICAL RAINFALL  
 10/27/1998 - 10/31/2001 FY01: \$73,386 Total: \$227,819  
*Prin. Invest.:* E FOUFOULA-GEORGI  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7885 UNIV OF MINNESOTA 6095**  
 SUPPORT ANALYSIS OF DATA FROM THE UCLA MAGNETOMETE R ON  
 NASAPOLAR SPACECRAFT DURING THE  
 12/01/1998 - 12/31/2000 FY01: \$0 Total: \$65,000  
*Prin. Invest.:* C CATELL  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7906 UNIV OF MINNESOTA 6096**  
 INFRARED IMAGING PHOTOMETRY AND POLARIMETRY OF COMETS  
 12/10/1998 - 09/30/2002 FY01: \$0 Total: \$220,944  
*Prin. Invest.:* D J JONES  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7917 UNIV OF MINNESOTA 6097**  
 BIG FOOT--CHARACTERIZING LAND COVER, LAI AND NPP A T THE LAND-  
 SCAPE SCALE FOR EOS/MODIS VALIDATION  
 12/09/1998 - 12/31/2001 FY01: \$77,629 Total: \$229,481  
*Prin. Invest.:* P B REICH  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8073 UNIV OF MINNESOTA 6098**  
 GEOTAIL OBSERVATIONS OF EXB FLOWS AND ASSOCIATED L OW  
 FREQUENCY WAVES IN THE MAGNETOTAIL AND THEIR D  
 01/21/1999 - 01/31/2001 FY01: \$0 Total: \$84,000  
*Prin. Invest.:* C A CATELL  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8082 UNIV OF MINNESOTA 6099**  
 THEORETICAL STUDY OF ULF WAVES IN THE MAGNETOTAIL  
 01/22/1999 - 04/30/2002 FY01: \$101,768 Total: \$285,981  
*Prin. Invest.:* D L LYSAK  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8205 UNIV OF MINNESOTA 6100**  
 STUDY OF SUBSTORM ASSOCIATED ULF AND VLF WAVES IN THE MAGNE-  
 TOTAIL USING SPACECRAFT DATA  
 02/08/1999 - 02/14/2002 FY01: \$59,000 Total: \$167,693  
*Prin. Invest.:* D LIN  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8869 UNIV OF MINNESOTA 6101**  
 LABORATORY STUDIES OF THE KINETICS OF ATMOSPHERIC REACTIONS  
 OF HALOGENATED ALKOXY RADICALS  
 01/10/2000 - 12/31/2001 FY01: \$115,117 Total: \$224,975  
*Prin. Invest.:* R W CARR  
*Tech. Officer:* GSFC/M KURYLO  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9146 UNIV OF MINNESOTA 6102**  
 PHASE-A AND BRIDGE PHASE STUDY OF STEREO/WAVES ACCOMMODA-  
 TION  
 03/09/2000 - 12/31/2001 FY01: \$450,996 Total: \$582,150  
*Prin. Invest.:* K GOETZ  
*Tech. Officer:* GSFC/M KAISER  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

## MINNESOTA

**NAG 5 9221**                    **UNIV OF MINNESOTA**                    **6103**  
 QUASARS AS PROBES (LTSA 99)  
 03/14/2000 - 05/31/2002                    FY01: \$113,502                    Total: \$216,561  
*Prin. Invest.:* E SKILLMAN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9254**                    **UNIV OF MINNESOTA**                    **6104**  
 THEORETICAL STUDIES OF ALFVEN WAVE INTERACTION WITH THE IONOSPHERE  
 03/13/2000 - 04/30/2002                    FY01: \$79,632                    Total: \$152,132  
*Prin. Invest.:* R LYSAK  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9312**                    **UNIV OF MINNESOTA**                    **6105**  
 MAPPING & MODELING FOREST CHANGE IN A BOREAL LAND SCAPE  
 03/20/2000 - 04/30/2002                    FY01: \$120,154                    Total: \$199,934  
*Prin. Invest.:* J PASTOR  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9349**                    **UNIV OF MINNESOTA**                    **6106**  
 BALLOON BORNE OBSERVATIONS OF THE POLARIZATION ANI SOTROPY OF THE COSMIC MICROWAVE BACKGROUND RADIAT  
 03/28/2000 - 03/31/2003                    FY01: \$155,000                    Total: \$284,000  
*Prin. Invest.:* S HANANY  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9407**                    **UNIV OF MINNESOTA**                    **6107**  
 ENHANCING & ARCHIVING THE APS CATALOG OF THE POSS I  
 04/10/2000 - 04/30/2002                    FY01: \$115,900                    Total: \$233,400  
*Prin. Invest.:* R HUMPHREYS  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10178**                    **UNIV OF MINNESOTA**                    **6108**  
 CONTINUED ANALYSIS OF ISTP WIND/WAVES DATA  
 01/18/2001 - 02/28/2002                    FY01: \$151,619                    Total: \$151,619  
*Prin. Invest.:* K GOETZ  
*Tech. Officer:* GSFC/M L KAISER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10274**                    **UNIV OF MINNESOTA**                    **6109**  
 DATA ANALYSIS OF THE UNIV. MINNESOTA PORTION OF THE URAP EXPERIMENT ON THE ULYSSES SPACECRAFT  
 01/16/2001 - 12/31/2001                    FY01: \$90,024                    Total: \$90,024  
*Prin. Invest.:* P J KELLOGG  
*Tech. Officer:* GSFC/R J MACDOWALL  
*CASE Category:* 13 - PHYSICS

**NAG 5 10509**                    **UNIV OF MINNESOTA**                    **6110**  
 RHEOLOGY OF PLANETARY MATERIALS: IMPLICATIONS FOR TECTONICS OF TERRESTRIAL PLANETS  
 03/01/2001 - 03/31/2002                    FY01: \$84,900                    Total: \$84,900  
*Prin. Invest.:* D L KOHLSTEDT  
*Tech. Officer:* GSFC/D SENKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10569**                    **UNIV OF MINNESOTA**                    **6111**  
 SPATIAL VARIABILITY IN LAND-ATMOSPHERE INTERACTION COUPLING A NEW GENERATION LARGE-EDDY SIMULATION  
 03/12/2001 - 03/14/2002                    FY01: \$94,385                    Total: \$94,385  
*Prin. Invest.:* F PORTE-AGEL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10774**                    **UNIV OF MINNESOTA**                    **6112**  
 SELF-CONSISTENT EVOLUTION OF COSMIC-RAY SHOCKS (ATP 2000)  
 04/24/2001 - 04/30/2002                    FY01: \$61,343                    Total: \$61,343  
*Prin. Invest.:* T W JONES  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11124**                    **UNIV OF MINNESOTA**                    **6113**  
 DETERMINING THE IMPORTANCE OF ENERGY TRANSFER BETWEEN MAGNETOSPHERIC REGIONS VIA MHD WAVES USING  
 07/19/2001 - 07/14/2002                    FY01: \$185,000                    Total: \$185,000  
*Prin. Invest.:* C A CATTELL  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11130**                    **UNIV OF MINNESOTA**                    **6114**  
 LAND USE, CARBON AND WATER IN THE UPLANDS OF SOUTH EASTER NORTH AMERICA  
 08/02/2001 - 07/14/2002                    FY01: \$79,866                    Total: \$79,866  
*Prin. Invest.:* P BOLSTAD  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11262**                    **UNIV OF MINNESOTA**                    **6115**  
 DEVELOPMENT OF ENVIRONMENTAL INDICATORS FOR THE US GREAT LAKES USING REMOTE SENSING TECHNOLOGY  
 08/27/2001 - 08/31/2005                    FY01: \$75,000                    Total: \$75,000  
*Prin. Invest.:* G NIEMI  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1258**                    **UNIV OF MINNESOTA**                    **6116**  
 ATOMISTIC SIMULATIONS OF CADMIUM TELLURIDE  
 04/15/1996 - 04/14/2002                    FY01: \$0                    Total: \$352,000  
*Prin. Invest.:* J DERBY  
*Tech. Officer:* MSFC/P DOTY, MSFC/D NOEVER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1349**                    **UNIV OF MINNESOTA**                    **6117**  
 SELF-ASSEMBLY OF HEPATOCYTE SPHEROIDS IN MICRO- GRAVITY  
 06/19/1997 - 11/30/2001                    FY01: \$0                    Total: \$497,933  
*Prin. Invest.:* W S HU, L HANSEN, R KEMMEL  
*Tech. Officer:* MSFC/B GUYNES, MSFC/J MAYO  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1474**                    **UNIV OF MINNESOTA**                    **6118**  
 THEORETICAL ANALYSIS OF 3D TRANSIENT CONVECTION AND SEGREGATION  
 02/06/1998 - 01/31/2002                    FY01: \$128,250                    Total: \$487,750  
*Prin. Invest.:* J J DERBY, A J YECKEL  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 13 - PHYSICS

## MINNESOTA

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1519**                      **UNIV OF MINNESOTA**                      **6119**  
 SUBGRID SCALE PRECIPITATION VARIABILITY OVER THE MISSISSIPPI  
 RIVER BASIN  
 05/01/1998 - 04/30/2002      FY01: \$0                      Total: \$317,495  
*Prin. Invest.:* E FOUFOULA-GEORGIU  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 8 1676**                      **UNIV OF MINNESOTA**                      **6120**  
 FIRST PRINCIPLES CALCULATIONS OF MOLTEN II-IV COMPOUNDS AND  
 THEIR SOLIDIFICATION BEHAVIOR  
 05/01/2000 - 11/30/2003      FY01: \$104,500                      Total: \$149,500  
*Prin. Invest.:* J J DERBY, J R CHELIKOWSKY  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 9 1007**                      **UNIV OF MINNESOTA**                      **6121**  
 GENESIS DISCOVERY MISSION  
 05/06/1998 - 03/31/2002      FY01: \$83,697                      Total: \$309,322  
*Prin. Invest.:* R O PEPIN  
*Tech. Officer:* JSC/E K STANSBERRY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1218**                      **UNIV OF MINNESOTA**                      **6122**  
 LIQUID COOLING GARMENT FOR SPACE SUIT  
 03/03/2000 - 03/07/2002      FY01: \$184,134                      Total: \$373,786  
*Prin. Invest.:* V KOSCHEYER  
*Tech. Officer:* JSC/R TREVINO  
*CASE Category:* 42 - AERONAUTICAL ENGR

**NAG 9 1222**                      **UNIV OF MINNESOTA**                      **6123**  
 WORST CASE ANALYSIS OF THE X38 V201 FLIGHT CONTROL SYSTEM  
 03/24/2000 - 03/24/2001      FY01: \$0                      Total: \$40,918  
*Prin. Invest.:* G J BALAS  
*Tech. Officer:* JSC/S R MUNDY/M M HAMMERSCHMIDT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG13 99002**                      **UNIV OF MINNESOTA**                      **6124**  
 THE UPPER MIDWEST REGIONAL EARTH SCIENCE APPLICATION CENTER  
 02/03/1999 - 02/02/2002      FY01: \$0                      Total: \$1,500,000  
*Prin. Invest.:* M E BAUER  
*Tech. Officer:* SSC/C HILL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG13 99022**                      **UNIV OF MINNESOTA**                      **6125**  
 INTEGRATING SATELLITE REMOTE SENSING INTO FOREST INVENTORY  
 AND MANAGEMENT  
 08/13/1999 - 11/01/2001      FY01: \$183,892                      Total: \$288,917  
*Prin. Invest.:* M BAUER  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 5 32994**                      **UNIV OF MINNESOTA**                      **6126**  
 SCIENTIFIC AND TECHNICAL SUPPORT FOR THE UNIFIED RADIO AND  
 PLASMA WAVE INVESTIGATION  
 02/08/1996 - 12/31/2000      FY01: \$0                      Total: \$571,329  
*Prin. Invest.:* K GOETZ, P J KELLOGG  
*Tech. Officer:* GSFC/R J MACDOWELL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 1 311**                      **UNIV OF MINNESOTA**                      **6127**  
 IMPLEMENTATION OF IMPROVED NANOMETER AEROSOL SIZE ANALYZER  
 (NANO-ASA) FOR NEAR-FIELD FLT EXPERIMENTS  
 07/23/1998 - 01/12/2001      FY01: \$0                      Total: \$95,150  
*Prin. Invest.:* D PUI, B E ANDERSON, D B KITTELSON  
*Tech. Officer:* LARC/W L GROSE, LARC/R S ECKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 337**                      **UNIV OF MINNESOTA**                      **6128**  
 APPLICATION OF LINEAR PARAMETER-VARYING TECHNIQUES TO SAFETY-  
 CRITICAL AIRCRAFT FLIGHT SYSTEMS  
 07/20/1999 - 07/14/2002      FY01: \$202,522                      Total: \$502,114  
*Prin. Invest.:* G J BALAS  
*Tech. Officer:* LARC/C M BELCASTRO, LARC/N M BELCASTRO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 809**                      **UNIV OF MINNESOTA**                      **6129**  
 OPTIMAL TAKEOFF PROCEDURES FOR A CATEGORY A HELICOPTERS  
 07/08/1993 - 02/28/2001      FY01: \$0                      Total: \$361,468  
*Prin. Invest.:* Y ZHAO  
*Tech. Officer:* ARC/R T CHEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 990**                      **UNIV OF MINNESOTA**                      **6130**  
 AIRCRAFT SCHEDULING & CONFLICT RESOLUTION IN ATM  
 04/29/1997 - 02/28/2001      FY01: \$26,898                      Total: \$311,215  
*Prin. Invest.:* Y ZHAO  
*Tech. Officer:* ARC/T J DAVIS, ARC/J E ROBINSON, III  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1231**                      **UNIV OF MINNESOTA**                      **6131**  
 DISCOVERY OF CHANGES FROM THE GLOBAL CARBON CYCLE & CLIMATE  
 SYSTEM USING DATA MINING  
 03/28/2001 - 02/28/2002      FY01: \$94,000                      Total: \$94,000  
*Prin. Invest.:* V KUMAR  
*Tech. Officer:* ARC/C S POTTER, ARC/J COUGHLAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1240**                      **UNIV OF MINNESOTA**                      **6132**  
 INTELLIGENT SPECIFICATION-CENTERED TEST-CASE GENERATION  
 REVIEW IDENTIFIER  
 04/04/2001 - 02/28/2002      FY01: \$108,000                      Total: \$108,000  
*Prin. Invest.:* M HEIMDAHL  
*Tech. Officer:* ARC/R MORRIS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5340**                      **UNIV OF MINNESOTA**                      **6133**  
 LIFE IN EXTREME ENVIRONMENTS RESEARCH  
 08/04/1999 - 07/31/2000      FY01: \$0                      Total: \$30,000  
*Prin. Invest.:* W E SEYFRIED  
*Tech. Officer:* ARC/M T FLYNN, ARC/J HINES  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC 2 5393**                      **UNIV OF MINNESOTA**                      **6134**  
 ADVANCED MODELS FOR HIGH ENTHALPY FLOW SIMULATIONS  
 08/14/2000 - 09/14/2001      FY01: \$57,822                      Total: \$113,572  
*Prin. Invest.:* G V CANDLER  
*Tech. Officer:* ARC/J OLEJNICZAK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 652**                      **UNIV OF MINNESOTA**                      **6135**  
 MEASUREMENTS IN A TRANSITIONAL BOUNDARY LAYER UNDER LOW-PRESSURE TURBINE AIRFOIL CONDITIONS  
 11/10/1998 - 11/01/2002      FY01: \$91,359                      Total: \$182,306  
*Prin. Invest.:* T W SIMON  
*Tech. Officer:* GRC/D E ASHPIS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 754**                      **UNIV OF MINNESOTA**                      **6136**  
 DEVELOPMENT OF THE SPACE-TIME CE/SE METHOD FOR LARGE EDDY SIMULATIONS OF SUPERSONIC JET NOISE  
 12/29/1999 - 12/15/2000      FY01: \$0                      Total: \$50,000  
*Prin. Invest.:* G V CANDLER  
*Tech. Officer:* GRC/P JORGENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 811**                      **UNIV OF MINNESOTA**                      **6137**  
 ULTRA-COMPACT, SOFT-SWITCHING POWER SUPPLIES WITH HIGH EFFICIENCY FOR ELECTRIC PROPULSION  
 07/13/2000 - 06/14/2002      FY01: \$0                      Total: \$128,342  
*Prin. Invest.:* N MOHAN  
*Tech. Officer:* GRC/R M BUTTON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 857**                      **UNIV OF MINNESOTA**                      **6138**  
 ULTRA COMPACT SOFT SWITCHING POWER SUPPLIES WITH HIGH EFFICIENCY FOR ELECTRIC PROPULSION  
 01/26/2001 - 01/14/2003      FY01: \$138,000                      Total: \$138,000  
*Prin. Invest.:* N MOHAN  
*Tech. Officer:* GRC/T T PETERSON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 316**                      **UNIV OF MINNESOTA**                      **6139**  
 INSTALIZING MTPE DATA FOR LAND & ENVIRONMENTAL MANAGEMENT  
 04/11/1998 - 02/28/2003      FY01: \$199,000                      Total: \$727,000  
*Prin. Invest.:* T BURK  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 102**                      **UNIV OF MINNESOTA**                      **6140**  
 SPECTROSCOPIC VARIABILITY IN ETA CARINAE (STUDENT: NATHAN SMITH)  
 05/25/2000 - 06/30/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* K DAVIDSON  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 30080**                      **UNIV OF MINNESOTA**                      **6141**  
 THE HYDROLOGIC CYCLE OF THE LOWER KANSAS RIVER BASIN OF LAND-ATMOSPHERE FEEDBACKS AND POTENTIAL EFFECT  
 09/11/1997 - 08/31/2000      FY01: -\$2,720                      Total: \$19,280  
*Prin. Invest.:* M PERSON  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30109**                      **UNIV OF MINNESOTA**                      **6142**  
 FAST-GEOTAIL CORRELATIVE STUDIES OF MAGNETOSPHERE-IONOSPHERE COUPLING  
 05/11/1998 - 07/31/2001      FY01: -\$7,090                      Total: \$36,910  
*Prin. Invest.:* C CATTELL/SIGSBEE  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 30111**                      **UNIV OF MINNESOTA**                      **6143**  
 THE IMPACTS OF A SALT CEDAR (TAMARIX RAMOSISSIMA) INVASION ON COMMUNITIES, ECOSYSTEM PROCESSES  
 08/28/1998 - 08/31/2002      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* S HOBBIE  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30115**                      **UNIV OF MINNESOTA**                      **6144**  
 ECOSYSTEM RESPONSE TO CLIMATIC CHANGE: A COMPARATIVE STUDY OF FOREST-LAKE ECOSYSTEMS ON DIFFERENT SITES  
 10/01/1997 - 02/28/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* M DAVIS  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40040**                      **UNIV OF MINNESOTA**                      **6145**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 01/24/1997 - 02/28/2001      FY01: -\$244,731                      Total: \$1,172,919  
*Prin. Invest.:* W L GARRARD  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40086**                      **UNIV OF MINNESOTA**                      **6146**  
 MINNESOTA SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 02/16/2001 - 02/28/2002      FY01: \$726,131                      Total: \$726,131  
*Prin. Invest.:* W L GARRARD  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50091**                      **UNIV OF MINNESOTA**                      **6147**  
 STUDY OF LONG RANGE QUANTUM COHERENCE IN THE BOSE-LIQUID HELIUM FOUR.  
 09/05/1997 - 06/30/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* HALLEY  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50104**                      **UNIV OF MINNESOTA**                      **6148**  
 SPATIO-TEMPORAL ORGANIZATION OF REMOTELY SENSED RADAR DYNAMIC SCALING AND DEVELOPMENT OF FRAMEWORK FOR  
 09/06/1997 - 08/31/2000      FY01: -\$79                      Total: \$43,921  
*Prin. Invest.:* G POURFOULA  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50123**                      **UNIV OF MINNESOTA**                      **6149**  
 THE DYNAMICAL EVOLUTION OF YOUNG SUPERNOVA REMNANTS  
 09/10/1997 - 09/14/2000      FY01: -\$3,485                      Total: \$62,515  
*Prin. Invest.:* L RUDNICK  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 5 50186**                      **UNIV OF MINNESOTA**                      **6150**  
 THREE DIMENSIONAL SIMULATION OF KELVIN-HELMHOLTZ INSTABILITY WITH MAGNETIC SHEAR  
 05/27/1998 - 06/30/2000      FY01: \$0                      Total: \$38,500  
*Prin. Invest.:* R L LYSAK  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50250** **UNIV OF MINNESOTA** **6151**  
 SOUTHERN GALACTIC PLANE SURVEY AT 21 CM STUDENT: NAOMI M. MCCLURE-G  
 06/08/1999 - 09/30/2001 FY01: \$0 Total: \$44,000  
 Prin. Invest.: J DICKEY  
 Tech. Officer: GSFC/L SMITH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50251** **UNIV OF MINNESOTA** **6152**  
 STUDY OF SOLITARY WAVES & DOUBLE LAYERS IN HIGH ALTITUDE CUSP AND PLASMA SHEET BOUNDARY REGION  
 06/08/1999 - 06/30/2000 FY01: \$0 Total: \$22,000  
 Prin. Invest.: C CATTELL  
 Tech. Officer: GSFC/L SMITH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50293** **UNIV OF MINNESOTA** **6153**  
 A PARTICLE SIMULATION STUDY OF SOLITARY WAVES IN THE MAGNRTO-SPHERE/STUDENT: JAMES CRUMLEY  
 06/26/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
 Prin. Invest.: R LYSAK  
 Tech. Officer: GSFC/L SMITH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50312** **UNIV OF MINNESOTA** **6154**  
 THE ELECTRODYNAMICS OF THE INNER MAGNETOSPHERE DURING MAJOR GEOMAGNETIC STORMS/STUDENT: DOUGLASROW  
 08/07/2000 - 07/31/2001 FY01: \$0 Total: \$22,000  
 Prin. Invest.: J WYGANT  
 Tech. Officer: GSFC/J SHARBER  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50344** **UNIV OF MINNESOTA** **6155**  
 MAXIPOL: MEASURING THE POLARIZATION ANISOTROPY OF THE COSMIC MICROWAVE BACKGROUND/STUDENT: BRADLEY  
 05/14/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
 Prin. Invest.: S HANAY  
 Tech. Officer: GSFC/K BLANDING  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50346** **UNIV OF MINNESOTA** **6156**  
 A MULTIWAVELENGTH STUDY OF THE INTERSTELLAR MEDIUM OF LOW-METALLICITY/STUDENT: JOHN CANNON  
 05/07/2001 - 08/30/2002 FY01: \$22,000 Total: \$22,000  
 Prin. Invest.: E SKILLMAN  
 Tech. Officer: GSFC/K BLANDING  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NSG 5088** **UNIV OF MINNESOTA** **6157**  
 RESEARCH OF MAGNETOSPHERIC PHYSICS PHENOMENA USING SOUND ROCKETS  
 11/01/1975 - 06/30/2001 FY01: \$0 Total: \$2,615,463  
 Prin. Invest.: J R WINCKLER  
 Tech. Officer: GSFC/L J EARLY, GSFC/R H PLESS  
 CASE Category: 13 - PHYSICS

**NAG 1 01054** **WINONA STATE UNIV** **6158**  
 ACCELERATED TESTING OF POLYMERIC COMPOSITES: CORRELATION OF SCALE-UP EFFECTS ON VISCOELASTIC  
 03/30/2001 - 04/30/2003 FY01: \$60,864 Total: \$60,864  
 Prin. Invest.: B ABDEL-MAGID  
 Tech. Officer: LARC/T S GATES  
 CASE Category: 47 - METAL & MATERIALS ENGR

## MISSISSIPPI

**NAG 9 1135** **ALCORN STATE UNIV** **6159**  
 INTEGRATED POWER SYS RELIABILITY CURRICULUM ENHANCEMENT AND LAB DEVELOP PROGRAM  
 08/17/1999 - 08/16/2000 FY01: -\$1,459 Total: \$98,541  
 Prin. Invest.: N W MOSES  
 Tech. Officer: JSC/W C ROEH, JSC/L M ARMENDARIZ  
 CASE Category: 45 - ELECTRICAL ENGR

**NAG13 98005** **ALCORN STATE UNIV** **6160**  
 THERMAL-HYDRAULIC MATERIAL PRE-CONSTRUCTION ANALYSIS OF THE NEW SSME TEST DIFFUSER  
 03/31/1998 - 09/30/2001 FY01: \$0 Total: \$264,392  
 Prin. Invest.: S ACEIL  
 Tech. Officer: JSC/B ST. CYR  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG13 98010** **ALCORN STATE UNIV** **6161**  
 STRENGTHENING PRE-SERVICE AND IN-SERVICE TEACHER EDUCATION IN MATHEMATICS, SCIENCE & TECHNOLOGY  
 06/12/1998 - 06/10/2001 FY01: \$0 Total: \$575,280  
 Prin. Invest.: D ADDIE, J RUSSELL, W HUMPHRY  
 Tech. Officer: JSC/N SULLIVAN  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1485** **JACKSON STATE UNIV** **6162**  
 NETWORK VISUALIZATION IN THREE-DIMENSIONS (NETVIZ)  
 05/22/2001 - 05/14/2002 FY01: \$35,000 Total: \$35,000  
 Prin. Invest.: Q MALLUHI  
 Tech. Officer: ARC/B A BIEGEL  
 CASE Category: 22 - COMPUTER SCIENCE

**NAG 3 2277** **JACKSON STATE UNIV** **6163**  
 INTELLIGENT INTERFACE TO THE NUMERICAL SIMULATORS (IINS) OF THE AEROSPACE TRANSPORTATION ENGINES.  
 07/22/1999 - 07/31/2002 FY01: \$35,815 Total: \$105,847  
 Prin. Invest.: D MITRA  
 Tech. Officer: GRC/D F NOGA  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG 5 6209** **JACKSON STATE UNIV** **6164**  
 BOUNDARY LAYER PROCESSES AFFECTING TROPICAL CYCLONES  
 08/06/1997 - 07/31/2001 FY01: \$0 Total: \$300,000  
 Prin. Invest.: P FITZPATRICK  
 Tech. Officer: GSFC/R ADLER  
 CASE Category: 31 - ATMOSPHERIC SCIENCE

**NAG13 98007** **JACKSON STATE UNIV** **6165**  
 PACE/MSET SAME  
 06/10/1998 - 08/30/2001 FY01: \$0 Total: \$299,910  
 Prin. Invest.: A K MOHAMED  
 Tech. Officer: SSC/A JOYCE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG13 99004** **JACKSON STATE UNIV** **6166**  
 MASTAP PROJECT: A MODEL FOR IMPROVING THE PRE-SERVICE TRAINING OF MIDDLE SCHOOL MATH TEACHERS  
 02/23/1999 - 02/22/2002 FY01: \$199,600 Total: \$598,800  
 Prin. Invest.: H GORE  
 Tech. Officer: SSC/A JOYCE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER



**NAG13 99012 JACKSON STATE UNIV 6167**  
 STUDIES OF OCEAN-ATMOSPHERIC INTERACTIONS AND ASSOCIATED  
 TROPICAL CYCLONES/HURRICANES OF GULF ME  
 03/17/1999 - 03/16/2002 FY01: \$100,000 Total: \$300,000  
*Prin. Invest.:* R REDDY  
*Tech. Officer:* JSC/R MILLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG13 99013 JACKSON STATE UNIV 6168**  
 SATELLITE ANALYSIS OF GULF COAST ATMOSPHERE MOSITURE AND  
 TROPOSHERIC AEROSOLS  
 03/24/1999 - 03/23/2002 FY01: \$99,992 Total: \$299,988  
*Prin. Invest.:* P CROFT  
*Tech. Officer:* JSC/J JENNER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5398 JACKSON STATE UNIV 6169**  
 COMPUTATIONAL STUDY ON EVOLUTION OF LIFE: INVESTI GATION OF  
 NON-CLASICAL BASE 5-AZACYTOSINE & ITS D  
 09/21/2000 - 09/30/2001 FY01: \$0 Total: \$14,000  
*Prin. Invest.:* J LESZCZYNSKI  
*Tech. Officer:* ARC/A POHORILLE, ARC/M FONDA  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 1990 MISSISSIPPI STATE UNIV 6170**  
 GRID GENERATION AND NUMERICAL SOLUTION OF THE NAVIER-STOKES  
 EQUATIONS OF UNSTRUCTUREDGRIDS  
 01/12/1998 - 01/11/2000 FY01: -\$89 Total: \$249,912  
*Prin. Invest.:* D L WITFIELD, D L MARCUM  
*Tech. Officer:* LARC/J L THOMAS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2038 MISSISSIPPI STATE UNIV 6171**  
 INVESTIGATION OF ROBUST DESIGN CONCEPTS FOR COMPO- SITE  
 ROTORCRAFT FUSELAGE STRUCTURES  
 03/26/1998 - 05/31/2001 FY01: \$0 Total: \$135,283  
*Prin. Invest.:* M RAIS-BHANI  
*Tech. Officer:* LARC/D J BAKER, LARC/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2295 MISSISSIPPI STATE UNIV 6172**  
 SITUATION AWARENESS & LEVEL OF AUTOMATION: EMPIRICAL  
 ASSESSMENT OF LEELS OF AUTOMATION IN THE  
 05/11/2000 - 05/10/2001 FY01: -\$5,999 Total: \$54,001  
*Prin. Invest.:* D B KABER  
*Tech. Officer:* LARC/M R ENDSLEY  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 2 1232 MISSISSIPPI STATE UNIV 6173**  
 PHYSICS-BASED MANEUVERING PREDICTION OF TILT ROTOR AIRCRAFT  
 06/24/1998 - 07/31/2001 FY01: \$216,338 Total: \$870,726  
*Prin. Invest.:* D L WHITFIELD, L K TAYLOR, W R BRILEY  
*Tech. Officer:* ARC/R C STRAWN, ARC/W F FEIREISEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 1699 MISSISSIPPI STATE UNIV 6174**  
 COMPUTATIONAL FLUID DYNAMICS OF ROTATING MACHINERY USING  
 TRUBO  
 01/23/1995 - 03/30/2001 FY01: \$50,000 Total: \$629,999  
*Prin. Invest.:* J M JANUS, D WHITFIELD, T M SWAFFORD  
*Tech. Officer:* GRC/D L HUFF  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 1712 MISSISSIPPI STATE UNIV 6175**  
 COMPUTATIONS OF ROTOR-STATOR INTERACTIONS USING TH E  
 NAVIEER-STOKES EQUATION  
 02/21/1995 - 02/06/2000 FY01: \$0 Total: \$480,000  
*Prin. Invest.:* D L WHITFIELD  
*Tech. Officer:* GRC/E R MCFARLAND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2176 MISSISSIPPI STATE UNIV 6176**  
 DEVELOPMENT OF A PARALLEL TURBOMACHINERY FLOW SOLV ER  
 06/22/1998 - 01/31/2002 FY01: \$35,000 Total: \$225,000  
*Prin. Invest.:* W R BRILEY  
*Tech. Officer:* GRC/E R MCFARLAND  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2235 MISSISSIPPI STATE UNIV 6177**  
 INTEGRATED GEOMETRY/GRID/SIMULATION SOFTWARE FOR S INGLE AND  
 MULTI-ELEENT AIRFOILS WITH ICE ACCRETIO  
 02/22/1999 - 03/31/2001 FY01: \$80,000 Total: \$210,313  
*Prin. Invest.:* B K SONI  
*Tech. Officer:* GRC/Y K CHOO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2562 MISSISSIPPI STATE UNIV 6178**  
 ICEWING - A MESH GENERATION SYSTEM FOR COMPLEX THR EE-DIMEN-  
 SIONAL ICED WING CONFIGURATIONS  
 03/05/2001 - 02/04/2002 FY01: \$61,087 Total: \$61,087  
*Prin. Invest.:* D THOMPSON  
*Tech. Officer:* GRC/Y K CHOO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 11127 MISSISSIPPI STATE UNIV 6179**  
 DELTA AREA SCIENCE & TECHNOLOGY ACADEMY  
 07/26/2001 - 07/14/2002 FY01: \$70,000 Total: \$70,000  
*Prin. Invest.:* B JOINER  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1566 MISSISSIPPI STATE UNIV 6180**  
 NOVEL APPROACHES REGARDING PROTEIN SOLUBILITY  
 02/23/1999 - 11/30/2002 FY01: \$103,550 Total: \$346,550  
*Prin. Invest.:* W W WILSON, A ASONOV  
*Tech. Officer:* MSFC/B V GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1837 MISSISSIPPI STATE UNIV 6181**  
 HIGH THROUGHTPUT SCREEN OF PROTEIN-PROTEIN INTER- ACTIONS BY  
 MICROCHIP SPACE  
 08/22/2001 - 11/30/2004 FY01: \$32,000 Total: \$32,000  
*Prin. Invest.:* W W WILSON  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

## MISSISSIPPI

## NASA'S UNIVERSITY PROGRAM

**NAG13 99018**                    **MISSISSIPPI STATE UNIV**                    **6182**  
 LEAF AREA AND VOLUME ESTIMATES IN LOBLOLLY PINE FOREST DERIVED  
 FROM AERIAL IMAGING LIDAR  
 07/30/1999 – 11/01/2001            FY01: \$65,000                    Total: \$247,132  
*Prin. Invest.:* S ROBERTS  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAS 3 00181**                    **MISSISSIPPI STATE UNIV**                    **6183**  
 MODIFICATION OF TURBO SOFTWARE  
 09/29/2000 – 10/01/2005            FY01: \$200,000                    Total: \$325,000  
*Prin. Invest.:* J CHEN, D L WHITEFIELD, R BRILEY  
*Tech. Officer:* GRC/E MCFARLAND, GRC/D VAN ZANTE  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAS13 98033**                    **MISSISSIPPI STATE UNIV**                    **6184**  
 RESEARCH & DEVELOPMENT NASA AND RESIDENT AGENCIES  
 03/23/1998 – 03/22/2003            FY01: \$4,699,265                    Total: \$14,721,852  
*Prin. Invest.:* L RITCHIE, BULLINGTON, D WIESENBURG  
*Tech. Officer:* SSC/D POWE  
*CASE Category:* 33 – OCEANOGRAPHY

**NCC13 99001**                    **MISSISSIPPI STATE UNIV**                    **6185**  
 ROLE OF LAND-GRANT UNIV IN APPLICATIONS OF REMOTE SENSING  
 02/19/1999 – 03/21/2004            FY01: \$2,500,000                    Total: \$12,500,000  
*Prin. Invest.:* D SHAW, N M COX  
*Tech. Officer:* SSC/H CARR  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NGT13 52741**                    **MISSISSIPPI STATE UNIV**                    **6186**  
 ENHANCEMENT OF CRYOGENIC FLUID FLOW SIMULATION CAPABILITES &  
 CONTROLLER DESIGN TEST FACILITIES  
 05/20/2000 – 07/31/2001            FY01: \$0                            Total: \$0  
*Prin. Invest.:* R FOLLET  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 5 9197**                    **MISSISSIPPI VALLEY STATE UNIV.**                    **6187**  
 MISSISSIPPI VALLEY STATE UNIV PACE PROGRAM  
 03/09/2000 – 02/28/2002            FY01: \$99,921                    Total: \$199,659  
*Prin. Invest.:* C BLAND  
*Tech. Officer:* GSFC/M STOUTSENBERGER  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 9535**                    **MISSISSIPPI VALLEY STATE UNIV.**                    **6188**  
 INTEGRATING REMOTE SENSING/GIS TECHNOLOGY & RSCH INTO MSET  
 EDUCATION  
 05/01/2000 – 05/14/2002            FY01: \$0                            Total: \$200,000  
*Prin. Invest.:* C BLAND  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG13 51**                    **MISSISSIPPI VALLEY STATE UNIV.**                    **6189**  
 INCORPORATING INFORMATION TECHNOLOGY TO ENTERPRISE ZONES  
 AND EMPOWERMENT COMMUNITY SCHOOL SYSTEMS  
 06/30/1997 – 03/31/2000            FY01: -\$25,890                    Total: \$355,128  
*Prin. Invest.:* S J WHITE  
*Tech. Officer:* JSC/N SULLIVAN  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG13 98004**                    **MISSISSIPPI VALLEY STATE UNIV.**                    **6190**  
 RESPONSE OF A LEAF AND CANOPY SPECTRAL REFLECTANCE TO  
 DROUGHT STRESS IN SOYBEANS  
 03/31/1998 – 09/30/2001            FY01: \$0                            Total: \$299,352  
*Prin. Invest.:* R BAHADUR  
*Tech. Officer:* JSC/G CARTER  
*CASE Category:* 55 – AGRICULTURE

**NAG13 99003**                    **MISSISSIPPI VALLEY STATE UNIV.**                    **6191**  
 IMPROVING TEACHERS AND STUDENTS ACHIEVEMENT IN MATHEMATICS  
 AND SCIENCE  
 02/17/1999 – 02/17/2002            FY01: \$197,853                    Total: \$591,503  
*Prin. Invest.:* S J WHITE  
*Tech. Officer:* SSC/N S SULLIVAN  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG13 99026**                    **MISSISSIPPI VALLEY STATE UNIV.**                    **6192**  
 RESPONSE OF SOYBEAN LEAF & CANOPY SPECTRAL REFLECT ANCE TO  
 CHELATE ASSISTED LEAD JUTPEXTRACTOPM  
 09/01/1999 – 09/27/2002            FY01: \$77,299                    Total: \$199,920  
*Prin. Invest.:* R BAHDUR  
*Tech. Officer:* JSC/R TRAVIS  
*CASE Category:* 55 – AGRICULTURE

**NAG 5 7671**                    **UNIV OF MISSISSIPPI – MEDICAL CENTER**                    **6193**  
 FUNDING FOR 'THE UTILITY OF LOW COST THERMAL SENSORS IN  
 ARCHAEOLOGICALRESEARCH' (SENH98-0125)  
 09/01/1998 – 02/28/2001            FY01: \$0                            Total: \$100,000  
*Prin. Invest.:* J K JOHNSON  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 – GEOLOGICALSCIENCE

**NAG13 00036**                    **UNIV OF MISSISSIPPI – UNIV**                    **6194**  
 THE UNIV OF MS REMOTE SENSING AND SPACE LAW CENTER OF EXCEL-  
 LENCE  
 04/06/2000 – 04/05/2002            FY01: \$0                            Total: \$500,000  
*Prin. Invest.:* J GABRYNOWICZ, R MCLAUGHLIN, R RYCHLAK  
*Tech. Officer:* SSC/M MICK  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG13 00037**                    **UNIV OF MISSISSIPPI – UNIV**                    **6195**  
 THE UNIV OF MISSISSIPPI GEOINFORMATICS CENTER  
 05/08/2000 – 05/07/2002            FY01: \$0                            Total: \$1,826,459  
*Prin. Invest.:* G EAASSON  
*Tech. Officer:* SSC/N SOVIK  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG13 01004**                    **UNIV OF MISSISSIPPI – UNIV**                    **6196**  
 NEW GRANT AWARD GEOSPATIAL INFORMATION TECHNOLOGY EDUCA-  
 TION:  
 07/12/2001 – 07/02/2002            FY01: \$1,000,000                    Total: \$1,000,000  
*Prin. Invest.:* J JOHNSON, P LAWHEAD  
*Tech. Officer:* SSC/D P POWE  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NCC 5 405**                    **UNIV OF MISSISSIPPI – UNIV**                    **6197**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/17/1999 – 12/31/2001            FY01: \$0                            Total: \$450,000  
*Prin. Invest.:* P SUKANEK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

NASA'S UNIVERSITY PROGRAM

MISSOURI

**NCC 5 574 UNIV OF MISSISSIPPI - UNIV 6198**  
 MISSISSIPPI NASA EPSCOR PROGRAM  
 09/26/2001 - 07/31/2004 FY01: \$258,000 Total: \$258,000  
*Prin. Invest.:* P SUKANEK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40032 UNIV OF MISSISSIPPI - UNIV 6199**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 02/13/1997 - 02/28/2001 FY01: -\$85,294 Total: \$938,456  
*Prin. Invest.:* P R SUKANEK  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40098 UNIV OF MISSISSIPPI - UNIV 6200**  
 MISSISSIPPI SPACE GRANT COLLEGE AND FELLOWSHIP PRO GRAM  
 02/28/2001 - 02/28/2002 FY01: \$464,544 Total: \$464,544  
*Prin. Invest.:* P SUKANEK  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4570 UNIV OF SOUTHERN MISSISSIPPI 6201**  
 OPTICAL ASSESSMENT OF BIOGEOCHEMICAL PROPERTIES IN APPLICA  
 TION TO MULTI-SPECTRAL AND HIGH RESOLUTION  
 07/23/1997 - 10/14/2000 FY01: \$0 Total: \$260,988  
*Prin. Invest.:* S LOHRENZ  
*Tech. Officer:* GSFC/J A CAMPBELL  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 9770 UNIV OF SOUTHERN MISSISSIPPI 6202**  
 OPTICAL ASSESSMENT OF BIOGEOCHEMICAL PROPERTIES IN COASTAL  
 WATERS WITH APPLICATION TO MULTI-SPECTRAL  
 07/12/2000 - 01/31/2002 FY01: \$35,716 Total: \$58,216  
*Prin. Invest.:* S E LOHRENZ  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 10668 UNIV OF SOUTHERN MISSISSIPPI 6203**  
 EXPLORING THE RELATIONSHIP BETWEEN SIZE AND CATALY TIC  
 CAPACITY OF RNA CATALYSTS  
 03/21/2001 - 03/31/2002 FY01: \$167,200 Total: \$167,200  
*Prin. Invest.:* F HUANG  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1466 UNIV OF SOUTHERN MISSISSIPPI 6204**  
 FRONTAL POLYMERIZATION IN MICROGRAVITY  
 02/10/1998 - 12/31/2002 FY01: \$281,770 Total: \$735,520  
*Prin. Invest.:* J A POJMAN  
*Tech. Officer:* MSFC/W S SPEARMAN  
*CASE Category:* 13 - PHYSICS

**NAG 8 1684 UNIV OF SOUTHERN MISSISSIPPI 6205**  
 "PHASE SEPARATION AND SELF-ASSEMBLY OF LIQUID CRYSTALS AND  
 POLYMER DISPERSIONS"  
 06/05/2000 - 11/30/2003 FY01: \$85,500 Total: \$125,500  
*Prin. Invest.:* J WHITEHEAD  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG13 01005 UNIV OF SOUTHERN MISSISSIPPI 6206**  
 A PROPOSAL TO DEVELOP AND OPERATE A COASTAL ZONE APPLICA  
 TIONS CENTER/ADVANCED GIS/REMOTE SENSING  
 07/30/2001 - 06/30/2003 FY01: \$2,993,400 Total: \$2,993,400  
*Prin. Invest.:* W HAWKINS  
*Tech. Officer:* SSC/M THOMAS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

MISSOURI

**NAG 1 2253 SAINT LOUIS UNIV 6207**  
 DEV OF A LOW REYNOLDS NUMBER TRANSITION-SENSITIZED TURBU  
 LENCE MODEL  
 11/23/1999 - 12/31/2000 FY01: \$0 Total: \$35,000  
*Prin. Invest.:* W D THACKER  
*Tech. Officer:* LARC/J B GATSKI  
*CASE Category:* 41 - AERONAUTICAL ENGRN

**NAG 3 2469 SAINT LOUIS UNIV 6208**  
 INVESTIGATION OF THERMAL PROCESSING ON THE PEOPERT IES OF  
 PS304, A SOLID LUBRICANT COATING  
 06/27/2000 - 06/14/2001 FY01: \$0 Total: \$32,201  
*Prin. Invest.:* P A BENOY  
*Tech. Officer:* GRC/C DELLACORTE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2642 SAINT LOUIS UNIV 6209**  
 INVESTIGATION OF THERMAL PROCESSING ON THE PROPERT IES OF  
 PS305, A SOLID LUBRICANT COATING  
 08/02/2001 - 12/16/2001 FY01: \$31,007 Total: \$31,007  
*Prin. Invest.:* P A BENOY  
*Tech. Officer:* GRC/C DELLACORTE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 1 01003 SAINT LOUIS UNIV 6210**  
 FORMULATION OF A TRANSITION-SENSITIZED TURBULENCE MODEL  
 12/19/2000 - 12/31/2001 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* W D THACKER  
*Tech. Officer:* LARC/T B GATSKI  
*CASE Category:* 41 - AERONAUTICAL ENGRN

**NGT 5 50201 SAINT LOUIS UNIV 6211**  
 TRANSCRIPTIONAL REGULATION OF DIFFERENTIATING OSTEOBAST  
 07/02/1998 - 06/30/2000 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* N C PARTRIDGE  
*Tech. Officer:* HQ/L SMITH  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 01037 UNIV OF MISSOURI - COLUMBIA 6212**  
 DESIGN & EXPERIMENTAL VERIFICATION OF DEPLOYABLE/ INFLATABLE  
 ULTRA-LIGHTWEIGHT STRUCTURES  
 06/08/2001 - 05/31/2004 FY01: \$79,054 Total: \$79,054  
*Prin. Invest.:* P PAI  
*Tech. Officer:* LARC/W K BELVIN  
*CASE Category:* 49 - ENGINEERING, OTHER

## MISSOURI

## NASA'S UNIVERSITY PROGRAM

**NAG 2 1372**            **UNIV OF MISSOURI - COLUMBIA**            **6213**  
 SIGNALING OF MUSCLE ATROPHY WITH UNLOADING  
 08/17/1999 - 08/31/2002    FY01: \$150,219            Total: \$365,206  
*Prin. Invest.:* F W BOOTH  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 3900**            **UNIV OF MISSOURI - COLUMBIA**            **6214**  
 INTERCOMPARISON, VISUALIZATION AND ANALYSIS TESTBE ASSIMILATED  
 DATA SETS AND SATELLITE DATA.  
 03/03/1997 - 02/28/2001    FY01: \$0            Total: \$405,838  
*Prin. Invest.:* K PALANIAPPAN  
*Tech. Officer:* GSFC/A NEGRI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4607**            **UNIV OF MISSOURI - COLUMBIA**            **6215**  
 VESTIBULAR ONTOGENY, ADAPTATION, AND THE EFFECTS O LOADING IN  
 THE RAT  
 05/19/1997 - 11/14/2001    FY01: \$0            Total: \$296,020  
*Prin. Invest.:* T A JONES  
*Tech. Officer:* GSFC/M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 6772**            **UNIV OF MISSOURI - COLUMBIA**            **6216**  
 INVESTIGATION OF A LARGE, COMPLETE SAMPLE OF GALAX Y GROUPS  
 USING THE ROSROSAT ALL-SKY SURVEY  
 01/22/1998 - 01/31/2001    FY01: \$0            Total: \$90,767  
*Prin. Invest.:* J BURNS  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6837**            **UNIV OF MISSOURI - COLUMBIA**            **6217**  
 GREENLAND ICE SHEET ELEVATION CHANGE STUDIES USING RADAR  
 ALTIMETRY WITH IMPROVED ORBIT ERROR ANALYS  
 01/08/1998 - 12/31/2000    FY01: \$0            Total: \$150,214  
*Prin. Invest.:* D KLUEVER  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 8344**            **UNIV OF MISSOURI - COLUMBIA**            **6218**  
 BAYESIAN HIERARCHICAL AIR-SEA INTERACTION MODELING : DEVELOP-  
 MENTAND APPLICATION IN THE LABR  
 04/13/1999 - 05/31/2002    FY01: \$16,231            Total: \$51,413  
*Prin. Invest.:* C K WIKLE  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8557**            **UNIV OF MISSOURI - COLUMBIA**            **6219**  
 ELEVATION CHANGE OF THE SOUTHERN GREENLAND ICE SHEET: INTER-  
 PRETATION  
 06/18/1999 - 12/31/2000    FY01: \$0            Total: \$59,378  
*Prin. Invest.:* C DAVIS, NONE  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9145**            **UNIV OF MISSOURI - COLUMBIA**            **6220**  
 ANDEAN MOUNTAIN BUILDING: AN INTEGRATED TOPO GRAPH GPS, SEIS-  
 MOLOGICAL AND NUMERICAL STUDY  
 03/07/2000 - 03/14/2002    FY01: \$62,500            Total: \$100,000  
*Prin. Invest.:* M LIU  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9555**            **UNIV OF MISSOURI - COLUMBIA**            **6221**  
 EVOLUTION OF THE RIBOZYME RNASE P RNA BY TRANSACTI VATION  
 05/04/2000 - 04/30/2002    FY01: \$120,000            Total: \$233,040  
*Prin. Invest.:* F SCHMIDT  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10720**            **UNIV OF MISSOURI - COLUMBIA**            **6222**  
 MOBILE WIRELESS ACCESS TO LOW RESOLUTION PICTURE TAKING (LRPT)  
 NOAA WEATHER IMAGES  
 05/03/2001 - 05/14/2002    FY01: \$50,000            Total: \$50,000  
*Prin. Invest.:* C CHEN  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11081**            **UNIV OF MISSOURI - COLUMBIA**            **6223**  
 20-YEAR ELEVATION CHANGE OF THE SOUTHERN GREENLAND ICE SHEET  
 FROM SATELLITE RADAR ALTIMETRY  
 07/10/2001 - 06/30/2002    FY01: \$48,977            Total: \$48,977  
*Prin. Invest.:* C DAVIS  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1741**            **UNIV OF MISSOURI - COLUMBIA**            **6224**  
 TRAJECTORY OPTIMIZATION PROGRAM FOR NEAR-EARTH LOW-THRUST  
 SPACECRAFT  
 11/01/2000 - 08/31/2001    FY01: \$55,933            Total: \$55,933  
*Prin. Invest.:* C A KLUEVER  
*Tech. Officer:* MSFC/J M HANSON, MSFC/G A DUKEMAN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1210**            **UNIV OF MISSOURI - COLUMBIA**            **6225**  
 DESIGN & THERMAL CONTROL OF ADVANCED SPACE SUITS  
 03/24/2000 - 03/31/2003    FY01: \$15,000            Total: \$89,999  
*Prin. Invest.:* S NAIR, J B MILES  
*Tech. Officer:* JSC/G A THOMAS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1230**            **UNIV OF MISSOURI - COLUMBIA**            **6226**  
 CONSTRUCT THE LIFE SCIENCES CENTER  
 09/29/2000 - 08/31/2005    FY01: \$14,967,000            Total: \$27,767,000  
*Prin. Invest.:* G M CHIPPENDALE  
*Tech. Officer:* JSC/R P KEHOE, JSC/P CAMPBELL  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG13 00006**            **UNIV OF MISSOURI - COLUMBIA**            **6227**  
 CENTER FOR LOCAL AND REGIONAL GOVERNMENT APPLICATI ONS  
 (CLARA)  
 03/13/2000 - 05/31/2002    FY01: \$114,999            Total: \$324,999  
*Prin. Invest.:* D D HIPPLE  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

MISSOURI

**NAG13 99014**                    **UNIV OF MISSOURI - COLUMBIA**                    **6228**  
 INST FOR THE COMMERCIAL DEVELOPMENT OF REMOTE SENSING  
 TECHNOLOGY (ICREST)  
 04/19/1999 - 12/31/2001                    FY01: \$0                    Total: \$3,590,000  
*Prin. Invest.:* D BLANCHARD  
*Tech. Officer:* JSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 1 01017**                    **UNIV OF MISSOURI - COLUMBIA**                    **6229**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) (PREVIOUS  
 GRANT NO. NGT-1-52239)  
 05/25/2001 - 06/30/2003                    FY01: \$12,000                    Total: \$12,000  
*Prin. Invest.:* O VASILYEV  
*Tech. Officer:* LARC/T B GATSKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52239**                    **UNIV OF MISSOURI - COLUMBIA**                    **6230**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/26/2000 - 06/30/2001                    FY01: \$12,000                    Total: \$22,000  
*Prin. Invest.:* O VASILYEV  
*Tech. Officer:* LARC/T B GATSKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50205**                    **UNIV OF MISSOURI - COLUMBIA**                    **6231**  
 VASCULAR CONTROL OF SKELETAL MUSCLE BLOOD FLOW AFT ER SIMU-  
 LATEDMICROGRAVITY (GSRP STUDENT:  
 07/09/1998 - 06/30/2001                    FY01: \$0                    Total: \$44,000  
*Prin. Invest.:* M LAUGHLIN  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52850**                    **UNIV OF MISSOURI - COLUMBIA**                    **6232**  
 ROBUST GUIDANCE SCHEMES FOR LOW THRUST EARTH ORBIT  
 07/27/1998 - 08/14/2000                    FY01: \$0                    Total: \$44,000  
*Prin. Invest.:* C A KLUEVER  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT13 52747**                    **UNIV OF MISSOURI - COLUMBIA**                    **6233**  
 REMOTE SENSING INFO. PRODUCTS FROM HIGH RESOLUTION SATELLITE  
 IMAGERY FOR LOCAL GOV. APP'S  
 06/08/2001 - 06/30/2004                    FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* A K SHACKLEFORD  
*Tech. Officer:* SSC/B DAVIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01050**                    **UNIV OF MISSOURI - ROLLA**                    **6234**  
 MODELING OF INTERACTION BETW PERMEABILITY & DAMAGE IN PMC  
 LAMINATES FOR THE NASA RLV  
 04/05/2001 - 04/04/2004                    FY01: \$81,286                    Total: \$81,286  
*Prin. Invest.:* S ROY  
*Tech. Officer:* LARC/T S GATES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 01122**                    **UNIV OF MISSOURI - ROLLA**                    **6235**  
 HIGH-SPEED PROPULSION SYSTEM MODELING AND ANALYSIS  
 08/29/2001 - 08/28/2004                    FY01: \$60,001                    Total: \$60,001  
*Prin. Invest.:* D W RIGGINS  
*Tech. Officer:* LARC/C R MCCLINTON, LARC/S H STACK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2185**                    **UNIV OF MISSOURI - ROLLA**                    **6236**  
 ADVANCED EXTRACTIVE AEROSOL SAMPLING  
 07/27/1998 - 09/30/2000                    FY01: \$0                    Total: \$303,149  
*Prin. Invest.:* P D WHITEFIELD, D E HAGEN  
*Tech. Officer:* GRC/C WEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2340**                    **UNIV OF MISSOURI - ROLLA**                    **6237**  
 STUDIES IN ACOUSTIC PROPAGATION AND RADIATION STUDIES IN  
 ACOUSTIC PROPAGATION AND RADIATION  
 02/25/2000 - 01/31/2002                    FY01: \$0                    Total: \$75,381  
*Prin. Invest.:* W EVERSMA  
*Tech. Officer:* GRC/E ENVIA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2357**                    **UNIV OF MISSOURI - ROLLA**                    **6238**  
 CHARACTERIZATION OF ENVIRONMENTAL DURABILITY OF A POLYMER  
 MATRIX COMPOSITE  
 03/15/2000 - 01/31/2002                    FY01: \$31,731                    Total: \$65,644  
*Prin. Invest.:* D ROY  
*Tech. Officer:* GRC/M A MEADER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2608**                    **UNIV OF MISSOURI - ROLLA**                    **6239**  
 SECOND-LAW BASED PERFORMED OF AEROSPACE TURBOSHAFT  
 ENIGNES & ENGINE COMPONENTS  
 05/11/2001 - 12/14/2001                    FY01: \$59,999                    Total: \$59,999  
*Prin. Invest.:* D W RIGGINS  
*Tech. Officer:* GRC/D THURMAN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1465**                    **UNIV OF MISSOURI - ROLLA**                    **6240**  
 KINETICS OF NUCLEATION AND CRYSTAL GROWTH IN GLASS FORMING  
 METALS IN MICROGRAVITY  
 02/10/1998 - 01/31/2002                    FY01: \$211,630                    Total: \$617,880  
*Prin. Invest.:* D E DAY, C S RAY  
*Tech. Officer:* MSFC/M PURVEY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1656**                    **UNIV OF MISSOURI - ROLLA**                    **6241**  
 MODELS OF MASS TRANSPORT DURING MICROGRAVITY CRY- STAL  
 GROWTH OF ALLOYED SEMICONDUCTORS IN A MAGETIC  
 04/24/2000 - 04/30/2001                    FY01: \$0                    Total: \$40,000  
*Prin. Invest.:* N MA  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1805**                    **UNIV OF MISSOURI - ROLLA**                    **6242**  
 ROBUST ADAPTIVE CRITIC BASED NEUROCONTROLLERS FOR REUSABLE  
 LAUNCH VEHICLES  
 07/25/2001 - 07/31/2002                    FY01: \$34,999                    Total: \$34,999  
*Prin. Invest.:* S N BALAKRISHNAN  
*Tech. Officer:* MSFC/D KRUPP, MSFC/C HALL  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 5419**                    **UNIV OF MISSOURI - ROLLA**                    **6243**  
 ADAPTIVE CRITIC BASED RECONFIGURABLE CONTROLLER  
 02/14/2001 - 01/31/2002                    FY01: \$60,000                    Total: \$60,000  
*Prin. Invest.:* S N BALAKRISHNAN  
*Tech. Officer:* GSFC/J J TOTAH  
*CASE Category:* 41 - AERONAUTICAL ENGR

## MISSOURI

## NASA'S UNIVERSITY PROGRAM

**NCC 2 5423**                    **UNIV OF MISSOURI – ROLLA**                    **6244**  
 AN ANALYTICAL METHOD FOR DESIGN & AMANUFACTURING T O CAPTURE  
 POTENTIAL FAILURE MODES IN HIGH RISK AE  
 02/26/2001 – 02/28/2002                    FY01: \$50,640                    Total: \$50,640  
*Prin. Invest.:* R B STONE  
*Tech. Officer:* ARC/I Y TUMER  
*CASE Category:* 41 – AERONAUTICAL ENGNR

**NGT 5 40060**                    **UNIV OF MISSOURI – ROLLA**                    **6245**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 03/04/1997 – 02/28/2001                    FY01: \$0                    Total: \$807,500  
*Prin. Invest.:* B P SELBERG  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NGT 5 40112**                    **UNIV OF MISSOURI – ROLLA**                    **6246**  
 MISSOURI SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 03/06/2001 – 02/28/2002                    FY01: \$212,500                    Total: \$212,500  
*Prin. Invest.:* F FINIASH  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 3 2592**                    **UNIV OF MISSOURI – SAINT LOUIS**                    **6247**  
 THE THERMO-CHEMISTRY OF HIGH ENERGY DENSITY MISSLE FUELS  
 04/23/2001 – 02/28/2002                    FY01: \$30,000                    Total: \$30,000  
*Prin. Invest.:* J CHICKOS  
*Tech. Officer:* GRC/M J ZEHE  
*CASE Category:* 12 – CHEMISTRY

**NAG 5 6091**                    **UNIV OF MISSOURI – SAINT LOUIS**                    **6248**  
 METHANE ABSORPTION SPECTOSCOPY IN THE 700-1000NM R SURE  
 DEPENDENCES & DETERMINATIONS OF THE INTER-BA  
 08/26/1997 – 06/14/2001                    FY01: \$0                    Total: \$100,000  
*Prin. Invest.:* D J O'BRIEN  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 2 945**                    **WASHINGTON UNIV – ST. LOUIS**                    **6249**  
 CHRONIC RECORDING OF OTOLITH NERVES IN MICROGRAVIT Y  
 12/16/1994 – 11/30/1999                    FY01: -\$60,416                    Total: \$969,576  
*Prin. Invest.:* S M HIGHSTEIN  
*Tech. Officer:* ARC/W E HINDS, ARC/C M WINGET  
*CASE Category:* 51 – BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1457**                    **WASHINGTON UNIV – ST. LOUIS**                    **6250**  
 DEFORMABLE WAKE DYNAMICS FOR IMPROVED MANEUVERING FLIGHT  
 SIMULATION  
 03/07/2001 – 02/14/2002                    FY01: \$43,821                    Total: \$43,821  
*Prin. Invest.:* D A PETERS  
*Tech. Officer:* ARC/C TUNG, ARC/T MAIER  
*CASE Category:* 46 – MECHANICAL ENGR

**NAG 2 1493**                    **WASHINGTON UNIV – ST. LOUIS**                    **6251**  
 MULTISENSORY INTERACTIONS TO DISCRIMINATE GRAVITY FROM  
 TRANSLATIONAL ACCELERATIONS  
 07/31/2001 – 06/30/2002                    FY01: \$188,831                    Total: \$188,831  
*Prin. Invest.:* D E ANGELAKI  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 – BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1500**                    **WASHINGTON UNIV – ST. LOUIS**                    **6252**  
 EVOLUTION OF ANTHROPOD NEURAL PATTERN  
 07/06/2001 – 06/30/2002                    FY01: \$76,223                    Total: \$76,223  
*Prin. Invest.:* J B SKEATH  
*Tech. Officer:* ARC/M M AVERNER  
*CASE Category:* 51 – BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1910**                    **WASHINGTON UNIV – ST. LOUIS**                    **6253**  
 GAS – PHASE COMBUSTION SYNTHESIS OF METAL AND ERAM IC NANO-  
 PARTICLES  
 06/24/1996 – 06/22/2001                    FY01: \$0                    Total: \$288,238  
*Prin. Invest.:* R L AXELBAUM, B H CHAO  
*Tech. Officer:* GRC/S A GOKOGLE  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 3 2625**                    **WASHINGTON UNIV – ST. LOUIS**                    **6254**  
 DEVELOPMENT OF A MICROSACLE PARTICULATE CLASSIFIER (MIPAC)  
 06/01/2001 – 09/30/2001                    FY01: \$25,000                    Total: \$25,000  
*Prin. Invest.:* D CHEN  
*Tech. Officer:* GRC/P S GREENBERG  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 5 3657**                    **WASHINGTON UNIV – ST. LOUIS**                    **6255**  
 STRUCTURE AND EVOLUTION OF OUTER PLANET SATELLITES  
 03/19/1997 – 10/31/2001                    FY01: \$30,900                    Total: \$151,632  
*Prin. Invest.:* W B MCKINNON  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 3870**                    **WASHINGTON UNIV – ST. LOUIS**                    **6256**  
 SURFACE PROCESSES ON VENUS AND MARS  
 02/11/1997 – 03/31/2001                    FY01: \$0                    Total: \$649,054  
*Prin. Invest.:* R E ARVIDSON  
*Tech. Officer:* GSFC/D G SENSKE  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 4098**                    **WASHINGTON UNIV – ST. LOUIS**                    **6257**  
 ISOTOPIC STRUCTURES AND FINE-SCALE CHRONOLOGY IN P  
 06/23/1997 – 03/31/2002                    FY01: \$0                    Total: \$427,000  
*Prin. Invest.:* D A PODOSEK  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 4172**                    **WASHINGTON UNIV – ST. LOUIS**                    **6258**  
 ANALYTICAL, EXPERIMENTAL, AND MODELING STUDIES OF IGNEOUS  
 ROCKS  
 04/09/1997 – 06/30/2001                    FY01: \$0                    Total: \$988,000  
*Prin. Invest.:* D A HASKIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 – CHEMISTRY

**NAG 5 4173**                    **WASHINGTON UNIV – ST. LOUIS**                    **6259**  
 LUNAR AND PLANETARY SURFACE DYNAMICS AND EARLY HIS  
 06/02/1997 – 12/14/2000                    FY01: \$0                    Total: \$645,000  
*Prin. Invest.:* D HOHENBERG  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 – CHEMISTRY

**NAG 5 4323**                    **WASHINGTON UNIV - ST. LOUIS**                    **6260**  
 KINETICS OF THERMOCHEMICAL GAS-SOLID REACTIONS IMP RETENTION  
 IN THE SOLAR NEBULA: IMPLICATIONS FOR  
 04/09/1997 - 01/31/2001                    FY01: -\$29                    Total: \$232,785  
*Prin. Invest.:* D FEGLEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4435**                    **WASHINGTON UNIV - ST. LOUIS**                    **6261**  
 PARTICIPATION IN THE DATA ANALYSIS AND SCIENCE ACT ORBITING  
 LASER ALTIMETER (MOLA) & THE MARS GLOBAL  
 04/28/1997 - 12/31/2001                    FY01: \$125,000                    Total: \$560,000  
*Prin. Invest.:* R J PHILLIPS  
*Tech. Officer:* GSFC/D E SMITH  
*CASE Category:* 99 - MULTIINTERDISCIPL, OTHER

**NAG 5 4448**                    **WASHINGTON UNIV - ST. LOUIS**                    **6262**  
 PLANETARY INTERIOR MODELLING AND TECTONIC IMPLICAT  
 05/08/1997 - 12/31/2001                    FY01: \$117,000                    Total: \$554,150  
*Prin. Invest.:* D J PHILLIPS  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4564**                    **WASHINGTON UNIV - ST. LOUIS**                    **6263**  
 KINETICS OF THERMOCHEMICAL REACTIONS IMPORTANT IN SULFUR  
 CYCLE  
 05/29/1997 - 12/31/2001                    FY01: \$0                    Total: \$343,206  
*Prin. Invest.:* D FEGLEY  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4565**                    **WASHINGTON UNIV - ST. LOUIS**                    **6264**  
 CHEMICAL WEATHERING KINETICS OF BASALT ON VENUS  
 05/30/1997 - 02/14/2002                    FY01: \$0                    Total: \$227,838  
*Prin. Invest.:* D FEGLEY  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4642**                    **WASHINGTON UNIV - ST. LOUIS**                    **6265**  
 RAMAN SPECTROMETER FOR SURFACE IDENTIFICATION OF M  
 COMPOUNDS ON SILICATE PLANETS AND SMALL SOLAR-SYS  
 06/06/1997 - 06/30/2000                    FY01: \$0                    Total: \$167,390  
*Prin. Invest.:* D A HASKIN  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 5078**                    **WASHINGTON UNIV - ST. LOUIS**                    **6266**  
 BASIC RESEARCH ON THE COMPOSITION OF HEAVY COSMIC RAYS: TIGER  
 05/03/1996 - 11/30/2001                    FY01: \$325,000                    Total: \$1,812,700  
*Prin. Invest.:* R W BINNS  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5110**                    **WASHINGTON UNIV - ST. LOUIS**                    **6267**  
 DEVELOPMENT OF SIFTER WITH SIMULTANEOUS TRACKING AND  
 CALORIMETRY  
 02/12/1997 - 05/31/2001                    FY01: \$0                    Total: \$410,000  
*Prin. Invest.:* R BINNS  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5114**                    **WASHINGTON UNIV - ST. LOUIS**                    **6268**  
 A BALLOON-BORNE HARD X-RAY IMAGING SPECTROMETER BASED ON  
 CDZNTI TECHNOLOGY  
 04/09/1997 - 09/30/2000                    FY01: \$0                    Total: \$161,000  
*Prin. Invest.:* P L HINK  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5154**                    **WASHINGTON UNIV - ST. LOUIS**                    **6269**  
 ULTRA HEAVY AND HEAVY COSMIC-RAY MEASUREMENTS ON ACCESS  
 03/26/1998 - 06/30/2001                    FY01: \$0                    Total: \$112,160  
*Prin. Invest.:* W R BINNS  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5215**                    **WASHINGTON UNIV - ST. LOUIS**                    **6270**  
 A PROPOSAL FOR CONVERSION OF THE TRANS-IRON GALACTIC  
 ELEMENT RECORDER (TIGER) PIHINK  
 12/01/1998 - 11/30/2002                    FY01: \$209,442                    Total: \$529,732  
*Prin. Invest.:* P HINK  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 5296**                    **WASHINGTON UNIV - ST. LOUIS**                    **6271**  
 SIFTER SCINTILLATING FIBER TELESCOPE FOR ENERGETIC  
 06/12/2000 - 12/31/2001                    FY01: \$0                    Total: \$64,000  
*Prin. Invest.:* W R BINNS  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6125**                    **WASHINGTON UNIV - ST. LOUIS**                    **6272**  
 ACOUSTIC COMPOSITION EXPERIMENT FOR DETERMINING H2 RATIO IN  
 THE ATMOSPHERES OF THE JOVIAN PLANETS  
 08/04/1997 - 07/14/2002                    FY01: \$0                    Total: \$467,327  
*Prin. Invest.:* D FEGLEY  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6366**                    **WASHINGTON UNIV - ST. LOUIS**                    **6273**  
 CHEMICAL MODELS OF THE PRESENT AND PRIMORDIAL ATMO GIANT  
 PLANETS JUPITER, SATURN, URANUS AND NEPTUNE  
 09/22/1997 - 12/31/2001                    FY01: \$63,800                    Total: \$283,926  
*Prin. Invest.:* D FEGLEY  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6756**                    **WASHINGTON UNIV - ST. LOUIS**                    **6274**  
 REGIONAL PLANETARY IMAGE FACILITY  
 12/24/1997 - 06/30/2001                    FY01: \$0                    Total: \$61,951  
*Prin. Invest.:* R ARVIDSON  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6784**                    **WASHINGTON UNIV - ST. LOUIS**                    **6275**  
 COMPOSITION, LITHOLOGY, AND HETEROGENEITY OF THE L UNAR CRUST  
 USING REMOTE-SENSING OF IMPACT-B  
 01/28/1998 - 04/30/2000                    FY01: -\$1                    Total: \$63,199  
*Prin. Invest.:* B L JOLLIFF  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## MISSOURI

## NASA'S UNIVERSITY PROGRAM

**NAG 5 7140**                    **WASHINGTON UNIV - ST. LOUIS**                    **6276**  
 OPTICAL DESIGN AND BREADBOARD OF A RAMAN SPECTROMETER  
 03/13/1998 - 03/31/2001                    FY01: \$0                    Total: \$267,726  
*Prin. Invest.:* L HASKIN  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7149**                    **WASHINGTON UNIV - ST. LOUIS**                    **6277**  
 STUDIES OF PRESOLAR MATERIALS AND SOLAR NEBULA STRUCTURE  
 AND EVOLUTION  
 03/23/1998 - 07/31/2000                    FY01: -\$13                    Total: \$163,704  
*Prin. Invest.:* F PODOSEK  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7613**                    **WASHINGTON UNIV - ST. LOUIS**                    **6278**  
 DYNAMICS OF WETLANDS AMONG ENGINEERED PORTIONS OF MISSOURI  
 RIVER SYSTEM  
 07/22/1998 - 01/31/2002                    FY01: \$60,000                    Total: \$360,000  
*Prin. Invest.:* R E ARVIDSON  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7696**                    **WASHINGTON UNIV - ST. LOUIS**                    **6279**  
 HYDROTHERMAL ECOSYSTEMS IN A PLANETARY CONTEXT  
 09/17/1998 - 01/31/2002                    FY01: \$135,931                    Total: \$425,728  
*Prin. Invest.:* E L SHOCK  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8056**                    **WASHINGTON UNIV - ST. LOUIS**                    **6280**  
 DEFORMATION OF THE EUROPEAN ICE SHELL BY TIDAL AND CONVECTION  
 STRESSES  
 01/15/1999 - 01/31/2002                    FY01: \$0                    Total: \$103,000  
*Prin. Invest.:* W B MCKINNON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8194**                    **WASHINGTON UNIV - ST. LOUIS**                    **6281**  
 ADAPTIVE VISUAL-VESTIBULAR MECHANISMS AND GRAVITY  
 05/12/1999 - 06/30/2000                    FY01: -\$590                    Total: \$99,409  
*Prin. Invest.:* D E ANGELAKI  
*Tech. Officer:* GSFC/C SAWIN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 8336**                    **WASHINGTON UNIV - ST. LOUIS**                    **6282**  
 SOLID STATE AND MASS SPECTROMETRIC MEASUREMENT OF EXTRATER-  
 RESTRIAL MATERIALS  
 02/24/1999 - 02/28/2002                    FY01: \$405,000                    Total: \$1,981,000  
*Prin. Invest.:* T J BERNATOWICZ  
*Prin. Invest.:* NONE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8536**                    **WASHINGTON UNIV - ST. LOUIS**                    **6283**  
 DEVELOPMENT OF HIGH QUANTUM EFFICIENCY UV/BLUE PHOTOCATHODE  
 EPITAXIAL SEMICONDUCTOR HETEROSTRUCTURE  
 07/08/1999 - 01/14/2002                    FY01: \$0                    Total: \$576,028  
*Prin. Invest.:* D LEOPOLD  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 8568**                    **WASHINGTON UNIV - ST. LOUIS**                    **6284**  
 THE HIGH ENERGY X-RAY IMAGING SURVEY (HEXIS)  
 05/24/1999 - 05/31/2001                    FY01: \$0                    Total: \$45,000  
*Prin. Invest.:* P L HINK  
*Tech. Officer:* GSFC/L KALUZIENSKI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 8609**                    **WASHINGTON UNIV - ST. LOUIS**                    **6285**  
 SYNTHESIZING LUNAR PROSPECTOR, CLEMENTINE, AND APOLO  
 GEOCHEMICAL DATA TO UNDERSTAND THE GEOLOGY OF  
 06/10/1999 - 06/30/2002                    FY01: \$70,000                    Total: \$176,000  
*Prin. Invest.:* R L KOROTEV  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8717**                    **WASHINGTON UNIV - ST. LOUIS**                    **6286**  
 GLOBAL CHEMICAL REACTOR OF PROTOPLANETARY DISK  
 08/10/1999 - 07/31/2002                    FY01: \$23,000                    Total: \$68,000  
*Prin. Invest.:* J T GLEAVES  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8729**                    **WASHINGTON UNIV - ST. LOUIS**                    **6287**  
 PURCHASE AND INSTALLATION OF NANOSIMS 50  
 08/10/1999 - 07/31/2002                    FY01: \$350,000                    Total: \$1,083,000  
*Prin. Invest.:* R M WALKER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8899**                    **WASHINGTON UNIV - ST. LOUIS**                    **6288**  
 DEFORMATION OF THE EUROPEAN ICE SHELL BY TIDAL AND CONVECTIVE  
 STRESSES: CONSTRAINTS FROM GEM DATA  
 01/13/2000 - 01/31/2002                    FY01: \$40,000                    Total: \$69,000  
*Prin. Invest.:* W MCKINNON  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8905**                    **WASHINGTON UNIV - ST. LOUIS**                    **6289**  
 COMPOSITION, LITHOLOGY, AND HETEROGENEITY OF THE LUNAR CRUST  
 USING REMOTE-SENSING OF IMPACT-BASIN  
 01/21/2000 - 01/31/2002                    FY01: \$38,000                    Total: \$74,100  
*Prin. Invest.:* B L JOLLIFF  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9442**                    **WASHINGTON UNIV - ST. LOUIS**                    **6290**  
 LUNAR & PLANETARY SURFACE DYNAMICS & EARLY HISTORY  
 04/14/2000 - 12/14/2001                    FY01: \$224,000                    Total: \$441,000  
*Prin. Invest.:* C M HOHENBERG  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9449**                    **WASHINGTON UNIV - ST. LOUIS**                    **6291**  
 STUDIES OF PRESOLAR MATERIALS AND SOLAR NEBULA STRUCTURE  
 AND EVOLUTION  
 04/12/2000 - 04/30/2002                    FY01: \$82,000                    Total: \$156,000  
*Prin. Invest.:* F PODOSEK  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 9801**                    **WASHINGTON UNIV - ST. LOUIS**                    **6292**  
 ORIGIN & EVOLUTION OF THE SOLAR SYSTEM: MICROANALYTICAL  
 STUDIES OF METEORITES & INTERPLANETARY DUST  
 07/14/2000 - 02/28/2002            FY01: \$202,000                    Total: \$387,000  
*Prin. Invest.:* R M WALKER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10158**                    **WASHINGTON UNIV - ST. LOUIS**                    **6293**  
 WASHINGTON UNIV-REGIONAL PLANETARY IMAGE FACILITY  
 12/18/2000 - 12/31/2001            FY01: \$24,473                    Total: \$24,473  
*Prin. Invest.:* R ARVIDSON  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10186**                    **WASHINGTON UNIV - ST. LOUIS**                    **6294**  
 SPACE-BASED GRAVITATIONAL-WAVE OBSERVATIONS AS TOOLS FOR  
 TESTING GENERAL RELATIVITY  
 12/20/2000 - 12/31/2001            FY01: \$65,000                    Total: \$65,000  
*Prin. Invest.:* C M WILL  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10190**                    **WASHINGTON UNIV - ST. LOUIS**                    **6295**  
 HYDROGEOLOGY OF BASINS ON MARS  
 01/03/2001 - 01/14/2002            FY01: \$138,000                    Total: \$138,000  
*Prin. Invest.:* R E ARVIDSON  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10227**                    **WASHINGTON UNIV - ST. LOUIS**                    **6296**  
 INTEGRATED STUDY OF THE GEOLOGY, COMPOSITION, & ORIGIN OF  
 LUNAR MARE BASALTS  
 01/04/2001 - 01/14/2002            FY01: \$35,000                    Total: \$35,000  
*Prin. Invest.:* B JOLLIFF  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10426**                    **WASHINGTON UNIV - ST. LOUIS**                    **6297**  
 THE HISTORY OF PRESOLAR GRAINS  
 02/16/2001 - 02/28/2002            FY01: \$386,000                    Total: \$386,000  
*Prin. Invest.:* T BERNATOWICZ  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10485**                    **WASHINGTON UNIV - ST. LOUIS**                    **6298**  
 GEOCHEMICAL & PETROLOGIC ANALYSIS & MODELING OF LUNAR ROCKS  
 & REGOLITHS  
 03/06/2001 - 03/14/2002            FY01: \$250,000                    Total: \$250,000  
*Prin. Invest.:* L HASKIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10513**                    **WASHINGTON UNIV - ST. LOUIS**                    **6299**  
 ISOTOPIC STRUCTURES & FINE-SCALE CHRONOLOGY IN PLANETARY  
 MATERIALS  
 03/05/2001 - 03/31/2002            FY01: \$114,000                    Total: \$114,000  
*Prin. Invest.:* F PODOSEK  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10533**                    **WASHINGTON UNIV - ST. LOUIS**                    **6300**  
 MAJOR EQUIPMENT: GAMMA-RAY DETECTORS FOR NEUTRON ACTIVATION  
 ANALYSIS ASSOCIATED WITH PROPOSAL "GE  
 04/06/2001 - 02/28/2002            FY01: \$44,200                    Total: \$44,200  
*Prin. Invest.:* L HASKIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10553**                    **WASHINGTON UNIV - ST. LOUIS**                    **6301**  
 KINETICS OF THERMOCHEMICAL GAS-SOLID REACTIONS IMPORTANT FOR  
 VOLATILE RETENTION IN THE SOLAR NE  
 03/09/2001 - 03/14/2002            FY01: \$60,000                    Total: \$60,000  
*Prin. Invest.:* B FEGLEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10703**                    **WASHINGTON UNIV - ST. LOUIS**                    **6302**  
 ENHANCED LASER RAMAN SPECTROSCOPY FOR PLANETARY ON -  
 SURFACE MINERALOGY, PETROLOGY, AND DETECTION OF  
 04/09/2001 - 03/31/2002            FY01: \$186,674                    Total: \$186,674  
*Prin. Invest.:* L HASKIN  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10802**                    **WASHINGTON UNIV - ST. LOUIS**                    **6303**  
 CONCEPT STUDY FOR THE "THE HEAVY NUCLEI EXPLORER" (HNX)  
 MISSION AO-99-OSS-05  
 04/30/2001 - 04/30/2002            FY01: \$127,300                    Total: \$127,300  
*Prin. Invest.:* W BINNS  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11037**                    **WASHINGTON UNIV - ST. LOUIS**                    **6304**  
 KINETICS OF THE THERMOCHEMICAL REACTIONS IMPORTANT IN THE  
 VENUS ATMOSPHERIC SULFUR CYCLE  
 06/12/2001 - 06/14/2002            FY01: \$93,000                    Total: \$93,000  
*Prin. Invest.:* B FEGLEY  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11050**                    **WASHINGTON UNIV - ST. LOUIS**                    **6305**  
 CHEMICAL WEATHERING REACTIONS ON VENUS  
 06/18/2001 - 05/31/2002            FY01: \$60,000                    Total: \$60,000  
*Prin. Invest.:* B FEGLEY, JR  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11202**                    **WASHINGTON UNIV - ST. LOUIS**                    **6306**  
 INTEGRATED GEODYNAMICAL AND HYDROGEOLOGICAL HISTORY OF  
 MARS  
 08/14/2001 - 08/14/2004            FY01: \$65,000                    Total: \$65,000  
*Prin. Invest.:* R J PHILLIPS  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

## MISSOURI

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1682**                    **WASHINGTON UNIV - ST. LOUIS**                    **6307**  
 "STUDIES OF NUCLEATION AND GROWTH, SPECIFIC HEAT AND VISCOSITY  
 OF UNDER COOLED MELTS OF ALLOYS"  
 05/01/2000 - 11/30/2003                    FY01: \$159,600                    Total: \$239,579  
*Prin. Invest.:* K F KELTON  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 9 1006**                    **WASHINGTON UNIV - ST. LOUIS**                    **6308**  
 GENESIS: NOBLE GAS MEASUREMENTS PHASE B  
 04/29/1998 - 03/31/2002                    FY01: \$61,800                    Total: \$244,900  
*Prin. Invest.:* C M HOHENBERG  
*Tech. Officer:* JSC/K E CYR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1010**                    **WASHINGTON UNIV - ST. LOUIS**                    **6309**  
 GENESIS DISCOVERY MISSION  
 05/05/1998 - 08/08/2001                    FY01: \$0                    Total: \$56,600  
*Prin. Invest.:* F A PODOSEK  
*Tech. Officer:* JSC/E K STANSBERY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 3 00094**                    **WASHINGTON UNIV - ST. LOUIS**                    **6310**  
 NRA CONTRACT FOR "SEARCH FOR EFFECTS OF ELECTROSTATIC  
 POTENTIAL ON CLOCKS IN THE FRAME OF REFERENCE"  
 12/27/1999 - 12/26/2000                    FY01: \$0                    Total: \$99,985  
*Prin. Invest.:* M S CONRAD, H I RINGERMACHER  
*Tech. Officer:* GRC/M MILLIS  
*CASE Category:* 13 - PHYSICS

**NCC 3 697**                    **WASHINGTON UNIV - ST. LOUIS**                    **6311**  
 FLAE DESIGN - A NOVAL APPROACH TO CLEAN, EFFICIENT DIFFUSION  
 FLAMES  
 03/26/1999 - 01/13/2003                    FY01: \$60,300                    Total: \$186,032  
*Prin. Invest.:* R L AXELBAUM  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 777**                    **WASHINGTON UNIV - ST. LOUIS**                    **6312**  
 OPTIMIZING THE CORBA COMPONENT MODEL FOR HIGH-PERFORMANCE  
 AND REAL-TIME APPLICATIONS  
 02/24/2000 - 01/20/2003                    FY01: \$40,842                    Total: \$100,842  
*Prin. Invest.:* D L LEVINE  
*Tech. Officer:* GRC/R W CLAUS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 8 85**                    **WASHINGTON UNIV - ST. LOUIS**                    **6313**  
 COMPOSITION EFFECTS ON PHASE FORMATION & STABILITY  
 04/22/1996 - 04/21/2001                    FY01: \$0                    Total: \$467,400  
*Prin. Invest.:* K F KELTON  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 8 154**                    **WASHINGTON UNIV - ST. LOUIS**                    **6314**  
 COOPERATIVE AGREEMENT ENTITLED "IMAGING CALORIMETER FOR  
 ACCESS (ICA)"  
 07/10/1998 - 07/09/2001                    FY01: \$0                    Total: \$119,600  
*Prin. Invest.:* P L HINK, M H ISRAEL, R W BINNS  
*Tech. Officer:* MSFC/M CHRISTI, MSFC/M J CHRISTL  
*CASE Category:* 11 - ASTRONOMY

**NGT 1 52197**                    **WASHINGTON UNIV - ST. LOUIS**                    **6315**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/09/1998 - 06/30/2000                    FY01: \$0                    Total: \$44,000  
*Prin. Invest.:* K R WATERS  
*Tech. Officer:* LARC/P H JOHNSTON  
*CASE Category:* 13 - PHYSICS

**NGT 5 50023**                    **WASHINGTON UNIV - ST. LOUIS**                    **6316**  
 TIGER: A COSMIC RAY DETECTOR USED TO STUDY THE ABU ELEMENTS  
 08/04/1997 - 06/30/2000                    FY01: -\$250                    Total: \$65,750  
*Prin. Invest.:* SPOSATO  
*Tech. Officer:* GSFC/A NURRIDDIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50030**                    **WASHINGTON UNIV - ST. LOUIS**                    **6317**  
 COMPOSITIONAL EFFECTS ON TIME DEPENDENT NUCLEATION  
 08/04/1997 - 06/30/2001                    FY01: \$0                    Total: \$66,000  
*Prin. Invest.:* K KELTON/CROAT  
*Tech. Officer:* GSFC/A NURRIDDIN  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50063**                    **WASHINGTON UNIV - ST. LOUIS**                    **6318**  
 TECTONIC PROCESSES ON ICY SATELLITES  
 08/15/1997 - 06/30/2000                    FY01: -\$1,246                    Total: \$64,754  
*Prin. Invest.:* W B MCKINNON/DOMBAR  
*Tech. Officer:* GSFC/A NURRIDDIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50170**                    **WASHINGTON UNIV - ST. LOUIS**                    **6319**  
 GRADUATE STUDENT RESEARCH IN X-RAY ASTRONOMY  
 05/22/1998 - 06/30/2001                    FY01: \$0                    Total: \$66,000  
*Prin. Invest.:* P L HINK  
*Tech. Officer:* GSFC/K E BLANDING  
*CASE Category:* 13 - PHYSICS

**NGT 5 50240**                    **WASHINGTON UNIV - ST. LOUIS**                    **6320**  
 GRADUATE STUDENT RSCH IN COSMIC RAY ASTROPHYSICS  
 06/03/1999 - 06/30/2002                    FY01: \$22,000                    Total: \$66,000  
*Prin. Invest.:* M ISRAEL  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50348**                    **WASHINGTON UNIV - ST. LOUIS**                    **6321**  
 HYDROTHERMAL ECOSYSTEMS AS ANALOGS IN THE STUDY OF ASTRO-  
 BIOLOGY & EARLY LIFE ON EARTH/STUDENT: D. ME  
 05/07/2001 - 06/30/2002                    FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* E SHOCK  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1851**                    **WILLIAM JEWELL COLLEGE**                    **6322**  
 MOLECULAR PROBE FLUORESCENCE MONITORING OF POLYMERIZATION  
 09/27/2001 - 08/31/2002                    FY01: \$27,957                    Total: \$27,957  
*Prin. Invest.:* P BUNTON  
*Tech. Officer:* MSFC/M P BODIFORD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## MONTANA

<b>NAG 2 1323</b>	<b>MONTANA STATE UNIV</b>	<b>6323</b>
SPATIO-SPECTRAL HOLOGRAPHY FOR HIGH BANDWIDTH CORR ELATORS		
04/29/1999 - 04/30/2002	FY01: \$1,750,000	Total: \$5,096,000
<i>Prin. Invest.:</i> A E CRAIG		
<i>Tech. Officer:</i> ARC/W F BROOKS, ARC/D KOGA		
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NAG 5 3652</b>	<b>MONTANA STATE UNIV</b>	<b>6324</b>
MOLECULAR AND GEOCHEMICAL ANALYSIS OF HOT SPRING CROFLEXUS MATS AS STROMATOLITE ANALOGS		
03/25/1997 - 06/30/2000	FY01: \$0	Total: \$274,062
<i>Prin. Invest.:</i> M G WARD		
<i>Tech. Officer:</i> GSFC/M MEYER		
<i>CASE Category:</i> 12 - CHEMISTRY		
<b>NAG 5 4576</b>	<b>MONTANA STATE UNIV</b>	<b>6325</b>
CENTER FOR EDUCATIONAL RESOURCES		
05/13/1997 - 05/31/2001	FY01: \$0	Total: \$999,975
<i>Prin. Invest.:</i> G TUTHILL		
<i>Tech. Officer:</i> GSFC/M V PHELPS		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 6005</b>	<b>MONTANA STATE UNIV</b>	<b>6326</b>
CAUSES AND CONSEQUENCES OF LAND-COVER IN A GREATER ASSESSMENT, MONITORING AND OUTREACH		
09/11/1997 - 07/14/2001	FY01: \$0	Total: \$565,010
<i>Prin. Invest.:</i> A HASEN		
<i>Tech. Officer:</i> GSFC/A C JANETOS		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 6110</b>	<b>MONTANA STATE UNIV</b>	<b>6327</b>
MAGNETIC HELICITY AND THE SOLAR DYNAMO		
07/28/1997 - 07/31/2002	FY01: \$316,052	Total: \$975,776
<i>Prin. Invest.:</i> D CANFIELD		
<i>Tech. Officer:</i> GSFC/W WAGNER		
<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 8807</b>	<b>MONTANA STATE UNIV</b>	<b>6328</b>
CENTER FOR STUDYING LIFE IN EXTREME ENVIRONMENTS		
09/03/1999 - 08/31/2004	FY01: \$5,129,000	Total: \$7,002,000
<i>Prin. Invest.:</i> T R MCDERMOTT		
<i>Tech. Officer:</i> GSFC/M MEYER		
<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 8824</b>	<b>MONTANA STATE UNIV</b>	<b>6329</b>
MOLECULAR AND GEOCHEMICAL ANALYSIS OF HOT SPRING CYANOBACTERIAL & CHLOROFLEXUS MATS AS STROMATOLITE		
09/22/1999 - 10/31/2001	FY01: \$0	Total: \$194,200
<i>Prin. Invest.:</i> D M WARD		
<i>Tech. Officer:</i> GSFC/M MEYER		
<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 9300</b>	<b>MONTANA STATE UNIV</b>	<b>6330</b>
MONITORING FOREST RESPONSE TO PAST & FUTURE GLOBAL CHANGE IN GREATER YELLOWSTONE		
04/07/2000 - 04/30/2002	FY01: \$120,886	Total: \$207,168
<i>Prin. Invest.:</i> A HANSEN		
<i>Tech. Officer:</i> GSFC/G GUTMAN		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 9806</b>	<b>MONTANA STATE UNIV</b>	<b>6331</b>
CHANGING LANDSCAPED IN RURAL AMERICA		
07/13/2000 - 08/31/2001	FY01: \$0	Total: \$15,000
<i>Prin. Invest.:</i> A HANSEN		
<i>Tech. Officer:</i> GSFC/G GUTMAN		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 10489</b>	<b>MONTANA STATE UNIV</b>	<b>6332</b>
THE X-RAY BRIGHT POINT: A CASE STUDY IN RECONNECTI ON		
03/07/2001 - 02/28/2002	FY01: \$91,029	Total: \$91,029
<i>Prin. Invest.:</i> D LONGCOPE		
<i>Tech. Officer:</i> GSFC/W WALTER		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 10997</b>	<b>MONTANA STATE UNIV</b>	<b>6333</b>
MOSES: A SLITLESS MULTI-ORDER SOLAR EXTREME ULTRA VIOLET SPECTROGRAPH FOR FAST IMAGING SPECTROSCOPY		
06/08/2001 - 05/31/2002	FY01: \$248,122	Total: \$248,122
<i>Prin. Invest.:</i> C C KANKELBORG		
<i>Tech. Officer:</i> GSFC/W J WAGNER		
<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 11158</b>	<b>MONTANA STATE UNIV</b>	<b>6334</b>
LAND USE LAND CHANGE AROUND PROTECTED AREAS IN LCLUC SITES: SYNTHESIS OF RATES, CONSEQUENCES FOR		
08/01/2001 - 08/14/2004	FY01: \$61,425	Total: \$61,425
<i>Prin. Invest.:</i> A HANSEN		
<i>Tech. Officer:</i> GSFC/G GUTMAN		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 8 1399</b>	<b>MONTANA STATE UNIV</b>	<b>6335</b>
LARGE SCALE ORGANIZATION OF ACTIVE REGION MAGNETIC FIELDS		
08/11/1997 - 08/10/2002	FY01: \$0	Total: \$184,330
<i>Prin. Invest.:</i> R C CANFIELD		
<i>Tech. Officer:</i> MSFC/M J HAGYARD, MSFC/G A GARY		
<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 9 1082</b>	<b>MONTANA STATE UNIV</b>	<b>6336</b>
RAPID BACTERIAL TESTING FOR SPACECRAFT WATER		
03/03/1999 - 03/31/2002	FY01: \$69,483	Total: \$286,278
<i>Prin. Invest.:</i> B H PYLE		
<i>Tech. Officer:</i> JPL/D JAN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 2 1073</b>	<b>MONTANA STATE UNIV</b>	<b>6337</b>
COMPARATIVE STUDIES OF MICROBIAL MATS: COMMUNITY COMPOSITION, PHYSIOLOGICAL & ORGANIC GEOCHEMICAL P		
12/08/1998 - 12/31/2002	FY01: \$54,441	Total: \$155,454
<i>Prin. Invest.:</i> D M WARD		
<i>Prin. Invest.:</i> NONE		
<i>Tech. Officer:</i> ARC/D J DES MARAIS, ARC/B BEBOUT		
<i>CASE Category:</i> 54 - ENVIRONMENTALBIOLOGY		
<b>NCC 2 1143</b>	<b>MONTANA STATE UNIV</b>	<b>6338</b>
BACTERIAL PHYSIOLOGY & VIRULENCE ON EARTH & IN MICROGRAVITY		
09/19/1999 - 08/31/2002	FY01: \$135,620	Total: \$325,621
<i>Prin. Invest.:</i> B H PYLE		
<i>Tech. Officer:</i> ARC/M F VASQUES, ARC/P D SAVAGE		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		

## MONTANA

## NASA'S UNIVERSITY PROGRAM

**NCC 2 1181** MONTANA STATE UNIV 6339  
 STUDENT-MENTOR PROJECTS IN SUPPORT OF NASA SHARP PROGRAM  
 EXPERIMENTS  
 05/23/2000 - 12/31/2001 FY01: \$0 Total: \$91,357  
*Prin. Invest.:* D CAIRNS  
*Tech. Officer:* ARC/P KOLODZIEJ, ARC/D J RASKY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5277** MONTANA STATE UNIV 6340  
 MICROBIOLOGICAL SENSING SYSTEM FOR A EUROPA PROBE APPLICA-  
 TION  
 07/21/1998 - 09/30/1999 FY01: \$0 Total: \$10,000  
*Prin. Invest.:* B H PYLE, G MCFETERS  
*Tech. Officer:* ARC/M T FLYNN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5437** MONTANA STATE UNIV 6341  
 A MINIATURE RAMAN SPECTROMETER FOR FIELD EVALUATIO N IN  
 ANTARCTICA AS AN ANALOGUE OF PUTATIVE MARTIA  
 06/25/2001 - 05/31/2002 FY01: \$72,607 Total: \$72,607  
*Prin. Invest.:* D L DICKENSHEETS  
*Tech. Officer:* ARC/R A GRYMES, ARC/W W DOLCI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 5445** MONTANA STATE UNIV 6342  
 EFFECTS OF STAND-REPLACING FIRE ON MYCORRHIZAL COM MUNITIES  
 07/16/2001 - 06/30/2002 FY01: \$94,660 Total: \$94,660  
*Prin. Invest.:* J HENSON  
*Tech. Officer:* ARC/K CULLINGS, ARC/M H NEW  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NCC 5 240** MONTANA STATE UNIV 6343  
 MONTANA EPSCOR PROGRAM  
 09/12/1997 - 02/28/2002 FY01: \$0 Total: \$1,800,000  
*Prin. Invest.:* W HISCOCK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 410** MONTANA STATE UNIV 6344  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/19/1999 - 05/31/2002 FY01: \$0 Total: \$450,000  
*Prin. Invest.:* W HISCOCK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 579** MONTANA STATE UNIV 6345  
 MONTANA NASA EPSCOR PROGRAM  
 08/17/2001 - 07/31/2004 FY01: \$463,300 Total: \$463,300  
*Prin. Invest.:* W HISCOCK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 40041** MONTANA STATE UNIV 6346  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRA M  
 06/03/1991 - 02/29/2000 FY01: -\$50,967 Total: \$953,533  
*Prin. Invest.:* W A HISCOCK  
*Tech. Officer:* HQ/E T SCHWARTZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 01012** MONTANA STATE UNIV 6347  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/15/2001 - 06/30/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* V H SCHMIDT  
*Tech. Officer:* LARC/J HARRISON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 40036** MONTANA STATE UNIV 6348  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 01/31/1997 - 02/28/2001 FY01: -\$80,617 Total: \$1,330,633  
*Prin. Invest.:* W A HISCOCK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40092** MONTANA STATE UNIV 6349  
 MONTANA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/28/2001 - 02/28/2002 FY01: \$555,617 Total: \$555,617  
*Prin. Invest.:* W HISCOCK  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50297** MONTANA STATE UNIV 6350  
 ECOLOGY & NITROGEN BIOGEOCHEMISTRY OF ANATARCTIC LAKE ICE/  
 STUDENT: AARON D. HALL  
 06/27/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* J C PRISCU  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9139** MONTANA TECH OF THE UNIV OF MONTANA 6351  
 STEP CAREERS IN RESEARCH EXPLORATION PROGRAM  
 02/29/2000 - 02/28/2003 FY01: \$15,695 Total: \$31,730  
*Prin. Invest.:* T MOON  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9102** SALISH KOOTENAI COLLEGE 6352  
 EARTH SYSTEM SCIENCE STUDENT RESEARCH EXPERIENCES AT SALISH  
 KOOTENAI COLLEGE  
 03/02/2000 - 01/31/2002 FY01: \$105,595 Total: \$213,103  
*Prin. Invest.:* T S OLSON  
*Tech. Officer:* GSFC/N K HAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9147** SALISH KOOTENAI COLLEGE 6353  
 NORTHERN ROCKY MOUNTAIN TRIBAL PATHWAY TO ACADEMIC EXCEL-  
 LENCE PROGRAM  
 03/03/2000 - 03/14/2002 FY01: \$100,000 Total: \$200,000  
*Prin. Invest.:* J M GOBERT  
*Tech. Officer:* GSFC/M STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9368** SALISH KOOTENAI COLLEGE 6354  
 NASA NATIVE EARTH SYSTEMS SCIENCE CURRICULUM PROJECT (NESCP)  
 04/03/2000 - 03/31/2002 FY01: \$154,129 Total: \$308,847  
*Prin. Invest.:* J M GOBERT  
*Tech. Officer:* GSFC/B MEESON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9541** **SALISH KOOTENAI COLLEGE** **6355**  
 RELATIVISTIC DISSIPATIVE FLUID THEORIES OF NEUTRON STARS  
 06/08/2000 - 06/14/2001 FY01: \$0 Total: \$48,051  
*Prin. Invest.:* T OLSON  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 21 - MATHEMATICS

**NAG 5 10144** **SALISH KOOTENAI COLLEGE** **6356**  
 ASTRONOMY & ASTROPHYSICS COURSE DEVELOPMENT AT SAL ISH  
 KOOTENAI COLLEGE  
 12/11/2000 - 12/31/2001 FY01: \$12,852 Total: \$12,852  
*Prin. Invest.:* T S OLSON, NONE  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 44 - CIVIL ENGR

**NAG 5 4923** **UNIV OF MONTANA** **6357**  
 ASSIMILATION OF SAR DERIVED PARAMETER MAPS INTO BI OVER BOREAS  
 STUDY AREA  
 06/23/1997 - 05/31/2000 FY01: -\$1 Total: \$191,316  
*Prin. Invest.:* S W RUNNING  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6719** **UNIV OF MONTANA** **6358**  
 RADAR BASED MEASURE OF INTERANNUAL VEGETATION PHEN OLOGY  
 FOR MONITORING GLOBAL CHANGE RESPONSES OF  
 12/10/1997 - 08/31/2000 FY01: -\$43 Total: \$205,435  
*Prin. Invest.:* S RUNNING  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8599** **UNIV OF MONTANA** **6359**  
 THE IMPACT OF VEGETATION CHANGES IN THE SAHEL ON REGIONAL  
 SCALE HYDROLOGY  
 06/21/1999 - 06/30/2002 FY01: \$48,860 Total: \$140,734  
*Prin. Invest.:* S W RUNNING  
*Tech. Officer:* GSFC/E G ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9062** **UNIV OF MONTANA** **6360**  
 EARTH SCIENCE ENTERPRISE RESEARCH PROGRAM  
 02/15/2000 - 02/14/2003 FY01: \$99,675 Total: \$199,675  
*Prin. Invest.:* J R KUGLIN  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9332** **UNIV OF MONTANA** **6361**  
 DEVELOPMENT SPRAWL IMPACTS ON THE TERRESTRIAL CARBON  
 DYNAMICS OF THE UNITED STATES  
 03/23/2000 - 04/30/2003 FY01: \$48,044 Total: \$77,873  
*Prin. Invest.:* R NEMANI  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9333** **UNIV OF MONTANA** **6362**  
 MONITORING BOREAL LANDCOVER AND ECOSYSTEM DYNAMICS AT  
 REGIONAL SCALES USING INTEGRATED SPACEBORNE  
 03/23/2000 - 04/30/2003 FY01: \$11,333 Total: \$34,000  
*Prin. Invest.:* J KIMBALL  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11256** **UNIV OF MONTANA** **6363**  
 A SATELLITE MICROWAVE REMOTE SENSING MEASURE OF HI GH  
 LATITUDE GROWING SEASONS FOR IMPROVED ASSESS  
 08/16/2001 - 08/31/2004 FY01: \$165,352 Total: \$165,352  
*Prin. Invest.:* S RUNNING  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1112** **UNIV OF MONTANA** **6364**  
 INST FOR THE STUDY OF BIOMAKERS IN ASTROMATERIALS  
 05/11/1999 - 05/13/2002 FY01: \$14,353 Total: \$38,353  
*Prin. Invest.:* N C HINMAN  
*Tech. Officer:* JSC/E K GIBSON  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAS 5 31368** **UNIV OF MONTANA** **6365**  
 EOS MODIS INVESTIGATION FROM DR. STEVE RUNNING  
 01/07/1992 - 12/14/2001 FY01: \$421,000 Total: \$4,369,500  
*Prin. Invest.:* S W RUNNING  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 1263** **UNIV OF MONTANA** **6366**  
 INTELLIGENT PARAMETERIZATION & REAL-TIME EXECUTION OF  
 ECOSYSTEM MODELS  
 05/07/2001 - 10/31/2001 FY01: \$100,849 Total: \$100,849  
*Prin. Invest.:* R NEMANI  
*Tech. Officer:* ARC/K P GOODEN, ARC/M A SCHWABACHER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5397** **UNIV OF MONTANA** **6367**  
 AUTOMATED TESTING OF MATRIX MODELS  
 09/07/2000 - 02/28/2001 FY01: \$0 Total: \$12,162  
*Prin. Invest.:* J HENRY  
*Tech. Officer:* ARC/A PATTERSON-HINE, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 382** **UNIV OF MONTANA** **6368**  
 INTERNATIONAL EOS NATURAL RESOURCE TRAINING CENTER  
 02/19/1999 - 02/28/2002 FY01: \$2,993,400 Total: \$8,174,400  
*Prin. Invest.:* S W RUNNING  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30395** **UNIV OF MONTANA** **6369**  
 FORECASTING THE EFFECTS OF CLIMATE CHANGE ON EMERG ING  
 INFECTIOUS DISEASE: A HANTAVIRUS MODEL  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S RUNNING  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50225** **UNIV OF MONTANA** **6370**  
 MODELING NOVEL FT-IR SPECTROSCOPIC MEASUREMENTS OF OXYGE  
 NATEDHYDROCARBON LEVELS FROM BIO  
 09/29/1998 - 02/28/2002 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R J FIELD  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50329**                      **UNIV OF MONTANA**                      **6371**  
 BIOGEOCHEMISTRY OF RECREATIONAL GRASSLANDS STUDENT: CRISTINA MILES  
 08/17/2000 - 08/31/2002                      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* S RUNNING  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NEBRASKA

**NAG 2 1353**                      **CREIGHTON UNIV**                      **6372**  
 EFFECTS OF GRAVITY ON VESTIBULAR DEVELOPMENT IN MICE  
 07/22/1999 - 07/31/2002                      FY01: \$195,093                      Total: \$484,874  
*Prin. Invest.:* B FRITZSCH  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 1 01087**                      **UNIV OF NEBRASKA - LINCOLN**                      **6373**  
 OPTIMAL EXPERIMENTAL DESIGN FOR THERMAL CHARACTERIZATION OF FUNCTIONALLY GRADED MATERIALS  
 05/30/2001 - 09/30/2002                      FY01: \$29,437                      Total: \$29,437  
*Prin. Invest.:* K D COLE  
*Tech. Officer:* LARC/M L BLOXXER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2219**                      **UNIV OF NEBRASKA - LINCOLN**                      **6374**  
 ATOMIC OXYGEN ULTRAVIOLET, AND THERMAL CYCLING EFFECTS ON SPACE MATERIALS  
 12/28/1998 - 10/31/2001                      FY01: \$55,001                      Total: \$145,001  
*Prin. Invest.:* J A WOOLLAM  
*Tech. Officer:* GRC/D A JAWORSKE  
*CASE Category:* 13 - PHYSICS

**NAG 5 3442**                      **UNIV OF NEBRASKA - LINCOLN**                      **6375**  
 CHARACTERIZATION OF LANDSAT-7 GEOMETRY AND RADIOMETRY FOR LAND COVER ANALYSES  
 10/07/1996 - 12/31/2000                      FY01: \$0                      Total: \$93,293  
*Prin. Invest.:* J W MERCHANT  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4217**                      **UNIV OF NEBRASKA - LINCOLN**                      **6376**  
 CONSORTIUM FOR THE APPLICATION OF SPACE DATA TO ED  
 03/15/1997 - 12/31/2000                      FY01: \$0                      Total: \$1,449,859  
*Prin. Invest.:* D RUNDQUIST  
*Tech. Officer:* GSFC/D L KALE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6506**                      **UNIV OF NEBRASKA - LINCOLN**                      **6377**  
 MRK 42 AND MRK 957: TWO EXTREME NARROW-LINE STRONG FE II EMITTING QUASARS - ASCA PROPOSAL AO5  
 11/17/1997 - 10/31/2001                      FY01: \$0                      Total: \$17,800  
*Prin. Invest.:* M GASKELL  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6990**                      **UNIV OF NEBRASKA - LINCOLN**                      **6378**  
 CHARACTERIZATION AND IMPROVEMENT OF EOS LAND PRODUCTION USING MEASUREMENTS AT AMERIFLUX GRASSLAND AND  
 02/25/1998 - 02/28/2002                      FY01: \$64,380                      Total: \$505,000  
*Prin. Invest.:* E WALTER-SHEA  
*Tech. Officer:* GSFC/D C WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8677**                      **UNIV OF NEBRASKA - LINCOLN**                      **6379**  
 "COMPRESSION FOR LAND USE DATA". GSFC CONTROL NO. 5-3491.  
 FUNDS FOR UNSOLICITED PROPOSAL W/UNIV NE  
 07/09/1999 - 09/30/2001                      FY01: \$0                      Total: \$50,131  
*Prin. Invest.:* K SAYOOD  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 9834**                      **UNIV OF NEBRASKA - LINCOLN**                      **6380**  
 ROBUST COMPRESSION FOR LAND USE DATA  
 07/28/2000 - 09/30/2002                      FY01: \$0                      Total: \$60,546  
*Prin. Invest.:* K SAYOOD  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10408**                      **UNIV OF NEBRASKA - LINCOLN**                      **6381**  
 "CONTEXT BASED COMPRESSION SCHEME"  
 04/05/2001 - 07/14/2002                      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* K SAYOOD  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11147**                      **UNIV OF NEBRASKA - LINCOLN**                      **6382**  
 CONSEQUENCES OF INSTANT CHANGE: LAND-COVER DYNAMICS IN KAZAKHSTAN 1960-2000  
 07/31/2001 - 08/14/2003                      FY01: \$89,949                      Total: \$89,949  
*Prin. Invest.:* A GITELSON  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1137**                      **UNIV OF NEBRASKA - LINCOLN**                      **6383**  
 A PROTOTYPE MARS SURFACE MOBILITY VEHICLE  
 08/04/1999 - 08/31/2000                      FY01: -\$5,000                      Total: \$0  
*Prin. Invest.:* S FARRITOR  
*Tech. Officer:* JSC/J JOCHIM  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1310**                      **UNIV OF NEBRASKA - LINCOLN**                      **6384**  
 USE OF FEMTOSECOND LASERS IN THE CURATION & ALLOCATION OF SAMPLES COLLECTED BY UPCOMING PLANET  
 06/06/2001 - 06/08/2004                      FY01: \$34,995                      Total: \$34,995  
*Prin. Invest.:* D R ALEXANDER  
*Tech. Officer:* JSC/F HORZZ, JSC/J JONES  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 2 5304**                      **UNIV OF NEBRASKA - LINCOLN**                      **6385**  
 TRANSPORT IN QUANTUM STRUCTURES: QUASI-TWO-DIMENSIONAL DEVICES  
 01/11/1999 - 12/31/2001                      FY01: \$0                      Total: \$126,973  
*Prin. Invest.:* S BANDYOPADHYAY  
*Tech. Officer:* ARC/M MEYAPPAN  
*CASE Category:* 13 - PHYSICS

## NASA'S UNIVERSITY PROGRAM

NEVADA

**NCC 5 169 UNIV OF NEBRASKA - LINCOLN 6386**  
 THE NEBRASKA INITIATIVE FOR AEROSPACE RESEARCH AND DEVELOPMENT  
 12/05/1996 - 11/14/2001 FY01: \$500,000 Total: \$2,500,000  
*Prin. Invest.:* B D BOWEN  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 430 UNIV OF NEBRASKA - LINCOLN 6387**  
 "AMERICA'S FARM" A PROTOTYPE FOR OTHER NATIONAL CYBER-EDUCATIONAL SITES IN RESPONSE TO NASA COOPERATION  
 09/20/1999 - 09/30/2002 FY01: \$220,740 Total: \$518,228  
*Prin. Invest.:* D C RUNDQUIST  
*Tech. Officer:* GSFC/R E GABRYNS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC13 98003 UNIV OF NEBRASKA - LINCOLN 6388**  
 AN INITIATIVE TO CREATE AN AFFILIATED RESEARCH CENTER PROGRAM  
 08/17/1998 - 03/31/2002 FY01: \$272,792 Total: \$622,399  
*Prin. Invest.:* RUNDQUIST  
*Tech. Officer:* SSC/A PEEK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30175 UNIV OF NEBRASKA - LINCOLN 6389**  
 INTERANNUAL VARIABILITY IN SNOW MELT & ASSOCIATED ATMOSPHERIC CONDITIONS OVER THE MARINE CRYOSPHERE  
 01/13/1999 - 12/31/2000 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* M ANDERSON  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30358 UNIV OF NEBRASKA - LINCOLN 6390**  
 LANDFORM EVOLUTION OF THE LOWER MISSISSIPPI RIVER VALLEY IN RESPONSE TO DEGLACIATION/STUDENT: TAMMY  
 08/23/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* M BLUM  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 401 UNIV OF NEBRASKA-OMAHA 6391**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/13/1999 - 09/30/2001 FY01: \$0 Total: \$450,000  
*Prin. Invest.:* B BROWN  
*Tech. Officer:* HQ/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 572 UNIV OF NEBRASKA-OMAHA 6392**  
 NEBRASKA NASA EPSCOR PROGRAM  
 07/20/2001 - 07/31/2002 FY01: \$700,000 Total: \$700,000  
*Prin. Invest.:* B D BOWEN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40037 UNIV OF NEBRASKA-OMAHA 6393**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE AND FELLOWSHIP PROGRAM.  
 02/13/1997 - 02/28/2001 FY01: \$0 Total: \$1,040,150  
*Prin. Invest.:* B D BOWEN  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40104 UNIV OF NEBRASKA-OMAHA 6394**  
 NEBRASKA SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 03/01/2001 - 02/28/2002 FY01: \$277,650 Total: \$277,650  
*Prin. Invest.:* B D BOWEN  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NEVADA

**NAG 1 2046 UNIV. OF NEVADA - DESERT RES. INST - RENO 6395**  
 MICROPHYSICS AND RADIATIVE PROPERTIES OF CIRRUS: INSTRUMENTATION AND ANALYSIS/PREVIOUS # NAG-1-1707  
 04/01/1998 - 05/03/2002 FY01: \$0 Total: \$212,000  
*Prin. Invest.:* J HALLETT  
*Tech. Officer:* LARC/D S MCDUGAL, LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2183 UNIV. OF NEVADA - DESERT RES. INST - RENO 6396**  
 CLOUD CONDENSATION NUCLEI FIRE III MY 1/2  
 04/19/1999 - 06/03/2002 FY01: \$21,000 Total: \$100,000  
*Prin. Invest.:* J G HUDSON  
*Tech. Officer:* LARC/V E DELNORE, LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7870 UNIV. OF NEVADA - DESERT RES. INST - RENO 6397**  
 INTEGRATING MODELING AND REMOTE SENSING FOR MONITO RING POTENTIAL RESPONSES TO CLIMATE CHANGE  
 01/20/1999 - 12/31/2001 FY01: \$62,310 Total: \$158,378  
*Prin. Invest.:* G L DANA  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7973 UNIV. OF NEVADA - DESERT RES. INST - RENO 6398**  
 IN SITU MICROPHYSICAL OBSERVATIONS IN SUPPORT OF THE TRMM/KWAJEX FIELD CAMPAIGN  
 01/03/1999 - 12/31/2001 FY01: \$92,070 Total: \$349,841  
*Prin. Invest.:* J HALALETT  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9716 UNIV. OF NEVADA - DESERT RES. INST - RENO 6399**  
 ANALYSIS AND INTEGRATION OF IN SITU MICROPHYSICAL OBSERVATIONS FROM THE TRMM/KWAJEX FIELD CAMPAIGN  
 06/22/2000 - 06/14/2002 FY01: \$153,000 Total: \$305,764  
*Prin. Invest.:* D KINGSMILL  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10445 UNIV. OF NEVADA - DESERT RES. INST - RENO 6400**  
 AN AQUEOUS GEOCHEMICAL MODEL FOR COLD PLANETS  
 02/20/2001 - 02/28/2002 FY01: \$65,000 Total: \$65,000  
*Prin. Invest.:* G M MARION  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## NEVADA

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1718 UNIV. OF NEVADA - DESERT RES. INST - RENO 6401**  
 RESEARCH ENTITLED, "SHEAR FLOW STABILIZED LASER- IGNITED  
 Z-PINCH"  
 04/27/2000 - 04/26/2003 FY01: \$37,000 Total: \$67,000  
 Prin. Invest.: F WINTERBERG  
 Tech. Officer: MSFC/F THIO  
 CASE Category: 13 - PHYSICS

**NCC 5 486 UNIV. OF NEVADA - DESERT RES. INST - RENO 6402**  
 HYPERSPECTRAL MONITORING OF INVASIVE NON-NATIVE PLANT SPECIES  
 04/06/2000 - 12/31/2001 FY01: \$64,689 Total: \$110,966  
 Prin. Invest.: K C MCGWIRE  
 Tech. Officer: GSFC/S G UNGAR  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40038 UNIV. OF NEVADA - DESERT RES. INST - RENO 6403**  
 NATIONAL SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 01/24/1997 - 02/28/2001 FY01: \$0 Total: \$801,125  
 Prin. Invest.: J V TARANIK  
 Tech. Officer: GSFC/L KEFFER  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 3994 UNIV OF NEVADA - LAS VEGAS 6404**  
 EFFICIENT TRANSMISSION AND MANIPULATION OF SCIENTI  
 03/06/1997 - 02/28/2001 FY01: \$0 Total: \$261,642  
 Prin. Invest.: D LATIFI  
 Tech. Officer: GSFC/J BREDEKAMP  
 CASE Category: 22 - COMPUTER SCIENCE

**NAG 5 6727 UNIV OF NEVADA - LAS VEGAS 6405**  
 LABORATORY STUDIES OF THERMAL ENERGY CHARGE TRANSFER OF  
 CARBON, IRON, SULPHUR, AND NITROGEN IONS IN  
 12/11/1997 - 12/31/2001 FY01: \$100,000 Total: \$310,200  
 Prin. Invest.: V H KWONG  
 Tech. Officer: GSFC/H HASAN  
 CASE Category: 11 - ASTRONOMY

**NAG 5 9489 UNIV OF NEVADA - LAS VEGAS 6406**  
 DEVELOPMENT OF THE CONTENT-BASED IMAGE QUERYING TOOLS:  
 TOWARD ADVANCED DATABASES FOR ASTRONOMICAL  
 04/17/2000 - 04/14/2001 FY01: \$0 Total: \$80,000  
 Prin. Invest.: S LATIFI  
 Tech. Officer: GSFC/J BREDEKAMP  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAS 5 31231 UNIV OF NEVADA - LAS VEGAS 6407**  
 STIS CO-INVESTIGATOR SUPPORT  
 08/30/1991 - 09/30/2002 FY01: \$109,000 Total: \$1,023,301  
 Prin. Invest.: D WEISTROP  
 Tech. Officer: GSFC/D VITAGLIANO  
 CASE Category: 11 - ASTRONOMY

**NAG 5 6881 UNIV OF NEVADA - RENO 6408**  
 NUMERICAL GEOMECHANICS STUDIES OF PLANETARY FAULTING  
 02/27/1998 - 12/31/2000 FY01: \$0 Total: \$164,302  
 Prin. Invest.: R SCHULTZ  
 Tech. Officer: GSFC/P ROGERS  
 CASE Category: 11 - ASTRONOMY

**NAG 5 8267 UNIV OF NEVADA - RENO 6409**  
 GEOMETRY AND MECHANICS OF FAULTING ON MARS  
 02/24/1999 - 06/30/2002 FY01: \$95,000 Total: \$279,000  
 Prin. Invest.: R SCHULTZ  
 Tech. Officer: GSFC/J BOYCE  
 CASE Category: 11 - ASTRONOMY

**NAG 5 9001 UNIV OF NEVADA - RENO 6410**  
 COMPREHENSIVE STRUCTURAL MODEL FOR PLANETARY WRINKLE  
 RIDGES  
 02/03/2000 - 06/30/2002 FY01: \$44,000 Total: \$80,100  
 Prin. Invest.: R A SCHULTZ  
 Tech. Officer: GSFC/D SENSKE  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9127 UNIV OF NEVADA - RENO 6411**  
 CONCURRENT ANALYSIS OF MULTI- & HYPERSPECTRAL DATA SETS OF  
 ANTARCTICA  
 02/25/2000 - 12/31/2001 FY01: \$0 Total: \$31,900  
 Prin. Invest.: W M CALVIN  
 Tech. Officer: GSFC/E LINDSTROM  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9298 UNIV OF NEVADA - RENO 6412**  
 ALTERATION MINERALOGY OF MARS: SPECTROSCOPIC ANALYSIS AND  
 INTERPRETATION  
 04/27/2000 - 04/30/2001 FY01: \$0 Total: \$55,100  
 Prin. Invest.: W CALVIN, NONE  
 Tech. Officer: GSFC/J A GRANT  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 9467 UNIV OF NEVADA - RENO 6413**  
 AN AQUEOUS GEOCHEMICAL MODEL FOR COLD PLANETS  
 04/18/2000 - 04/14/2001 FY01: \$0 Total: \$33,250  
 Prin. Invest.: G M MARION  
 Tech. Officer: GSFC/J A GRANT  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 9498 UNIV OF NEVADA - RENO 6414**  
 GLOBAL ASSESSMENT OF VOLCANIC DEBRIS FLOW HAZARDS FROM  
 SPACE: EVALUATION OF NEW MULTISPECTRAL AND HYP  
 04/27/2000 - 12/31/2001 FY01: \$43,475 Total: \$81,821  
 Prin. Invest.: R J WATTERS  
 Tech. Officer: GSFC/S G UNGAR  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10290 UNIV OF NEVADA - RENO 6415**  
 ICES & ALTERATION MINERALS IN THE SOLAR SYSTEM: SPECTROSCOPIC  
 ANALYSIS & INTERPRETATION  
 01/29/2001 - 01/31/2002 FY01: \$43,000 Total: \$43,000  
 Prin. Invest.: W CALVIN  
 Tech. Officer: GSFC/D SENKE  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 10926 UNIV OF NEVADA - RENO 6416**  
 GEOMECHANICS STUDIES OF PLANETARY FAULTING: MECHANISMS OF  
 DEFORMATION ON MARS AND EUROPA  
 05/14/2001 - 06/30/2002 FY01: \$36,000 Total: \$36,000  
 Prin. Invest.: R A SCHULTZ  
 Tech. Officer: GSFC/D A SENSKE  
 CASE Category: 32 - GEOLOGICAL SCIENCE



NASA'S UNIVERSITY PROGRAM

NEW HAMPSHIRE

**NAG 9 1340 UNIV OF NEVADA - RENO 6417**  
 STEM CELL PLASTICITY UNDER SIMULATED MICROGRAVITY  
 08/01/2001 - 08/01/2004 FY01: \$51,000 Total: \$51,000  
*Prin. Invest.:* G ALMEIDA-PORADA  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 43 - CHEMICAL ENGR

**NCC 5 583 UNIV OF NEVADA SYSTEM 6425**  
 NEVADA NASA EPSCOR PROGRAM  
 08/27/2001 - 08/31/2004 FY01: \$508,600 Total: \$508,600  
*Prin. Invest.:* J V TARANIK  
*Tech. Officer:* HQ/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 5408 UNIV OF NEVADA - RENO 6418**  
 MEASURING CHANGES IN LOCAL VOLUMETRIC BONE DENSITY  
 11/24/2000 - 11/14/2001 FY01: \$23,750 Total: \$23,750  
*Prin. Invest.:* E WANG  
*Tech. Officer:* ARC/R T WHALEN, ARC/E M HOLTON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

NEW HAMPSHIRE

**NAG 2 1420 DARTMOUTH COLLEGE 6426**  
 TRANSCRIPTIONAL REGULATIONS & EVOLUTION OF BILATERIAN BODY PLANS  
 07/13/2000 - 07/31/2002 FY01: \$66,695 Total: \$134,855  
*Prin. Invest.:* K PETERSON, E H DAVIDSON  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5443 UNIV OF NEVADA - RENO 6419**  
 TESTING/DIRECT OSMOTIC CONCENTRATION  
 07/16/2001 - 01/31/2003 FY01: \$20,684 Total: \$20,684  
*Prin. Invest.:* V D ADAMS, J G CURTIS, A E CHILDRESS  
*Tech. Officer:* ARC/M T FLYNN, ARC/J W FISHER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 3212 DARTMOUTH COLLEGE 6427**  
 A PRECISE POSITION FOR RU0042+32  
 04/18/1996 - 10/31/1999 FY01: -\$1,054 Total: \$939  
*Prin. Invest.:* J THORSTENSEN  
*Tech. Officer:* GSFC/R PETRE  
*CASE Category:* 11 - ASTRONOMY

**NCC 3 750 UNIV OF NEVADA - RENO 6420**  
 ACOUSTIC TOMOGRAPHY FOR JET ENGINES/TURBINES: PRO OF OF CONCEPT  
 12/15/1999 - 09/30/2001 FY01: \$79,737 Total: \$119,564  
*Prin. Invest.:* J A KLEPPE  
*Tech. Officer:* GRC/G FRALICK  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 3498 DARTMOUTH COLLEGE 6428**  
 "RIVER FLOODING AND GLOBAL ENVIRONMENTAL CHANGE: A  
 12/02/1996 - 02/14/2001 FY01: \$0 Total: \$824,151  
*Prin. Invest.:* R BRACKENRIDGE  
*Tech. Officer:* GSFC/M BALTUCK  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 5 30385 UNIV OF NEVADA - RENO 6421**  
 EVAPORATION AND CARBON DIOXIDE FLUX MEASUREMENTS AT THE SALAR DE ATACAMA, NORTHERN CHILE/STE  
 08/13/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S TYLER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4529 DARTMOUTH COLLEGE 6429**  
 DISPERSIVE ALFVEN DYNAMICS OF THE MAGNETOSPHERE-IO  
 05/09/1997 - 08/31/2001 FY01: \$0 Total: \$251,535  
*Prin. Invest.:* D LOTKO  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NGT 5 40113 UNIV OF NEVADA - RENO 6422**  
 NEVADA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/12/2001 - 02/28/2002 FY01: \$206,125 Total: \$206,125  
*Prin. Invest.:* J V TARANIK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 5238 DARTMOUTH COLLEGE 6430**  
 SOUNDING OF THE ION ENERGIZATION REGION: RESOLVING AMBIGUITIES (SIERRA)  
 05/11/1999 - 05/10/2002 FY01: \$48,100 Total: \$166,055  
*Prin. Invest.:* J W LABELLE  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NGT 5 50362 UNIV OF NEVADA - RENO 6423**  
 SYNTHESIS OF HYPERSPECTRAL AND MULTISPECTRAL IMAGE DATA FOR THE IDENTIFICATION OF FOSSIL AND ACTIVE  
 05/31/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* W CALVIN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 5239 DARTMOUTH COLLEGE 6431**  
 FIRST YEAR FUNDING FOR "ROCKET AURORAL CORRELATOR EXPERIMENT (RACE) PI DR. JAMES LABELLE  
 05/19/1999 - 05/18/2002 FY01: \$52,751 Total: \$263,637  
*Prin. Invest.:* J W LABELLE  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NCC 5 397 UNIV OF NEVADA SYSTEM 6424**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/24/1999 - 06/30/2002 FY01: \$0 Total: \$450,000  
*Prin. Invest.:* J TARANIK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 5318 DARTMOUTH COLLEGE 6432**  
 HIGH BANDWIDTH AURORAL ROCKET (HI-BAR) HIGH BANDWIDTH AURORAL ROCKET (HI-BAR)  
 02/14/2001 - 02/12/2004 FY01: \$69,098 Total: \$69,098  
*Prin. Invest.:* J W LABELLE  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

## NEW HAMPSHIRE

## NASA'S UNIVERSITY PROGRAM

**NAG 5 6268**                      **DARTMOUTH COLLEGE**                      **6433**  
 AUTOMATED ANALYSIS OF REMOTELY-SENSED 2D MAGNETOPA  
 08/21/1997 - 07/31/2000                      FY01: \$0                      Total: \$128,879  
*Prin. Invest.:* D O SONNERUP  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 7185**                      **DARTMOUTH COLLEGE**                      **6434**  
 APPROXIMATELY TWO-DIMENSIONAL, COHERENT STRUCTURES IN  
 SPACE PLASMAS: THE INVERSE PROBLEM  
 03/25/1998 - 03/31/2002                      FY01: \$0                      Total: \$213,222  
*Prin. Invest.:* B U SONNERUP  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7442**                      **DARTMOUTH COLLEGE**                      **6435**  
 A THEORETICAL STUDY OF THE GLOBAL GEOSPACE SYSTEM  
 06/02/1998 - 09/30/2001                      FY01: \$70,000                      Total: \$585,630  
*Prin. Invest.:* M HUDSON  
*Tech. Officer:* GSFC/S CURTIS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7689**                      **DARTMOUTH COLLEGE**                      **6436**  
 NONADIABATIC CHANGES IN RADIATION BELT POPULATIONS  
 09/14/1998 - 09/30/2001                      FY01: \$0                      Total: \$215,592  
*Prin. Invest.:* M K HUDSON  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7803**                      **DARTMOUTH COLLEGE**                      **6437**  
 MULTIPPOINT, MULTI-INSTRUMENT STUDY OF AURORAL ALFVENIC  
 PROCESSES (SEC GI PROGRAM) NRA-98-03-S  
 11/09/1998 - 03/31/2002                      FY01: \$99,249                      Total: \$284,369  
*Prin. Invest.:* W LOTKO  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8441**                      **DARTMOUTH COLLEGE**                      **6438**  
 RESEARCH:"ULTRA LOW FREQUENCY MAGNETOSPHERIC PHYSI  
 CS...".FIRST YEAR OF THREE YEAR FUNDING CYCLE. P  
 04/08/1999 - 04/14/2002                      FY01: \$346,000                      Total: \$980,048  
*Prin. Invest.:* W LOTKO  
*Tech. Officer:* GSFC/J M GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 9225**                      **DARTMOUTH COLLEGE**                      **6439**  
 THE FORMATION OF THE MILKY WAY AND ITS SATELLITE GALAXIES (L TSA  
 99)  
 03/15/2000 - 03/14/2002                      FY01: \$61,755                      Total: \$121,649  
*Prin. Invest.:* B CHABOYER  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9470**                      **DARTMOUTH COLLEGE**                      **6440**  
 RIVER FLOODING AND GLOBAL ENVIRONMENTAL CHANGE: A MULTI-  
 SENSOR APPROACH  
 04/14/2000 - 04/30/2002                      FY01: \$196,905                      Total: \$329,437  
*Prin. Invest.:* R BRAKENRIDGE, NONE  
*Tech. Officer:* GSFC/P HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10216**                      **DARTMOUTH COLLEGE**                      **6441**  
 IMPACTS OF IONOSPHERIC ACTIVITY ON ULTRA-LOW-FREQU ENCY  
 AURORAL ELECTRODYNAMICS  
 01/05/2001 - 01/14/2002                      FY01: \$78,513                      Total: \$78,513  
*Prin. Invest.:* A V STRELTISOV  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10219**                      **DARTMOUTH COLLEGE**                      **6442**  
 A LOW-COST ROCKET-BORNE IMAGER FOR STUDIES OF AURO RAL FINE  
 STRUCTURES  
 01/05/2001 - 01/14/2002                      FY01: \$69,891                      Total: \$69,891  
*Prin. Invest.:* M R LESSARD  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10953**                      **DARTMOUTH COLLEGE**                      **6443**  
 EARLY FLOOD DETECTION USING QUICKSCAT AND THE DART MOUTH  
 FLOOD OBSERVATORY  
 05/18/2001 - 05/31/2002                      FY01: \$59,686                      Total: \$59,686  
*Prin. Invest.:* G BRAKENRIDGE, NONE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 8 1590**                      **DARTMOUTH COLLEGE**                      **6444**  
 R/S IN SITU OPTICAL WAVEGUIDES FOR MONITORING AND MODIFYING  
 PROTEIN CRYSTAL GROWTH  
 01/28/1999 - 09/30/2002                      FY01: \$108,300                      Total: \$305,299  
*Prin. Invest.:* U J GIBSON  
*Tech. Officer:* MSFC/H K HIGGINBOTTAM, MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1088**                      **DARTMOUTH COLLEGE**                      **6445**  
 LIFE SCIENCES DATA ARCHIVE SCIENTIFIC SUPPORT  
 03/15/1999 - 09/30/2001                      FY01: \$44,362                      Total: \$261,091  
*Prin. Invest.:* J BUCKEY  
*Tech. Officer:* JSC/D BELL  
*CASE Category:* 56 - MEDICL

**NAG 9 1387**                      **DARTMOUTH COLLEGE**                      **6446**  
 OTOACOUSTIC HEARING OF SPACE STATION CREWS  
 09/24/2001 - 08/31/2004                      FY01: \$85,004                      Total: \$85,004  
*Prin. Invest.:* J BUCKLEY  
*Tech. Officer:* JSC/C LLYOD  
*CASE Category:* 56 - MEDICL

**NAG13 00041**                      **DARTMOUTH COLLEGE**                      **6447**  
 LIMITED AREA OPERATIONAL COASTAL OCEAN MODELS SAME  
 09/06/2000 - 09/05/2002                      FY01: \$0                      Total: \$234,724  
*Prin. Invest.:* D LYNCH  
*Tech. Officer:* SSC/R MILLER  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC 1 01045**                      **DARTMOUTH COLLEGE**                      **6448**  
 DATA-BASED OPTIMAL CONTROL & FAULT DETECTION TECHNIQUES FOR  
 AEROSPACE SYSTEMS  
 06/12/2001 - 02/14/2004                      FY01: \$56,000                      Total: \$56,000  
*Prin. Invest.:* M Q PHAN  
*Tech. Officer:* LARC/C M BELCASTRO  
*CASE Category:* 41 - AERONAUTICAL ENGRN

## NASA'S UNIVERSITY PROGRAM

## NEW HAMPSHIRE

**NGT 5 95**                    **DARTMOUTH COLLEGE**                    **6449**  
 STORM-TIME RADIATION BELT DYNAMICS  
 07/23/1999 - 07/31/2000    FY01: \$0                    Total: \$22,000  
*Prin. Invest.:* M K HUDSON  
*Tech. Officer:* GSFC/L ZANETTI  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 384**                    **SAINT ANSELM COLLEGE**                    **6450**  
 GROUND-BASED TESTING OF A PROTOTYPE HOLOGRAPHIC AT  
 MOSPHERIC SCANNER FOR ENVIRONMENTAL REMOTESENSIN  
 03/05/1999 - 08/30/2001    FY01: \$0                    Total: \$34,700  
*Prin. Invest.:* D GUERRA  
*Tech. Officer:* GSFC/A J NEGRİ  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 1479**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6451**  
 THEORETICAL STUDIES ON THE CHROMOSPHERE, CORONA, AND SOLAR  
 WIND  
 11/26/1990 - 09/30/1999    FY01: -\$6,156                    Total: \$2,540,074  
*Prin. Invest.:* J V HOLLWEG, M A LEO  
*Tech. Officer:* GSFC/T J BIRMINGHAM  
*CASE Category:* 13 - PHYSICS

**NAG 5 3527**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6452**  
 ASSESSING THE EFFECTS OF HISTORICAL LAND USE ON FO RESPONSE  
 TO CLIMATE CHANGEAND CO2: A REMOTE SENS  
 11/18/1996 - 11/14/2000    FY01: -\$1,310                    Total: \$550,380  
*Prin. Invest.:* M MARTIN  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3671**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6453**  
 CONTINUED STUDIES OF SOUTHERN HEMISPHERE GAMMA-RAY  
 PARADIGMS FOR TWO BLAZAR PROTOTYPES  
 01/02/1997 - 12/31/1999    FY01: -\$40,990                    Total: \$52,005  
*Prin. Invest.:* W VESTRAND*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4458**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6454**  
 MAGNETOTAIL-IONOSPHERE COUPLING  
 05/14/1997 - 06/30/2000    FY01: \$0                    Total: \$63,900  
*Prin. Invest.:* D L KAUFMANN  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 4695**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6455**  
 TRANSPORT OF ENERGETIC IONS IN THE RING CURRENT DU S  
 06/17/1997 - 11/14/1999    FY01: -\$529                    Total: \$120,471  
*Prin. Invest.:* D M KISTLER  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 13 - PHYSICS

**NAG 5 4785**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6456**  
 AN INTEGRATED SYSTEM FOR WATER BUDGET CLOSURE OVER MASS: A  
 TRMM VALIDATION EFFORT  
 07/03/1997 - 12/31/2001    FY01: \$0                    Total: \$234,500  
*Prin. Invest.:* C VOROSMARTY  
*Tech. Officer:* GSFC/O W THİELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4856**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6457**  
 MAGNETIC RECONNECTION IN SOLAR FLARES  
 07/15/1997 - 05/14/2000    FY01: -\$381                    Total: \$253,619  
*Prin. Invest.:* D G FORBES  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5057**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6458**  
 A CO-INVESTIGATOR PROPOSAL FOR CORNELL UNIV CAPER  
 06/25/1996 - 05/31/2001    FY01: \$0                    Total: \$409,705  
*Prin. Invest.:* R ARNOLDY  
*Tech. Officer:* GSFC/L W GURKIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5117**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6459**  
 THE TIGRE INSTRUMENT FOR INTERMEDIATE-ENERGY GAMMA-RAY  
 ASGTRONOMY FOR 0.3 TO 100MEV  
 04/18/1997 - 11/30/2001    FY01: \$24,990                    Total: \$175,972  
*Prin. Invest.:* J RYAN  
*Tech. Officer:* GSFC/H NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5124**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6460**  
 ENSTROPHY - FILAMENTATION OF AURORAL CURRENTS  
 03/10/1997 - 01/31/2001    FY01: \$0                    Total: \$389,920  
*Prin. Invest.:* K LYNCH  
*Tech. Officer:* GSFC/B FLOWERS  
*CASE Category:* 13 - PHYSICS

**NAG 5 5147**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6461**  
 MINUTE OF ARC RESOLUTION GAMMA-RAY IMAGING EXPERIMENT  
 (MARGIE)  
 07/02/1997 - 06/30/2001    FY01: \$0                    Total: \$150,000  
*Prin. Invest.:* J RYAN  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5192**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6462**  
 MONITORING INITIAL STAGES OF FOREST RECOVERY IN T CZECH  
 REPUBLIC  
 07/18/1997 - 07/31/2000    FY01: \$0                    Total: \$444,069  
*Prin. Invest.:* B ROCK  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 5212**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6463**  
 ULDB COMPTON TELESCOPE MISSION  
 09/22/1998 - 12/31/2001    FY01: \$0                    Total: \$60,000  
*Prin. Invest.:* J M RYAN  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5234**                **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6464**  
 DUST DARTS PI DR. KRISTINA LYNCH  
 02/12/1999 - 03/28/2002    FY01: \$138,400                    Total: \$353,595  
*Prin. Invest.:* K LYNCH  
*Tech. Officer:* GSFC/W JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5237 UNIV OF NEW HAMPSHIRE - DURHAM 6465**  
 SOUNDING OF THE ION ENERGIZATION REGION: RESOLVING AMBIGUITIES (SIERRA)  
 05/11/1999 - 05/10/2002 FY01: \$154,870 Total: \$424,715  
*Prin. Invest.:* R L ARNOLDY  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5324 UNIV OF NEW HAMPSHIRE - DURHAM 6466**  
 A WIDE FIELD-OF-VIEW HARD X-RAY POLARIMETER FOR STUDYING GAMMA-RAY BURSTS  
 03/21/2001 - 12/31/2003 FY01: \$75,000 Total: \$75,000  
*Prin. Invest.:* M L MCCONNELL  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5326 UNIV OF NEW HAMPSHIRE - DURHAM 6467**  
 DEVELOPMENT OF CZT STRIP DETECTORS FOR HARD X-RAY IMAGING WITH MARGIE  
 03/21/2001 - 12/31/2004 FY01: \$130,000 Total: \$130,000  
*Prin. Invest.:* J M RYAN  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5327 UNIV OF NEW HAMPSHIRE - DURHAM 6468**  
 DEVELOPMENT OF CZT STRIP DETECTORS FOR HARD X-RAY AND GAMMA-RAY IMAGING SPECTROSCOPY PI PRO  
 08/09/2001 - 12/31/2003 FY01: \$250,000 Total: \$250,000  
*Prin. Invest.:* J RYAN  
*Tech. Officer:* WFF/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6115 UNIV OF NEW HAMPSHIRE - DURHAM 6469**  
 THE BIO-ATMOSPHERIC CYCLES OF NITROGEN AND CARBON: POLLUTION AND TERRESTRIAL  
 07/28/1997 - 07/31/2000 FY01: -\$1 Total: \$107,769  
*Prin. Invest.:* B BRASWELL  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6137 UNIV OF NEW HAMPSHIRE - DURHAM 6470**  
 TRANSFER FUNDS TO UNIV OF NEW HAMPSHIRE IN S ENTITLED: CHANGES IN BIOGEOCHEMICAL CYCLES  
 08/11/1997 - 05/31/2002 FY01: \$0 Total: \$6,253,073  
*Prin. Invest.:* B MOORE, III  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6289 UNIV OF NEW HAMPSHIRE - DURHAM 6471**  
 DEVELOPMENT OF A PARTICLE BACKSCATTERING ALGORITHM CONCURRENT SHIP MEASUREMENTS, AND GLOBAL BIOGEOCH  
 09/10/1997 - 08/31/2002 FY01: \$79,608 Total: \$425,983  
*Prin. Invest.:* W S BROWN, NONE  
*Tech. Officer:* GSFC/E A LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6452 UNIV OF NEW HAMPSHIRE - DURHAM 6472**  
 SATELLITE-BASED SYSTEMS FOR MONITORING BIOGEOCHEMICAL FLUXES BETWEEN THE CONTINENTAL LAND MASS AND C  
 11/04/1997 - 12/31/2000 FY01: \$0 Total: \$552,982  
*Prin. Invest.:* C VOROSMARTY  
*Tech. Officer:* GSFC/J A YODER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6453 UNIV OF NEW HAMPSHIRE - DURHAM 6473**  
 ATMOSPHERIC IMPACTS OF AGRICULTURE: INTEGRATION OF REMOTE SENSING AND BIOGEOCHEMICAL MODELS FOR T  
 11/18/1997 - 12/31/2001 FY01: \$0 Total: \$336,476  
*Prin. Invest.:* C LI  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6623 UNIV OF NEW HAMPSHIRE - DURHAM 6474**  
 RADAR-BASED MEASURE OF INTERANNUAL VEGETATION PHENOLOGY FOR MONITORING GLOBAL CHANGES RESPONSES OF  
 11/19/1997 - 11/30/2000 FY01: \$0 Total: \$83,227  
*Prin. Invest.:* S FROLKING  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6860 UNIV OF NEW HAMPSHIRE - DURHAM 6475**  
 WIND/SWE CONTINUED INVESTIGATIONS  
 02/17/1998 - 01/14/2001 FY01: \$0 Total: \$459,155  
*Prin. Invest.:* R TORBERT  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 13 - PHYSICS

**NAG 5 6925 UNIV OF NEW HAMPSHIRE - DURHAM 6476**  
 GRANT  
 02/04/1998 - 01/31/2001 FY01: -\$374 Total: \$389,360  
*Prin. Invest.:* L M KISTLER  
*Tech. Officer:* GSFC/M HESSE  
*CASE Category:* 13 - PHYSICS

**NAG 5 6935 UNIV OF NEW HAMPSHIRE - DURHAM 6477**  
 GRANT  
 02/04/1998 - 07/31/2001 FY01: \$0 Total: \$379,492  
*Prin. Invest.:* R B TORBERT  
*Tech. Officer:* GSFC/M HESSE  
*CASE Category:* 13 - PHYSICS

**NAG 5 7095 UNIV OF NEW HAMPSHIRE - DURHAM 6478**  
 SCALING PEATLAND CO2 AND CH4 FLUXES FROM CHAMBERS TO THE BOREAS NORTH-ERN AND SOUTHERN STUDY AREAS  
 05/21/1998 - 04/30/2001 FY01: \$0 Total: \$218,362  
*Prin. Invest.:* S FROLKING  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7097 UNIV OF NEW HAMPSHIRE - DURHAM 6479**  
 STUDIES OF INTERSTELLAR PICKUP IONS IN THE SOLAR WIND  
 06/05/1998 - 04/30/2001 FY01: \$0 Total: \$220,600  
*Prin. Invest.:* P A ISENBERG  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7368 UNIV OF NEW HAMPSHIRE - DURHAM 6480**  
 STUDY OF RING CURRENT DYNAMICS DURING GEOMAGNETIC STORMS  
 05/06/1998 - 05/31/2000 FY01: -\$2 Total: \$13,998  
*Prin. Invest.:* V K JORDANOVA  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7601 UNIV OF NEW HAMPSHIRE - DURHAM 6481**  
 DEVELOPMENT OF SPACE-BASED TECHNIQUES FOR MEASURING  
 07/24/1998 - 07/14/2000 FY01: \$0 Total: \$89,532  
*Prin. Invest.:* L D DINGMAN  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7631 UNIV OF NEW HAMPSHIRE - DURHAM 6482**  
 QUANTIFYING THE ATMOSPHERIC IMPACTS OF PADDY RICE AGRICULTURE  
 IN CHINA  
 08/10/1998 - 09/30/2002 FY01: \$370,330 Total: \$1,350,000  
*Prin. Invest.:* C LI  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7792 UNIV OF NEW HAMPSHIRE - DURHAM 6483**  
 ION ACCELERATION AND TRANSPORT IN IMPULSIVE AND GRADUAL  
 SOLAR FLARES  
 12/14/1998 - 12/31/2001 FY01: \$58,263 Total: \$166,844  
*Prin. Invest.:* D A LEE  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7798 UNIV OF NEW HAMPSHIRE - DURHAM 6484**  
 SMALL SCALE STRUCTURE OF AURORAL ELECTRIC CURRENTS -- A  
 GUEST INVESTIGATOR PROPOSAL TO THE FAST  
 12/15/1998 - 12/31/2001 FY01: \$0 Total: \$168,425  
*Prin. Invest.:* D A LYNCH  
*Tech. Officer:* GSFC/L ZANETTI  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7804 UNIV OF NEW HAMPSHIRE - DURHAM 6485**  
 ELECTRIC FIELDS AND RING CURRENT ENERGIZATION (SEC  
 PROGRAM)  
 11/06/1998 - 12/31/2001 FY01: \$77,655 Total: \$224,131  
*Prin. Invest.:* V K JORDANOVA  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8041 UNIV OF NEW HAMPSHIRE - DURHAM 6486**  
 INVESTIGATION OF POLAR CAP AND RING CURRENT PRECIPITATION  
 01/07/1999 - 01/14/2001 FY01: \$0 Total: \$60,695  
*Prin. Invest.:* R B TOBBERT  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8044 UNIV OF NEW HAMPSHIRE - DURHAM 6487**  
 AN INVESTIGATION OF THE CHARGE STATE COMPOSITION OF SOLAR &  
 SHOCKACCELERATED SUPRATHERMAL PA  
 01/11/1999 - 01/14/2000 FY01: \$0 Total: \$36,081  
*Prin. Invest.:* A B GALVIN  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8228 UNIV OF NEW HAMPSHIRE - DURHAM 6488**  
 "THEORETICAL STUDIES OF THE SOLAR ATMOSPHERE AND SOLAR WIND".  
 02/24/1999 - 03/14/2002 FY01: \$400,000 Total: \$1,139,914  
*Prin. Invest.:* J V HOLLWEG  
*Tech. Officer:* GSFC/J M GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 8443 UNIV OF NEW HAMPSHIRE - DURHAM 6489**  
 A WATER BUDGET CLOSURE SYSTEM TO SUPPORT LBA HYDRO  
 METEOROLOGY AND ECOLOGY STUDIES  
 04/08/1999 - 04/14/2002 FY01: \$104,881 Total: \$328,145  
*Prin. Invest.:* C J VOROSMARTY  
*Tech. Officer:* GSFC/P T HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8452 UNIV OF NEW HAMPSHIRE - DURHAM 6490**  
 USE OF SAR FOR MONITORING DEFORESTATION AND SECONDARY  
 GROWTH IN THE TROPICS  
 04/09/1999 - 08/31/2000 FY01: -\$608 Total: \$40,934  
*Prin. Invest.:* W SALAS  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8486 UNIV OF NEW HAMPSHIRE - DURHAM 6491**  
 SONTRAC - A NEUTRON TRACKING DEVICE FOR SOLAR AND  
 ATMOSPHERIC PHYSICS  
 04/29/1999 - 10/30/2000 FY01: \$0 Total: \$171,043  
*Prin. Invest.:* J M RYAN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8641 UNIV OF NEW HAMPSHIRE - DURHAM 6492**  
 AN APD READOUT SCHEME FOR A SOLAR NEUTRON TRACKING DEVICE.  
 07/08/1999 - 06/30/2002 FY01: \$0 Total: \$368,600  
*Prin. Invest.:* M L MCCONNELL, NONE  
*Tech. Officer:* GSFC/F HERRERO  
*CASE Category:* 13 - PHYSICS

**NAG 5 8656 UNIV OF NEW HAMPSHIRE - DURHAM 6493**  
 EDUCATION & PUBLIC OUTREACH PROPOSAL - UNIV-LEVEL RESEARCH  
 PROJECTS FOR HIGH SCHOOL STUDENTS  
 08/19/1999 - 08/31/2000 FY01: -\$3 Total: \$997  
*Prin. Invest.:* M MCCONNELL  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8683 UNIV OF NEW HAMPSHIRE - DURHAM 6494**  
 THE CONTRIBUTION OF SATELLITE RADAR ALTIMETRY TO THE DETER-  
 MINATION OF RIVER DISCHARGE & LAKE/RESERVOIR  
 07/23/1999 - 07/14/2001 FY01: \$0 Total: \$132,199  
*Prin. Invest.:* C J VOROSMARTY  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8733 UNIV OF NEW HAMPSHIRE - DURHAM 6495**  
 CONVERSION SURFACE TECHNOLOGY FOR LOW ENERGY NEUTRAL  
 ATOM IMAGING.  
 09/14/1999 - 06/30/2002 FY01: \$0 Total: \$352,372  
*Prin. Invest.:* J QUINN  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

## NEW HAMPSHIRE

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8828 UNIV OF NEW HAMPSHIRE - DURHAM 6496**  
 "COOPERATION BETWEEN IGBP AND LAB: MEETING THE INTERNATIONAL CHALLENGE"  
 09/08/1999 - 03/14/2002 FY01: \$98,450 Total: \$214,950  
 Prin. Invest.: B MOORE III  
 Tech. Officer: GSFC/D DEERING  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9614 UNIV OF NEW HAMPSHIRE - DURHAM 6497**  
 MAGNETIC RECONNECTION IN SOLAR FLARES  
 05/16/2000 - 11/14/2001 FY01: \$0 Total: \$29,840  
 Prin. Invest.: T G FORBES  
 Tech. Officer: GSFC/W J WAGNER  
 CASE Category: 13 - PHYSICS

**NAG 5 9617 UNIV OF NEW HAMPSHIRE - DURHAM 6498**  
 A REGIONAL INTEGRATED MONITORING SYSTEM FOR THE HYDROLOGY OF THE PAN-ARCTIC MASS  
 05/23/2000 - 04/30/2002 FY01: \$132,842 Total: \$214,401  
 Prin. Invest.: C VOROSMARTY  
 Tech. Officer: GSFC/P HOUSER  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9685 UNIV OF NEW HAMPSHIRE - DURHAM 6499**  
 CONSOLIDATING THE VELA-REGION 1.809 MEV RESULTS  
 06/05/2000 - 06/14/2001 FY01: \$0 Total: \$3,500  
 Prin. Invest.: J RYAN  
 Tech. Officer: GSFC/J P NORRIS  
 CASE Category: 11 - ASTRONOMY

**NAG 5 9689 UNIV OF NEW HAMPSHIRE - DURHAM 6500**  
 LONG DURATION SOLAR OBSERVATIONS WITH COMPTEL  
 06/15/2000 - 06/14/2001 FY01: \$0 Total: \$5,000  
 Prin. Invest.: M L MCCONNELL  
 Tech. Officer: GSFC/J P NORRIS  
 CASE Category: 11 - ASTRONOMY

**NAG 5 9960 UNIV OF NEW HAMPSHIRE - DURHAM 6501**  
 CLUSTER ELECTRON DRIFT INSTRUMENT (EDI).  
 09/20/2000 - 10/31/2001 FY01: \$525,751 Total: \$867,315  
 Prin. Invest.: J M QUINN  
 Tech. Officer: GSFC/M GOLDSTEIN  
 CASE Category: 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10135 UNIV OF NEW HAMPSHIRE - DURHAM 6502**  
 PREDICTING CHANGES IN REGIONAL & GLOBAL BIOGEO- CHEMICAL CYCLES  
 02/14/2001 - 12/31/2001 FY01: \$800,000 Total: \$800,000  
 Prin. Invest.: B MOORE  
 Tech. Officer: GSFC/D E WICKLAND  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10203 UNIV OF NEW HAMPSHIRE - DURHAM 6503**  
 HARD X-RAY POLARIMETRY OF SOLAR FLARES WITH HESSI  
 12/28/2000 - 12/31/2001 FY01: \$68,115 Total: \$68,115  
 Prin. Invest.: M L MCCONNELL  
 Tech. Officer: GSFC/W WAGNER  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10260 UNIV OF NEW HAMPSHIRE - DURHAM 6504**  
 A SATELLITE-BASED SYSTEM FOR MONITORING FLUXES BETWEEN THE CONTINENTAL LAND MASS & COASTAL OCEANS  
 02/05/2001 - 12/31/2001 FY01: \$212,404 Total: \$212,404  
 Prin. Invest.: C VOROSMARTY  
 Tech. Officer: GSFC/J MARRA  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10360 UNIV OF NEW HAMPSHIRE - DURHAM 6505**  
 GGS/WIND MISSION MISSIONS OPERATIONS AND DATA ANALYSIS PHASE.  
 02/05/2001 - 02/14/2002 FY01: \$100,000 Total: \$100,000  
 Prin. Invest.: R TORBERT  
 Tech. Officer: GSFC/K OGILVIE  
 CASE Category: 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10420 UNIV OF NEW HAMPSHIRE - DURHAM 6506**  
 CONSTELLATION PATHFINDER TECHNOLOGY DEVELOPMENT: SYSTEMS INTEGRATION AND MANUFACTURABILITY.  
 03/12/2001 - 03/14/2002 FY01: \$49,645 Total: \$49,645  
 Prin. Invest.: D LYNCH  
 Tech. Officer: GSFC/P BUCHANAN  
 CASE Category: 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10472 UNIV OF NEW HAMPSHIRE - DURHAM 6507**  
 PARTICLE ENERGIZATION IN REVERSE AURORA  
 02/27/2001 - 02/28/2002 FY01: \$79,035 Total: \$79,035  
 Prin. Invest.: K LYNCH  
 Tech. Officer: GSFC/J SPANN  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 10835 UNIV OF NEW HAMPSHIRE - DURHAM 6508**  
 A NEW KINETIC MODEL FOR CORONAL HEATING AND GENERATION OF THE FAST SOLAR WIND BY ION-CYCLOTRON  
 04/27/2001 - 04/30/2002 FY01: \$94,021 Total: \$94,021  
 Prin. Invest.: P A ISENBERG  
 Tech. Officer: GSFC/W J WAGNER  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10883 UNIV OF NEW HAMPSHIRE - DURHAM 6509**  
 AN ASSESSMENT OF THE FEASIBILITY OF PREDICTING MAJOR GEOMAGNETIC DISTURBANCES FROM MONITORS IN  
 05/03/2001 - 04/30/2002 FY01: \$98,885 Total: \$98,885  
 Prin. Invest.: C FARRUGIA  
 Tech. Officer: GSFC/W WAGNER  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10890 UNIV OF NEW HAMPSHIRE - DURHAM 6510**  
 LOCAL INTERSTELLAR MEDIUM PARAMETERS  
 05/10/2001 - 05/31/2002 FY01: \$75,327 Total: \$75,327  
 Prin. Invest.: E MOEBIUS  
 Tech. Officer: GSFC/J GURMAN  
 CASE Category: 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10977 UNIV OF NEW HAMPSHIRE - DURHAM 6511**  
 NUMERICAL TESTS OF ERUPTIVE CME MODELS  
 05/29/2001 - 05/31/2002 FY01: \$53,067 Total: \$53,067  
 Prin. Invest.: T G FORBES  
 Tech. Officer: GSFC/W J WAGNER  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

## NEW HAMPSHIRE

**NAG 5 10988 UNIV OF NEW HAMPSHIRE - DURHAM 6512**  
 THE ROLE OF KINETICS IN NEARLY PERPENDICULAR CASCADES  
 06/05/2001 - 05/31/2002 FY01: \$86,312 Total: \$86,312  
*Prin. Invest.:* B J VASQUEZ  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11160 UNIV OF NEW HAMPSHIRE - DURHAM 6513**  
 LAND-USE CHANGE IN TEMPERATE EAST ASIA: LAND COVER CHANGE  
 IMPACTS ON CARBON FLUXES AND LAND PRODUCTI  
 08/03/2001 - 07/31/2002 FY01: \$36,831 Total: \$36,831  
*Prin. Invest.:* X XIAO  
*Tech. Officer:* GSFC/G Q GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11258 UNIV OF NEW HAMPSHIRE - DURHAM 6514**  
 AIR-SEA FLUX OF CO2: EFFECTS OF SMALL-SCALE VARIABILITY ON  
 LARGE-SCALE ESTIMATES  
 08/17/2001 - 08/31/2004 FY01: \$133,369 Total: \$133,369  
*Prin. Invest.:* J W CAMPBELL  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11310 UNIV OF NEW HAMPSHIRE - DURHAM 6515**  
 SCALING FOREST CARBON FLUX MEASUREMENTS FROM SITES TO LAND-  
 SCAPES: AHYPERSPECTRAL ANALYSIS OF F  
 08/31/2001 - 08/31/2004 FY01: \$268,075 Total: \$268,075  
*Prin. Invest.:* S OLLINGER  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 5 00132 UNIV OF NEW HAMPSHIRE - DURHAM 6516**  
 STEREO PHASE A CONCEPT STUDY FOR INSTIN MEASUREMENTS OF  
 PARTICLES & CME TRANSIENT (IMPACT)  
 02/22/2000 - 11/29/2001 FY01: \$825,709 Total: \$1,323,609  
*Prin. Invest.:* A GALVIN  
*Tech. Officer:* GSFC/A HARPER  
*CASE Category:* 13 - PHYSICS

**NAS 5 26645 UNIV OF NEW HAMPSHIRE - DURHAM 6517**  
 DEFINITION PHASE OF THE DETECTOR SUBSYSTEM FOR THE COMPTEL  
 08/19/1981 - 09/30/2002 FY01: \$250,000 Total: \$30,541,653  
*Prin. Invest.:* J RYAN  
*Tech. Officer:* GSFC/J NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 30744 UNIV OF NEW HAMPSHIRE - DURHAM 6518**  
 ELECTRON DRIFT EXPERIMENT & ACTIVE SPACECRAFT POTENTIAL  
 11/22/1989 - 10/17/2000 FY01: \$0 Total: \$16,084,594  
*Prin. Invest.:* R TORBERT  
*Tech. Officer:* GSFC/L CHRISTENSEN  
*CASE Category:* 13 - PHYSICS

**NAS 5 96063 UNIV OF NEW HAMPSHIRE - DURHAM 6519**  
 MODIS-EOS DEVELOPMENT OF ALGORITHMS  
 07/16/1996 - 12/14/2001 FY01: \$217,000 Total: \$1,156,000  
*Prin. Invest.:* J CAMPBELL  
*Tech. Officer:* GSFC/D TOLL, GSFC/B CONBOY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 298 UNIV OF NEW HAMPSHIRE - DURHAM 6520**  
 PEM-TROPICS B MY 1/2  
 04/30/1998 - 07/31/2001 FY01: \$0 Total: \$818,000  
*Prin. Invest.:* R W TALBOT, J E DIBB  
*Tech. Officer:* LARC/J M HOELL, JR., LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 410 UNIV OF NEW HAMPSHIRE - DURHAM 6521**  
 TRACE-P DC-8 AND P3-B AIRCRAFT MY 1/3  
 09/13/2000 - 06/30/2003 FY01: \$168,939 Total: \$379,907  
*Prin. Invest.:* R W TALBOT  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 226 UNIV OF NEW HAMPSHIRE - DURHAM 6522**  
 TROPICAL BIOCHEMISTRY & NASA LBA ECOLOGY SCIENCE S  
 09/10/1997 - 12/31/2001 FY01: \$173,479 Total: \$656,894  
*Prin. Invest.:* D BARTLETT  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 304 UNIV OF NEW HAMPSHIRE - DURHAM 6523**  
 WEB BASED SYSTEM FOR TERRESTRIAL ENVIRONMENTAL RESEARCH  
 04/22/1998 - 06/30/2002 FY01: \$610,000 Total: \$3,385,000  
*Prin. Invest.:* B MOORE  
*Tech. Officer:* GSFC/M MAIDEN  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 5 338 UNIV OF NEW HAMPSHIRE - DURHAM 6524**  
 MODELING THE BIOGEOCHEMICAL SYSTEM OF THE TERRESTRIAL  
 AMAZON: ISSUES FOR SUSTAINABILITY  
 06/23/1998 - 12/31/2001 FY01: \$232,670 Total: \$1,023,276  
*Prin. Invest.:* B MOORE, 111  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 357 UNIV OF NEW HAMPSHIRE - DURHAM 6525**  
 SOIL BIOGEOCHEMISTRY OF CARBON, NUTRIENTS AND TRACE GAS IN  
 THE AMAZON REGION OF BRAZIL: FIELD AND  
 08/03/1998 - 12/31/2001 FY01: \$235,394 Total: \$1,034,065  
*Prin. Invest.:* P CRILL  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 477 UNIV OF NEW HAMPSHIRE - DURHAM 6526**  
 EVALUATION OF HYPERSPECTRAL REQUIREMENTS FOR REMOTE ESTIMA-  
 TION OF FOREST ECOSYSTEM COMPOSITIO  
 03/22/2000 - 12/31/2001 FY01: \$108,292 Total: \$121,360  
*Prin. Invest.:* M E MARTIN  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 499 UNIV OF NEW HAMPSHIRE - DURHAM 6527**  
 "LENA/IMAGE" MO&DA - ON-ORBIT EVALUATION & VALIDATION OF THE  
 LENA INSTRUMENTOPERATION & DATA  
 05/03/2000 - 01/31/2001 FY01: \$0 Total: \$28,065  
*Prin. Invest.:* J M QUINN  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/T E MOORE  
*CASE Category:* 11 - ASTRONOMY

## NEW JERSEY

## NASA'S UNIVERSITY PROGRAM

**NCC 5 587 UNIV OF NEW HAMPSHIRE - DURHAM 6528**  
 VALIDATING, SCALING AND PARAMETERIZING A FOREST RE GROWTH  
 MODEL FOR THE AMAZON REGION USING AIRCRAFT  
 08/30/2001 - 08/31/2004 FY01: \$281,397 Total: \$281,397  
*Prin. Invest.:* W SALAS  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30125 UNIV OF NEW HAMPSHIRE - DURHAM 6529**  
 SOIL HYDROLOGICAL CONTROLS OVER NITROGEN OXIDE EMISSIONS  
 AND NITROGEN CYCLING IN TROPICAL AGRICULTURE  
 06/03/1998 - 08/31/2000 FY01: -\$8,572 Total: \$57,428  
*Prin. Invest.:* P CRILL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NGT 5 30349 UNIV OF NEW HAMPSHIRE - DURHAM 6530**  
 SOURCE APPORTIONMENT OF ANTHROPOGENIC AEROSOLS CONTRIBUTING  
 TO DIRECT RADIATIVE FORCING IN SOUTHERN  
 08/24/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* J E DIBB  
*Tech. Officer:* GSFC/M WEITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40010 UNIV OF NEW HAMPSHIRE - DURHAM 6531**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATHAN COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 01/30/1997 - 02/28/2001 FY01: -\$254,296 Total: \$1,028,851  
*Prin. Invest.:* D S BARTLETT  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40088 UNIV OF NEW HAMPSHIRE - DURHAM 6532**  
 NEW HAMPSHIRE SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/21/2001 - 02/28/2002 FY01: \$685,546 Total: \$685,546  
*Prin. Invest.:* D BARTLETT  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NEW JERSEY

**NAG 1 01110 NEW JERSEY INST OF TECHNOLOGY 6533**  
 NANOCOMPOSITES BASED ON LIQUID CRYSTALLINE POLYMERS  
 08/30/2001 - 09/30/2004 FY01: \$131,933 Total: \$131,933  
*Prin. Invest.:* M JAFFE  
*Tech. Officer:* LARC/E S WEISER, LARC/B J JENSEN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2367 NEW JERSEY INST OF TECHNOLOGY 6534**  
 GRAVITY AND GRANULAR MATERIALS GRAVITY AND GRANULAR  
 MATERIALS  
 03/24/2000 - 11/30/2003 FY01: \$10,435 Total: \$20,333  
*Prin. Invest.:* L KONDIC, NONE  
*Tech. Officer:* GRC/A WILKENSEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2459 NEW JERSEY INST OF TECHNOLOGY 6535**  
 DATA ANALYSIS FOR REAL-TIME/POST FLIGHT HEALTH MONITORING OF  
 PROPULSION SYSTEMS  
 06/07/2000 - 12/31/2001 FY01: \$48,702 Total: \$104,419  
*Prin. Invest.:* D P DHAWAN  
*Tech. Officer:* GRC/E WONG  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2475 NEW JERSEY INST OF TECHNOLOGY 6536**  
 DATA MINING AND OPTIMIZATION TOOLS FOR ENGINE CONDITION  
 MONITORING  
 07/19/2000 - 11/30/2001 FY01: \$60,599 Total: \$94,022  
*Prin. Invest.:* D P DHAWAN  
*Tech. Officer:* GRC/J LITT  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 5 4919 NEW JERSEY INST OF TECHNOLOGY 6537**  
 STUDIES OF SOLAR MAGNETIC FIELDS AND SOLAR ACTIVITY  
 07/08/1997 - 05/31/2000 FY01: -\$16 Total: \$1,044,459  
*Prin. Invest.:* D R GOODE  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5144 NEW JERSEY INST OF TECHNOLOGY 6538**  
 A STUDENT-DESIGNED EXPERIMENT TO ANALYZE PARTICLES COLLECTED  
 DURING A NASA BALLOON FLIGHT  
 06/17/1997 - 12/17/1999 FY01: \$0 Total: \$34,220  
*Prin. Invest.:*  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6381 NEW JERSEY INST OF TECHNOLOGY 6539**  
 MEASUREMENTS OF THE SOLAR CORONA AND MAGNETIC FIELDS USING  
 IMAGING MICROWAVE SPECTROSCOPY  
 10/31/1997 - 06/30/2001 FY01: \$0 Total: \$316,003  
*Prin. Invest.:* D GARY  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 7085 NEW JERSEY INST OF TECHNOLOGY 6540**  
 STATISTICAL STUDIES OF FILAMENT DIAPPEARANCES BY ANALYZING  
 FULL-DISK YOHKOH SXT AND BBSO HX DATA  
 03/13/1998 - 10/14/2001 FY01: \$0 Total: \$105,906  
*Prin. Invest.:* H WANG  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7454 NEW JERSEY INST OF TECHNOLOGY 6541**  
 EARTHSHINE MEASUREMENTS OF GLOBAL ATMOSPHERIC PROPERTIES  
 07/23/1998 - 07/31/2001 FY01: \$107,176 Total: \$325,721  
*Prin. Invest.:* P R GOODE  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7837 NEW JERSEY INST OF TECHNOLOGY 6542**  
 SOHO/BBSO COORDINATED STUDY ON MAGNETIC RECONNECTION IN  
 THE QUIET SUN  
 12/22/1998 - 12/31/2001 FY01: \$81,154 Total: \$232,363  
*Prin. Invest.:* H WANG  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER



**NAG 5 8466 NEW JERSEY INST OF TECHNOLOGY 6543**  
 SOFTWARE DEVELOPMENT FOR THE OWENS VALLEY SOLAR ARRAY IN  
 SUPPORT OF HESSI  
 04/29/1999 - 09/30/2000 FY01: -\$313 Total: \$73,204  
*Prin. Invest.:* D E GARY  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8485 NEW JERSEY INST OF TECHNOLOGY 6544**  
 INTERACTION OF WAVES AND CONVECTION IN THE SUN  
 05/04/1999 - 04/30/2002 FY01: \$47,923 Total: \$131,417  
*Prin. Invest.:* M F WOODARD  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9501 NEW JERSEY INST OF TECHNOLOGY 6545**  
 STUDIES OF SMALL-SCALE DYNAMICS BY JOINT TRACE AND BBSO  
 OBSERVATIONS  
 04/20/2000 - 04/30/2002 FY01: \$74,612 Total: \$116,483  
*Prin. Invest.:* H WANG  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9519 NEW JERSEY INST OF TECHNOLOGY 6546**  
 SOURCES OF SOLAR IRRADIANCE VARIATION  
 05/02/2000 - 07/30/2001 FY01: \$0 Total: \$47,100  
*Prin. Invest.:* M F WOODARD  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9682 NEW JERSEY INST OF TECHNOLOGY 6547**  
 STUDIES OF SOLAR MAGNETIC FIELDS & SOLAR ACTIVITY  
 06/26/2000 - 05/31/2002 FY01: \$263,866 Total: \$525,155  
*Prin. Invest.:* P R GOODE  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9730 NEW JERSEY INST OF TECHNOLOGY 6548**  
 NEW GRANT GLOBAL ASYMMETRIES IN SOLAR INTERIOR FROM SOHO  
 06/22/2000 - 06/30/2001 FY01: \$0 Total: \$73,307  
*Prin. Invest.:* P GOODE  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9738 NEW JERSEY INST OF TECHNOLOGY 6549**  
 NEW GRANT STUDY OF FILAMENT ERUPTIONS AND CORONAL MASS EJECTIONS BY SOHO  
 07/18/2000 - 07/31/2001 FY01: \$0 Total: \$100,440  
*Prin. Invest.:* H WANG  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10212 NEW JERSEY INST OF TECHNOLOGY 6550**  
 MICROWAVE IMAGING SPECTROSCOPY OF SOLAR FLARES IN SUPPORT OF HESSI  
 01/03/2001 - 12/31/2001 FY01: \$78,945 Total: \$78,945  
*Prin. Invest.:* D E GARY  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10891 NEW JERSEY INST OF TECHNOLOGY 6551**  
 STUDY OF OVSA MICROWAVES AND HESSI HARD X-RAYS  
 05/10/2001 - 05/31/2002 FY01: \$47,208 Total: \$47,208  
*Prin. Invest.:* J LEE  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10894 NEW JERSEY INST OF TECHNOLOGY 6552**  
 EPHEMERAL REGIONS AND CANCELLING MAGNETIC FEATURES  
 05/14/2001 - 05/31/2002 FY01: \$46,245 Total: \$46,245  
*Prin. Invest.:* J CHAE  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10910 NEW JERSEY INST OF TECHNOLOGY 6553**  
 HESSI-BBSO JOINT STUDIES OF SOLAR FLARES  
 05/24/2001 - 05/31/2002 FY01: \$74,971 Total: \$74,971  
*Prin. Invest.:* H WANG  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11007 NEW JERSEY INST OF TECHNOLOGY 6554**  
 EARTHSHINE MEASUREMENTS OF THE EARTH'S ALBEDO  
 06/29/2001 - 06/30/2002 FY01: \$73,505 Total: \$73,505  
*Prin. Invest.:* P R GOODE  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1714 NEW JERSEY INST OF TECHNOLOGY 6555**  
 HIGH TEMPERATURE PHASES AND PHASE EQUILIBRIA IN REACTIVE  
 MOLTEN METAL-BASED SYSTEMS  
 05/04/2000 - 11/30/2003 FY01: \$99,750 Total: \$149,750  
*Prin. Invest.:* E DREIZIN  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 746 NEW JERSEY INST OF TECHNOLOGY 6556**  
 DETAILED REACTION MECHANISMS AND PARTICLE INTERACTION IN  
 BURNING TWO-PHASE SYSTEMS  
 12/07/1999 - 06/30/2001 FY01: \$0 Total: \$53,363  
*Prin. Invest.:* E L DREIZIN  
*Tech. Officer:* GRC/R F FRIEDMAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 9103 PASSAIC COUNTY COMMUNITY COLLEGE 6557**  
 PANTHER PROJECT (PATERSON & NASA TOGETHER FOR HIGH EXPECTATIONS & RESULTS)  
 03/10/2000 - 02/28/2002 FY01: \$100,000 Total: \$200,000  
*Prin. Invest.:* R EPSTEIN  
*Tech. Officer:* HQ/STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2291 PRINCETON UNIV 6558**  
 ADAPTIVE AND OPTIMAL CONTROLLER DESIGNS FOR UNCERTAIN AEROSPACE STRUCTURES  
 04/13/2000 - 12/01/2000 FY01: \$0 Total: \$45,000  
*Prin. Invest.:* M Q PHAN  
*Tech. Officer:* LARC/P G MAGHAMI  
*CASE Category:* 41 - AERONAUTICAL ENGR

## NEW JERSEY

## NASA'S UNIVERSITY PROGRAM

**NAG 1 01010**                      **PRINCETON UNIV**                      **6559**  
 SELF-HEALING ORGANIC/INORGANIC NANOCOMPOSITES  
 01/10/2001 - 12/31/2003      FY01: \$125,000                      Total: \$125,000  
*Prin. Invest.:* A AKSAY  
*Tech. Officer:* WFF/T L STCLAIR  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 616**                      **PRINCETON UNIV**                      **6567**  
 INTERSTELLAR MEDIUM ABSORPTION PROFILE SPECTROGRAPH (IMAPS)  
 01/01/1983 - 10/31/2002      FY01: \$10,649                      Total: \$10,722,665  
*Prin. Invest.:* E B JENKINS  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 2 561**                      **PRINCETON UNIV**                      **6560**  
 STUDIES IN ROTORCRAFT SYSTEM IDENTIFICATION  
 02/03/1989 - 01/31/2000      FY01: \$0                      Total: \$372,867  
*Prin. Invest.:* H C CURTISS, R M MCKILLUP  
*Tech. Officer:* ARC/J A FRANKLIN, ARC/M B TISCHLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 1629**                      **PRINCETON UNIV**                      **6568**  
 HST GTO PARTICIPATION  
 07/15/1991 - 08/31/2000      FY01: \$0                      Total: \$925,196  
*Prin. Invest.:* E J GROTH  
*Tech. Officer:* GSFC/S SOBIESKI  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1327**                      **PRINCETON UNIV**                      **6561**  
 DEVELOPMENT OF UNSTRUCTURED METHODS FOR EFFICIENT AERODY-  
 NOMIC SIMULATION & DESIGN  
 05/21/1999 - 03/14/2002      FY01: \$69,588                      Total: \$205,335  
*Prin. Invest.:* T J BAKER, A J SMITS  
*Tech. Officer:* ARC/S E CLIFF  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3364**                      **PRINCETON UNIV**                      **6569**  
 ORIGIN AND EVOLUTION OF DUST IN ELLIPTICAL GALAXIES  
 08/28/1996 - 08/31/2001      FY01: \$0                      Total: \$151,000  
*Prin. Invest.:* G R KNAPP  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1400**                      **PRINCETON UNIV**                      **6562**  
 STUDIES IN ROTORCRAFT SYSTEM IDENTIFICATION  
 03/28/2000 - 09/30/2001      FY01: \$0                      Total: \$22,500  
*Prin. Invest.:* H C CURTIS  
*Tech. Officer:* ARC/M B TISCHLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 6494**                      **PRINCETON UNIV**                      **6570**  
 REMOTE SENSING FOR LAND SURFACE HYDROLOGY: ACCURACY AND  
 UNCERTAINTY ANALYSES  
 10/27/1997 - 09/30/2001      FY01: \$0                      Total: \$436,752  
*Prin. Invest.:* E WOOD  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 1475**                      **PRINCETON UNIV**                      **6563**  
 PIEZOELECTRIC MICROCANTILEVERS WITH NANOSCOPIC CONTACTS  
 A BREAKTHROUGH SENSING TECHNOLOGY  
 04/20/2001 - 04/14/2003      FY01: \$598,740                      Total: \$598,740  
*Prin. Invest.:* I AKSAY  
*Tech. Officer:* ARC/M MEYYAPPAN, ARC/H PATRIDGE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 6511**                      **PRINCETON UNIV**                      **6571**  
 "ESTIMATION OF FLOOD HAZARDS THROUGH REMOTE SENSING AND  
 MODELING"  
 11/04/1997 - 09/30/2001      FY01: \$0                      Total: \$144,589  
*Prin. Invest.:* E WOOD  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 3 2248**                      **PRINCETON UNIV**                      **6564**  
 THE CONTROL AND DYNAMICS OF HARD SPHERE COLLOIDAL DISPERS-  
 IONS  
 03/30/1999 - 02/23/2004      FY01: \$432,500                      Total: \$1,032,500  
*Prin. Invest.:* P M CHALKIN  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 6591**                      **PRINCETON UNIV**                      **6572**  
 EVALUATION AND INTERCOMPARISON OF THREE-DIMENSIONAL GLOBAL  
 MARINE CARBON CYCLE MODELS  
 11/07/1997 - 12/31/2000      FY01: \$0                      Total: \$172,804  
*Prin. Invest.:* J L SARMIENTO  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2380**                      **PRINCETON UNIV**                      **6565**  
 ELECTROHYDRODYNAMIC FLOWS IN ELECTROCHEMICAL SYSTEMS  
 04/06/2000 - 11/30/2003      FY01: \$90,250                      Total: \$150,250  
*Prin. Invest.:* D A SAVILLE  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6734**                      **PRINCETON UNIV**                      **6573**  
 IMAGING THE CELESTIAL EQUATOR AT 12 MICRONS AND 2.5 MICRONS  
 AND COMPARISON WITH FIVE OTHER  
 12/16/1997 - 12/31/2001      FY01: \$0                      Total: \$45,000  
*Prin. Invest.:* G KNAPP  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 3 2473**                      **PRINCETON UNIV**                      **6566**  
 FUEL SULFUR ISSUES AND SOX/NOX/COX HOT SECTION INTERACTIONS  
 07/12/2000 - 09/30/2001      FY01: \$0                      Total: \$100,087  
*Prin. Invest.:* D L DRYER  
*Tech. Officer:* GRC/M RABINOWITZ  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 7016**                      **PRINCETON UNIV**                      **6574**  
 ASTROMETRY OF GRAVITATIONAL LENSING WITH SIMBAD  
 02/17/1998 - 02/14/2000      FY01: \$0                      Total: \$92,522  
*Prin. Invest.:* B PACZYNSKI  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7030** PRINCETON UNIV 6575  
 INTERSTELLAR STUDIES - ATP  
 02/17/1998 - 02/14/2002 FY01: \$0 Total: \$297,933  
*Prin. Invest.:* B T DRAINE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7047** PRINCETON UNIV 6576  
 QUASAR ABSORPTION LINES AT LOW AND INTERMEDIATE REDSHIFTS - ATP  
 02/19/1998 - 02/14/2001 FY01: \$0 Total: \$156,000  
*Prin. Invest.:* J N BACHALL  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7066** PRINCETON UNIV 6577  
 DYNAMICS OF THE GALAXY, GLOBULAR CLUSTERS, AND THE LOCAL GROUP - ATP  
 02/26/1998 - 02/28/2002 FY01: \$0 Total: \$229,480  
*Prin. Invest.:* S D TREMAINE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7154** PRINCETON UNIV 6578  
 FORMATION AND EVOLUTION OF GROUPS AND FILAMENTS - ATP  
 03/16/1998 - 03/14/2002 FY01: \$0 Total: \$348,752  
*Prin. Invest.:* D N SPERGEL  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7297** PRINCETON UNIV 6579  
 A TERRESTRIAL WATER AND ENERGY BUDGET FOR THE BOREAS STUDY REGION SCALE USING FIELD MEASUREMENTS, R  
 04/21/1998 - 04/30/2002 FY01: \$0 Total: \$103,503  
*Prin. Invest.:* E F WOOD  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7310** PRINCETON UNIV 6580  
 LONG-TERM ORBITAL EVOLUTION IN PLANETARY SYSTEMS AND PROTOPLANETARY DISKS  
 04/22/1998 - 04/30/2001 FY01: \$0 Total: \$217,000  
*Prin. Invest.:* S D TREMAINE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7544** PRINCETON UNIV 6581  
 HYDROLOGY OF EXTREME FLOODS FOR THE UNITED STATES EAST OF THE ROCKYMOUNTAINS  
 06/23/1998 - 09/30/2001 FY01: \$0 Total: \$246,097  
*Prin. Invest.:* J A SMITH  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7744** PRINCETON UNIV 6582  
 DEVELOPMENT AND EVALUATION OF RADAR DATA QUALITY CONTROL ALGORITHMS  
 10/28/1998 - 10/31/2001 FY01: \$76,390 Total: \$254,471  
*Prin. Invest.:* J A SMITH  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8084** PRINCETON UNIV 6583  
 PRIMARY AND SECONDARY ANISOTROPIES OF COSMIC MICRO WAVE BACKGROUND  
 01/19/1999 - 02/28/2002 FY01: \$92,000 Total: \$270,664  
*Prin. Invest.:* U SELJAK  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8365** PRINCETON UNIV 6584  
 STUDYING THE EVOLUTION OF X-RAY CLUSTERS OF GALAXIES USING LARGE-SCALE HIGH RESOLUTION COSMOLOGIC  
 03/15/1999 - 03/14/2002 FY01: \$123,559 Total: \$363,066  
*Prin. Invest.:* R CEN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8385** PRINCETON UNIV 6585  
 EVOLUTION AND DYNAMICS OF PROTOSTELLAR DISKS  
 03/03/1999 - 02/28/2002 FY01: \$40,000 Total: \$125,000  
*Prin. Invest.:* J GOODMAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8676** PRINCETON UNIV 6586  
 ATMOSPHERIC AEROSOL EVOLUTION AND EXCHANGE  
 07/08/1999 - 07/14/2002 FY01: \$0 Total: \$322,129  
*Prin. Invest.:* L RUSSELL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9274** PRINCETON UNIV 6587  
 EARLY IDENTIFICATION & INTERPRETATION OF QUASAR/ AGN MICROLINING EVENT: PROBES OF ACCRETIONDISK  
 03/15/2000 - 03/14/2002 FY01: \$91,000 Total: \$173,240  
*Prin. Invest.:* E TURNER  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9284** PRINCETON UNIV 6588  
 FINDING THE BARYONS: MATCHING COSMOLOGICAL PREDICTIONS WITH THE X-RAY SKY  
 04/17/2000 - 04/30/2002 FY01: \$99,674 Total: \$210,344  
*Prin. Invest.:* J P OSTRICKER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9414** PRINCETON UNIV 6589  
 UNDERSTANDING WATER, CLIMATE AND GLOBAL CHANGE: A GEWEX GLOBAL WATER AND ENERGY PATHFINDER DATA SET  
 04/11/2000 - 04/14/2002 FY01: \$58,811 Total: \$95,448  
*Prin. Invest.:* E WOOD  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9486** PRINCETON UNIV 6590  
 TERRESTRIAL HYDROLOGY & CLIMATE STUDIES USING EOS- ERA DATA  
 04/17/2000 - 03/31/2002 FY01: \$92,619 Total: \$153,958  
*Prin. Invest.:* E WOOD  
*Tech. Officer:* GSFC/P HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NEW JERSEY

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9635**                      **PRINCETON UNIV**                      **6591**  
 TMI SOIL MOISTURE PATHFINDER DATA STUDY  
 06/05/2000 - 05/31/2002      FY01: \$40,003                      Total: \$90,002  
*Prin. Invest.:* E WOOD  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9748**                      **PRINCETON UNIV**                      **6592**  
 "SATELLITE ATTITUDE ESTIMATION WITH THE TWO STEP OPTIMAL ESTI-  
 MATOR"  
 07/14/2000 - 02/28/2002      FY01: \$0                      Total: \$50,000  
*Prin. Invest.:* N KASDIN  
*Tech. Officer:* GSFC/R HARMAN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9810**                      **PRINCETON UNIV**                      **6593**  
 REGIONAL CONTRIBUTION TO THE GLOBAL TROPOSPHERIC OZONE  
 BUDGET-GLOBAL MODELING AND DATA ANALYSIS  
 07/18/2000 - 07/14/2001      FY01: \$32,692                      Total: \$61,844  
*Prin. Invest.:* D L MAUZERALL  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9891**                      **PRINCETON UNIV**                      **6594**  
 USE OF TRMM DATA TO EVALUATE BENEFITS OF POST-2002 GLOBAL  
 PRECIPITATION MISSION FOR LAND SURFACE HYD  
 08/23/2000 - 08/31/2002      FY01: \$63,000                      Total: \$126,000  
*Prin. Invest.:* E F WOOD  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10217**                      **PRINCETON UNIV**                      **6595**  
 ENERGY TRANSPORT & DISSIPATION OF ELECTROMAGNETIC ION CYCLO-  
 TRON WAVES IN THE MAGNETOSPHERE/IONOSP  
 01/05/2001 - 02/07/2001      FY01: \$0                      Total: \$0  
*Prin. Invest.:* J R JOHNSON  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10456**                      **PRINCETON UNIV**                      **6596**  
 RESONANT & SECULAR ORBITAL DYNAMICS OF PLANETS, PLANETES-  
 IMALS & SATELLITES  
 02/21/2001 - 02/28/2002      FY01: \$60,000                      Total: \$60,000  
*Prin. Invest.:* S TREMAINE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10481**                      **PRINCETON UNIV**                      **6597**  
 MICROWAVE ANISOTROPY PROBE (MAP) INVESTIGATION PHASE III  
 COMPLETION & PHASE IV DATA ANALYSIS  
 03/01/2001 - 07/31/2001      FY01: \$381,540                      Total: \$381,540  
*Prin. Invest.:* L PAGE  
*Tech. Officer:* GSFC/C BENNET  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10811**                      **PRINCETON UNIV**                      **6598**  
 INTERSTELLAR STUDIES OF DUST AND GAS (ATP 2000)  
 04/30/2001 - 04/30/2002      FY01: \$60,000                      Total: \$60,000  
*Prin. Invest.:* B T DRAINE  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10933**                      **PRINCETON UNIV**                      **6599**  
 MODELING AND SIMULATION OF THE MAXIM PATHFINDER MISSION:  
 PRECISION SPACECRAFT FORMATION CONTROL  
 06/04/2001 - 10/31/2001      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* J KASDIN  
*Tech. Officer:* GSFC/F L MARKLEY  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 11094**                      **PRINCETON UNIV**                      **6600**  
 PARALLAXES OF RED GIANT STARS (ADP 2000)  
 07/10/2001 - 07/14/2002      FY01: \$38,391                      Total: \$38,391  
*Prin. Invest.:* G R KNAPP  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11111**                      **PRINCETON UNIV**                      **6601**  
 LAND SURFACE MODELING STUDIES IN SUPPORT OF AQUA AMSR-E  
 VALIDATION AQUA-0088-0029  
 07/12/2001 - 08/31/2002      FY01: \$46,591                      Total: \$46,591  
*Prin. Invest.:* E F WOOD  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11136**                      **PRINCETON UNIV**                      **6602**  
 TESTING COSMOLOGICAL MODELS WITH QSO ABSORBERS (L TSA 2000)  
 07/20/2001 - 03/30/2002      FY01: \$88,745                      Total: \$88,745  
*Prin. Invest.:* T M TRIPP  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11301**                      **PRINCETON UNIV**                      **6603**  
 USING REMOTE SENSING AND OCEAN MEASUREMENTS TO CON TRAIN  
 CARBON FLUXES IN THE SOUTHERN OCEAN  
 08/31/2001 - 08/31/2003      FY01: \$155,253                      Total: \$155,253  
*Prin. Invest.:* M BENDER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1368**                      **PRINCETON UNIV**                      **6604**  
 ELECTROHYDRODYNAMICS OF SUSPENSIONS  
 05/30/1997 - 11/30/2000      FY01: \$0                      Total: \$389,000  
*Prin. Invest.:* D SAVILLE  
*Tech. Officer:* MSFC/D NOENER  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1517**                      **PRINCETON UNIV**                      **6605**  
 TERRESTRIAL HYDROLOGY AND CLIMATE STUDIES USING EOS-ERA DATA  
 (CATEGORY 2)  
 05/07/1998 - 04/30/2002      FY01: \$0                      Total: \$715,753  
*Prin. Invest.:* E F WOOD  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1521**                      **PRINCETON UNIV**                      **6606**  
 OROGRAPHIC RAINFALL IN THE APPALACHIAN REGION OF THE MISSIS-  
 SIPPI RIVER BASIN  
 05/15/1998 - 10/01/2001      FY01: \$0                      Total: \$206,179  
*Prin. Invest.:* J A SMITH  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 30110**                      **PRINCETON UNIV**                      **6607**  
 SPACE TELESCOPE IMAGING SPECTROGRAPH PROGRAM SUPPORT  
 06/17/1987 - 09/30/2001      FY01: \$247,245                      Total: \$1,114,245  
*Prin. Invest.:* E JENKINS  
*Tech. Officer:* GSFC/D VITAGLINO  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 96021**                      **PRINCETON UNIV**                      **6608**  
 MICROWAVE ANISOTROPY PROBE INVESTIGATION (PHASE I DEFINITION STUDY)  
 06/28/1996 - 05/30/2001      FY01: \$465,566                      Total: \$9,368,566  
*Prin. Invest.:* D WILKINSON  
*Tech. Officer:* GSFC/R CUDDAPAH  
*CASE Category:* 11 - ASTRONOMY

**NCC 1 01010**                      **PRINCETON UNIV**                      **6609**  
 DEV OF A DESIGN METHODOLOGY FOR RECONFIGURABLE FLIGHT CONTROL SYSTEMS  
 02/27/2001 - 02/28/2002      FY01: \$50,992                      Total: \$50,992  
*Prin. Invest.:* I A AKSAY  
*Tech. Officer:* LARC/E J SIOCHI, LARC/T L ST. CLAIR  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 670**                      **PRINCETON UNIV**                      **6610**  
 STRUCTURE AND RESPONSE OF SPHERICAL DIFFUSION FLAMES  
 02/08/1999 - 12/29/2002      FY01: \$128,750                      Total: \$433,750  
*Prin. Invest.:* C K LAW  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 687**                      **PRINCETON UNIV**                      **6611**  
 AERODYNAMICS AND CHEMICAL KINETICS OF PREMIXED FLAMES AT HIGH PRESSURE  
 03/12/1999 - 01/03/2003      FY01: \$114,000                      Total: \$339,000  
*Prin. Invest.:* C K LAW  
*Tech. Officer:* GRC/D SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 735**                      **PRINCETON UNIV**                      **6612**  
 SCIENTIFIC SUPPORT FOR A SPACE SHUTTLE DROPLET BURNING EXPERIMENT  
 09/30/1999 - 08/18/2002      FY01: \$223,079                      Total: \$502,248  
*Prin. Invest.:* F L DRYER  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 30113**                      **PRINCETON UNIV**                      **6613**  
 CHANGE IN FOREST COVER OF NANG RONG, THAILAND: AN INTEGRATED PRGM OF LANDSCAPE ANALYSIS, EMPIRICAL S  
 10/01/1997 - 08/31/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* S HUBBELL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30134**                      **PRINCETON UNIV**                      **6614**  
 RESPONSE OF ENSO TO MODULATIONS IN TROPICAL CLIMATE/STUDENT: WITTENBERG  
 09/04/1998 - 08/31/2001      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* G PHILANDER  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30137**                      **PRINCETON UNIV**                      **6615**  
 TRANSBOUNDARY AIR POLLUTION IN ASIA/STUDENT: HOLLOWAY  
 09/04/1998 - 08/31/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* H LEVY, 11  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30156**                      **PRINCETON UNIV**                      **6616**  
 THE INFLUENCE OF THE TROPOSPHERE'S STATIC STABILITY ON CLIMATE-SENSITIVITY  
 08/28/1998 - 08/31/2000      FY01: \$0                      Total: \$34,900  
*Prin. Invest.:* I M HELD, SCHNEIDER  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30333**                      **PRINCETON UNIV**                      **6617**  
 THE INTERACTION BETWEEN THE ABYSSAL CIRCULATION & THE WIND DRIVEN OCEAN DYNAMICS & EFFECTS ON THE CL  
 08/16/2000 - 08/31/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* G PHILANDER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30341**                      **PRINCETON UNIV**                      **6618**  
 ELEPHANTS, FIRE & VEGETATION CHANGE IN SOUTHERN AFRICAN WOODLANDS/STUDENT: RICARDO HOLDO  
 08/21/2000 - 08/31/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* A DOBSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30356**                      **PRINCETON UNIV**                      **6619**  
 MODELING MARINE DENITRIFICATION & N2 FIXATION/STUDENT: CURTIS DEUTSCH  
 08/24/2000 - 08/31/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* J SARMIENTO  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50033**                      **PRINCETON UNIV**                      **6620**  
 MEASURING ANISOTROPY IN THE COSMIC MICROWAVE BACKGROUND RECEIVERS  
 08/04/1997 - 07/31/2000      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* L PAGE/MILLER  
*Tech. Officer:* GSFC/A NURRIDIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50193**                      **PRINCETON UNIV**                      **6621**  
 EXPERIMENTAL & THEORETICAL STUDIES OF ANOMALOUS RESISTIVITY IN MAGNETIC RECONNECTION  
 06/05/1998 - 06/30/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* M YAMADA  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50333**                      **PRINCETON UNIV**                      **6622**  
 ROLE OF GLOBAL SNOW COVER EXTENT ON CLIMATE VARIABILITY & PREDICTABILITY/STUDENT: RADHIKA WIJETUNG  
 08/17/2000 - 08/31/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* E F WOOD  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NEW JERSEY

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50356**                    **PRINCETON UNIV**                    **6623**  
 LITHIUM LORENTZ FORCE ACCELERATOR RESEARCH FOR HIGH POWER  
 STEADY-STATE SPACE PROPULSION (STUDENT:  
 05/23/2001 - 08/31/2002      FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* E CHOUERI  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50370**                    **PRINCETON UNIV**                    **6624**  
 OPTICALLY-TUNABLE COLLOIDAL CRYSTALLIZATION (STUDENT: W.  
 RISTENPART)  
 06/13/2001 - 08/31/2002      FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* D SAVILLE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2521**                    **ROWAN UNIV**                    **6625**  
 GRAVITATIONAL INFLUENCES ON FLAME PROPAGATION THROUGH NON  
 UNIFORM PREMIXED GAS SYSTEMS  
 01/10/2001 - 11/30/2001      FY01: \$10,745                    Total: \$10,745  
*Prin. Invest.:* D MARCHESI  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 6776**                    **ROWAN UNIV**                    **6626**  
 RESEARCH IN PLANETARY ASTRONOMY  
 01/09/1998 - 06/30/2002      FY01: \$85,885                    Total: \$246,728  
*Prin. Invest.:* D KLASSEN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9593**                    **ROWAN UNIV**                    **6627**  
 FUNDING FOR PROFESSOR KAREN MAGEE-SAUER, DEPT OF CHEMISTRY  
 & PHYSICS; PRODUCTION DATA PROCESSING  
 06/07/2000 - 05/31/2001      FY01: \$0                    Total: \$8,900  
*Prin. Invest.:* K MAGEE-SAUER  
*Tech. Officer:* GSFC/M J MUMMA  
*CASE Category:* 13 - PHYSICS

**NAG 5 11076**                    **ROWAN UNIV**                    **6628**  
 CLOUDS OF MARS-AN IRFT/MGS COMPARIION  
 08/06/2001 - 08/14/2002      FY01: \$50,000                    Total: \$50,000  
*Prin. Invest.:* D R KLASSEN  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 1 2154**                    **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                    **6629**  
 SAGE II VALIDATION WITH A GLOBAL LIDAR NETWORK MY 1/3  
 03/10/1999 - 12/31/2001      FY01: \$84,149                    Total: \$253,933  
*Prin. Invest.:* A ROBOCK  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2182**                    **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                    **6630**  
 NANOCOMPOSITES BASED ON LIQUID CRYSTALLINE POLYMERS  
 04/13/1999 - 10/31/2001      FY01: \$0                    Total: \$115,001  
*Prin. Invest.:* M JAFFE  
*Tech. Officer:* LARC/N J JOHNSON, LARC/J W CONNELLE  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 2311**                    **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                    **6631**  
 NIGHTTIME POLAR CLOUD PARAMETERS RETRIEVED FROM SATELLITE  
 SOUNDER AND IMAGE DATA  
 06/15/2000 - 06/30/2001      FY01: \$39,724                    Total: \$68,099  
*Prin. Invest.:* J A FRANCIS  
*Prin. Invest.:* NONE  
*Tech. Officer:* LARC/P MINNIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1234**                    **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                    **6632**  
 SELF ADAPTIVE SOFTWARE FOR AUTOMATED DESIGN OF COM PLEX  
 ENGINEERING SYSTEMS  
 07/24/1998 - 12/31/2001      FY01: \$0                    Total: \$788,238  
*Prin. Invest.:* S AMAREL, T ELLMAN  
*Tech. Officer:* ARC/M R LOWRY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2350**                    **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                    **6633**  
 THE EFFECT OF GRAVITY ON THE MECHANICS OF FLUIDIZE D BEDS  
 03/16/2000 - 11/30/2003      FY01: \$76,000                    Total: \$126,000  
*Prin. Invest.:* D J GLASSER  
*Tech. Officer:* GRC/B J MOTIL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2589**                    **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                    **6634**  
 IN-SITU ULTRA-HIGH VACUUM SCANNING PROBE MICROSCOP Y STUDIES  
 OF THE POLYMER ANODE/LIPON INTERFACE  
 04/17/2001 - 05/31/2002      FY01: \$50,000                    Total: \$50,000  
*Prin. Invest.:* D H GAROFALINI  
*Tech. Officer:* GRC/N HAGEDORN  
*CASE Category:* 13 - PHYSICS

**NAG 5 3158**                    **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                    **6635**  
 GUARANTEED TIME OBSERVER: SPACE TELESCOPE IMAGING SPECTRO-  
 GRAPH  
 01/23/1996 - 09/30/2001      FY01: \$51,000                    Total: \$615,000  
*Prin. Invest.:* C L JOSEPH  
*Tech. Officer:* GSFC/KRUEGER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3432**                    **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                    **6636**  
 DETERMINING THE HUBBLE CONSTANT USING X-RAY, OPTIC IONS OF  
 CLUSTER  
 10/30/1996 - 09/30/2002      FY01: \$0                    Total: \$638,401  
*Prin. Invest.:* J P HUGHES  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4327**                    **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                    **6637**  
 ISOTOPIC INVESTIGATIONS OF EXTRATERRESTRIAL MATERI  
 04/11/1997 - 02/28/2002      FY01: \$70,000                    Total: \$339,000  
*Prin. Invest.:* D F HERZOG, NONE  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4597**                    **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                    **6638**  
 TRANSIENT HEATING IN THE SOLAR ACCRETION DISK  
 05/15/1997 - 02/28/2001      FY01: \$0                    Total: \$190,000  
*Prin. Invest.:* R H HEWINS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6011 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6639**  
 \*NJ-NSCORT FOR BIOGENERATIVE LIFE SUPPORT SYSTEM  
 07/23/1997 - 04/30/2001 FY01: \$760,000 Total: \$5,084,998  
*Prin. Invest.:* H JANES, NONE  
*Tech. Officer:* GSFC/G FOGLEMAN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 6037 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6640**  
 BLACK HOLES AND GALAXY DYNAMICS  
 10/08/1997 - 10/14/2001 FY01: \$119,000 Total: \$454,000  
*Prin. Invest.:* D MERRITT  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6420 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6641**  
 ROSAT HRI OBSERVATIONS OF SMC SNRS  
 11/25/1997 - 10/31/2000 FY01: \$0 Total: \$53,718  
*Prin. Invest.:* J HUGHES  
*Tech. Officer:* GSFC/R PETRE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 6982 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6642**  
 REPRESENTING KEY PHYTOPLANKTON GROUPS IN OCEAN CARBON  
 CYCLE MODELS  
 03/23/1998 - 03/14/2001 FY01: \$0 Total: \$658,307  
*Prin. Invest.:* P G FALKOWSKI  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7015 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6643**  
 THEORETICAL ISSUES FOR INTERPRETING COSMIC MICROWAVE BACK-  
 GROUND MAPS\_ATP  
 02/17/1998 - 04/30/2001 FY01: \$0 Total: \$100,333  
*Prin. Invest.:* A B KOSOWSKY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7148 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6644**  
 UV SOLID STATE DETECTORS  
 05/04/1998 - 04/14/2002 FY01: \$43,166 Total: \$301,004  
*Prin. Invest.:* C L JOSEPH  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7437 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6645**  
 ESTABLISHING AND IMPROVING A TRACEABLE, TIME-DEPENDENT  
 PRIMARY PRODUCTION ALGORITHM FOR GENERATING  
 06/11/1998 - 07/14/2000 FY01: \$0 Total: \$306,822  
*Prin. Invest.:* M J BEHRENFELD  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7564 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6646**  
 EVALUATION OF SNOW WATER EQUIVALENT ACROSS GRASSLAND  
 REGIONS  
 06/30/1998 - 06/30/2001 FY01: \$0 Total: \$115,143  
*Prin. Invest.:* D ROBINSON  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8213 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6647**  
 THE IMPACTS OF LAND-USE/LAND-COVER CHANGE IN AMAZONIA  
 HYDROMETEOROLOGICAL PROCESS  
 03/01/1999 - 02/28/2002 FY01: \$91,808 Total: \$300,000  
*Prin. Invest.:* R AVISSAR  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8820 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6648**  
 IN SITU MICROANALYSIS OF TRANSITION ELEMENT OXIDATION STATES IN  
 SOLAR SYSTEM MATERIALS  
 09/07/1999 - 08/31/2000 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* J S DELANEY  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9046 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6649**  
 ORIGIN AND EVOLUTION OF MASSIVE BLACK HOLES IN GALAXIES - (ATP  
 99)  
 03/06/2000 - 05/31/2002 FY01: \$95,370 Total: \$196,783  
*Prin. Invest.:* D MERRITT  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9259 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6650**  
 SIMULATION AND ANALYSIS OF METEORITIC MATERIAL  
 03/17/2000 - 02/28/2002 FY01: \$0 Total: \$109,000  
*Prin. Invest.:* J BOYCE  
*Tech. Officer:* GSFC/R HEWINS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9340 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6651**  
 ATMOSPHERIC IRON FLUXES TO THE OCEAN: SEASONAL PATTERNS AND  
 LINKAGE TO PHYTOPLANKTON BLOOMS  
 04/11/2000 - 04/30/2002 FY01: \$93,217 Total: \$157,366  
*Prin. Invest.:* Y GAO  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9528 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6652**  
 IN SITU SYNCHROTRON MICROXANES MEASUREMENTS OF OXIDATION  
 STATES OF SOLAR SYSTEM MATERIALS  
 04/28/2000 - 04/30/2002 FY01: \$40,000 Total: \$109,000  
*Prin. Invest.:* J S DELANEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9746 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6653**  
 SUPPORT FOR THE NASA-HYDROMETEOROLOGY SCIENCE TEAM OFFICE  
 07/11/2000 - 07/14/2001 FY01: \$0 Total: \$49,475  
*Prin. Invest.:* R AVISSAR, NONE  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9787 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6654**  
 ESTABLISHING AND IMPROVING A TRACEABLE, TIME-DEPENDENT  
 PRIMARY PRODUCTION ALGORITHM FOR GENERATING  
 07/14/2000 - 07/14/2001 FY01: \$37,000 Total: \$74,000  
*Prin. Invest.:* M J BEHRENFELD  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9792 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6655**  
 VOLCANIC ERUPTIONS AND CLIMATE  
 07/18/2000 - 07/31/2002 FY01: \$60,000 Total: \$120,000  
*Prin. Invest.:* A ROBECK  
*Tech. Officer:* GSFC/K BERGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9813 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6656**  
 ULTRAVIOLET TESTING OF GAN BASED UV CCD'S AS DESCRIBED IN THE  
 PROPOSAL "GA CCD'S"  
 07/19/2000 - 07/14/2001 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* D JOSEPH  
*Tech. Officer:* GSFC/B MOTT  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9847 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6657**  
 OCEAN CARBON FLUX: TRANSPORT & BURIAL WITHIN THE WESTERN &  
 EASTERN U.S.COASTAL ZONES  
 07/31/2000 - 07/31/2002 FY01: \$97,500 Total: \$191,250  
*Prin. Invest.:* D HAIDVOGEL  
*Tech. Officer:* GSFC/E LINSTROM  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 9927 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6658**  
 XMM SPECTRO-IMAGERY OF TWO YOUNG EJECTA-DOMINATED SNRS:  
 KEPLER & W49B  
 09/07/2000 - 09/14/2001 FY01: \$0 Total: \$6,240  
*Prin. Invest.:* J P HUGHES  
*Tech. Officer:* GSFC/D F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9979 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6659**  
 CONFRONTING THE COMPLEXITY OF GALAXY CLUSTERS WITH LENSING,  
 SZ, & XMM DATA  
 09/12/2000 - 09/14/2002 FY01: \$16,400 Total: \$44,800  
*Prin. Invest.:* J P HUGHES  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9990 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6660**  
 XMM STUDIES OF A NEW SAMPLE OF YOUNG EJECTA-DOMINATED  
 GALACTIC SNRS  
 09/14/2000 - 08/31/2002 FY01: \$16,061 Total: \$45,061  
*Prin. Invest.:* J P HUGHES  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10003 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6661**  
 BLACK HOLES IN EARLY TYPE GALAXIES: INCIDENCE, FORMATION AND  
 EVOLUTION  
 09/25/2000 - 08/31/2002 FY01: \$109,223 Total: \$216,501  
*Prin. Invest.:* L FERRARESE  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10110 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6662**  
 SPACE ASTROPHYSICS RESEARCH & ANALYSIS PROGRAM  
 01/02/2001 - 12/31/2001 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* J SELLWOOD  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10357 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6663**  
 HOT-ELECTRON DETECTORS: RECORD SENSITIVITY DUE TO CONTROL-  
 LABLE ELECTRON-PHONON COUPLING IN SUPERCOND  
 02/01/2001 - 01/14/2002 FY01: \$182,594 Total: \$182,594  
*Prin. Invest.:* M GERSHENSON  
*Tech. Officer:* GSFC/C STAHL  
*CASE Category:* 13 - PHYSICS

**NAG 5 10494 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6664**  
 SIMULATION & ANALYSIS OF METEORITIC MATERIAL  
 02/28/2001 - 02/28/2002 FY01: \$120,000 Total: \$120,000  
*Prin. Invest.:* R HEWINS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10495 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6665**  
 TRANSIENT HEATING IN THE SOLAR ACCRETION DISK  
 02/28/2001 - 02/28/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* R HEWINS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10809 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6666**  
 REDUCTION OF BACKGROUND SIGNALS IN AIGAN OR GAN SOLID STATE  
 DETECTORS  
 04/26/2001 - 04/30/2002 FY01: \$32,000 Total: \$32,000  
*Prin. Invest.:* C L JOSEPH  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 11045 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6667**  
 EFFECTS OF RADIATION ON DESORPTION OF ALKALIS FROM MINERAL &  
 ICE SURFACES: RELATION TO ORIGINS OF AL  
 06/13/2001 - 06/14/2002 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* T MADEY  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11345 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6668**  
 USING REMOTE SENSING AND OCEAN OXYGEN MEASUREMENTS TO  
 CONSTRAIN CARBONFLUXES IN THE SOUTHERN OCEAN  
 09/10/2001 - 09/14/2004 FY01: \$78,581 Total: \$78,581  
*Prin. Invest.:* P G FALKONSKI  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1513 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6669**  
 SPATIAL & TEMPORAL VARIABILITY OF SOIL MOISTURE & ITS RELATION TO  
 WATER & ENERGY BALANCES IN A MONSON  
 06/01/1998 - 05/31/2002 FY01: \$0 Total: \$339,524  
*Prin. Invest.:* Y LIU, R AVISSAR  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1769 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6670**  
 RESEARCH ON STRESS-DRIVEN INSTABILITY ON HELIUM-4 CRYSTALS.  
 04/27/2001 - 03/31/2005 FY01: \$100,444 Total: \$100,444  
*Prin. Invest.:* H KOJIMA  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER



**NAGW 5226 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6671**  
 RESEARCH (BIDIRECTIONAL)  
 10/07/1996 - 12/31/1999 FY01: \$0 Total: \$40,000  
*Prin. Invest.:* R AVISSAR  
*Tech. Officer:* HQ/A C JANETOS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 476 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6672**  
 COOPERATIVE RESEARCH IN REGIONAL & GLOBAL CLIMATE VARIABILITY.  
 03/17/2000 - 03/31/2001 FY01: \$115,594 Total: \$657,181  
*Prin. Invest.:* R AVISSAR  
*Tech. Officer:* GSFC/R STOTHERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 553 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6673**  
 RESEARCH IN REGIONAL & GLOBAL CLIMATE VARIABILITY  
 04/24/2001 - 03/31/2002 FY01: \$700,000 Total: \$700,000  
*Prin. Invest.:* A ROBOCK  
*Tech. Officer:* GSFC/R B STOTHERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 30062 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6674**  
 ANTHROPOGENIC PERTURBATIONS TO THE CARBON CYCLE FR ESTI-  
 MATED FROM NEW HISTORICAL LAND USE DATA  
 09/10/1997 - 05/31/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* D ROBINSON  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50229 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6675**  
 CROP MODELING FOR MULTIPLE CROP PRODUCTION AND CON TROL FOR  
 ADVANCED LIFE SUPPORT SYSTEMS  
 11/04/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* K C TING, FLEISHER  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 50364 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6676**  
 DEVELOPMENT OF A HAPTIC INTERFACE FOR REMOTE OPERA TIONS IN  
 SPACE, MEDICINE AND VIRTUAL REALITY, USI  
 06/12/2001 - 08/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* C MAVROIDIS  
*Tech. Officer:* GSFC/K BLADING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50376 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6677**  
 SPATIALLY RESOLVED X-RAY SPECTROSCOPY OF YOUNG SUPERNOVA  
 REMNANTS/STUDENT: CARA RAKOWSKI  
 07/05/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J P HUGHES  
*Tech. Officer:* GSFC/L KALUZIENSKI  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 9359 RUTGERS STATE UNIV OF NJ COOK CAMPUS 6678**  
 A STUDY OF TELECONNECTIONS USING A NESTED GCM-RCM &  
 SATELLITE OBSERVATIONS  
 04/06/2000 - 06/30/2001 FY01: \$50,000 Total: \$100,000  
*Prin. Invest.:* R AVISSAR  
*Tech. Officer:* GSFC/K BERGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9833 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6679**  
 ULTRAVIOLET TESTIN OF GAN ARRAYS AS DESCRIBED IN THE PROPOSAL  
 "GAN ULTRAVIOLET ARRAYS"  
 07/26/2000 - 10/31/2002 FY01: \$24,504 Total: \$49,008  
*Prin. Invest.:* D JOSEPH  
*Tech. Officer:* GSFC/B MOTT  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11244 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6680**  
 GLOBAL MODELING AND ANALYSIS OF NONMETHANE HYDROCA RBONS,  
 OXYGENATED HYDROCARBONS, AND ANTHROPOG  
 08/16/2001 - 08/31/2004 FY01: \$81,221 Total: \$81,221  
*Prin. Invest.:* Y WANG, NONE  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11356 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6681**  
 REPRESENTING KEY PHYTOPLANKTON GROUPS IN OCEAN CAR BON  
 CYCLE MODELS  
 09/25/2001 - 09/30/2004 FY01: \$124,826 Total: \$124,826  
*Prin. Invest.:* P G FALKOWSKI  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1283 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6682**  
 MOLECULAR CHARACTERIZATION OF EUBACTERIA IN THE BIOLOGICAL  
 WATER PROCESSOR  
 02/22/2001 - 12/31/2001 FY01: \$144,228 Total: \$144,228  
*Prin. Invest.:* L KERKHOF  
*Tech. Officer:* JSC/K DAUES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1318 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6683**  
 CHARACTERIZATION OF HYDROPONICALLY GROWN APOGEE WHEAT  
 FLOUR  
 06/18/2001 - 10/31/2001 FY01: \$16,100 Total: \$16,100  
*Prin. Invest.:* J L KOKINI  
*Tech. Officer:* JSC/V KLOERIS  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 9 1923 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6684**  
 INNOVATIVE CO2 REMOVAL BIOREACTOR FOR AN ADVANCED MARS EVA  
 SPACESUIT  
 06/23/2000 - 06/23/2001 FY01: \$0 Total: \$99,997  
*Prin. Invest.:* M C TRACHTENBERG, R M COWAN  
*Tech. Officer:* JSC/G A THOMAS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 5 99138 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6685**  
 AIRBORNA (LIFT) METHOD FOR MEASURING PHOTOSYNTHETIC  
 PERFORMANCE & PRIMARY PRODUCTIVITY.  
 04/15/1999 - 04/15/2002 FY01: \$273,133 Total: \$984,393  
*Prin. Invest.:* Z KOLBER  
*Tech. Officer:* GSFC/J B HARTLEY  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

## NEW MEXICO

## NASA'S UNIVERSITY PROGRAM

**NCC 2 1259**      **RUTGERS STATE UNIV OF NJ NEW BRUNSWICK**      **6686**  
 INTEGRATING MULTIPLE SOURCES OF INFORMATION IN TEXT MINING  
 04/20/2001 - 04/30/2002      FY01: \$80,000      Total: \$80,000  
*Prin. Invest.:* H HIRSCH  
*Tech. Officer:* ARC/M SCHWABACHER, ARC/J COUGHLAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8971**      **STEVENS INST OF TECHNOLOGY**      **6687**  
 ELECTRON-IMPACT DISSOCIATION AND EXCITATION OF MOLECULES AND  
 MOLECULAR IONS  
 01/28/2000 - 12/31/2002      FY01: \$60,100      Total: \$116,714  
*Prin. Invest.:* K BECKER  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1063**      **STEVENS INST OF TECHNOLOGY**      **6688**  
 INVESTIGATION OF AMBIENT PRESSURE  
 01/05/1999 - 01/05/2002      FY01: \$153,288      Total: \$428,983  
*Prin. Invest.:* G P KORFIATIS  
*Tech. Officer:* JSC/J GRAF  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAS 5 99238**      **STEVENS INST OF TECHNOLOGY**      **6689**  
 SENSOR INTERCOMPARISON & MERGER FOR BIOLOGICAL & INTERDIS-  
 CIPLINARY STUDIES.  
 09/01/1999 - 02/28/2001      FY01: \$0      Total: \$124,965  
*Prin. Invest.:* K STAMNES, B CHEN  
*Tech. Officer:* GSFC/C MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NGT 5 40041**      **STEVENS INST OF TECHNOLOGY**      **6690**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRA  
 01/24/1997 - 02/28/2001      FY01: \$0      Total: \$801,125  
*Prin. Invest.:* S THANGAM  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40096**      **STEVENS INST OF TECHNOLOGY**      **6691**  
 NEW JERSEY SPACE GRANT COLLEGE AND FELLOWSHIP PROGRA  
 02/28/2001 - 02/28/2002      FY01: \$206,125      Total: \$206,125  
*Prin. Invest.:* S THANGAM  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1367**      **UNIV OF MEDICINE AND DENTISTRY**      **6692**  
 MURINE DEVELOPMENT: CELLULAR & MOLECULAR ANALYSIS  
 08/02/1999 - 07/14/2002      FY01: \$290,411      Total: \$705,316  
*Prin. Invest.:* R S NOWAKOWSKI  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1162**      **UNIV OF MEDICINE AND DENTISTRY**      **6693**  
 GLUKOSE KINETICS AND MUSCLE ATROPHY  
 09/21/1999 - 09/22/2002      FY01: \$70,049      Total: \$148,027  
*Prin. Invest.:* T P STEIN  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 56 - MEDICL

**NGT 5 50335**      **UNIV OF MEDICINE AND DENTISTRY**      **6694**  
 TRANSCRIPTIONAL REGULATION OF DIFFERENTIATING OSTE OBLASTS/  
 STUDENT: RICHARD D'ALONZO  
 10/16/2000 - 10/01/2001      FY01: \$22,000      Total: \$22,000  
*Prin. Invest.:* N C PARTRIDGE  
*Tech. Officer:* HQ/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 950**      **UNIV. OF MEDICINE & DENTISTRY-NJ.**      **6695**  
 REDUCED GRAVITY: EFFECTS IN THE DEVELOPING NERVOU S SYSTEM  
 (DEFINITION PHASE)  
 12/16/1994 - 11/30/1999      FY01: \$0      Total: \$739,162  
*Prin. Invest.:* R S KOWAKOWSKI  
*Tech. Officer:* ARC/W E HINDS, ARC/C M WINGET  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

## NEW MEXICO

**NAG 9 1066**      **COLLEGE OF SANTA FE**      **6696**  
 MOBILE SCIENCE PROJECT PACE/ MSET  
 01/07/1999 - 12/31/2001      FY01: \$100,000      Total: \$300,000  
*Prin. Invest.:* B COLEMAN  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10150**      **EASTERN NEW MEXICO UNIV - MAIN CAMPUS**      **6697**  
 NEW MEXICO CONNECTIONS: CONNECTING PEOPLE, PLACES AND  
 RESEARCH  
 12/08/2000 - 08/13/2001      FY01: \$64,956      Total: \$64,956  
*Prin. Invest.:* S NUTTER  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 972**      **EASTERN NEW MEXICO UNIV - MAIN CAMPUS**      **6698**  
 SUMMER SMET CAMP FOR RURAL MINORITIES GIRLS  
 09/24/1997 - 09/30/2000      FY01: -\$2,485      Total: \$72,515  
*Prin. Invest.:* J MILLER  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1255**      **EASTERN NEW MEXICO UNIV - MAIN CAMPUS**      **6699**  
 SMET CAMP  
 08/12/2000 - 09/30/2001      FY01: \$0      Total: \$25,000  
*Prin. Invest.:* J MILLER  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1730**      **INST AMER INDIAN & AK NATIVE CULTURE & DEV**      **6700**  
 ESTABLISH A COMMUNITY BASED NATIVE AMERICAN AGHRIC ULTURE  
 RESEARCH AND DEVELOPMENT CENTER  
 06/22/2000 - 11/30/2001      FY01: \$0      Total: \$98,854  
*Prin. Invest.:* S SULNA  
*Prin. Invest.:* NONE  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 55 - AGRICULTURE

**NAG 5 6532**      **NEW MEXICO HIGHLANDS UNIV**      **6701**  
 ALLIANCE FOR NONLINEAR OPTICS  
 12/07/1997 - 09/30/1999      FY01: \$0      Total: \$1,653,070  
*Prin. Invest.:* R CLARK  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<b>NAG 5 8734</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6702</b>	<b>NAG 9 1374</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6711</b>
CCD PHOTOMETRY OF THE VESTA FAMILY OF ASTEROIDS & AN ANALYSIS OF THEIR IMPACT ORIGIN			AISTEC PROJECT		
08/26/1999 - 07/31/2002	FY01: \$72,000	Total: \$217,699	08/09/2001 - 08/12/2002	FY01: \$100,000	Total: \$100,000
<i>Prin. Invest.:</i> D V RYAN			<i>Prin. Invest.:</i> J CAIBACA		
<i>Tech. Officer:</i> GSFC/T MORGAN			<i>Tech. Officer:</i> JSC/K KRISHEN, JSC/L ARMENDARIZ		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 8 1639</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6703</b>	<b>NAG 9 1375</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6712</b>
DEVELOPMENT OF NOVEL THERMOSTABLE PHOTOREFRACTIVE POLYMERS AND SOL-GEL MATERIALS			HYDROCODE SIMULATIONS OF POROUS ASTEROID IMPACTS		
12/21/1999 - 12/20/2002	FY01: \$176,652	Total: \$290,006	08/09/2001 - 08/12/2002	FY01: \$25,000	Total: \$25,000
<i>Prin. Invest.:</i> R D CLARK, M SANGHADASA			<i>Prin. Invest.:</i> J R JUAREZ		
<i>Tech. Officer:</i> MSFC/B G PENN			<i>Tech. Officer:</i> JSC/L ARMENDARIZ		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 8 1708</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6704</b>	<b>NAG 9 1921</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6713</b>
ALLIANCE FOR NONLINEAR OPTICS			EDUCATIONAL OUTREACH		
03/01/2000 - 02/28/2003	FY01: \$500,000	Total: \$1,000,000	05/23/2000 - 05/31/2001	FY01: \$0	Total: \$18,803
<i>Prin. Invest.:</i> R CLARK			<i>Prin. Invest.:</i> J R JUAREZ		
<i>Tech. Officer:</i> MSFC/W LOVE			<i>Tech. Officer:</i> JSC/L ARMENDARIZ		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 9 1139</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6705</b>	<b>NAG 9 1922</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6714</b>
AMERICAN INDIAN SCIENCE & TECH EDUCATION CONSORTIUM			HYDROCODE SIMULATIONS OF PAROUS ASTEROID IMPACTS		
08/31/1999 - 08/30/2001	FY01: \$0	Total: \$278,000	05/23/2000 - 05/31/2001	FY01: \$0	Total: \$24,997
<i>Prin. Invest.:</i> J C DE BACA			<i>Prin. Invest.:</i> J R JUAREZ		
<i>Tech. Officer:</i> JSC/L M ARMEDARIZ			<i>Tech. Officer:</i> JSC/L ARMENDARIZ		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 9 1168</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6706</b>	<b>NGT 5 90069</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6715</b>
JSC ASTROBIOLOGY INST			AMERICAN INDIAN SCIENCE AND TECHNOLOGY EDUCATION C		
09/29/1999 - 09/29/2001	FY01: \$0	Total: \$292,100	04/04/1997 - 11/30/2001	FY01: \$0	Total: \$4,400,822
<i>Prin. Invest.:</i> J C DEBACA, J R JUAREZ			<i>Prin. Invest.:</i> J C DE BACA		
<i>Tech. Officer:</i> JSC/D S MCKAY, JSC/L ARMENDARIZ			<i>Tech. Officer:</i> GSFC/P SAKIMOTO		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 9 1195</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6707</b>	<b>NAG 5 4139</b>	<b>NEW MEXICO INST OF MINING &amp; TECH</b>	<b>6716</b>
REACHING OUT FOR SCIENCE, MATHEMATICS, & TECHNOLOGY STUDENTS			OBSERVATIONS & ANALYSIS OF ATMOSPHERIC HYDROXYL		
05/23/2000 - 05/31/2001	FY01: \$0	Total: \$19,528	03/17/1997 - 03/14/2001	FY01: \$0	Total: \$176,882
<i>Prin. Invest.:</i> J JUAREZ			<i>Prin. Invest.:</i> K MINSCHWANNER		
<i>Tech. Officer:</i> JSC/L ARMENDARIZ			<i>Tech. Officer:</i> GSFC/M J KURYLO		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 9 1260</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6708</b>	<b>NAG 5 7109</b>	<b>NEW MEXICO INST OF MINING &amp; TECH</b>	<b>6717</b>
STUDIES ON THE IMPACT OF CERRO GRANDE & VIVEASH FOREST FIRES			GROUND BASED MEASUREMENTS OF TOTAL OZONE, CLOUD PROPERTIES, AND UVDOSES		
09/07/2000 - 09/30/2004	FY01: \$0	Total: \$151,095	03/25/1998 - 03/31/2002	FY01: \$0	Total: \$107,153
<i>Prin. Invest.:</i> J R JUAREZ			<i>Prin. Invest.:</i> D R MINSCHWANER		
<i>Tech. Officer:</i> JSC/G HENDERSEN			<i>Tech. Officer:</i> GSFC/J HERMAN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 9 1330</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6709</b>	<b>NAG 5 9328</b>	<b>NEW MEXICO INST OF MINING &amp; TECH</b>	<b>6718</b>
REACHING OUT FOR SCIENCE, MATHEMATICS & TECHNOLOGY STUDENTS			INFLUENCE OF LAND-ATMOSPHERE INTERACTIONS ON VARIABILITY OF THE NORTH AMERICAN MONSOON		
06/28/2001 - 06/26/2004	FY01: \$19,528	Total: \$19,528	04/03/2000 - 04/30/2002	FY01: \$81,513	Total: \$140,754
<i>Prin. Invest.:</i> J R JUAREZ			<i>Prin. Invest.:</i> E E SMALL		
<i>Tech. Officer:</i> JSC/L M ARMENDARIZ			<i>Tech. Officer:</i> GSFC/D WICKLAND		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 9 1369</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6710</b>	<b>NAG 9 1106</b>	<b>NEW MEXICO INST OF MINING &amp; TECH</b>	<b>6719</b>
EDUCATIONAL OUTREACH			THE SEARCH FOR MICROBIAL BIOMARKERS IN TERRESTRIAL DEPOSITS		
07/30/2001 - 07/31/2004	FY01: \$19,000	Total: \$19,000	05/10/1999 - 05/09/2004	FY01: \$22,000	Total: \$66,000
<i>Prin. Invest.:</i> J JUAREZ			<i>Prin. Invest.:</i> T L KIEFT		
<i>Tech. Officer:</i> WFF/PBAKER, JSC/L M ARMENDARIZ			<i>Tech. Officer:</i> JSC/F K GIBSON		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		

## NEW MEXICO

## NASA'S UNIVERSITY PROGRAM

**NGT 5 30169 NEW MEXICO INST OF MINING & TECH 6720**  
 COMBINED SIMULATION OF ALPINE GLACIERS AND CLOSED-BASIN  
 LAKES: THE KEY TO DETERMINING THE LONG-TERM  
 09/01/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* F M PHILLIPS, PLUMMER  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 11 - ASTRONOMY

**NAG 1 1868 NEW MEXICO STATE UNIV - LAS CRUCES 6721**  
 ACTIVE CONTROL OF AERODYNAMIC NOISE SOURCES MY 1/3  
 09/20/1996 - 11/01/2000 FY01: \$0 Total: \$281,474  
*Prin. Invest.:* G A REYNOLDS  
*Tech. Officer:* LARC/G S JONES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1334 NEW MEXICO STATE UNIV - LAS CRUCES 6722**  
 XENOPUS INNER EAR ORGAN INFORMATION IN AN ALTERED GRAVITY ENVI-  
 RONMENT  
 07/08/1999 - 06/30/2002 FY01: \$99,920 Total: \$299,141  
*Prin. Invest.:* E E SERRANO  
*Tech. Officer:* ARC/C E WADE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 6007 NEW MEXICO STATE UNIV - LAS CRUCES 6723**  
 THEORETICAL & OBSERVATIONAL STUDIES OF SOLAR & EXT RA SOLAR  
 PLANETARY ATMOSPHERES  
 10/16/1996 - 06/30/2001 FY01: \$0 Total: \$288,379  
*Prin. Invest.:* M MARLEY  
*Tech. Officer:* ARC/C P MCKAY, ARC/A J HATCH  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 6030 NEW MEXICO STATE UNIV - LAS CRUCES 6724**  
 CAREER OPPORTUNITIES IN MATHEMATICS, ENGINEERING, TECHNOLOGY,  
 & SCIENCE (COMETS) PROGRAMS  
 03/09/1999 - 03/31/2002 FY01: \$99,000 Total: \$299,001  
*Prin. Invest.:* G V GARCIA  
*Tech. Officer:* ARC/B J COLLINS, ARC/G S LEE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 3842 NEW MEXICO STATE UNIV - LAS CRUCES 6725**  
 MODELLING X-RAY CLUSTERS: EVOLUTION AND REALISTIC  
 02/25/1997 - 02/28/2001 FY01: \$0 Total: \$299,540  
*Prin. Invest.:* A KLYPIN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4987 NEW MEXICO STATE UNIV - LAS CRUCES 6726**  
 MODEL ATMOSPHERES AND SPECTRA FOR EXTRASOLAR GIANT  
 06/26/1997 - 06/14/2001 FY01: \$0 Total: \$127,500  
*Prin. Invest.:* D MARLEY  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 5060 NEW MEXICO STATE UNIV - LAS CRUCES 6727**  
 SEARCHING FOR ANTIMATTER AND COSMIC RAY STUDIES USING BESS  
 05/01/1996 - 05/31/2000 FY01: \$0 Total: \$88,318  
*Prin. Invest.:* S J STOCHAJ  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5068 NEW MEXICO STATE UNIV - LAS CRUCES 6728**  
 WIZARD-RELATED BALLOON PROGRAM FUNDING FOR THE FIRST YEAR  
 OF THE GRANT  
 05/03/1996 - 05/31/2000 FY01: -\$1,839 Total: \$932,832  
*Prin. Invest.:* S J STOCHAJ  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5159 NEW MEXICO STATE UNIV - LAS CRUCES 6729**  
 AN IMAGING SILICON CALORIMETER FOR USE ON ACCESS INCREMENTAL  
 FUNDING FOR FIRST YEAR OF GRANT  
 03/26/1998 - 06/30/2001 FY01: \$0 Total: \$209,000  
*Prin. Invest.:* S J STOCHAJ  
*Tech. Officer:* GSFC/B A MERRITT/  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5226 NEW MEXICO STATE UNIV - LAS CRUCES 6730**  
 FIRST YEAR FUNDING FOR NAG5-5226  
 07/06/1999 - 12/31/2001 FY01: \$143,000 Total: \$428,000  
*Prin. Invest.:* S J STOCHAJ  
*Tech. Officer:* WSTF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6897 NEW MEXICO STATE UNIV - LAS CRUCES 6731**  
 EFFECTS OF RHEOLOGY ON THE DYNAMICS AND EVOLUTION OF MARS  
 AND VENUS  
 01/21/1998 - 12/31/2000 FY01: \$0 Total: \$92,577  
*Prin. Invest.:* V SOLOMATOV  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7520 NEW MEXICO STATE UNIV - LAS CRUCES 6732**  
 CENTER FOR TELEMETERING AND TELECOMMUNICATION SYSTEMS  
 07/28/1998 - 04/30/2000 FY01: \$0 Total: \$1,344,000  
*Prin. Invest.:* S HORAN  
*Tech. Officer:* GSFC/W MILLER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 7524 NEW MEXICO STATE UNIV - LAS CRUCES 6733**  
 TRANSPORTATION OF ENERGETIC PARTICLES IN THE GALAXY -  
 APPROVED UNDER NRA 97-OSS-12  
 06/09/1998 - 06/14/2002 FY01: \$10,951 Total: \$34,173  
*Prin. Invest.:* W R WEBBER  
*Tech. Officer:* GSFC/F C JONES  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7795 NEW MEXICO STATE UNIV - LAS CRUCES 6734**  
 A PROPOSAL TO ASSIST IN THE INTERPRETATION OF DATA FROM THE  
 COSMIC RAY ISOTOPE SPECTROMETER EXPERIMENT  
 12/10/1998 - 12/31/2001 FY01: \$40,698 Total: \$117,422  
*Prin. Invest.:* D R WEBBER  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7904 NEW MEXICO STATE UNIV - LAS CRUCES 6735**  
 ADVANCED IR IMAGING OF SATURN  
 12/03/1998 - 11/30/2002 FY01: \$59,800 Total: \$160,726  
*Prin. Invest.:* D J CHANOVER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8242 NEW MEXICO STATE UNIV - LAS CRUCES 6736**  
 TESTING INFLATION AND DARK MATTER WITH NEW DATA, MODELS, AND METHODS(ATP98)  
 02/19/1999 - 02/28/2002 FY01: \$24,762 Total: \$67,392  
*Prin. Invest.:* A KLYPIN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8803 NEW MEXICO STATE UNIV - LAS CRUCES 6737**  
 EFFECTS OF RHEOLOGY ON THE DYNAMICS AND THERMAL EVOLUTION OF MARS AND VENUS  
 01/06/2000 - 01/14/2002 FY01: \$48,000 Total: \$93,600  
*Prin. Invest.:* V SOLOMATOV  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 13 - PHYSICS

**NAG 5 8919 NEW MEXICO STATE UNIV - LAS CRUCES 6738**  
 MODEL ATMOSPHERES AND SPECTRA FOR EXTRASOLAR GIANT PLANETS AND BROWNDWARFS  
 01/21/2000 - 06/14/2002 FY01: \$77,300 Total: \$148,515  
*Prin. Invest.:* M MARLEY  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9273 NEW MEXICO STATE UNIV - LAS CRUCES 6739**  
 MODEL ATMOSPHERES AND SPECTRA OF THE L-DWARFS (ATP 99)  
 03/15/2000 - 03/14/2002 FY01: \$50,184 Total: \$86,127  
*Prin. Invest.:* M S MARLEY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9323 NEW MEXICO STATE UNIV - LAS CRUCES 6740**  
 "THE CENTER FOR SPACE TELEMETERING AND TELECOMMUNICATIONS SYSTEMS", AT THE NEW MEXICO STATE UNIVER  
 03/31/2000 - 04/30/2002 FY01: \$524,000 Total: \$1,060,000  
*Prin. Invest.:* S HORAN  
*Tech. Officer:* GSFC/W H MILLER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10578 NEW MEXICO STATE UNIV - LAS CRUCES 6741**  
 IMPACTS AND THE THERMAL EVOLUTION OF MARS  
 03/19/2001 - 02/28/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* V SOLOMATOV  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11164 NEW MEXICO STATE UNIV - LAS CRUCES 6742**  
 DETERMINATION OF MARTIAN POLAR DUST FLUX FROM TES OPACITY OBSERVATIONS  
 08/06/2001 - 08/14/2003 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J R MURPHY  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11311 NEW MEXICO STATE UNIV - LAS CRUCES 6743**  
 NMSU PARTICIPATORY PROJECT IN MESSENGER EXPLORATION AND DEVELOPMENT OF STUDENT SCIENCE  
 09/07/2001 - 09/14/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* H BAPTISTE  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1710 NEW MEXICO STATE UNIV - LAS CRUCES 6744**  
 NANOMETER LASER SPECTROSCOPY USING FRACTAL MEDIA  
 03/08/2000 - 03/07/2003 FY01: \$99,997 Total: \$199,995  
*Prin. Invest.:* C YING  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1291 NEW MEXICO STATE UNIV - LAS CRUCES 6745**  
 STUDY TOWARD A HAND HELD VOLATILE ORGANIC ANALYZER FOR MARS MISSION  
 04/19/2001 - 12/31/2002 FY01: \$202,180 Total: \$202,180  
*Prin. Invest.:* G A EICEMAN  
*Tech. Officer:* JSC/D M RUSSO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 5 98009 NEW MEXICO STATE UNIV - LAS CRUCES 6746**  
 BALLOON SERVICES  
 02/17/1998 - 02/28/2003 FY01: \$14,645,312 Total: \$55,687,659  
*Prin. Invest.:* N APPLICABLE  
*Tech. Officer:* WFF/R S NOCK, WFF/B A MERRITT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 422 NEW MEXICO STATE UNIV - LAS CRUCES 6747**  
 SIMULATIONS OF EXTENSIVE AIRCRAFT USING BEOWULF- CLASS SYSTEMS  
 09/30/1999 - 08/31/2001 FY01: \$3,777 Total: \$138,230  
*Prin. Invest.:* S STOCHAJ  
*Tech. Officer:* GSFC/R E STREITMATTER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 466 NEW MEXICO STATE UNIV - LAS CRUCES 6748**  
 MATHEMATICS AND SCIENCE EDUCATORS FOR THE FUTURE  
 03/02/2000 - 02/28/2002 FY01: \$148,386 Total: \$340,144  
*Prin. Invest.:* H BAPTISTE  
*Tech. Officer:* GSFC/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40061 NEW MEXICO STATE UNIV - LAS CRUCES 6749**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE AND FELLOWSHIP PROGRAM.  
 03/04/1997 - 01/31/2002 FY01: \$10,000 Total: \$1,968,000  
*Prin. Invest.:* P HYNES  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40087 NEW MEXICO STATE UNIV - LAS CRUCES 6750**  
 NEW MEXICO SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/16/2001 - 02/14/2002 FY01: \$475,000 Total: \$475,000  
*Prin. Invest.:* P HYNES  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50117 NEW MEXICO STATE UNIV - LAS CRUCES 6751**  
 DIRECT SOLUTION OF LARGE, SPARSE SYSTEMS OF EQUATIONS  
 09/06/1997 - 06/30/2000 FY01: -\$9,023 Total: \$55,477  
*Prin. Invest.:* S CASTILLO  
*Tech. Officer:* GSFC/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NEW MEXICO

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10143 SOUTHWESTERN INDIAN POLYTECHNIC INST 6752**  
 STARS ON EARTH, PROVIDING UNDERREPRESENTED NEW MEXICO HIGH  
 SCHOOL STUDENTS WITH RESEARCH EXPER  
 01/18/2001 - 12/31/2001 FY01: \$160,000 Total: \$160,000  
*Prin. Invest.:* C L ABEITA  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1312 UNIV OF ALBUQUERQUE 6753**  
 NASA TRAINING PROJECT  
 09/24/2001 - 09/30/2004 FY01: \$450,200 Total: \$450,200  
*Prin. Invest.:* R A LAFARGE  
*Tech. Officer:* JSC/LM ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2018 UNIV OF NEW MEXICO-ALBUQUERQUE 6754**  
 SIMULATION OF FLOW CONTROL USING DEFORMABLE SURFACES  
 03/17/1998 - 03/16/2001 FY01: \$1 Total: \$299,945  
*Prin. Invest.:* C R TRUMAN  
*Tech. Officer:* LARC/R D JOSLIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1437 UNIV OF NEW MEXICO-ALBUQUERQUE 6755**  
 CHARACTERIZATION & ANALYSIS OF ADVANCED THERMAL PROTECTION  
 MATERIALS  
 09/13/2000 - 08/14/2002 FY01: \$0 Total: \$59,996  
*Prin. Invest.:* R E LOEHMAN  
*Tech. Officer:* ARC/D T ELLERBY, ARC/S M JOHNSON  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 2 1480 UNIV OF NEW MEXICO-ALBUQUERQUE 6756**  
 NASA GROUP UNIV RESEARCH CENTER SECOND FIVE YEARS  
 05/01/2001 - 04/30/2002 FY01: \$760,000 Total: \$760,000  
*Prin. Invest.:* P DORATO  
*Tech. Officer:* ARC/B J COLLINS, ARC/A R GROSS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1516 UNIV OF NEW MEXICO-ALBUQUERQUE 6757**  
 CHARACTERIZATION AND ANALYSIS OF ULTRAHIGH TEMPERATURE  
 CERAMICS  
 08/15/2001 - 07/31/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* R E LOEHMAN  
*Tech. Officer:* ARC/D ELLERBY, ARC/S JOHNSON  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 1976 UNIV OF NEW MEXICO-ALBUQUERQUE 6758**  
 NEW PHENOMENA IN STRONGLY COUNTERFLOWING HE-II  
 10/22/1996 - 09/30/2002 FY01: \$89,000 Total: \$354,000  
*Prin. Invest.:* S T BOYD, R V DUNCAN, M J ADVIAANS  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2322 UNIV OF NEW MEXICO-ALBUQUERQUE 6759**  
 ACCURATE BOUNDARY CONDITIONS FOR COMPUTATIONAL AERODYNAMICS  
 01/18/2000 - 01/03/2001 FY01: \$0 Total: \$86,532  
*Prin. Invest.:* D HAGSTROM  
*Tech. Officer:* GRC/J GOODRICH  
*CASE Category:* 21 - MATHEMATICS

**NAG 3 2543 UNIV OF NEW MEXICO-ALBUQUERQUE 6760**  
 HIGH EFFICIENCY THERMOELECTRIC RADIOISOTOPE POWER SYSTEMS  
 02/15/2001 - 12/31/2003 FY01: \$102,000 Total: \$102,000  
*Prin. Invest.:* M EL-GENK  
*Tech. Officer:* GRC/R L CATALDO  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2626 UNIV OF NEW MEXICO-ALBUQUERQUE 6761**  
 EXPERIMENTS WITH BOUNDARY CONDITIONS FOR JET FLOW SIMULA-  
 TIONS  
 06/01/2001 - 04/30/2002 FY01: \$6,943 Total: \$6,943  
*Prin. Invest.:* T HAGSTROM  
*Tech. Officer:* GRC/J GOODRICH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 4441 UNIV OF NEW MEXICO-ALBUQUERQUE 6762**  
 PETROLOGY OF PRESOLAR DUST AND ALTERATION IN CHONDRITES  
 04/28/1997 - 03/31/2002 FY01: \$121,000 Total: \$559,000  
*Prin. Invest.:* D J RIETMEIJER  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4619 UNIV OF NEW MEXICO-ALBUQUERQUE 6763**  
 METEORITES AND SMALL PRIMITIVE SOLAR SYSTEM BODIES  
 05/20/1997 - 05/14/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* D J BREARLEY  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4935 UNIV OF NEW MEXICO-ALBUQUERQUE 6764**  
 MICROSTRUCTURAL STUDIES BEARING ON THE ORIGIN OF CARBON-ASSOCIATED  
 MINERALS IN MARTIAN METEORITE ALH 8400  
 06/23/1997 - 06/30/2000 FY01: \$0 Total: \$78,000  
*Prin. Invest.:* A J BREARLEY  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6739 UNIV OF NEW MEXICO-ALBUQUERQUE 6765**  
 THE X-RAY PROPERTIES OF RICH CLUSTERS FROM Z=0-0.2 USING THE  
 ROSAT ALL-SKY SURVEY  
 12/19/1997 - 06/30/2000 FY01: -\$28,071 Total: \$131,969  
*Prin. Invest.:* M LEDLOW  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6999 UNIV OF NEW MEXICO-ALBUQUERQUE 6766**  
 RIPARIAN ECOSYSTEM RESTORATION: EFFECTS OF FLOODING AND  
 VEGETATION TYPE ON ANNUAL EVAPOTRANSPIRATION  
 02/17/1998 - 02/14/2002 FY01: \$0 Total: \$700,000  
*Prin. Invest.:* C N DAHM  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7006 UNIV OF NEW MEXICO-ALBUQUERQUE 6767**  
 GRANT TITLE: "HIGH PERFORMANCE IMAGE PROCESSOR FOR  
 SPACE" GSFC#5-3358.  
 02/17/1998 - 04/14/2001 FY01: \$0 Total: \$325,000  
*Prin. Invest.:* G MAKI  
*Tech. Officer:* GSFC/W H MILLER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7360 UNIV OF NEW MEXICO-ALBUQUERQUE 6768**  
 TITLE: "CULPRIT". GSFC CONTROL #5-3394, (4/1/98 THRU 9/30/98) FIRST YEAR FUNDS FOR THE UNSOLICIT  
 05/15/1998 - 05/14/2001 FY01: \$50,835 Total: \$1,248,699  
 Prin. Invest.: G MAKI  
 Tech. Officer: GSFC/W H MILLER  
 CASE Category: 45 - ELECTRICAL ENGR

**NAG 5 8454 UNIV OF NEW MEXICO-ALBUQUERQUE 6769**  
 HIGH PERFORMANCE DATA COMPRESSION VLSI ARCHITECTURE; GSFC CONTROLNO. 3474  
 04/20/1999 - 04/30/2002 FY01: \$0 Total: \$460,000  
 Prin. Invest.: G MAKI  
 Tech. Officer: GSFC/W H MILLER  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG 5 8804 UNIV OF NEW MEXICO-ALBUQUERQUE 6770**  
 MARTIN IMPACT CRATER HYDROTHERMAL SYSTEMS, CLUES FROM THE LONAR CRATER, INDIA.  
 01/06/2000 - 01/14/2002 FY01: \$25,100 Total: \$48,945  
 Prin. Invest.: H NEWSOM  
 Tech. Officer: GSFC/J GRANT  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 8821 UNIV OF NEW MEXICO-ALBUQUERQUE 6771**  
 BIOMIMETIC SELF-ASSEMBLY OF HARDENED (NACRE-LIKE) COMPOSITE COATINGS FOR TRANSHAB  
 09/21/1999 - 08/31/2002 FY01: \$242,564 Total: \$492,748  
 Prin. Invest.: J BRINKER  
 Tech. Officer: GSFC/R CROUCH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9152 UNIV OF NEW MEXICO-ALBUQUERQUE 6772**  
 ULTRA-LOW POWER RADIATION TOLERANT CMOS VLSI  
 03/07/2000 - 03/14/2001 FY01: \$0 Total: \$1,237,600  
 Prin. Invest.: G MAKI  
 Tech. Officer: GSFC/W H MILLER  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG 5 9402 UNIV OF NEW MEXICO-ALBUQUERQUE 6773**  
 "BIT PLANE ENCODER/DECODER FOR HPDC", FOR THE UNIVERSITY OF NEW MEXICO, CONTROL #5-3524.  
 04/25/2000 - 04/14/2002 FY01: \$420,000 Total: \$720,000  
 Prin. Invest.: G MAKI Prin. Invest.: NONE  
 Tech. Officer: GSFC/W H MILLER  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG 5 9463 UNIV OF NEW MEXICO-ALBUQUERQUE 6774**  
 MICROBEAM STUDIES OF PLANETARY MATERIALS  
 04/18/2000 - 02/14/2003 FY01: \$283,800 Total: \$516,800  
 Prin. Invest.: J J PAPIKE  
 Tech. Officer: GSFC/J BOYCE  
 CASE Category: 11 - ASTRONOMY

**NAG 5 9469 UNIV OF NEW MEXICO-ALBUQUERQUE 6775**  
 RECONFIGURABLE DATA PATH PROCESSOR  
 04/17/2000 - 04/14/2002 FY01: \$270,000 Total: \$510,000  
 Prin. Invest.: G DONOHOE  
 Tech. Officer: GSFC/P YEY  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG 5 9704 UNIV OF NEW MEXICO-ALBUQUERQUE 6776**  
 SOFTWARE DEVELOPMENT ENVIRONMENT FOR A RECONFIGURABLE PROCESSOR  
 06/22/2000 - 07/31/2002 FY01: \$223,010 Total: \$483,010  
 Prin. Invest.: G W DONOHOE  
 Tech. Officer: GSFC/W H MILLER  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG 5 9798 UNIV OF NEW MEXICO-ALBUQUERQUE 6777**  
 FORMATION AND ALTERATION HISTORIES OF CHONDRITIC MATERIAL  
 07/13/2000 - 06/30/2002 FY01: \$65,000 Total: \$125,000  
 Prin. Invest.: A BREARLEY  
 Tech. Officer: GSFC/J BOYCE  
 CASE Category: 11 - ASTRONOMY

**NAG 5 9993 UNIV OF NEW MEXICO-ALBUQUERQUE 6778**  
 VLSI ARCHITECTURE FOR 8PSK-TRELLIS CODED MODULATION  
 09/14/2000 - 09/14/2001 FY01: \$30,000 Total: \$55,000  
 Prin. Invest.: G K MAKI  
 Tech. Officer: GSFC/W H MILLER  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG 5 10337 UNIV OF NEW MEXICO-ALBUQUERQUE 6779**  
 "ULTRA-LOW POWER RADIATION TOLERANT CMOS VLSI", RENEWAL OF GRANT NAG5-9152, PROPOSAL CONTROL #5-35  
 02/07/2001 - 03/14/2002 FY01: \$995,760 Total: \$995,760  
 Prin. Invest.: G K MAKI  
 Tech. Officer: GSFC/W H MILLER  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG 5 10359 UNIV OF NEW MEXICO-ALBUQUERQUE 6780**  
 NEUTRON AND HIGH ENERGY PARTICLE DETECTION WITH CRYOGENICS CALORIMETERS  
 02/01/2001 - 01/14/2002 FY01: \$132,997 Total: \$132,997  
 Prin. Invest.: S BOYD  
 Tech. Officer: GSFC/C STAHL  
 CASE Category: 13 - PHYSICS

**NAG 5 10372 UNIV OF NEW MEXICO-ALBUQUERQUE 6781**  
 SEMICONDUCTOR- RING -LASER-BASED ROTATION SENSORS PROPOSAL #293.  
 02/15/2001 - 01/14/2002 FY01: \$326,882 Total: \$326,882  
 Prin. Invest.: M OSINSKI  
 Tech. Officer: GSFC/J GAMBINO  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 5 10373 UNIV OF NEW MEXICO-ALBUQUERQUE 6782**  
 SOLID STATE OPTICAL REFRIGERATORS FOR SPACE MISSIONS, PROPOSAL #214  
 03/27/2001 - 03/14/2002 FY01: \$300,000 Total: \$300,000  
 Prin. Invest.: R IEPSTEIN  
 Tech. Officer: GSFC/E R CANAVAN  
 CASE Category: 13 - PHYSICS

**NAG 5 10918 UNIV OF NEW MEXICO-ALBUQUERQUE 6783**  
 HELIOSEISMIC METROLOGY  
 05/14/2001 - 05/31/2002 FY01: \$114,667 Total: \$114,667  
 Prin. Invest.: S JEFFERIES  
 Tech. Officer: GSFC/J GURMAN  
 CASE Category: 19 - PHYSICAL SCIENCE, OTHER

## NEW MEXICO

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10960 UNIV OF NEW MEXICO-ALBUQUERQUE 6784**  
 HIGH PERFORMANCE ULTRA-LOW POWER RADIATION TOLERANT CMOS  
 VLSI  
 06/11/2001 - 06/14/2002 FY01: \$407,038 Total: \$407,038  
*Prin. Invest.:* G K MAKI  
*Tech. Officer:* GSFC/P YEP  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1664 UNIV OF NEW MEXICO-ALBUQUERQUE 6785**  
 RESEARCH  
 06/01/2000 - 05/31/2003 FY01: \$100,000 Total: \$200,000  
*Prin. Invest.:* M OSINSKI  
*Tech. Officer:* MSFC/M D WATSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1758 UNIV OF NEW MEXICO-ALBUQUERQUE 6786**  
 BASIC AWARD FOR RESEARCH STUDY ENTITLED, "SURFACE PHYSICS  
 WITH HELIUM CRYSTALS IN MICROGRAVITY"  
 04/24/2001 - 04/29/2003 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* A V BABKIN  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 995 UNIV OF NEW MEXICO-ALBUQUERQUE 6787**  
 DESIGN & DEVELOP INTELLIGENT BIOMIMETIC ROBOTS  
 03/12/1998 - 07/30/2001 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* M SHAHINPOOR  
*Tech. Officer:* JSC/K KRISHEN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 9 1017 UNIV OF NEW MEXICO-ALBUQUERQUE 6788**  
 STIMULUS FOR STUDENTS TO STUDY PRE COLLEGE MATH  
 05/28/1998 - 07/21/2001 FY01: \$0 Total: \$297,351  
*Prin. Invest.:* H E NEWSOM  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1042 UNIV OF NEW MEXICO-ALBUQUERQUE 6789**  
 1998 NASA TRAINING PROJECT  
 07/01/1998 - 06/30/2001 FY01: \$0 Total: \$1,350,600  
*Prin. Invest.:* J D TORRES  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1111 UNIV OF NEW MEXICO-ALBUQUERQUE 6790**  
 INST FOR THE STUDY OF BIOMARKERS IN ASTROMATERIALS  
 05/14/1999 - 05/13/2002 FY01: \$50,000 Total: \$150,000  
*Prin. Invest.:* J J PAPIKE  
*Tech. Officer:* JSC/E K GIBSON  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 9 1324 UNIV OF NEW MEXICO-ALBUQUERQUE 6791**  
 ADVANCED CO2 REMOVAL SYSTEM USING AMINE FUNCTIONAL IZED  
 MEMBRANES  
 07/20/2001 - 06/15/2002 FY01: \$95,000 Total: \$95,000  
*Prin. Invest.:* J BRINKER  
*Tech. Officer:* JSC/G THOMAS  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAS 3 00103 UNIV OF NEW MEXICO-ALBUQUERQUE 6792**  
 MULTIPLE PR'S FOR THIS ACTION: 132514,132514F BREAKTHROUGH  
 PROPULSION PHYSICS  
 01/19/2000 - 04/09/2002 FY01: \$79,972 Total: \$170,353  
*Prin. Invest.:* K J MALLOY  
*Tech. Officer:* GRC/M G MILLIS  
*CASE Category:* 13 - PHYSICS

**NCC 2 5345 UNIV OF NEW MEXICO-ALBUQUERQUE 6793**  
 TELEMEDICINE VIRTUAL COLLABORATORY  
 08/16/1999 - 10/31/2000 FY01: -\$891 Total: \$70,660  
*Prin. Invest.:* D ALVERSON  
*Tech. Officer:* ARC/K A SOUZA, ARC/B P DALTON  
*CASE Category:* 56 - MEDICL

**NCC 5 309 UNIV OF NEW MEXICO-ALBUQUERQUE 6794**  
 PERFORMING A REGIONAL ASSESSMENT & PROTOTYPING INTERNET  
 ACCESSIBLE MTPE PRODUCTS TO THE UPPER RIO  
 04/09/1998 - 02/28/2003 FY01: \$392,955 Total: \$2,078,687  
*Prin. Invest.:* S MORAIN  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 350 UNIV OF NEW MEXICO-ALBUQUERQUE 6795**  
 PREPARATION FOR UNVIERSITY OF STUDENTS IN UNDEGRAD UATE  
 EDUCATION  
 07/01/1998 - 07/31/2003 FY01: \$896,961 Total: \$1,996,587  
*Prin. Invest.:* M JAMSHIDI  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC13 98002 UNIV OF NEW MEXICO-ALBUQUERQUE 6796**  
 AFFILIATED RESEARCH CENTER PROGRAM-COMMERCIAL RE- MOTE  
 SENSING PARTNERSHIPS WITH INDUSTRY  
 08/11/1998 - 08/10/2002 FY01: \$224,681 Total: \$574,681  
*Prin. Invest.:* S A MORAIN, S A MORAIN  
*Tech. Officer:* SSC/A PEEK  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30227 UNIV OF NEW MEXICO-ALBUQUERQUE 6797**  
 CLIMATIC WATER BALANCE AND THE DYNAMICS OF PINYON- JUNIPER  
 09/19/2000 - 08/31/2001 FY01: \$0 Total: \$14,000  
*Prin. Invest.:* B MILNE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 31 UNIV OF NEW MEXICO-ALBUQUERQUE 6798**  
 TRAINING GRANT  
 06/03/1998 - 08/01/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* C D HERD  
*Tech. Officer:* JSC/J H JONES, JSC/D SICKORREZ  
*CASE Category:* 32 - GEOLOGICAL SCIENCE



## NEW YORK

<p><b>NAG 5 7473 CAYUGA COUNTY COMMUNITY COLLEGE 6799</b>            DEFINING EARTH SYSTEM ENTERPRISE INFO NEEDS &amp; PILOT PROGRAMS FOR UTILIZATION BY LOCAL GOVERNMENT            06/15/1998 - 06/14/2002 FY01: \$0 Total: \$3,450,000  <i>Prin. Invest.:</i> R BROWN  <i>Tech. Officer:</i> GSFC/W CAMPBELL            CASE Category: 22 - COMPUTER SCIENCE</p>	<p><b>NAG 1 2028 CITY UNIV OF NEW YORK CITY COLLEGE 6806</b>            EIGENSTRUCTURE ASSIGNMENT FOR FAULT TOLERANT FLIGHT CONTROL DESIGN            03/09/1998 - 01/31/2002 FY01: \$0 Total: \$298,796  <i>Prin. Invest.:</i> K SOBEL  <i>Tech. Officer:</i> LARC/S M JOSHI            CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG13 00043 CAYUGA COUNTY COMMUNITY COLLEGE 6800</b>            SPATIAL INFORMATION TECHNOLOGY CENTER AT FULTON MONTGOMERY COMMUNITY COLLEGE            09/27/2000 - 09/26/2002 FY01: \$498,900 Total: \$1,491,400  <i>Prin. Invest.:</i> R FRESTOPKIK  <i>Tech. Officer:</i> SSC/D POWE            CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 1 2259 CITY UNIV OF NEW YORK CITY COLLEGE 6807</b>            IRA (INSTAL RESEARCH AWARD) PROGRAM TRANSFER NAGW5-6952            01/19/2000 - 11/30/2002 FY01: \$170,000 Total: \$1,000,000  <i>Prin. Invest.:</i> R A ALFANO  <i>Tech. Officer:</i> LARC/N P BARNES, LARC/J C BARNES            CASE Category: 13 - PHYSICS</p>
<p><b>NAG13 00044 CAYUGA COUNTY COMMUNITY COLLEGE 6801</b>            PHASE III: DEPLOYING ESE PILOT INFORMATION PROGRAMS FOR STATE &amp; LOCAL GOVERNMENT IN THE NORTHEAST            09/27/2000 - 09/26/2003 FY01: \$1,000,000 Total: \$10,110,000  <i>Prin. Invest.:</i> R BROWER  <i>Tech. Officer:</i> SSC/M MICK            CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 3 1836 CITY UNIV OF NEW YORK CITY COLLEGE 6808</b>            MOLECULAR DYNAMICS OF FLUID-SOLID SYSTEM            04/19/1996 - 04/30/2000 FY01: \$0 Total: \$600,000  <i>Prin. Invest.:</i> J KOPLIK, J BANAVAR  <i>Tech. Officer:</i> GRC/B SINGH            CASE Category: 13 - PHYSICS</p>
<p><b>NAG 3 2268 CITY UNIV OF NY HERBERT H. LEHMAN COLL 6802</b>            MATHEMATICS, SCIENCE AND TECHNOLOGY WITH EXCELLENCE IN RESEARCH: A SCIENCE AND TECHNOLOGY ENTRY PR            05/17/1999 - 06/30/2002 FY01: \$100,000 Total: \$300,000  <i>Prin. Invest.:</i> A L ROTHSETIN  <i>Tech. Officer:</i> GRC/R F LAWRENCE            CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 3 2074 CITY UNIV OF NEW YORK CITY COLLEGE 6809</b>            PICOSECOND GATED OPTICAL IMAGING OF DENSE FUEL SPRAYS            09/17/1997 - 07/15/2001 FY01: \$0 Total: \$299,322  <i>Prin. Invest.:</i> P P HO  <i>Tech. Officer:</i> GRC/K J BREISACHER, GRC/L LIU            CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 3 2057 CITY UNIV. OF NY HOSTOS COMMUNITY COLL. 6803</b>            HOSTOS EARLY LEARNING COMMUNITIES            08/19/1997 - 10/31/1999 FY01: -\$12,084 Total: \$137,916  <i>Prin. Invest.:</i> G MELENDEZ-DELANEY  <i>Tech. Officer:</i> GRC/D CENTENO-GOMEZ            CASE Category: 29 - MATH/COMPUTER SCI, OTHER</p>	<p><b>NAG 3 2163 CITY UNIV OF NEW YORK CITY COLLEGE 6810</b>            HIGH RESOLUTION EXPERIMENTS OF COMPRESSIBLE TURBULENCE INTERACTING WITH EXPANSION OR SHOCK WAVES            08/24/1998 - 04/05/2001 FY01: \$0 Total: \$300,000  <i>Prin. Invest.:</i> Y ANDREPOULOS  <i>Tech. Officer:</i> GRC/D O DAVIS            CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 5 7532 CITY UNIV COLLEGE OF NEW YORK YORK COLL 6804</b>            LET'S DO SCIENCE            06/11/1998 - 05/31/2001 FY01: \$0 Total: \$583,704  <i>Prin. Invest.:</i> J SCHLEIN  <i>Tech. Officer:</i> GSFC/M STOUTSENBERGER            CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 3 2167 CITY UNIV OF NEW YORK CITY COLLEGE 6811</b>            USING SURFACTANTS TO ENHANCE THERMOCAPILLARY MIGRATION OF BUBBLES &amp; DROPS &amp; FACILITATE DROP SPREAD            05/26/1998 - 09/30/2001 FY01: \$59,996 Total: \$299,820  <i>Prin. Invest.:</i> C MALDARELLI, RBALASUBRAMANIAN  <i>Tech. Officer:</i> GRC/B S SINGH            CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 10152 CITY UNIV COLLEGE OF NEW YORK YORK COLL 6805</b>            YORK COLLEGE OBSERVATORY EDUCATIONAL OUTREACH SVC. TO THE COLLEGE &amp; THE PUBLIC SCHOOL COMMUNITY            12/08/2000 - 12/31/2001 FY01: \$154,000 Total: \$154,000  <i>Prin. Invest.:</i> M SPERGEL  <i>Tech. Officer:</i> GSFC/P SAKIMOTO            CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 3 2258 CITY UNIV OF NEW YORK CITY COLLEGE 6812</b>            SCIENCE AND TECHNOLOGY TEACHERS FOR THE NEXT MILLENNIAL PHASE II (MASTAP)            05/03/1999 - 03/22/2002 FY01: \$200,000 Total: \$600,000  <i>Prin. Invest.:</i> L P JOHNSON  <i>Tech. Officer:</i> GRC/R F LAWRENCE            CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
	<p><b>NAG 3 2259 CITY UNIV OF NEW YORK CITY COLLEGE 6813</b>            ULTRASONIC ASSESSMENT OF IMPACT-INDUCED DAMAGE AND MICROCRACKING IN POLYMER MATRIX COMPOSITES            05/05/1999 - 01/26/2002 FY01: \$100,000 Total: \$200,000  <i>Prin. Invest.:</i> B LIAW  <i>Tech. Officer:</i> GRC/K J BOWLES            CASE Category: 47 - METAL &amp; MATERIALS ENGR</p>

**NAG 3 2335 CITY UNIV OF NEW YORK CITY COLLEGE 6814**  
 MOLECULAR DYNAMICS OF FLUID-SOLID SYSTEMS MOLECULAR  
 DYNAMICS OF FLUID-SOLID SYSTEMS  
 02/17/2000 - 11/30/2003 FY01: \$49,999 Total: \$75,085  
*Prin. Invest.:* D KOPLIK  
*Tech. Officer:* GRC/F P CHIARMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 4019 CITY UNIV OF NEW YORK CITY COLLEGE 6815**  
 CONTINUATION OF GRANT  
 03/03/1997 - 11/30/2000 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* D AKINS  
*Tech. Officer:* GSFC/S GLICKER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4911 CITY UNIV OF NEW YORK CITY COLLEGE 6816**  
 ADVANCING MINORITIES IN SCIENCE AND ENGINEERING ED  
 07/16/1997 - 08/31/2001 FY01: \$0 Total: \$633,325  
*Prin. Invest.:* J BARBA  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6952 CITY UNIV OF NEW YORK CITY COLLEGE 6817**  
 TUNABLE SOLID STATE LASERS AND OPTICAL IMAGING  
 02/02/1998 - 11/30/1999 FY01: -\$39,360 Total: \$1,861,893  
*Prin. Invest.:* R R ALFANO  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7129 CITY UNIV OF NEW YORK CITY COLLEGE 6818**  
 ROBUST ALGORITHMS FOR IMAGE REGISTRATION  
 03/11/1998 - 09/30/2001 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* G WOLBERG  
*Tech. Officer:* GSFC/J TILTON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 7160 CITY UNIV OF NEW YORK CITY COLLEGE 6819**  
 HIGH DENSITY SOLID STATE MEMORIES  
 03/11/1998 - 03/14/2002 FY01: \$0 Total: \$294,347  
*Prin. Invest.:* N SCHEINBERG  
*Tech. Officer:* GSFC/H SHAW  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 7827 CITY UNIV OF NEW YORK CITY COLLEGE 6820**  
 WINDS, WATER BUDGETS, AND STABLE ISOTOPES IN TROPICAL  
 CYCLONES USING TRMM AND QUICKSCAT  
 12/14/1998 - 12/14/2001 FY01: \$67,544 Total: \$204,552  
*Prin. Invest.:* S GEDZELMAN  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9732 CITY UNIV OF NEW YORK CITY COLLEGE 6821**  
 THE STUDENT POLARIMETER AEROSOL & CLOUD EXPERIMENT (SPACE)  
 06/20/2000 - 12/31/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* F MOSHARY, NONE  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10845 CITY UNIV OF NEW YORK CITY COLLEGE 6822**  
 ADVANCING MINORITIES IN SCIENCE AND ENGINEERING EDUCATION  
 05/01/2001 - 05/14/2002 FY01: \$157,608 Total: \$157,608  
*Prin. Invest.:* J BARBA  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 607 CITY UNIV OF NEW YORK CITY COLLEGE 6823**  
 THE SYNERGISM OF ELECTORRHEOLOGICAL RESPONSE, DIELECTROPHORE-  
 RESIS AND SHEAR-INDUCED DIFFUSION IN FLOW  
 04/07/1998 - 01/31/2002 FY01: \$71,250 Total: \$296,250  
*Prin. Invest.:* A ACRIVOS  
*Tech. Officer:* GRC/F D CHIARMONTE  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 5 98 CITY UNIV OF NEW YORK CITY COLLEGE 6824**  
 AN URBAN COLLABORATION FOR NETWORK CONNECTIVITY AND  
 INTERNET ACCESS  
 09/13/1995 - 11/14/2000 FY01: \$0 Total: \$2,423,500  
*Prin. Invest.:* S AUSTIN  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 343 CITY UNIV OF NEW YORK CITY COLLEGE 6825**  
 COOPERATIVE RESEARCH & EDUCATION PROGRAM: INST ON CLIMATE  
 AND PLANETS  
 06/23/1998 - 12/31/2000 FY01: \$0 Total: \$782,194  
*Prin. Invest.:* N A PARKER  
*Tech. Officer:* GSFC/L TRAVIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 344 CITY UNIV OF NEW YORK CITY COLLEGE 6826**  
 INTEGRATION OF RESEARCH AND EDUCATION IN REMOTE SENSING  
 AND ENVIRONMENTAL CLIMATE RESEARCH  
 07/15/1998 - 06/30/2002 FY01: \$500,000 Total: \$2,000,000  
*Prin. Invest.:* R KHANBILVARDI  
*Tech. Officer:* HQ/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 520 CITY UNIV OF NEW YORK CITY COLLEGE 6827**  
 COOPERATIVE RESEARCH & EDUCATION PROGRAM: INST. ON CLIMATE &  
 PLANETS.  
 11/02/2000 - 12/31/2001 FY01: \$349,123 Total: \$349,123  
*Prin. Invest.:* N A PARKER  
*Tech. Officer:* GSFC/L TRAVIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 530 CITY UNIV OF NEW YORK CITY COLLEGE 6828**  
 AN URBAN COLLABORATION FOR NETWORKS CONNECTIVITY & INTERNET  
 ACCESS/MUSPINNRTS PROGRAM.  
 02/01/2001 - 01/31/2002 FY01: \$399,765 Total: \$399,765  
*Prin. Invest.:* S AUSTIN  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1423 CITY UNIV OF NEW YORK SYSTEM 6829**  
 R/S OBJECTIVE OPERATIONAL UTILIZATION OF SATELLITE MICROWAVE  
 SCATTEROMETER OBSERVATION OF TROPICAL  
 01/01/1998 - 12/31/2000 FY01: -\$1 Total: \$99,999  
*Prin. Invest.:* W J PIERSON  
*Tech. Officer:* MSFC/J SIMMONDS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 1891**                      **CLARKSON UNIV**                      **6830**  
 ABSOLUTE AND CONVECTIVE INSTABILITY AND SPLITTING OF A LIQUID  
 05/30/1996 - 05/31/2001      FY01: \$4,867                      Total: \$348,867  
*Prin. Invest.:* S P LIN  
*Tech. Officer:* GRC/M E HILL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2393**                      **CLARKSON UNIV**                      **6831**  
 QUANTIFICATION OF ENERGY RELEASE IN COMPOSITE STRUCTURES  
 04/18/2000 - 12/31/2001      FY01: \$0                      Total: \$49,529  
*Prin. Invest.:* D MINNETYAN  
*Tech. Officer:* GRC/C C CHAMIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2394**                      **CLARKSON UNIV**                      **6832**  
 TEST-FREE FRACTURE TOUGHNESS, REF. #00169 TEST-FREE FRACTURE  
 TOUGHNESS, REF. #00169  
 04/18/2000 - 12/31/2001      FY01: \$0                      Total: \$50,554  
*Prin. Invest.:* D MINNETYAN  
*Tech. Officer:* GRC/C C CHAMIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2609**                      **CLARKSON UNIV**                      **6833**  
 COMPUTATIONAL SIMULATION OF COMPOSITE STRUCTURAL FATIGUE  
 05/16/2001 - 05/31/2004      FY01: \$25,118                      Total: \$25,118  
*Prin. Invest.:* D MINNETYAN  
*Tech. Officer:* GRC/C C CHAMIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1266**                      **CLARKSON UNIV**                      **6834**  
 USE OF MICROGRAVITY TO CONTROL THE MICROSTRUCTURE OF EUTECTICS  
 05/01/1996 - 11/30/2001      FY01: \$0                      Total: \$540,000  
*Prin. Invest.:* W R WILCOX, L L REGEL  
*Tech. Officer:* MSFC/P DOTY, MSFC/R POWER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1482**                      **CLARKSON UNIV**                      **6835**  
 R/S IMPROVED CRYSTAL QUALITY BY DETACHED SOLIDIFICATION IN  
 MICROGRAVITY  
 02/12/1998 - 01/31/2002      FY01: \$90,250                      Total: \$340,417  
*Prin. Invest.:* L L REGEL  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1703**                      **CLARKSON UNIV**                      **6836**  
 RESIDUAL GAS EFFECTS ON DETACHED SOLIDIFICATION IN  
 MICROGRAVITY  
 06/22/2000 - 11/28/2003      FY01: \$95,000                      Total: \$135,000  
*Prin. Invest.:* W R WILCOX  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 12 - CHEMISTRY

**NGT 1 52214**                      **CLARKSON UNIV**                      **6837**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) YEAR 1  
 06/10/1999 - 06/30/2002      FY01: \$12,000                      Total: \$44,000  
*Prin. Invest.:* M N GLAUSER  
*Tech. Officer:* LARC/C S YAO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52222**                      **CLARKSON UNIV**                      **6838**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/29/1999 - 06/30/2002      FY01: \$16,000                      Total: \$56,001  
*Prin. Invest.:* R F SCHMIT, M GLAUSER  
*Tech. Officer:* LARC/J JUANG, LARC/L HORTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 8 52849**                      **CLARKSON UNIV**                      **6839**  
 MICROGRAVITY EQUIPMENT VIBRATIONS: A SENSITIVITY AND CONTROL  
 STUDY  
 07/21/1998 - 08/13/2001      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* G AHMADI  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52853**                      **CLARKSON UNIV**                      **6840**  
 COMPUTATIONAL MODELING OF FUEL SPRAY FORMATION IN ROCKET  
 ENGINES  
 07/21/1998 - 08/13/2001      FY01: \$0                      Total: \$68,000  
*Prin. Invest.:* G AHMADI  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 2 1345**                      **COLUMBIA UNIV**                      **6841**  
 DEVELOPMENT & FUNCTION OF THE MOUSE VESTIBULAR SYSTEM IN THE  
 ABSENCE OF GRAVITY PERCEPTION  
 07/16/1999 - 07/14/2002      FY01: \$170,916                      Total: \$429,061  
*Prin. Invest.:* D J WOLGEMUTH  
*Tech. Officer:* ARC/M M AVRENER, ARC/G C JAHN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 618**                      **COLUMBIA UNIV**                      **6842**  
 X-RAY ASTRONOMY  
 07/23/1990 - 06/30/2001      FY01: \$0                      Total: \$8,461,663  
*Prin. Invest.:* R NOVICK, W H-M KU, M VARTANIAN  
*Tech. Officer:* GSFC/L J EARLY, GSFC/R H PLESS  
*CASE Category:* 13 - PHYSICS

**NAG 5 3502**                      **COLUMBIA UNIV**                      **6843**  
 SN 1987A: FORMATION OF A SUPERNOVA REMNANT  
 12/11/1996 - 12/14/2001      FY01: \$175,300                      Total: \$583,500  
*Prin. Invest.:* A P CROTTIS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4028**                      **COLUMBIA UNIV**                      **6844**  
 MODELLING SOUTH PACIFIC OCEAN INTERACTIONS IN THE  
 03/13/1997 - 02/28/2001      FY01: \$0                      Total: \$261,592  
*Prin. Invest.:* D M HOLLAND  
*Tech. Officer:* GSFC/R H THOMAS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4058**                      **COLUMBIA UNIV**                      **6845**  
 IMPACTS OF INTERANNUAL VARIABILITY ON AGRO ECOSYSTEMS AND  
 FISHERIES  
 03/26/1997 - 12/31/2000      FY01: \$0                      Total: \$360,000  
*Prin. Invest.:* M CANE  
*Tech. Officer:* GSFC/C ROSENZWEIG  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4649** **COLUMBIA UNIV** **6846**  
 EARLY DIFFERENTIATION OF THE MOON: EXPERIMENTAL AND  
 06/11/1997 - 05/31/2002 FY01: \$161,000 Total: \$710,000  
*Prin. Invest.:* D LONGHI  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5108** **COLUMBIA UNIV** **6847**  
 LXEGRIT: A LIQUID XENON GAMMA-RAY IMAGING TELE- SCOPE FOR HIGH  
 ENERGY ASTROPHYSICS  
 02/11/1997 - 05/31/2001 FY01: \$30,000 Total: \$1,291,000  
*Prin. Invest.:* E APRILE  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5123** **COLUMBIA UNIV** **6848**  
 X-RAY SPECTROSCOPIC LABORATORY EXPERIMENTS IN SUPPORT OF  
 THE NASA X-RAY ASTRONOMY PROGRAM  
 02/20/1997 - 05/31/2003 FY01: \$85,240 Total: \$708,400  
*Prin. Invest.:* S M KAHN  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5247** **COLUMBIA UNIV** **6849**  
 GRANT NAG5-5247 RAIN INDUCED AIR-WATER GAS EXCH. PI DR.  
 SCHLOSSER  
 04/01/1999 - 03/28/2001 FY01: \$0 Total: \$10,000  
*Prin. Invest.:* P SCHLOSSER  
*Tech. Officer:* GSFC/F BLIVEN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5254** **COLUMBIA UNIV** **6850**  
 HIGH-PERFORMANCE MULTILAYER COATINGS FOR THE NEXT GENERA-  
 TION OF HIGH-RESOLUTION X-RAY OPTICS  
 02/22/2000 - 02/03/2003 FY01: \$195,000 Total: \$380,000  
*Prin. Invest.:* D L WINDT  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5260** **COLUMBIA UNIV** **6851**  
 THERMALLY-FORMED GALASS OPTICS FOR X-RAY AND GAMMA-RAY  
 MISSIONS  
 02/18/2000 - 02/10/2003 FY01: \$195,000 Total: \$374,000  
*Prin. Invest.:* C J HAILEY  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 5261** **COLUMBIA UNIV** **6852**  
 MEASUREMENTS, CALCULATIONS, AND ASTROPHYSICAL IMPLICATIONS  
 OF NEW LOW TEMPERATURE DIELECTRONIC  
 02/11/2000 - 02/10/2003 FY01: \$120,000 Total: \$233,040  
*Prin. Invest.:* D W SAVIN  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5275** **COLUMBIA UNIV** **6853**  
 FUNDING FOR PHASE 1 OF SPACE PROJECT FUNDING FOR PHASE 1 OF  
 SPACE PROJECT  
 04/17/2000 - 04/13/2006 FY01: \$0 Total: \$299,510  
*Prin. Invest.:* B CAIRNS  
*Tech. Officer:* GSFC/D L PIERCE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 5280** **COLUMBIA UNIV** **6854**  
 DEVELOPMENT OF XENON TIME PROJECTION CHAMBERS FOR PRECISDE  
 COMPTON IMAGING OF ASTROPHYSICAL LINES  
 05/31/2000 - 12/31/2002 FY01: \$390,000 Total: \$757,500  
*Prin. Invest.:* E APRILE  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6035** **COLUMBIA UNIV** **6855**  
 SURFING THE HIGH DENSITY UNIVERSE  
 10/03/1997 - 09/30/2001 FY01: \$137,700 Total: \$486,800  
*Prin. Invest.:* D HELFAND  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6294** **COLUMBIA UNIV** **6856**  
 DEVELOP A UNIQUE SHARED RESEARCH FACILITY IN WHICH FOCUS ON  
 THE CHANGING ATMOSPHER  
 09/15/1997 - 08/14/2000 FY01: \$0 Total: \$225,000  
*Prin. Invest.:* W BROECKER  
*Tech. Officer:* GSFC/M KHAZENIE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6315** **COLUMBIA UNIV** **6857**  
 MODELING STUDIES OF THE EFFECTS OF WINDS AND HEAT TROPICAL  
 OCEAN  
 09/19/1997 - 03/31/2000 FY01: \$0 Total: \$291,359  
*Prin. Invest.:* R SEAGER  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6321** **COLUMBIA UNIV** **6858**  
 THE BIO-ATMOSPHERIC CYCLES OF NITROGEN AND CARBON: POLLUTION  
 AND TERRESTRIAL ECOSYSTEMS  
 09/09/1997 - 04/30/2001 FY01: \$0 Total: \$123,985  
*Prin. Invest.:* E MATTHEWS  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6450** **COLUMBIA UNIV** **6859**  
 PRODUCTION AND ANALYSIS OF GLOBAL WAVE AND PHOTOSY NTHETI-  
 CALLY ACTIVESURFACE IRRADIANCE FIELDS U  
 10/31/1997 - 09/30/2001 FY01: \$0 Total: \$485,933  
*Prin. Invest.:* J A BISHOP  
*Tech. Officer:* GSFC/J A MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6876** **COLUMBIA UNIV** **6860**  
 INFLUENCE OF ARCTIC SEA ICE ON NATURAL AND ANTHROP OGENI-  
 CALLY-INDUCEDCLIMATE VATIABILITY  
 01/30/1998 - 03/31/2002 FY01: \$0 Total: \$235,200  
*Prin. Invest.:* D G MARTINSON  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6877** **COLUMBIA UNIV** **6861**  
 MONSOONS, TIDAL MIXING AND PRODUCTIVITY IN THE BAN DA SEA, INDO-  
 NESIA  
 02/10/1998 - 12/31/2001 FY01: \$0 Total: \$554,232  
*Prin. Invest.:* T TAKAHASHI  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6948** **COLUMBIA UNIV** **6862**  
 MTPE: GLOBAL OCEAN-ATMOSPHERE INTERACTIONS FORCED BY TIDAL  
 MIXING OF SST  
 02/24/1998 - 12/31/2000 FY01: \$0 Total: \$127,651  
*Prin. Invest.:* A L FIELD  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7044** **COLUMBIA UNIV** **6863**  
 ASSESSING CURRENT AND POTENTIAL USE OF CLIMATE FOR ECAS  
 FOR COMMUNAL FARM MANAGEMENT IN ZIMBABWE  
 03/05/1998 - 08/31/2001 FY01: \$25,119 Total: \$102,621  
*Prin. Invest.:* M A CANE  
*Tech. Officer:* GSFC/D RIND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7138** **COLUMBIA UNIV** **6864**  
 MIDDLEWORLD TRANSPORT WITHIN THREE-DIMENSIONAL MODES: CHAR-  
 ACTERIZATION & SENSITIVITIES TO MODEL F  
 05/06/1998 - 03/31/2001 FY01: \$0 Total: \$126,408  
*Prin. Invest.:* T HALL  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7461** **COLUMBIA UNIV** **6865**  
 POLYNAS, PREDATORS AND PACK ICE VARIABILITY IN TH E SOUTHERN  
 OCEAN  
 10/26/1998 - 12/31/2001 FY01: \$91,498 Total: \$249,868  
*Prin. Invest.:* S S JACOBS  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7687** **COLUMBIA UNIV** **6866**  
 SURFACE SOLAR RADIATION SOLAR BASE  
 09/17/1998 - 08/31/2001 FY01: \$67,429 Total: \$300,429  
*Prin. Invest.:* G KUKLA  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7737** **COLUMBIA UNIV** **6867**  
 SCIENCE AND CALIBRATION SUPPORT FOR THE REFLECTING GRATING  
 SPECTROMETER ON THE X-RAY MULTI-MIRROR M  
 10/01/1998 - 03/31/2002 FY01: \$1,005,000 Total: \$2,033,750  
*Prin. Invest.:* S M KAHN *Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/N E WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7740** **COLUMBIA UNIV** **6868**  
 XTE A03 PROPOSAL - RECONSIDERING THE NATURE OF THE NEUTRON  
 STARCANDIDATE IN RCW 103  
 10/28/1998 - 10/31/2000 FY01: \$0 Total: \$9,401  
*Prin. Invest.:* E GOTTHELF  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7814** **COLUMBIA UNIV** **6869**  
 NEW ASCA AND ROSAT OBSERVATIONS OF ROTATION-POWERE D  
 PULSARS\_\_ - ADP 98  
 12/03/1998 - 12/14/2001 FY01: \$0 Total: \$72,728  
*Prin. Invest.:* J P HALPERN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7846** **COLUMBIA UNIV** **6870**  
 CONSOLIDATING CYGNUS REGION 1.809 MEV EMISSION  
 11/25/1998 - 05/31/2000 FY01: \$0 Total: \$5,000  
*Prin. Invest.:* U OBERLACK  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7922** **COLUMBIA UNIV** **6871**  
 EFFECT OF HISTORICAL AND PROJECTED CLIMATE CHANGE ON  
 SOUTHERN OCEAN SEA ICE AND ANTARCTIC MASSBALAN  
 12/21/1998 - 12/31/2000 FY01: \$0 Total: \$93,000  
*Prin. Invest.:* D MARTINSON  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7935** **COLUMBIA UNIV** **6872**  
 THE NATURE OF RADIO-QUIET X-RAY PULSARS IN SUPERNO VA  
 REMNANTS\_\_(LTSA-98)  
 12/14/1998 - 12/31/2001 FY01: \$117,407 Total: \$339,196  
*Prin. Invest.:* E V GOTTHELF  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7971** **COLUMBIA UNIV** **6873**  
 NARROW-LINE SEYFERT 1 GALAXIES (LTSA 98)  
 12/22/1998 - 09/14/2000 FY01: -\$7,843 Total: \$134,364  
*Prin. Invest.:* K M LEIGHLY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7977** **COLUMBIA UNIV** **6874**  
 ACCRETION RATES IN CATAclysmic VARIABLES (ADP98)  
 12/23/1998 - 12/31/2001 FY01: \$0 Total: \$106,810  
*Prin. Invest.:* J O PATTERSON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8297** **COLUMBIA UNIV** **6875**  
 VARIABILITY OF SEA LEVEL WITHIN THE INDONESIA SEA S AND ITS RELA-  
 TION- SHIP TO INTEROCEAN THROUGH F  
 02/23/1999 - 02/28/2001 FY01: \$0 Total: \$205,158  
*Prin. Invest.:* A L GORDON  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8506** **COLUMBIA UNIV** **6876**  
 COSMOLOGY AND PARTICLE ASTROPHYSICS THEORY (ATP - 98)  
 05/10/1999 - 04/30/2000 FY01: \$0 Total: \$30,743  
*Prin. Invest.:* M P KAMIONKOWSKI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

## NEW YORK

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8675** **COLUMBIA UNIV** **6877**  
 HYDRODYNAMIC INSTABILITIES AND EDDY-MEAN FLOW INTERACTION IN THE SOUTHERN OCEAN  
 07/08/1999 - 07/14/2001 FY01: -\$69,108 Total: \$131,482  
*Prin. Invest.:* D L WITTER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8725** **COLUMBIA UNIV** **6878**  
 SEASONAL AND INTERANNUAL VARIABILITY OF AIR-SEA-ICE COUPLING PROCESSES IN THE SUBPOLAR SOUTHERN OCEAN  
 08/04/1999 - 08/31/2002 FY01: \$42,416 Total: \$184,254  
*Prin. Invest.:* X YUAN  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8808** **COLUMBIA UNIV** **6879**  
 US GLOBAL CHANGE RESEARCH INFORMATION OFFICE (GCRI O)  
 09/08/1999 - 02/28/2001 FY01: \$0 Total: \$350,000  
*Prin. Invest.:* R MILLER  
*Tech. Officer:* GSFC/D KAHLE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8848** **COLUMBIA UNIV** **6880**  
 FIRST YEAR FUNDING FOR SENH99-0121, LANDSLIDE MECHANISMS & HAZARD ASSESSMENT IN MOUNTAIN REGIONS  
 12/16/1999 - 12/31/2001 FY01: \$148,174 Total: \$315,761  
*Prin. Invest.:* J K WEISSEL  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8854** **COLUMBIA UNIV** **6881**  
 ASSIST IN DEVELOPING A THEORETICAL MATHEMATICAL MODEL FOR THE EXISTING WFF BALLOON LAUNCH TRAIN AN  
 11/01/1999 - 10/31/2000 FY01: -\$31 Total: \$9,969  
*Prin. Invest.:* B CRAIG  
*Tech. Officer:* GSFC/T GRUNER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9056** **COLUMBIA UNIV** **6882**  
 CONTINENT-WIDE ESTIMATION AND CALIBRATION OF CATCHMENT HYDROLOGIC PARAMETERS USING SRTM AND LASER  
 02/15/2000 - 02/28/2002 FY01: \$46,943 Total: \$71,693  
*Prin. Invest.:* C P STARK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9060** **COLUMBIA UNIV** **6883**  
 IMPROVED ESTIMATES OF ANTARCTIC ICE SHEET VOLUME BASED ON INVERSION OF GRAVITY DATA & OTHER POTENTIALS  
 02/10/2000 - 02/14/2002 FY01: \$72,250 Total: \$139,000  
*Prin. Invest.:* R E BELL  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9094** **COLUMBIA UNIV** **6884**  
 TESTING FOR X-RAY PERIODICITIES IN SEYFERT GALAXIES - ADP 99  
 02/18/2000 - 02/28/2002 FY01: -\$7,500 Total: \$22,152  
*Prin. Invest.:* J P HALPERN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9095** **COLUMBIA UNIV** **6885**  
 ASCA OBSERVATIONS OF HIGH-ENERGY GAMMA-RAY SOURCES - ADP 99  
 02/18/2000 - 02/28/2002 FY01: -\$7,500 Total: \$49,911  
*Prin. Invest.:* J P HALPERN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9136** **COLUMBIA UNIV** **6886**  
 ON THE EVOLUTION OF YOUNG NEUTRON STARS: ANOMALOUS COMPACT OBJECTS WITHIN SUPERNOVA REMNANTS  
 03/01/2000 - 02/28/2002 FY01: \$52,422 Total: \$102,862  
*Prin. Invest.:* E V GOTTHELF  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9581** **COLUMBIA UNIV** **6887**  
 UNRAVELING THE PHYSICAL CONDITIONS IN THE SOLAR ATMOSPHERE: EXPERIMENTAL AND THEORETICAL RATES FOR  
 05/09/2000 - 04/30/2003 FY01: \$131,183 Total: \$208,052  
*Prin. Invest.:* D W SAVIN  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9615** **COLUMBIA UNIV** **6888**  
 HIGH-PERFORMANCE MULTILAYER X-RAY OPTICS FOR SOLAR PHYSICS  
 05/23/2000 - 04/30/2002 FY01: \$92,692 Total: \$144,069  
*Prin. Invest.:* D WINDT  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9653** **COLUMBIA UNIV** **6889**  
 CONSOLIDATING THE VELA-REGION 1.809 MEV RESULTS  
 05/30/2000 - 08/31/2001 FY01: \$0 Total: \$6,500  
*Prin. Invest.:* U OBERLACK  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9759** **COLUMBIA UNIV** **6890**  
 ASSIMILATION OF REMOTELY SENSED SNOW OBSERVATIONS INTO THE NSIPP LAND SURFACE MODEL  
 06/26/2000 - 06/30/2002 FY01: \$57,946 Total: \$103,447  
*Prin. Invest.:* M STIEGLITZ  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9870** **COLUMBIA UNIV** **6891**  
 SURVEYING THE GALACTIC PLANE WITH XMM  
 09/29/2000 - 09/30/2002 FY01: \$30,000 Total: \$61,000  
*Prin. Invest.:* D HELFAND  
*Tech. Officer:* GSFC/P ATKINS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9898** **COLUMBIA UNIV** **6892**  
 THE NATURE OF ISOLATED NEUTRON STARS AND THE EQUATION OF STATE AT SUPRA-NUCLEAR DENSITY  
 09/06/2000 - 09/14/2002 FY01: \$0 Total: \$8,500  
*Prin. Invest.:* F B PAERELS  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9911**                      **COLUMBIA UNIV**                      **6893**  
 AN ULTRA-MAGNETIZED X-RAY PULSAR IN THE SUPERNOVA REMNANT  
 KES 73  
 09/05/2000 – 09/30/2002      FY01: \$13,365                      Total: \$27,365  
*Prin. Invest.:* E V GOTTHELF  
*Tech. Officer:* GSFC/R M MUSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9928**                      **COLUMBIA UNIV**                      **6894**  
 COMPOSITE SUPERNOVA REMNANTS: HOME TO THE YOUNGEST  
 NEUTRON STARS  
 09/07/2000 – 09/14/2002      FY01: \$0                      Total: \$23,459  
*Prin. Invest.:* D J HELFAND  
*Tech. Officer:* GSFC/D F MUTSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9929**                      **COLUMBIA UNIV**                      **6895**  
 AN X-RAY SPECTROSCOPIC DETERMINATION OF THE HUBBLE CONSTANT  
 09/07/2000 – 09/14/2002      FY01: \$0                      Total: \$24,619  
*Prin. Invest.:* F B PAERLES  
*Tech. Officer:* GSFC/D F MUSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9946**                      **COLUMBIA UNIV**                      **6896**  
 TAKING THE PULSE OF OUR YOUNGEST NEIGHBORHOOD NEUTRON STAR  
 09/06/2000 – 09/14/2002      FY01: \$15,000                      Total: \$32,900  
*Prin. Invest.:* D J HELFAND  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 9950**                      **COLUMBIA UNIV**                      **6897**  
 A POSSIBLE IDENTIFICATION OF THE EGRET SOURCE 2EG J2227+6122  
 09/07/2000 – 08/31/2002      FY01: \$14,000                      Total: \$30,662  
*Prin. Invest.:* J P HALPERN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10082**                      **COLUMBIA UNIV**                      **6898**  
 THE X-RAY TEMPERATURE FUNCTION AND STRUCTURE OF CLUSTERS AT  
 Z=0.6-1  
 11/06/2000 – 11/14/2002      FY01: \$5,625                      Total: \$5,625  
*Prin. Invest.:* C A SCHARF  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10607**                      **COLUMBIA UNIV**                      **6899**  
 USING A CLOUD-RESOLVING MODEL TO UNDERSTAND LARGE-SCALE  
 VARIATIONS IN TROPICAL RAINFALL: A NO  
 03/15/2001 – 03/14/2002      FY01: \$95,576                      Total: \$95,576  
*Prin. Invest.:* A SOBEL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 5 11049**                      **COLUMBIA UNIV**                      **6900**  
 RECOMBINATION RATES OF METHYL RADICALS AT LOW TEMPERATURES  
 IN HYDROGEN. (LOW TEMPERATURE PHOTOCHEM)  
 06/18/2001 – 05/31/2002      FY01: \$65,000                      Total: \$65,000  
*Prin. Invest.:* R BERSOHN  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 12 – CHEMISTRY

**NAG 5 11215**                      **COLUMBIA UNIV**                      **6901**  
 MESOSCALE CIRCULATION AND ECOSYSTEM PROCESSES OFF WESTERN  
 AUSTRALIA: A SYNERGISTIC APPROACH OF REMO  
 08/13/2001 – 09/30/2003      FY01: \$243,481                      Total: \$243,481  
*Prin. Invest.:* O ANDERSON  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 5 11357**                      **COLUMBIA UNIV**                      **6902**  
 TIME VARIATIONS OF THE NET AIR-SEA CO2 FLUX  
 09/25/2001 – 09/30/2004      FY01: \$87,100                      Total: \$87,100  
*Prin. Invest.:* T TAKAHASHI  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 9 1148**                      **COLUMBIA UNIV**                      **6903**  
 INDIVIDUAL SUSCEPTIBILITY TO RADIATION EFFECTS  
 09/14/1999 – 12/13/2002      FY01: \$397,244                      Total: \$734,218  
*Prin. Invest.:* E J HALL  
*Tech. Officer:* JSC/F A CUCINOTTA  
*CASE Category:* 59 – LIFE SCIENCE, OTHER

**NAS 5 97164**                      **COLUMBIA UNIV**                      **6904**  
 ACRIM SCIENCE TEAM  
 04/21/1997 – 04/20/2002      FY01: \$583,827                      Total: \$2,049,807  
*Prin. Invest.:* R C WILSON  
*Tech. Officer:* GSFC/V GRIFFIN  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAS 5 98037**                      **COLUMBIA UNIV**                      **6905**  
 CONSTELLATION X-RAY MISSION  
 06/22/1998 – 12/15/2001      FY01: \$90,000                      Total: \$432,000  
*Prin. Invest.:* S M KAHN  
*Tech. Officer:* GSFC/J GRADY  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAS 5 98162**                      **COLUMBIA UNIV**                      **6906**  
 EOSDIS SEDAC  
 07/01/1998 – 06/30/2003      FY01: \$4,154,000                      Total: \$11,070,114  
*Prin. Invest.:* R S CHEN  
*Tech. Officer:* GSFC/Q BARKER  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NCC 5 218**                      **COLUMBIA UNIV**                      **6907**  
 SEASONAL-TO-INTERANNUAL PREDICTION PROJECT  
 07/21/1997 – 06/30/2001      FY01: \$0                      Total: \$220,892  
*Prin. Invest.:* M STIEGLITZ  
*Tech. Officer:* GSFC/R KOSTER  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NCC 5 270**                      **COLUMBIA UNIV**                      **6908**  
 INTERDISCIPLINARY GLOBAL CHANGE RESEARCH  
 02/17/1998 – 04/30/2000      FY01: \$0                      Total: \$3,781,639  
*Prin. Invest.:* L M DRUYAN  
*Tech. Officer:* GSFC/A LACIS  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NCC 5 278** **COLUMBIA UNIV** **6909**  
 MODELLING OF ATMOSPHERIC CIRCULATION AND CHEMISTRY -GSFC  
 CONTROL NO.5-3357  
 05/28/1998 - 02/28/2001 FY01: \$0 Total: \$373,065  
*Prin. Invest.:* L POLVANI, NONE  
*Tech. Officer:* GSFC/R STOTHERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 328** **COLUMBIA UNIV** **6910**  
 INTERDISCIPLINARY RESEARCH ON CLIMATE VARIABILITY AND THE  
 IMPACTS ASSOCIATED WITH REGIONAL CLIMATE C  
 06/05/1998 - 12/31/2000 FY01: \$0 Total: \$2,082,031  
*Prin. Invest.:* M A CHANDLER  
*Tech. Officer:* GSFC/D RIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 469** **COLUMBIA UNIV** **6911**  
 MODELING OF ATMOSPHERIC CIRCULATION AND CHEMISTRY  
 03/09/2000 - 06/14/2001 FY01: \$0 Total: \$259,591  
*Prin. Invest.:* L POLVANI  
*Tech. Officer:* GSFC/R STOTHERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 470** **COLUMBIA UNIV** **6912**  
 THE INST ON CLIMATE AND PLANETS (ICP): A RESEARCH EDUCATION  
 PROGRAM  
 03/09/2000 - 05/31/2001 FY01: \$0 Total: \$268,397  
*Prin. Invest.:* C HARRIS  
*Tech. Officer:* GSFC/B CARLSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 473** **COLUMBIA UNIV** **6913**  
 INTERDISCIPLINARY GLOBAL CHANGE RESEARCH.  
 03/15/2000 - 03/31/2001 FY01: \$419,830 Total: \$831,205  
*Prin. Invest.:* L DRUYAN  
*Tech. Officer:* GSFC/A LACIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 485** **COLUMBIA UNIV** **6914**  
 MODELING OF OCEAN CIRCULATION AND ATMOSPHERIC CHEMICAL  
 SYSTEMS.  
 03/30/2000 - 06/30/2001 FY01: \$664,196 Total: \$1,596,248  
*Prin. Invest.:* C K CHU  
*Tech. Officer:* GSFC/R B STOTHERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 505** **COLUMBIA UNIV** **6915**  
 INTERDISCIPLINARY RESEARCH ON CLIMATE VARIABILITY AND CLIMATE  
 CHANGE  
 07/21/2000 - 07/31/2002 FY01: \$1,226,342 Total: \$1,302,543  
*Prin. Invest.:* M CHANDLER, NONE  
*Tech. Officer:* GSFC/D RIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 510** **COLUMBIA UNIV** **6916**  
 LAND SURFACE MODEL DEVELOPMENT FOR THE NASA SEASON AL TO  
 INTERANNUAL PREDICTION PROJECT  
 08/21/2000 - 08/14/2002 FY01: \$122,489 Total: \$177,298  
*Prin. Invest.:* M STIEGLITZ  
*Tech. Officer:* GSFC/R KOSTER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 546** **COLUMBIA UNIV** **6917**  
 INTERDISCIPLINARY GLOBAL CHANGE RESEARCH  
 04/04/2001 - 03/31/2002 FY01: \$862,710 Total: \$862,710  
*Prin. Invest.:* L M DRUYAN  
*Tech. Officer:* GSFC/A LACIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 547** **COLUMBIA UNIV** **6918**  
 MODELING OF OCEAN CIRCULATION AND ATMOSPHERIC CHEMICAL  
 SYSTEMS  
 04/06/2001 - 03/31/2002 FY01: \$927,415 Total: \$927,415  
*Prin. Invest.:* C K CHU  
*Tech. Officer:* GSFC/R B STOTHERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 549** **COLUMBIA UNIV** **6919**  
 "ICP: RESEARCH EDUCATION PROGRAM"  
 04/09/2001 - 05/31/2002 FY01: \$169,981 Total: \$169,981  
*Prin. Invest.:* C HARRIS  
*Tech. Officer:* GSFC/B CARLSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 558** **COLUMBIA UNIV** **6920**  
 MODELING OF ATMOSPHERIC CIRCULATION AND CHEMISTRY.  
 06/06/2001 - 02/28/2002 FY01: \$329,203 Total: \$329,203  
*Prin. Invest.:* L M POLVANI  
*Tech. Officer:* GSFC/R STOTHERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 44** **COLUMBIA UNIV** **6921**  
 RADIATIVE LINKS TO POLAR DYNAMICAL PROCESSES  
 06/23/1997 - 06/30/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* A D DELGENIO  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 30106** **COLUMBIA UNIV** **6922**  
 RAIN INDUCED AIR-WATER GAS EXCHANGE: MECHANISMS AND GLOBAL  
 EFFECTS  
 10/24/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* D SCHLOSSER  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30123** **COLUMBIA UNIV** **6923**  
 AN INTERMEDIATE-LEVEL MODEL FOR THE TROPICAL ATMOS  
 09/30/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* M CANE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30167** **COLUMBIA UNIV** **6924**  
 VARIABILITY OF BIOGEOCHEMICAL REGIMES IN THE ROSS SEA: AN ANAL-  
 YSIS USINGHIGH RESOLUTION SEA SURFACE  
 09/02/1998 - 08/31/2002 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* T TAKAHASHI  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



**NGT 5 30226** **COLUMBIA UNIV** **6925**  
 HIGH RESOLUTION MILLENNIAL SCALE HISTORY OF HUDSON VALLEY, NY  
 FORESTS: CLIMATE & ENVIRONMENTAL INFL  
 09/19/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D PETEET  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30374** **COLUMBIA UNIV** **6926**  
 INCREASING HAZARD IN GREATER CARACAS, VENEZUELA: I NTERAC-  
 TIONS OFSNEOTECTONICS, LANDSLIDES AN  
 08/13/2001 - 08/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* W MENKE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30388** **COLUMBIA UNIV** **6927**  
 SEMI-ARID GRASSLAND ECOSYSTEM FORCING: REPLACING NATIVE,  
 FREE-RANGING UNGULATE GRAZING WITH HUMAN-  
 08/13/2001 - 09/05/2001 FY01: \$0 Total: \$0  
*Prin. Invest.:* W MENKE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30391** **COLUMBIA UNIV** **6928**  
 SENSITIVITY AND RESPONSE OF ICE-OCEAN-ATMOSPHERE I NTERAC-  
 TIONS IN THESOUTH PACIFIC SECTOR OF THE  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D MARTINSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50323** **COLUMBIA UNIV** **6929**  
 PREDICTION OF MOSQUITO ABUNDANCE WITH A LAND SURFA CE  
 HYDROLOGY MODEL & LANDSAT THERMATIC MAPPER IMA  
 08/17/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* M CANE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50353** **COLUMBIA UNIV** **6930**  
 X-RAY SPECTROSCOPIC INVESTIGATIONS OF OUTFLOWS IN ACTIVE  
 GALACTIC NUCLEI  
 05/11/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S KAHN  
*Tech. Officer:* GSFC/K E BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2069** **CORNELL UNIV** **6931**  
 BASIC RESEARCH IN CRACK GROWTH PREDICTION METHODO LOGIES  
 05/20/1998 - 06/30/2000 FY01: \$0 Total: \$173,472  
*Prin. Invest.:* A R INGRAFFEA, P A WAWRZYNEK  
*Tech. Officer:* LARC/J C NEWMAN, JR., LARC/I S RAJU  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 2268** **CORNELL UNIV** **6932**  
 CRACK TURNING AND DAMAGE TOLERANCE OF MONOLITHIC STRUC-  
 TURES  
 02/03/2000 - 06/15/2000 FY01: \$0 Total: \$25,225  
*Prin. Invest.:* R PETTIT, A INGRAFFEA  
*Tech. Officer:* LARC/J C NEWMAN/D R AMBUR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 01034** **CORNELL UNIV** **6933**  
 NANOTUBE SENSORS  
 02/28/2001 - 10/31/2001 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* P L MCEUEN  
*Tech. Officer:* LARC/S K KAHNG  
*CASE Category:* 13 - PHYSICS

**NAG 3 1854** **CORNELL UNIV** **6934**  
 STABILITY OF SHAPE HELD BY SURFACE TENSION AND SUB JECTED TO  
 FL9OW  
 05/01/1996 - 04/30/2001 FY01: \$0 Total: \$425,007  
*Prin. Invest.:* P H STEEN  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 1993** **CORNELL UNIV** **6935**  
 SIMULATION OF CRACK GROWTH IN SPRIAL-BEVEL GEARS  
 12/11/1996 - 01/01/2002 FY01: \$0 Total: \$289,961  
*Prin. Invest.:* A R INGRAFFEA  
*Tech. Officer:* GRC/D G LOWICKI  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2112** **CORNELL UNIV** **6936**  
 STUDIES OF GAS-PARTICLE INTERATIONS IN A MICROGRAV ITY FLOW  
 CELL  
 01/15/1998 - 12/31/2001 FY01: \$242,549 Total: \$686,517  
*Prin. Invest.:* M LOUGE  
*Tech. Officer:* GRC/R HAKIMAZADEH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2224** **CORNELL UNIV** **6937**  
 HIGH PRESSURE COMBUSTION OF AN UNSUPPORTED SOOTING FUEL  
 DROPLET IN MICROGRAVITY  
 01/12/1999 - 11/11/2002 FY01: \$71,483 Total: \$211,972  
*Prin. Invest.:* T AVEDISIAN  
*Tech. Officer:* GRC/D L DIETRICH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2349** **CORNELL UNIV** **6938**  
 TURBULENCE-INDUCED COALESCENCE OF AEROSOL PARTICLES  
 03/23/2000 - 11/30/2003 FY01: \$95,000 Total: \$145,000  
*Prin. Invest.:* D L KOCH  
*Tech. Officer:* GRC/H K NAHRA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2353** **CORNELL UNIV** **6939**  
 SHEET FLOWS, AVALANCHES, AND DUNE EVOLUTION ON EAR TH AND  
 MARS  
 03/14/2000 - 11/30/2003 FY01: \$58,900 Total: \$103,140  
*Prin. Invest.:* D T JENKINS  
*Tech. Officer:* GRC/F P CHIARMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

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**NAG 3 2440** **CORNELL UNIV** **6940**  
 RAPIDLY SHEARED BUBBLY SUSPENSION RAPIDLY SHEARED BUBBLY  
 SUSPENSION  
 05/31/2000 - 04/30/2005 FY01: \$133,000 Total: \$273,000  
*Prin. Invest.:* D L KOCH  
*Tech. Officer:* GRC/H K NAHRA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3427** **CORNELL UNIV** **6941**  
 DEVELOPMENT AND APPLICATION OF NEW TOOLS FOR STATI DISCRETE  
 ASTROPHYSICAL DATA  
 09/26/1996 - 09/30/2001 FY01: \$0 Total: \$522,253  
*Prin. Invest.:* T J LOREDO  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3626** **CORNELL UNIV** **6942**  
 PHYSICAL STUDIES OF PLANETARY AND SATELLITE SURFACE  
 02/12/1997 - 10/31/2001 FY01: \$77,000 Total: \$511,150  
*Prin. Invest.:* J VEVERKA  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3627** **CORNELL UNIV** **6943**  
 SHAPES, SURFACES AND INTERIORS OF SATELLITES  
 02/12/1997 - 03/31/2001 FY01: \$0 Total: \$210,850  
*Prin. Invest.:* P C THOMAS  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3639** **CORNELL UNIV** **6944**  
 STUDY OF THE EFFECTS OF PHOTOMETRIC GEOMETRY ON SP  
 MEASUREMENTS  
 02/12/1997 - 12/31/2001 FY01: \$50,000 Total: \$247,500  
*Prin. Invest.:* P HELFENSTEIN  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3795** **CORNELL UNIV** **6945**  
 DYNAMICAL STUDIES OF PLANETARY RINGS  
 03/24/1997 - 09/30/2001 FY01: \$61,000 Total: \$297,050  
*Prin. Invest.:* P D NICHOLSON  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3800** **CORNELL UNIV** **6946**  
 STATISTICS OF GAMMA RAY BURSTS  
 11/27/1996 - 11/30/2000 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* I M WASSERMAN  
*Tech. Officer:* GSFC/J PNORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3862** **CORNELL UNIV** **6947**  
 STUDIES OF THERMAL STRUCTURES AND MOTIONS OF PLANE  
 01/24/1997 - 11/30/2001 FY01: \$123,200 Total: \$547,161  
*Prin. Invest.:* D J GIERABCH  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3910** **CORNELL UNIV** **6948**  
 PHYSICAL PROCESSES IN PLANETARY RINGS  
 03/07/1997 - 12/31/2001 FY01: \$114,000 Total: \$683,100  
*Prin. Invest.:* D A BURNS  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4205** **CORNELL UNIV** **6949**  
 STUDIES IN PLANETARY GEOSCIENCES  
 03/19/1997 - 03/31/2002 FY01: \$0 Total: \$459,323  
*Prin. Invest.:* S W SQUYRES  
*Tech. Officer:* GSFC/J G GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4220** **CORNELL UNIV** **6950**  
 SURFACE PROPERTIES FROM RADAR AND RADIO OBSERVATIO  
 03/15/1997 - 12/31/2000 FY01: \$0 Total: \$161,900  
*Prin. Invest.:* D B CAMPBELL  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4333** **CORNELL UNIV** **6951**  
 MARS SURFACE MINERALOGY FROM HST AND MARINER 6.7 I  
 04/25/1997 - 04/30/2001 FY01: \$0 Total: \$133,200  
*Prin. Invest.:* D F BELL  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4361** **CORNELL UNIV** **6952**  
 IMPLICATIONS OF EPISODIC SUBDUCTION  
 04/09/1997 - 03/31/2000 FY01: \$0 Total: \$105,000  
*Prin. Invest.:* D L TURCOTTE  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4502** **CORNELL UNIV** **6953**  
 OPERATE THE SPACECRAFT PLANETARY IMAGING FACILITY  
 05/06/1997 - 02/28/2001 FY01: \$0 Total: \$146,150  
*Prin. Invest.:* D VEVERKA  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 5134** **CORNELL UNIV** **6954**  
 CO-INVESTIGATOR PROPOSAL FOR ENSTROPHY- FILAMENTATION OF  
 AWARD CURRENTS  
 04/14/1997 - 03/31/2000 FY01: -\$12 Total: \$201,579  
*Prin. Invest.:* P KINTNER  
*Tech. Officer:* GSFC/W JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5233** **CORNELL UNIV** **6955**  
 SIERRA PI DR. PAUL KINTNER  
 02/10/1999 - 03/31/2002 FY01: \$146,899 Total: \$513,147  
*Prin. Invest.:* P M KINTNER  
*Tech. Officer:* MSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5244**                      **CORNELL UNIV**                      **6956**  
 FIRST YEAR OF A THREE GRANT NAG5-5244 PI DR. MICHAEL C. KELLEY  
 03/29/1999 - 03/28/2002      FY01: \$97,600                      Total: \$189,538  
*Prin. Invest.:* M C KELLEY  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6273**                      **CORNELL UNIV**                      **6957**  
 BIOLOGICAL AND PHYSICAL CONTROLS OF PRIMARY PRODUC SUBSE-  
 QUENT FATE IN THE GEORGES BANK REGION: AN IN  
 08/29/1997 - 04/30/2001      FY01: \$0                      Total: \$218,223  
*Prin. Invest.:* G CHARLES  
*Tech. Officer:* GSFC/J JODER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6437**                      **CORNELL UNIV**                      **6958**  
 PERCEPTION AND TRANSDUCTION OF THE GRAVITATIONAL S TIMULUS  
 10/28/1997 - 05/31/2000      FY01: -\$38,430                      Total: \$181,577  
*Prin. Invest.:* R WAYNE  
*Tech. Officer:* GSFC/M P AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 6495**                      **CORNELL UNIV**                      **6959**  
 DEVELOPMENT OF 256X256 SI:SB AND SI:AS BIBIB DETEC TORS FOR  
 SOFIA  
 10/31/1997 - 12/31/2001      FY01: \$30,000                      Total: \$840,000  
*Prin. Invest.:* D L HERTER  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6783**                      **CORNELL UNIV**                      **6960**  
 RADAR SYNTHESIS IMAGING OF SMALL BODIES  
 01/20/1998 - 09/30/2000      FY01: -\$415                      Total: \$101,585  
*Prin. Invest.:* D B CAMPBELL  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7264**                      **CORNELL UNIV**                      **6961**  
 ROTATING AND BINARY NEUTRON STARS IN GENERAL RELATIVITY\_ - ATP  
 04/29/1998 - 04/30/2001      FY01: \$0                      Total: \$166,136  
*Prin. Invest.:* S TUEKOLSKY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7373**                      **CORNELL UNIV**                      **6962**  
 OBSERVATIONS OF LARGE-SCALE JOVIAN THERMAL WAVES  
 05/12/1998 - 05/14/2000      FY01: \$0                      Total: \$158,910  
*Prin. Invest.:* J HARRINGTON  
*Tech. Officer:* GSFC/L D DEMING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7497**                      **CORNELL UNIV**                      **6963**  
 UNDERSTANDING METEOROLOGICAL CONTROLS OF GLACIER MASS  
 BALANCE  
 06/29/1998 - 06/30/2002      FY01: \$0                      Total: \$270,000  
*Prin. Invest.:* K H COOK  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7508**                      **CORNELL UNIV**                      **6964**  
 ELASTIC PROPERTIES OF FILMS OF WATER AND NOBLE GAS ES  
 CONDENSED AT LOW TEMPERATURES  
 06/29/1998 - 05/31/2001      FY01: \$0                      Total: \$130,000  
*Prin. Invest.:* R O POHL  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7864**                      **CORNELL UNIV**                      **6965**  
 JUPITER CLOUD STRUCTURE AND DYNAMICS STUDIES  
 01/12/1999 - 12/31/2001      FY01: \$0                      Total: \$182,000  
*Prin. Invest.:* D J GIERASCH  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7892**                      **CORNELL UNIV**                      **6966**  
 SPECTROSCOPY AND METEORITE LINKAGE OF THE K-TYPE ASTEROIDS  
 12/04/1998 - 12/31/2000      FY01: \$0                      Total: \$41,000  
*Prin. Invest.:* D E CLARK  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7919**                      **CORNELL UNIV**                      **6967**  
 SPATIALLY RESOLVED K-BAND GRISM SPECTRA OF URANUS AND  
 NEPTUNE: AEROSOL AND METHANE VERTICAL DISTRIB  
 12/10/1998 - 12/31/2001      FY01: \$0                      Total: \$58,795  
*Prin. Invest.:* D BANFIELD  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7965**                      **CORNELL UNIV**                      **6968**  
 JOVIAN PLANETARY WAVES: BASIC ATMOSPHERIC PROPERTIES FROM  
 MULTIPLE PRE-GALILEO DATASETS  
 12/15/1998 - 12/31/2000      FY01: \$0                      Total: \$73,978  
*Prin. Invest.:* D HARRINGTON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8010**                      **CORNELL UNIV**                      **6969**  
 DIGITAL MAPPING OF JOVIAN CLOUD MOTIONS  
 01/13/1999 - 01/14/2002      FY01: \$0                      Total: \$50,000  
*Prin. Invest.:* P HELFENSTEIN  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8067**                      **CORNELL UNIV**                      **6970**  
 COMET NUCLEUS TOUR - CONTOUR  
 01/21/1999 - 09/30/2000      FY01: \$0                      Total: \$574,000  
*Prin. Invest.:* D VEVERKA  
*Tech. Officer:* GSFC/A CARRO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8070**                      **CORNELL UNIV**                      **6971**  
 WATER DETECTION ON ASTEROIDS: ARE THE VISIBLE REBANDS REALLY A  
 GOOD PROXY?  
 01/29/1999 - 02/28/2002      FY01: \$0                      Total: \$89,364  
*Prin. Invest.:* D S HOWELL  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8188**                      **CORNELL UNIV**                      **6972**  
 UNDERGRADUATE COURSE ON SATELLITE REMOTE SENSING I N BIOLOG-  
 ICAL/OCEANOGRAPHY  
 03/04/1999 - 09/30/2001                      FY01: \$0                      Total: \$151,501  
*Prin. Invest.:* B MONGER  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8282**                      **CORNELL UNIV**                      **6973**  
 SEPARATION & ANALYSIS OF TES ATMOSPHERIC TEMPERATU RES AS  
 COMPONENTFIELDS: ZONAL MEANS, THERMA  
 02/19/1999 - 02/28/2002                      FY01: \$66,000                      Total: \$200,800  
*Prin. Invest.:* D J BANDFIELD  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8356**                      **CORNELL UNIV**                      **6974**  
 ASTROPHYSICS OF FAST MOVING NEUTRON STARS (ATP98)  
 03/11/1999 - 03/14/2002                      FY01: \$115,000                      Total: \$329,504  
*Prin. Invest.:* D F CHERNOFF  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8484**                      **CORNELL UNIV**                      **6975**  
 MATTER IN STRONG MAGNETIC FIELDS AND THERMAL RADIA TION FROM  
 ISOLATEDNEUTRON STARS (ATP - 98)  
 05/11/1999 - 05/14/2002                      FY01: \$69,000                      Total: \$197,114  
*Prin. Invest.:* D LAI  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8673**                      **CORNELL UNIV**                      **6976**  
 A SCANNING DOUBLE HALF-WAVE INTERFEROMETER FOR SOFIA  
 07/09/1999 - 07/14/2002                      FY01: \$0                      Total: \$315,665  
*Prin. Invest.:* G J STACEY  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8775**                      **CORNELL UNIV**                      **6977**  
 ENGINEERING CONTROL OF BIOMOLECULAR MOTOR POWERED  
 NANO-CHEMICAL DEVICE  
 09/01/1999 - 08/31/2002                      FY01: \$143,631                      Total: \$326,772  
*Prin. Invest.:* C MONTEEMAGNO  
*Tech. Officer:* GSFC/S DAVISON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8950**                      **CORNELL UNIV**                      **6978**  
 DELIVERY OF ASTEROIDS AND METEOROIDS TO EARTH VIA YARKOVSKY  
 THERMAL FORCES  
 01/24/2000 - 10/15/2000                      FY01: -\$11,041                      Total: \$13,659  
*Prin. Invest.:* W BOTTKE  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9034**                      **CORNELL UNIV**                      **6979**  
 RADAR SYNTHESIS IMAGING OF SMALL BODIES  
 02/07/2000 - 02/14/2003                      FY01: \$63,000                      Total: \$122,850  
*Prin. Invest.:* B CAMPBELL  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9047**                      **CORNELL UNIV**                      **6980**  
 ACCRETION TO MAGNETIZED ROTATING NEUTRON STARS (ATP 99)  
 03/09/2000 - 03/14/2002                      FY01: \$59,643                      Total: \$116,752  
*Prin. Invest.:* R LOVELACE  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9067**                      **CORNELL UNIV**                      **6981**  
 SCALING & CROSS CORRELATION STUDIES OF LAND SLIDES  
 02/17/2000 - 02/28/2002                      FY01: \$75,000                      Total: \$120,000  
*Prin. Invest.:* D L TURCOTTE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9082**                      **CORNELL UNIV**                      **6982**  
 UNDERSTANDING THE DISTRIBUTION OF NEAR-EARTH OB JECTS TO THE  
 NASA NEAR EARTH OBJECTS OBSERVATIONS  
 02/17/2000 - 08/14/2000                      FY01: -\$33,804                      Total: \$12,196  
*Prin. Invest.:* W BOTTKE  
*Tech. Officer:* GSFC/T H MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9140**                      **CORNELL UNIV**                      **6983**  
 INVESTIGATION OF CELESTIAL SOLID ANALOGS  
 02/29/2000 - 02/28/2002                      FY01: \$60,000                      Total: \$116,520  
*Prin. Invest.:* A SIEVERS  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9178**                      **CORNELL UNIV**                      **6984**  
 MULTI-WAVELENGTH OBSERVATIONS OF THE MICROQUASAR GR5  
 1915+105--ADP99  
 03/06/2000 - 03/14/2001                      FY01: \$0                      Total: \$20,482  
*Prin. Invest.:* S S EIKENBERRY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 21 - MATHEMATICS

**NAG 5 9199**                      **CORNELL UNIV**                      **6985**  
 ELECTRON AND ION ACCELERATION ASSOCIATED WITH ALFVENIC STRUC-  
 TURES  
 03/09/2000 - 03/14/2003                      FY01: \$80,000                      Total: \$153,500  
*Prin. Invest.:* C E SEYLER  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9492**                      **CORNELL UNIV**                      **6986**  
 STUDIES OF VOLCANISM AND TECTONISM ON MARS AND THE MOON  
 04/17/2000 - 04/14/2002                      FY01: \$35,000                      Total: \$68,250  
*Prin. Invest.:* D L TURCOTTE  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9594**                      **CORNELL UNIV**                      **6987**  
 PARTICIPATION IN SHOEMAKER-LEVY 9 IMPACT MODELING INVESTIGA-  
 TION  
 06/08/2000 - 06/14/2002                      FY01: \$46,823                      Total: \$107,147  
*Prin. Invest.:* J HARRINGTON  
*Tech. Officer:* GSFC/L D DEMING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9612**                      **CORNELL UNIV**                      **6988**  
 NEW ALGORITHMS FOR MAGNETOMETER ORBIT AND ATTITUDE ESTIMATION  
 05/26/2000 - 05/31/2002      FY01: \$0                      Total: \$60,008  
*Prin. Invest.:* D PSIAKI  
*Tech. Officer:* GSFC/R HARMAN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9735**                      **CORNELL UNIV**                      **6989**  
 MAGNETOHYDRODYNAMICS AND PLASMA PHENOMENA IN PROTELLAR SYSTEMS  
 06/21/2000 - 06/30/2002      FY01: \$23,200                      Total: \$45,200  
*Prin. Invest.:* R LOVELACE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9774**                      **CORNELL UNIV**                      **6990**  
 SUB-PIXEL DETECTABILITY OF MATERIALS AT THE PATH FINDER LANDING SITE: IMPLICATIONS FOR MARTIAN SURF  
 06/30/2000 - 06/30/2002      FY01: \$70,000                      Total: \$140,000  
*Prin. Invest.:* J F BELL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9794**                      **CORNELL UNIV**                      **6991**  
 DETERMINATION OF AERODYNAMIC ROUGHNESS FROM SURFACE- BASED STEREO IMAGING  
 07/11/2000 - 07/14/2002      FY01: \$43,000                      Total: \$85,100  
*Prin. Invest.:* R J SULLIVAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10168**                      **CORNELL UNIV**                      **6992**  
 SURFACES OF PLANETS, SATELLITES, AND ASTEROIDS  
 01/04/2001 - 11/30/2001      FY01: \$39,000                      Total: \$39,000  
*Prin. Invest.:* P THOMAS  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10289**                      **CORNELL UNIV**                      **6993**  
 THERMAL EMISSION SPECTRAL MODELING WITH APPLICATIONS TO ASTEROIDS AND METEORITES  
 01/29/2001 - 01/31/2002      FY01: \$16,000                      Total: \$16,000  
*Prin. Invest.:* B E CLARK  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10356**                      **CORNELL UNIV**                      **6994**  
 QUANTUM WELL ELECTRON GAIN STRUCTURES FOR IMPROVED INFRARED DETECTOR READ NOISE  
 02/07/2001 - 01/31/2002      FY01: \$293,057                      Total: \$293,057  
*Prin. Invest.:* S EIKENBERRY  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10434**                      **CORNELL UNIV**                      **6995**  
 OPERATE THE SPACECRAFT PLANETARY IMAGING FACILITY AT CORNELL  
 02/16/2001 - 02/28/2002      FY01: \$37,000                      Total: \$37,000  
*Prin. Invest.:* J VEVEKKA  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10438**                      **CORNELL UNIV**                      **6996**  
 THE IRREGULAR SATELLITE SYSTEMS OF THE GIANT PLANETS  
 02/20/2001 - 02/28/2002      FY01: \$54,000                      Total: \$54,000  
*Prin. Invest.:* P NICHOLSON  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10559**                      **CORNELL UNIV**                      **6997**  
 MHD AND PLASMA PHENOMENA IN PROTOSTELLAR SYSTEMS  
 03/13/2001 - 05/15/2001      FY01: \$0                      Total: \$0  
*Prin. Invest.:* R V LOVELACE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10574**                      **CORNELL UNIV**                      **6998**  
 EVALUATION OF DUST AVALANCHES AND HIGH-ALTITUDE AEOLIAN FEATURES  
 03/13/2001 - 03/14/2002      FY01: \$45,000                      Total: \$45,000  
*Prin. Invest.:* R SULLIVAN  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10579**                      **CORNELL UNIV**                      **6999**  
 DUST LIFTING & TRANSPORT ON MARS: ANALYSIS OF MGS DATA WITH A MESOSCALE MODEL  
 03/19/2001 - 02/28/2002      FY01: \$71,000                      Total: \$71,000  
*Prin. Invest.:* P GIERASCH  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10580**                      **CORNELL UNIV**                      **7000**  
 OBSERVATIONAL STUDY OF THE MARS POLAR VORTEX  
 03/19/2001 - 02/28/2002      FY01: \$60,000                      Total: \$60,000  
*Prin. Invest.:* B CONRATH  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10584**                      **CORNELL UNIV**                      **7001**  
 ELASTIC PROPERTIES OF FILMS OF WATER & NOBLE GASES CONDENSED AT LOW TEMPERATURES  
 03/13/2001 - 05/31/2002      FY01: \$45,000                      Total: \$45,000  
*Prin. Invest.:* R O POHL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10636**                      **CORNELL UNIV**                      **7002**  
 MINERALOGY AND WEATHERING HISTORY OF THE MARTIAN SURFACE  
 03/17/2001 - 03/14/2002      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* J F BELL, III  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10848**                      **CORNELL UNIV**                      **7003**  
 UNDERGRADUATE COURSE ON SATELLITE REMOTE SENSING IN BIOLOGICAL OCEANOGRAPHY  
 05/03/2001 - 04/14/2002      FY01: \$89,482                      Total: \$89,482  
*Prin. Invest.:* B MONGER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1357**                      **CORNELL UNIV**                      **7004**  
 R/S "DEFECTS, GROWTH, & ELASTIC PROPERTIES OF PROTEIN CRYSTALS"  
 05/15/1997 - 05/31/2001      FY01: \$41,913                      Total: \$410,913  
*Prin. Invest.:* R THORNE  
*Tech. Officer:* MSFC/B GUYNES, MSFC/J MAYO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1372**                      **CORNELL UNIV**                      **7005**  
 R/S ENHANCEMENT OF CELL FUNCTION IN CULTURE BY CONTROLLED  
 AGGREGATION UNDER MICROGRAVITY CONDITIO  
 06/18/1997 - 05/31/2001      FY01: \$0                      Total: \$511,000  
*Prin. Invest.:* W M SALTZMAN  
*Tech. Officer:* JSC/W M SATTMAN  
*CASE Category:* 13 - PHYSICS

**NAG 8 1438**                      **CORNELL UNIV**                      **7006**  
 STUDIES OF FREE RADICALS  
 02/17/1998 - 01/31/2001      FY01: \$10,500                      Total: \$245,500  
*Prin. Invest.:* J M PARPIA  
*Tech. Officer:* MSFC/J W POE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1445**                      **CORNELL UNIV**                      **7007**  
 STUDIES OF FREE RADICALS  
 02/16/1998 - 01/31/2003      FY01: \$142,500                      Total: \$583,500  
*Prin. Invest.:* D M LEE  
*Tech. Officer:* MSFC/J W POE  
*CASE Category:* 13 - PHYSICS

**NAG 8 1518**                      **CORNELL UNIV**                      **7008**  
 MESOSCALE LANDSURFACE HEAT FLUX VARIABILITY OVER THE  
 SOUTHERN GCIP AREA FROM ATMOSPHERIC SOUNDINGS  
 06/01/1998 - 05/31/2002      FY01: \$0                      Total: \$343,000  
*Prin. Invest.:* W BRUTSAERT  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1574**                      **CORNELL UNIV**                      **7009**  
 IMPURITY EFFECTS IN MACROMOLECULAR CRYSTAL GROWTH  
 01/05/1999 - 11/30/2002      FY01: \$29,150                      Total: \$192,150  
*Prin. Invest.:* R THORNE  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1666**                      **CORNELL UNIV**                      **7010**  
 INFLUENCE OF HOMOGENEITY AND FRAGILITY ON THE DYNAMICAL PROP-  
 erties OF GLASSY NETWORKS.  
 05/12/2000 - 09/30/2003      FY01: \$104,500                      Total: \$159,500  
*Prin. Invest.:* A J SIEVERS  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1671**                      **CORNELL UNIV**                      **7011**  
 ON THE CONTROL OF THE EFFECTS OF GRAVITY ON THE SOLIDIFICATION  
 MICROSTRUCTURES USING OPTIMALLY DESIG  
 06/16/2000 - 12/31/2003      FY01: \$90,250                      Total: \$135,250  
*Prin. Invest.:* N ZABARAS  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 8 1716**                      **CORNELL UNIV**                      **7012**  
 SIMULATION FOR OPERATIONS AND SPARE PARTS STOCKING FOR SPACE  
 TRANSPORTATION SYSTEMS.  
 03/22/2000 - 12/22/2001      FY01: \$2,000                      Total: \$76,999  
*Prin. Invest.:* P JACKSON  
*Tech. Officer:* MSFC/M NIX  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1759**                      **CORNELL UNIV**                      **7013**  
 BIODEGRADABLE POLYMERS  
 05/02/2001 - 03/31/2005      FY01: \$74,084                      Total: \$74,084  
*Prin. Invest.:* C A BATT, E P GIANNELIS  
*Tech. Officer:* MSFC/D SHUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1778**                      **CORNELL UNIV**                      **7014**  
 MICROSCALE MIXER FOR PROTEIN FOLDING  
 05/02/2001 - 12/31/2005      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* L POLLACK  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1831**                      **CORNELL UNIV**                      **7015**  
 R/S "MACROMOLECULAR CRYSTAL GROWTH: TECHNIQUES, DEVELOP-  
 MENT, FUNDAMENTAL STUDIES, AND APPS.  
 08/30/2001 - 11/30/2004      FY01: \$131,000                      Total: \$131,000  
*Prin. Invest.:* R E THORNE  
*Tech. Officer:* MSFC/G GUYNES  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NASW 00005**                      **CORNELL UNIV**                      **7016**  
 PRINCIPAL INVESTIGATOR & CO'S NASA'S CONTOUR DISCOVERY MISSION  
 07/03/2000 - 09/30/2002      FY01: \$563,497                      Total: \$905,497  
*Prin. Invest.:* J F VEVERKA  
*Tech. Officer:* HQ/D B JARRETT  
*CASE Category:* 11 - ASTRONOMY

**NASW 99008**                      **CORNELL UNIV**                      **7017**  
 DEVELOPMENT MID-INFARED CROSS DISPERSEL ECHELLE SPECTRO-  
 GRAPH W/NO MOVING PARTS KECK OBS  
 05/24/1999 - 05/23/2000      FY01: \$0                      Total: \$78,812  
*Prin. Invest.:* J R HOUCK  
*Tech. Officer:* HQ/J T BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1201**                      **CORNELL UNIV**                      **7018**  
 DO INTEGRINS MEDIATE THE SKELETAL RESPONSES TO ALTERED  
 LOADING IN VIVO (SUB-PROJECT B)  
 09/12/2000 - 09/30/2002      FY01: \$30,172                      Total: \$64,060  
*Prin. Invest.:* M C VAN DER MEULEN  
*Tech. Officer:* ARC/R K GLOBUS, ARC/E M HOLTON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5459**                      **CORNELL UNIV**                      **7019**  
 SYNTHETIC & MICROBIAL FOOD INGREDIENTS FOR LONG DURATION  
 SPACE MISSIONS  
 08/27/2001 - 08/31/2002      FY01: \$18,293                      Total: \$18,293  
*Prin. Invest.:* J B HUNTER  
*Tech. Officer:* ARC/H W JONES, ARC/M H KLISS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 3 468**                      **CORNELL UNIV**                      **7020**  
 MICROGRAVITY SEGREGATION IN BINARY MIXTURES OF INE LASTIC  
 SPHERES DRIVEN BY VELOCITY FLUCTUATION GRA  
 04/22/1996 - 08/15/2001      FY01: \$0                      Total: \$787,098  
*Prin. Invest.:* J T JENKINS, M LOUGE  
*Tech. Officer:* GRC/R HAKIMZADEH, GRC/E NELSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 797**                      **CORNELL UNIV**                      **7021**  
 PARTICLE SEGREGATION IN COLLISIONAL SHEARING FLOWS PARTICLE  
 SEGREGATION IN COLLISIONAL SHEARINGFLOW  
 05/18/2000 - 04/30/2005      FY01: \$183,996                      Total: \$309,996  
*Prin. Invest.:* J JENKINS  
*Tech. Officer:* GRC/F P CHARIAMONTE 111  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 832**                      **CORNELL UNIV**                      **7022**  
 HIGH TEMPERATURE POLYIMIDE NANOCOMPOSITES HIGH TEMPERATURE  
 POLYIMIDE NANOCOMPOSITES  
 01/04/2001 - 12/31/2001      FY01: \$67,850                      Total: \$67,850  
*Prin. Invest.:* D P GIANNELIS  
*Tech. Officer:* GRC/M MEADOR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 5 298**                      **CORNELL UNIV**                      **7023**  
 CARBON AND NUTRIENT STOCKS, SOIL WATER DYNAMICS, A ND TRACE  
 GAS FLUXES IN ABANDONED PASTURES AND AGR  
 06/16/1998 - 12/31/2001      FY01: \$346,002                      Total: \$995,177  
*Prin. Invest.:* E FERNANDES  
*Tech. Officer:* GSFC/D DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 322**                      **CORNELL UNIV**                      **7024**  
 OUTER PLANETS ATMOSPHERIC STRUCTURE  
 03/10/1998 - 02/28/2001      FY01: \$18,580                      Total: \$348,719  
*Prin. Invest.:* P J GIERASCH  
*Tech. Officer:* GSFC/F M FLASAR  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 375**                      **CORNELL UNIV**                      **7025**  
 RADIATIVE STUDIES OF PLANETARY ATMOSPHERES  
 01/19/1999 - 02/14/2002      FY01: \$114,229                      Total: \$273,854  
*Prin. Invest.:* B J CONRATH  
*Tech. Officer:* GSFC/F M FLASAR  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 539**                      **CORNELL UNIV**                      **7026**  
 OUTER PLANETS, ATMOSPHERIC STRUCTURE AND PARTICIPA TION IN  
 CIRS  
 02/12/2001 - 02/14/2002      FY01: \$170,000                      Total: \$170,000  
*Prin. Invest.:* P J GIERASCH  
*Tech. Officer:* GSFC/F M FLASAR  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 563**                      **CORNELL UNIV**                      **7027**  
 DEVELOPMENT OF GPS SOFTWARE RECEIVER ALGORITHMS FOR USE IN  
 HIGH-ALTITUDE SPACECRAFT NAVIGATION  
 06/12/2001 - 06/30/2002      FY01: \$40,000                      Total: \$40,000  
*Prin. Invest.:* M L PSIAKI  
*Tech. Officer:* GSFC/B L EDWARDS  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 9 86**                      **CORNELL UNIV**                      **7028**  
 EVALUATION OF WATER-JACKED LAMPS FOR USE IN JSC BIO-PLEX  
 06/01/1999 - 12/31/2001      FY01: \$0                      Total: \$26,089  
*Prin. Invest.:* L D ALBRIGHT  
*Tech. Officer:* JSC/D J BARTA  
*CASE Category:* 55 - AGRICULTURE

**NCC 9 89**                      **CORNELL UNIV**                      **7029**  
 COORDINATE ANALYSIS AND CALIBRATION STUDIES  
 07/20/1999 - 07/19/2002      FY01: \$10,000                      Total: \$30,000  
*Prin. Invest.:* R V MORRIS, J F BELL  
*Tech. Officer:* JSC/R V MORRIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 3 52362**                      **CORNELL UNIV**                      **7030**  
 NASA GRADUATE STUDENT RESEARCHERS PROGRAM NASA GRADUATE  
 STUDENT RESEARCHERS PROGRAM  
 06/07/2000 - 06/30/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* D KOCH  
*Tech. Officer:* GRC/H K NAHRA  
*CASE Category:* 43 - CHEMICAL ENGR

**NGT 5 30038**                      **CORNELL UNIV**                      **7031**  
 THE INTERNAL NITROGEN CYCLE OF TEMPERATURE FORESTS MECH-  
 ANISMS IN THE ABSENCE OF HUMAN DISTURBANCE  
 10/17/1996 - 08/31/2000      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* L O HEDIN  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 30126**                      **CORNELL UNIV**                      **7032**  
 INTERFEROMETRIC SAR MEASUREMENTS OF SEISMIC & INTE R-SEISMIC  
 STRAIN NEAR A MAJOR SEISMIC GAP INPERU  
 10/10/1997 - 08/31/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* B ISACKS  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30210**                      **CORNELL UNIV**                      **7033**  
 HAVE WE GROSSLY UNDERESTIMATED METHANE PRODUCTION &  
 CONSUMPTION? APPLICATION OF A NEW STABLE ISOTOPE  
 08/20/1999 - 08/31/2002      FY01: \$2,200                      Total: \$46,200  
*Prin. Invest.:* L O HEDIN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40019**                      **CORNELL UNIV**                      **7034**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 01/06/1997 - 01/31/2001      FY01: -\$15,696                      Total: \$1,789,304  
*Prin. Invest.:* Y TERZIAN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40078**                      **CORNELL UNIV**                      **7035**  
 NEW YORK SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2002      FY01: \$490,696                      Total: \$490,696  
*Prin. Invest.:* Y TERZIAN  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NEW YORK

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50218**                    **CORNELL UNIV**                    **7036**  
 VOLUMETRIC ASSESSMENT OF FACTORS GOVERNING SEASONAL AND  
 INTERANNUAL FLUXES OF PHYTOPLANKTON FROM  
 09/17/1998 - 08/31/2001                    FY01: \$0                    Total: \$66,000  
*Prin. Invest.:* C H GREENE, FISHER  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50270**                    **CORNELL UNIV**                    **7037**  
 PRE-AGGREGATION OF CELLS UNDER MICROGRAVITY CONDITIONS  
 FOLLOWED BY TRANSPLANTATION INTO THE BRAIN  
 07/23/1999 - 08/31/2000                    FY01: \$0                    Total: \$22,000  
*Prin. Invest.:* M SALTZMAN  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50375**                    **CORNELL UNIV**                    **7038**  
 BONE ADAPTATION TO PRECISELY CONTROLLED CYCLIC LOADING  
 (STUDENT: JAMES FRITTON)  
 06/29/2001 - 07/31/2002                    FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* M H VAN DER MUELEN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52897**                    **CORNELL UNIV**                    **7039**  
 UNDERSTANDING THE COVARIABILITY OF AFRICAN AND INDIAN SUMMER  
 RAINFALL  
 05/25/2001 - 07/01/2004                    FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* K H COOK  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 9 16**                    **CORNELL UNIV**                    **7040**  
 SELECTION & CHARACTERIZATION OF VEGETATION CROP CULTIVARS ...  
 05/16/1997 - 09/30/2000                    FY01: \$0                    Total: \$69,000  
*Prin. Invest.:* R W LANGHANS  
*Tech. Officer:* JSC/D G SICKOREZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT10 52623**                    **CORNELL UNIV**                    **7041**  
 GRADUATE STUDENT RESEARCHER'S PROGRAM  
 08/23/1999 - 08/30/2002                    FY01: \$22,000                    Total: \$66,000  
*Prin. Invest.:* L ALBRIGHT  
*Tech. Officer:* KSC/R WHEELER  
*CASE Category:* 55 - AGRICULTURE

**NAG13 00007**                    **FULTON-MONTGOMERY COMMUNITY COLLEGE**                    **7042**  
 SPATIAL INFORMATION TECHNOLOGY CENTER AT FULTON-MONTGOMERY  
 COMMUNITY COLLEGE  
 03/23/2000 - 03/26/2001                    FY01: \$0                    Total: \$375,000  
*Prin. Invest.:* M PRESTOPNIK  
*Tech. Officer:* SSC/D L POWE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7503**                    **HOFSTRA UNIV**                    **7043**  
 OCEAN SURFACE STRESS MEASUREMENTS USING SATELLITE SCAT-  
 TEROMETERS  
 06/09/1998 - 12/31/2000                    FY01: \$0                    Total: \$256,223  
*Prin. Invest.:* D E WEISSMAN  
*Tech. Officer:* GSFC/E J LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1259**                    **HUNTER COLL OF THE CITY UNIV OF NY**                    **7044**  
 JOVE RESEARCH  
 01/17/1997 - 08/31/2000                    FY01: -\$531                    Total: \$207,469  
*Prin. Invest.:* L COHEN, S GREENBAUM, P COMBS  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9311**                    **INTER AMERICAN UNIV OF PR AGUADILLA CAMP**                    **7045**  
 PRECOLLEGE AWARENESS IN MATH AND SCIENCE PROGRAM  
 03/22/2000 - 02/28/2002                    FY01: \$77,027                    Total: \$172,161  
*Prin. Invest.:* R GONZALEZ  
*Tech. Officer:* HQ/M STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9889**                    **MARIST COLLEGE**                    **7046**  
 PERSISTENCE & INFECTIVITY OF CYANOPHAGE FROM POLAR ENVIRON-  
 MENTS: IMPLICATIONS FOR PLANETARY PROTECTION  
 08/30/2000 - 06/30/2001                    FY01: \$0                    Total: \$70,650  
*Prin. Invest.:* R KEPNER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9256**                    **MEDGAR EVERS COLLEGE**                    **7047**  
 MEDGAR EVERS COLLEGE AERONAUTICS AND EARTH SCIENCE ACADEMY  
 03/15/2000 - 02/28/2002                    FY01: \$100,000                    Total: \$200,000  
*Prin. Invest.:* L JOHNSON  
*Tech. Officer:* HQ/M STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10142**                    **MEDGAR EVERS COLLEGE**                    **7048**  
 THE NEW YORK CITY SPACE SCIENCE RESEARCH ALLIANCE  
 12/19/2000 - 12/31/2001                    FY01: \$245,000                    Total: \$245,000  
*Prin. Invest.:* L P JOHNSON  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 946**                    **MT SINAI SCH OF MED OF THE CUNY**                    **7049**  
 ANATOMICAL STUDIES OF CENTRAL VESTIBULAR ADAPTATION  
 01/10/1995 - 09/30/2001                    FY01: \$0                    Total: \$694,832  
*Prin. Invest.:* G R HOLSTEIN, G R HOLSTEIN  
*Tech. Officer:* ARC/W E HINDS, ARC/C M WINGET  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1191**                    **MT SINAI SCH OF MED OF THE CUNY**                    **7050**  
 NITRIC OXIDE SIGNALING IN HYPERGRAVITY INDUCED NEURONAL PLAS-  
 TICITY  
 03/23/1998 - 08/31/2002                    FY01: \$0                    Total: \$636,166  
*Prin. Invest.:* G R HOLSTEIN, G P MARTINELLI  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 6276**                    **MT SINAI SCH OF MED OF THE CUNY**                    **7051**  
 "VESTIBULAR INFLUENCES ON AUTONOMIC CARDIOVASCULAR  
 09/08/1997 - 12/31/2001                    FY01: \$0                    Total: \$848,810  
*Prin. Invest.:* H KAUFMANN  
*Tech. Officer:* GSFC/V SCHNEIDER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER



**NAG 9 1097** **MT SINAI SCH OF MED OF THE CUNY** **7052**  
 ARTCT AND MECH FUNDTION W/RECOVERY FR DISUSE OSTEOPOROSIS  
 04/01/1999 - 03/31/2001 FY01: \$0 Total: \$153,098  
*Prin. Invest.:* M SCHAFFLER  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAS 9 19441** **MT SINAI SCH OF MED OF THE CUNY** **7053**  
 SPATIAL ORIENTATION OF VESTIBULO-OCULAR REFLEX AND VELOCITY STORAGE  
 03/01/1996 - 09/30/2000 FY01: \$0 Total: \$1,779,665  
*Prin. Invest.:* D COHEN, M.D., M DAI, M.D.  
*Tech. Officer:* JSC/A M LEE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1173** **MT SINAI SCH OF MED OF THE CUNY** **7054**  
 NEUROLAB COMPLETION PROPOSAL: ANATOMICAL STUDIES OF CENTRAL VESTIBULAR ADAPTATION  
 04/17/2000 - 03/31/2002 FY01: \$0 Total: \$238,548  
*Prin. Invest.:* G R HOLSTEIN  
*Tech. Officer:* ARC/M F VASQUES, ARC/P D SAVAGE  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 9 128** **MT SINAI SCH OF MED OF THE CUNY** **7055**  
 VALIDATION CENTRIFUGATION AS A COUNTER MEASURE FOR OTOLITH DECONDITIONING DURING SPACEFLIGHT  
 06/14/2001 - 09/30/2004 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* S MOORE  
*Tech. Officer:* JSC/M E ANDERSON  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 2 951** **NEW YORK UNIV** **7056**  
 EFFECTS OF GRAVITY ON POSTNATL MOTOR DEVELOPMENT  
 12/22/1994 - 07/31/2001 FY01: \$0 Total: \$878,767  
*Prin. Invest.:* K D WALTON  
*Tech. Officer:* ARC/W E HINDS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1426** **NEW YORK UNIV** **7057**  
 GRAVITATION & DEVELOPMENT MOTRICITY  
 07/26/2000 - 07/31/2001 FY01: \$0 Total: \$80,000  
*Prin. Invest.:* K D WALTON  
*Tech. Officer:* ARC/MM AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 7583** **NEW YORK UNIV** **7058**  
 JOINT CENTER FOR COMPUTATIONAL MODELING (JCCM)  
 08/04/1998 - 12/31/2001 FY01: \$103,000 Total: \$203,000  
*Prin. Invest.:* M BERGER  
*Tech. Officer:* GSFC/D S SPICER  
*CASE Category:* 21 - MATHEMATICS

**NAG 5 8475** **NEW YORK UNIV** **7059**  
 MODELING SOUTH PACIFIC ICE-OCEAN INTERACTIONS IN THE GLOBAL CLIMATE SYSTEM  
 04/26/1999 - 04/30/2001 FY01: \$0 Total: \$45,065  
*Prin. Invest.:* D M HOLLAND  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9246** **NEW YORK UNIV** **7060**  
 SENSITIVITY OF THE ATMOSPHERIC SHOWERS OF EXTREMELY HIGH ENERGY COSMIC RAYS TO UNKNOWN ASPECTS OF  
 03/14/2000 - 03/14/2002 FY01: \$101,800 Total: \$194,118  
*Prin. Invest.:* G FARRAR  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9871** **NEW YORK UNIV** **7061**  
 AN INVESTIGATION OF THE PREDICTABILITY OF THE NSIPP FORECAST SYSTEM  
 08/08/2000 - 08/14/2002 FY01: \$100,000 Total: \$185,000  
*Prin. Invest.:* R KLEEMAN  
*Tech. Officer:* GSFC/M REINECKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1024** **NEW YORK UNIV** **7062**  
 CANCER RISK MECHANISM FOLLOWING REPEATED EXPOSURE TO HIGH LET RADIATION  
 06/04/1998 - 09/04/2001 FY01: \$71,334 Total: \$589,334  
*Prin. Invest.:* F J BURNS  
*Tech. Officer:* JSC/F A CUCINOTTA  
*CASE Category:* 56 - MEDICL

**NCC 2 5417** **NEW YORK UNIV** **7063**  
 SOFTWARE FOR IMAGE DISCRIMINABILITY & QUALITY MODE LING  
 02/15/2001 - 05/31/2001 FY01: \$63,912 Total: \$63,912  
*Prin. Invest.:* M LANDY  
*Tech. Officer:* ARC/A J AHUMADA, ARC/J B MULLIGAN  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NGT 8 52893** **NEW YORK UNIV** **7064**  
 NANOTOOLS FROM BIOLOGY: ANTIBODY TECHNOLOGY APPLIED TO CARBON NANOTUBE PROCESSING  
 06/28/2000 - 08/31/2003 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* S WILSON, NONE  
*Tech. Officer:* MSFC/S NASH-STEVEN  
*CASE Category:* 12 - CHEMISTRY

**NCC 8 182** **NIAGARA UNIV** **7065**  
 ALGORITHM DEVELOPMENT AND SCIENCES ANALYSIS OF STANDARD DATA PRODUCTS FROM LIGHTNING INSTR. SPACE  
 04/26/1999 - 07/31/2002 FY01: \$22,431 Total: \$67,514  
*Prin. Invest.:* W BOECK  
*Tech. Officer:* MSFC/R BLAKESLEE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 2533** **POLYTECHNIC UNIV - BROOKLYN, NY** **7066**  
 REFLECTION & REFRACTION OF SOUND WAVES THROUGH GLOW DISCHARGES  
 01/25/2001 - 12/31/2002 FY01: \$65,000 Total: \$65,000  
*Prin. Invest.:* M OTUGEN  
*Tech. Officer:* GRC/D B ZAMAN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1370**      **POLYTECHNIC UNIV - BROOKLYN,NY**      **7067**  
 R/S "DIFFUSION, VISCOSITY AND CRYSTAL GROWTH OF PROTEINS IN MICROGRAVITY"  
 05/28/1997 - 02/28/2002      FY01: \$70,000      Total: \$431,000  
*Prin. Invest.:* A MYERSON  
*Tech. Officer:* MSFC/B GUYNES, MSFC/J MAYO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1455**      **POLYTECHNIC UNIV - BROOKLYN,NY**      **7068**  
 R/S THERMODYNAMIC & SPECTROSCOPIC STUDIES OF SECONDARY NUCLEATION IN MICROGRAVITY  
 02/01/1998 - 01/31/2002      FY01: \$76,000      Total: \$282,667  
*Prin. Invest.:* A S MEYERSON  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 43 - CHEMICAL ENGR

**NGT 8 52879**      **POLYTECHNIC UNIV - BROOKLYN,NY**      **7069**  
 GRADUATE STUDENT RESEARCH PROGRAM DEVELOPMENT OF HEALTH MONITORING TECHNIQUES FOR AEROSPACE  
 09/08/1999 - 08/31/2002      FY01: \$0      Total: \$22,000  
*Prin. Invest.:* F LIN  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 44 - CIVIL ENGR

**NAG 1 1939**      **RENSSELAER POLYTECHNIC INST**      **7070**  
 THE DESIGN AND SYNTHESIS OF EPOXY MATRIX COMPOSITES CURABLE BY ELECTRON BEAM  
 06/02/1997 - 03/06/2000      FY01: -\$1,638      Total: \$158,616  
*Prin. Invest.:* J V CRIVELLO  
*Tech. Officer:* LARC/J W CONNELL, LARC/N J JOHNSTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2089**      **RENSSELAER POLYTECHNIC INST**      **7071**  
 EVOLUTION IN DECENTRALIZED EMERGENT COMPUTATION MY 1/2  
 07/08/1998 - 05/30/2001      FY01: \$1      Total: \$264,639  
*Prin. Invest.:* P HAJELA, K E JANSEN  
*Tech. Officer:* LARC/J SOBIESKI, LARC/J R ROGERS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 1834**      **RENSSELAER POLYTECHNIC INST**      **7072**  
 A STUDY OF THE CONSTRAINED VAPOR BUBBL THRMOSYPHON  
 04/22/1996 - 10/21/2000      FY01: \$0      Total: \$709,520  
*Prin. Invest.:* P C WAYNER  
*Tech. Officer:* GRC/J C DUH  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2304**      **RENSSELAER POLYTECHNIC INST**      **7073**  
 STUDIES OF CYCLIC AND LINEAR CARBOSILANES AS SINGLE SOURCE SIC PRESURSORS  
 12/13/1999 - 03/09/2000      FY01: -\$135      Total: \$4,865  
*Prin. Invest.:* L V INTERRANTE  
*Tech. Officer:* GRC/D LARKIN  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2334**      **RENSSELAER POLYTECHNIC INST**      **7074**  
 MINORITY ENGINEERING PROGRAM MINORITY ENGINEERING PROGRAM  
 02/17/2000 - 08/31/2000      FY01: \$0      Total: \$50,000  
*Prin. Invest.:* M D SMITH  
*Tech. Officer:* GRC/S GOTT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2351**      **RENSSELAER POLYTECHNIC INST**      **7075**  
 THEORETICAL AND EXPERIMENTAL INVESTIGATION OF THE STABILITY OF AN EVAPORATING CONSTRAINED VAPOR BUBB  
 03/24/2000 - 11/30/2003      FY01: \$54,000      Total: \$81,500  
*Prin. Invest.:* D C WAYNER  
*Tech. Officer:* GRC/R SKARDA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2383**      **RENSSELAER POLYTECHNIC INST**      **7076**  
 R & D WORK ON THE CONSTRAINED VAPOR BUBBLE SYSTEM FOR A MICROGRAVITY EXPERIMENT  
 04/18/2000 - 04/21/2005      FY01: \$166,250      Total: \$314,250  
*Prin. Invest.:* P C WAGNER  
*Tech. Officer:* GRC/J SKARDA  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 2525**      **RENSSELAER POLYTECHNIC INST**      **7077**  
 THE PREPARATION OF SIC NANOTUBES & NANOLAYERS #207 -01-253B  
 01/17/2001 - 12/31/2001      FY01: \$127,311      Total: \$127,311  
*Prin. Invest.:* D INTERRANTE  
*Tech. Officer:* GRC/D LARKIN  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2552**      **RENSSELAER POLYTECHNIC INST**      **7078**  
 MINORITY ENGINEERING PROGRAM MINORITY ENGINEERING PROGRAM  
 03/06/2001 - 12/01/2001      FY01: \$30,000      Total: \$30,000  
*Prin. Invest.:* M D SMITH  
*Tech. Officer:* GRC/T ROGERS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3725**      **RENSSELAER POLYTECHNIC INST**      **7079**  
 METEORITE SPECTROSCOPY AND CHARACTERIZATION OF AST MATERIALS  
 02/12/1997 - 02/14/2001      FY01: \$0      Total: \$164,250  
*Prin. Invest.:* M J GAFFEY  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4557**      **RENSSELAER POLYTECHNIC INST**      **7080**  
 A LABORATORY INVESTIGATION OF PHOTOCHEMICAL PROCES  
 06/23/1997 - 10/31/2000      FY01: \$0      Total: \$406,120  
*Prin. Invest.:* D P FERRIS  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 7598**      **RENSSELAER POLYTECHNIC INST**      **7081**  
 ORIGIN OF LIFE: INTERSTELLAR MOLECULES TO INTRONS  
 07/15/1998 - 12/31/2001      FY01: \$953,000      Total: \$2,800,218  
*Prin. Invest.:* D P FERRIS  
*Tech. Officer:* GSFC/M A MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7884**      **RENSSELAER POLYTECHNIC INST**      **7082**  
 THE NATURE AND EVOLUTION OF INTERSTELLAR & CIRCUMSTELLAR ICES & ORGANIC MATTER  
 12/01/1998 - 12/31/2001      FY01: \$16,380      Total: \$47,724  
*Prin. Invest.:* D C WHITTET  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8976 RENSSELAER POLYTECHNIC INST 7083**  
 PARTICIPATING SCIENTIST: ANALYSIS OF THE MSI/NIS SPECTRA OF EROS  
 01/24/2000 - 03/31/2002 FY01: \$0 Total: \$70,887  
*Prin. Invest.:* M J GAFFEY  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9148 RENSSELAER POLYTECHNIC INST 7084**  
 AN INVENTORY OF CARBONACEOUS MOLECULES IN INTERSTELLAR ICES  
 & THEIR RELATION TO COMETS  
 03/03/2000 - 03/14/2002 FY01: \$55,900 Total: \$108,558  
*Prin. Invest.:* D WHITTET  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 9607 RENSSELAER POLYTECHNIC INST 7085**  
 A LABORATORY INVESTIGATION OF PHOTOCHEMICAL PROCESSES ON  
 TITAN  
 05/12/2000 - 05/14/2002 FY01: \$133,000 Total: \$266,000  
*Prin. Invest.:* J P FERRIS  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10345 RENSSELAER POLYTECHNIC INST 7086**  
 CHARACTERIZATIONS OF ASTEROID SURFACE MATERIALS: METEORITE  
 PARENT BODIES & ASTEROID EVOLUTION  
 02/01/2001 - 02/14/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* D J GAFFEY  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1290 RENSSELAER POLYTECHNIC INST 7087**  
 "INVESTIGATIONS OF FREE STREAM FLOW TECHNOLOGIES"  
 12/18/1996 - 09/30/2000 FY01: \$0 Total: \$525,669  
*Prin. Invest.:* L N MYRABO  
*Tech. Officer:* MSFC/G A ROBERSTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1468 RENSSELAER POLYTECHNIC INST 7088**  
 R/S EVOLUTION OF LOCAL MICROSTRUCTURES SPATIAL INSTABILITIES OF  
 COARSENING CLUSTERS  
 02/24/1998 - 03/23/2002 FY01: \$142,500 Total: \$401,259  
*Prin. Invest.:* M E GLICKSMAN  
*Tech. Officer:* MSFC/L B JETER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1488 RENSSELAER POLYTECHNIC INST 7089**  
 R/S TRANSIENT DENDRITIC SOLIDIFICATION EXPERIMENT  
 02/24/1998 - 02/23/2002 FY01: -\$13,344 Total: \$374,256  
*Prin. Invest.:* M B KOSS, M E GLICKSMAN  
*Tech. Officer:* MSFC/A JACKMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1696 RENSSELAER POLYTECHNIC INST 7090**  
 FOLLOW-ON RESEARCH ACTIVITIES FOR THE RENSSELAER ISOTHERMAL  
 DENDRITIC GROWTH EXPERIMENT (RIDGE)  
 05/15/2000 - 11/30/2003 FY01: \$95,000 Total: \$135,000  
*Prin. Invest.:* M E GLICKSMAN, M B KOSS  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1795 RENSSELAER POLYTECHNIC INST 7091**  
 EXPERIMENTAL INVESTIGATION INTO ADVANCED PROPULSION FORTH  
 GENERATION SPACE TRANSPORTATION  
 04/12/2001 - 03/31/2004 FY01: \$99,000 Total: \$99,000  
*Prin. Invest.:* L N MYRABO, H NAGAMATSU  
*Tech. Officer:* MSFC/J W LEHNER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 25368 RENSSELAER POLYTECHNIC INST 7092**  
 ISOTHERMAL DENDRITIC GROWTH  
 12/15/1988 - 12/31/1999 FY01: -\$18,173 Total: \$3,612,729  
*Prin. Invest.:* M E GLICKSMAN  
*Tech. Officer:* GRC/E A WINSA, GRC/G A KRAFT  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 1 52160 RENSSELAER POLYTECHNIC INST 7093**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 09/22/1997 - 09/21/2000 FY01: -\$23,491 Total: \$42,509  
*Prin. Invest.:* K E JARSEN  
*Tech. Officer:* LARC/M H CARPENTER  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 3 52341 RENSSELAER POLYTECHNIC INST 7094**  
 POWDER LUBRICATED JOURNAL BEARING DEVELOPMENT  
 06/29/1998 - 08/31/2001 FY01: \$0 Total: \$64,000  
*Prin. Invest.:* J A TICHY  
*Tech. Officer:* GRC/D MONTEGANI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50165 RENSSELAER POLYTECHNIC INST 7095**  
 SCALABLE INSTRUMENTATION AND DATABASE APPROACH TO  
 PERFORMANCE ANALYSIS OF PARALLEL SCIENTIFIC APPLI  
 06/03/1999 - 06/30/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* B SZMANSKI  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2484 ROCHESTER INST OF TECHNOLOGY 7096**  
 SPIN-ON GLASSY ELECTROLYTES FOR THIN-FILM MICROELECTRONIC  
 BATTERIES  
 09/11/2000 - 11/30/2002 FY01: \$34,637 Total: \$46,182  
*Prin. Invest.:* D P RAFFAELLE  
*Tech. Officer:* GRC/N HAGEDORN  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2593 ROCHESTER INST OF TECHNOLOGY 7097**  
 DEVELOPMENT OF ADVANCED GRAVITY-INDEPENDENT HIGH HEAT FLUX  
 PHASE CHANGE HEAT EXCHANGER TECH & DESIGN  
 05/11/2001 - 06/30/2003 FY01: \$42,462 Total: \$42,462  
*Prin. Invest.:* D RAFFAELLE  
*Tech. Officer:* GRC/S BAILEY  
*CASE Category:* 13 - PHYSICS

**NAG 3 2595 ROCHESTER INST OF TECHNOLOGY 7098**  
 QUANTUM DOT DEVICE CHARACTERIZATION AND DEVELOPMENT  
 04/30/2001 - 05/31/2004 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* D P RAFFAELLE  
*Tech. Officer:* GRC/S BAILEY  
*CASE Category:* 13 - PHYSICS

**NAG 3 2596 ROCHESTER INST OF TECHNOLOGY 7099**  
 SIC SOLAR CELLS SIC SOLAR CELLS  
 04/30/2001 - 05/31/2002 FY01: \$36,889 Total: \$36,889  
*Prin. Invest.:* D RAFFAELLE  
*Tech. Officer:* GRC/S BAILEY  
*CASE Category:* 13 - PHYSICS

**NAG 5 3443 ROCHESTER INST OF TECHNOLOGY 7100**  
 ABSOLUTE CALIBRATION, ATMOSPHERIC CORRECTION AND A PPLICATION  
 OF LANDSAT-7 ETM +THERMAL INFRARED...  
 11/03/1996 - 06/30/2001 FY01: \$52,142 Total: \$828,520  
*Prin. Invest.:* J SCHOTT  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3728 ROCHESTER INST OF TECHNOLOGY 7101**  
 DEVELOPMENT OF BACK ILLUMINATED PREAMP PER PIXEL DEVICE  
 ARRAYS  
 02/21/1997 - 12/31/2000 FY01: \$0 Total: \$367,451  
*Prin. Invest.:* D NINKOV  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9090 ROCHESTER INST OF TECHNOLOGY 7102**  
 A PROGRAM TO DEVELOP HYBRIDIZED 2K X 2K SI PIN ARRAYS FOR SPACE  
 02/17/2000 - 01/31/2002 FY01: \$350,000 Total: \$679,700  
*Prin. Invest.:* Z NINKOV  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10051 ROCHESTER INST OF TECHNOLOGY 7103**  
 FOREST FIRES IMAGING EXPERIMENT SYSTEMS  
 09/29/2000 - 08/31/2002 FY01: \$1,598,227 Total: \$2,275,275  
*Prin. Invest.:* A VODECEK  
*Tech. Officer:* GSFC/T D GUBBELS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11009 ROCHESTER INST OF TECHNOLOGY 7104**  
 SYNERGISTIC APPLICATIONS OF EO-1 AND LANDSAT 7 FOR CANOPY  
 TEMPERA  
 06/06/2001 - 06/14/2003 FY01: \$69,997 Total: \$69,997  
*Prin. Invest.:* D SCHOTT  
*Tech. Officer:* GSFC/J A SMITH  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 11298 ROCHESTER INST OF TECHNOLOGY 7105**  
 YEAR ONE OF SOLICITED PROPOSAL ENTITLED,"LANDSAT RADIOMETRIC  
 CALIBRATION: TOWARDS A 20 YEAR RECORD  
 08/29/2001 - 08/31/2004 FY01: \$94,989 Total: \$94,989  
*Prin. Invest.:* J SCHOTT  
*Tech. Officer:* GSFC/B L MARKHAM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 3 786 ROCHESTER INST OF TECHNOLOGY 7106**  
 INTEGRATED POWER SOURCES INTEGRATED POWER SOURCES  
 03/23/2000 - 04/30/2003 FY01: \$25,000 Total: \$75,000  
*Prin. Invest.:* D P RAFAELLE  
*Tech. Officer:* GRC/A F HEPP  
*CASE Category:* 13 - PHYSICS

**NCC 3 806 ROCHESTER INST OF TECHNOLOGY 7107**  
 SOLID STATE LITHIUM POLYMER ELECTROLYTE DEVELOPMENT  
 06/07/2000 - 05/31/2001 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* D P RAFFAELLE  
*Tech. Officer:* GRC/A F HEPP  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 3 807 ROCHESTER INST OF TECHNOLOGY 7108**  
 THIN FILM SOLAR CELL PROCESSING AND DEVELOPMENT THIN FILM  
 SOLAR CELL PROCESSING AND DEVELOPMENT  
 06/07/2000 - 05/31/2001 FY01: \$0 Total: \$70,000  
*Prin. Invest.:* D P RAFFAELLE  
*Tech. Officer:* GRC/A HEPP  
*CASE Category:* 13 - PHYSICS

**NCC13 98001 ST U NY COLL OF ENVIR SCI & FORESTRY 7109**  
 A CENTER FOR EXPLORING AND DEVELOPING COMMERCIAL APPLICA  
 TIONS OF REMOTE SENSING AND GEO-SPATIAL TEC  
 09/01/1998 - 03/31/2002 FY01: \$150,000 Total: \$500,000  
*Prin. Invest.:* P HOPKINS  
*Tech. Officer:* SSC/N SOVIK  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 01003 ST U NY COLL OF ENVIR SCI & FORESTRY 7110**  
 APPLYING REMOTE SENSING TO FOREST MANAGEMENT IN ST ATE AGEN  
 CIES  
 06/01/2001 - 05/31/2002 FY01: \$449,010 Total: \$449,010  
*Prin. Invest.:* P HOPKINS  
*Tech. Officer:* SSC/N SOVIK  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6227 STATE UNIV OF NEW YORK - ALBANY 7111**  
 DETECTING INTERACTIONS BETWEEN VEGETATION AND THE THE NORTH  
 EASTERN UNITED STATES  
 09/12/1997 - 12/31/2001 FY01: \$12,801 Total: \$296,085  
*Prin. Invest.:* D R FITZJARRALD  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7469 STATE UNIV OF NEW YORK - ALBANY 7112**  
 CASE STUDY INVESTIGATIONS OF LARGE-AMPLITUDE INERT IA-GRAVITY  
 WAVEENVIRONMENTS AND MESOSCALE  
 06/03/1998 - 06/30/2001 FY01: \$0 Total: \$129,936  
*Prin. Invest.:* L BOSART  
*Tech. Officer:* GSFC/A NEGRI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8815 STATE UNIV OF NEW YORK - ALBANY 7113**  
 GENETIC COMPLEXITY IN THE RNA WORLD: AN EXAMINATIO N OF THE  
 GENETIC LOAD IN RNA POPULATIONS  
 10/06/1999 - 09/30/2001 FY01: \$75,360 Total: \$155,360  
*Prin. Invest.:* N E LEHMAN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9676 STATE UNIV OF NEW YORK - ALBANY 7114**  
 TECHNOLOGY & POLICY ASPECTS OF APPLYING REMOTE SENSING TO  
 FOREST MANAGEMENT IN STATE AGENCIES  
 05/31/2000 - 05/31/2001 FY01: \$0 Total: \$275,000  
*Prin. Invest.:* P F HOPKINS  
*Tech. Officer:* GSFC/A J TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9690 STATE UNIV OF NEW YORK - ALBANY 7115**  
 DEVELOPING & TESTING OF NEW TECHNIQUES FOR CONSER-  
 VATIONAL BIOGEOPHYSICAL MINERALEXPLORATION  
 06/19/2000 - 11/30/2001 FY01: \$0 Total: \$114,589  
*Prin. Invest.:* H MASSONE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9764 STATE UNIV OF NEW YORK - ALBANY 7116**  
 MARS LANDING SITE STUDIES  
 06/27/2000 - 06/30/2001 FY01: -\$40,000 Total: \$0  
*Prin. Invest.:* J A GRANT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11008 STATE UNIV OF NEW YORK - ALBANY 7117**  
 RELATIONSHIP BETWEEN CORE CONVECTIVE STRUCTURE AND  
 INTENSITY CHANGE IN TROPICAL CYCLONES  
 06/06/2001 - 06/14/2002 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* J MOLINARI  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 18942 STATE UNIV OF NEW YORK - ALBANY 7118**  
 SAGE III SCIENCE SUPPORT - P.I. - DR. V. MOHNEN  
 01/31/1990 - 01/31/2005 FY01: \$70,000 Total: \$587,630  
*Prin. Invest.:* V MOHNEN  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R MCMASTER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5212 STATE UNIV OF NEW YORK - ALBANY 7119**  
 REVIEW QUALITY ASSURANCE AND APPLICATION OF GLOBAL  
 ATMOSPHERIC RADON DATA  
 04/03/1997 - 05/31/2000 FY01: \$0 Total: \$44,698  
*Prin. Invest.:* M KRITZ  
*Tech. Officer:* ARC/L PFISTER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5380 STATE UNIV OF NEW YORK - ALBANY 7120**  
 A PRELIMINARY TEST OF THE CO2 RECTIFIER HYPOTHESIS USING  
 EXISTING UPPER TROPOSPHERIC MEASUREMENTS...  
 04/15/2000 - 04/14/2002 FY01: \$24,410 Total: \$48,710  
*Prin. Invest.:* M KRITZ  
*Tech. Officer:* ARC/L PFISLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 3 891 STATE UNIV OF NEW YORK - ALBANY 7121**  
 POLYTYPE MAPPING AND DEFECT CHARACTERIZATION IN SILICON  
 CARBIDE HETEROEPITAXIAL STRUCTURES  
 06/04/2001 - 05/02/2002 FY01: \$55,000 Total: \$55,000  
*Prin. Invest.:* D DUDLEY  
*Tech. Officer:* GRC/P NEUDECK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 283 STATE UNIV OF NEW YORK - ALBANY 7122**  
 PERIODIC, TRANSIENT, AND SPATIALLY INHOMOGENEOUS I  
 NFLUENCES ON EXCHANGE IN AMAZONIA  
 06/23/1998 - 12/31/2001 FY01: \$284,620 Total: \$1,157,862  
*Prin. Invest.:* D R FRITZJARRALD, NONE  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 8 125 STATE UNIV OF NEW YORK - ALBANY 7123**  
 RESEARCH BRINGING GREATLY ENHANCED LAB-BASED PROTEIN CRYSTALLOGRAPHY TO THE US BIOTECHNOLOGY  
 01/16/1997 - 01/14/2001 FY01: \$0 Total: \$2,075,346  
*Prin. Invest.:* W M GIBSON  
*Tech. Officer:* MSFC/K HIGGINBOTHAN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 9069 STATE UNIV OF NEW YORK - BINGHAMTON 7124**  
 USE OF ROTATIONAL & GRAVITATIONAL OBSERVATIONS TO INFER CORE-  
 MANTLE COUPLING & LONG TIDAL PERIODS  
 03/08/2000 - 02/28/2002 FY01: \$65,750 Total: \$107,000  
*Prin. Invest.:* S DICKMAN  
*Tech. Officer:* GSFC/H FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 1 336 STATE UNIV OF NEW YORK - BINGHAMTON 7125**  
 RELIABILITY CRITERIA-BASED FLIGHT SYSTEM CONTROL MY 1/3  
 04/30/1999 - 01/31/2002 FY01: \$59,559 Total: \$159,254  
*Prin. Invest.:* N WU  
*Tech. Officer:* LARC/C M BELCASTRO, LARC/C M BELCASTRO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2238 STATE UNIV OF NEW YORK - BUFFALO 7126**  
 FILTERED MASS DENSITY FUNCTION FOR DESIGN SIMU-  
 LATIONS OF HIGH SPEED AIRBREATHING PROPULSION SYS.  
 09/20/1999 - 08/31/2002 FY01: \$30,000 Total: \$67,500  
*Prin. Invest.:* P GIVI  
*Tech. Officer:* LARC/J P DRUMMOND  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 2 1429 STATE UNIV OF NEW YORK - BUFFALO 7127**  
 A NEW SEMI-ACTIVE APPROACH FOR DYNAMIC RESPONSE MO  
 DIFICATION OF HELICOPTERS  
 08/11/2000 - 08/31/2002 FY01: \$0 Total: \$46,994  
*Prin. Invest.:* G LEE  
*Tech. Officer:* ARC/C TUNG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2225 STATE UNIV OF NEW YORK - BUFFALO 7128**  
 LARGE EDDY SIMULATION OF GRAVITATIONAL EFFECTS ON TRANSITIONAL  
 AND TURBULENT GAS-JET DIFFUSION FLAME  
 01/22/1999 - 12/10/2002 FY01: \$96,790 Total: \$263,911  
*Prin. Invest.:* D GIVI  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 9390 STATE UNIV OF NEW YORK - BUFFALO 7129**  
 THE PLANETARY GEOLOGY AND GEOPHYSICS UNDERGRADUATE  
 RESEARCH PROGRAM  
 04/04/2000 - 04/14/2002 FY01: \$68,600 Total: \$148,600  
*Prin. Invest.:* T GREGG  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## NEW YORK

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9619 STATE UNIV OF NEW YORK - BUFFALO 7130**  
 VOLCANIC EVOLUTION & EROSIONAL HISTORY OF TYRRHENA &  
 HADRIACA PATERAE, MARS  
 05/18/2000 - 05/14/2003 FY01: \$55,000 Total: \$109,200  
*Prin. Invest.:* T GREGG  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9658 STATE UNIV OF NEW YORK - BUFFALO 7131**  
 DEVELOPMENT OF A ROVER-DEPLOYED GROUND PENETRATING RADAR  
 05/31/2000 - 11/30/2000 FY01: -\$169,387 Total: \$0  
*Prin. Invest.:* J GRANT  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9873 STATE UNIV OF NEW YORK - BUFFALO 7132**  
 A NEW CLASS OF UNNATURAL FOLDING OLIGOMERS: HELICES WITH  
 NANO-SIZED CAVITIES  
 08/10/2000 - 08/31/2002 FY01: \$139,567 Total: \$233,822  
*Prin. Invest.:* B GONG  
*Tech. Officer:* GSFC/S DAVISON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10608 STATE UNIV OF NEW YORK - BUFFALO 7133**  
 REMOTE SENSING OF GROUND WATER: CALIBRATION OF ENVIRONMENTAL  
 GROUNDWATER FLOW MODELS TO SATELL  
 03/15/2001 - 03/14/2002 FY01: \$115,418 Total: \$115,418  
*Prin. Invest.:* M BECKER  
*Tech. Officer:* GSFC/M BECKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 1 01034 STATE UNIV OF NEW YORK - BUFFALO 7134**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/22/2001 - 06/30/2003 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* K LEWIS  
*Tech. Officer:* LARC/S L PADULA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 1 52185 STATE UNIV OF NEW YORK - BUFFALO 7135**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/12/1998 - 06/30/2002 FY01: \$12,000 Total: \$66,001  
*Prin. Invest.:* K E LEWIS  
*Tech. Officer:* LARC/J SOBIESKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52228 STATE UNIV OF NEW YORK - BUFFALO 7136**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 04/18/2000 - 12/31/2001 FY01: \$1 Total: \$22,001  
*Prin. Invest.:* K E LEWIS, T J HALECKI  
*Tech. Officer:* LARC/S L PADULA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 2040 STATE UNIV OF NEW YORK - STONY BROOK 7137**  
 SPARC DATA CENTER MY 1/3  
 03/27/1998 - 12/31/2000 FY01: \$1 Total: \$179,288  
*Prin. Invest.:* M A GELLER  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2065 STATE UNIV OF NEW YORK - STONY BROOK 7138**  
 OCEAN BUOY SHORTWAVE (OBS): A DATA SET FOR SATELLITE RETRIEVAL  
 AND GCM VALIDATION  
 05/01/1998 - 11/30/2000 FY01: \$1 Total: \$126,278  
*Prin. Invest.:* R A WALUSER  
*Tech. Officer:* LARC/D S MCDUGAL, LARC/J L RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2166 STATE UNIV OF NEW YORK - STONY BROOK 7139**  
 SAGE II RESEARCH ON THE CONTROLLING PROCESSES OF UPPER  
 TROPOSPHERIC & STRATOSPHERIC WATER VAPOR  
 03/17/1999 - 06/14/2002 FY01: \$106,000 Total: \$273,000  
*Prin. Invest.:* M A GELLER  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01052 STATE UNIV OF NEW YORK - STONY BROOK 7140**  
 CENTER FOR EMERGING TECHNOLOGIES: LONG ISLAND TECHNOLOGY  
 CENTER  
 03/30/2001 - 04/14/2003 FY01: \$997,800 Total: \$997,800  
*Prin. Invest.:* Y SHAMASH  
*Tech. Officer:* LARC/R R ANTCLIFF  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1325 STATE UNIV OF NEW YORK - STONY BROOK 7141**  
 APPLICATIONS OF COMPUTATIONAL GEOMETRY IN AIR TRAFFIC MANAGE-  
 MENT  
 05/19/1999 - 05/31/2002 FY01: \$35,000 Total: \$85,000  
*Prin. Invest.:* J S MITCHELL  
*Tech. Officer:* ARC/G MEYER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 2 1379 STATE UNIV OF NEW YORK - STONY BROOK 7142**  
 EFFECT OF SIMULATED MICROGRAVITY ON ACTIVATED T CELL GENE  
 TRANSCRIPTION  
 08/16/1999 - 08/31/2002 FY01: \$82,597 Total: \$206,623  
*Prin. Invest.:* M A MORROW  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1517 STATE UNIV OF NEW YORK - STONY BROOK 7143**  
 ELUCIDATING THE MOLECULAR EVENTS OF BONE MECHANORECEPTION  
 08/31/2001 - 08/14/2002 FY01: \$139,589 Total: \$139,589  
*Prin. Invest.:* M HADJIARYROU  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 2863 STATE UNIV OF NEW YORK - STONY BROOK 7144**  
 THE COMPOSITION, STRUCTURE AND EVOLUTION OF NEUTRON STARS  
 01/06/1995 - 09/30/1999 FY01: -\$152 Total: \$220,846  
*Prin. Invest.:* J M LATTIMER  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3135 STATE UNIV OF NEW YORK - STONY BROOK 7145**  
 CONSISTENCY STUDY OF THE ENHANCED SHORTWAVE CLOUD ABSORP-  
 TION USING GEB A DATA  
 11/03/1995 - 05/14/2000 FY01: \$0 Total: \$118,349  
*Prin. Invest.:* M ZHANG  
*Tech. Officer:* GSFC/M DAH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3261 STATE UNIV OF NEW YORK - STONY BROOK 7146**  
 THE GASEOUS CONTENT OF THE UNIVERSE AT Z  
 06/10/1996 - 04/30/2001 FY01: \$0 Total: \$164,000  
*Prin. Invest.:* K M LANZETTA  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3718 STATE UNIV OF NEW YORK - STONY BROOK 7147**  
 LABORATORY SPECTROSCOPIC MEASUREMENTS RELEVANT TO  
 RESEARCH  
 01/24/1997 - 02/28/2002 FY01: \$93,671 Total: \$437,365  
*Prin. Invest.:* D VARANABI  
*Tech. Officer:* GSFC/M J KURYLO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 3950 STATE UNIV OF NEW YORK - STONY BROOK 7148**  
 OPTIMIZATION OF A BIOCHEMICAL COUNTERMEASURE  
 02/12/1997 - 02/14/2002 FY01: \$0 Total: \$1,047,235  
*Prin. Invest.:* C T RUBIN  
*Tech. Officer:* GSFC/V SCHNEIDER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 4043 STATE UNIV OF NEW YORK - STONY BROOK 7149**  
 CIO MEASUREMENTS AND ANALYSIS IN THE NETWORK FOR T STRATO-  
 SPHERIC CHANGE  
 05/06/1997 - 12/31/2001 FY01: \$283,935 Total: \$1,397,451  
*Prin. Invest.:* P SOLOMON  
*Tech. Officer:* GSFC/M J KURYLO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4071 STATE UNIV OF NEW YORK - STONY BROOK 7150**  
 STRATOPHERIC AND MESOSPHERIC TRACE GAS STUDIES USI MM-WAVE  
 RECEIVERS  
 03/21/1997 - 12/31/2001 FY01: \$0 Total: \$555,549  
*Prin. Invest.:* R L DE ZAFRA  
*Tech. Officer:* GSFC/M J KURYLO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4640 STATE UNIV OF NEW YORK - STONY BROOK 7151**  
 THE STABILITY OF ORBITAL CONFIGURATIONS AND THE UL OF PLANETARY  
 AND SATELLITESYSTEMS  
 06/09/1997 - 03/31/2001 FY01: \$0 Total: \$135,000  
*Prin. Invest.:* D J LISSAUER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6544 STATE UNIV OF NEW YORK - STONY BROOK 7152**  
 ORBITS OF SATURN'S INNER MOONS AND OTHER OBSERVATI ONS  
 CONNECTED WITH THE1995-1996 SATURNIAN RING PL  
 10/24/1997 - 12/31/2000 FY01: -\$1 Total: \$76,999  
*Prin. Invest.:* D LISSAUER  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6565 STATE UNIV OF NEW YORK - STONY BROOK 7153**  
 COLLABORATIVE RESEARCH: MODELING OF N2 AND CO2 FI XATION BY  
 THE OCEANIC DIAZOTROPH TRICHODESMIUM  
 11/03/1997 - 10/31/2000 FY01: \$0 Total: \$143,240  
*Prin. Invest.:* E CARPENTER  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6601 STATE UNIV OF NEW YORK - STONY BROOK 7154**  
 DEVELOPMENT AND VALIDATION OF A TROPICAL ISOPRENE EMISSION  
 MODEL  
 12/09/1997 - 03/31/2002 FY01: \$0 Total: \$117,349  
*Prin. Invest.:* M LERDAU  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6879 STATE UNIV OF NEW YORK - STONY BROOK 7155**  
 STUDIES OF EXCITED SPECIES IN PLANETARY UPPER ATMO SPHERES  
 01/30/1998 - 05/14/2002 FY01: \$90,338 Total: \$266,738  
*Prin. Invest.:* J L FOX  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7134 STATE UNIV OF NEW YORK - STONY BROOK 7156**  
 UARS INVESTIGATIONS OF WAVE-COUPPLING IN THE MIDDLE  
 ATMOSPHERE  
 03/03/1998 - 02/14/2001 FY01: \$0 Total: \$225,003  
*Prin. Invest.:* D A GELLER  
*Tech. Officer:* GSFC/A DOUGLASS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7439 STATE UNIV OF NEW YORK - STONY BROOK 7157**  
 EARTH REMOTE SENSING FACILITIES FOR RESEARCH AND TEACHING AT  
 THE STATE UNIV OF NEW YORK  
 05/27/1998 - 08/31/2000 FY01: \$0 Total: \$99,921  
*Prin. Invest.:* M GELLER  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7875 STATE UNIV OF NEW YORK - STONY BROOK 7158**  
 2-D MODELING EFFORTS FOR SUPERSONIC AIRCRAFT EFFEC TS ON THE  
 ATMOSPHERE NEW GRANT  
 11/30/1998 - 05/31/2000 FY01: -\$1 Total: \$49,999  
*Prin. Invest.:* M GELLER  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7978 STATE UNIV OF NEW YORK - STONY BROOK 7159**  
 A COMPREHENSIVE STUDY OF NEUTRON STAR PHOTOSPHERES \_  
 (LTS98)  
 01/06/1999 - 12/31/2001 FY01: \$75,000 Total: \$178,000  
*Prin. Invest.:* F M WALTER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8106 STATE UNIV OF NEW YORK - STONY BROOK 7160**  
 COSMIC RAYS IN INTERPLANETARY SPACE  
 02/04/1999 - 05/15/2001 FY01: \$0 Total: \$242,918  
*Prin. Invest.:* D A FORMAN  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8169 STATE UNIV OF NEW YORK - STONY BROOK 7161**  
 SEDIMENTARY GEOCHEMISTRY OF MARTIAN SAMPLES FROM T HE PATH-  
 FINDER MISSION  
 02/16/1999 - 08/31/2001 FY01: \$0 Total: \$59,500  
*Prin. Invest.:* S M MCLENNAN  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8377 STATE UNIV OF NEW YORK - STONY BROOK 7162**  
 SYSTEMATIC STUDY OF EXPLOSIONS IN CORE COLLAPSE SUPERNOVA -  
 REOB. DUE TO PI TRANSF. FROM NAG5-3099  
 03/08/1999 - 12/31/2000 FY01: \$0 Total: \$28,837  
*Prin. Invest.:* F SWETSY  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8437 STATE UNIV OF NEW YORK - STONY BROOK 7163**  
 LOW MASS STAR FORMATION IN ORI OB1A & B (ADP 98)  
 04/02/1999 - 03/31/2001 FY01: \$0 Total: \$54,988  
*Prin. Invest.:* F M WALTER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8462 STATE UNIV OF NEW YORK - STONY BROOK 7164**  
 STRUCTURE OF PROTOPLANETARY ENVIRONMENTS  
 04/19/1999 - 05/31/2000 FY01: -\$37 Total: \$9,963  
*Prin. Invest.:* M SIMON  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8980 STATE UNIV OF NEW YORK - STONY BROOK 7165**  
 WERNER BANDS OF H2 IN CIRCUMSTELLAR ENVIRONMENTS OF  
 SELECTED CLASSICAL T TAURI STARS - FUSE  
 01/24/2000 - 01/31/2002 FY01: \$0 Total: \$45,500  
*Prin. Invest.:* F M WALKER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9029 STATE UNIV OF NEW YORK - STONY BROOK 7166**  
 SORPTION OF SIMPLE ORGANIC MOLECULES ONTO PYRITE: POSSIBLY AN  
 IMPORTANT STEP IN THE ORIGIN OF LIFE  
 02/08/2000 - 12/31/2001 FY01: \$0 Total: \$45,519  
*Prin. Invest.:* M A SCHOONEN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9053 STATE UNIV OF NEW YORK - STONY BROOK 7167**  
 A SELF-CONSISTENT GLOBAL VELOCITY GRADIENT TENSOR FIELD  
 MODEL  
 02/10/2000 - 02/14/2002 FY01: \$42,500 Total: \$170,000  
*Prin. Invest.:* W E HOLT  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9680 STATE UNIV OF NEW YORK - STONY BROOK 7168**  
 THE STABILITY OF ORBITAL CONFIGURATIONS AND THE ULTIMATE  
 CONFIGURATIONS OF PLANETARY AND SATELLITE  
 06/21/2000 - 06/14/2002 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* J J LISSAUR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9786 STATE UNIV OF NEW YORK - STONY BROOK 7169**  
 TRAVEL SUPPORT AND WAVAS PROJECT SUPPORT OF SPARC  
 07/11/2000 - 07/31/2001 FY01: \$0 Total: \$34,726  
*Prin. Invest.:* M A GELLER  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9958 STATE UNIV OF NEW YORK - STONY BROOK 7170**  
 THE EVOLUTION OF STELLAR CORONAE FROM THE PMS THROUGH THE  
 ZAMS  
 09/13/2000 - 09/14/2002 FY01: \$17,000 Total: \$45,000  
*Prin. Invest.:* F M WALTER  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10284 STATE UNIV OF NEW YORK - STONY BROOK 7171**  
 VERTICAL PROFILES OF LATENT HEATING IN TRMM: VALIDATION &  
 ASSIMILATION IN THE GEOS DATA ASSIMILATION  
 01/31/2001 - 01/31/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* M ZHANG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10318 STATE UNIV OF NEW YORK - STONY BROOK 7172**  
 THE EARLY EVOLUTION OF THE CIRCUMSTELLAR ENVIRONMENT OF  
 SOLAR-LIKE STARS FUSE 2000  
 01/25/2001 - 01/31/2002 FY01: \$36,000 Total: \$36,000  
*Prin. Invest.:* F M WALTER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10506 STATE UNIV OF NEW YORK - STONY BROOK 7173**  
 SURFICIAL PROCESSES ON MARS: AN EXPERIMENTAL APPROACH  
 03/05/2001 - 02/28/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* S MCLENNAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10583 STATE UNIV OF NEW YORK - STONY BROOK 7174**  
 SEDIMENTARY GEOCHEMISTRY ON MARS  
 03/19/2001 - 02/28/2002 FY01: \$28,000 Total: \$28,000  
*Prin. Invest.:* S MCLENNAN  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10772 STATE UNIV OF NEW YORK - STONY BROOK 7175**  
 EARLY BATSE GRB AFTERGLOWS (ADP 2000)  
 04/26/2001 - 04/30/2002 FY01: \$10,000 Total: \$10,000  
*Prin. Invest.:* R A WIJERS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10995 STATE UNIV OF NEW YORK - STONY BROOK 7176**  
 COSMIC RAYS IN INTERPLANETARY SPACE: SCATTERING THEORY IN  
 THREE DIMENSIONAL TURBULENCE  
 05/31/2001 - 05/31/2002 FY01: \$117,926 Total: \$117,926  
*Prin. Invest.:* M A FORMAN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 11033 STATE UNIV OF NEW YORK - STONY BROOK 7177**  
 INTRASEASONAL VARIABILITY IN THE INDIAN OCEAN  
 06/08/2001 - 06/30/2002 FY01: \$59,976 Total: \$59,976  
*Prin. Invest.:* D WALISER  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY



**NAG 5 11240 STATE UNIV OF NEW YORK - STONY BROOK 7178**  
 TROPICAL UPWELLING AND STRATOSPHERIC WATER VAPOR VARIABILITY  
 08/15/2001 - 08/31/2004 FY01: \$73,956 Total: \$73,956  
*Prin. Invest.:* M GELLER  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1698 STATE UNIV OF NEW YORK - STONY BROOK 7179**  
 MICROGRAVITY PROCESSING OF POLYMER THIN FILMS  
 06/02/2000 - 11/30/2003 FY01: \$95,000 Total: \$135,000  
*Prin. Invest.:* M RAFILOVICH  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1700 STATE UNIV OF NEW YORK - STONY BROOK 7180**  
 DEFECTS NUMERICALLY DECREASED (DENUDE)  
 08/07/2000 - 11/30/2003 FY01: \$47,500 Total: \$92,500  
*Prin. Invest.:* D LARSON  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 13 - PHYSICS

**NAS 1 96006 STATE UNIV OF NEW YORK - STONY BROOK 7181**  
 UPPER ATMOSPHER AND STRATOSPHERIC WATER VAPOR RESEARCH  
 USING SAGE II  
 06/12/1996 - 06/11/2000 FY01: \$0 Total: \$253,806  
*Prin. Invest.:* N AVAILABLE  
*Tech. Officer:* LARC/N AVAILABLE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 1 98142 STATE UNIV OF NEW YORK - STONY BROOK 7182**  
 CERES SCIENCE INVESTIGATIONS  
 10/29/1998 - 10/31/2002 FY01: \$186,379 Total: \$494,914  
*Prin. Invest.:* R D CESS  
*Tech. Officer:* LARC/B A WIELICKI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 126 STATE UNIV OF NEW YORK - STONY BROOK 7183**  
 INTERDISCIPLINARY GLOBAL CHANGE RESEARCH  
 10/05/1995 - 02/15/2000 FY01: -\$2 Total: \$324,249  
*Prin. Invest.:* GELLER  
*Tech. Officer:* GSFC/B CARLSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 342 STATE UNIV OF NEW YORK - STONY BROOK 7184**  
 INTERDISCIPLINARY GLOBAL CHANGE RESEACH  
 06/23/1998 - 03/14/2002 FY01: \$0 Total: \$136,741  
*Prin. Invest.:* M GELLER  
*Tech. Officer:* GSFC/B CARLSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 8 93 STATE UNIV OF NEW YORK - STONY BROOK 7185**  
 COMBINED SYNCHROTRON WHITE X-RAY TOPOGRAPHY & HIGH RESOLU-  
 TION TRIPLE AXIS X-RAY DIFFRACTION CHARACTE  
 04/22/1996 - 03/31/2001 FY01: \$0 Total: \$418,563  
*Prin. Invest.:* M DUDLEY, R J MATYI  
*Tech. Officer:* MSFC/C TALLEY, MSFC/F R SZOFRAN  
*CASE Category:* 13 - PHYSICS

**NCC 8 100 STATE UNIV OF NEW YORK - STONY BROOK 7186**  
 RESEARCH ENTITLED "ORBITAL PROCESSING OF EUTECTICS  
 06/13/1996 - 10/31/2000 FY01: \$0 Total: \$656,249  
*Prin. Invest.:* D LARSON  
*Tech. Officer:* MSFC/T TURNER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 8 208 STATE UNIV OF NEW YORK - STONY BROOK 7187**  
 GROWTH DEFECT CHARACTERIZATION USING WHITE BEAM SYNCHRO-  
 TRON X-RAY TOPOGRAPHY  
 11/06/2000 - 11/05/2001 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* M DUDLEY  
*Tech. Officer:* MSFC/C HUA SU  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 30124 STATE UNIV OF NEW YORK - STONY BROOK 7188**  
 ENVIRONMENTAL CONTROLS OVER 2-METHYL-3-BUTEN-2-01  
 09/30/1997 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* M LERDAU/GRAY  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50322 STATE UNIV OF NEW YORK - STONY BROOK 7189**  
 EVOLUTION OF THE THREE-DIMENSIONAL MOISTURE STRUCT URE  
 ASSOCIATED WITH THE LIFE CYCLE OF THE MADDEN  
 08/17/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D WALISER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9383 STATE UNIV OF NEW YORK COL - PLATTSBURGH 7190**  
 TRACE ELEMENT ANALYSIS OF COSMIC DUST  
 04/04/2000 - 06/30/2002 FY01: \$47,700 Total: \$91,700  
*Prin. Invest.:* G J FLYNN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1109 STATE UNIV OF NEW YORK COL - PLATTSBURGH 7191**  
 JSC ASTROBIOLOGY INST  
 05/11/1999 - 05/13/2002 FY01: \$25,000 Total: \$75,000  
*Prin. Invest.:* G J FLYNN  
*Tech. Officer:* JSC/E K GIBSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 4157 STATE UNIV OF NEW YORK COLLEGE - PURCHASE 7192**  
 EVOLUTION OF VALLEY NETWORKS  
 04/16/1997 - 03/30/2001 FY01: -\$23,313 Total: \$59,015  
*Prin. Invest.:* D A GRANT,III  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4691 STATE UNIV OF NEW YORK COLLEGE - PURCHASE 7193**  
 CARBON AND NITROGEN ABUNDANCES IN INTERPLANETARY TO PRE-  
 BIOTIC ORGANIC MATTER ON EARTH  
 06/26/1997 - 10/31/2001 FY01: \$0 Total: \$73,550  
*Prin. Invest.:* D J FLYNN  
*Tech. Officer:* GSFC/M A MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 8499 STATE UNIV OF NEW YORK COLLEGE - PURCHASE 7194**  
 DETERMINATION OF GEOS ANALYSIS ERRORS NEAR STRONG JET  
 STREAMS USING HIGHRESOLUTION MODELS & AIRCRAF  
 06/14/1999 - 06/30/2000 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* J TENENBAUM, NONE  
*Tech. Officer:* GSFC/H M HELFAND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9370 STATE UNIV OF NEW YORK COLLEGE - PURCHASE 7195**  
 VALIDATION AND IMPROVEMENT OF DAO ANALYSES USING FLIGHT DATA  
 RECORDER OBSERVATIONS  
 04/12/2000 - 03/31/2002 FY01: \$70,000 Total: \$138,000  
*Prin. Invest.:* J TENENBAUM  
*Tech. Officer:* GSFC/M HELFAND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10221 STATE UNIV OF NEW YORK COLLEGE - PURCHASE 7196**  
 EXPERIMENTAL STUDY OF THE IMPACT DISRUPTION OF MET EORITIC  
 SAMPLES: PARENT BODY FRAGMENTATION & THE  
 01/11/2001 - 01/14/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* G FLYNN  
*Tech. Officer:* GSFC/D SENSEKE  
*CASE Category:* 99 - MULTIINTERDISCIPL, OTHER

**NAG 3 2464 STATE UNIV OF NEW YORK COLLEGE, BUFFALO 7197**  
 DYNAMICS OF AEROSOL PARTICLES IN STATIONARY ISOTRO PIC TURBU-  
 LENCE  
 06/16/2000 - 11/30/2003 FY01: \$57,000 Total: \$77,000  
*Prin. Invest.:* H MENG  
*Tech. Officer:* GRC/F P CHIARAMONTE 111  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 4544 STATE UNIV OF NEW YORK COLLEGE, BUFFALO 7198**  
 PLANETARY GEOLOGY AND GEOPHYSICS UNDERGRADUATE RES  
 05/13/1997 - 03/31/2001 FY01: \$0 Total: \$204,086  
*Prin. Invest.:* GREGG  
*Tech. Officer:* GSFC/J G GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7579 STATE UNIV OF NEW YORK COLLEGE, BUFFALO 7199**  
 FUNDING FOR 'DEBRIS FLOW HAZARD ASSESSMENT, PICO D E ORIZABA,  
 MEXICO'(SENH98-0089)  
 08/04/1998 - 07/31/2002 FY01: \$50,000 Total: \$300,000  
*Prin. Invest.:* M F SHERIDAN  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7581 STATE UNIV OF NEW YORK COLLEGE, BUFFALO 7200**  
 FUNDING FOR 'TEPHROSTRATIGRAPHIC AND SATELLITE IMA GERY ANAL-  
 YSIS OF THE KAMCHATKAN SHORELINE...' (SE  
 08/04/1998 - 01/31/2002 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* M BURSIK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICALSCIENCE

**NAG 5 10648 STATE UNIV OF NEW YORK COLLEGE, BUFFALO 7201**  
 ANALYSIS OF VOCANOTECTONICS DEFORMATION & VOLCANIC HAZARDS  
 USING TOPSAR & SRTM, MONO BASIN CALIFORNI  
 04/02/2001 - 04/14/2002 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* M I BURSIK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11331 STATE UNIV OF NEW YORK COLLEGE, BUFFALO 7202**  
 ATTITUDE DETERMINATION SCHEMES FOR THE CEGANS SENSORS  
 09/27/2001 - 11/30/2001 FY01: \$5,900 Total: \$5,900  
*Prin. Invest.:* J CRASSIDIS  
*Tech. Officer:* GSFC/D A QUINN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 8 52861 STATE UNIV OF NEW YORK COLLEGE, BUFFALO 7203**  
 ORIGIN OF CELLULAR PROCESSES ON EARTH  
 07/27/1998 - 06/30/2000 FY01: \$0 Total: \$20,699  
*Prin. Invest.:* G R WILSKY  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1853 SYRACUSE UNIV 7204**  
 BEHAVIOR OF RAPIDLY SHEARED BUBBLY SUSPENSIONS  
 05/01/1996 - 04/30/2001 FY01: \$0 Total: \$793,431  
*Prin. Invest.:* A S SANGANI, D L KOCH  
*Tech. Officer:* GRC/H K NAHRA, GRC/B MOTIL  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 2089 SYRACUSE UNIV 7205**  
 THREE-DIMENSIONAL VISCOUS INVERSE METHOD WITH ENDW ALL  
 EFFECTS  
 03/17/1998 - 12/31/2001 FY01: \$0 Total: \$211,521  
*Prin. Invest.:* T DANG  
*Tech. Officer:* GRC/J R WOOD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2309 SYRACUSE UNIV 7206**  
 WORKSHOP ON BOUNDARY LAYER TRANSITION AND UNSTEADY  
 ASPECTS OF TURBOMACHINERY FLOWS  
 12/10/1999 - 12/31/2000 FY01: \$0 Total: \$6,000  
*Prin. Invest.:* D E LAGRAFF  
*Tech. Officer:* GRC/D ASHPIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2419 SYRACUSE UNIV 7207**  
 MEASUREMENT OF TURBULENT PRESSURE AND TEMPERATURE FLUC-  
 TUATIONS IN A GAS TURBINE COMBUSTOR  
 05/11/2000 - 09/30/2002 FY01: \$88,633 Total: \$158,710  
*Prin. Invest.:* D LAGRAFF  
*Tech. Officer:* GRC/D A POVINELLI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2427 SYRACUSE UNIV 7208**  
 RAPIDLY SHEARED BUBBLY SUSPENSIONS RAPIDLY SHEARED BUBBLY  
 SUSPENSIONS  
 05/24/2000 - 04/30/2005 FY01: \$66,500 Total: \$136,500  
*Prin. Invest.:* D SANGANI  
*Tech. Officer:* GRC/H K NAHRA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 6822**                      **SYRACUSE UNIV**                      **7209**  
 STUDIES OF REACTIONS ON INTERSTELLAR GRAIN ANALOGUES IN A  
 UV-RICH ENVIRONMENT  
 01/12/1998 - 12/31/2001      FY01: \$0                      Total: \$229,476  
*Prin. Invest.:* G VIDALI  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9093**                      **SYRACUSE UNIV**                      **7210**  
 ENERGETICS OF MOLECULAR HYDROGEN FORMATION  
 02/17/2000 - 01/31/2002      FY01: \$70,000              Total: \$135,940  
*Prin. Invest.:* G VIDALI  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11227**                      **SYRACUSE UNIV**                      **7211**  
 APPLY SENSE, ANALYZE, INTERPRET AND DECIDE (SAID) TO THE  
 DEVELOPMENT OF INTELLIGENT ALGORITHMS & SYS  
 08/13/2001 - 08/14/2003      FY01: \$997,800              Total: \$997,800  
*Prin. Invest.:* P K VARSHNEY  
*Tech. Officer:* GSFC/E J MASUOKA  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 3 00172**                      **SYRACUSE UNIV**                      **7212**  
 ENHANCED 3D VISCOUS INVERSE DESIGN CFD CODE  
 11/03/2000 - 09/30/2001      FY01: \$141,504              Total: \$141,504  
*Prin. Invest.:* N AVAILABLE  
*Tech. Officer:* GRC/C COLES-HAMILTON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 1 01004**                      **SYRACUSE UNIV**                      **7213**  
 AN ADVANCED INTERACTIVE DISCOVERY ENVIRONMENT FOR ENGI-  
 NEERING EDUCATION  
 02/07/2001 - 12/31/2003      FY01: \$998,000              Total: \$998,000  
*Prin. Invest.:* B D DAVIDSON, E D LIDDY  
*Tech. Officer:* LARC/R D BRAUN, LARC/K A CANNON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 1 52169**                      **SYRACUSE UNIV**                      **7214**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/07/1997 - 12/31/1999      FY01: -\$5,148              Total: \$44,352  
*Prin. Invest.:* M A KEGERISE, E F SPINA  
*Tech. Officer:* LARC/C B MCGINLEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1142**                      **UNIV OF ROCHESTER**                      **7215**  
 PROPOSAL FOR INFRARED SUBMILLIMETER, AND RADIO ASTRONOMY  
 07/22/1997 - 05/31/2002      FY01: \$0                      Total: \$1,479,766  
*Prin. Invest.:* W J FORREST, J L PIPHER  
*Tech. Officer:* ARC/C R MCCREIGHT, ARC/R E MCMURRAY  
*CASE Category:* 13 - PHYSICS

**NAG 2 1280**                      **UNIV OF ROCHESTER**                      **7216**  
 DEVELOPMENT OF DETECTOR ARRAYS FOR LOW-BACKGROUND SPACE  
 ASTRONOMY  
 01/12/1999 - 02/28/2002      FY01: \$65,000              Total: \$195,000  
*Prin. Invest.:* W J FORREST  
*Tech. Officer:* ARC/C R MCCREIGHT  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 2 1452**                      **UNIV OF ROCHESTER**                      **7217**  
 DEVELOPMENT OF OPTIMIZED 1K X 1K MULTIPLEXER FOR N GST  
 02/01/2001 - 12/31/2001      FY01: \$450,000              Total: \$450,000  
*Prin. Invest.:* W J FORREST  
*Tech. Officer:* ARC/C R MCCREIGHT, ARC/R E MCMURRAY, JR  
*CASE Category:* 11 - ASTRONOMY

**NAG 3 2348**                      **UNIV OF ROCHESTER**                      **7218**  
 LIQUID CRYSTAL POINT-DIFFRACTION INTERFEROMETER (L CPDI)  
 MATERIALS AND DEVICES FOR MICROGRAVITY FLUI  
 03/08/2000 - 11/30/2003      FY01: \$93,276              Total: \$131,776  
*Prin. Invest.:* K MARSHALL  
*Tech. Officer:* GRC/D GRIFFIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 4976**                      **UNIV OF ROCHESTER**                      **7219**  
 DEVELOPMENT OF GE:GA BLOCKED-IMPURITY-BAND DETECTOR  
 ASTRONOMY  
 07/10/1997 - 12/31/2000      FY01: \$0                      Total: \$305,000  
*Prin. Invest.:* D M WATSON  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6119**                      **UNIV OF ROCHESTER**                      **7220**  
 SUNSPOT DYNAMICS  
 08/08/1997 - 08/31/2001      FY01: \$0                      Total: \$173,100  
*Prin. Invest.:* D H THOMAS  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6267**                      **UNIV OF ROCHESTER**                      **7221**  
 DEVELOPMENT OF LOW DARK CURRENT, HIGH QUANTUM EFFICIENCY  
 PASSIVELY COOLED SPACE EXPERIMENTS  
 08/21/1997 - 06/30/2002      FY01: \$0                      Total: \$605,562  
*Prin. Invest.:* J L PIPHER  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8428**                      **UNIV OF ROCHESTER**                      **7222**  
 THE PHYSICS OF RADIATIVE MHD JETS: A NUMERICAL STUDY OF MAGNE-  
 TIZED YSO OUTFLOWS  
 06/02/1999 - 06/14/2002      FY01: \$174,780              Total: \$278,780  
*Prin. Invest.:* A FRANK  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8642**                      **UNIV OF ROCHESTER**                      **7223**  
 DEVELOPMENT OF 2 - 10 MICRON HGCDE ARRAYS FOR EXPERIMENTAL  
 MISSIONS AND SOFIA.  
 07/08/1999 - 06/30/2002      FY01: \$0                      Total: \$492,402  
*Prin. Invest.:* J L PIPHER  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9351**                      **UNIV OF ROCHESTER**                      **7224**  
 DEVELOPMENT OF EXTRINSIC GERMANIUM BLOCKED-IMPURITY-BAND  
 DETECTOR ARRAYS FOR FAR-INFRARED ASTRONOMY  
 03/30/2000 - 03/31/2001      FY01: \$0                      Total: \$298,000  
*Prin. Invest.:* D M WATSON  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 13 - PHYSICS

## NORTH CAROLINA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10429**                      **UNIV OF ROCHESTER**                      **7225**  
 NGST DETECTOR ARRAY TESTING AT THE UNIV OF ROCHESTER  
 02/22/2001 - 02/28/2002      FY01: \$183,000                      Total: \$183,000  
*Prin. Invest.:* D J FORREST  
*Tech. Officer:* GSFC/M GREENHOUSE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1382**                      **UNIV OF ROCHESTER**                      **7226**  
 EN VIVO HEMOPOIESIS IN 3-DIMENSIONAL HUMAN BONE MARROW  
 CULTURE UNDER SIMULATED MICROGRAVITY  
 07/09/1997 - 07/08/2001      FY01: \$0                      Total: \$519,000  
*Prin. Invest.:* D WU  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1360**                      **UNIV OF ROCHESTER**                      **7227**  
 CIRCADIAN RHYTHMS AND CONTROL OF HEMATOPOIESIS  
 07/27/2001 - 07/16/2005      FY01: \$79,000                      Total: \$79,000  
*Prin. Invest.:* J H WU  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 3 660**                      **UNIV OF ROCHESTER**                      **7228**  
 WAVEGUIDE COUPLING APPLIED TO AN INTEGRATED THIN FILM NOX  
 SENSOR  
 01/06/1999 - 09/24/2000      FY01: \$0                      Total: \$34,980  
*Prin. Invest.:* T G BROWN  
*Tech. Officer:* GRC/M L TUMA  
*CASE Category:* 13 - PHYSICS

**NGT 5 104**                      **UNIV OF ROCHESTER**                      **7229**  
 THE NUCLEATION OF REFRACTORY VAPORS & ITS IMPACT ON  
 ASTROPHYSICAL PROCESSES/STUDENT: DANIEL MARTINE  
 05/25/2000 - 08/31/2001      FY01: \$0                      Total: \$22,000  
*Prin. Invest.:* R H HEIST  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 43 - CHEMICAL ENGR

**NGT 5 50360**                      **UNIV OF ROCHESTER**                      **7230**  
 EXPERIMENTAL EFFORT FOR THE OBSERVATION OF MACROSCOPIC  
 QUANTUM COHERENCE IN AN RF - SQUID  
 05/25/2001 - 05/31/2002      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* M BOCKO  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NORTH CAROLINA

**NAG 1 01014**                      **DUKE UNIV**                      **7231**  
 IMPACT OF MODEL UNCERTAINTY ON SPATIAL COMPENSATION IN STRUC-  
 TURAL ACOUSTIC CONTROL  
 03/27/2001 - 12/31/2003      FY01: \$50,535                      Total: \$50,535  
*Prin. Invest.:* R L CLARK  
*Tech. Officer:* LARC/R H CABELL  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01062**                      **DUKE UNIV**                      **7232**  
 THE MECHANICS OF FLAPPING FLIGHT  
 04/11/2001 - 01/31/2004      FY01: \$35,723                      Total: \$35,723  
*Prin. Invest.:* K C HALL  
*Tech. Officer:* LARC/D E COX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1002**                      **DUKE UNIV**                      **7233**  
 EXPRESSION OF CONTRACTILE PROTEIN ISOFORMS IN MICROGRAVITY  
 08/25/1995 - 06/30/2000      FY01: \$0                      Total: \$165,646  
*Prin. Invest.:* P ANDERSON  
*Tech. Officer:* ARC/C M WINGET, ARC/G C JAHNS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1377**                      **DUKE UNIV**                      **7234**  
 EVOLUTION OF GENE REGULATORY SYSTEM: STRUCTURAL & FUNC-  
 TIONAL ANALYSES OF EVOLUTIONARY DIVERSIFICATION  
 08/19/1999 - 09/30/2002      FY01: \$121,565                      Total: \$316,458  
*Prin. Invest.:* G A WRAT  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1838**                      **DUKE UNIV**                      **7235**  
 DENSITY EQUILIBRATION IN FLUIDS NEAR THE LIQUID-VAPOR CRITICAL  
 POINT  
 04/22/1996 - 04/30/2002      FY01: \$0                      Total: \$350,000  
*Prin. Invest.:* H MEYER  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 1917**                      **DUKE UNIV**                      **7236**  
 DYNAMICS OF GRANULAR MATERIAL  
 07/15/1996 - 07/15/2000      FY01: -\$1                      Total: \$471,999  
*Prin. Invest.:* R BEHRINGER  
*Tech. Officer:* GRC/E NELSON  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2372**                      **DUKE UNIV**                      **7237**  
 GRAVITY AND GRANULAR MATERIALS GRAVITY AND GRANULAR  
 MATERIALS  
 04/07/2000 - 11/30/2003      FY01: \$103,550                      Total: \$168,650  
*Prin. Invest.:* R P BEHRINGER  
*Tech. Officer:* GRC/R A WILKINSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2627**                      **DUKE UNIV**                      **7238**  
 MODELING OF UNSTEADY THREE-DIMENSIONAL FLOWS IN MULTISTAGE  
 MACHINES  
 06/07/2001 - 04/02/2005      FY01: \$18,243                      Total: \$18,243  
*Prin. Invest.:* K C HALL  
*Tech. Officer:* GRC/A P KURKOV  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 3665**                      **DUKE UNIV**                      **7239**  
 A STUDY OF CARBON MONOXIDE USING TRACE CONSTITUENT DATA  
 ASSIMILATION: A NEW APPROACH IN GLOBAL ...  
 01/15/1997 - 12/31/2000      FY01: \$0                      Total: \$646,175  
*Prin. Invest.:* P KABIBHATLA  
*Tech. Officer:* GSFC/R ROOD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6988** **DUKE UNIV** **7240**  
 REPRESENTING KEY PHYTOPLANKTON GROUPS IN OCEAN CARBON  
 CYCLE MODELS  
 02/20/1998 - 02/14/2000 FY01: -\$7,564 Total: \$169,330  
*Prin. Invest.:* R T BARBER  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 8533** **DUKE UNIV** **7241**  
 TO WHAT EXTENT CAN INCREASED EVAPOTRANSPIRATION DUE TO  
 GROUNDWATER BASED IRRIGATION IN THE GREAT  
 07/02/1999 - 07/14/2002 FY01: \$103,346 Total: \$233,754  
*Prin. Invest.:* S ROJSTACZER  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9348** **DUKE UNIV** **7242**  
 PHYSICAL VARIABILITY, ECOSYSTEM RESPONSE & BIOGEOCHEMICAL  
 CONSEQUENCES IN THE PACIFIC OCEAN: UNDERS  
 03/29/2000 - 04/30/2002 FY01: \$184,477 Total: \$303,262  
*Prin. Invest.:* R T BARBER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9605** **DUKE UNIV** **7243**  
 CONTINUED DEVELOPMENT & APPLICATION OF DATA ASSIMILATION  
 TECHNIQUES FOR TROPOSPHERIC CHEMISTRY STUDI  
 05/31/2000 - 05/31/2002 FY01: \$210,144 Total: \$338,430  
*Prin. Invest.:* P KASIBHATLA  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10270** **DUKE UNIV** **7244**  
 MAGNETOSPHERIC, IONOSPHERIC, & ATMOSPHERIC EFFECT OF  
 INTENSE LIGHTNING-GENERATED ELECTROMAGNETIC  
 01/08/2001 - 01/14/2002 FY01: \$73,976 Total: \$73,976  
*Prin. Invest.:* S CUMMER  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1581** **DUKE UNIV** **7245**  
 R/S DIFFERENTIATION AND MAINTENANCE OF SKELETAL AND CARDIAC  
 MUSCLE IN SIMULATED GRAVITY  
 03/01/1999 - 11/30/2002 FY01: \$152,000 Total: \$400,000  
*Prin. Invest.:* W E KRAUS  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1715** **DUKE UNIV** **7246**  
 RESEARCH ENTITLED: DYNAMIC STRUCTURAL MODELING AND AND  
 TESTING OF THIN-FILM STRUCTURE.  
 03/23/2000 - 06/02/2003 FY01: \$62,028 Total: \$121,102  
*Prin. Invest.:* L N VIRGIN, K N SLADE  
*Tech. Officer:* MSFC/M TINKER, MSFC/L CURTIS  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1736** **DUKE UNIV** **7247**  
 AN INVESTIGATION OF THE GEOMETRICAL SCALING PROPERTIES FO  
 INFLATABLE STRUCTURES  
 09/06/2000 - 09/06/2001 FY01: \$0 Total: \$25,000  
*Prin. Invest.:* L N VIRGIN, K N SLADE  
*Tech. Officer:* MSFC/M L TINKER  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 8 1781** **DUKE UNIV** **7248**  
 QUANTUM COHERENCE IN ULTRACOLD FERMIONIC VAPORS  
 05/01/2001 - 04/30/2005 FY01: \$70,000 Total: \$70,000  
*Prin. Invest.:* J E THOMAS  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 5 233** **DUKE UNIV** **7249**  
 A GROUND-TRUTHING PROGRAM IN SUPPORT OF THE VEGETA MISSION.  
 09/03/1997 - 08/31/2000 FY01: \$0 Total: \$39,437  
*Prin. Invest.:* D L URBAN  
*Tech. Officer:* GSFC/R KNOX  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 9 83** **DUKE UNIV** **7250**  
 PREBREATHE REDUCTION PROTOCOL  
 03/11/1999 - 03/10/2003 FY01: \$150,000 Total: \$425,000  
*Prin. Invest.:* R VANN  
*Tech. Officer:* JSC/M GERNHARDT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 69** **DUKE UNIV** **7251**  
 A REGIONAL ASSESSMENT OF THE RATE AND DIRECTION OF CHANGE IN  
 SOIL ORGANIC CARBON POOLS DUE TO LAND  
 05/28/1998 - 09/14/2001 FY01: \$0 Total: \$62,100  
*Prin. Invest.:* B SCHLESINGER  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30105** **DUKE UNIV** **7252**  
 EFFECTS OF PLANT-SOIL INTERACTIONS ON CARBON STORAGE IN A  
 CHESAPEAKE BAY MARSH: DOES ELEVATED CO2  
 10/24/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* D REYNOLDS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30117** **DUKE UNIV** **7253**  
 THE EFFECTS OF WILDFIRE ON CARBON CYCLING IN SOILS OF INTERIOR  
 ALASKA ESSF RECIPIENT: KATHERINE O'NE  
 10/01/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* D RICHTER  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30355** **DUKE UNIV** **7254**  
 EFFECTS OF PRECIPITATION VARIABILITY & DESERTIFICATION ON WATER  
 DYNAMICS IN ARID LANDS: A PATCH & LA  
 08/24/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* J REYNOLDS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30379** **DUKE UNIV** **7255**  
 THE INFLUENCE OF IRRIGATION ON WARM SEASON PRECIPITATION IN THE GREWPLAINS/NATHAN J. MOORE  
 08/13/2001 - 08/31/2004 FY01: \$21,412 Total: \$21,412  
*Prin. Invest.:* S ROJSTACZER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30397** **DUKE UNIV** **7256**  
 MECHANISMS CONTROLLING THE RESPONSE OF DETRITIFICATION TO ANTHROPOGENIC NITROGEN DEPOSITION (STUDENT  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* W H SCHLESSINGER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50224** **DUKE UNIV** **7257**  
 VARYING EOLIAN DUST INPUTS AND SPATIOTEMPORAL PATTERNS OF CHANGE ON CARIBBEAN CORAL REEFS  
 09/29/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R T BARBER, M HAYES  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50266** **DUKE UNIV** **7258**  
 CYTOSKELETAL CONTRIBUTIONS TO CHANGES IN ELASTICITY OF MAMMALIAN MYOCYTES AFTER CYCLIC MECHANICAL  
 07/07/1999 - 06/30/2001 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* G TRUSKEY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52842** **DUKE UNIV** **7259**  
 GRADUATE STUDENT RESEARCH PROGRAM  
 07/30/1997 - 08/31/2000 FY01: -\$1,251 Total: \$64,749  
*Prin. Invest.:* L N VIRGIN  
*Tech. Officer:* MSFC/JDOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 2 6045** **EAST CAROLINA UNIV** **7260**  
 SC2000/SC2001 COMPUTATIONAL SCIENCE LEADERSHIP PROGRAM FOR HIGH SCHOOL TEACHERS  
 08/23/2000 - 07/31/2002 FY01: \$54,000 Total: \$108,000  
*Prin. Invest.:* J C HUSKAMP  
*Tech. Officer:* ARC/J P ZIEBARTH, ARC/M J LEON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 1 01027** **EAST CAROLINA UNIV** **7261**  
 THE LIVES, CAREERS, AND ENGINEERING ACCOMPLISHMENTS OF WILBUR AND ORVILLE WRIGHT  
 03/13/2001 - 12/31/2002 FY01: \$91,874 Total: \$91,874  
*Prin. Invest.:* L TISE  
*Tech. Officer:* LARC/S E MASSENBERG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1165** **EAST CAROLINA UNIV** **7262**  
 HYPERGRAVITY EFFECTS ON THE MATERNAL-FETAL SYSTEM  
 03/27/2000 - 03/14/2002 FY01: \$29,886 Total: \$58,902  
*Prin. Invest.:* H W BURDEN  
*Tech. Officer:* ARC/A E RONCA/E M HOLTON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 1 2229** **ELIZABETH CITY STATE UNIV** **7263**  
 A PILOT COMPUTER AIDED DESIGN AND MANUFACTURING CURRICULUM THAT PROMOTES ENGINEERING  
 09/15/1999 - 07/31/2001 FY01: \$75,001 Total: \$200,001  
*Prin. Invest.:* E LAWRENCE  
*Tech. Officer:* LARC/G D REESE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2150** **ELIZABETH CITY STATE UNIV** **7264**  
 CONTROLLING CHAOS IN JOSEPHSON JUNCTION CONTROLLING CHAOS IN JOSEPHSON JUNCTION  
 04/07/1998 - 05/31/2002 FY01: \$0 Total: \$244,272  
*Prin. Invest.:* D SENGUPTA, S K KANA, K D EDOH  
*Tech. Officer:* GRC/M ANDRO, GRC/E J PETRIK  
*CASE Category:* 21 - MATHEMATICS

**NAG 3 2556** **ELIZABETH CITY STATE UNIV** **7265**  
 AIR TRAFFIC ANALYSIS AIR TRAFFIC ANALYSIS  
 03/01/2001 - 02/28/2002 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* D PENDHARKAR  
*Tech. Officer:* GRC/D C ROBINSON  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 5 6814** **ELIZABETH CITY STATE UNIV** **7266**  
 DR. C.D. TURNAGE PRE-COLLEGE AWARDS FOR EXCELLENCE IN MATHEMATICS, SCIENCE, ENGINEERING AND TECHNOLOGY  
 01/05/1998 - 11/30/1999 FY01: \$0 Total: \$200,000  
*Prin. Invest.:* S SACHDEV  
*Tech. Officer:* GSFC/STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9371** **ELIZABETH CITY STATE UNIV** **7267**  
 MATHEMATICS OF THE GREAT DISMAL SWAMP  
 04/06/2000 - 03/31/2002 FY01: \$101,776 Total: \$203,776  
*Prin. Invest.:* L HAYDEN  
*Tech. Officer:* GSFC/B MEESON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9372** **ELIZABETH CITY STATE UNIV** **7268**  
 YOU BE THE SCIENTIST WITH SATELLITE IMAGERY IN EX/ EC COMMUNITIES  
 04/06/2000 - 03/31/2002 FY01: \$94,791 Total: \$189,791  
*Prin. Invest.:* L B HAYDEN  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 121** **ELIZABETH CITY STATE UNIV** **7269**  
 REGIONAL NETWORK RESOURCES AND TRAINING SITE AT ECSU  
 08/15/1995 - 08/14/2001 FY01: \$15,000 Total: \$2,639,000  
*Prin. Invest.:* L HAYDEN  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 533** **ELIZABETH CITY STATE UNIV** **7270**  
 ECSU - NRTS CONTINUATION/MUSPIN NRTS PROGRAM.  
 02/01/2001 - 01/31/2002 FY01: \$357,694 Total: \$357,694  
*Prin. Invest.:* L HAYDEN  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2227**                    **FAYETTEVILLE STATE UNIV**                    **7271**  
 TEACHING INTEGRATED MATHEMATICS AND SCIENCE WITH TECHNOLOGY  
 AND NASA RESOURCES: A PARTNERSHIP  
 08/23/1999 - 07/31/2001                    FY01: \$1                    Total: \$200,001  
*Prin. Invest.:* I EDWARDS  
*Tech. Officer:* LARC/S MASSENBERG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2072**                    **FAYETTEVILLE STATE UNIV**                    **7272**  
 GENERATING ELECTRONIC MATERIALS (GEM) FOR TEACHING /LEARNING  
 MATHEMATIC AND SCIENCE TEACHER TRAINING  
 07/28/1997 - 04/15/2000                    FY01: -\$2,603                    Total: \$79,394  
*Prin. Invest.:* L EDWARDS  
*Tech. Officer:* GRC/R F LAWRENCE  
*CASE Category:* 29 - MATH/COMPUTERSCI, OTHER

**NAG 5 9155**                    **FAYETTEVILLE STATE UNIV**                    **7273**  
 MATHEMATICS/SCIENCE EDUCATION CENTER PRECOLLEGE PROGRAM  
 03/03/2000 - 02/28/2002                    FY01: \$100,000                    Total: \$200,000  
*Prin. Invest.:* L EDWARDS  
*Tech. Officer:* GSFC/M STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2290**                    **JOHNSON C. SMITH UNIV**                    **7274**  
 OPTIMUM DESIGN OF PASSIVE MILLIMETER WAVE IMAGING WITH SUPER-  
 RAYLEIGH RESOLUTION OF APPLICATION TO  
 09/02/1999 - 08/31/2000                    FY01: \$0                    Total: \$55,000  
*Prin. Invest.:* M F ATTIA  
*Tech. Officer:* GRC/I M BLANKSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2300**                    **JOHNSON C. SMITH UNIV**                    **7275**  
 THE DEVELOPMENT OF A PASSIVE MILLIMETER WAVE IMAGING SYSTEM  
 WITH SUPER-RESOLUTION  
 11/16/1999 - 12/31/2002                    FY01: \$97,596                    Total: \$195,192  
*Prin. Invest.:* D E MILLER  
*Tech. Officer:* GRC/D M BLANKSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 1956**                    **NORTH CAROLINA A&T STATE UNIV**                    **7276**  
 APPROACHES TO DESIGN AND EVALUATION OF SANDWICH COMPOSITES  
 07/10/1997 - 10/31/2000                    FY01: \$1                    Total: \$177,001  
*Prin. Invest.:* K N SHIVAKUMAR, NONE  
*Tech. Officer:* LARC/D R AMBUR, LARC/C C POE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 2225**                    **NORTH CAROLINA A&T STATE UNIV**                    **7277**  
 ACCESS TO SPACE THROUGH RESEARCH AND EDUCATION MY 1/2  
 08/24/1999 - 12/31/2001                    FY01: \$75,000                    Total: \$200,000  
*Prin. Invest.:* F FERGUSON  
*Tech. Officer:* LARC/R S CALLOWAY, LARC/B K OUTLAW  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1413**                    **NORTH CAROLINA A&T STATE UNIV**                    **7278**  
 MOTION PLANNING IN A SOCIETY OF INTELLIGENT MOBILE AGENTS  
 07/05/2000 - 06/14/2002                    FY01: \$0                    Total: \$120,416  
*Prin. Invest.:* A C ESTERLINE  
*Tech. Officer:* ARC/M G SHATTO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1430**                    **NORTH CAROLINA A&T STATE UNIV**                    **7279**  
 COMBUSTION SENSORS: GAS TURBINE APPLICATIONS  
 08/16/2000 - 12/31/2001                    FY01: \$0                    Total: \$143,397  
*Prin. Invest.:* M HUMAN  
*Tech. Officer:* ARC/G ZILLIAC  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 2 1469**                    **NORTH CAROLINA A&T STATE UNIV**                    **7280**  
 EXAMINING THE PILOT & CONTROLLER PERFORMANCE DATA WHEN IN A  
 FREE FLIGHT WITH WEATHER PHENOMENON  
 04/12/2001 - 03/31/2002                    FY01: \$130,000                    Total: \$130,000  
*Prin. Invest.:* C NTUEN  
*Tech. Officer:* ARC/S LOZITO, ARC/R ASHFORD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 6028**                    **NORTH CAROLINA A&T STATE UNIV**                    **7281**  
 RONALD E. MCNAIR GRADUATE RESEARCH FELLOWSHIP PROGRAM  
 02/22/1999 - 02/14/2002                    FY01: \$323,500                    Total: \$970,500  
*Prin. Invest.:* R M SALAMI, L SHARPE  
*Tech. Officer:* ARC/B COLLINS, ARC/M L MARLAIRE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2165**                    **NORTH CAROLINA A&T STATE UNIV**                    **7282**  
 DEVELOPMENT OF A STRUCTURAL DAMAGE DIAGNOSTIC AND  
 MONITORING SYSTEM FOR ROCKETENGINES PHASE I: DAMA  
 06/11/1998 - 10/31/2000                    FY01: \$0                    Total: \$90,000  
*Prin. Invest.:* Y ELLEN, L SHARPE  
*Tech. Officer:* GRC/D F NOGA, GRC/A L JANKOVSKY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2584**                    **NORTH CAROLINA A&T STATE UNIV**                    **7283**  
 ADVANCED CROSS ENTERPRISE TECHNOLOGY  
 04/05/2001 - 03/11/2004                    FY01: \$539,870                    Total: \$539,870  
*Prin. Invest.:* D DOGAN  
*Tech. Officer:* GRC/G FUJIKAWA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2650**                    **NORTH CAROLINA A&T STATE UNIV**                    **7284**  
 CARBON FIBER REINFORCED CERAMIC COMPOSITES FOR PRO PULSION  
 APPLICATION  
 09/21/2001 - 02/28/2002                    FY01: \$5,000                    Total: \$5,000  
*Prin. Invest.:* D N SHIVAKUMAR  
*Tech. Officer:* GRC/M R FREEDMAN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 4 118**                    **NORTH CAROLINA A&T STATE UNIV**                    **7285**  
 MULTIDISCIPLINARY MODELING & SIMULATION OF AEROSPACE VEHICLE  
 SYSTEMS  
 03/27/1997 - 03/30/2001                    FY01: -\$209                    Total: \$99,789  
*Prin. Invest.:* M HUMAN  
*Tech. Officer:* DFRC/K K GUPTA, DFRC/L S VOELKER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 131**                    **NORTH CAROLINA A&T STATE UNIV**                    **7286**  
 ARTIFICIAL POTENTIAL FIELD BASED MOTION PLANNING/ NAVIGATION IN 2  
 & 3 DIMENSIONAL DYNAMIC ENVIRON.  
 06/06/1997 - 05/31/2001                    FY01: \$0                    Total: \$354,016  
*Prin. Invest.:* A V HOMAIFAR  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

## NORTH CAROLINA

## NASA'S UNIVERSITY PROGRAM

**NAG 4 132 NORTH CAROLINA A&T STATE UNIV 7287**  
 HYBRID MOTION PLANNING WITH MULTIPLE DESTINATIONS NEW AWARD  
 06/10/1997 - 06/30/2000 FY01: -\$3,541 Total: \$269,753  
*Prin. Invest.:* J CLOUSE, NONE  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 152 NORTH CAROLINA A&T STATE UNIV 7288**  
 INVESTIGATION OF AERO SERVO STRUCTURAL INTERACTIO IN AERO-  
 SPACE APPLICATIONS  
 03/23/1998 - 03/18/2002 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* S CHANDRA  
*Tech. Officer:* DFRC/J BRADEN, DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 211 NORTH CAROLINA A&T STATE UNIV 7289**  
 DEVELOPMENT AND EVALUATION OF FAULT-TOLERANT FLIGH T CONTROL  
 SYSTEMS  
 06/26/2000 - 06/14/2003 FY01: \$100,000 Total: \$200,000  
*Prin. Invest.:* D D SONG  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 4102 NORTH CAROLINA A&T STATE UNIV 7290**  
 FORMAL FOUNDATIONS OF AGENTS  
 03/31/1997 - 11/30/1999 FY01: \$0 Total: \$295,567  
*Prin. Invest.:* A ESTERLINE  
*Tech. Officer:* GSFC/W TRUSZKOWSKI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 7158 NORTH CAROLINA A&T STATE UNIV 7291**  
 SELF-TIMED SYNCHRONOUS DIGITAL SYSTEM DESIGN  
 03/11/1998 - 05/14/2002 FY01: \$100,000 Total: \$299,028  
*Prin. Invest.:* A WALKER  
*Tech. Officer:* GSFC/P CORONADO  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 9170 NORTH CAROLINA A&T STATE UNIV 7292**  
 NATIONAL CONFERENCE OF BLACK PHYSICS STUDENTS  
 03/06/2000 - 03/14/2001 FY01: \$0 Total: \$77,708  
*Prin. Invest.:* E WILLIAMS  
*Tech. Officer:* GSFC/J A JACKSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 9419 NORTH CAROLINA A&T STATE UNIV 7293**  
 LOW-POWER RF SOI-CMOS TECHNOLOGY FOR DISTRIBUTED SENSOR  
 NETWORKS  
 04/11/2000 - 08/30/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* N DOGAN  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1142 NORTH CAROLINA A&T STATE UNIV 7294**  
 ROCKET ENGINE STUDY  
 05/15/1995 - 12/31/2000 FY01: \$0 Total: \$69,729  
*Prin. Invest.:* K JONES  
*Tech. Officer:* MSFC/J RUF  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1247 NORTH CAROLINA A&T STATE UNIV 7295**  
 DEVELOPMENT & TESTING OF A VIBROMETRY TECHNIQUE FOR HEALTH  
 MONITORING OF COMPOSITE MATERIAL STRUCT  
 10/31/1996 - 10/31/1999 FY01: -\$8,247 Total: \$276,260  
*Prin. Invest.:* D J SCHULZ  
*Tech. Officer:* MSFC/C WILKERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1646 NORTH CAROLINA A&T STATE UNIV 7296**  
 STRUCTURAL HEALTH MONITORING OF AEROSPACE VEHICLES  
 09/30/1999 - 09/30/2001 FY01: \$80,000 Total: \$200,000  
*Prin. Invest.:* N  
*Tech. Officer:* MSFC/A BEAM, MSFC/W LOVE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1707 NORTH CAROLINA A&T STATE UNIV 7297**  
 ALLIANCE FOR LEARNING AND VISION FOR UNDER- REPRESENTED AMER-  
 ICANS PROGRAM (ALVA)  
 01/31/2000 - 01/20/2001 FY01: \$0 Total: \$47,025  
*Prin. Invest.:* E CHEEK  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 973 NORTH CAROLINA A&T STATE UNIV 7298**  
 INTELLIGENT AGENTS-BASED SCHEDULING  
 09/25/1997 - 09/30/2000 FY01: -\$15,499 Total: \$117,448  
*Prin. Invest.:* B RAM  
*Tech. Officer:* JSC/J D ERICK SUN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 201 NORTH CAROLINA A&T STATE UNIV 7299**  
 CLEANING OF CONTAMINATED SUBSTRATES  
 10/23/1996 - 12/22/2000 FY01: -\$31,054 Total: \$253,029  
*Prin. Invest.:* G WHITE  
*Tech. Officer:* KSC/G ALLEN  
*CASE Category:* 43 - CHEMICAL ENGR

**NAS 3 01197 NORTH CAROLINA A&T STATE UNIV 7300**  
 8CM, AND 30CM CARBON-CARBON GRIDS, USING INNOVATIV E MANUFAC-  
 TURING PROCESS  
 08/14/2001 - 05/28/2004 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* K SHIVAKUMAR  
*Tech. Officer:* GRC/T HAAG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAS 3 96055 NORTH CAROLINA A&T STATE UNIV 7301**  
 NEW MECHANISTIC CONSTITUTIVE MODEL FOR HIGH TEMPER ATURE  
 CMCS UNDER MONOTONIC CYCLIC LOADING  
 11/05/1996 - 09/30/1999 FY01: \$0 Total: \$120,000  
*Prin. Invest.:* J SANKAR, A D KELKAR  
*Tech. Officer:* GRC/R BHATT, GRC/E HANES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 1 255 NORTH CAROLINA A&T STATE UNIV 7302**  
 THE CENTER FOR AEROSPACE RESEARCH: A NASA CENTER OF EXCEL-  
 LENCE  
 05/13/1997 - 12/31/2001 FY01: \$1,200,000 Total: \$4,900,000  
*Prin. Invest.:* E O DOSE  
*Tech. Officer:* LARC/W WHIGGLOW, JR.  
*CASE Category:* 41 - AERONAUTICAL ENGR



**NCC 1 01058**      **NORTH CAROLINA A&T STATE UNIV**      **7303**  
 INTEGRATION OF NASA RESEARCH IN UNDERGRADUATE EDUCATION IN MATHEMATICS, SCIENCE, ENGINEERING & TECHNOLOGY  
 08/24/2001 - 06/30/2003      FY01: \$701,721      Total: \$701,721  
*Prin. Invest.:* J D MONROE  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 576**      **NORTH CAROLINA A&T STATE UNIV**      **7304**  
 AEROTHERMO STRUCTURAL ANALYSIS OF LOW COST COMPOSITE NOZZLE/INLET COMPONENTS  
 09/19/1997 - 08/15/2000      FY01: \$0      Total: \$499,494  
*Prin. Invest.:* K N SHIVAKUMAR, D SREE  
*Tech. Officer:* GRC/D R REDDY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 4 105**      **NORTH CAROLINA A&T STATE UNIV**      **7305**  
 ON THE PREVIEWED CONTROL ACTION FOR AIRCRAFT FLYING QUALITIES  
 07/25/1996 - 03/30/2001      FY01: -\$6,977      Total: \$93,023  
*Prin. Invest.:* D HOMAIFAR  
*Tech. Officer:* DFRC/R K BOGUE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 349**      **NORTH CAROLINA A&T STATE UNIV**      **7306**  
 INTEGRATION OF NASA RESEARCH INTO UNDERGRADUATE EDUCATION IN MATHEMATICS, SCIENCE, ENGINEERING AND TECHNOLOGY  
 06/29/1998 - 06/30/2003      FY01: \$0      Total: \$1,500,000  
*Prin. Invest.:* J D MONROE  
*Tech. Officer:* GSFC/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 52178**      **NORTH CAROLINA A&T STATE UNIV**      **7307**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 09/12/1997 - 09/11/2000      FY01: -\$2,382      Total: \$63,618  
*Prin. Invest.:* F VAINSTEIN, R P WILSON  
*Tech. Officer:* LARC/S E WOODARD, LARC/J N JUANG  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NGT 4 52409**      **NORTH CAROLINA A&T STATE UNIV**      **7308**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/04/1999 - 10/31/2001      FY01: \$0      Total: \$44,000  
*Prin. Invest.:* S CHANDRA, S WYLIE  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 1981**      **NORTH CAROLINA STATE UNIV. - RALEIGH**      **7309**  
 CRACK TURNING MECHANICS OF COMPOSITE WING SKIN PANELS  
 12/17/1997 - 04/30/2001      FY01: \$20,939      Total: \$323,824  
*Prin. Invest.:* F G YUAN  
*Tech. Officer:* LARC/C C POE, LARC/I S RAJU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2216**      **NORTH CAROLINA STATE UNIV. - RALEIGH**      **7310**  
 ALGORITHMIC ENHANCEMENTS FOR THE VULCAN NAVIER-STOKES SOLVER  
 08/09/1999 - 06/30/2002      FY01: \$15,001      Total: \$50,001  
*Prin. Invest.:* J R EDWARDS  
*Tech. Officer:* LARC/J A WHITE, LARC/J P DRUMMOND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2222**      **NORTH CAROLINA STATE UNIV. - RALEIGH**      **7311**  
 AN INVESTIGATION OF TERMINAL GUIDANCE & CONTROL TECHNIQUES FOR A ROBOTIC MARS LANDER  
 08/06/1999 - 05/15/2001      FY01: \$0      Total: \$62,356  
*Prin. Invest.:* G O WALBERG, B K BIRGE  
*Tech. Officer:* LARC/E M QUEEN, LARC/R W POWELL  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 2287**      **NORTH CAROLINA STATE UNIV. - RALEIGH**      **7312**  
 MODEL DEVELOPMENT FOR HIGH PERFORMANCE PIEZOCERAMIC-BASED ACTUATORS  
 03/30/2000 - 04/30/2001      FY01: -\$231      Total: \$27,769  
*Prin. Invest.:* R C SMITH  
*Tech. Officer:* LARC/J S HARRISON/R G BRYANT  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 01002**      **NORTH CAROLINA STATE UNIV. - RALEIGH**      **7313**  
 LEVELS OF AUTOMATION IN THE COMMERCIAL AIRCRAFT COCKPIT AND PILOT SITUATION AWARENESS  
 12/06/2000 - 12/31/2001      FY01: \$63,462      Total: \$63,462  
*Prin. Invest.:* D B KABER  
*Tech. Officer:* LARC/A C TRUJILLO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01039**      **NORTH CAROLINA STATE UNIV. - RALEIGH**      **7314**  
 HUMAN RESPONSE ADAPTIVE AUTOMATIC EARLY SENSOR/INFO ACQ FUNC & LATER STGS OF INFO PROCESSING IN SYS OPS  
 04/19/2001 - 12/31/2001      FY01: \$39,971      Total: \$39,971  
*Prin. Invest.:* D KABER  
*Tech. Officer:* LARC/L J PRINZEL  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 1 01041**      **NORTH CAROLINA STATE UNIV. - RALEIGH**      **7315**  
 MODEL DEVELOPMENT FOR HIGH PERFORMANCE PIEZOCERAMIC-BASED ACTUATORS  
 03/22/2001 - 02/28/2002      FY01: \$33,886      Total: \$33,886  
*Prin. Invest.:* R C SMITH  
*Tech. Officer:* LARC/J S HARRISON  
*CASE Category:* 21 - MATHEMATICS

**NAG 1 01064**      **NORTH CAROLINA STATE UNIV. - RALEIGH**      **7316**  
 ACTIVE SHIELDING & CONTROL OF ENVIRONMENTAL NOISE  
 04/19/2001 - 12/31/2001      FY01: \$10,009      Total: \$10,009  
*Prin. Invest.:* S C TSYNKOV  
*Tech. Officer:* LARC/C L STREETT, LARC/H L ATKINS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01069**      **NORTH CAROLINA STATE UNIV. - RALEIGH**      **7317**  
 UNINHABITED AERIAL VEHICLES (UAV) FLIGHT CONTROL USING DISTRIBUTED ACTUATION & SENSING  
 05/18/2001 - 09/30/2003      FY01: \$43,308      Total: \$43,308  
*Prin. Invest.:* N E CHOKANI, C E HALL  
*Tech. Officer:* LARC/D L RANEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01103**      **NORTH CAROLINA STATE UNIV. - RALEIGH**      **7318**  
 MULTISCALE MODELING OF NANOCOMPOSITES  
 06/19/2001 - 06/30/2002      FY01: \$19,993      Total: \$19,993  
*Prin. Invest.:* F G YUAN  
*Tech. Officer:* LARC/E H GLASSGEN, LARC/E SAETHER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

## NORTH CAROLINA

## NASA'S UNIVERSITY PROGRAM

**NAG 1 01111 NORTH CAROLINA STATE UNIV. - RALEIGH 7319**  
 A COMPUTATIONAL INTELLIGENT (CI) APPROACH TO THE PRECISION  
 MARS LANDER PROBLEM  
 08/09/2001 - 05/15/2002 FY01: \$35,413 Total: \$35,413  
*Prin. Invest.:* G D WALBERG  
*Tech. Officer:* LARC/E M QUEEN, LARC/R W POWELL  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 01119 NORTH CAROLINA STATE UNIV. - RALEIGH 7320**  
 POST-STALL FLIGHT UNSTEADY AERODYNAMIC STUDY AND GAIN-SCHED-  
 ULED CONTROLLER DESIGN  
 08/16/2001 - 08/31/2004 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* F WU  
*Tech. Officer:* LARC/P C MURPHY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01128 NORTH CAROLINA STATE UNIV. - RALEIGH 7321**  
 ENHANCEMENT OF BUCKLING LOAD WITH THE USE OF ACTIVE MATERIALS  
 09/27/2001 - 05/31/2002 FY01: \$26,106 Total: \$26,106  
*Prin. Invest.:* F G YUAN  
*Tech. Officer:* LARC/D R AMBER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 2 1119 NORTH CAROLINA STATE UNIV. - RALEIGH 7322**  
 COMPUTATIONAL STUDY OF NANOMETER-SCALE DEVICE OPER ATION &  
 ENGINEERING  
 02/20/1997 - 09/30/2000 FY01: -\$4,777 Total: \$249,135  
*Prin. Invest.:* D W BRENNER, C K HALL  
*Tech. Officer:* ARC/C ' LEVIT, ARC/D A BAILEY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1281 NORTH CAROLINA STATE UNIV. - RALEIGH 7323**  
 VISUAL FACTORS AFFECTING PILOT'S JUDGEMENTS OF TRA JECTORY-  
 TO-TOUCHDOWN DURING EMERGENCY LANDINGS  
 01/11/1999 - 12/31/2001 FY01: \$0 Total: \$185,999  
*Prin. Invest.:* D H MERSHON, C M MAYER  
*Tech. Officer:* ARC/I BARSHI  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 2 1502 NORTH CAROLINA STATE UNIV. - RALEIGH 7324**  
 PHOSPHOINOSITIDE SIGNALING AND PLANT GRAVITROPISM: A TRANS-  
 GENIC APPROACH  
 07/16/2001 - 07/14/2002 FY01: \$47,006 Total: \$47,006  
*Prin. Invest.:* I Y PERERA  
*Tech. Officer:* ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 3743 NORTH CAROLINA STATE UNIV. - RALEIGH 7325**  
 NASA SPECIALIZED CENTER OF RESEARCH AND TRAINING I BIOLOGY  
 03/19/1997 - 03/14/2002 FY01: \$526,237 Total: \$4,028,631  
*Prin. Invest.:* E DAVIES  
*Tech. Officer:* GSFC/D P LISKOWSKY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 6520 NORTH CAROLINA STATE UNIV. - RALEIGH 7326**  
 SEAWIFS DATA COLLECTION, CALIBRATION AND PROCESSIN G FOR THE  
 INDIAN OCEAN  
 02/12/1998 - 01/31/2001 FY01: \$0 Total: \$102,105  
*Prin. Invest.:* J MORRISON  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6586 NORTH CAROLINA STATE UNIV. - RALEIGH 7327**  
 REFINING REMOTE SENSING ESTIMATES OF NUTRIENT CONC ENTRA-  
 TIONS BASED ON TEMPERATURE  
 11/07/1997 - 04/30/2002 FY01: \$0 Total: \$189,527  
*Prin. Invest.:* D KAMYKOWSKI  
*Tech. Officer:* GSFC/J A MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 7153 NORTH CAROLINA STATE UNIV. - RALEIGH 7328**  
 X-RAY EMISSION AND DYNAMICS OF SUPERNOVA REMNANTS - ATP  
 03/31/1998 - 03/14/2002 FY01: \$0 Total: \$382,170  
*Prin. Invest.:* S P REYNOLDS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7406 NORTH CAROLINA STATE UNIV. - RALEIGH 7329**  
 DUST DESTRUCTION IN SUPERNOVA REMNANTS - ASCA PROP OSAL  
 05/28/1998 - 11/30/1999 FY01: -\$2,827 Total: \$7,672  
*Prin. Invest.:* K BORKOWSKI  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7942 NORTH CAROLINA STATE UNIV. - RALEIGH 7330**  
 A GENERIC DESIGN METHODOLOGY FOR DEVELOPMENT OF HI GH  
 PERFORMANCE REMOTE SENSING SCIENCE DATA PROCES  
 01/27/1999 - 01/31/2000 FY01: -\$1,547 Total: \$48,453  
*Prin. Invest.:* C GLOSTER, JR.  
*Tech. Officer:* GSFC/P S GHUMAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8215 NORTH CAROLINA STATE UNIV. - RALEIGH 7331**  
 EDUCATIONAL OUTREACH FOR RESEARCH "PRODUCTION OF ENERGETIC  
 PARTICLES AT HELIOSPHERIC SHOCKS". THIS  
 03/04/1999 - 10/31/2000 FY01: \$0 Total: \$9,975  
*Prin. Invest.:* D C ELLISON  
*Tech. Officer:* GSFC/J M GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 8865 NORTH CAROLINA STATE UNIV. - RALEIGH 7332**  
 SEAWIFS DATA COLLECTION, CALIBRATION & PROCESSING FOR THE  
 INDIAN OCEAN  
 12/06/1999 - 01/31/2002 FY01: \$100,859 Total: \$165,884  
*Prin. Invest.:* J MORRISON  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9490 NORTH CAROLINA STATE UNIV. - RALEIGH 7333**  
 SOFTWARE PACKAGE FOR ANALYSIS OF THERMAL X-RAY SPECTRA OF  
 SUPERNOVA REMNANTS  
 04/17/2000 - 10/14/2001 FY01: \$0 Total: \$87,400  
*Prin. Invest.:* K J BORKOWSKI  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10940 NORTH CAROLINA STATE UNIV. - RALEIGH 7334**  
 X-RAY EMISSION AND DYNAMICS OF SUPERNOVA REMNANTS (ATP 2000)  
 05/15/2001 - 05/14/2002 FY01: \$140,000 Total: \$140,000  
*Prin. Invest.:* S P REYNOLDS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

## NORTH CAROLINA

**NAG 8 1479 NORTH CAROLINA STATE UNIV. - RALEIGH 7335**  
 R/S GROWTH AND PROPERTIES OF CARBON  
 03/19/1998 - 01/31/2002 FY01: \$95,000 Total: \$358,333  
*Prin. Invest.:* J BERNHOLC  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1686 NORTH CAROLINA STATE UNIV. - RALEIGH 7336**  
 OPTICAL CHARACTERIZATION OF GAS PHASE CHEMISTRY AND SURFACE  
 CHEMISTRY DURING HIGH PRESSURE PROCESS  
 05/09/2000 - 12/31/2003 FY01: \$114,000 Total: \$164,000  
*Prin. Invest.:* N DIETZ  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1817 NORTH CAROLINA STATE UNIV. - RALEIGH 7337**  
 MODELS OF MASS TRANSPORT DURING MICROGRAVITY CRYSTAL  
 GROWTH OF ALLOYED SEMICONDUCTORS  
 07/10/2001 - 11/30/2003 FY01: \$36,000 Total: \$36,000  
*Prin. Invest.:* N MA  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1087 NORTH CAROLINA STATE UNIV. - RALEIGH 7338**  
 INTEGRATED PRESSURE BLADDER-RESTRAINT STRUCTURE FOR  
 ADVANCED EXTRAVEHICULAR MOBILITY UNIT  
 02/12/1999 - 02/11/2002 FY01: \$0 Total: \$81,144  
*Prin. Invest.:* M H MOHAMAD  
*Tech. Officer:* JSC/C H LIN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG10 308 NORTH CAROLINA STATE UNIV. - RALEIGH 7339**  
 CAPTURING SELECTED LECTURES FROM THE COURSE "SPACE BIOLOGY"  
 IN DIGITAL FORMAT: PHASE I  
 09/24/2001 - 09/16/2002 FY01: \$38,338 Total: \$38,338  
*Prin. Invest.:* D S BROWN  
*Prin. Invest.:* NONE  
*Tech. Officer:* KSC/J LETCHWORTH  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAS 1 01082 NORTH CAROLINA STATE UNIV. - RALEIGH 7340**  
 HEALTH MONITORING OF RLV AIRFRAME STRUCTURES  
 05/30/2001 - 03/31/2002 FY01: \$219,597 Total: \$219,597  
*Prin. Invest.:* F G YUAN, K PETERS  
*Tech. Officer:* LARC/P H JOHNSTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 1 18944 NORTH CAROLINA STATE UNIV. - RALEIGH 7341**  
 SAGE III SCIENCE INVESTIGATION SUPPORT; P.I. PROFESSOR SAXENA  
 10/06/1989 - 01/31/2005 FY01: \$146,300 Total: \$613,937  
*Prin. Invest.:* V SAXENA  
*Tech. Officer:* LARC/G MADDREA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 1 99097 NORTH CAROLINA STATE UNIV. - RALEIGH 7342**  
 ENHANCEMENT OF TAPPS FOR AVOSS DEMONSTRATION  
 06/03/1999 - 12/01/2000 FY01: \$0 Total: \$302,000  
*Prin. Invest.:* Y L LIN, M L KAPLAN  
*Tech. Officer:* LARC/F H PROCTOR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 335 NORTH CAROLINA STATE UNIV. - RALEIGH 7343**  
 DETAILED MEASUREMENTS IN CAVITY SHEAR LAYER WITH OSCILLATORY  
 BLOWING CONTROL  
 04/09/1999 - 05/31/2000 FY01: -\$1,016 Total: \$27,307  
*Prin. Invest.:* N CHOKANI  
*Tech. Officer:* LARC/R D JOSLIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 407 NORTH CAROLINA STATE UNIV. - RALEIGH 7344**  
 RESEARCH ON STREAMLINES AND AERODYNAMIC HEATING FOR  
 UNSTRUCTURED GRIDS ON HIGH SPEED VEHICLES  
 08/28/2000 - 06/30/2001 FY01: \$0 Total: \$24,675  
*Prin. Invest.:* F R DEJARNETTE  
*Tech. Officer:* LARC/H H HAMILTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 01008 NORTH CAROLINA STATE UNIV. - RALEIGH 7345**  
 UAV (UNINHABITED AERIAL VEHICLE) FLIGHT TESTING 4 ADVANCED  
 TECHNOLOGY CONCEPTS  
 11/28/2000 - 11/30/2003 FY01: \$54,917 Total: \$54,917  
*Prin. Invest.:* N CHOKANI, S N NIHEINZEN, C E HALL  
*Tech. Officer:* LARC/J B ANDERS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 8 95 NORTH CAROLINA STATE UNIV. - RALEIGH 7346**  
 FUNDAMENTAL ASPECTS OF VAPOR DEPOSITION AND ETCHING UNDER  
 DIFFUSION CONTROLLED TRANSPORT  
 05/31/1996 - 08/31/2000 FY01: \$0 Total: \$691,133  
*Prin. Invest.:* K J BACHMANN  
*Tech. Officer:* MSFC/S SPEARMAN, MSFC/J GRISHAM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 159 NORTH CAROLINA STATE UNIV. - RALEIGH 7347**  
 APPLICATION OF REMOTE SENSING TECHNOLOGIES IN THE FOREST  
 SECTOR  
 10/28/1998 - 10/27/2003 FY01: \$0 Total: \$120,000  
*Prin. Invest.:* R ABT  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 1 01004 NORTH CAROLINA STATE UNIV. - RALEIGH 7348**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 05/16/2001 - 06/30/2004 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* D KABER  
*Tech. Officer:* LARC/L J PRINZEL, III  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NGT 1 01007 NORTH CAROLINA STATE UNIV. - RALEIGH 7349**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/04/2001 - 06/30/2004 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* L SILVERBERG  
*Tech. Officer:* LARC/D E COX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 01032 NORTH CAROLINA STATE UNIV. - RALEIGH 7350**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/22/2001 - 06/30/2003 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* H T BANKS  
*Tech. Officer:* LARC/W P WINIFREE  
*CASE Category:* 21 - MATHEMATICS

## NORTH CAROLINA

## NASA'S UNIVERSITY PROGRAM

**NGT 1 52172 NORTH CAROLINA STATE UNIV. - RALEIGH 7351**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/30/1997 - 06/30/2000 FY01: -\$4,449 Total: \$61,552  
*Prin. Invest.:* F R DE JARNETTE, K E HARWELL  
*Tech. Officer:* LARC/H H HAMILTON, LARC/E V ZOBY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52183 NORTH CAROLINA STATE UNIV. - RALEIGH 7352**  
 GRADUATE STUDENTS RESEARCHERS PROGRAM (GSRP)  
 08/31/1998 - 06/30/2000 FY01: -\$582 Total: \$43,418  
*Prin. Invest.:* M SMITH  
*Tech. Officer:* LARC/B E ANDERSON, LARC/V S CONNORS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 1 52196 NORTH CAROLINA STATE UNIV. - RALEIGH 7353**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/22/1998 - 06/30/2001 FY01: \$12,000 Total: \$66,001  
*Prin. Invest.:* M L JOYNER, H T BANKS  
*Tech. Officer:* LARC/W P WINFREE, LARC/R A WINCHESKI  
*CASE Category:* 21 - MATHEMATICS

**NGT 1 52242 NORTH CAROLINA STATE UNIV. - RALEIGH 7354**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/22/2000 - 06/30/2001 FY01: \$12,001 Total: \$22,001  
*Prin. Invest.:* G P  
*Tech. Officer:* LARC/W P WINFREE  
*CASE Category:* 21 - MATHEMATICS

**NGT 5 65 NORTH CAROLINA STATE UNIV. - RALEIGH 7355**  
 GSRP TRAINING GRANT - KRISTY DYER - THERMAL AND NO N-THERMAL  
 PHYSICS OF OUNGSUPERNOVA REMNANTS  
 05/27/1998 - 08/14/2002 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* S O REYNOLDS  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 30054 NORTH CAROLINA STATE UNIV. - RALEIGH 7356**  
 CONSTRAINING CARBON MONOXIDE SOURCES BY MODELING ITS STABLE  
 ISOTOPES  
 10/24/1997 - 08/31/2002 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* D REICHL  
*Tech. Officer:* GSFC/A GHASSEM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30192 NORTH CAROLINA STATE UNIV. - RALEIGH 7357**  
 WATER, HEAT AND SALT BUDGET IN THE NORTHERN INDIAN OCEAN/STU-  
 DENT: WEI SHI  
 08/19/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* J M MORRISON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40011 NORTH CAROLINA STATE UNIV. - RALEIGH 7358**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 01/30/1997 - 02/28/2002 FY01: -\$48,709 Total: \$928,341  
*Prin. Invest.:* F R DEJARNETTE  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40109 NORTH CAROLINA STATE UNIV. - RALEIGH 7359**  
 NORTH CAROLINA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/02/2001 - 02/28/2002 FY01: \$304,959 Total: \$304,959  
*Prin. Invest.:* F R DEJARNETTE  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01126 SHAW UNIV 7360**  
 SCIENTISTS PLUS ALLIES CONTRIBUTING TO EDUCATION (SPACE)  
 09/25/2001 - 08/31/2002 FY01: \$99,364 Total: \$99,364  
*Prin. Invest.:* P PIERCE RAMSEY  
*Tech. Officer:* LARC/R HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9195 SHAW UNIV 7361**  
 SHAW UNIV MSET PRE-COLLEGE EXPERIENCE  
 03/10/2000 - 02/28/2002 FY01: \$88,107 Total: \$181,917  
*Prin. Invest.:* K SATAGOPAN  
*Tech. Officer:* GSFC/M STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2301 UNIV OF NORTH CAROLINA - CHAPEL HILL 7362**  
 CHEMICAL MODIFICATION OF NANOTUBES FOR COMPOSITES  
 06/08/2000 - 05/31/2003 FY01: \$102,529 Total: \$152,865  
*Prin. Invest.:* E T SAMULSKI  
*Tech. Officer:* LARC/E J SIOCHI  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 01061 UNIV OF NORTH CAROLINA - CHAPEL HILL 7363**  
 SCIENCE AND TECHNOLOGY OF NEW CARBON NANOTUBE- BASED  
 COMPOSITES  
 04/17/2001 - 01/31/2004 FY01: \$382,970 Total: \$382,970  
*Prin. Invest.:* O  
*Tech. Officer:* LARC/J SMITH, JR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1188 UNIV OF NORTH CAROLINA - CHAPEL HILL 7364**  
 BONE MATRIX CHANGES DURING SKELETAL UNLOADING & RE LOADING  
 08/15/2000 - 04/30/2002 FY01: \$0 Total: \$509,761  
*Prin. Invest.:* M YAMAUCHI, W J GRZESKI  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 3100 UNIV OF NORTH CAROLINA - CHAPEL HILL 7365**  
 RADIATIVE PHYSICS OF THE SOFT GAMMA REPEATERS  
 10/11/1995 - 01/14/2001 FY01: \$0 Total: \$99,000  
*Prin. Invest.:* C EVANS  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 6278 UNIV OF NORTH CAROLINA - CHAPEL HILL 7366**  
 GREENHOUSE GAS (N2O, CH4) EXCHANGE AND N CYCLING D FERTILIZED  
 (FACE) TEMPERATE FOREST  
 09/12/1997 - 08/31/2001 FY01: \$26,177 Total: \$254,765  
*Prin. Invest.:* S C WHALEN  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8924 UNIV OF NORTH CAROLINA - CHAPEL HILL 7367**  
 LABORATORY STUDIES OF THE OPTICAL CONSTANTS & MICROPHYSICAL  
 PROPERTIES OF STRATOSPHERIC & UPPER TROPOSPHERIC  
 01/06/2000 - 12/31/2001 FY01: \$90,000 Total: \$203,536  
*Prin. Invest.:* R E MILLER  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11290 UNIV OF NORTH CAROLINA - CHAPEL HILL 7368**  
 SIMULATING OF LAND USE DYNAMICS IN SE ASIA: A CELLULAR AUTOMA-  
 TION APPROACH  
 08/21/2001 - 08/31/2004 FY01: \$187,891 Total: \$187,891  
*Prin. Invest.:* R RINDFUSS  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1580 UNIV OF NORTH CAROLINA - CHAPEL HILL 7369**  
 QUANTITATIVE, MULTIVARIATE METHOD/PRE-FLIGHT OPTIMIZATION, &  
 POST-FLIGHT EVALUATION OF CRYSTAL GROWTH.  
 02/04/1999 - 11/30/2002 FY01: \$176,700 Total: \$501,677  
*Prin. Invest.:* C W CARTER, JR.  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5372 UNIV OF NORTH CAROLINA - CHAPEL HILL 7370**  
 NOVEL PROPERTIES OF CARBON NANOTUBES AND RELATED NANOS-  
 TRUCTURES  
 03/23/2000 - 03/14/2002 FY01: \$80,000 Total: \$170,000  
*Prin. Invest.:* J LU  
*Tech. Officer:* ARC/M MEYYPAN  
*CASE Category:* 13 - PHYSICS

**NCC 5 295 UNIV OF NORTH CAROLINA - CHAPEL HILL 7371**  
 AGRICULTURAL COLONIZATION ON THE ECUADORIAN AMAZON: POPULA-  
 TION, BIOPHYSICAL AND GEOGRAPHICAL FACTOR  
 06/12/1998 - 12/31/2001 FY01: \$161,231 Total: \$811,893  
*Prin. Invest.:* R BILSBORROW  
*Tech. Officer:* GSFC/D DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 337 UNIV OF NORTH CAROLINA - CHAPEL HILL 7372**  
 RADON-222 AND STABLE CARBON ISOTOPE TRACING OF CARBON  
 EXCHANGE AND TRACE GAS FLUXES IN OLD GROWTH A  
 06/17/1998 - 12/31/2001 FY01: \$218,935 Total: \$782,600  
*Prin. Invest.:* C S MARTENS  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 2 52247 UNIV OF NORTH CAROLINA - CHAPEL HILL 7373**  
 SYNTHESIS & PROPERTIES OF CARBON NANOTUBES & CARBON NANO-  
 TUBE INTERCALATION COMPOUNDS  
 08/19/1998 - 08/14/2000 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* O ZHOU  
*Tech. Officer:* ARC/R L JAFFE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 2 52254 UNIV OF NORTH CAROLINA - CHAPEL HILL 7374**  
 CMOS SMART SENSORS FOR TRACKING IN NATURAL ENVIRONMENTS  
 07/19/1999 - 07/14/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* G BISHOP  
*Tech. Officer:* ARC/H THOMAS, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 30177 UNIV OF NORTH CAROLINA - CHAPEL HILL 7375**  
 THE MIGRATION ORIGINS OF DEFORESTATION IN A PROTECTED AREA:  
 COLONIZATION OF CLEAR-CUTTING, AND CORN IN  
 08/12/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* T M WHITMORE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30389 UNIV OF NORTH CAROLINA - CHAPEL HILL 7376**  
 WIND DRIVEN TRANSPORT PROCESSES OFF THE OREGON COAST:  
 DIRECT AND REMOTE SENSING OF COASTAL OCEAN PR  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J BANE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30390 UNIV OF NORTH CAROLINA - CHAPEL HILL 7377**  
 DISTRIBUTED HYDROLOGICAL MODELING OF URBANIZING ECOSYSTEMS:  
 INVESTIGATING THE IMPACT OF URBANIZATION  
 08/14/2001 - 08/31/2004 FY01: \$20,470 Total: \$20,470  
*Prin. Invest.:* L BAND  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50311 UNIV OF NORTH CAROLINA - CHAPEL HILL 7378**  
 MONOLAYER-PROTECTED CLUSTERS: NEW AND UNUSUAL NANOMETER-  
 SCALE ELECTRONICS MATERIALS/STUDENT W. WUEL  
 07/07/2000 - 09/30/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* R W MURRAY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8114 UNIV OF NORTH CAROLINA AT WILMINGTON 7379**  
 HIGH-TROPHIC LEVEL ECOSYSTEM RESPONSE TO CLIMATE CHANGE IN  
 THE ANTARCTIC PENINSULA  
 01/25/1999 - 12/31/2001 FY01: \$0 Total: \$165,725  
*Prin. Invest.:* S D EMSLIE  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1296 UNIV OF NORTH CAROLINA-GREENSBORO 7380**  
 SELF-REPORTING SPACE CORPS: EDIBLE BIOSENSORS  
 04/27/2001 - 04/30/2002 FY01: \$57,000 Total: \$57,000  
*Prin. Invest.:* C N STEWART  
*Tech. Officer:* JSC/D RUSSO  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 8 1314 UNIV OF NORTH CAROLINA, CHARLOTTE 7381**  
 RESEARCH JOVE  
 01/22/1997 - 08/31/2000 FY01: -\$7,057 Total: \$127,443  
*Prin. Invest.:* R D FORSYTHE, P WANG, S E MARSHALL  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1514 UNIV OF NORTH CAROLINA, CHARLOTTE 7382**  
 VARIABILITY & PREDICTABILITY OF LAND-ATMOSPHERE INTERACTIONS:  
 OBSERVATIONAL AND MODELING STUDIES  
 06/02/1998 - 05/31/2001 FY01: -\$1,574 Total: \$138,326  
*Prin. Invest.:* S MARSHALL, NONE  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

NORTH DAKOTA

NASA'S UNIVERSITY PROGRAM

**NGT 8 52901 UNIV OF NORTH CAROLINA, CHARLOTTE 7383**  
 CHARACTERIZATION OF X-RAY OPTICS MANUFACTURE AND ITS APPLICATION TO WOLTERMICROSCOPE OPTICS.  
 05/25/2001 - 07/01/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S SMITH  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 2 1203 WAKE FOREST UNIV 7384**  
 FUCUS AS A MODEL SYSTEM TO STUDY THE ROLE OF SUXIN TRANSPORT & THE ACTIN CYTOSKELETON IN GRAVITY...  
 04/06/1998 - 04/30/2002 FY01: \$0 Total: \$399,796  
*Prin. Invest.:* G K MUDAAY  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1507 WAKE FOREST UNIV 7385**  
 REGULATION OF AUXIN TRANSPORT BY PHOSPHORYLATION AND FLAVONOID DURING GRAVITROPISM IN ARABIDOPSIS  
 07/20/2001 - 07/31/2002 FY01: \$67,694 Total: \$67,694  
*Prin. Invest.:* G K MUDAY  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2011 WINSTON-SALEM STATE UNIV 7386**  
 PARALLEL OBJECT-ORIENTED PROGRAMMING IN NETWORK ENVIRONMENT  
 02/21/1997 - 02/28/2001 FY01: -\$722 Total: \$143,266  
*Prin. Invest.:* A RADENSKI  
*Tech. Officer:* GRC/G FOLLEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2515 WINSTON-SALEM STATE UNIV 7387**  
 GENERIC DIVIDE AND CONQUER INTERNET-BASED GENERIC DIVIDE AND CONQUER INTERNET-BASED  
 12/22/2000 - 12/21/2003 FY01: \$51,839 Total: \$51,839  
*Prin. Invest.:* D RADENSKI  
*Tech. Officer:* GRC/G J FOLLEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 8 1099 WINSTON-SALEM STATE UNIV 7388**  
 JOVE  
 10/18/1994 - 02/25/2000 FY01: -\$1,498 Total: \$105,502  
*Prin. Invest.:* F LEE, E J JONES  
*Tech. Officer:* MSFC/F SIX  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

NORTH DAKOTA

**NAG 4 209 NORTH DAKOTA STATE UNIV 7389**  
 ADAPTIVE MULTISCALE ALGORITHMS FOR NON-LINEAR ESTIMATION OF AEROSPACE SYSTEMS  
 05/31/2000 - 02/12/2001 FY01: -\$271 Total: \$12,757  
*Prin. Invest.:* Y XU  
*Tech. Officer:* DFRC/M J BRENNER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52159 NORTH DAKOTA STATE UNIV 7390**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/27/1997 - 06/30/2000 FY01: -\$9,110 Total: \$56,890  
*Prin. Invest.:* M SOUCEK, C R WOLD  
*Tech. Officer:* LARC/R PATER  
*CASE Category:* 11 - ASTRONOMY

**NGT 4 52411 NORTH DAKOTA STATE UNIV 7391**  
 ADAPTIVE MULTISCALE ALGORITHMS  
 05/11/1999 - 07/31/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* Y XU, W K PERRIZO  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 4 52424 NORTH DAKOTA STATE UNIV 7392**  
 GRAD STU RES PRO (GSRP)-PROP TITLE : ADAPTIVE MULTISCALE ALGORITHMS FOR NONLINEAR EST OF AEROSPACE  
 09/26/2000 - 09/25/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* Y XU  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 1911 UNIV OF NORTH DAKOTA 7393**  
 AMERICAN INDIANS INTO COMPUTER SCIENCE & ENGINEERING PROGRAM (AICSE)  
 07/08/1996 - 05/31/2000 FY01: -\$672 Total: \$58,096  
*Prin. Invest.:* M S ALI, A ALLERY  
*Tech. Officer:* GRC/D R PLUMER, GRC/S A MERRITT  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 2696 UNIV OF NORTH DAKOTA 7394**  
 BRINGING VOLCANO REMOTE SENSING DATA TO CLASSROOMS NATIONAL PARKS AND MONUMENTS  
 08/17/1994 - 09/30/2000 FY01: -\$13,765 Total: \$841,722  
*Prin. Invest.:* C A WOOD  
*Tech. Officer:* GSFC/F HASLER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3616 UNIV OF NORTH DAKOTA 7395**  
 A PUBLIC ACCESS RESOURCE CENTER (PARC) EMPOWERING TO USE EOSDI -IMPLEMENTATION PHASE  
 11/22/1996 - 06/30/2002 FY01: \$999,924 Total: \$4,816,924  
*Prin. Invest.:* G A SEIELSTAD  
*Tech. Officer:* GSFC/J J COLLIER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 5340 UNIV OF NORTH DAKOTA 7396**  
 EVALUATION OF NASA POLARIMETRIC (NPOL) RADAR OBSERVATIONS COLLECTED DURING THE KEYS AREA MICROPHYSIC  
 07/16/2001 - 12/31/2002 FY01: \$74,217 Total: \$74,217  
*Prin. Invest.:* P KUCERA  
*Tech. Officer:* WFF/J GERLACH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7950 UNIV OF NORTH DAKOTA 7397**  
 CO2 BUDGET AND RECTIFICATION AIRBORNE STUDY--NORTH AMERICA (COBRA--NA)  
 12/21/1998 - 12/14/2001 FY01: \$0 Total: \$180,250  
*Prin. Invest.:* C A GRAINGER  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

NASA'S UNIVERSITY PROGRAM

OHIO

**NAG 5 8681 UNIV OF NORTH DAKOTA 7398**  
 BEYOND THE CUTTING EDGE: INNOVATIVE INTERNET EDUCATION TECHNIQUES  
 07/23/1999 - 09/30/2000 FY01: -\$320 Total: \$99,680  
 Prin. Invest.: C WOOD  
 Tech. Officer: GSFC/N LAL  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9656 UNIV OF NORTH DAKOTA 7399**  
 MICROPHYSICAL CHARACTERISTICS OF CLOUDS DURING THE TRMM FIELD CAMPAIGNS  
 06/05/2000 - 05/31/2002 FY01: \$42,356 Total: \$101,655  
 Prin. Invest.: C A GRAINGER  
 Tech. Officer: HQ/R J LAWRENCE  
 CASE Category: 31 - ATMOSPHERIC SCIENCE

**NAG10 283 UNIV OF NORTH DAKOTA 7400**  
 CLOUD ELECTRIC FIELDS AND MICROPHYSICS STUDIES CLOUD ELECTRIC FIELDS AND MICROPHYSICS STUDIES  
 05/23/2000 - 06/03/2002 FY01: \$429,054 Total: \$821,054  
 Prin. Invest.: D GRAINGER  
 Tech. Officer: KSC/F J MERCERET  
 CASE Category: 31 - ATMOSPHERIC SCIENCE

**NAG13 01006 UNIV OF NORTH DAKOTA 7401**  
 NORTHERN GREAT PLAINS CENTER OF PEOPLE AND THE ENVIRONMENT  
 07/30/2001 - 04/30/2002 FY01: \$1,496,700 Total: \$1,496,700  
 Prin. Invest.: G A SEIESTAD  
 Tech. Officer: SSC/B A SPIERING  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99006 UNIV OF NORTH DAKOTA 7402**  
 NORTHERN GREAT PLAINS REGIONAL EARTH SCIENCE APPLICATIONS CENTER  
 03/01/1999 - 02/28/2002 FY01: \$0 Total: \$1,720,000  
 Prin. Invest.: P R ZIMMERMAN  
 Tech. Officer: SSC/C HILL  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 310 UNIV OF NORTH DAKOTA 7403**  
 A PUBLIC ACCESS RESOURCE CTR(PARC)EMPOWERING THE GENERAL PUBLIC TO USE EOSDIS(PHASE III-OPERATIONS)  
 04/11/1998 - 06/30/2002 FY01: \$574,300 Total: \$2,202,300  
 Prin. Invest.: G SEIELSTAD  
 Tech. Officer: GSFC/A TUYAHOV  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 399 UNIV OF NORTH DAKOTA 7404**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/14/1999 - 04/30/2002 FY01: \$0 Total: \$450,000  
 Prin. Invest.: C WOOD  
 Tech. Officer: GSFC/D DETROYE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 503 UNIV OF NORTH DAKOTA 7405**  
 A MULTI-USE AIRBORNE RESEARCH FACILITY  
 06/20/2000 - 06/30/2003 FY01: \$50,000 Total: \$143,257  
 Prin. Invest.: M POELLET  
 Tech. Officer: GSFC/C YUHAS  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 582 UNIV OF NORTH DAKOTA 7406**  
 NORTH DAKOTA NASA EPSCOR PROGRAM  
 08/16/2001 - 08/14/2004 FY01: \$125,000 Total: \$125,000  
 Prin. Invest.: R ANDRES  
 Tech. Officer: GSFC/D DETROYE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40034 UNIV OF NORTH DAKOTA 7407**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE AND FELLOWSHIP PROGRAM.  
 02/13/1997 - 02/28/2001 FY01: \$0 Total: \$931,062  
 Prin. Invest.: C A WOOD  
 Tech. Officer: GSFC/L KEFFER  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40117 UNIV OF NORTH DAKOTA 7408**  
 NORTH DAKOTA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/08/2001 - 02/28/2002 FY01: \$248,562 Total: \$248,562  
 Prin. Invest.: R ANDRES  
 Tech. Officer: GSFC/D D DETROYE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

OHIO

**NAG 3 2443 BOWLING GREEN STATE UNIV 7409**  
 PROPOSED TRIAL OF FRESHLY COLLECTED LANDSAT 7 TM DATA FOR REMOTE SENSING APPLICATIONS IN NORTHWEST  
 05/31/2000 - 09/30/2001 FY01: \$0 Total: \$105,000  
 Prin. Invest.: D K VINCENT  
 Tech. Officer: GRC/T M SCOTT  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1186 BOWLING GREEN STATE UNIV 7410**  
 PATHOGEN REDUCTION ON LETTUCE AND RADISHES USING HYDROGEN PEROXIDE  
 01/10/2000 - 11/30/2001 FY01: \$0 Total: \$18,412  
 Prin. Invest.: D L HENTGES, NONE  
 Tech. Officer: JSC/N L KLOERIS  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAS 3 99202 BOWLING GREEN STATE UNIV 7411**  
 PURCHASE OF DYNAMIC ELECTRIC MOTOR LOAD SIMULATOR  
 09/24/1999 - 12/31/2000 FY01: \$0 Total: \$359,986  
 Prin. Invest.: S BALLARD  
 Tech. Officer: GRC/J L DOLCE  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 2 1333 CASE WESTERN RESERVE UNIV 7412**  
 DISCRETE FILEDS FOR AIR TRAFFIC MANAGEMENT  
 07/01/1999 - 12/31/2001 FY01: \$34,333 Total: \$86,610  
 Prin. Invest.: M S BRANICKY  
 Tech. Officer: ARC/G MEYER  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG 2 1356 CASE WESTERN RESERVE UNIV 7413**  
 EFFECTS OF MICROGRAVITY ON ZEBRAFISH VESTIBULAR DEVELOPMENT  
 07/23/1999 - 07/31/2002 FY01: \$122,948 Total: \$305,164  
 Prin. Invest.: S J MOORMAN, NONE  
 Tech. Officer: ARC/M M AVERNER, ARC/R D MACELROY  
 CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1868**      **CASE WESTERN RESERVE UNIV**      **7414**  
 INDUSTRIAL PROCESSES INFLUENCED BY GRAVITY  
 05/09/1996 - 04/08/2001      FY01: \$0      Total: \$396,073  
*Prin. Invest.:* S OSTRACH, Y KAMOTANI  
*Tech. Officer:* GRC/A D PLINE, GRC/N R HALL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 1913**      **CASE WESTERN RESERVE UNIV**      **7415**  
 BUBBLE GENERATION IN A FLOWING LIQUID MEDIUM & RES ULTING TWO-  
 PHASE FLOW IN MICROGRAVITY  
 07/10/1996 - 09/30/2000      FY01: -\$446      Total: \$383,528  
*Prin. Invest.:* Y KAMOTANI, J OSTRACH  
*Prin. Invest.:* J KADAMBI  
*Tech. Officer:* GRC/D F CHAO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2110**      **CASE WESTERN RESERVE UNIV**      **7416**  
 NOVEL PIV TECHNIQUE FOR PLANAR PARTICLE SIZE AND V OLOCITY  
 MEASUREMENTS FOR SPRAY DIAGNOSTICS  
 01/08/1998 - 10/31/2000      FY01: \$0      Total: \$224,947  
*Prin. Invest.:* J R KADAMBI  
*Tech. Officer:* GRC/M P WERNET  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2160**      **CASE WESTERN RESERVE UNIV**      **7417**  
 STABILITY LIMITS AND DYNAMICS OF NONAXISYMMETRIC L IQUID  
 BRIDGES  
 04/24/1998 - 05/31/2001      FY01: \$0      Total: \$335,877  
*Prin. Invest.:* I D ALEXANDER  
*Tech. Officer:* GRC/J C DUH, GRC/B S SINGH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2204**      **CASE WESTERN RESERVE UNIV**      **7418**  
 ESTABLISH THE GLENNAN MICROSYSTEM INITIATIVE ESTABLISH THE  
 GLENNAN MICROSYSTEM INITIATIVE  
 09/25/1998 - 01/01/2001      FY01: \$0      Total: \$2,258,000  
*Prin. Invest.:* M MEHREGANY  
*Tech. Officer:* GRC/L G MATUS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2210**      **CASE WESTERN RESERVE UNIV**      **7419**  
 THE FEASIBILITY OF APPLYING TOMOGRAPHIC TECHNIQUES IN THE ICING  
 RESEARCH WIND TUNNEL  
 11/19/1998 - 05/20/2002      FY01: \$40,437      Total: \$144,967  
*Prin. Invest.:* S H IZEN  
*Tech. Officer:* GRC/C R MERCER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2238**      **CASE WESTERN RESERVE UNIV**      **7420**  
 IDENTIFICATION OF GRAVITY-RELATED EFFECTS ON CRYST AL GROWTH  
 FROM MELTS WITH AN IMISCIBILITY GAP  
 02/24/1999 - 08/04/2000      FY01: \$0      Total: \$70,067  
*Prin. Invest.:* A SAYIR  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2239**      **CASE WESTERN RESERVE UNIV**      **7421**  
 CANDLE FLAMES IN MICROGRAVITY CANDLE FLAMES IN MICROGRAVITY  
 02/24/1999 - 05/02/2000      FY01: \$0      Total: \$56,500  
*Prin. Invest.:* I ADAMOVICH  
*Tech. Officer:* GRC/S J SCHNEIDER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2243**      **CASE WESTERN RESERVE UNIV**      **7422**  
 ADVANCEMENT OR TRANSDUCER SENSOR SYSTEM FOR CRACK  
 CONTAMINATION DETECTION  
 03/12/1999 - 07/30/2002      FY01: \$0      Total: \$100,000  
*Prin. Invest.:* D HAZONY  
*Tech. Officer:* GRC/D NG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2315**      **CASE WESTERN RESERVE UNIV**      **7423**  
 MODELING OF BALLISTIC IMPACT BEHAVIOR OF INCONEL 7 18 ALLOYS  
 WITH APPLICATIONS TO ENGINE BLADE CONTA  
 12/30/1999 - 12/15/2001      FY01: \$121,932      Total: \$161,932  
*Prin. Invest.:* V PRAKASH  
*Tech. Officer:* GRC/J PEREIRA  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2331**      **CASE WESTERN RESERVE UNIV**      **7424**  
 CANDLE FLAMES IN MICROGRAVITY CANDLE FLAMES IN MICROGRAVITY  
 02/10/2000 - 02/08/2002      FY01: \$14,000      Total: \$56,323  
*Prin. Invest.:* J S TIEN  
*Tech. Officer:* GRC/D L KIETRICH  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2391**      **CASE WESTERN RESERVE UNIV**      **7425**  
 SATELLITE AND TERRESTRIAL NETWORK ANALYSIS SATELLITE AND  
 TERRESTRIAL NETWORK ANALYSIS  
 04/13/2000 - 05/31/2001      FY01: \$0      Total: \$27,646  
*Prin. Invest.:* J ISHAC  
*Tech. Officer:* GRC/W HVANCIC  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2504**      **CASE WESTERN RESERVE UNIV**      **7426**  
 INSITU MONITORING OF BIOLOGICAL MATERIAL USING LOW -COHERENCE  
 INTERFEROMETRIC SENSORS  
 11/13/2000 - 09/30/2002      FY01: \$253,000      Total: \$253,000  
*Prin. Invest.:* B OVRYN  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2541**      **CASE WESTERN RESERVE UNIV**      **7427**  
 TIME DEPENDENT NUMERICAL SIMULATIONS OF SOLIDIFIC ATION  
 PROCESSES  
 02/09/2001 - 02/05/2003      FY01: \$0      Total: \$0  
*Prin. Invest.:* P L TAYLOR  
*Tech. Officer:* GRC/A CHAIT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2578**      **CASE WESTERN RESERVE UNIV**      **7428**  
 RESEARCH INIATIVE IN SPACE COMMUNICATIONS AND NETW ORKS  
 03/30/2001 - 03/25/2002      FY01: \$390,000      Total: \$390,000  
*Prin. Invest.:* F L MERAT  
*Tech. Officer:* GRC/K BHASIN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2581**      **CASE WESTERN RESERVE UNIV**      **7429**  
 ANALYSIS OF DROPLET SPLASHING IN AIRCRAFT ICING CO NDITIONS  
 04/02/2001 - 11/30/2001      FY01: \$47,774      Total: \$47,774  
*Prin. Invest.:* J D ALEXANDER, NONE  
*Tech. Officer:* GRC/M G POTAPCZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR



**NAG 3 2620**            **CASE WESTERN RESERVE UNIV**            **7430**  
 INVESTIGATION OF ROTARY BLOOD PUMP FLOW USING PIV INVESTIGATION OF ROTARY BLOOD PUMP FLOW USING PIV  
 06/29/2001 - 10/31/2002    FY01: \$125,406            Total: \$125,406  
*Prin. Invest.:* J R KADAMBI  
*Tech. Officer:* GRC/J M SANKOVIC  
*CASE Category:* 56 - MEDICL

**NAG 3 2644**            **CASE WESTERN RESERVE UNIV**            **7431**  
 INKJET METHODOLOGIES FOR THE FABRICATION OF SECONDARY LITHIUM-ION MICROBATTERIES INCORPORATING NANO  
 08/17/2001 - 06/30/2002    FY01: \$41,700            Total: \$41,700  
*Prin. Invest.:* D A SCHERSON  
*Tech. Officer:* GRC/D L BRITTON  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 6715**            **CASE WESTERN RESERVE UNIV**            **7432**  
 AN ELECTRON MICROSCOPY SURVEY OF CARBONATE-BEARING REGIONS OF ALH84001  
 12/10/1997 - 11/30/2000    FY01: \$0            Total: \$120,000  
*Prin. Invest.:* R HARVEY  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7019**            **CASE WESTERN RESERVE UNIV**            **7433**  
 THE EVOLUTION OF GALAXIES HARBORING CENTRAL MASSIVE BLACK HOLES - ATP  
 02/19/1998 - 02/14/2002    FY01: \$0            Total: \$260,505  
*Prin. Invest.:* C MIHOS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11059**            **CASE WESTERN RESERVE UNIV**            **7434**  
 FEASIBILITY STUDY OF PLANS TO USE THE SUN AS A GRAVITATIONAL LENS FOR ASTRONOMY  
 06/27/2001 - 06/30/2002    FY01: \$99,995            Total: \$99,995  
*Prin. Invest.:* G STARKMAN  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11122**            **CASE WESTERN RESERVE UNIV**            **7435**  
 RECOVERY AND STUDY OF ANTARCTIC MARTIAN METEORITES  
 07/18/2001 - 07/14/2002    FY01: \$186,415            Total: \$186,415  
*Prin. Invest.:* R HARVEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1270**            **CASE WESTERN RESERVE UNIV**            **7436**  
 DETERMINATION OF THE SURFACE ENERGY OF LIQUID CRYSTALS  
 05/03/1996 - 05/31/2001    FY01: \$0            Total: \$280,000  
*Prin. Invest.:* C ROSENBLATT, P L TAYLOR  
*Tech. Officer:* MSFC/C R TALLEY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1727**            **CASE WESTERN RESERVE UNIV**            **7437**  
 PROPOSAL "VIBRATION AND G-JITTER: TRANSPORT DISTURBANCES DUE TO RESIDUAL ACCELERATION/LOW GRAVITY."  
 06/19/2000 - 11/30/2003    FY01: \$95,000            Total: \$139,837  
*Prin. Invest.:* J I ALEXANDER  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 42 - AERONAUTICAL ENGR

**NAG 8 1779**            **CASE WESTERN RESERVE UNIV**            **7438**  
 SIMULATED MICROGRAVITY MEASUREMENT TECHNIQUES FOR THE STUDY OF DYNAMIC EFFECTS IN PHOSPHOLIPID SUR  
 04/24/2001 - 04/30/2005    FY01: \$80,000            Total: \$80,000  
*Prin. Invest.:* C ROSENBLATT, P L TAYLOR  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCA 3 201**            **CASE WESTERN RESERVE UNIV**            **7439**  
 GLENNAN MICROSYSTEMS INITIATIVE FY00 PROJECTS GLENNAN MICROSYSTEMS INITIATIVE FY00 PROJECTS  
 05/12/2000 - 10/31/2001    FY01: \$1,114,001            Total: \$2,352,471  
*Prin. Invest.:* M MEHREGANY, C LIU  
*Tech. Officer:* GRC/L G MATUS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 2 1204**            **CASE WESTERN RESERVE UNIV**            **7440**  
 EFFECTS OF MICROGRAVITY DURING THE CRITICAL PERIOD OF ZEBRAFISH VESTIBULAR DEVELOPMENT  
 09/29/2000 - 12/31/2001    FY01: \$10,000            Total: \$30,000  
*Prin. Invest.:* S J MOORMAN  
*Tech. Officer:* ARC/D REISS-BUBENHEIM, ARC/R W BERTHOLD  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 3 372**            **CASE WESTERN RESERVE UNIV**            **7441**  
 A STUDY OF THE MECHANICAL PROPERTIES OF DIRECTIONALLY SOLIDIFIED & CHARACTERIZATION OF HIGH TEMPERATURE  
 11/15/1994 - 04/30/2001    FY01: \$0            Total: \$1,322,773  
*Prin. Invest.:* A SAYIR  
*Tech. Officer:* GRC/J A DICARLO, GRC/S R LEVINE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 463**            **CASE WESTERN RESERVE UNIV**            **7442**  
 MONOLITHIC CU-CR-NB ALLOYS FOR ELEVATED TEMPERATURE HIGH HEAT FLUX APPLICATIONS  
 04/10/1996 - 01/18/2001    FY01: \$0            Total: \$367,032  
*Prin. Invest.:* G M MICHAL, D L ELLIS  
*Tech. Officer:* GRC/R V MINER, GRC/M V NATHAL  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 464**            **CASE WESTERN RESERVE UNIV**            **7443**  
 THE ROLE OF FIBER ARCHITECTURE ON THE MECHANICAL PROPERTIES OF TITANIUM MATRIX COMPOSITES  
 04/11/1996 - 06/30/2000    FY01: \$0            Total: \$243,492  
*Prin. Invest.:* R M AIKEN, JR.  
*Tech. Officer:* GRC/S M ARNOLD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 587**            **CASE WESTERN RESERVE UNIV**            **7444**  
 TIME DEPENDENT NUMERICAL SIMULATIONS OF SOLIDIFICATION PROCESSES  
 01/01/1998 - 12/31/2002    FY01: \$93,725            Total: \$362,842  
*Prin. Invest.:* P L TAYLOR  
*Tech. Officer:* GRC/A CHIT  
*CASE Category:* 13 - PHYSICS

**NCC 3 633**            **CASE WESTERN RESERVE UNIV**            **7445**  
 COMBUSTION OF SOLID FUEL IN VERY LOW SPEED OXYGEN STREAMS  
 06/30/1998 - 09/02/2003    FY01: \$182,400            Total: \$516,012  
*Prin. Invest.:* J S TIEN  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 653**                    **CASE WESTERN RESERVE UNIV**                    **7446**  
 A STUDY OF THE TIME-DEPENDENT RESPONSE OF CERAMIC MATERIALS  
 11/23/1998 – 11/30/2001                    FY01: \$107,022                    Total: \$305,664  
*Prin. Invest.:* D A GASPARINI  
*Tech. Officer:* GRC/N N NEMETH  
*CASE Category:* 46 – MECHANICAL ENGR

**NCC 3 658**                    **CASE WESTERN RESERVE UNIV**                    **7447**  
 LOW STRETCH DIFFUSION FLAMES LOW STRETCH DIFFUSION FLAMES  
 01/12/1999 – 12/08/2002                    FY01: \$73,830                    Total: \$185,659  
*Prin. Invest.:* J S TIEN  
*Tech. Officer:* GRC/S L OLSON  
*CASE Category:* 49 – ENGINEERING, OTHER

**NCC 3 669**                    **CASE WESTERN RESERVE UNIV**                    **7448**  
 FLAME SPREADING IN PARTIAL GRAVITY FLAME SPREADING IN PARTIAL  
 GRAVITY  
 02/03/1999 – 01/03/2003                    FY01: \$60,317                    Total: \$128,756  
*Prin. Invest.:* J S TIEN  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 – ENGINEERING, OTHER

**NCC 3 679**                    **CASE WESTERN RESERVE UNIV**                    **7449**  
 DEVELOPMENT OF ADVANCED SENSORS FOR BANTAM VEHICLE APPLICA-  
 TIONS  
 02/24/1999 – 01/31/2002                    FY01: \$70,000                    Total: \$220,000  
*Prin. Invest.:* C LUJ  
*Tech. Officer:* GRC/G W HUNTER  
*CASE Category:* 43 – CHEMICAL ENGR

**NCC 3 681**                    **CASE WESTERN RESERVE UNIV**                    **7450**  
 THERMO-PHYSICAL PROPERTIES OF MOLTEN SEMICONDUCTOR S  
 02/24/1999 – 02/17/2002                    FY01: \$0                    Total: \$5,000  
*Prin. Invest.:* D H MATTHIENSEN  
*Tech. Officer:* GRC/A CHAIT  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NCC 3 701**                    **CASE WESTERN RESERVE UNIV**                    **7451**  
 DENTRITIC GROWTH AND COARSENING PHENOMENA IN SOLID IIFICATION  
 04/20/1999 – 05/31/2002                    FY01: \$118,809                    Total: \$309,692  
*Prin. Invest.:* P L TAYLOR  
*Tech. Officer:* GRC/A CHAIT  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NCC 3 714**                    **CASE WESTERN RESERVE UNIV**                    **7452**  
 RAPID MANUFACTURING MONOLITHIC SILICON NITRIDE THR UST CELLS  
 07/12/1999 – 12/25/2001                    FY01: \$241,961                    Total: \$486,052  
*Prin. Invest.:* J D CRAWLEY, NONE  
*Tech. Officer:* GRC/J LANG  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NCC 3 743**                    **CASE WESTERN RESERVE UNIV**                    **7453**  
 DEVELOPMENT OF ADVANCED OIL-FREE TURBOMACHINERY DEVELOP-  
 MENT OF ADVANCED OIL-FREE TURBOMACHINERY  
 11/23/1999 – 06/30/2000                    FY01: \$0                    Total: \$51,985  
*Prin. Invest.:* J M PRAHL  
*Tech. Officer:* GRC/C DELLACORTE  
*CASE Category:* 46 – MECHANICAL ENGR

**NCC 3 766**                    **CASE WESTERN RESERVE UNIV**                    **7454**  
 LONG TERM DURABILITY OF MATERIALS FOR AEROSPACE AP PICATIONS  
 01/24/2000 – 11/30/2001                    FY01: \$163,200                    Total: \$259,332  
*Prin. Invest.:* I E LOCCI, NONE  
*Tech. Officer:* GRC/M V NATHAL  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NCC 3 772**                    **CASE WESTERN RESERVE UNIV**                    **7455**  
 THE DEVELOPMENT OF SOLID STATE CO AND CO2 SENSOR F OR FIRE  
 PROTECTION APPLICATIONS  
 02/11/2000 – 01/23/2002                    FY01: \$125,000                    Total: \$220,000  
*Prin. Invest.:* C C LIU  
*Tech. Officer:* GRC/G W HUNTER  
*CASE Category:* 43 – CHEMICAL ENGR

**NCC 3 823**                    **CASE WESTERN RESERVE UNIV**                    **7456**  
 GAS EVOLUTION EFFECT ON MASS TRANSFER IN ROTATING ELECTRO-  
 CHEMICAL CELLS UNDER MICROGRAVITY CONDITION  
 08/17/2000 – 11/30/2003                    FY01: \$48,230                    Total: \$98,155  
*Prin. Invest.:* Y KAMOTANI  
*Tech. Officer:* GRC/D GREEN  
*CASE Category:* 49 – ENGINEERING, OTHER

**NCC 3 830**                    **CASE WESTERN RESERVE UNIV**                    **7457**  
 ADVANCED COPPER ALLOYS FOR REGENERATIVELY COOLED R OCKET  
 ENGINE COMBUSTION CHAMBERLINERS  
 12/08/2000 – 11/30/2001                    FY01: \$202,512                    Total: \$202,512  
*Prin. Invest.:* D L ELLIS  
*Tech. Officer:* GRC/M NATHAL  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NCC 3 838**                    **CASE WESTERN RESERVE UNIV**                    **7458**  
 SOOT FORMATION IN PURELY CURVED PREMIXED FLAMES & LAMINAR  
 FLAME SPEEDS OF SOOT FORMING FLAMES  
 01/16/2001 – 11/30/2004                    FY01: \$56,500                    Total: \$56,500  
*Prin. Invest.:* C SUNG  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 – ENGINEERING, OTHER

**NCC 3 850**                    **CASE WESTERN RESERVE UNIV**                    **7459**  
 NOVEL STRUCTURAL AND FUNCTIONAL CERAMICS  
 01/17/2001 – 11/30/2001                    FY01: \$389,905                    Total: \$389,905  
*Prin. Invest.:* S SAYIR  
*Tech. Officer:* GRC/S C FARMER  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NCC 3 892**                    **CASE WESTERN RESERVE UNIV**                    **7460**  
 TECHNOLOGIES FOR ACTIVE CLEARANCE CONTROL  
 05/22/2001 – 11/30/2001                    FY01: \$44,995                    Total: \$44,995  
*Prin. Invest.:* S M PHILLIPS  
*Tech. Officer:* GRC/B STEINETZ  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NCC 3 895**                    **CASE WESTERN RESERVE UNIV**                    **7461**  
 THERMALLY STABLE OHMIC CONTACTS ON 6H-SIC THERMALLY STABLE  
 OHMIC CONTACTS ON 6H-SIC  
 06/01/2001 – 05/31/2002                    FY01: \$59,400                    Total: \$59,400  
*Prin. Invest.:* P PIROUZ  
*Tech. Officer:* GRC/R OKOJIE  
*CASE Category:* 13 – PHYSICS

## NASA'S UNIVERSITY PROGRAM

OHIO

**NCC 3 898**                    **CASE WESTERN RESERVE UNIV**                    **7462**  
 CERAMIC CANTED COIL SPRINGS FOR AEROSPACE SEALING APPLICATIONS  
 07/31/2001 - 10/02/2002                    FY01: \$83,111                    Total: \$83,111  
*Prin. Invest.:* J D CAWLEY, NONE  
*Tech. Officer:* GRC/P DUNLAP  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 8 152**                    **CASE WESTERN RESERVE UNIV**                    **7463**  
 DIFFUSION PROCESSES IN MOLTEN SEMICONDUCTORS  
 06/12/1998 - 03/31/2002                    FY01: \$200,000                    Total: \$1,769,997  
*Prin. Invest.:* D H MATTHIESEN  
*Tech. Officer:* MSFC/J BRUNSON  
*CASE Category:* 13 - PHYSICS

**NGT 3 52328**                    **CASE WESTERN RESERVE UNIV**                    **7464**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 06/10/1997 - 05/31/2000                    FY01: -\$1,333                    Total: \$64,667  
*Prin. Invest.:* K LOPARO  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 3 52350**                    **CASE WESTERN RESERVE UNIV**                    **7465**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RESEARCH PROGRAM  
 06/23/1999 - 06/30/2002                    FY01: \$22,000                    Total: \$66,000  
*Prin. Invest.:* J S TIEN  
*Tech. Officer:* GRC/J J MONTEGANI  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 3 52352**                    **CASE WESTERN RESERVE UNIV**                    **7466**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RESEARCH PROGRAM  
 06/24/1999 - 08/31/2001                    FY01: \$0                    Total: \$44,000  
*Prin. Invest.:* J R KADAMBI  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 3 52374**                    **CASE WESTERN RESERVE UNIV**                    **7467**  
 GRADUATE STUDENT RESEARCH  
 06/07/2001 - 06/30/2002                    FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* J R KADAMBI  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 50274**                    **CASE WESTERN RESERVE UNIV**                    **7468**  
 A MANTIS-LIKE ROBOT FOR AGILE OPERATION IN EXTREME ENVIRONMENTS/STUDENT: DANIEL KINGSLEY  
 06/15/2000 - 08/31/2002                    FY01: \$22,000                    Total: \$44,000  
*Prin. Invest.:* R QUINN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 50369**                    **CASE WESTERN RESERVE UNIV**                    **7469**  
 COMBUSTION OF BLACK LIQUOR DEPOSITS  
 06/13/2001 - 06/30/2002                    FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* J TIEN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2040**                    **CLEVELAND STATE UNIV**                    **7470**  
 FPGA BASED RECONFIGURABLE PACKET SWITCH TEST BED  
 04/29/1997 - 07/31/2001                    FY01: \$0                    Total: \$129,907  
*Prin. Invest.:* P P CHU  
*Tech. Officer:* GRC/R E JONES  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2075**                    **CLEVELAND STATE UNIV**                    **7471**  
 MINORITY ENGINEERING PROGRAM PIPELINE  
 09/17/1997 - 08/31/2002                    FY01: \$19,392                    Total: \$86,046  
*Prin. Invest.:* P CHARITY  
*Tech. Officer:* GRC/M L BOROWSKI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2232**                    **CLEVELAND STATE UNIV**                    **7472**  
 MAPPING THE POSITION DEPENDENCE OF THE LIQUID WATER CONTENT  
 02/18/1999 - 12/31/2001                    FY01: \$0                    Total: \$14,000  
*Prin. Invest.:* J LOCK  
*Tech. Officer:* GRC/C R MERCER  
*CASE Category:* 13 - PHYSICS

**NAG 3 2273**                    **CLEVELAND STATE UNIV**                    **7473**  
 THE ECONOMIC IMPACT OF GLENN RESEARCH CENTER THE ECONOMIC IMPACT OF GLENN RESEARCH CENTER  
 06/23/1999 - 11/30/2000                    FY01: \$0                    Total: \$57,772  
*Prin. Invest.:* Z AUSTRIAN  
*Tech. Officer:* GRC/R C ALEXANDER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2296**                    **CLEVELAND STATE UNIV**                    **7474**  
 REAL TIME MONITORING SYSTEM  
 09/30/1999 - 05/12/2002                    FY01: \$30,434                    Total: \$59,450  
*Prin. Invest.:* D M KOCHER  
*Tech. Officer:* GRC/D WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2306**                    **CLEVELAND STATE UNIV**                    **7475**  
 STRUCTURAL MODELING OF ENGINE COMPONENTS AND MATERIAL PROCESSES  
 12/01/1999 - 10/31/2001                    FY01: \$0                    Total: \$111,880  
*Prin. Invest.:* J HEMANN  
*Tech. Officer:* GRC/H KAUTZ  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2326**                    **CLEVELAND STATE UNIV**                    **7476**  
 DEVELOPMENT OF A FAST ANALYSIS TOOL FOR THE INTERNATIONAL SPACE STATION (ISS) USING SOFT COMPUTING  
 02/04/2000 - 01/31/2002                    FY01: \$73,500                    Total: \$113,500  
*Prin. Invest.:* P P LIN  
*Prin. Invest.:* NONE  
*Tech. Officer:* GRC/K JULES  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2423**                    **CLEVELAND STATE UNIV**                    **7477**  
 OPTICAL SCATTERING CHARACTERIZATION FOR THE GLENN MICRO-SYSTEMS MICROSCALE PARTICULATE CLASSIFIER  
 05/12/2000 - 04/15/2002                    FY01: \$0                    Total: \$10,000  
*Prin. Invest.:* J A LOCK  
*Tech. Officer:* GRC/P S GREENSBERG  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2482 CLEVELAND STATE UNIV 7478**  
 DEVELOPMENT OF A MULTI-DIMENSIONAL STIRLING ENGINE CODE FOR  
 THERMODYNAMICS PERFORMANCE  
 08/02/2000 - 07/31/2002 FY01: \$207,453 Total: \$262,453  
*Prin. Invest.:* D IBRAHIM  
*Tech. Officer:* GRC/L THIEMENE  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2490 CLEVELAND STATE UNIV 7479**  
 PRELIMINARY DEVELOPMENT OF AN ENGINE MANUFACTURING COST  
 ESTIMATING MODEL  
 09/29/2000 - 11/30/2000 FY01: \$93,500 Total: \$93,500  
*Prin. Invest.:* Y LIQU  
*Tech. Officer:* GRC/F TORRES  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2509 CLEVELAND STATE UNIV 7480**  
 THE INTEGRATION OF LEGACY APPLICATIONS WITH CORBA THE INTEGRA-  
 TION OF LEGACY APPLICATIONS WITH CORBA  
 11/30/2000 - 11/16/2001 FY01: \$52,997 Total: \$52,997  
*Prin. Invest.:* J SANG  
*Tech. Officer:* GRC/C KIM  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2514 CLEVELAND STATE UNIV 7481**  
 STRUCTURAL MODELING OF ENGINE COMPONENTS AND MATERIAL  
 PROCESSES  
 12/18/2000 - 12/31/2001 FY01: \$153,697 Total: \$153,697  
*Prin. Invest.:* J HEMANN  
*Tech. Officer:* GRC/H E KAUTZ  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2531 CLEVELAND STATE UNIV 7482**  
 POWER EFFICIENT REFLECTARRAY COMMUNICATIONS SYSTEM MODULA-  
 TION  
 01/23/2001 - 12/31/2001 FY01: \$33,832 Total: \$33,832  
*Prin. Invest.:* F XIONG  
*Tech. Officer:* GRC/R R ROMANOF SKY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2573 CLEVELAND STATE UNIV 7483**  
 ROTODYNAMIC ANALYSIS AND FEASIBILITY STUDY OF A DISK SPIN  
 FACILITY  
 03/22/2001 - 12/31/2001 FY01: \$28,000 Total: \$28,000  
*Prin. Invest.:* J T SAWICKI  
*Tech. Officer:* GRC/H KAUTZ  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2607 CLEVELAND STATE UNIV 7484**  
 HIGH-LEVEL QUANTUM CHEMICAL CALCULATIONS ON POTENTIAL JET  
 FUELS  
 06/12/2001 - 03/14/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* D W BALL  
*Tech. Officer:* GRC/M J ZEHE  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2619 CLEVELAND STATE UNIV 7485**  
 ROBUST TIMING SYNCHRONIZATION IN AERONAUTICAL MOBILE COMMU-  
 NICATIONS SYSTEMS  
 05/23/2001 - 05/20/2002 FY01: \$14,000 Total: \$14,000  
*Prin. Invest.:* F XIONG  
*Tech. Officer:* GSFC/K CHUN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2631 CLEVELAND STATE UNIV 7486**  
 INERTING AIRCRAFT FUEL SYSTEMS USING EXHAUST GASES  
 06/13/2001 - 05/31/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* D G NEHEMANN  
*Tech. Officer:* GRC/K KUNDU  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1584 CLEVELAND STATE UNIV 7487**  
 R/S ACOUSTICALLY ASSISTED BIOREACTOR FOR TERRESTRIAL AND  
 MICROGRAVITY APPLICATIONS.  
 01/14/1999 - 11/30/2002 FY01: \$76,850 Total: \$391,850  
*Prin. Invest.:* J M BELOVICH  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

**NCC 3 444 CLEVELAND STATE UNIV 7488**  
 COATINGS FOR CERAMIC MATRIX COMPOSITES  
 01/15/1996 - 07/17/2001 FY01: \$0 Total: \$561,144  
*Prin. Invest.:* S N TEWARI  
*Tech. Officer:* GRC/L A GREENBAUER-SENG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 445 CLEVELAND STATE UNIV 7489**  
 MODIFICATION OF ENVIRONMENTAL/THERMAL BARRIER COATINGS FOR  
 SILICON-BASED CERAMICS  
 01/15/1996 - 07/17/2001 FY01: \$0 Total: \$607,229  
*Prin. Invest.:* S N TEWARI  
*Tech. Officer:* GRC/L A GREENBAUER-SENG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 521 CLEVELAND STATE UNIV 7490**  
 THE EFFECTS OF MULTIPLE SCATTERING IN PHOTON CORRELATION  
 SPECTROSCOPY  
 12/26/1996 - 11/30/2001 FY01: \$0 Total: \$294,000  
*Prin. Invest.:* J A LOCK  
*Tech. Officer:* GRC/A CHAIT  
*CASE Category:* 13 - PHYSICS

**NCC 3 581 CLEVELAND STATE UNIV 7491**  
 ULTRASONIC SCANNER CONTROL AND DATA ACQUISITION  
 12/09/1997 - 12/31/2001 FY01: \$187,893 Total: \$537,242  
*Prin. Invest.:* J HEMANN  
*Tech. Officer:* GRC/H KAUTZ  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 582 CLEVELAND STATE UNIV 7492**  
 THE DEVELOPMENT OF ENGINEERING TOMOGRAPHY FOR MONOLITHIC  
 AND COMPOSITE MATERIALS AND COMPONENTS  
 12/09/1997 - 12/31/2001 FY01: \$186,340 Total: \$520,141  
*Prin. Invest.:* J HEMANN  
*Tech. Officer:* GRC/H E KAUTZ  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 595 CLEVELAND STATE UNIV 7493**  
 SIMULATION AND PERFORMANCE ANALYSIS OF HYBRID SATE LLITE-  
 TERRESTRIAL NETWORKS  
 01/12/1998 - 02/04/2002 FY01: \$149,547 Total: \$376,038  
*Prin. Invest.:* V K KONANGI  
*Tech. Officer:* GRC/T M WALLETT, GRC/K B BHASIN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 631 CLEVELAND STATE UNIV 7494**  
 STUDY OF MAGNETIC DAMPING EFFECTS ON CONVECTION DU RING  
 DIRECTIONAL SOLIDIFICATION  
 06/26/1998 - 06/07/2000 FY01: \$0 Total: \$87,720  
*Prin. Invest.:* D N TEWARI  
*Tech. Officer:* GRC/H C DE GROH  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 647 CLEVELAND STATE UNIV 7495**  
 THE STUDY OF THE APPLICATION OF MODERN METHODS OF CONTROL  
 AND INTERFACE TO SCIENTIFIC EFFORTS  
 09/04/1998 - 09/30/2001 FY01: \$78,195 Total: \$246,970  
*Prin. Invest.:* G L KRAMERICH *Prin. Invest.:* NONE  
*Tech. Officer:* GRC/J M MULLINS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 699 CLEVELAND STATE UNIV 7496**  
 DEVELOPMENT OF DIGITAL CONTROL TECHNOLOGY FOR POWE R  
 MANAGEMENT AND DISTRIBUTION SYSTEMS  
 04/02/1999 - 05/14/2002 FY01: \$152,810 Total: \$437,669  
*Prin. Invest.:* Z GAO  
*Tech. Officer:* GRC/J F SOEDER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 740 CLEVELAND STATE UNIV 7497**  
 PHYSICAL PROPERTIES AND DURABILITY OF NEW MATERIAL S FOR SPACE  
 AND COMMERCIAL APPLICATIONS  
 10/21/1999 - 12/02/2002 FY01: \$45,011 Total: \$179,561  
*Prin. Invest.:* P HAMBOURGER  
*Tech. Officer:* GRC/S K RUTLEDGE  
*CASE Category:* 13 - PHYSICS

**NCC 3 749 CLEVELAND STATE UNIV 7498**  
 ADVANCED MATERIALS DEVELOPMENT, EVALUATION, AND MO DELING  
 FOR PROPULSION APPLICATIONS  
 02/14/2000 - 02/28/2002 FY01: \$125,823 Total: \$215,475  
*Prin. Invest.:* S N TEWARI  
*Tech. Officer:* GRC/M NATHAL  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 759 CLEVELAND STATE UNIV 7499**  
 EPR INVESTIGATIONS OF SILANE POLYMERIZATIONS EPR INVESTIGA-  
 TIONS OF SILANE POLYMERIZATIONS  
 12/30/1999 - 11/30/2001 FY01: \$113,279 Total: \$198,279  
*Prin. Invest.:* J MASNOVI  
*Tech. Officer:* GRC/S R LEVINE  
*CASE Category:* 43 - CHEMICAL ENGR

**NCC 3 761 CLEVELAND STATE UNIV 7500**  
 DESIGN LIFE METHODOLOGIES AND COMPUTER ALGORITHMS FOR THE  
 ANALYSIS OF COMPONENTS FABRIATED FROM CERA  
 01/11/2000 - 01/22/2002 FY01: \$65,009 Total: \$129,946  
*Prin. Invest.:* S F DUFFY  
*Tech. Officer:* GRC/J MANDERSCHIED  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 764 CLEVELAND STATE UNIV 7501**  
 SIMULATION AND PERFORMANCE ANALYSIS OF THE AERONAU TICAL  
 TELECOMMUNICATION NETWORK  
 01/14/2000 - 03/14/2002 FY01: \$74,222 Total: \$142,222  
*Prin. Invest.:* V K KONANGI  
*Tech. Officer:* GRC/R KERCZEWSKI  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 817 CLEVELAND STATE UNIV 7502**  
 NEW SOLID POLYMER ELECTROLYTES FOR IMPROVED LITHIU M  
 BATTERIES  
 07/24/2000 - 07/31/2001 FY01: \$90,509 Total: \$140,509  
*Prin. Invest.:* D G HEHEMANN  
*Tech. Officer:* GRC/A E HEPP  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 818 CLEVELAND STATE UNIV 7503**  
 STUDY ON DAMPING EFFECTS ON CONVECTION DURING DIRE CTIONAL  
 SOLIDIFICATION  
 07/24/2000 - 07/09/2001 FY01: \$0 Total: \$24,000  
*Prin. Invest.:* D TEWARI  
*Tech. Officer:* GRC/H DEGROH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 829 CLEVELAND STATE UNIV 7504**  
 SOLUTAL REDISTRIBUTION DURING DIRECTIONAL SOLIDIFI CATION  
 10/10/2000 - 08/31/2002 FY01: \$45,500 Total: \$45,500  
*Prin. Invest.:* S N TEWARI  
*Tech. Officer:* GRC/H C DE GROH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 853 CLEVELAND STATE UNIV 7505**  
 DEVELOPMENT OF HIGH TEMPERATURE LOW THERMAL CONDUCTIVITY  
 ENVIRONMENTAL & THERMAL BARRIER COATING  
 01/23/2001 - 01/21/2002 FY01: \$145,309 Total: \$145,309  
*Prin. Invest.:* S N TEWARI  
*Tech. Officer:* GRC/L GREENBAUER-SENG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 862 CLEVELAND STATE UNIV 7506**  
 ENVIRONMENTAL DURABILITY OF MATERIALS FOR SPACE TR ANSPORTA-  
 TION  
 02/14/2001 - 02/08/2002 FY01: \$134,058 Total: \$134,058  
*Prin. Invest.:* S TEWARI  
*Tech. Officer:* GRC/L A GREENBAUER-SENG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 869 CLEVELAND STATE UNIV 7507**  
 DYE-SENSITIZED SOLAR CELLS FOR SPACE POWER DYE-SENSITIZED  
 SOLAR CELLS FOR SPACE POWER  
 02/27/2001 - 02/27/2002 FY01: \$70,000 Total: \$70,000  
*Prin. Invest.:* J D HARRIS  
*Tech. Officer:* GRC/S G BAILEY  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 876 CLEVELAND STATE UNIV 7508**  
 FORMULATION & EVALUATION OF ORGANO-PHOSPHATE SOLUT IONS FOR  
 HIGH TEMPERATURE LUBRICATION  
 03/14/2001 - 05/20/2002 FY01: \$26,168 Total: \$26,168  
*Prin. Invest.:* J E GATICA  
*Tech. Officer:* GRC/W MORALES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 883 CLEVELAND STATE UNIV 7509**  
 ANALYSIS & CHARACTERIZATION OF ADVANCED MATERIALS FOR AEROSPACE APPLICATIONS  
 03/29/2001 - 03/31/2002 FY01: \$156,911 Total: \$156,911  
*Prin. Invest.:* D G NEHEMANN  
*Tech. Officer:* GRC/S G BAILEY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 908 CLEVELAND STATE UNIV 7510**  
 INVESTIGATION OF THE UTILIZATION OF MODERN INDUSTRIAL METHODS, PROCESSES, ERGONOMICS, AND THE INTER  
 08/13/2001 - 09/30/2002 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* G L KRAMERICH  
*Tech. Officer:* GRC/J MULLINS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 909 CLEVELAND STATE UNIV 7511**  
 REFLECTIVITY FREQUENCY RESPONSE OF IN-FIBER BRAGG GRATINGS  
 08/16/2001 - 07/31/2002 FY01: \$5,000 Total: \$5,000  
*Prin. Invest.:* J A LOCK  
*Tech. Officer:* GRC/G ADAMOVSKY  
*CASE Category:* 13 - PHYSICS

**NCC 3 914 CLEVELAND STATE UNIV 7512**  
 THERMAL TESTING OF FIBER OPTIC BRAGG GRATINGS UNDER DYNAMIC EXCITATION  
 09/18/2001 - 12/30/2001 FY01: \$8,000 Total: \$8,000  
*Prin. Invest.:* D FLANAGAN  
*Tech. Officer:* GRC/D ADAMOVSKY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10233 COLLEGE OF WOOSTER 7513**  
 MULTIWAVELENGTH OBSERVATIONS OF HERCULES X-1; EUVE MINI-GRANT, #97-MINIGRANT-002  
 01/25/2001 - 01/31/2002 FY01: \$9,639 Total: \$9,639  
*Prin. Invest.:* B BOROSON  
*Tech. Officer:* GSFC/K HARTNETT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10396 COLLEGE OF WOOSTER 7514**  
 WIND IONIZATION IN HIGH MASS X-RAY BINARIES FUSE  
 02/12/2001 - 02/14/2002 FY01: \$36,200 Total: \$36,200  
*Prin. Invest.:* B BOROSON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1433 COLLEGE OF WOOSTER 7515**  
 TURBIDITY AND UNIVERSALITY AROUND A LIQUID-LIQUID CRITICAL POINT  
 02/06/1998 - 01/31/2003 FY01: \$47,500 Total: \$149,500  
*Prin. Invest.:* D T JACOBS  
*Tech. Officer:* MSFC/J W POE  
*CASE Category:* 13 - PHYSICS

**NAG 3 1778 CUYAHOGA COMMUNITY COLLEGE 7516**  
 MENTOR INTERSHIP PARTNERSHIP PROGRAM  
 08/16/1995 - 09/30/2001 FY01: \$1,501 Total: \$99,822  
*Prin. Invest.:* R L MOSS  
*Tech. Officer:* GRC/F H YARRIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2370 CUYAHOGA COMMUNITY COLLEGE 7517**  
 SEMAA AND FIRST SCHOLARSHIP SUPPORT PROGRAM SEMAA AND FIRST SCHOLARSHIP SUPPORT PROGRAM  
 12/22/1999 - 03/31/2001 FY01: \$0 Total: \$14,000  
*Prin. Invest.:* S CHAND  
*Tech. Officer:* GRC/R LAWRENCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2496 CUYAHOGA COMMUNITY COLLEGE 7518**  
 CUYAHOGA COMMUNITY COLLEGE SCHOLARSHIP PROGRAM CUYAHOGA COMMUNITY COLLEGE SCHOLARSHIP PROGRAM  
 10/27/2000 - 06/11/2001 FY01: \$11,000 Total: \$11,000  
*Prin. Invest.:* T L BUTLER  
*Tech. Officer:* GRC/R F LAWRENCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 98099 CUYAHOGA COMMUNITY COLLEGE 7519**  
 REPLICA OF SCIENCE ENGRG MATH. & AEROSPACE ACADEMY (SEMAA) IN CONNECTION W/NAS3-97168 (MAEL)  
 06/30/1998 - 09/30/2001 FY01: \$3,383,297 Total: \$9,583,920  
*Prin. Invest.:* L L DARLING  
*Tech. Officer:* GRC/R LBONDURANT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4341 DENISON UNIV 7520**  
 LAB SPECTROSCOPY CH4 AND H2  
 04/23/1997 - 11/30/2001 FY01: \$0 Total: \$112,808  
*Prin. Invest.:* D E MICKELSON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 2564 JOHN CARROLL UNIV 7521**  
 LIGHTING INNOVATIONS INST SUPPORT OF THE MEMS INCANDESCENT LIGHT SOURCE PROJECT  
 03/12/2001 - 01/31/2002 FY01: \$45,000 Total: \$45,000  
*Prin. Invest.:* R L HANSLER  
*Tech. Officer:* GRC/S WRBANEK  
*CASE Category:* 13 - PHYSICS

**NAG 2 1497 KENT STATE UNIV 7522**  
 THE EFFECTS OF MICROGRAVITY ON THE ECOLOGY OF BIOFILM BACTERIA  
 07/05/2001 - 06/30/2002 FY01: \$90,664 Total: \$90,664  
*Prin. Invest.:* L G LEFF  
*Tech. Officer:* ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2416 KENT STATE UNIV 7523**  
 LANDSCAPE PARAMETERIZATION AND CLASSIFICATION FOR VISUALIZATION OF LANDSAT ETM - OHIOVIEW  
 05/09/2000 - 07/20/2001 FY01: \$0 Total: \$105,000  
*Prin. Invest.:* D MUNRO-STASIUK  
*Tech. Officer:* GRC/T SCOTT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2539** **KENT STATE UNIV** **7524**  
LIQUID CRYSTAL BASED BEAM STEERING DEVICE AND OPTI CAL TELE-  
SCOPES  
02/08/2001 - 01/15/2004 FY01: \$211,293 Total: \$211,293  
*Prin. Invest.:* P BROS  
*Tech. Officer:* GRC/J POUCH  
*CASE Category:* 13 - PHYSICS

**NAG 5 11266** **KENT STATE UNIV** **7525**  
HYDRODYNAMIC INSTABILITIES AND EDDY-MEAN FLOW INTE RACTION IN  
THESOUTHERN OCEAN  
09/10/2001 - 07/14/2003 FY01: \$69,108 Total: \$69,108  
*Prin. Invest.:* D L WITTER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 3 563** **KENT STATE UNIV** **7526**  
THIN FILM BATTERIES  
06/17/1997 - 01/31/2001 FY01: \$0 Total: \$147,000  
*Prin. Invest.:* C VARCAS ABURTO, R URIBE  
*Tech. Officer:* GRC/A F HEPP  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 721** **KENT STATE UNIV** **7527**  
E-BEAM SENSITIVE POLYIMIDES E-BEAM SENSITIVE POLYIMIDES  
07/02/1999 - 09/21/2002 FY01: \$117,556 Total: \$242,654  
*Prin. Invest.:* R J TWIEG  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 734** **KENT STATE UNIV** **7528**  
THIN FILM TECHNOLOGY FOR SPACE POWER THIN FILM TECHNOLOGY  
FOR SPACE POWER  
09/23/1999 - 02/28/2001 FY01: \$0 Total: \$99,994  
*Prin. Invest.:* D CHOWDHURY  
*Tech. Officer:* GRC/A HEPP  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 3 52309** **KENT STATE UNIV** **7529**  
GRADUATE STUDENT RESEARCHERS PROGRM - HIGH PERFORM ANCE  
COMPUTING AND COMMUNICATION (HPPC)  
07/25/1995 - 10/01/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* S RYAN  
*Tech. Officer:* GRC/L SHAW  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 2 1017** **MIAMI UNIV** **7530**  
GRAVIPERCEPTION IN STARCH-DEFICIENT PLANTS IN BIOR ACK  
10/31/1995 - 12/31/2001 FY01: \$0 Total: \$297,282  
*Prin. Invest.:* J Z KISS  
*Tech. Officer:* ARC/C M WINGET, ARC/G C JAHNS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2436** **MIAMI UNIV** **7531**  
BUILDING AND ENHANCING AN OHIOVIEW GEOSPATIAL DIGI TAL LIBRARY  
FOR K-12, HIGHER EDUCATION AND THEGE  
05/22/2000 - 05/15/2001 FY01: \$0 Total: \$105,000  
*Prin. Invest.:* J MILLARD  
*Tech. Officer:* GRC/T M SCOTT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 1200** **MIAMI UNIV** **7532**  
ANALYSIS OF A NOVEL SENSORY MECHANISM IN ROOT PHOT OTROPISM  
09/05/2000 - 04/30/2002 FY01: \$141,559 Total: \$161,559  
*Prin. Invest.:* J Z KISS  
*Tech. Officer:* ARC/D REISS-BUBENHEIM, ARC/R W BERTHLOD  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 7789** **NORTHEASTERN OHIO UNIV COL OF MEDICINE** **7533**  
THE EFFECT OF HYPERGRAVITY ON BONE CELL CULTURES  
11/16/1998 - 07/31/2002 FY01: \$0 Total: \$374,743  
*Prin. Invest.:* W J LANDIS  
*Tech. Officer:* GSFC/M M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 3 2544** **OHIO NORTHERN UNIV** **7534**  
A FUZZY CONTROLLER REMOTE POWER SWITCH  
04/19/2001 - 07/08/2001 FY01: \$2,500 Total: \$2,500  
*Prin. Invest.:* F L GRISMORE  
*Tech. Officer:* GRC/R BUTTON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 2 1190** **OHIO STATE UNIV** **7535**  
THE REGULATION OF GROWTH IN THE DISTAL ELONGATION ZONE OF  
MAIZE ROOTS  
03/20/1998 - 04/30/2001 FY01: \$3,082 Total: \$264,202  
*Prin. Invest.:* M L EVANS, H ISHIKAWA  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 2 1411** **OHIO STATE UNIV** **7536**  
ANALYSIS OF THE INTERACTION OF ENVIRONMENTAL SIGNA L TRANSDUC-  
TION PATHWAYS USING TRASDUCTION  
06/21/2000 - 06/14/2002 FY01: \$170,087 Total: \$252,755  
*Prin. Invest.:* M L EVANS  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1979** **OHIO STATE UNIV** **7537**  
PLANETARY GEAR DYNAMICS & VIBRATION ISOLATION IN R OTORCRAFT  
TRANSMISSIONS  
10/24/1996 - 02/28/2001 FY01: \$0 Total: \$149,438  
*Prin. Invest.:* R G PARKER  
*Tech. Officer:* GRC/T L KANTZ  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2084** **OHIO STATE UNIV** **7538**  
INTELLIGENT FAULT TOLERANT ENGINE CONTROL INTELLIGENT FAULT  
TOLERANT ENGINE CONTROL  
10/30/1997 - 10/31/2000 FY01: \$0 Total: \$298,161  
*Prin. Invest.:* K M PASSINO  
*Tech. Officer:* GRC/T H GUO, GRC/J LITT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2138** **OHIO STATE UNIV** **7539**  
ULTRASOUND THERMAL FIELD IMAGING OF OPAQUE FLUIDS ULTRA  
SOUND THERMAL FIELD IMAGING OF OPAQUE FLUIDS  
03/06/1998 - 12/31/2002 FY01: \$81,700 Total: \$332,700  
*Prin. Invest.:* C D ANDERECK  
*Tech. Officer:* GRC/D W GRIFFIN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2157** **OHIO STATE UNIV** **7540**  
 UNSTEADY EFFECTS (INCLUDING FILM COOLING) ON HIGH PRESSURE  
 TUBINESS: AN ALALYTICAL AND EXPERIMENTAL  
 04/22/1998 - 09/30/2000 FY01: \$0 Total: \$110,843  
*Prin. Invest.:* M G DUNN, R S ABHARI  
*Tech. Officer:* GRC/K C CIVISKAS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2202** **OHIO STATE UNIV** **7541**  
 MAGNETIC NOZZLE STUDIES FOR ADVANCED ROCKET PROPULSION  
 09/25/1998 - 04/30/2001 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* P J TURCHI  
*Tech. Officer:* GRC/C H WILLIAMS  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 3 2215** **OHIO STATE UNIV** **7542**  
 DEVELOPMENT OF HIGH PERFORMANCE III-V SPACE PHOTOVOLTAICS ON  
 SI-BASED SUBSTRATES  
 12/24/1998 - 08/01/2001 FY01: \$0 Total: \$77,995  
*Prin. Invest.:* D A RINGEL  
*Tech. Officer:* GRC/D M WILT  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2233** **OHIO STATE UNIV** **7543**  
 CHARACTERIZATION OF COMPOSITES RESPONSE AT HIGH RATES OF  
 DEFORMATION  
 02/19/1999 - 11/12/2000 FY01: \$0 Total: \$45,000  
*Prin. Invest.:* A GILAT  
*Tech. Officer:* GRC/G D ROBERTS  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2316** **OHIO STATE UNIV** **7544**  
 MAGNETIC NOZZLE STUDIES FOR ADVANCED ROCKET PROPULSION  
 01/07/2000 - 01/31/2002 FY01: \$0 Total: \$129,998  
*Prin. Invest.:* P J TURCHI  
*Tech. Officer:* GRC/C H WILLIAMS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2339** **OHIO STATE UNIV** **7545**  
 COMPUTATIONAL NONEQUILIBRIUM PLASMA DYNAMICS COMPUTATIONAL  
 NONEQUILIBRIUM PLASMA DYNAMICS  
 02/23/2000 - 06/30/2002 FY01: \$20,000 Total: \$80,000  
*Prin. Invest.:* I ADAMOVICH  
*Tech. Officer:* GRC/S J SCHNEIDER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2410** **OHIO STATE UNIV** **7546**  
 DEMONSTRATING THE VALUE OF SATELLITE INFORMATION FOR  
 DEVELOPMENT AND PLANNING IN APPALACHIAN OHIO -  
 05/11/2000 - 05/31/2001 FY01: \$0 Total: \$105,000  
*Prin. Invest.:* J K KLEIN  
*Tech. Officer:* GRC/T M SCOTT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2412** **OHIO STATE UNIV** **7547**  
 OHIOVIEW WORK (2 PROPOSALS) DESIGN OF A USER FRIENDLY DATA  
 MINING APPROACH FOR GEO-REFERENCED IMAGE  
 05/04/2000 - 09/30/2001 FY01: \$0 Total: \$230,000  
*Prin. Invest.:* D L MORRISON  
*Tech. Officer:* GRC/T M SCOTT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2428** **OHIO STATE UNIV** **7548**  
 OHIO VIEW PRODUCT DEFINITION WORKSHOPS OHIO VIEW PRODUCT  
 DEFINITION WORKSHOPS  
 05/31/2000 - 07/30/2001 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* S DAVIS  
*Tech. Officer:* GRC/T M SCOTT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2438** **OHIO STATE UNIV** **7549**  
 PLASMA THRUSTERS RESEARCH (PARTS I AND III) PLASMA THRUSTERS  
 RESEARCH (PARTS I AND III)  
 05/19/2000 - 05/18/2002 FY01: \$0 Total: \$89,999  
*Prin. Invest.:* D Y YORK  
*Tech. Officer:* GRC/E J PENCIL  
*CASE Category:* 13 - PHYSICS

**NAG 3 2522** **OHIO STATE UNIV** **7550**  
 CHARACTERIZATION OF COMPOSITE RESPONSE AT HIGH RATES OF  
 LOADING  
 01/09/2001 - 11/30/2001 FY01: \$45,070 Total: \$45,070  
*Prin. Invest.:* GILAT  
*Tech. Officer:* GRC/R K GOLDBERG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2549** **OHIO STATE UNIV** **7551**  
 THERMALLY STABLE OHMIC CONTRACTS ON 4H & 6H-SiC MICRODEVICES  
 FOR HIGH TEMPERATURE APPLICATION  
 02/26/2001 - 01/06/2002 FY01: \$40,477 Total: \$40,477  
*Prin. Invest.:* L BRILLSON  
*Tech. Officer:* GRC/R S OKOJIE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 2996** **OHIO STATE UNIV** **7552**  
 EXTRACTION AND INTERPRETATION OF POLAR LITHOSPHERIC ANOMALIES  
 FROM COMBINED OERSTED AND MAGSAT DATA  
 07/10/1995 - 06/30/2000 FY01: -\$64 Total: \$174,912  
*Prin. Invest.:* R VON FRESE  
*Tech. Officer:* GSFC/P TAYLOR  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3525** **OHIO STATE UNIV** **7553**  
 QUASAR ABSORPTION IN THE UV: PROBING THE INTERGALAXY  
 11/13/1996 - 09/14/2002 FY01: \$0 Total: \$552,600  
*Prin. Invest.:* D H WEINBERG  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3983** **OHIO STATE UNIV** **7554**  
 MILLIMETER AND SUBMILLIMETER SPECTROSCOPY OF MOLECULAR  
 IMPORTANCE  
 03/03/1997 - 12/31/2001 FY01: \$130,677 Total: \$622,013  
*Prin. Invest.:* F C DEELUCIA  
*Tech. Officer:* GSFC/M J KURYLO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4250** **OHIO STATE UNIV** **7555**  
 SAR-BASED STRUCTURAL MAPPING OF THE TRANSANTARCTIC  
 03/24/1997 - 03/31/2001 FY01: \$0 Total: \$165,420  
*Prin. Invest.:* T J WILSON  
*Tech. Officer:* GSFC/S H GOGINENI  
*CASE Category:* 32 - GEOLOGICAL SCIENCE



**NAG 5 6001** **OHIO STATE UNIV** **7556**  
 SATELLITE AND MODEL ANALYSIS OF THE ATMOSPHERIC MOI LATITUDES  
 09/10/1997 - 07/31/2001 FY01: \$0 Total: \$368,150  
*Prin. Invest.:* D BROMWICH  
*Tech. Officer:* HQ/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6700** **OHIO STATE UNIV** **7557**  
 GFO-1 GEOPHYSICAL DATA RECORD AND ORBIT VERIFICATION FOR  
 GLOBAL CHANGES STUDIES  
 02/03/1998 - 11/30/2000 FY01: \$0 Total: \$284,175  
*Prin. Invest.:* C K SHUM  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6817** **OHIO STATE UNIV** **7558**  
 SPATIAL AND TEMPORAL VARIABILITY OF NET ANNUAL ACCUMULATION  
 AND CLIMATE IN GREENLAND  
 01/07/1998 - 01/31/2001 FY01: \$0 Total: \$305,113  
*Prin. Invest.:* E S MOSLEY-THOMPSON  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6818** **OHIO STATE UNIV** **7559**  
 DETERMINING GREENLAND ICESHEET ACCUMULATION RATES FROM  
 RADAR REMOTE SENSING  
 01/07/1998 - 12/31/2000 FY01: \$0 Total: \$265,722  
*Prin. Invest.:* K C JEZEK  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6838** **OHIO STATE UNIV** **7560**  
 SURFACE GPS MEASUREMENTS FOR ICE SHEET MASS BALANCE AND  
 FIDUCIAL OF CONTROL ALTIMETRY  
 01/08/1998 - 06/30/2000 FY01: -\$40,742 Total: \$79,908  
*Prin. Invest.:* G S HAMILTON  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6908** **OHIO STATE UNIV** **7561**  
 ATOMIC DATABASE FOR ASTROPHYSICS FROM THE IRON PROJECT  
 01/23/1998 - 01/31/2001 FY01: \$0 Total: \$138,000  
*Prin. Invest.:* A PRADHAN  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7116** **OHIO STATE UNIV** **7562**  
 STAR FORMATION AND THE INTERSTELLAR MEDIUM IN SO GALAXIES  
 USING ROSAT POINTED OBSERVATIONS  
 04/15/1998 - 07/14/2001 FY01: -\$7,753 Total: \$810  
*Prin. Invest.:* P ESKRIDGE  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7150** **OHIO STATE UNIV** **7563**  
 STANDARD & NONSTANDARD STELLAR MODELS: IMPLICATIONS FOR  
 CLUSTER AGES AND LATE EVOLUTIONARY STAGES  
 04/02/1998 - 03/14/2002 FY01: \$0 Total: \$300,142  
*Prin. Invest.:* M H PINSOONNEAULT  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7252** **OHIO STATE UNIV** **7564**  
 SUBMILLIMETER LABORATORY INVESTIGATIONS: SPECTROSCOPY &  
 COLLISIONS  
 05/07/1998 - 04/30/2002 FY01: \$0 Total: \$150,360  
*Prin. Invest.:* E HERBST  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7284** **OHIO STATE UNIV** **7565**  
 VERIFICATION AND IMPROVEMENT OF ERS-1/2 ALTIMETER GEOPHYSICAL  
 DATA RECORDERS FOR GLOBAL CHANGES  
 04/22/1998 - 06/30/2001 FY01: \$0 Total: \$132,378  
*Prin. Invest.:* C K SHUM  
*Tech. Officer:* GSFC/E J LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7286** **OHIO STATE UNIV** **7566**  
 SHIFTING BOUNDARIES OF THE ANTARCTIC ICE SHEET  
 10/19/1998 - 10/31/2002 FY01: \$95,723 Total: \$278,474  
*Prin. Invest.:* K C JEZEK  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7574** **OHIO STATE UNIV** **7567**  
 FUNDING FOR GRAVITY & TIME VARYING GRAVITY FIELD RECOVERY  
 (SENH98-0144)  
 08/04/1998 - 07/31/2002 FY01: \$50,000 Total: \$300,000  
*Prin. Invest.:* C K SHUM  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7589** **OHIO STATE UNIV** **7568**  
 SEARCHING FOR EXTRA-SOLAR SYSTEM PLANETS USING MULTICOLOR  
 MICROLENSING OBSERVATIONS  
 06/30/1998 - 03/31/2001 FY01: \$0 Total: \$142,400  
*Prin. Invest.:* D L DEPOY  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7685** **OHIO STATE UNIV** **7569**  
 EDUCATIONAL OUTREACH FOR THE LANDSAT-7 MISSION SCIENCE  
 OFFICE  
 09/11/1998 - 12/31/2001 FY01: \$0 Total: \$77,425  
*Prin. Invest.:* C MERRY  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7750** **OHIO STATE UNIV** **7570**  
 MODELING AND OBSERVATIONAL STUDY OF THE GLOBAL ATMOSPHERIC  
 IMPACTS OF ANTARCTIC SEA ICE ANOMALIES  
 10/20/1998 - 12/31/2002 FY01: \$84,049 Total: \$245,536  
*Prin. Invest.:* D H BROMWICH  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7848** **OHIO STATE UNIV** **7571**  
 THE GLACIER DYNAMICS AND MASS FLUX OF ANTARCTIC ICE STREAMS  
 FROM RADARSAT INSAR  
 11/23/1998 - 12/31/2002 FY01: \$45,400 Total: \$130,318  
*Prin. Invest.:* R R FORSTER  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7903**                      **OHIO STATE UNIV**                      **7572**  
 RADIATIVE AND COLLISIONAL ATOMIC DATA FOR UV AND OPTICAL  
 ASTRONOMY  
 12/10/1998 - 12/31/2001      FY01: \$57,000                      Total: \$157,868  
*Prin. Invest.:* D K PRADHAN  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8313**                      **OHIO STATE UNIV**                      **7573**  
 SUPPORT OF GRAVITATIONAL MICROLENSING FOLLOW-UP OBSERVA-  
 TIONS BY THE PLANET COLLABORATION  
 03/23/1999 - 02/28/2001      FY01: \$0                      Total: \$125,000  
*Prin. Invest.:* D L DEPOY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8397**                      **OHIO STATE UNIV**                      **7574**  
 PROBING THE PHYSICS OF VARIABLE ACTIVE GALACTIC NUCLEI  
 04/16/1999 - 04/30/2002      FY01: \$87,400                      Total: \$248,500  
*Prin. Invest.:* B M PETERSON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8423**                      **OHIO STATE UNIV**                      **7575**  
 ATOMIC PROCESSES IN X-RAY ASTROPHYSICS (ATP 98)  
 04/15/1999 - 04/14/2002      FY01: \$67,000                      Total: \$189,346  
*Prin. Invest.:* A K PRADHAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8455**                      **OHIO STATE UNIV**                      **7576**  
 BAYESIAN HIERARCHICAL AIR-SEA INTERACTION MODELING: DEVELOP-  
 MENT AND APPLICATION TO THE LABR  
 04/12/1999 - 05/31/2002      FY01: \$17,344                      Total: \$49,620  
*Prin. Invest.:* K N BERLINER *Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8608**                      **OHIO STATE UNIV**                      **7577**  
 RADARSAT: THE ANTARCTIC MAPPING PROJECT  
 06/10/1999 - 06/30/2001      FY01: \$0                      Total: \$432,220  
*Prin. Invest.:* K C JEZEK  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8632**                      **OHIO STATE UNIV**                      **7578**  
 MODELING GREENLAND OUTLET GLACIERS  
 06/28/1999 - 06/30/2001      FY01: \$0                      Total: \$70,761  
*Prin. Invest.:* C DER VEEN  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8913**                      **OHIO STATE UNIV**                      **7579**  
 ABSORBING OUTFLOWS IN AGN PI TRANSFER FROM SAO  
 06/22/2000 - 09/30/2001      FY01: \$125,000                      Total: \$217,314  
*Prin. Invest.:* S MATHUR  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 21 - MATHEMATICS

**NAG 5 9270**                      **OHIO STATE UNIV**                      **7580**  
 UNDERSTANDING BROAD ABSORPTION LINE QUASARS WITH ASCA  
 OBSERVATIONS (ADP - 99)  
 05/30/2000 - 05/31/2001      FY01: \$0                      Total: \$20,000  
*Prin. Invest.:* S MATHUR  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9335**                      **OHIO STATE UNIV**                      **7581**  
 A GEOPHYSICAL APPROACH TO STUDY THE ROLE OF ICE SHEET MASS  
 BALANCE IN GLOBAL SEA LEVEL CHANGE  
 03/30/2000 - 04/30/2002      FY01: \$177,872                      Total: \$297,461  
*Prin. Invest.:* C K SHUM  
*Tech. Officer:* GSFC/K PARTINGTON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9518**                      **OHIO STATE UNIV**                      **7582**  
 REGIONAL SCALE METEOROLOGICAL ANALYSIS & PREDICTION USING GPS  
 OCCULTATION & EOS DATA  
 05/10/2000 - 04/30/2002      FY01: \$258,542                      Total: \$432,015  
*Prin. Invest.:* D BROMWICH  
*Tech. Officer:* GSFC/R KAKAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9538**                      **OHIO STATE UNIV**                      **7583**  
 RADARSAT ANTARCTIC MAPPING PROJECT: ANTARCTIC IMAGING  
 CAMPAIGN 2  
 05/23/2000 - 05/31/2002      FY01: \$877,912                      Total: \$1,395,371  
*Prin. Invest.:* K JEZEK  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9596**                      **OHIO STATE UNIV**                      **7584**  
 A REGIONAL INTEGRATED MONITORING SYSTEM FOR THE HYDROLOGY  
 OF THE PAN-ARCTIC LAND MASS  
 05/11/2000 - 04/30/2002      FY01: \$41,910                      Total: \$68,336  
*Prin. Invest.:* D BROMWICH  
*Tech. Officer:* GSFC/P HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9883**                      **OHIO STATE UNIV**                      **7585**  
 LITHOSPHERIC ANALYSIS OF SATELLITE MAGNETOMETER OBSERVATION  
 08/24/2000 - 08/31/2002      FY01: \$0                      Total: \$25,000  
*Prin. Invest.:* R R VON FRESE  
*Tech. Officer:* GSFC/P TAYLOR  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9936**                      **OHIO STATE UNIV**                      **7586**  
 LIFTING THE SHROUD AROUND BROAD ABSORPTION LINE QUASARS WITH  
 XMM  
 09/06/2000 - 09/14/2002      FY01: \$16,300                      Total: \$37,300  
*Prin. Invest.:* S MATHUR  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9937**                      **OHIO STATE UNIV**                      **7587**  
 X-RAY SPECTRA OF  $Z > 4$  QUASARS  
 09/06/2000 - 09/14/2002      FY01: \$14,000                      Total: \$30,000  
*Prin. Invest.:* S MATHUR  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10112**                      **OHIO STATE UNIV**                      **7588**  
 MAPPING ANTARCTIC ICE SHEET MARGINS AND SNOW MELT ZONES OVER  
 DECADAL TIME SCALES FOR UNDERSTANDING  
 11/21/2000 - 11/14/2001      FY01: \$88,537                      Total: \$88,537  
*Prin. Invest.:* K JEZEK  
*Tech. Officer:* GSFC/K PARTINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10160**                      **OHIO STATE UNIV**                      **7589**  
 SATELLITE AND MODEL ANALYSIS OF THE ATMOSPHERIC MOISTURE  
 BUDGET IN HIGH LATITUDES  
 12/20/2000 - 12/31/2001      FY01: \$78,767                      Total: \$78,767  
*Prin. Invest.:* D BROMWICH  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10199**                      **OHIO STATE UNIV**                      **7590**  
 AIRBORNE GEOPHYSICS AND REMOTE SENSING APPLIED TO STUDY  
 GREENLAND ICE DYNAMICS  
 12/21/2000 - 12/31/2001      FY01: \$63,604                      Total: \$63,604  
*Prin. Invest.:* B CSATHO  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10207**                      **OHIO STATE UNIV**                      **7591**  
 SUBMILLIMETER LABORATORY INVESTIGATIONS: SPECTROSCOPY &  
 COLLISIONS  
 01/03/2001 - 12/31/2001      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* E HERBST  
*Tech. Officer:* GSFC/G STRINGFELLO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10266**                      **OHIO STATE UNIV**                      **7592**  
 SPATIAL AND TEMPORAL VARIABILITY OF GREENLAND ACCUMULATION  
 AND CLIMATE FROM THE PARCA CORES  
 01/09/2001 - 12/31/2001      FY01: \$70,217                      Total: \$70,217  
*Prin. Invest.:* E MOSLEY-THOMPSON  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10275**                      **OHIO STATE UNIV**                      **7593**  
 DETERMINING ICE SHEET ACCUMULATION RATES FROM RADAR REMOTE  
 SENSING  
 01/12/2001 - 01/14/2002      FY01: \$54,903                      Total: \$54,903  
*Prin. Invest.:* K JEZEK  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10320**                      **OHIO STATE UNIV**                      **7594**  
 FUV SPECTROSCOPY OF NARROW LINE SEYFERT 1 GALAXIES FUSE 2000  
 01/30/2001 - 01/31/2002      FY01: \$83,900                      Total: \$83,900  
*Prin. Invest.:* S MATHUR  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10619**                      **OHIO STATE UNIV**                      **7595**  
 NEAR REAL-TIME GPS/LEO PRECISION ORBIT DETERMINATION FOR  
 OPERATIONAL WEATHER FORECASTING WITH GPS  
 03/19/2001 - 03/31/2002      FY01: \$117,889                      Total: \$117,889  
*Prin. Invest.:* D BRZEZINSKA  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10678**                      **OHIO STATE UNIV**                      **7596**  
 SEARCHING FOR EXTRA-SOLAR SYSTEM PLANETS USING GRAVITATIONAL  
 MICROLENSING  
 04/24/2001 - 04/30/2002      FY01: \$45,000                      Total: \$45,000  
*Prin. Invest.:* D DEPOY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10978**                      **OHIO STATE UNIV**                      **7597**  
 MODELLING GREENLAND OUTLET GLACIERS  
 05/29/2001 - 05/31/2002      FY01: \$41,805                      Total: \$41,805  
*Prin. Invest.:* C V DER VEEN  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 8 1267**                      **OHIO STATE UNIV**                      **7598**  
 REVERSE MICELLE BASED SYNTHESIS OF MICROPOROUS MATERIALS IN  
 MICROGRAVITY  
 05/23/1996 - 05/31/2000      FY01: \$0                      Total: \$332,000  
*Prin. Invest.:* P K DUTTA, R ANSARI, C T KRESGE  
*Tech. Officer:* MSFC/P DOTY, MSFC/R W ALLEN  
*CASE Category:* 13 - PHYSICS

**NAG 8 1441**                      **OHIO STATE UNIV**                      **7599**  
 GRAVITATIONAL EFFECTS IN BOSE-EINSTEIN CONDENSATE OF ATOMIC  
 GASES  
 03/06/1998 - 01/31/2003      FY01: \$71,250                      Total: \$213,250  
*Prin. Invest.:* T HO  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 8 1470**                      **OHIO STATE UNIV**                      **7600**  
 R/S INTERDIFFUSION IN THE PRESENCE OF FREE CONVECTION  
 03/26/1998 - 01/31/2002      FY01: \$66,500                      Total: \$240,833  
*Prin. Invest.:* P K GUPTA  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1670**                      **OHIO STATE UNIV**                      **7601**  
 FUNDAMENTAL STUDIES OF CRYSTAL GROWTH OF MICROPOROUS  
 MATERIALS  
 06/05/2000 - 11/30/2003      FY01: \$138,700                      Total: \$215,917  
*Prin. Invest.:* P K DUTTA  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1765**                      **OHIO STATE UNIV**                      **7602**  
 QUANTUM GASES IN NOVEL ENVIRONMENTS: OPTICAL LATTICES AND  
 RAPIDLY ROTATING POTENTIALS  
 05/01/2001 - 04/30/2004      FY01: \$25,000                      Total: \$25,000  
*Prin. Invest.:* T L HO  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 9 1005**                      **OHIO STATE UNIV**                      **7603**  
 ORIENTATION FOR INTERVENTION: SUPPORTING MISSION AWARENESS IN  
 SPACE OPERATIONS  
 05/06/1998 - 06/30/2002      FY01: \$32,292                      Total: \$242,292  
*Prin. Invest.:* D D WOODS  
*Tech. Officer:* JSC/B J WOOLFORD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG10 263**                      **OHIO STATE UNIV**                      **7604**  
 DEVELOPMENT OF GRAVITY SENSITIVE PLANT CELLS CERATODON IN  
 MICROGRAVITY  
 07/14/1999 - 11/30/2001      FY01: \$138,359                      Total: \$325,354  
*Prin. Invest.:* F SACK  
*Tech. Officer:* KSC/G ETHERIDGE  
*CASE Category:* 55 - AGRICULTURE

**NAG13 00039**                      **OHIO STATE UNIV**                      **7605**  
 HIERARCHICAL SEGMENTATION AND ATTRIBUTION OF HIGH RESOLUTION  
 AERIAL IMAGES  
 05/19/2000 - 09/30/2001      FY01: \$0                      Total: \$200,000  
*Prin. Invest.:* K BOYER  
*Tech. Officer:* SSC/B DAVIS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAS 3 97030**                      **OHIO STATE UNIV**                      **7606**  
 NRA-ULTRASONIC CHARACTERIZATION OF FATIGUE MICRO DAMAGE  
 11/08/1996 - 09/30/1999      FY01: \$0                      Total: \$110,977  
*Prin. Invest.:* S ROKHLIN, G MAJOR, D WILLIARD  
*Tech. Officer:* GRC/D J ROTH  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCA 3 206**                      **OHIO STATE UNIV**                      **7607**  
 GLENNAN MICROSYSTEMS INITIATIVE FY 01 PROJECTS  
 02/26/2001 - 11/30/2001      FY01: \$140,000                      Total: \$140,000  
*Prin. Invest.:* P DUTTA  
*Tech. Officer:* GRC/M V ZELLER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 2 1130**                      **OHIO STATE UNIV**                      **7608**  
 DISTRIBUTED & COOPERATIVE PROBLEM-SOLVING IN AIR CARRIER & AIR  
 TRAFFIC COMMUNICATION  
 08/04/1999 - 07/14/2000      FY01: -\$1,784                      Total: \$91,216  
*Prin. Invest.:* C E MCCOY  
*Tech. Officer:* ARC/J M ORASANU  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 1261**                      **OHIO STATE UNIV**                      **7609**  
 VISUALIZING TIME-VARYING DATA DISTRIBUTIONS IN EOS APPLICATIONS  
 04/26/2001 - 02/28/2002      FY01: \$47,478                      Total: \$47,478  
*Prin. Invest.:* H SHEN  
*Tech. Officer:* ARC/D L KAO, ARC/V R WATSON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 3 434**                      **OHIO STATE UNIV**                      **7610**  
 DEVELOPMENT OF LOW REYNOLDS NUMBER HEAT EXCHANGERS  
 09/25/1995 - 12/02/2000      FY01: \$0                      Total: \$824,635  
*Prin. Invest.:* R N CHRISTENSEN, Y GUEZENNEC  
*Tech. Officer:* GRC/T T MOCKLER, GRC/D BENTS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 733**                      **OHIO STATE UNIV**                      **7611**  
 DESIGN AND DEVELOPMENT OF SMART ELECTROMAGNETIC STRUCTURES  
 09/22/1999 - 09/30/2000      FY01: -\$2,005                      Total: \$16,495  
*Prin. Invest.:* G WASHINGTON  
*Tech. Officer:* GRC/R ROMANOVSKY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 899**                      **OHIO STATE UNIV**                      **7612**  
 DEVELOPMENT OF ADVANCED SOLAR CELL TECHNOLOGY DEVELOPMENT  
 OF ADVANCED SOLAR CELL TECHNOLOGY  
 06/20/2001 - 06/30/2002      FY01: \$23,000                      Total: \$23,000  
*Prin. Invest.:* S A RINGEL  
*Tech. Officer:* GRC/E B CLARK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 3 52355**                      **OHIO STATE UNIV**                      **7613**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT  
 RESEARCH PROGRAM  
 06/24/1999 - 06/30/2000      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* S A RINGEL  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 3 52363**                      **OHIO STATE UNIV**                      **7614**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT  
 RESEARCH PROGRAM  
 06/12/2000 - 09/18/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* P K DUTTA  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 43 - CHEMICAL ENGR

**NGT 3 52373**                      **OHIO STATE UNIV**                      **7615**  
 GRADUATE STUDENT RESEARCH  
 06/07/2001 - 08/31/2002      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* V V SUBRAMANIAM  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 30012**                      **OHIO STATE UNIV**                      **7616**  
 AN ICE CORE PALEOCLIMATE STUDY OF WINDY DOME, FRANT DEVELOP-  
 MENT OF A SEA ICE PROXY FROM SATELLITE AND  
 10/14/1996 - 08/31/2000      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* L G THOMPSON  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30042**                      **OHIO STATE UNIV**                      **7617**  
 BIOMASS BURNING IN TROPICAL RAIN FORESTS: AN ANALY AND LAND  
 USE PRACTICE TO ASSESS BURNING PATTERNS  
 10/17/1996 - 09/30/2000      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* L BROWN/SORRENSEN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30178**                      **OHIO STATE UNIV**                      **7618**  
 METEOROLOGICAL PROCESSES CONTROLLING THE SPATIAL & TEMPORAL  
 VARIABILITY OF NET ANNUAL ACCUMULATION:  
 08/12/1999 - 08/31/2002      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* E MOSLEY-THOMPSON  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50015** **OHIO STATE UNIV** **7619**  
 THE ROLE OF ELECTRICAL EVENTS IN CONTROLLING DIFFE GRAVI-  
 TROPISM IN THE DEZ  
 09/06/1997 - 12/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* M EVANS  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 51** **OHIO STATE UNIV** **7620**  
 ACID SULFATE DRAINAGE: A MODEL SYSTEM FOR UNDERSTANDING  
 POTENTIAL BIOMINERALIZATION PROCESSON MARS  
 07/11/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* J BIGHAM  
*Tech. Officer:* JSC/R MORRIS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 1 2036** **OHIO UNIV** **7621**  
 MODIFYING & TESTING ATC CONTROLLER INTERFACE (CI) FOR DATA LINK  
 CLEARANCES  
 03/24/1998 - 02/28/2001 FY01: \$0 Total: \$386,981  
*Prin. Invest.:* J M RANKIN, P MATTSON  
*Tech. Officer:* LARC/R W WILLS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 2099** **OHIO UNIV** **7622**  
 HAPTICS-AUGMENTED NASA EDUCATION VIA THE INTERNET  
 08/10/1998 - 09/30/1999 FY01: -\$1,540 Total: \$28,492  
*Prin. Invest.:* R L WILLIAMS  
*Tech. Officer:* LARC/J M SEATON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 2299** **OHIO UNIV** **7623**  
 HAPTICS-AUGMENTED SCIENCE EDUCATION  
 05/16/2000 - 05/15/2001 FY01: \$12,679 Total: \$30,430  
*Prin. Invest.:* R L WILLIAMS  
*Tech. Officer:* LARC/J M SEATON  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 1 01094** **OHIO UNIV** **7624**  
 HAPTICS-AUGMENTED EDUCATION  
 06/01/2001 - 05/31/2004 FY01: \$14,000 Total: \$14,000  
*Prin. Invest.:* R L WILLIAMS  
*Tech. Officer:* LARC/J M SEATON  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2385** **OHIO UNIV** **7625**  
 WEATHER DATALINK RESEARCH WEATHER DATALINK RESEARCH  
 04/05/2000 - 07/10/2001 FY01: \$0 Total: \$199,976  
*Prin. Invest.:* T A SKIDMORE  
*Tech. Officer:* GRC/P E POINSATTE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2575** **OHIO UNIV** **7626**  
 AVIATION WEATHER DATALINK FLIGHT TEST EVALUATIONS RESEARCH  
 AND DEVELOPMENT  
 03/23/2001 - 10/19/2001 FY01: \$49,723 Total: \$49,723  
*Prin. Invest.:* T SKIDMORE  
*Tech. Officer:* GRC/P POINSATTE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2612** **OHIO UNIV** **7627**  
 FLIGHT DEMONSTRATION OF A 3-DIMENSIONAL COCKPIT DISPLAY OF  
 TRAFFIC INFORMATION  
 07/31/2001 - 09/30/2002 FY01: \$35,867 Total: \$35,867  
*Prin. Invest.:* J RANKIN  
*Tech. Officer:* GRC/B BREM  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 7645** **OHIO UNIV** **7628**  
 FUNDING FOR 'ANALYSIS OF POLAR ORBITED, SUNSAT, MARSAT, AND  
 POGO DATA' (SENH98-0063)  
 08/27/1998 - 06/30/2002 FY01: \$37,000 Total: \$224,500  
*Prin. Invest.:* R R VON FRESE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10349** **OHIO UNIV** **7629**  
 PROPOSAL #537 DEVELOP A DYNAMIC RESOURCE MANAGEMENT  
 APPROACH FOR ADAPTIVE AGENT-BASED REAL-TIME  
 02/05/2001 - 02/14/2002 FY01: \$193,919 Total: \$193,919  
*Prin. Invest.:* L WELCH  
*Tech. Officer:* GSFC/B B PFARR  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 11025** **OHIO UNIV** **7630**  
 COOLING FLOWS AND RADIO GALAXIES: THE CHANDRA ERA (LTSA 2000)  
 06/13/2001 - 06/14/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* B MCNAMARA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1789** **OHIO UNIV** **7631**  
 FUTURE IMPROVEMENT OF A TRAJECTORY LINEARIZATION FLIGHT  
 CONTROLLER FOR X-33  
 03/06/2001 - 12/31/2001 FY01: \$34,833 Total: \$34,833  
*Prin. Invest.:* J J ZHU  
*Tech. Officer:* MSFC/D R KRUPP/C E HALL  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAS 5 00185** **OHIO UNIV** **7632**  
 ADAPTIVE MANAGEMENT OF COMPUTING & NETWORK RESOURCES FOR  
 REAL-TIME SENSOR WEBS.  
 08/31/2000 - 08/30/2002 FY01: \$154,681 Total: \$342,988  
*Prin. Invest.:* L WELCH, NONE  
*Tech. Officer:* GSFC/B PFARR  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 8 01105** **OHIO UNIV** **7633**  
 THEORETICAL VALIDATION, FEV & IMPLEMENTATION OF ALGORITHMS, &  
 PREFORMING SIMULATION TESTING  
 05/18/2001 - 09/30/2005 FY01: \$369,018 Total: \$369,018  
*Prin. Invest.:* J ZHU, D A LAWRENCE  
*Tech. Officer:* MSFC/J M RANKIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 1 351** **OHIO UNIV** **7634**  
 A DTED TERRAIN AVOIDANCE SYS UTILIZING GPS AND RADAR ALTIMETER  
 MONITORING, RE NRA 98-LARC-10  
 09/01/1999 - 12/31/2002 FY01: \$586,000 Total: \$953,000  
*Prin. Invest.:* J M RANKIN, D DIGGLE, M U DE HAAG  
*Tech. Officer:* LARC/R M HUESCHEN, LARC/R V PARRISH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 827** **OHIO UNIV** **7635**  
 DISTRIBUTED & COOPERATIVE PROBLEM-SOLVING IN THE NATIONAL  
 AVIATION SYSTEM  
 09/20/1993 - 05/31/2000 FY01: \$0 Total: \$341,713  
*Prin. Invest.:* C E MCCOY, P J SMITH  
*Tech. Officer:* ARC/J M ORASANU  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1030** **OHIO UNIV** **7636**  
 WEATHER-RELATED PILOT DECISION-MAKING CONTEXT CATEGORIZATION  
 03/25/1998 - 12/31/2000 FY01: \$0 Total: \$132,386  
*Prin. Invest.:* C E MCCOY  
*Tech. Officer:* ARC/J M ORASANU  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 1258** **OHIO UNIV** **7637**  
 EXTREME DECISION-MAKING: WEATHER RELATED PILOT DECISION-  
 MAKING  
 04/20/2001 - 11/14/2001 FY01: \$77,199 Total: \$77,199  
*Prin. Invest.:* C E MCCOY  
*Tech. Officer:* ARC/J ORASANU  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 3 680** **OHIO UNIV** **7638**  
 A STUDY OF MULTI-USER TCPTRAFFIC OVER ACTS A STUDY OF MULTI-  
 USER TCPTRAFFIC OVER ACTS  
 03/10/1999 - 05/15/2001 FY01: \$3,312 Total: \$90,935  
*Prin. Invest.:* S OSTERMANN  
*Tech. Officer:* GRC/W D IVANCIC  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10453** **OHIO WESLEYAN UNINERITY** **7639**  
 INFORMAL & UNDERGRADUATE SCIENCE EDUCATION OPPORTUNITIES AT  
 OHIO WESLEYAN UNIV  
 02/28/2001 - 02/28/2003 FY01: \$1,373,000 Total: \$1,373,000  
*Prin. Invest.:* W LOUTHAN  
*Tech. Officer:* HQ/J ROSENDHAL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 1747** **UNIV OF AKRON** **7640**  
 DEVELOPMENTS IN COUPLED DEFORMATION-DAMAGE AND FRACTURE  
 MODELING FOR LIFE PREDICTIONS OF STRUCTURES  
 05/19/1995 - 09/15/2000 FY01: \$0 Total: \$557,413  
*Prin. Invest.:* A F SALEEB  
*Tech. Officer:* GRC/S M ARNOLD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2182** **UNIV OF AKRON** **7641**  
 FAST POTENTIAL THEORETIC METHODS FOR FAR-FIELD SOUND RADIATION  
 PROBLEMS  
 07/18/1998 - 06/30/2001 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* D I HAIHARAN  
*Tech. Officer:* GRC/J R SCOTT  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2278** **UNIV OF AKRON** **7642**  
 IMPLEMENTATION AND PERFORMANCE EVALUATION OF A DC/DC  
 CONVERTER FOR CRYOGENIC APPLICATIONS  
 07/15/1999 - 06/23/2000 FY01: -\$5,981 Total: \$24,019  
*Prin. Invest.:* M E ELBULUK  
*Tech. Officer:* GRC/R L PATTERSON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2279** **UNIV OF AKRON** **7643**  
 SYSTEM AND PROPAGATION AVAILABILITY ANALYSIS FOR NASA'S  
 ADVANCED AIR TRANSPORTATION TECHNOLOGIES (A  
 07/12/1999 - 08/14/2001 FY01: \$0 Total: \$74,100  
*Prin. Invest.:* O C UGWEJE  
*Tech. Officer:* GRC/R J ACOSTA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2312** **UNIV OF AKRON** **7644**  
 DISCRETE-FREQUENCY NOISE PREDICTIONS IN AN ANNULAR CASCADE  
 USING TIGER/AWAKEN/TURBO/LINFLUX  
 12/29/1999 - 12/31/2000 FY01: -\$2,567 Total: \$17,236  
*Prin. Invest.:* S SAWYER  
*Tech. Officer:* GRC/E ENVIA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2390** **UNIV OF AKRON** **7645**  
 HIGH TEMPERATURE ADHESIVES AND STRUCTURAL RESINS HIGH  
 TEMPERATURE ADHESIVES AND STRUCTURAL RESINS  
 04/12/2000 - 06/30/2001 FY01: \$24,468 Total: \$65,832  
*Prin. Invest.:* F W HARRIS  
*Tech. Officer:* GRC/C CHUANG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2420** **UNIV OF AKRON** **7646**  
 A NEW FINITE ELEMENT FORMULATION ANALYSIS OF AEROSPACE  
 STRUCTURES  
 05/11/2000 - 02/25/2002 FY01: \$50,034 Total: \$120,031  
*Prin. Invest.:* S N PATNAIK  
*Tech. Officer:* GRC/G R HALFORD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2442** **UNIV OF AKRON** **7647**  
 STEREO IMAGING VELOCIMETRY OF MIXING DRIVEN BY BUOYANCY  
 INDUCED FLOW FIELDS  
 05/23/2000 - 11/30/2003 FY01: \$35,561 Total: \$72,994  
*Prin. Invest.:* C BATUR  
*Tech. Officer:* GRC/W B DUVAL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2444** **UNIV OF AKRON** **7648**  
 NE OHIO URBAN GROWTH MONITORING AND MODELING PROTOTYPE  
 05/24/2000 - 09/30/2001 FY01: \$0 Total: \$105,000  
*Prin. Invest.:* D SIEBERT  
*Tech. Officer:* GRC/T M SCOTT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2494** **UNIV OF AKRON** **7649**  
 COMPRESSOR SURGE INCEPTION AND SURGE DISCRIMINATION FROM  
 TIME SERIES  
 11/08/2000 - 04/27/2002 FY01: \$44,519 Total: \$44,519  
*Prin. Invest.:* H K QAMMAR  
*Tech. Officer:* GRC/M BRIGHT  
*CASE Category:* 21 - MATHEMATICS

**NAG 3 2512**                      **UNIV OF AKRON**                      **7650**  
GRAVITATIONAL INFLUENCES ON FLAME PROPAGATION THROUGH NON-UNIFORM PRE-MIXED GAS SYSTEMS  
12/08/2000 - 11/30/2004      FY01: \$16,688                      Total: \$16,688  
*Prin. Invest.:* D PERRY  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2537**                      **UNIV OF AKRON**                      **7651**  
APPLICATION OF PERIODIC BOUNDARY CONDITIONS IN THE AEROACOUSTICS OF TURBOMACHINERY  
02/08/2001 - 01/31/2004      FY01: \$15,000                      Total: \$15,000  
*Prin. Invest.:* S SAWYER  
*Tech. Officer:* GRC/E ENVIA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2566**                      **UNIV OF AKRON**                      **7652**  
INFRASTRUCTURE ADDITIONS FOR A POLYMER NANOTECHNOLOGY CENTER AT THE UNIV OF AKRON  
03/16/2001 - 03/18/2002      FY01: \$998,000                      Total: \$998,000  
*Prin. Invest.:* F N KELLEY  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2572**                      **UNIV OF AKRON**                      **7653**  
LOW MELT VISCOSITY RESINS FOR RESIN TRANSFER MOLDING  
03/22/2001 - 11/30/2001      FY01: \$44,637                      Total: \$44,637  
*Prin. Invest.:* F W HARRIS  
*Tech. Officer:* GRC/C CHUANG  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2632**                      **UNIV OF AKRON**                      **7654**  
DEVELOPMENT OF AN OPTICAL REAL-TIME POLARIMETRIC IMAGING SYSTEM FOR AEROSPACE APPLICATIONS  
06/07/2001 - 05/31/2002      FY01: \$58,423                      Total: \$58,423  
*Prin. Invest.:* G C GIAKOS  
*Tech. Officer:* GRC/D NG  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 3 441**                      **UNIV OF AKRON**                      **7655**  
COMPUTATIONAL TOOL AND TECHNIQUES FOR THE MACRO/MICROMECHANICAL ANALYSIS OF COMPOSITE STRUCTURES  
12/14/1995 - 09/03/2000      FY01: -\$42                      Total: \$562,686  
*Prin. Invest.:* A F SALEEB  
*Tech. Officer:* GRC/S M ARNOLD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 526**                      **UNIV OF AKRON**                      **7656**  
UTILIZATION OF FRACTIONAL ORDER SYSTEMS IN CONTROL IN ENGINEERING  
01/06/1997 - 12/31/2001      FY01: -\$511                      Total: \$84,569  
*Prin. Invest.:* T T HARTLEY  
*Tech. Officer:* GRC/C LORENZO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 567**                      **UNIV OF AKRON**                      **7657**  
DETERMINATION OF OPTIMUM HEATING ZONE LENGTH & CONTROL THERMOCOUPLE PLACEMENT FOR GRIDGMAN CRYSTAL G  
07/01/1997 - 07/31/2001      FY01: \$0                      Total: \$38,997  
*Prin. Invest.:* C BATUR  
*Tech. Officer:* GRC/W B DUVAL  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 578**                      **UNIV OF AKRON**                      **7658**  
ENHANCEMENTS TO NURBS-BASED FE AIRFOIL MODLER-SABER  
10/24/1997 - 06/24/2002      FY01: \$25,000                      Total: \$238,076  
*Prin. Invest.:* A F SALEEB, D A TROWBRIDGE  
*Tech. Officer:* GRC/S A THORP  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 682**                      **UNIV OF AKRON**                      **7659**  
IMPROVED HIGH TEMPERATURE POLYIMIDE COMPOSITES IMPROVED HIGH TEMPERATURE POLYIMIDE COMPOSITES  
02/24/1999 - 03/31/2001      FY01: \$21,894                      Total: \$393,389  
*Prin. Invest.:* R KEBY  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 716**                      **UNIV OF AKRON**                      **7660**  
THEORY, MODELING, SOFTWARE AND HARDWARE DEVELOPMENT IN COMPUTATIONAL MATERIALS SCIENCE  
06/25/1999 - 07/06/2003      FY01: \$142,222                      Total: \$358,694  
*Prin. Invest.:* G W YOUNG  
*Tech. Officer:* GRC/A CHAIT  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 738**                      **UNIV OF AKRON**                      **7661**  
ANALYSIS AND DESIGN OPTIMIZATION OF MULTI-LAYER PANEL STRUCTURES WITH NEURAL NETWORK AND REGRESSION  
10/20/1999 - 12/09/2000      FY01: \$0                      Total: \$86,086  
*Prin. Invest.:* S N PATNAIK  
*Tech. Officer:* GRC/D HOPKINS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 744**                      **UNIV OF AKRON**                      **7662**  
DESIGN, PROGRESSIVE MODELING, MANUFACTURE, AND TESTING OF COMPOSITE SHIELD FOR TURBINE ENGINE BLADE  
12/01/1999 - 11/17/2001      FY01: \$174,825                      Total: \$363,515  
*Prin. Invest.:* E SANCAKTAR  
*Tech. Officer:* GRC/G D ROBERTS  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 752**                      **UNIV OF AKRON**                      **7663**  
STUDIES ON STRESS-STRAIN RELATIONSHIPS OF POLYMERIC MATERIALS USED IN SPACE APPLICATIONS  
12/28/1999 - 09/30/2001      FY01: \$149,559                      Total: \$234,212  
*Prin. Invest.:* S C JANA  
*Tech. Officer:* GRC/A FREED  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 765**                      **UNIV OF AKRON**                      **7664**  
DEVELOPMENT OF EFFICIENT NUMERICAL ALGORITHMS FOR PREDICTION OF FAR-FIELD ACOUSTIC NOISE  
02/07/2000 - 01/02/2002      FY01: \$0                      Total: \$60,000  
*Prin. Invest.:* K KREIDER  
*Tech. Officer:* GRC/J SCOTT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 768**                      **UNIV OF AKRON**                      **7665**  
ADVANCED STRUCTURAL, IMPACT AND LIFE ANALYSES OF AEROSPACE COMPONENTS  
02/02/2000 - 02/25/2002      FY01: \$147,462                      Total: \$300,317  
*Prin. Invest.:* V K ARYA  
*Tech. Officer:* GRC/G R HALFORD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 788**                      **UNIV OF AKRON**                      **7666**  
 DEFORMATION AND LIFE OF POLYMER MATRIX COMPOSITE ( PMC)  
 FLYWHEEL ROTORS  
 03/27/2000 - 02/28/2002              FY01: \$49,000                      Total: \$96,932  
*Prin. Invest.:* D F SALEEB  
*Tech. Officer:* GRC/A ARNOLD  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 794**                      **UNIV OF AKRON**                      **7667**  
 HOMOPOLYROTAXANES AND HOMOPOLYROTAXAND NETWORKS OF PEO  
 04/20/2000 - 04/17/2002              FY01: \$85,698                      Total: \$165,798  
*Prin. Invest.:* C PUGH  
*Tech. Officer:* GRC/M MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 802**                      **UNIV OF AKRON**                      **7668**  
 POLYMER SOLID ELECTROLYTES FOR RECHARGEABLE BATTER IES  
 05/23/2000 - 05/17/2001              FY01: \$103,427                      Total: \$153,427  
*Prin. Invest.:* F W HARRIS  
*Tech. Officer:* GRC/M MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 808**                      **UNIV OF AKRON**                      **7669**  
 DEFECT DETECTION SCHEMES AND ALGORITHMIC DEVELOPE NT FOR  
 LARGE-SCALE SIMULATIONS OF DAMAGING VISCO-  
 06/16/2000 - 03/14/2002              FY01: \$297,000                      Total: \$397,000  
*Prin. Invest.:* A F SALEEB  
*Tech. Officer:* GRC/S M ARNOLD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 820**                      **UNIV OF AKRON**                      **7670**  
 MODEL-BASED CONTROL OF BATTERIES AND FUEL CELLS FO R LONGER  
 LIFE  
 08/09/2000 - 08/31/2001              FY01: \$60,644                      Total: \$112,644  
*Prin. Invest.:* D T HARTLEY  
*Tech. Officer:* GRC/M MANZO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 828**                      **UNIV OF AKRON**                      **7671**  
 RESEARCH AND DEVELOPMENT OF IMPROVED RF SIGNAL SWI TCHING  
 AND DISTRIBUTION TECHNIQUES IN CIVILAVIAT  
 09/29/2000 - 09/30/2001              FY01: \$24,739                      Total: \$24,739  
*Prin. Invest.:* O C UGWEJE  
*Tech. Officer:* GRC/H NGUYEN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 831**                      **UNIV OF AKRON**                      **7672**  
 DESIGN OPTIMIZATION OF STRUCTURAL PANELS WITH ANAL YSIS  
 APPROXIMATORS AT THE SUBPROBLEM LEVEL  
 12/12/2000 - 11/30/2001              FY01: \$86,804                      Total: \$86,804  
*Prin. Invest.:* S N PATNAIK  
*Tech. Officer:* GRC/D HOPKINS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 839**                      **UNIV OF AKRON**                      **7673**  
 RESEARCH IN INNOVATIVE USE OF SMART MATERIALS IN P ROPULSION  
 SYSTEM COMPONENTS-CONTROL AND EXPERIMEN  
 12/20/2000 - 12/31/2001              FY01: \$68,662                      Total: \$68,662  
*Prin. Invest.:* G SONG  
*Tech. Officer:* GRC/H LEE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 877**                      **UNIV OF AKRON**                      **7674**  
 HIGH TEMPERATURE FUEL CELLS  
 03/14/2001 - 03/05/2002              FY01: \$164,334                      Total: \$164,334  
*Prin. Invest.:* R K EBY  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 2 52228**                      **UNIV OF AKRON**                      **7675**  
 THE DEVELOPMENT OF NEURAL-NETWORK-ENHANCE ELECTRIC AL  
 INDEPENDANCE CARDIOGRAPH FOR HEMODYNAMIC.....  
 08/14/1997 - 02/28/2001              FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* B C TAYLOR  
*Tech. Officer:* ARC/P S COWINGS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 3 52327**                      **UNIV OF AKRON**                      **7676**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 06/10/1997 - 01/31/2001              FY01: -\$855                      Total: \$65,145  
*Prin. Invest.:* R K EBY  
*Tech. Officer:* GRC/FJ MONTEGANI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 3 52344**                      **UNIV OF AKRON**                      **7677**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 07/28/1998 - 05/31/2000              FY01: -\$25,925                      Total: \$40,075  
*Prin. Invest.:* R K EBY  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 3 52364**                      **UNIV OF AKRON**                      **7678**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT  
 RESEARCH PROGRAM  
 06/13/2000 - 06/30/2002              FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* D PERRY  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 1987**                      **UNIV OF CINCINNATI**                      **7679**  
 INVESTIGATION OF SIMPLEX NOZZLES FOR ADVANCED COMBUSTORS  
 11/06/1996 - 11/01/2000              FY01: -\$4                      Total: \$220,481  
*Prin. Invest.:* S M JENG  
*Tech. Officer:* GRC/R R TACINA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2087**                      **UNIV OF CINCINNATI**                      **7680**  
 DATA BASE FOR REALISTIC COMPUTATIONAL MODELING OF INLET/COM-  
 PRESSOR INTERFACES DURING RAPID FLOW TRAN  
 01/16/1998 - 12/31/2000              FY01: \$0                      Total: \$252,017  
*Prin. Invest.:* M SAJBEN  
*Tech. Officer:* GRC/G L COLE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2281**                      **UNIV OF CINCINNATI**                      **7681**  
 DEVELOPMENT OF A MACROPOROUS SI WICK BASED HEAT EN GINE FOR  
 HEAT TRANSFER FROM MICRO DEVICES  
 07/20/1999 - 01/20/2000              FY01: \$0                      Total: \$45,000  
*Prin. Invest.:* H HENDERSON  
*Tech. Officer:* GRC/S M GENG  
*CASE Category:* 45 - ELECTRICAL ENGR



**NAG 3 2437**                      **UNIV OF CINCINNATI**                      **7682**  
OHIOVIEW UNDERGRADUATE DISTANCE LEARNING PROTOTYPE OHIO-  
VIEW UNDERGRADUATE DISTANCE LEARNING PROTOTYP  
05/22/2000 - 09/30/2001      FY01: \$0                      Total: \$360,000  
*Prin. Invest.:* D BECK  
*Tech. Officer:* GRC/T SCOTT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2451**                      **UNIV OF CINCINNATI**                      **7683**  
MICROSCOPIC FLOW VISUALIZATION IN DE-MIXING FLUIDS DURING POLY-  
MERIC MEMBRANE FORMATION IN LOW-G  
06/01/2000 - 11/30/2003      FY01: \$95,000                      Total: \$145,000  
*Prin. Invest.:* W B KRANTZ  
*Tech. Officer:* GRC/H C DEGROH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2462**                      **UNIV OF CINCINNATI**                      **7684**  
INTEGRATED ATOMIZER/SWIRLER FOR LEAN DIRECT INJECT ION COMBUS-  
TION  
06/14/2000 - 06/04/2002      FY01: \$83,205                      Total: \$121,209  
*Prin. Invest.:* S JENG  
*Tech. Officer:* GRC/R R TACINA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2487**                      **UNIV OF CINCINNATI**                      **7685**  
A SIMULATION STUDY OF SIGE HBTS FOR POWER APPLICAT IONS AT  
MICROWAVE FREQUENCIES  
09/27/2000 - 09/07/2003      FY01: \$97,839                      Total: \$97,839  
*Prin. Invest.:* K P ROENKER  
*Tech. Officer:* GRC/G E PONCHAK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 6946**                      **UNIV OF CINCINNATI**                      **7686**  
ORDOVICIAN BIODIVERSITY: GEOGRAPHY AND ENVIRONMEN T  
02/12/1998 - 06/30/2000      FY01: -\$3                      Total: \$99,997  
*Prin. Invest.:* A I MILLER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7098**                      **UNIV OF CINCINNATI**                      **7687**  
USING LANDSAT DATA TO DEVELOP AN IMAGE BASED LOGIS TIC REGRES-  
SION MODEL FOR PREDICTING DEFORESTATIO  
05/28/1998 - 11/30/1999      FY01: -\$444                      Total: \$153,434  
*Prin. Invest.:* R C FROHN  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8986**                      **UNIV OF CINCINNATI**                      **7688**  
ULTRA-HOT WINDS FROM DO WHITE DWARFS - FUSE  
01/27/2000 - 01/31/2002      FY01: \$0                      Total: \$10,600  
*Prin. Invest.:* M L SITKO  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9418**                      **UNIV OF CINCINNATI**                      **7689**  
ORDOVICIAN BIODIVERSITY: GEOGRAPHY AND ENVIRONMENT  
04/11/2000 - 06/30/2002      FY01: \$50,900                      Total: \$98,848  
*Prin. Invest.:* A I MILLER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9475**                      **UNIV OF CINCINNATI**                      **7690**  
IR SPECTROSCOPY OF DUSTY PROTOSTELLAR DISKS  
04/20/2000 - 04/30/2002      FY01: \$60,000                      Total: \$120,000  
*Prin. Invest.:* M SITKO  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 13 - PHYSICS

**NAG 5 10384**                      **UNIV OF CINCINNATI**                      **7691**  
DYNAMICS AND CONTROL OF DISTRIBUTED SPACECRAFT.  
02/07/2001 - 01/14/2002      FY01: \$106,975                      Total: \$106,975  
*Prin. Invest.:* T WILLIAMS  
*Tech. Officer:* GSFC/D FOLTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 1 00123**                      **UNIV OF CINCINNATI**                      **7692**  
PROOF OF CONCEPT MICRO LOOP HEAT PIPE SYSTEM FOR S PACE  
SOLAR POWER SATELLITES  
06/16/2000 - 10/31/2000      FY01: \$0                      Total: \$150,000  
*Prin. Invest.:* H T HENDERSOM, S BHANSALI  
*Tech. Officer:* LARC/C L MOORE, GRC/E GALIHER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAS 3 01120**                      **UNIV OF CINCINNATI**                      **7693**  
DEVELOPMENT OF AN INTEGRATED LOOP HEAT PIPE, USING COHERENT  
POROUS SILICON AS A WICK  
03/21/2001 - 12/31/2001      FY01: \$119,999                      Total: \$119,999  
*Prin. Invest.:* T HENSEN SON  
*Tech. Officer:* GRC/E GOLLIHER  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 1139**                      **UNIV OF CINCINNATI**                      **7694**  
ADVANCED TRAJECTORY ANALYSIS WITH APPLICATION TO A IR TRAFFIC  
CONTROL  
09/03/1999 - 03/31/2002      FY01: \$55,427                      Total: \$102,612  
*Prin. Invest.:* G L SLATER  
*Tech. Officer:* ARC/T J DAVIS, ARC/D R ISAACSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 30108**                      **UNIV OF CINCINNATI**                      **7695**  
SPACE-TIME CHARACTERIZATION OF REMOTELY SENSED SOI L MOIS-  
TURE  
02/10/1998 - 09/30/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* S ISLAM  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50040**                      **UNIV OF CINCINNATI**                      **7696**  
A THEORY FOR THE EXACT INTEGRATION OF A REFERENCE L ATTITUDE  
PROGRAM FORMULATED AS PERTURBED JACOBI  
08/15/1997 - 08/31/2000      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* P L RICHARDSON  
*Tech. Officer:* GSFC/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50265**                      **UNIV OF CINCINNATI**                      **7697**  
NEGATIVE REGULATION OF OSTEOCLASTOGENESIS BY ESTRO GENS VIA  
DIRECT ACTIONS ON HEMATOPOIETIC CELLS  
07/07/1999 - 06/30/2001      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* J W PIKE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52801 UNIV OF CINCINNATI 7698**  
 GRADSTUDENT RESEARCH PROGRAM  
 07/28/1995 - 08/31/2000 FY01: -\$75 Total: \$87,925  
*Prin. Invest.:* K N GHIA  
*Tech. Officer:* MSFC/P K MCCONNAUGHEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2318 UNIV OF DAYTON 7699**  
 QUALITY OF SERVICE FOR REAL-TIME APPLICATIONS OVER NEXT  
 GENERATION DATA NETWORKS  
 02/09/2000 - 12/31/2000 FY01: \$0 Total: \$130,000  
*Prin. Invest.:* M ATIQUZZAMAN  
*Tech. Officer:* GRC/W D IVANCIC  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8451 UNIV OF DAYTON 7700**  
 DIAMOND, MOISSANITE, AND OSBORNITE: PHYSICS AND CHEMISTRY OF  
 INTER-STELLAR GRAIN FORMATION  
 04/09/1999 - 10/30/2000 FY01: -\$27 Total: \$21,973  
*Prin. Invest.:* A W PHELPS  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9804 UNIV OF DAYTON 7701**  
 STUDIES WITH SYNTHETIC INTERSTELLAR DIAMOND: RARE GAS  
 INCORPORATION AND PHASE STABILITY  
 07/14/2000 - 07/14/2002 FY01: \$30,000 Total: \$60,000  
*Prin. Invest.:* A PHELPS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9808 UNIV OF DAYTON 7702**  
 FE-MG CARBONATES AS A MONITOR PHASE OF CARBON DIOXIDE AND  
 OXYGEN FUGACITY ON MARS  
 07/17/2000 - 06/30/2002 FY01: \$23,000 Total: \$45,000  
*Prin. Invest.:* A M KOZIOL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAS 1 99148 UNIV OF DAYTON 7703**  
 OPERATIONS AND MODELING ANALYSIS  
 09/27/1999 - 10/31/2002 FY01: \$78,000 Total: \$150,500  
*Prin. Invest.:* C E EBELING  
*Tech. Officer:* LARC/W D MORRIS  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAS 8 98216 UNIV OF DAYTON 7704**  
 A NEW TECHNIQUE FOR ACHIEVING IMPACT VELOCITIES GREATER THAN  
 10KM/S  
 06/01/1998 - 07/31/2000 FY01: \$0 Total: \$299,558  
*Prin. Invest.:* A J PIEKUTOWSKI  
*Tech. Officer:* MSFC/G S OLSEN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 3 771 UNIV OF DAYTON 7705**  
 A FERROELECTRIC TUNABLE PRE-SELECT FILTER/LNA HYBRID CIRCUIT  
 WITH A VOLTAGE CONTROLLABLE IMPEDANCE  
 02/10/2000 - 11/08/2001 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* G SUBRAMANYAM  
*Tech. Officer:* GRC/F MIRANDA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 824 UNIV OF DAYTON 7706**  
 INFRARED AVIONICS SIGNAL DISTRIBUTION: EXPERIMENTAL SETUP AND  
 VERIFICATION  
 09/20/2000 - 03/02/2001 FY01: -\$28,000 Total: \$0  
*Prin. Invest.:* M ATIQUZZAMAN  
*Tech. Officer:* GRC/H NGUYEN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 882 UNIV OF DAYTON 7707**  
 DESIGN OF FREQUENCY AGILE COMPONENTS USING PATTERNED  
 FERROELECTRIC FILMS FOR K- AND KA-BAND APPLICATIONS  
 04/18/2001 - 12/04/2001 FY01: \$22,633 Total: \$22,633  
*Prin. Invest.:* G SUBRAMANYAM  
*Prin. Invest.:* NONE  
*Tech. Officer:* GRC/F A MIRANDA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 3 52351 UNIV OF DAYTON 7708**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT  
 RESEARCH PROGRAM  
 06/23/1999 - 07/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* V JAIN  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 2244 UNIV OF TOLEDO 7709**  
 DYNAMIC CONFIGURABLE OBJECT-ORIENTED FRAMEWORK FOR DISTRIBUTED  
 MULTI-MODAL COMPUTATIONAL AEROSPACE SYSTEMS SIMULATION  
 09/23/1999 - 08/31/2002 FY01: \$97,135 Total: \$207,104  
*Prin. Invest.:* A AETEH, V A REED  
*Tech. Officer:* LARC/W K GERDES  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 1967 UNIV OF TOLEDO 7710**  
 BANDGAP ENGINEERING AND CIRCUIT DESIGN FOR LOW TEMPERATURE  
 SPACE-BORNE POWER ELECTRONICS  
 09/07/1996 - 12/31/1999 FY01: \$0 Total: \$105,386  
*Prin. Invest.:* Y J KAPOOR, M A SMITH  
*Tech. Officer:* GRC/R L PATTERSON, GRC/J E DICKMAN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2264 UNIV OF TOLEDO 7711**  
 GEOMETRY INTEGRATION INTO NUMERICAL PROPULSION SYSTEMS  
 SIMULATION ARCHITECTURE  
 05/04/1999 - 04/26/2000 FY01: \$0 Total: \$60,000  
*Prin. Invest.:* A A AFEH, NONE  
*Tech. Officer:* GRC/G J FOLLEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2269 UNIV OF TOLEDO 7712**  
 DEVELOPMENT OF NOVEL METHODS FOR THE REDUCTION OF NOISE AND  
 WEIGHT IN HELICOPTER TRANSMISSIONS  
 06/29/1999 - 12/31/2001 FY01: \$205,000 Total: \$320,052  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/T L KRANTZ  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2282**                      **UNIV OF TOLEDO**                      **7713**  
 DATA MINING AND OPTIMIZATION TOOLS FOR DEVELOPING ENGINE  
 PARAMETER MODELS  
 07/20/1999 - 07/01/2000      FY01: \$0                      Total: \$55,985  
*Prin. Invest.:* A P DHAWAN  
*Tech. Officer:* GRC/J LITT  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2338**                      **UNIV OF TOLEDO**                      **7714**  
 CHEMISTRY OF AVIATION FUELS CHEMISTRY OF AVIATION FUELS  
 02/23/2000 - 12/31/2001      FY01: \$156,414              Total: \$289,414  
*Prin. Invest.:* K L DEWITT  
*Tech. Officer:* GRC/M RABINOWITZ  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 2408**                      **UNIV OF TOLEDO**                      **7715**  
 INVESTIGATION OF PRESSURIZED WAVE BEARING INVESTIGATION OF  
 PRESSURIZED WAVE BEARING  
 05/01/2000 - 02/17/2002      FY01: \$41,113              Total: \$76,138  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/D P FLEMING  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2409**                      **UNIV OF TOLEDO**                      **7716**  
 DISSEMINATION OF REMOTE SENSING TECHNOLOGY IN NORT HWEST  
 OHIO THROUGH EDUCATIONAL AND COMMUNITY OUTR  
 05/04/2000 - 09/30/2001      FY01: \$0                      Total: \$105,000  
*Prin. Invest.:* D P CZAJKOWSKI  
*Tech. Officer:* GRC/T M SCOTT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2502**                      **UNIV OF TOLEDO**                      **7717**  
 DEVELOPMENT OF COMPUTATIONAL AEROACOUSTICS CODE FO R JET  
 AND FAN NOISE AND FLOW PREDICTION  
 11/07/2000 - 10/31/2001      FY01: \$129,682              Total: \$129,682  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/E ENVIA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2505**                      **UNIV OF TOLEDO**                      **7718**  
 CFD SIMULATION OF CASING TREATMENT OF AXIAL FLOW C OMPRES-  
 SORS  
 11/13/2000 - 09/30/2001      FY01: \$134,650              Total: \$134,650  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/J ADMACZYK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2507**                      **UNIV OF TOLEDO**                      **7719**  
 DEVELOPMENT OF ADVANCED CASING TREATMENTS FOR FLOW  
 CONTROL  
 11/20/2000 - 11/05/2001      FY01: \$119,190              Total: \$119,190  
*Prin. Invest.:* T G KEITH, JR.  
*Tech. Officer:* GRC/M D HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2508**                      **UNIV OF TOLEDO**                      **7720**  
 ESTABLISHMENT OF A DATA EXCHANGE MECHANISM FOR ZOO MING IN  
 THE NPSS ARCHITECTURE  
 11/29/2000 - 11/15/2001      FY01: \$60,014              Total: \$60,014  
*Prin. Invest.:* A A AFJEH  
*Tech. Officer:* GRC/G J FOLLEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2565**                      **UNIV OF TOLEDO**                      **7721**  
 CRYOGENIC NANO ELECTRONICS FOR SPACE BORNE POWER SYSTEMS  
 03/14/2001 - 03/14/2002      FY01: \$22,293              Total: \$22,293  
*Prin. Invest.:* V J KAPOOR  
*Tech. Officer:* GRC/R L PATTERSON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2594**                      **UNIV OF TOLEDO**                      **7722**  
 SIMULATION OF COORDINATED STATELITE OPERATION  
 04/17/2001 - 04/02/2004      FY01: \$49,999              Total: \$49,999  
*Prin. Invest.:* D D JOHNSON  
*Tech. Officer:* GRC/J D STEGEMAN  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2641**                      **UNIV OF TOLEDO**                      **7723**  
 INVESTIGATION OF DYNAMIC FORCE/VIBRATION TRANSMISS ION CHAR-  
 ACTERISTICS OF FOUR-SQUARE TYPE GEAR DURA  
 07/16/2001 - 03/31/2002      FY01: \$31,295              Total: \$31,295  
*Prin. Invest.:* A KAHRAMAN  
*Tech. Officer:* GRC/R HANDSCHUH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2646**                      **UNIV OF TOLEDO**                      **7724**  
 ADVANCED CONCEPTS RESEARCH FOR FLYWHEEL TECHNOLOGY  
 APPLICATIONS  
 08/30/2001 - 02/28/2002      FY01: \$49,999              Total: \$49,999  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/R F BEACH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 3248**                      **UNIV OF TOLEDO**                      **7725**  
 THE EFFECT OF ROTATION ON STELLAR WINDS: ASYMMETRI ES AND  
 BIPOLAR STRUCTURES IN CIRCUMS  
 10/09/1996 - 08/31/2001      FY01: \$0                      Total: \$400,000  
*Prin. Invest.:* J E BJORKMAN  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3447**                      **UNIV OF TOLEDO**                      **7726**  
 EFFECTS OF ROTATION AND REVISED IONIZATION BALANCE MASS-LOSS  
 RATES FOR B STARS  
 10/10/1996 - 10/14/2000      FY01: \$0                      Total: \$150,000  
*Prin. Invest.:* K BJORKMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3790**                      **UNIV OF TOLEDO**                      **7727**  
 OPTICAL PROPERTIES OF CARBONACEOUS GRAIN MANTLE MA PURITIES  
 03/10/1997 - 02/28/2001      FY01: \$0                      Total: \$186,169  
*Prin. Invest.:* D N WITT  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4338** **UNIV OF TOLEDO** **7728**  
 NEAR-IR EMISSION AND ABSORPTION CHARACTERISTICS OF MANTLE MATERIALS  
 04/21/1997 - 03/31/2001 FY01: \$0 Total: \$156,000  
*Prin. Invest.:* D N WITT  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4957** **UNIV OF TOLEDO** **7729**  
 THE EVOLUTION OF INTERSTELLAR GAS - MASSIVE STARS  
 06/27/1997 - 06/30/2002 FY01: \$98,200 Total: \$420,154  
*Prin. Invest.:* S R FEDERMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6624** **UNIV OF TOLEDO** **7730**  
 MAPPING THE DIFFUSE GALACTIC LIGHT AND EXTENDED RED EMISSION WITH PIONEER10 AND 11  
 11/20/1997 - 12/31/2000 FY01: \$0 Total: \$103,052  
*Prin. Invest.:* A WITT  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7754** **UNIV OF TOLEDO** **7731**  
 OSCILLATOR STRENGTHS FOR ULTRAVIOLET ATOMIC AND MOLECULAR TRANSITIONS  
 11/25/1998 - 06/30/2001 FY01: \$0 Total: \$117,462  
*Prin. Invest.:* S R FEDERMAN  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8052** **UNIV OF TOLEDO** **7732**  
 TERRESTRIAL ENVIRONMENT VARIABLES DERIVED FROM EOS PLATFORM SENSORS  
 01/15/1999 - 01/31/2002 FY01: \$42,603 Total: \$156,377  
*Prin. Invest.:* K P CZAJKOWSKI, NONE  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8054** **UNIV OF TOLEDO** **7733**  
 CIRCUMSTELLAR ENVIRONMENTS OF HIGH- AND INTERMEDIATE-MASS STARS: FROM THE PRE-MAIN-SEQUENCE TO LB  
 01/19/1999 - 01/14/2002 FY01: \$95,783 Total: \$286,188  
*Prin. Invest.:* K S BJORKMAN  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8183** **UNIV OF TOLEDO** **7734**  
 DUST AND CONDENSATE CLOUDS IN THE MARTIAN POLAR REGIONS  
 02/16/1999 - 08/31/2002 FY01: \$59,000 Total: \$178,600  
*Prin. Invest.:* P B JAMES  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8671** **UNIV OF TOLEDO** **7735**  
 USE OF THERMAL INFRARED SATELLITE DATA IN CLIMATE CHANGE STUDIES  
 07/08/1999 - 07/14/2002 FY01: \$111,564 Total: \$334,317  
*Prin. Invest.:* K P CZAJKOWSKI  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8785** **UNIV OF TOLEDO** **7736**  
 A NEW CLASS OF UNNATURAL FOLDING OLIGOMERS: HELICES WITH NANO-SIZED CAVITIES  
 08/26/1999 - 06/30/2000 FY01: \$0 Total: \$133,245  
*Prin. Invest.:* B GONG  
*Tech. Officer:* GSFC/R CROUCH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8794** **UNIV OF TOLEDO** **7737**  
 THE GEOMETRY AND EVOLUTION OF LOW-MASS STAR FORMATION (ATP 98)  
 09/07/1999 - 09/14/2002 FY01: \$41,782 Total: \$61,782  
*Prin. Invest.:* J E BJORKMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8961** **UNIV OF TOLEDO** **7738**  
 MOLECULAR HYDROGEN EXCITATION IN PHOTODISSOCIATION REGIONS - FUSE  
 01/21/2000 - 10/31/2001 FY01: \$0 Total: \$74,200  
*Prin. Invest.:* S R FEDERMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8982** **UNIV OF TOLEDO** **7739**  
 DUST SCATTERING PROPERTIES IN REFLECTION NEBULAE - FUSE  
 01/24/2000 - 01/31/2001 FY01: \$0 Total: \$33,100  
*Prin. Invest.:* A N WITT  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9202** **UNIV OF TOLEDO** **7740**  
 MOVING BEYOND THE STANDARD PARADIGM: THE IMPORTANCE OF INTERSTELLAR DUST FROM THE MILKY WAY TO HIGH  
 03/14/2000 - 03/14/2002 FY01: \$33,694 Total: \$65,858  
*Prin. Invest.:* A N WITT  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9376** **UNIV OF TOLEDO** **7741**  
 INTERSTELLAR DUST IN GALAXIES (LTSA - 99)  
 04/11/2000 - 04/14/2002 FY01: \$94,745 Total: \$187,113  
*Prin. Invest.:* A N WITT  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10305** **UNIV OF TOLEDO** **7742**  
 EFFECTS OF STAR FORMATION & STELLAR DEATH ON INTERSTELLAR GAS ASSOCIATED WITH CEP OB2 (FUSE00)  
 01/29/2001 - 01/31/2002 FY01: \$36,800 Total: \$36,800  
*Prin. Invest.:* S R FEDERMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1380** **UNIV OF TOLEDO** **7743**  
 FOR RESEARCH ENTITLED "SEARCHING FOR THE BEST PROTEIN CRYSTALS"  
 06/19/1997 - 07/31/2001 FY01: \$116,395 Total: \$604,995  
*Prin. Invest.:* G BORGOTTAHL  
*Tech. Officer:* MSFC/B GUYNES, MSFC/J MAYO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1578**                      **UNIV OF TOLEDO**                      **7744**  
 INFLUENCE OF IMPURITIES ON PROTEIN CRYSTAL GROWTH  
 01/28/1999 - 11/30/2002      FY01: \$102,600                      Total: \$307,600  
*Prin. Invest.:* C A SCHALL  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1825**                      **UNIV OF TOLEDO**                      **7745**  
 SEARCHING FOR THE BEST PROTEIN CRYSTALS; INTE- GRATION OF  
 SYNCHRONTRON-BASED CRYSTAL MEASUREMENTS  
 08/29/2001 - 11/30/2004      FY01: \$101,000                      Total: \$101,000  
*Prin. Invest.:* G E BORGSTAHL  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 3 01116**                      **UNIV OF TOLEDO**                      **7746**  
 AEROELASTIC MODELING AND ANALYSIS OF UEET FAN AND  
 COMPRESSOR DESIGN  
 06/18/2001 - 09/18/2004      FY01: \$55,000                      Total: \$55,000  
*Prin. Invest.:* T KEITH  
*Tech. Officer:* GRC/J MINNS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 513**                      **UNIV OF TOLEDO**                      **7747**  
 IMPROVED MODEL FOR THE OXIDATIVE PYROLYSIS OF HYDROCARBON  
 FUELS  
 11/06/1996 - 03/31/2000      FY01: \$0                      Total: \$370,903  
*Prin. Invest.:* K J DEWITT  
*Tech. Officer:* GRC/K P KUNDU  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 524**                      **UNIV OF TOLEDO**                      **7748**  
 COMPUTATIONAL SIMULATION OF COMPOSITE BEHAVIOR  
 12/26/1996 - 12/05/2001      FY01: \$138,287                      Total: \$585,527  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/P MURTHY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 527**                      **UNIV OF TOLEDO**                      **7749**  
 AEROELASTIC ANALYSIS FOR AEROPROPULSION APPLICATIO NS  
 12/26/1996 - 06/30/2001      FY01: \$0                      Total: \$234,068  
*Prin. Invest.:* T G KEITH, JR.  
*Tech. Officer:* GRC/O MEHMED, GRC/G L STEFKO  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 596**                      **UNIV OF TOLEDO**                      **7750**  
 APPLICATION OF AEROELASTIC SOLVERS BASED ON NAVIER -STOKES  
 EQUATIONS  
 01/14/1998 - 06/30/2000      FY01: \$0                      Total: \$205,706  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/D JANETZKE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 605**                      **UNIV OF TOLEDO**                      **7751**  
 AEROELASTIC STABILITY AND RESPONSE OF ROTATING STR UCTURES  
 04/03/1998 - 02/08/2002      FY01: \$80,000                      Total: \$403,759  
*Prin. Invest.:* T KEITH  
*Tech. Officer:* GRC/O MEHMED  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 717**                      **UNIV OF TOLEDO**                      **7752**  
 MULTI-STAGE AEROELASTIC ANALYSIS FOR PROPULSION MULTI-STAGE  
 AEROELASTIC ANALYSIS FOR PROPULSION  
 06/29/1999 - 11/19/2001      FY01: \$45,001                      Total: \$127,731  
*Prin. Invest.:* T G KEITH, JR.  
*Tech. Officer:* GRC/O MEHMED  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 719**                      **UNIV OF TOLEDO**                      **7753**  
 CENTRIFUGAL COMPRESSOR AEROELASTIC ANALYSIS CODEE  
 CENTRIFUGAL COMPRESSOR AEROELASTIC ANALYSISCODEE  
 06/24/1999 - 10/31/2001      FY01: \$49,999                      Total: \$168,729  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/D C JANETZKE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 774**                      **UNIV OF TOLEDO**                      **7754**  
 ACTIVE CONTROL ANALYSIS FOR AEROELASTIC INSTABILIT IES IN TURBO-  
 MACHINES  
 02/14/2000 - 11/01/2001      FY01: \$82,458                      Total: \$115,916  
*Prin. Invest.:* T KEITH  
*Tech. Officer:* GRC/D JANETZKE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 855**                      **UNIV OF TOLEDO**                      **7755**  
 NEXT GENERATION OF HALL THRUSTERS FOR SPACE PROPULSION  
 01/25/2001 - 01/18/2002      FY01: \$147,162                      Total: \$147,162  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/D REDDY  
*CASE Category:* 13 - PHYSICS

**NCC 3 881**                      **UNIV OF TOLEDO**                      **7756**  
 MICROWAVE LOW NOISE AMPLIFIER USING SILICON GERMAN IUM NANO-  
 TECHNOLOGY  
 03/26/2001 - 03/01/2002      FY01: \$79,632                      Total: \$79,632  
*Prin. Invest.:* V J KAPOOR  
*Tech. Officer:* GRC/G E PONCHAK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 907**                      **UNIV OF TOLEDO**                      **7757**  
 NOVEL DAMPING CONCEPTS FOR MECHANICAL BACKUP BEARI NGS AND  
 PASSIVE MAGNETICALLY SUSPENDED ROTORS  
 08/02/2001 - 07/31/2002      FY01: \$35,000                      Total: \$35,000  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/K MCLALLIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 916**                      **UNIV OF TOLEDO**                      **7758**  
 TECHNOLOGY VALIDATION AND RISK REDUCTION RESEARCH FOR  
 FLYWHEEL TECHNOLOGY  
 09/20/2001 - 12/06/2001      FY01: \$43,122                      Total: \$43,122  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/R BEACH  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 8 196**                      **UNIV OF TOLEDO**                      **7759**  
 USE OF FLUORESCENCE SPECTROSCOPY AND X-RAY DIFFRACTION IN  
 INVEST. OF PROTEIN CRYSTAL GROWTH  
 11/17/1999 - 11/11/2000      FY01: \$0                      Total: \$55,000  
*Prin. Invest.:* A NADARAJAH  
*Tech. Officer:* MSFC/M PUSEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 3 52342**                      **UNIV OF TOLEDO**                      **7760**  
 MICROMACHINED CANTILEVERED TRANSMISSION LINE SWITC HES FOR  
 MICROWAVE APPLICATIONS  
 07/18/1998 - 10/31/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* D J KAPOOR  
*Tech. Officer:* GRC/D MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 3 52375**                      **UNIV OF TOLEDO**                      **7761**  
 GRADUATE STUDENT RESEARCH  
 06/07/2001 - 06/30/2002      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* V J KAPOOR  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2301**                      **WILBERFORCE UNIV**                      **7762**  
 STUDENT OUTREACH WITH RENEWABLE ENERGY TECHNOLOGY (SORET)  
 CONSORTIUM  
 11/05/1999 - 10/28/2002      FY01: \$299,957                      Total: \$599,915  
*Prin. Invest.:* D R BUFFINGER  
*Tech. Officer:* GRC/A F HEPP  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 2 1237**                      **WRIGHT STATE UNIV**                      **7763**  
 ROLES FOR TECHNOLOGY IN THE FACILITATION OF DISTRU BUTED WORK  
 IN COMPLEX DYNAMIC DOMAINS  
 07/16/1998 - 10/31/2000      FY01: \$0                      Total: \$142,295  
*Prin. Invest.:* V L SHALIN  
*Tech. Officer:* ARC/W J CLANCEY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2637**                      **WRIGHT STATE UNIV**                      **7764**  
 DEFECTS IN AIGAN/GAN HEMT DEVICES DEFECTS IN AIGAN/GAN HEMT  
 DEVICES  
 06/18/2001 - 06/30/2002      FY01: \$119,269                      Total: \$119,269  
*Prin. Invest.:* D C LOOK  
*Tech. Officer:* GRC/J FREEMAN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 4188**                      **WRIGHT STATE UNIV**                      **7765**  
 MODEL STUDIES OF EXCITED STATES OF N2 AND N2+ IN T IONOSPHERE  
 03/27/1997 - 03/31/2002      FY01: \$0                      Total: \$209,608  
*Prin. Invest.:* D L FOX  
*Tech. Officer:* GSFC/M M MELLOTT, SR  
*CASE Category:* 13 - PHYSICS

**NCC 2 1203**                      **WRIGHT STATE UNIV**                      **7766**  
 ROLES FOR TECHNOLOGY IN THE FACILITATION OF DISTRI BUTED WORK  
 IN COMPLEX DYNAMIC DOMAINS  
 09/15/2000 - 09/14/2001      FY01: \$34,232                      Total: \$122,261  
*Prin. Invest.:* V L SHALIN  
*Tech. Officer:* ARC/W J CLANCEY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 30091**                      **WRIGHT STATE UNIV**                      **7767**  
 AEROSPACE MEDICINE TRAINING PROGRAM  
 09/11/1997 - 12/30/2001      FY01: \$190,000                      Total: \$2,058,212  
*Prin. Invest.:* S R MOHLER  
*Tech. Officer:* GSFC/R J WILLIAMS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT 5 50213**                      **WRIGHT STATE UNIV**                      **7768**  
 THREE-DIMENSIONAL AUDIO PRESENTATION SYSTEM EFFECT IVENESS  
 INHYPERGRAVITY AND HYPOGRAVIT  
 07/22/1998 - 08/31/2001      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* R H GILKEY  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

## OKLAHOMA

**NAG 3 1852**                      **OKLAHOMA STATE UNIV**                      **7769**  
 STUDIES OF PARTICLES SEDIMENTATION BY NOVEL SCATTE RING TECH-  
 HNIQUE  
 05/01/1996 - 04/30/2002      FY01: \$0                      Total: \$399,992  
*Prin. Invest.:* O TONG, B ACKERSON, NONE  
*Tech. Officer:* GRC/B SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 4 176**                      **OKLAHOMA STATE UNIV**                      **7770**  
 CFD AEROSERVOELASTIC & FLIGHT DYNAMICS ANALYSIS  
 09/16/1999 - 09/16/2000      FY01: \$0                      Total: \$55,607  
*Prin. Invest.:* A ARENA, JR.  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 216**                      **OKLAHOMA STATE UNIV**                      **7771**  
 CFD-BASED AEROSERVOELASTIC AND FLIGHT DYNAMICS ANA LYSIS OF A  
 FLIGHT RESEARCH VEHICLE  
 01/11/2001 - 11/30/2001      FY01: \$59,995                      Total: \$59,995  
*Prin. Invest.:* D S ARENA  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 7451**                      **OKLAHOMA STATE UNIV**                      **7772**  
 TERRESTRIAL ENVIRONMENTAL VARIABLES DERIVED FROM E OS PLAT-  
 FORM SENSORS  
 07/09/1998 - 07/31/2001      FY01: \$0                      Total: \$47,226  
*Prin. Invest.:* S J STADLER  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1159**                      **OKLAHOMA STATE UNIV**                      **7773**  
 ROLE OF VITAMIN E IN PREVENTING BOND DAMAGE  
 09/29/1999 - 06/30/2001      FY01: \$0                      Total: \$206,262  
*Prin. Invest.:* B J STOECKER  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1332**                    **OKLAHOMA STATE UNIV**                    **7774**  
 MONOLITHIC INTERGRATED RADIATION\_SENSOR USING STIMULATED  
 LUMINESCENCE FROM ALUMINA  
 07/17/2001 - 07/13/2004      FY01: \$468,398                    Total: \$468,398  
*Prin. Invest.:* S MCKEEVER  
*Tech. Officer:* JSC/M GOLIGHTLY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NASW 5043**                    **OKLAHOMA STATE UNIV**                    **7775**  
 OPERATION OF AEROSPACE EDUCATION SERVICES PROGRAM  
 09/25/1995 - 05/31/2001      FY01: \$3,099,752                    Total: \$35,209,327  
*Prin. Invest.:* K WIGGINS  
*Tech. Officer:* HQ/L BILBROUGH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 903**                    **OKLAHOMA STATE UNIV**                    **7776**  
 INFRARED AVIONICS SIGNAL DISTRIBUTION: (PHASE 2: EXPERIMENT  
 SETUP AND VERIFICATION)  
 07/13/2001 - 02/19/2002      FY01: \$29,882                    Total: \$29,882  
*Prin. Invest.:* M ATIQUZZAMAN  
*Tech. Officer:* GRC/D NGO  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 185**                    **OKLAHOMA STATE UNIV**                    **7777**  
 TEACHING FROM SPACE PROGRAM  
 04/03/1997 - 11/30/2001      FY01: \$855,248                    Total: \$3,984,243  
*Prin. Invest.:* K E WIGGINS  
*Tech. Officer:* GSFC/P L MOUNTJOY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 561**                    **OKLAHOMA STATE UNIV**                    **7778**  
 AEROSPACE EDUCATION SERVICES PROGRAM  
 06/28/2001 - 05/31/2002      FY01: \$3,000,000                    Total: \$3,000,000  
*Prin. Invest.:* T COLLINS  
*Tech. Officer:* GSFC/L BILLBROUGH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 4 52412**                    **OKLAHOMA STATE UNIV**                    **7779**  
 AEROSEROELASTIC AND FLIGHT DYNAMICS  
 05/12/1999 - 06/30/2001      FY01: \$0                    Total: \$44,000  
*Prin. Invest.:* A ARENA  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 4 52425**                    **OKLAHOMA STATE UNIV**                    **7780**  
 (GSRP) OPEN PORT STABILIZED SENSOR SYSTEM AEROSERV OELASTIC  
 PREDICTION WITH COMPARISONS TO FLIGHT TE  
 07/16/2001 - 07/31/2002      FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* D S ARENA  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 7378**                    **ORAL ROBERTS UNIV**                    **7781**  
 EXPERIMENTAL APPARATUS TO TEST THE STABILITY OF SP INNING  
 SPACECRAFT UNDER THRUST  
 05/06/1998 - 05/14/2001      FY01: \$0                    Total: \$48,000  
*Prin. Invest.:* D HALSMER  
*Tech. Officer:* GSFC/R HARMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2178**                    **UNIV OF OKLAHOMA - NORMAN**                    **7782**  
 A STUDY ON EMBEDDED HIGH-SPEED WIRELESS TELEMETRY SYSTEMS  
 FOR WIND TUNNEL APPLICATIONS, PHASE II  
 03/31/1999 - 12/31/2001      FY01: \$0                    Total: \$221,218  
*Prin. Invest.:* J R CRUZ  
*Tech. Officer:* LARC/S K KAHNG  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 2 1427**                    **UNIV OF OKLAHOMA - NORMAN**                    **7783**  
 EFFECT OF HYPERGRAVITY, VIBRATION, & RADIATION ON GENETIC &  
 DEVELOPMENTAL STABILITY IN DROSOPHILIA..  
 08/03/2000 - 07/31/2002      FY01: \$244,853                    Total: \$511,604  
*Prin. Invest.:* J T THOMPSON, JR  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2388**                    **UNIV OF OKLAHOMA - NORMAN**                    **7784**  
 GRAVITATIONAL EFFECTS ON FLOW INSTABILITY AND TRAN SITION IN LOW  
 DENSITY JETS  
 04/10/2000 - 11/30/2003      FY01: \$90,250                    Total: \$140,250  
*Prin. Invest.:* A K AGRAWAL  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2528**                    **UNIV OF OKLAHOMA - NORMAN**                    **7785**  
 SCTP OVER LONG BANDWIDTH DELAY PRODUCT NETWORKS  
 01/22/2001 - 01/01/2002      FY01: \$75,243                    Total: \$75,243  
*Prin. Invest.:* D ATIQUZZAMAN  
*Tech. Officer:* GRC/W D IVANCIC/D FOLTZ  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 3505**                    **UNIV OF OKLAHOMA - NORMAN**                    **7786**  
 MULTIWAVELENGTH STUDIES OF SUPERNOVAE  
 11/25/1996 - 09/30/2001      FY01: \$0                    Total: \$250,000  
*Prin. Invest.:* E A BARON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9165**                    **UNIV OF OKLAHOMA - NORMAN**                    **7787**  
 COMPREHENSIVE SUPERNOVA SPECTROSCOPY - ADP - 99  
 03/31/2000 - 03/31/2002      FY01: \$40,000                    Total: \$90,000  
*Prin. Invest.:* D BRANCH  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9745**                    **UNIV OF OKLAHOMA - NORMAN**                    **7788**  
 X-RAY SPECTRAL & VARIABILITY STUDIES OF AGN ADP 99  
 06/29/2000 - 08/14/2002      FY01: \$0                    Total: \$50,440  
*Prin. Invest.:* K M LEIGHLY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9991**                    **UNIV OF OKLAHOMA - NORMAN**                    **7789**  
 NGC 6300: A NEW, BRIGHT, COMPTON-THICK SEYFERT 2 GALAXY  
 09/14/2000 - 08/31/2002      FY01: \$12,433                    Total: \$25,433  
*Prin. Invest.:* K M LEIGHLY  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10048**            **UNIV OF OKLAHOMA - NORMAN**            **7790**  
 FAR UV SPECTROSCOPY OF NARROW-LINE SEYFERT 1 GALAXY RE  
 1034+39  
 10/04/2000 - 08/15/2002            FY01: \$35,500            Total: \$35,500  
*Prin. Invest.:* K LEIGHLY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10171**            **UNIV OF OKLAHOMA - NORMAN**            **7791**  
 NARROW-LINE SEYFERT 1 GALAXIES (LTSA 98)  
 12/18/2000 - 05/31/2002            FY01: \$83,240            Total: \$83,240  
*Prin. Invest.:* K M LEIGHLY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10366**            **UNIV OF OKLAHOMA - NORMAN**            **7792**  
 WIND EMISSION IN NARROW-LINE SEYFERT 1 GALAXIES (FUZE 00)  
 02/05/2001 - 02/14/2002            FY01: \$70,000            Total: \$70,000  
*Prin. Invest.:* K M LEIGHLY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1271**            **UNIV OF OKLAHOMA - NORMAN**            **7793**  
 MICROGRAVITY IMPREMENTATION OF FIBER PREFORMS  
 05/02/1996 - 05/15/2000            FY01: \$0            Total: \$400,000  
*Prin. Invest.:* M C ALTAN, B GRADY, F C LAI  
*Tech. Officer:* MSFC/D R WOODARD, MSFC/R W ALLEN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1280**            **UNIV OF OKLAHOMA - NORMAN**            **7794**  
 INTEGRATED CREW PERFORMANCE ASSESSMENT AND TRAINING  
 02/02/2001 - 12/31/2003            FY01: \$143,759            Total: \$143,759  
*Prin. Invest.:* R SCHLEGEL  
*Tech. Officer:* JSC/B WOOLFORD  
*CASE Category:* 56 - MEDICL

**NCC 2 5382**            **UNIV OF OKLAHOMA - NORMAN**            **7795**  
 MINERALS & SUBMICROMETER FORMS AS BIOSIGNATURES  
 05/16/2000 - 05/14/2002            FY01: \$24,607            Total: \$30,000  
*Prin. Invest.:* R D ELMORE  
*Tech. Officer:* ARC/D BLAKE  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 3 787**            **UNIV OF OKLAHOMA - NORMAN**            **7796**  
 INSTABILITY AND BREAKUP OF GAS JETS INJECTED IN CO FLOWING  
 LIQUIDS  
 03/29/2000 - 11/30/2003            FY01: \$80,000            Total: \$125,000  
*Prin. Invest.:* D N PARTHASAEATHY  
*Tech. Officer:* GRC/J B MCQUILLEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 791**            **UNIV OF OKLAHOMA - NORMAN**            **7797**  
 ENHANCEMENT OF MICROGRAVITY FIBER IMPREGNATION USING ELEC-  
 TROHYDYNAMIC INDUCTION PUMPING  
 04/11/2000 - 05/31/2001            FY01: \$0            Total: \$44,997  
*Prin. Invest.:* D C LAI  
*Tech. Officer:* GRC/H C DEGROH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 171**            **UNIV OF OKLAHOMA - NORMAN**            **7798**  
 TO SUPPORT RESEARCH UNDER THE EXPERIMENTAL PROGRAM  
 COMPETITIVE RESEARCH  
 12/16/1996 - 11/14/2001            FY01: \$500,000            Total: \$2,500,000  
*Prin. Invest.:* V DUCA-SNOWDEN  
*Tech. Officer:* GSFC/J DASCH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 398**            **UNIV OF OKLAHOMA - NORMAN**            **7799**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/14/1999 - 09/30/2001            FY01: \$0            Total: \$448,800  
*Prin. Invest.:* V DUCA-SNOWDEN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 586**            **UNIV OF OKLAHOMA - NORMAN**            **7800**  
 OKLAHOMA NASA/EPSCOR PROGRAM  
 08/31/2001 - 08/31/2004            FY01: \$310,813            Total: \$310,813  
*Prin. Invest.:* V DUCA-SNOWDEN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30151**            **UNIV OF OKLAHOMA - NORMAN**            **7801**  
 INVESTIGATION OF LAND-ATMOSPHERE INTERACTIONS USING THE  
 OKLAHOMAMESONET/NASA EARTH SCIENCE  
 09/01/1998 - 08/31/2001            FY01: \$0            Total: \$66,000  
*Prin. Invest.:* K CRAWFORD  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40013**            **UNIV OF OKLAHOMA - NORMAN**            **7802**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 01/30/1997 - 02/28/2001            FY01: \$0            Total: \$807,500  
*Prin. Invest.:* V DUCA  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40111**            **UNIV OF OKLAHOMA - NORMAN**            **7803**  
 OKLAHOMA SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 03/06/2001 - 02/28/2002            FY01: \$212,500            Total: \$212,500  
*Prin. Invest.:* V DUCA-SNOWDEN  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## OREGON

**NCC 2 1190**            **OREGON GRAD INST OF SCI & TECH**            **7804**  
 IMPLEMENTATION OF SENSOR FUSION ALGORITHMS IN MATLAB  
 07/25/2000 - 03/31/2001            FY01: -\$3,705            Total: \$30,000  
*Prin. Invest.:* M PAVEL  
*Tech. Officer:* ARC/A J AHUMADA  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 1215**            **OREGON GRAD INST OF SCI & TECH**            **7805**  
 HUMAN ERROR MODELING - PROCESS & EVALUATION  
 03/05/2001 - 10/31/2001            FY01: \$70,112            Total: \$70,112  
*Prin. Invest.:* M PAVEL  
*Tech. Officer:* ARC/B L BEARD  
*CASE Category:* 69 - PSYCHOLOGY, OTHER



**NCC 2 1218 OREGON GRAD INST OF SCI & TECH 7806**  
 ROBUST INTELLIGENT SYSTEMS BASED ON INFORMATION FU SION  
 03/14/2001 - 02/28/2002 FY01: \$269,000 Total: \$269,000  
*Prin. Invest.:* M PAVEL  
*Tech. Officer:* ARC/J SKILES  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1253 OREGON GRAD INST OF SCI & TECH 7807**  
 BIOLOGICAL COMPUTING FOR ROBOT NAVIGATION & CONTRO L  
 04/08/2001 - 02/28/2002 FY01: \$336,000 Total: \$336,000  
*Prin. Invest.:* M A JABRI  
*Tech. Officer:* ARC/T R GOVINDAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1264 OREGON GRAD INST OF SCI & TECH 7808**  
 MODEL BIASED, DATA DRIVEN ADAAPTIVE FAILURE PREDIC ITON  
 05/21/2001 - 02/28/2002 FY01: \$120,000 Total: \$120,000  
*Prin. Invest.:* T LEEN  
*Tech. Officer:* ARC/I TUMER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1199 OREGON HEALTH SCIENCES UNIV 7809**  
 HOW DO CELL DIVISION PLANCES SPECIFY REGIONAL GENE EXPRES-  
 SION PATTERNS IN EARLYEMBRYOS?  
 04/02/1998 - 04/30/2002 FY01: \$0 Total: \$490,495  
*Prin. Invest.:* M V DANILCHIK  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1287 OREGON STATE UNIV 7810**  
 TRAINING PILOTS TO PRIORITIZE TASKS  
 02/01/1999 - 02/14/2002 FY01: \$73,243 Total: \$192,520  
*Prin. Invest.:* K H FUNK  
*Tech. Officer:* ARC/R K DISMUKES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1341 OREGON STATE UNIV 7811**  
 INTERACTIONS BETWEEN GRAVITY & LIGHT IN DETERMININ G PLANTFORM  
 ANALYSIS USING THE LAXY-2 MUTANT TOMA  
 07/21/1999 - 08/31/2002 FY01: \$163,428 Total: \$413,939  
*Prin. Invest.:* T L LOMAX  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2463 OREGON STATE UNIV 7812**  
 DEVELOPMENT AND EVALUATION OF HIGH TEMPERATURE AND SPECIAL-  
 IZED FIBER BRAGG GRATINGS  
 06/15/2000 - 09/30/2001 FY01: \$29,956 Total: \$47,953  
*Prin. Invest.:* T K PLANT  
*Tech. Officer:* GRC/G ADAMOVSKY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 4947 OREGON STATE UNIV 7813**  
 "COUPLED ATMOSPHERE/OCEAN PROCESSES & PRIMARY PROD IN THE  
 SOUTHERN OCEAN"  
 06/23/1997 - 06/30/2001 FY01: \$412,000 Total: \$3,300,000  
*Prin. Invest.:* M R ABBOTT  
*Tech. Officer:* GSFC/J A MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 5311 OREGON STATE UNIV 7814**  
 ANALYSIS OF BIO-OPTICAL SIGNATURES FROM AUTONOMOUS ADOS  
 LAGRANGIAN DRIFTERS WITH SEAWIFS  
 01/23/2001 - 01/31/2002 FY01: \$16,497 Total: \$16,497  
*Prin. Invest.:* R M LETELIER  
*Tech. Officer:* GSFC/J R MOISAN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6156 OREGON STATE UNIV 7815**  
 EFFECT OF OCEAN TIDES ON THE LONG TERM ORBITAL AND OF THE  
 EARTH-MOON SYSTEM  
 09/11/1997 - 09/14/2000 FY01: \$0 Total: \$60,000  
*Prin. Invest.:* G D EGBERT, NONE  
*Tech. Officer:* GSFC/B BILLS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6189 OREGON STATE UNIV 7816**  
 WAVES AND INSTABILITY IN THE ATMOSPHERE OF MARS  
 02/04/1998 - 06/30/2001 FY01: \$0 Total: \$250,105  
*Prin. Invest.:* D BARNES  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6242 OREGON STATE UNIV 7817**  
 MODELING CARBON DYNAMICS AND THEIR ECONOMIC IMPLIC REGIONS:  
 PACIFIC NORTHWESTERN USA AND NORTHWESTER  
 08/19/1997 - 08/31/2001 FY01: \$0 Total: \$580,000  
*Prin. Invest.:* D E HARMON  
*Tech. Officer:* GSFC/G C GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6530 OREGON STATE UNIV 7818**  
 THE IMPROVED ALGORITHM FOR ESTIMATING THE ATMOSPHE RIC  
 EFFECT IN SPACE MEASUREMENTS OF THE MARINE  
 12/09/1997 - 10/31/2001 FY01: \$0 Total: \$387,677  
*Prin. Invest.:* K SHIFRIN  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6642 OREGON STATE UNIV 7819**  
 COMPREHENSIVE VALIDATION OF SATELLITE OCEAN WINDS: ADVANCED  
 TECHNIQUES AND MULTI-INSTRUMENT ANALYS  
 11/20/1997 - 04/30/2001 FY01: \$0 Total: \$585,985  
*Prin. Invest.:* D FREILICH  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6647 OREGON STATE UNIV 7820**  
 RELATIONSHIPS BETWEEN THE INHERENT OPTICAL PROPERT IES  
 (IOP), BIOGEOCHEMICAL PARAMETERS A  
 12/04/1997 - 11/30/2000 FY01: \$0 Total: \$271,348  
*Prin. Invest.:* J R ZANEVELD  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7416 OREGON STATE UNIV 7821**  
 SPATIALLY-AVERAGED FLUXES OF CO2, HEAT AND MOISTUR E  
 05/21/1998 - 12/31/2000 FY01: \$0 Total: \$126,866  
*Prin. Invest.:* L MAHRT  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7506**                      **OREGON STATE UNIV**                      **7822**  
 ASSESSING POTENTIAL AND ACTUAL FOREST PRODUCTIVITY ACROSS  
 SOUTHWESTERN OREGON WITH TWO SIMULATION  
 06/26/1998 - 06/30/2002      FY01: \$28,567                      Total: \$260,910  
*Prin. Invest.:* R H WARING  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7531**                      **OREGON STATE UNIV**                      **7823**  
 EVALUATING MODEL PREDICTIONS OF CO2 AND WATER VAPO R  
 EXCHANGE WITHFLUX MEASUREMENTSIN A POND  
 06/11/1998 - 06/30/2002      FY01: \$114,209                      Total: \$651,594  
*Prin. Invest.:* M H UNSWORTH  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 7551**                      **OREGON STATE UNIV**                      **7824**  
 REDUCING UNCERTAINTY IN CARBON AND ENERGY EXCHANGE OVER  
 PINE FORESTS: INFLUENCE OF AGE,MANAGEMEN  
 06/22/1998 - 06/30/2002      FY01: \$106,603                      Total: \$841,355  
*Prin. Invest.:* B LAW  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7686**                      **OREGON STATE UNIV**                      **7825**  
 LIMITS TO CLOUD SUSCEPTIBILITY.  
 09/15/1998 - 09/30/2001      FY01: \$98,000                      Total: \$294,000  
*Prin. Invest.:* J A COAKLEY, JR.  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7856**                      **OREGON STATE UNIV**                      **7826**  
 BIGFOOT--CHARACTERIZING LAND COVER, LAI, AND NPP A T THE LAND-  
 SCAPE SCALE FOR EOS/MODIS VALIDATION  
 12/14/1998 - 11/30/2001      FY01: \$238,976                      Total: \$711,925  
*Prin. Invest.:* W B COHEN  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8261**                      **OREGON STATE UNIV**                      **7827**  
 CONSTRUCTION TO COMPLETE THE ENVIRONMENTAL COMPUTI NG  
 CENTER  
 02/17/1999 - 01/31/2002      FY01: \$0                      Total: \$2,000,000  
*Prin. Invest.:* G DALRYMPLE  
*Tech. Officer:* GSFC/R A SCHIFFER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8315**                      **OREGON STATE UNIV**                      **7828**  
 INTEGRATING MICROWAVE AND HYPERSPECTRAL REMOTE SENSING FOR  
 ESTIMATING VEGETATION STRUCTUREAND BIOMA  
 03/24/1999 - 02/28/2002      FY01: \$39,345                      Total: \$111,509  
*Prin. Invest.:* B E LAW  
*Tech. Officer:* HQ/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8400**                      **OREGON STATE UNIV**                      **7829**  
 USING DISTRIBUTED OBJECT-BASED FRAMEWORKS TO SUPPORT EOS  
 DATA ACCESS AND VISUALIZATION  
 05/20/1999 - 05/31/2002      FY01: \$0                      Total: \$127,000  
*Prin. Invest.:* M S ABBOTT  
*Tech. Officer:* GSFC/K MOE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8601**                      **OREGON STATE UNIV**                      **7830**  
 SPATIAL VARIATION OF SURFACE MOISTURE FLUXES IN SPG  
 06/17/1999 - 06/14/2002      FY01: \$60,116                      Total: \$159,902  
*Prin. Invest.:* L MAHRT  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8969**                      **OREGON STATE UNIV**                      **7831**  
 EOS TERRA DIRECT BROADCAST RECEIVING STATION: SUPPORT FOR  
 OCEAN & TERRESTRIAL ECOLOGY  
 01/24/2000 - 12/31/2001      FY01: \$0                      Total: \$550,000  
*Prin. Invest.:* M R ABBOTT  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9159**                      **OREGON STATE UNIV**                      **7832**  
 JASON-1 INVESTIGATION: ALTIMETRIC STUDIES OF OCEAN TIDAL  
 DYNAMICS  
 03/06/2000 - 03/31/2002      FY01: \$62,791                      Total: \$114,791  
*Prin. Invest.:* G D EGBERT  
*Tech. Officer:* GSFC/R RAY  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 9428**                      **OREGON STATE UNIV**                      **7833**  
 SYNTHESIS & ALTERATION OF HIGHER MOLECULAR WEIGHT ORGANIC  
 COMPOUNDS UNDER HYDROTHERMAL CONDITIONS  
 04/11/2000 - 04/14/2002      FY01: \$100,000                      Total: \$194,200  
*Prin. Invest.:* B T SIMONEIT  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9446**                      **OREGON STATE UNIV**                      **7834**  
 MICROBES IN SILICATE ROCKS ON EARTH: ANALOGUES OF EXTANT &  
 FOSSIL MICROBIAL HABITATS ON OTHER  
 04/13/2000 - 04/14/2002      FY01: \$51,000                      Total: \$99,042  
*Prin. Invest.:* M FISK  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9677**                      **OREGON STATE UNIV**                      **7835**  
 SUPPORT FOR THE GOF C BOREAL FOREST WORKSHOP, NASA SIBERIAN  
 NETWORK, AND EWG BOREAL FOREST PROJECT  
 06/02/2000 - 10/31/2001      FY01: \$0                      Total: \$38,641  
*Prin. Invest.:* O N KRANKINA  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9771**                      **OREGON STATE UNIV**                      **7836**  
 STUDIES OF MGS TES AND MPF MET DATA  
 06/29/2000 - 06/30/2002      FY01: \$59,600                      Total: \$119,200  
*Prin. Invest.:* J R BARNES  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10614 OREGON STATE UNIV 7837**  
 GOFC SUPPORT, WORKSHOP IN RUSSIA  
 03/16/2001 - 08/31/2002 FY01: \$39,173 Total: \$39,173  
*Prin. Invest.:* O N KRANKINA  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10623 OREGON STATE UNIV 7838**  
 THE REFINEMENT OF THE ATMOSPHERIC CORRECTION ALGORITHM FOR  
 SPACE-DERIVING THE MARINE CHLOROPHYLL  
 03/19/2001 - 03/14/2002 FY01: \$145,495 Total: \$145,495  
*Prin. Invest.:* K S SHIFRIN  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11046 OREGON STATE UNIV 7839**  
 DYNAMICS AND CIRCULATION OF THE MARTIAN ATMOSPHERE  
 06/20/2001 - 06/30/2002 FY01: \$74,000 Total: \$74,000  
*Prin. Invest.:* J BARNES  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11105 OREGON STATE UNIV 7840**  
 ADVANCED VALIDATION OF AMSR WIND SPEED MEASUREMENT USING  
 BUOY, SCATTEROMETER, AND NWP SURFACE ANALYSIS  
 07/13/2001 - 08/31/2002 FY01: \$28,809 Total: \$28,809  
*Prin. Invest.:* M H FREILICH  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11125 OREGON STATE UNIV 7841**  
 COUPLED ATMOSPHERE/OCEAN PROCESSES AND PRIMARY PRO  
 Duction IN THE SOUTHERN OCEAN  
 08/01/2001 - 06/30/2003 FY01: \$270,027 Total: \$270,027  
*Prin. Invest.:* M R ABBOTT  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11148 OREGON STATE UNIV 7842**  
 A ONE-YEAR PILOT STUDY FOR THE INCLUSION OF ACTIVE OPTICAL  
 SENSORS INTO PALACE FLOATS  
 07/30/2001 - 07/31/2002 FY01: \$27,977 Total: \$27,977  
*Prin. Invest.:* E BOSS  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11190 OREGON STATE UNIV 7843**  
 ECOSYSTEMS STRUCTURE AND CARBON CYCLING IN THE NORTH  
 PACIFIC: MODELING & DATA ASSIMILATION  
 08/17/2001 - 08/31/2004 FY01: \$216,950 Total: \$216,950  
*Prin. Invest.:* Y SPITZ  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11222 OREGON STATE UNIV 7844**  
 LINKING IN-SITU MEASUREMENTS, REMOTE SENSING, AND MODELS TO  
 VALIDATE MODIS PRODUCTS RELATED TO TH  
 08/09/2001 - 07/31/2004 FY01: \$24,628 Total: \$24,628  
*Prin. Invest.:* D P TURNER  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11223 OREGON STATE UNIV 7845**  
 USING REMOTE SENSING & IN SITU NETWORK OBSERVATIONS TO EVAL  
 UATE & IMPROVE THE PERFORMANCE OF  
 08/09/2001 - 07/31/2004 FY01: \$76,090 Total: \$76,090  
*Prin. Invest.:* B LAW  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11231 OREGON STATE UNIV 7846**  
 REGIONAL CARBON DIOXIDE FLUXES OVER HETEROGENEOUS TERRAIN  
 08/13/2001 - 08/14/2004 FY01: \$184,525 Total: \$184,525  
*Prin. Invest.:* L MAHRT  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11250 OREGON STATE UNIV 7847**  
 DRIVING FORCES OF CHANGE IN REGIONAL CARBON STOCKS :  
 COMPARISON OF THE WESTERN OREGON, AND ST. PET  
 08/20/2001 - 08/14/2004 FY01: \$187,238 Total: \$187,238  
*Prin. Invest.:* O KRANKINA  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 1 98140 OREGON STATE UNIV 7848**  
 CHARACTERIZATION OF CLOUDS AND THE ANISOTROPY OF EMITTED AND  
 REFLECTED RADIANCES  
 10/29/1998 - 10/28/2002 FY01: \$212,826 Total: \$561,235  
*Prin. Invest.:* J COAKLEY  
*Tech. Officer:* LARC/B A WIELICKI, LARC/R L HUFFMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 99104 OREGON STATE UNIV 7849**  
 DETERMINATION OF THE INDIRECT RADIATIVE FORCING DUE TO AERO  
 SOLS  
 05/17/1999 - 05/16/2002 FY01: \$10,850 Total: \$23,950  
*Prin. Invest.:* J M COAKLEY, JR.  
*Tech. Officer:* LARC/G GIBSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 31360 OREGON STATE UNIV 7850**  
 MODIS INVESTIGATION  
 12/30/1991 - 12/14/2001 FY01: \$611,000 Total: \$4,737,000  
*Prin. Invest.:* M R ABBOTT  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 32965 OREGON STATE UNIV 7851**  
 SEAWINDS PRINCIPAL INVESTIGATOR & SCIENCE TEAM ACTIVITIES  
 09/15/1995 - 12/31/2004 FY01: \$2,243,955 Total: \$7,540,085  
*Prin. Invest.:* D H FREILICH  
*Tech. Officer:* GSFC/C RABER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 1102 OREGON STATE UNIV 7852**  
 INVESTIGATION OF THE CIRCULATION OF THE MARTIAN ATMOSPHERE  
 USING DYNAMICAL MODELS  
 04/01/1999 - 12/31/2001 FY01: \$16,891 Total: \$49,306  
*Prin. Invest.:* J R BARNES  
*Tech. Officer:* ARC/R M HABERLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5427**                      **OREGON STATE UNIV**                      **7853**  
 PREPARATION OF THE ZAPS INSTRUMENT PACKAGE FOR THE VAILULU MISSION  
 03/09/2001 - 01/31/2002              FY01: \$15,000                      Total: \$15,000  
*Prin. Invest.:* G P KLINKHAMMER  
*Tech. Officer:* ARC/M T FLYNN, ARC/C A STOCKER  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC13 98004**                      **OREGON STATE UNIV**                      **7854**  
 AFFILIATED RESEARCH CENTER PROGRAM SAME  
 08/04/1998 - 06/30/2001              FY01: \$14,959                      Total: \$398,292  
*Prin. Invest.:* KIMERLING  
*Tech. Officer:* SSC/N SOVIK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 52245**                      **OREGON STATE UNIV**                      **7855**  
 MESOSCALE MODEL OF THE MARTIAN ATMOSPHERE  
 08/11/1998 - 08/14/2001              FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* J R BARNES  
*Tech. Officer:* ARC/R M HABERLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 96**                      **OREGON STATE UNIV**                      **7856**  
 GLOBAL CLIMATE CHANGE EFFECTS ON CARBON SEQUESTRATION MEDIATED BY SOIL MICROORGANISMS  
 08/20/1999 - 08/31/2002              FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* R P DICK, V GEWIN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30181**                      **OREGON STATE UNIV**                      **7857**  
 FUNCTIONAL GROUPING OF PLANTS IN FLORIDA SCRUB HABITAT/STUDENT: TAMMY FOSTER  
 08/23/1999 - 08/31/2002              FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* B BOND  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30185**                      **OREGON STATE UNIV**                      **7858**  
 RIGHT WHALE ECOLOGY IN THE NORTHWEST ATLANTIC OCEAN/STUDENT--MARK BAUMGARTNER  
 08/19/1999 - 08/31/2002              FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* B MATE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30214**                      **OREGON STATE UNIV**                      **7859**  
 COMBINING FIELD MEASUREMENTS AND SATELLITE IMAGERY WITH A PROBABILISTIC MODEL TO QUANTIFY UNCERTAIN  
 08/24/1999 - 08/31/2002              FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* W B COHEN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30347**                      **OREGON STATE UNIV**                      **7860**  
 ASYSTEMATIC STUDY OF THE OPTICAL PROPERTIES OF NON SPHERICAL OCEANIC PARTICLES/STUDENT: SEAN HERRING  
 08/21/2000 - 08/31/2002              FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* W PEGAU  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30387**                      **OREGON STATE UNIV**                      **7861**  
 SCALING UP NOCTURNAL CO2 AND WATER VAPOR FLUXES WITH MICRO-METEOROLOGICAL NETWORKS/REINA NAKAMURA  
 08/13/2001 - 08/31/2004              FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* L MAHRT  
*Tech. Officer:* GSFC/W WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40022**                      **OREGON STATE UNIV**                      **7862**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE AND FELLOWSHIP PROGRAM.  
 02/13/1997 - 02/28/2001              FY01: -\$148,553                      Total: \$802,197  
*Prin. Invest.:* A C KLEIN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40103**                      **OREGON STATE UNIV**                      **7863**  
 OREGON SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/01/2001 - 02/28/2002              FY01: \$404,803                      Total: \$404,803  
*Prin. Invest.:* A C KLEIN  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9579**                      **PORTLAND STATE UNIV**                      **7864**  
 RECOGNIZING THE SIGNATURES OF HYPERTHERMOPHILIC BIOFILMS: GEYSERITES, EPITHERMAL DEPOSITS & ANCI  
 05/10/2000 - 04/30/2002              FY01: \$109,020                      Total: \$178,960  
*Prin. Invest.:* S CADY  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11309**                      **PORTLAND STATE UNIV**                      **7865**  
 ICE SHELVES AND LANDFAST ICE ON THE ANTARCTIC PERI METER CHARACTERISTICS AND EFFECTS OF CLIMATE CHANGE  
 08/30/2001 - 08/31/2003              FY01: \$10,300                      Total: \$10,300  
*Prin. Invest.:* C HULBE  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1283**                      **PORTLAND STATE UNIV**                      **7866**  
 JOVE RESEARCH  
 01/21/1997 - 08/31/2000              FY01: -\$1,028                      Total: \$53,886  
*Prin. Invest.:* A M FRASER  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 1152**                      **PORTLAND STATE UNIV**                      **7867**  
 AN EXPLORATORY STUDY TO CHARACTERIZE AND EVALUATE IV & V ROI  
 01/19/2000 - 01/14/2001              FY01: \$0                      Total: \$94,228  
*Prin. Invest.:* D M RAFFO  
*Tech. Officer:* ARC/Y F SIAMAK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2010**                      **UNIV OF OREGON - EUGENE**                      **7868**  
 ATMOSPHERIC AND SPECTROSCOPIC RESEARCH IN THE FAR INFRARED  
 02/23/1998 - 02/21/2002              FY01: \$0                      Total: \$112,000  
*Prin. Invest.:* K PARK  
*Tech. Officer:* LARC/I G NOLT  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 1934**                    **UNIV OF OREGON - EUGENE**                    **7869**  
 NUCLEATION OF QUANTIZED VORTICES FROM ROTATING SUPERFLUID DROPS  
 08/05/1996 - 01/01/2001            FY01: \$10,000                    Total: \$249,000  
*Prin. Invest.:* D J DONNELLY  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 5 6109**                    **UNIV OF OREGON - EUGENE**                    **7870**  
 THE FORMATION AND EVOLUTION OF LSB GALAXIES  
 07/24/1997 - 10/31/2001            FY01: \$0                            Total: \$164,039  
*Prin. Invest.:* D SCHOMBERT  
*Tech. Officer:* GSFC/D GOLOMBEK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8505**                    **UNIV OF OREGON - EUGENE**                    **7871**  
 INSTABILITIES IN PROTOSTELLAR STAR/DISK SYSTEMS (A TP - 98)  
 05/10/1999 - 04/30/2002            FY01: \$27,513                    Total: \$76,358  
*Prin. Invest.:* J IMAMURA  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10709**                    **UNIV OF OREGON - EUGENE**                    **7872**  
 ACCRETION FLOWS IN MAGNETIC WHITE DWARF SYSTEMS (ADP 2000)  
 04/23/2001 - 04/30/2002            FY01: \$28,250                    Total: \$28,250  
*Prin. Invest.:* J IMAMURA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11300**                    **UNIV OF OREGON - EUGENE**                    **7873**  
 GALAXY PHOTOMETRY FOR NASA/IPAC EXTRAGALACTIC DATA BASE  
 08/29/2001 - 08/31/2004            FY01: \$37,709                    Total: \$37,709  
*Prin. Invest.:* J SCHOMBERT  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1089**                    **UNIV OF OREGON - EUGENE**                    **7874**  
 AFFECT & AERONAUTICAL DECISION-MAKING  
 02/02/1999 - 01/14/2002            FY01: \$168,698                    Total: \$368,313  
*Prin. Invest.:* R MAURO  
*Tech. Officer:* ARC/I BARSHI  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 5299**                    **UNIV OF OREGON - EUGENE**                    **7875**  
 THE EFFECT OF UV RADIATION ON THE ESTABLISHMENT & INTEGRITY OF MICROBIAL MATS  
 07/11/2000 - 12/31/2000            FY01: \$0                            Total: \$51,479  
*Prin. Invest.:* R W CASTEBOLZ  
*Tech. Officer:* ARC/B M BEBOUT, ARC/D J DES MARAIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5306**                    **UNIV OF OREGON - EUGENE**                    **7876**  
 CONSOLIDATED CULTURE COLLECTION OF MICROORGANISMS FOR EXTREME ENVIRONMENTS  
 01/21/1999 - 12/31/2000            FY01: \$0                            Total: \$83,000  
*Prin. Invest.:* R W CASTENHOLZ  
*Tech. Officer:* ARC/C P MCKAY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5409**                    **UNIV OF OREGON - EUGENE**                    **7877**  
 CULTURE COLLECTION OF MICRO-ORGANISMS FROM EXTREME ENVIRONMENTS & THE ROLE OF THE UV-SHIELDING PIGMENT  
 11/22/2000 - 12/31/2001            FY01: \$93,764                    Total: \$93,764  
*Prin. Invest.:* R W CASTENHOLZ  
*Tech. Officer:* ARC/B M BEBATH, ARC/M L FONDA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 3 880**                    **UNIV OF OREGON - EUGENE**                    **7878**  
 DEVELOPMENT OF A SELF-PACED COMPUTER BASED TRAINING PROGRAM ON IN-FLIGHT ICING  
 03/23/2001 - 06/30/2002            FY01: \$210,874                    Total: \$210,874  
*Prin. Invest.:* R MAURO  
*Tech. Officer:* GRC/T H BOND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50107**                    **UNIV OF OREGON - EUGENE**                    **7879**  
 POTENTIAL VEGETATION CHANGE IN NORTH AMERICA IN RESPONSE TO WARMING  
 09/06/1997 - 02/28/2001            FY01: \$0                            Total: \$66,000  
*Prin. Invest.:* P BARTLEIN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## PENNSYLVANIA

**NAG 5 3617**                    **ALLEGHENY COLLEGE**                    **7880**  
 ASSESSING THE IMPACTS OF EL NINO CLIMATIC EVENTS ON PHILIPPINE ECONOMY  
 02/21/1997 - 12/14/1999            FY01: -\$4,077                    Total: \$131,064  
*Prin. Invest.:* D BENSEL, NONE  
*Tech. Officer:* GSFC/A J TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7964**                    **BLOOMSBURG UNIV**                    **7881**  
 REMOTE SENSING OF FRACTAL PLANETARY SURFACES  
 01/11/1999 - 01/14/2002            FY01: \$34,000                    Total: \$146,300  
*Prin. Invest.:* M K SHEPARD  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8679**                    **BUCKNELL UNIV**                    **7882**  
 INVESTIGATION OF AERODYNAMIC AND RADIOMETRIC LAND SURFACE TEMPERATURES  
 07/27/1999 - 08/14/2002            FY01: \$65,645                    Total: \$170,060  
*Prin. Invest.:* R D CRAGO  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8699**                    **BUCKNELL UNIV**                    **7883**  
 IMPROVED PREDICTION OF MOMENTUM AND SCALAR FLUXES USING MODIS IMAGERY  
 08/17/1999 - 08/14/2002            FY01: \$19,330                    Total: \$56,250  
*Prin. Invest.:* R D CRAGO  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10129**                      **BUCKNELL UNIV**                      **7884**  
 SATELLITE-BASED ESTIMATION OF AERODYNAMIC ROUGHNESS FOR  
 GLOBAL CLIMATE STUDIES  
 12/06/2000 - 12/14/2001      FY01: \$5,000                      Total: \$5,000  
*Prin. Invest.:* R D CRAGO  
*Tech. Officer:* GSFC/M F JASINSKI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10821**                      **BUCKNELL UNIV**                      **7885**  
 SOFTWARE AND HARDWARE SYSTEM FOR PREDICTING THE COMPUTA-  
 TIONAL SPEED OF HIGH PERFORMANCE COMPUTERS  
 04/26/2001 - 05/14/2002      FY01: \$75,497                      Total: \$75,497  
*Prin. Invest.:* M F ABURDENE  
*Tech. Officer:* GSFC/J DORBAND  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 2090**                      **CARNEGIE - MELLON UNIV**                      **7886**  
 NOVEL SCALABLE ALGORITHMS FOR AEROSPACE DESIGN OPTIMIZATION  
 ON MASSIVELY PARALLEL COMPUTERS  
 07/21/1998 - 08/31/2001      FY01: \$71,000                      Total: \$276,403  
*Prin. Invest.:* O GHATTAS  
*Tech. Officer:* LARC/R T BIEDRON, GSFC/J SOBIESKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1230**                      **CARNEGIE - MELLON UNIV**                      **7887**  
 APPLICATION SPECIFIC SUPER COMPUTING  
 06/16/1998 - 04/30/2001      FY01: \$100,000                      Total: \$1,149,288  
*Prin. Invest.:* T C MOWRY, O C GHATTAS, D R O'HALLARON  
*Tech. Officer:* ARC/C H SCHULBACH  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 2 1276**                      **CARNEGIE - MELLON UNIV**                      **7888**  
 UAV MODELING & CONTROL  
 01/04/1999 - 11/30/2000      FY01: \$0                      Total: \$144,372  
*Prin. Invest.:* C E THORPE  
*Tech. Officer:* ARC/M B TISCHLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1393**                      **CARNEGIE - MELLON UNIV**                      **7889**  
 MODEL-BASED PROGRAMMING SKUNKWORKS  
 02/01/2000 - 04/30/2002      FY01: \$50,000                      Total: \$140,000  
*Prin. Invest.:* R SIMMONS  
*Tech. Officer:* ARC/M SHIRLEY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1402**                      **CARNEGIE - MELLON UNIV**                      **7890**  
 AUTOMATED VERIFICATION OF DIAGNOSTIC MODELS  
 04/12/2000 - 05/31/2002      FY01: \$80,000                      Total: \$145,000  
*Prin. Invest.:* R G SIMMONS  
*Tech. Officer:* ARC/M LOWRY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1408**                      **CARNEGIE - MELLON UNIV**                      **7891**  
 MEMORY-BASED ACTIVE LEARNING OF DYNAMIC CONTROL  
 05/30/2000 - 09/30/2000      FY01: \$0                      Total: \$30,777  
*Prin. Invest.:* J SCHNEIDER  
*Tech. Officer:* ARC/N MUSCETTOLA  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1441**                      **CARNEGIE - MELLON UNIV**                      **7892**  
 HUAU FLIGHTDYNAMICS & CONTROL  
 09/28/2000 - 08/31/2002      FY01: \$38,200                      Total: \$197,070  
*Prin. Invest.:* W C MESSNER, C E THORPE  
*Tech. Officer:* ARC/M B TISCHLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1472**                      **CARNEGIE - MELLON UNIV**                      **7893**  
 EFFECTIVE TEAM SUPPORT: FROM MODELING TO SOFTWARE AGENTS  
 04/06/2001 - 03/31/2002      FY01: \$442,776                      Total: \$442,776  
*Prin. Invest.:* B JOHN, K SYCARA  
*Tech. Officer:* ARC/M P MATESSA  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2159**                      **CARNEGIE - MELLON UNIV**                      **7894**  
 LATEAL MOTION OF PARTICLES AND BUBBLES CAUSED BY PHORETIC  
 FLOWS NEAR A SOLID INTERFACE  
 04/22/1998 - 12/31/2002      FY01: \$100,000                      Total: \$380,000  
*Prin. Invest.:* P J SIDES, Y E SOLOMENTSER, J L ANDERSON  
*Tech. Officer:* GRC/R B ROGERS  
*CASE Category:* 13 - PHYSICS

**NAG 3 2449**                      **CARNEGIE - MELLON UNIV**                      **7895**  
 MICROSCALE HYDRODYNAMICS NEAR MOVING CONTACT LINES MICRO-  
 SCALE HYDRODYNAMICS NEAR MOVING CONTACT LINE  
 06/12/2000 - 05/18/2005      FY01: \$178,676                      Total: \$236,696  
*Prin. Invest.:* S GAROFF  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2640**                      **CARNEGIE - MELLON UNIV**                      **7896**  
 NANOSTRUCTURAL ELECTROCHEMICALLY ACTIVE SYSTEMS FO R LITHI-  
 IUM-ION BATTERIES  
 06/25/2001 - 05/31/2004      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* P N KUMTA  
*Tech. Officer:* GRC/D L BRITTON  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 3651**                      **CARNEGIE - MELLON UNIV**                      **7897**  
 MISSION SCIENTIST FOR ESA'S X-RAY MULTI-MIRROR MIS  
 03/06/1997 - 02/29/2000      FY01: \$0                      Total: \$410,000  
*Prin. Invest.:* D GRIFFITHS  
*Tech. Officer:* GSFC/D MACHI  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6548**                      **CARNEGIE - MELLON UNIV**                      **7898**  
 A NEW LOOK AT CLUSTER EVOLUTION (LTSA)  
 10/29/1997 - 10/31/2000      FY01: \$0                      Total: \$149,500  
*Prin. Invest.:* R NICHOL  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7707**                      **CARNEGIE - MELLON UNIV**                      **7899**  
 ANTARCTIC METEORITE SEARCH DEMONSTRATION  
 09/17/1998 - 08/31/2001      FY01: \$182,000                      Total: \$1,182,000  
*Prin. Invest.:* W WHITTAKER  
*Tech. Officer:* GSFC/D LAVERY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7898**                    **CARNEGIE - MELLON UNIV**                    **7900**  
 CLUES TO THE ORIGIN OF THE HARD X-RAY BACKGROUND: ASCA DEEP  
 SURVEYS OF DEEP ROSAT FIELDS (ADP98)  
 01/12/1999 - 12/31/1999                    FY01: -\$10                    Total: \$46,716  
*Prin. Invest.:* R E GRIFFITHS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7926**                    **CARNEGIE - MELLON UNIV**                    **7901**  
 THE VIPER SUNYAEV-ZELDOVICH SURVEY (L TSA 98)  
 01/03/1999 - 12/31/2001                    FY01: \$90,000                    Total: \$270,000  
*Prin. Invest.:* A K ROMER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8093**                    **CARNEGIE - MELLON UNIV**                    **7902**  
 AN AUTOMATED SYSTEM FOR THE REDUCTION AND ANALYSIS OF X-RAY  
 DATA FROM GALAXIES  
 02/01/1999 - 06/30/2001                    FY01: \$0                    Total: \$146,198  
*Prin. Invest.:* A F PTAK  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9242**                    **CARNEGIE - MELLON UNIV**                    **7903**  
 APPLICATION & ENGINEERING OF THIN FILM LITHIUM-ION BATTERIES  
 USING CARBON NANOTUBES & SOL-GEL DERIVE  
 03/10/2000 - 03/14/2001                    FY01: \$0                    Total: \$20,000  
*Prin. Invest.:* P KUMTA  
*Tech. Officer:* GSFC/H SHAW  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 9309**                    **CARNEGIE - MELLON UNIV**                    **7904**  
 ARTIFICIAL INTELLIGENCE TECHNIQUES FOR MINERAL IDENTIFICATION  
 FROM NEAR INFRARED SPECTRA ONBOARD FUT  
 03/20/2000 - 03/14/2002                    FY01: \$49,700                    Total: \$97,500  
*Prin. Invest.:* C GLYMOUR  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9899**                    **CARNEGIE - MELLON UNIV**                    **7905**  
 XMM SURVEY OF THE SHARC SAMPLE: CONSTRAINING OMEGA AND  
 CLUSTER FORMATION  
 09/06/2000 - 09/14/2001                    FY01: \$0                    Total: \$12,700  
*Prin. Invest.:* A ROMER  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9902**                    **CARNEGIE - MELLON UNIV**                    **7906**  
 MISSION SCIENTIST FOR ESA'S X-RAY MULTI-MIRROR MISSION  
 08/25/2000 - 08/31/2002                    FY01: \$164,305                    Total: \$324,305  
*Prin. Invest.:* R E GRIFFITHS  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9922**                    **CARNEGIE - MELLON UNIV**                    **7907**  
 XMM SEARCHES FOR IRON LINES IN LOW LUMINOSITY AGN: A TEST OF  
 ACCRETION THEORIES  
 09/05/2000 - 09/15/2001                    FY01: \$0                    Total: \$16,410  
*Prin. Invest.:* A F PTAK  
*Tech. Officer:* GSFC/P M ATKINS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10014**                    **CARNEGIE - MELLON UNIV**                    **7908**  
 'FOSSIL GROUPS' IN THE BRIGHT SHARC SURVEY  
 09/21/2000 - 09/30/2001                    FY01: \$0                    Total: \$18,100  
*Prin. Invest.:* R C NICHOL  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10043**                    **CARNEGIE - MELLON UNIV**                    **7909**  
 X-RAY SPECTRAL STATISTICS OF A COMPLETE HARD X-RAY -SELECTED  
 SAMPLE OF AGNS  
 11/02/2000 - 10/31/2002                    FY01: \$33,400                    Total: \$33,400  
*Prin. Invest.:* T MIYAJI  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10170**                    **CARNEGIE - MELLON UNIV**                    **7910**  
 X-RAY SPECTROSCOPY OF LOW-LUMINOSITY ACTIVE GALACTIC NUCLEI  
 WITH XMM  
 12/18/2000 - 12/31/2001                    FY01: \$9,724                    Total: \$9,724  
*Prin. Invest.:* A F PTAK  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10739**                    **CARNEGIE - MELLON UNIV**                    **7911**  
 VEXT: A VIRTUAL OBSERVATORY EXPLORATORY TOOLKIT. FULLY FUNDS  
 YEAR 1 OF AWARD  
 05/17/2001 - 05/31/2002                    FY01: \$80,000                    Total: \$80,000  
*Prin. Invest.:* J SCHNEIDER  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10740**                    **CARNEGIE - MELLON UNIV**                    **7912**  
 ADVANCED GALAXY CLUSTER DETECTION SOFTWARE.  
 04/12/2001 - 06/30/2002                    FY01: \$130,000                    Total: \$130,000  
*Prin. Invest.:* R NICHOL  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10875**                    **CARNEGIE - MELLON UNIV**                    **7913**  
 AGN X-RAY SPECTRAL EVOLUTION (L TSA 2000)  
 05/10/2001 - 08/31/2002                    FY01: \$93,910                    Total: \$93,910  
*Prin. Invest.:* T MIYAJI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1674**                    **CARNEGIE - MELLON UNIV**                    **7914**  
 SHAPRE EVOLUTION KINETICS OF SMALL PARTICLES  
 06/28/2000 - 11/30/2003                    FY01: \$90,250                    Total: \$130,250  
*Prin. Invest.:* G S ROHRER, W M MULLINS  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1704**                    **CARNEGIE - MELLON UNIV**                    **7915**  
 LATTICE BOLTZMANN COMPUTATIONS OF BINARY DIFFUSION IN LIQUIDS  
 UNDER STOCHASTIC MICROGRAVITY  
 05/24/2000 - 11/30/2001                    FY01: \$121,250                    Total: \$121,250  
*Prin. Invest.:* R F SEKERKA  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1799**                      **CARNEGIE - MELLON UNIV**                      **7916**  
 RESEARCH ENTITLED, "ULTRA-HIGH DENSITY MEMS- ACTUATED-PROBE  
 MASS DATA STORAGE"  
 04/24/2001 - 04/23/2004                      FY01: \$515,000                      Total: \$515,000  
*Prin. Invest.:* L R CARLEY  
*Tech. Officer:* MSFC/A KEYS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1842**                      **CARNEGIE - MELLON UNIV**                      **7917**  
 ELECTROSMOTIC & ELECTROPHORETIC SELF-ASSEMBLY TECHNIQUES  
 TO PROMOTE MASS TRANSFER ON BIOSENSORS  
 08/31/2001 - 11/30/2004                      FY01: \$67,000                      Total: \$67,000  
*Prin. Invest.:* R D TILTON  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 12 - CHEMISTRY

**NAG 9 1090**                      **CARNEGIE - MELLON UNIV**                      **7918**  
 ANTARTIC METEORITE SEARCH DEMONSTRATION  
 02/26/1999 - 04/15/2001                      FY01: -\$182,199                      Total: \$1,817,801  
*Prin. Invest.:* T KANADE, W WHITTAKER  
*Tech. Officer:* HQ/D LAVERY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1092**                      **CARNEGIE - MELLON UNIV**                      **7919**  
 AUTONOMOUS ROVER TECHNOLOGY  
 03/15/1999 - 04/30/2002                      FY01: \$271,800                      Total: \$1,341,800  
*Prin. Invest.:* T KANADE  
*Tech. Officer:* JSC/D LAVERY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1214**                      **CARNEGIE - MELLON UNIV**                      **7920**  
 PARTICIPATION IN THE FIRST COMPETITION 2000  
 03/03/2000 - 03/03/2001                      FY01: \$0                      Total: \$35,000  
*Prin. Invest.:* W WHITTAKER, D APOSTOLOULOS  
*Tech. Officer:* JSC/C J CULBERT, JSC/C PRICE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1226**                      **CARNEGIE - MELLON UNIV**                      **7921**  
 DISTRIBUTED MULTI-ROBOT ASSEMBLY AND CONSTRUCTION  
 05/12/2000 - 05/15/2001                      FY01: \$0                      Total: \$300,000  
*Prin. Invest.:* R SIMMONS  
*Tech. Officer:* JSC/T PENDLETON, JSC/C CULBERT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1232**                      **CARNEGIE - MELLON UNIV**                      **7922**  
 STRATEGIC POSITIONING AND ATTITUDE COMPUTING ENGINE FOR  
 HOMING ORBITING GADGETRY  
 05/15/2000 - 12/31/2001                      FY01: \$0                      Total: \$250,000  
*Prin. Invest.:* O AMIDI  
*Tech. Officer:* JSC/R D JUDAY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1240**                      **CARNEGIE - MELLON UNIV**                      **7923**  
 SKYWORKER PHASE II SPACE SOLAR POWER  
 06/29/2000 - 12/30/2000                      FY01: \$0                      Total: \$124,624  
*Prin. Invest.:* R W WHITTAKER  
*Tech. Officer:* JSC/C J CULBERT, JSC/H ALDRIDGE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1242**                      **CARNEGIE - MELLON UNIV**                      **7924**  
 RESEARCH GRANT  
 06/30/2000 - 07/01/2001                      FY01: \$0                      Total: \$22,000  
*Prin. Invest.:* D HERSHBERGER, D HERSHBERGER  
*Tech. Officer:* JSC/CFARMER, JSC/W TARKINGTON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1248**                      **CARNEGIE - MELLON UNIV**                      **7925**  
 AUTONOMOUS RECONNAISSANCE ROVER FOR EVA ROBOTIC AS  
 SISTANCE  
 07/18/2000 - 07/16/2003                      FY01: \$50,000                      Total: \$150,000  
*Prin. Invest.:* D APOSTOLOPOULOS  
*Tech. Officer:* JSC/C J CULBERT, JSC/C FARMER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1256**                      **CARNEGIE - MELLON UNIV**                      **7926**  
 SUN SYNCHRONOUS CIRCUMNAVIGATION  
 08/21/2000 - 12/20/2001                      FY01: \$0                      Total: \$1,078,139  
*Prin. Invest.:* W R WHITTAKER  
*Tech. Officer:* JSC/C J CULBERT, JSC/H ALDRIDGE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1276**                      **CARNEGIE - MELLON UNIV**                      **7927**  
 PITTSBURGH PUBLIC SCHOOL DIST/CARNEGIE MELLON UNIV TEAM  
 PARTICIPATION IN FIRST COMPET  
 02/22/2001 - 05/01/2001                      FY01: \$35,000                      Total: \$35,000  
*Prin. Invest.:* W WHITTAKER  
*Tech. Officer:* JSC/C CULBERT  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1326**                      **CARNEGIE - MELLON UNIV**                      **7928**  
 DISTRIBUTED MULTI ROBOT ASSEMBLY AND CONSTRUCTION  
 06/19/2001 - 05/31/2002                      FY01: \$181,000                      Total: \$181,000  
*Prin. Invest.:* R SIMMONS, S SINGH  
*Tech. Officer:* JSC/C L FARMER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 9 1327**                      **CARNEGIE - MELLON UNIV**                      **7929**  
 SELF ADAPTIVE PERCEPTION SYSTEMS FOR VARYING ENVIORNMENTS  
 06/21/2001 - 06/20/2002                      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* R SIMMONS, S BURKETT  
*Tech. Officer:* JSC/C FARMER  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 1026**                      **CARNEGIE - MELLON UNIV**                      **7930**  
 AUTONOMOUS SCIENCE SOFTWARE  
 03/06/1998 - 01/31/2001                      FY01: \$0                      Total: \$374,472  
*Prin. Invest.:* C GLYMOUR  
*Tech. Officer:* ARC/TL ROUGH  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1188**                      **CARNEGIE - MELLON UNIV**                      **7931**  
 HIGH DEPENDABILITY COMPUTING CONSORTIUM  
 07/11/2000 - 12/31/2001                      FY01: \$993,461                      Total: \$1,043,461  
*Prin. Invest.:* J H MORRIS  
*Tech. Officer:* ARC/M E DUENAS  
*CASE Category:* 22 - COMPUTER SCIENCE



**NCC 2 1226**                    **CARNEGIE - MELLON UNIV**                    **7932**  
 SIMULATING LEARNING OF COMPLEX, DYNAMIC TASKS  
 03/23/2001 - 02/28/2002      FY01: \$157,000                    Total: \$157,000  
*Prin. Invest.:* J R ANDERSON  
*Tech. Officer:* ARC/M MATESSA  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1227**                    **CARNEGIE - MELLON UNIV**                    **7933**  
 AUTOMATED DISCOVERY PROCEDURES FOR GENE EXPRESSION &  
 REGULATION FROM MICROARRAY & SERIAL ANALYSIS O  
 03/16/2001 - 02/28/2002      FY01: \$298,000                    Total: \$298,000  
*Prin. Invest.:* C GLYMOUR  
*Tech. Officer:* ARC/J COUGHLAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1241**                    **CARNEGIE - MELLON UNIV**                    **7934**  
 FORMAL VERIFICATION TOOLS & TECHNIQUES FOR AUTONOMOUS  
 SYSTEMS  
 03/28/2001 - 11/30/2001      FY01: \$75,000                    Total: \$75,000  
*Prin. Invest.:* J WING  
*Tech. Officer:* ARC/R MORRIS, ARC/D J CLANCY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1243**                    **CARNEGIE - MELLON UNIV**                    **7935**  
 HETEROGENEOUS MULTI-ROVER COORDINATION OF PLANETARY EXPLO-  
 RATION  
 04/05/2001 - 02/28/2002      FY01: \$400,697                    Total: \$400,697  
*Prin. Invest.:* R SIMMONS, NONE  
*Tech. Officer:* ARC/R MORRIS, ARC/D J CLANCY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5438**                    **CARNEGIE - MELLON UNIV**                    **7936**  
 INTELLIGENT SPACE ROBOTS IN THE NEXT 20 YEARS A SUMMER STUDY  
 06/21/2001 - 10/31/2001      FY01: \$20,647                    Total: \$20,647  
*Prin. Invest.:* R SIMMONS  
*Tech. Officer:* ARC/D CLANCY, ARC/J LAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 223**                    **CARNEGIE - MELLON UNIV**                    **7937**  
 NATIONAL ROBOTICS ENGINEERING CONSORTIUM  
 08/26/1997 - 07/31/2002      FY01: \$2,874,615                    Total: \$13,867,615  
*Prin. Invest.:* T KANADE  
*Tech. Officer:* GSFC/B H HANKS  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 431**                    **CARNEGIE - MELLON UNIV**                    **7938**  
 EVENTSCOPE: A 3D, NETWORKED ROBOTIC LEARNING ENVIRONMENT. IN  
 RESPONSE TO NASA COOPERATIVE AGREEMENT  
 09/20/1999 - 09/30/2002      FY01: \$106,835                    Total: \$328,365  
*Prin. Invest.:* P COPPIN  
*Tech. Officer:* GSFC/R E GABRYS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 1704**                    **CARNEGIE - MELLON UNIV**                    **7939**  
 LATTICE BOLZMANN COMPUTATIONS OF BINARY DIFFUSION IN LIQUIDS  
 UNDER STOCHASTIC MICROGRAVITY  
 05/24/2000 - 11/30/2001      FY01: -\$50,000                    Total: \$0  
*Prin. Invest.:* R F SEKERKA  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 2 52277**                    **CARNEGIE - MELLON UNIV**                    **7940**  
 AUTOMATED SURFACE MISSION PLANNING (STUDENT: PAUL D.  
 THOMPSON)  
 06/12/2001 - 08/31/2002      FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* W L WHITTAKER, NONE  
*Tech. Officer:* ARC/M H SIMS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 3 52370**                    **CARNEGIE - MELLON UNIV**                    **7941**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 06/20/2000 - 06/30/2002      FY01: \$22,000                    Total: \$44,000  
*Prin. Invest.:* P N KUMTA  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 3 52379**                    **CARNEGIE - MELLON UNIV**                    **7942**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 06/21/2001 - 07/31/2002      FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* M E MCHENRY  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 50054**                    **CARNEGIE - MELLON UNIV**                    **7943**  
 INVESTIGATING THE MECH. OF AGGREGATION OF COLLOIDAL COTROPHO-  
 RETIC DEPOSITION  
 08/05/1997 - 12/31/1999      FY01: -\$2,380                    Total: \$45,287  
*Prin. Invest.:* J L ANDERSON  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50248**                    **CARNEGIE - MELLON UNIV**                    **7944**  
 TASK EVALUATION FOR ROBOTIC EXPLORERS STUDENT: KIMBERLY SHILL-  
 CUTT  
 06/04/1999 - 06/30/2001      FY01: \$0                    Total: \$33,000  
*Prin. Invest.:* W WHITTAKER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50279**                    **CARNEGIE - MELLON UNIV**                    **7945**  
 EFFICIENT MACHINE LEARNING ALGORITHMS FOR SCIENCE STUDENT:  
 ALEXANDER G. GRAY  
 06/20/2000 - 07/31/2002      FY01: \$22,000                    Total: \$44,000  
*Prin. Invest.:* A W MOORE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50347**                    **CARNEGIE - MELLON UNIV**                    **7946**  
 INTEGRATING FEATURE TRACKING AND SHAPE-FROM-MOTION FOR  
 ROBOT VISUAL NAVIGATION/STUDENT: DENNIS STEL  
 05/07/2001 - 06/30/2002      FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* S SINGH  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1312**                    **CLARION UNIV OF PENNSYLVANIA**                    **7947**  
 JOVE RESEARCH  
 01/22/1997 - 08/31/2000                    FY01: -\$22,621                    Total: \$63,379  
*Prin. Invest.:* A J VEGA, P T RYBERG  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 1 01118**                    **DREXEL UNIV**                    **7948**  
 RECONFIGURABLE CONTROL OF AIRCRAFT IN NONLINEAR FLIGHT REGIMES  
 08/16/2001 - 08/31/2004                    FY01: \$50,000                    Total: \$50,000  
*Prin. Invest.:* B C CHANG  
*Tech. Officer:* LARC/C M BELCASTRO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1436**                    **DREXEL UNIV**                    **7949**  
 ALTERED SIGNAL TRANSDUCTION & DIFFERENTIAL GENE EXPRESSION IN PC12 PHEOCYTOMOCYTOMA CELLS IN CULTURE  
 09/19/2000 - 08/31/2002                    FY01: \$231,594                    Total: \$426,892  
*Prin. Invest.:* P I LELKES  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1884**                    **DREXEL UNIV**                    **7950**  
 COMBUSTION OF UNCONFINED DROPLET CLUSTERS IN MICRO GRAVITY  
 06/01/1996 - 09/30/2000                    FY01: \$0                    Total: \$321,727  
*Prin. Invest.:* D A RUFF  
*Tech. Officer:* GRC/D D ROSS, GRC/M A SACKSTEDTER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2212**                    **DREXEL UNIV**                    **7951**  
 DEVELOPMENT OF LEAN DIRECT WALL INJECTION (LDWI) COMBUSTOR  
 12/03/1998 - 09/30/2001                    FY01: \$28,602                    Total: \$141,182  
*Prin. Invest.:* K J CHOI  
*Tech. Officer:* GRC/R R TACINA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2291**                    **DREXEL UNIV**                    **7952**  
 ENZYMATIC CATABOLYSIS MONITORING USING A DYNAMIC LIGHT SCATTERING PROBE  
 09/09/1999 - 07/19/2000                    FY01: -\$21,235                    Total: \$0  
*Prin. Invest.:* M A DELLAVECCHIA  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2295**                    **DREXEL UNIV**                    **7953**  
 DEVELOPMENT AND VERIFICATION OF AN IMPROVED MODEL OF THE ICE ACCRETION PROCESS  
 09/29/1999 - 02/09/2001                    FY01: \$0                    Total: \$82,975  
*Prin. Invest.:* D A RUFF  
*Tech. Officer:* GRC/M G POTAPCZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 6029**                    **DREXEL UNIV**                    **7954**  
 WORK IN SUPPORT OF THE NASA ESS HPCC PROGRAM  
 10/06/1997 - 03/31/2001                    FY01: \$0                    Total: \$520,218  
*Prin. Invest.:* B FRYXELL  
*Tech. Officer:* GSFC/J R FISCHER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 5 6964**                    **DREXEL UNIV**                    **7955**  
 STELLAR AND BINARY EVOLUTION IN GLOBULAR CLUSTERS - ATP  
 02/10/1998 - 02/14/2002                    FY01: \$0                    Total: \$350,826  
*Prin. Invest.:* S L MCMILLAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8929**                    **DREXEL UNIV**                    **7956**  
 SCHOOL-BASED UV-B MONITORING PROJECT IN SUPPORT OF EOS-CHEM  
 01/13/2000 - 01/14/2002                    FY01: \$101,739                    Total: \$184,949  
*Prin. Invest.:* D R BROOKS  
*Tech. Officer:* GSFC/E HILSENATH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9264**                    **DREXEL UNIV**                    **7957**  
 BINARY EVOLUTION IN GLOBULAR CLUSTERS - ATP  
 03/13/2000 - 03/31/2002                    FY01: \$84,345                    Total: \$152,411  
*Prin. Invest.:* S MCMILLAN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10026**                    **DREXEL UNIV**                    **7958**  
 NASA ESS HPCC PROGRAM  
 10/27/2000 - 10/14/2002                    FY01: \$215,000                    Total: \$215,000  
*Prin. Invest.:* D VALLIERES  
*Tech. Officer:* GSFC/J FISCHER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10775**                    **DREXEL UNIV**                    **7959**  
 STELLAR AND BINARY EVOLUTION IN STAR CLUSTERS (ATP 2000)  
 04/24/2001 - 04/30/2002                    FY01: \$70,000                    Total: \$70,000  
*Prin. Invest.:* S L MCMILLAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11119**                    **DREXEL UNIV**                    **7960**  
 NUMERICAL RELATIVISTIC ASTROPHYSICS AT THE LABORATORY OF HIGH ENERGY ASTROPHYSICS (LHEA)  
 08/09/2001 - 03/14/2003                    FY01: \$36,181                    Total: \$36,181  
*Prin. Invest.:* M VALLIERES  
*Tech. Officer:* GSFC/J CENTRELLA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11340**                    **DREXEL UNIV**                    **7961**  
 LIPID-SOME-ENCAPSULATED ENZYMES AS OPTICAL NANOSENSORS FOR THE DETECTION OF BIOLOGICAL PROCESSES  
 09/14/2001 - 09/14/2002                    FY01: \$6,000                    Total: \$6,000  
*Prin. Invest.:* M A WHEATLEY  
*Tech. Officer:* GSFC/H SHAW  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1380**                    **DREXEL UNIV**                    **7962**  
 INNOVATIVE CARDIAC TISSUE ENGINEERING IN RWV BIOREACTORS  
 09/13/2001 - 09/04/2002                    FY01: \$22,000                    Total: \$22,000  
*Prin. Invest.:* P LELKES  
*Tech. Officer:* JSC/N PELLIS  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

**NAG13 00040**                      **DREXEL UNIV**                      **7963**  
 APPLICATION OF AN INTEGRATED MONITORING & MODELING SYSTEM  
 NARRAGANSETT BAY - INTERNET-BASED TECHNOL  
 08/23/2000 - 08/22/2002      FY01: \$376,919                      Total: \$886,504  
*Prin. Invest.:* M PIASECKI, M SPAULDING  
*Tech. Officer:* SSC/R MILLER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 1 278**                      **DREXEL UNIV**                      **7964**  
 EFFECTS OF ELECTROMAGNETIC-INDUCED FAILURE MODES: MODELING  
 AND ANALYSIS MY 1/3  
 02/25/1998 - 12/31/2000      FY01: \$0                      Total: \$190,900  
*Prin. Invest.:* A C LAU, B C CHANG  
*Tech. Officer:* LARC/C M BELCASTRO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 297**                      **DREXEL UNIV**                      **7965**  
 A STUDY OF THE CHEMISTRY OF SULFUR IN THE INTER- TROPICAL AND  
 SOUTH PACIFIC CONVERGENCE ZONES-----  
 04/28/1998 - 10/31/2002      FY01: \$0                      Total: \$498,742  
*Prin. Invest.:* A R BANDY, D C THORNTON  
*Tech. Officer:* LARC/J L ROPER, LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 409**                      **DREXEL UNIV**                      **7966**  
 AN AIRBORNE STUDY OF THE CHEMISTRY OF SULFUR IN THE ATMOSPHERE  
 OF THE WESTERN NORTH PACIFIC OCEAN  
 09/11/2000 - 06/30/2002      FY01: \$158,304                      Total: \$310,340  
*Prin. Invest.:* A R BANDY  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 3 822**                      **DREXEL UNIV**                      **7967**  
 EXPERIMENTAL AND MODEL DEVELOPMENT FOR INVESTIGATION OF  
 SOOTING AND RADIATION EFFECTS IN MICROGRAVI  
 08/17/2000 - 12/31/2002      FY01: \$160,244                      Total: \$215,330  
*Prin. Invest.:* D CHOI  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 825**                      **DREXEL UNIV**                      **7968**  
 DEVELOPMENT OF THERMALLY SPRAYED FGM EROSION/OXIDATION  
 RESISTANT COATING FOR POLYMERIC SUBSTRATES  
 09/26/2000 - 08/31/2003      FY01: \$35,380                      Total: \$70,760  
*Prin. Invest.:* D KNIGHT  
*Tech. Officer:* GRC/J K SUTTER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 835**                      **DREXEL UNIV**                      **7969**  
 A PRELIMINARY INVESTIGATION OF THE E-BEAM INDUCED POLYMER-  
 IZATION OF MALEIMIDE AND NORBORNENE END-CAP  
 12/15/2000 - 03/31/2002      FY01: \$92,381                      Total: \$92,381  
*Prin. Invest.:* D R PALMESE  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 847**                      **DREXEL UNIV**                      **7970**  
 COMBUSTION OF UNSUPPORTED DROPLET CLUSTERS IN MICRO GRAVITY  
 01/11/2001 - 12/18/2003      FY01: \$59,692                      Total: \$59,692  
*Prin. Invest.:* D A RUFF  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 913**                      **DREXEL UNIV**                      **7971**  
 INVESTIGATION OF SOOTING AND RADIATION EFFECTS ON THE BURNING  
 OF LARGE ETHANOL AND HEPTANE DROPLETS  
 08/31/2001 - 07/12/2002      FY01: \$11,250                      Total: \$11,250  
*Prin. Invest.:* D Y CHOI  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 9 130**                      **DREXEL UNIV**                      **7972**  
 PC12 PHEOCHROMOCYTOMA CELLS  
 05/29/2001 - 05/30/2003      FY01: \$168,150                      Total: \$168,150  
*Prin. Invest.:* P LELKE  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 6858**                      **FRANKLIN-MARSHALL COLLEGE**                      **7973**  
 STATISTICAL ALGORITHMS FOR THE ANALYSIS OF SPACE-BASED DATA-  
 SETS  
 02/09/1998 - 02/14/2002      FY01: \$0                      Total: \$63,912  
*Prin. Invest.:* D BACKMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5365**                      **FRANKLIN-MARSHALL COLLEGE**                      **7974**  
 THE NSTARS PROJECT: DATABASE, ASTROPHYSICS AND ASTRONOMY  
 RESEARCH AND SCIENTIFIC WORKSHOPS  
 02/01/2000 - 01/31/2001      FY01: \$0                      Total: \$63,250  
*Prin. Invest.:* D BACKMAN  
*Tech. Officer:* ARC/L CAROFF  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1840**                      **HAHNEMANN UNIV**                      **7975**  
 DETERGENT INTERACTIONS AFFECTING MEMBRANE PROTEIN CRYSTAL-  
 LIZATION: ANALYSIS & USE IN SCREEN DESIGN  
 09/28/2001 - 11/30/2004      FY01: \$81,000                      Total: \$81,000  
*Prin. Invest.:* P J LOLL, J M WEINCEK  
*Prin. Invest.:* NONE  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9285**                      **HAVERFORD COLLEGE**                      **7976**  
 LARGE-SCALE STRUCTURE IN THE X-RAY BACKGROUND AND LIMITS ON  
 COSMOLOGICAL PARAMETERS FROM THE INTEGRAL  
 04/17/2000 - 04/30/2002      FY01: \$25,594                      Total: \$54,764  
*Prin. Invest.:* S P BOUGHN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1196**                      **LA SALLE UNIV**                      **7977**  
 ANALYSIS AND DESIGN OF AUTOMATION ASSISTANTS FOR FLIGHT  
 CONTROLLER TEAMS IN THE MISSION CONTROL CENTER  
 01/24/2000 - 11/01/2000      FY01: \$0                      Total: \$15,500  
*Prin. Invest.:* M TAVANA  
*Tech. Officer:* JSC/D G SICKOREZ, JSC/S E TORNY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10172**                      **LINCOLN UNIV - PA.**                      **7978**  
 LINCOLN'S ADVANCED SCIENCE AND ENGINEERING REINFORCEMENT  
 (LASER) PROGRAM  
 01/03/2001 - 01/14/2002      FY01: \$30,000                      Total: \$30,000  
*Prin. Invest.:* R LANGLEY  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 3368 PENN. ST. U. @ ERIE-BEHREND COLLEGE 7979**  
 ISO SOLAR SYSTEM MISSION-TEAM MEMBER SUPPORT  
 08/28/1996 - 09/30/2001 FY01: \$0 Total: \$60,000  
*Prin. Invest.:* R F KNACKE  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 9 1034 PENNSYLVANIA STATE UNIV -HERSHEY MED. 7980**  
 EFFECT OF HEAD MOVEMENTS ON SYMPATHETIC NERVE ACTIVITY IN HUMANS: ROLE OF THE VESTIBULAR SYSTEM  
 07/20/1998 - 07/19/2001 FY01: \$0 Total: \$227,063  
*Prin. Invest.:* C A RAY  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 56 - MEDICL

**NAG 9 1044 PENNSYLVANIA STATE UNIV -HERSHEY MED. 7981**  
 NEUROVASCULAR RESPONSE TO BED REST  
 07/15/1998 - 07/14/2001 FY01: \$0 Total: \$340,560  
*Prin. Invest.:* L I SINOWAY  
*Tech. Officer:* JSC/C F SAWIN  
*CASE Category:* 56 - MEDICL

**NAG 9 1259 PENNSYLVANIA STATE UNIV -HERSHEY MED. 7982**  
 BED REST & NEUROVASCULAR FUNCTION  
 09/25/2000 - 08/31/2003 FY01: \$161,340 Total: \$193,608  
*Prin. Invest.:* D MACLEAN  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50264 PENNSYLVANIA STATE UNIV -HERSHEY MED. 7983**  
 TRANSGENIC ZEBRAFISH AS AN INDICATOR OF MUTAGENIC RISK  
 07/07/1999 - 06/30/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* C CHENGE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 1924 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7984**  
 NUMERICAL SIMULATION OF THE EFFECTS OF FUSELAGE SCATTERING ON THE NOISE RADIATED BY ROTORCRAFT  
 05/13/1997 - 08/31/2000 FY01: -\$1 Total: \$152,107  
*Prin. Invest.:* P J MORRIS  
*Tech. Officer:* LARC/D P LOCKAND  
*CASE Category:* 41 - AERONAUTICALENGNR

**NAG 1 2147 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7985**  
 NUMERICAL SIMULATIONS FOR LANDING GEAR NOISE GENERATION AND RADIATION (REF:NRA 98-LARC-5)  
 02/05/1999 - 12/31/2001 FY01: \$100,000 Total: \$386,954  
*Prin. Invest.:* P J MORRIS, L N LONG  
*Tech. Officer:* LARC/R R ANTOLIFF  
*CASE Category:* 41 - AERONAUTICALENGNR

**NAG 1 2208 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7986**  
 SIMULATION OF THE NOISE RADIATED BY RECTANGULAR JETS  
 06/24/1999 - 05/31/2001 FY01: \$0 Total: \$120,000  
*Prin. Invest.:* P J MORRIS, L N LONG  
*Tech. Officer:* LARC/R A GOLUB, LARC/D P GARBER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 2273 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7987**  
 ADAPTIVE INTERFACE APPROACH USING A REAL TIME BIOCYBERNETIC SYSTEM: CONTROL OF HAZARDOUS  
 02/25/2000 - 02/24/2002 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* W J RAY  
*Tech. Officer:* LARC/L J PRINZEL/A T POPE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 1 01009 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7988**  
 THE PHYSICAL MECHANISMS FOR TONAL NOISE GENERATION BY SLATS  
 01/23/2001 - 01/31/2004 FY01: \$99,903 Total: \$99,903  
*Prin. Invest.:* P J MORRIS  
*Tech. Officer:* LARC/M R KHORRAMI, LARC/B A SINGER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01085 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7989**  
 AN EFFICIENT SCHEME FOR UPDATING SPARSE CHOLESKY FACTORS  
 05/24/2001 - 12/31/2001 FY01: \$20,002 Total: \$20,002  
*Prin. Invest.:* P RAGHAVAN, NONE  
*Tech. Officer:* LARC/J C NEWMAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1295 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7990**  
 WEATHER FORECASTING SUPPORT FOR SOLVE  
 03/03/1999 - 01/31/2001 FY01: \$0 Total: \$43,711  
*Prin. Invest.:* G S FORBES  
*Tech. Officer:* ARC/E P CONDON, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1302 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7991**  
 PARTICIPATION AS MISSION SCIENTIST IN OBSERVATIONS FROM THE MIDDLE STRATOSPHERE DURING SOLVE  
 03/05/1999 - 01/31/2001 FY01: \$0 Total: \$104,000  
*Prin. Invest.:* W H BRUNE  
*Prin. Invest.:* NONE  
*Tech. Officer:* ARC/E P CONDON, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1309 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7992**  
 MEASUREMENTS OF ClO, BRO & HOX DURING SOLVE  
 03/15/1999 - 03/31/2001 FY01: \$0 Total: \$95,097  
*Prin. Invest.:* W H BRUNE  
*Tech. Officer:* ARC/E P CONDON, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1342 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7993**  
 MOLECULAR CONTROL OF CELL GROWTH DURING GRAVITY RESPONSES OF MAIZE SEEDINGS  
 07/20/1999 - 07/14/2002 FY01: \$109,871 Total: \$280,398  
*Prin. Invest.:* D J COSGROVE  
*Tech. Officer:* ARC/M M AVERNER, ARC/D D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1366 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7994**  
 GRAVITROPISM IN CHARA RHIZOIDS  
 07/30/1999 - 07/14/2002 FY01: \$71,345 Total: \$215,217  
*Prin. Invest.:* S G GILROY  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1410 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7995**  
 OBSTACLE DETECTION ALGORITHMS FOR ROTORCRAFT NAVIGATION  
 06/13/2000 - 05/14/2001 FY01: \$0 Total: \$59,240  
*Prin. Invest.:* R KASTURI, O I CAMPS  
*Tech. Officer:* ARC/A J AHUMADA, ARC/J B MULLIGAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1453 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7996**  
 MEASUREMENTS OF OH AND HO2 USING ATHOS ON THE DC-8 DURING SOLVE  
 01/26/2001 - 01/31/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* W H BRUNE  
*Tech. Officer:* ARC/E P CONDON, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1487 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7997**  
 WIRE DETECTION ALGORITHMS FOR NAVIGATION  
 06/26/2001 - 12/31/2001 FY01: \$34,410 Total: \$34,410  
*Prin. Invest.:* R KASTURI, O I CAMPS  
*Tech. Officer:* ARC/A J AHUMADA, ARC/J B MULLIGAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1524 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7998**  
 EVALUATION OF SI-O-C FOAM CERAMICS IN SIMULATED AE ROTHMAL ENVIRONMENTS  
 09/14/2001 - 08/31/2002 FY01: \$30,000 Total: \$30,000  
*Prin. Invest.:* J R HELLMANN  
*Tech. Officer:* ARC/D T ELLERBY, ARC/S M JOHNSON  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 1871 PENNSYLVANIA STATE UNIV. - UNIV. PARK 7999**  
 MICROGRAVITY EFFECTS ON TRANSENDOTHELIAL TRANSPORT  
 05/22/1996 - 10/21/2001 FY01: \$0 Total: \$460,000  
*Prin. Invest.:* J M TAZBELL  
*Tech. Officer:* GRC/J S LING, GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2151 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8000**  
 MODELING OF COMBUSTION RESPONSE OF GAS TURBINE SPRAY SWIRL-STABILIZED INJECTORS TO ACOUSTIC OSCILLA  
 04/07/1998 - 12/31/2001 FY01: \$40,000 Total: \$135,000  
*Prin. Invest.:* V G YANG, NONE  
*Tech. Officer:* GRC/K L BREISACHER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2328 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8001**  
 A NUMERICAL AND EXPERIMENTAL STUDY OF THE FLOW AND NOISE FROM SUBSONIC AND SUPERSONIC JETS  
 03/17/2000 - 06/20/2002 FY01: \$59,082 Total: \$181,700  
*Prin. Invest.:* P J MORRIS  
*Tech. Officer:* GRC/M D DAHL  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2374 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8002**  
 MOLECULAR DYNAMIC OF FLUID SOLID SYSTEMS MOLECULAR DYNAMIC OF FLUID SOLID SYSTEMS  
 03/31/2000 - 11/30/2003 FY01: \$50,000 Total: \$75,000  
*Prin. Invest.:* D BANAVAR  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2448 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8003**  
 HEALTH MANAGEMENT AND LIFE EXTENDING CONTROL OF GAS TURBINE ENGINES  
 05/30/2000 - 05/14/2003 FY01: \$60,000 Total: \$95,000  
*Prin. Invest.:* A RAY  
*Tech. Officer:* GRC/T GUO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2470 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8004**  
 DYNAMICS OF PARTICLES IN STATIONARY ISOTROPIC TURBULENCE  
 07/11/2000 - 11/30/2003 FY01: \$38,000 Total: \$68,000  
*Prin. Invest.:* D R COLLINS  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2501 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8005**  
 COMBUSTION BEHAVIOR OF ADVANCED MONOPROPELLANTS COMBUSTION BEHAVIOR OF ADVANCED MONOPROPELLANTS  
 12/11/2000 - 10/31/2003 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* D KUO  
*Tech. Officer:* GRC/B D REED  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 3 2546 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8006**  
 EXPERIMENTAL AND THEORETICAL STUDIES OF WET GRANULAR MEDIA  
 02/26/2001 - 01/31/2004 FY01: \$76,145 Total: \$76,145  
*Prin. Invest.:* D E SCHIFFER  
*Tech. Officer:* GRC/J H AGUI  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 2561 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8007**  
 DIELECTRIC MATERIALS DEVELOPMENT FOR HIGH TEMPERATURE  
 03/16/2001 - 02/08/2002 FY01: \$70,000 Total: \$70,000  
*Prin. Invest.:* D T LANAGAN  
*Tech. Officer:* GRC/G E SCHWARZE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2590 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8008**  
 MEMS NOZZLE OPTIMIZATION STUDIES FOR DECOMPOSING SOLID MICROPROPULSION TECHNOLOGY  
 04/19/2001 - 05/31/2004 FY01: \$58,903 Total: \$58,903  
*Prin. Invest.:* D A LEVIN  
*Tech. Officer:* GRC/B D REED  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 3 2598 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8009**  
 FLYWHEEL TECHNOLOGY DEVELOPMENT FOR SMALL SATELLITE APPLICATIONS  
 04/27/2001 - 04/30/2003 FY01: \$59,745 Total: \$59,745  
*Prin. Invest.:* H HOFMANN  
*Tech. Officer:* GRC/B KENNY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2603 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8010**  
 INVESTIGATION OF ULTRAHIGH POWER DENSITY MACHINE DESIGNS  
 05/04/2001 - 10/31/2001 FY01: \$79,997 Total: \$79,997  
*Prin. Invest.:* D HOFMANN, NONE  
*Tech. Officer:* GRC/G V BROWN  
*CASE Category:* 45 - ELECTRICAL ENGR

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NAG 4 160 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8011**  
 LEARNING USING ERASST AIRCRAFT/LUAAU  
 02/08/1999 - 09/30/2001 FY01: \$20,253 Total: \$230,418  
*Prin. Invest.:* B GRABOWSKI, J A GOODE  
*Tech. Officer:* DFRC/M MC CARTHY, DFRC/E L DUKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 2857 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8012**  
 PHYSICS AND COSMOLOGY OF HIGH-ENERGY SOURCES  
 01/23/1995 - 09/30/2000 FY01: -\$1,364 Total: \$283,636  
*Prin. Invest.:* P MESZAROS  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3856 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8013**  
 ASSESSING THE IMPACT OF EXPANDING URBAN LAND USE USING  
 REMOTE SENSING DATA & PHYSICALLY BASED SOIL  
 12/19/1996 - 12/14/2000 FY01: \$0 Total: \$362,320  
*Prin. Invest.:* G W PETERSEN  
*Tech. Officer:* GSFC/M J IMHOFF  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3970 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8014**  
 USE OF ARABIDOPSIS TRANSPOSON MUTANTS IN THE STUDY  
 03/05/1997 - 02/28/2001 FY01: \$0 Total: \$470,187  
*Prin. Invest.:* N V FEDOROFF  
*Tech. Officer:* GSFC/M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 4301 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8015**  
 A STUDY OF PLANETARY SYSTEMS AROUND NEUTRON STARS  
 04/09/1997 - 02/28/2002 FY01: \$65,000 Total: \$297,000  
*Prin. Invest.:* D WOLSZCZAN  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4553 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8016**  
 THE GLOBAL WATER CYCLE: EXTENSION ACROSS THE EARTH  
 06/12/1997 - 06/30/2002 FY01: \$0 Total: \$5,263,454  
*Prin. Invest.:* E J BARRON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4840 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8017**  
 THE REGENERATING PROTOPLAST AS A SINGLE CELL MODEL IN PLANTS  
 06/26/1997 - 05/31/2002 FY01: \$0 Total: \$366,770  
*Prin. Invest.:* R CYR  
*Tech. Officer:* GSFC/M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 5093 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8018**  
 RESEARCH IN X-RAY ASTRONOMY  
 11/22/1996 - 09/30/2000 FY01: \$0 Total: \$1,367,429  
*Prin. Invest.:* D BURROWS, G P GARMIRE  
*Tech. Officer:* GSFC/W GURKIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5136 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8019**  
 SPIRIT: STUDENT PROJECTS INVOLVING ROCKET INVESTIGATION TECH-  
 Niques  
 04/14/1997 - 04/13/2001 FY01: \$0 Total: \$35,000  
*Prin. Invest.:* J D MITCHELL  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5169 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8020**  
 PROJECT DROPPS: THE DISTRIBUTION AND ROLE OF PARTICLES IN THE  
 POLAR SUMMER MESOSPHERE  
 03/13/1998 - 12/31/2001 FY01: \$0 Total: \$168,596  
*Prin. Invest.:* J D MITCHELL  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5174 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8021**  
 VALIDATION AND PROMPT DISTRIBUTION OF ACCESS DATA FUNDING FOR  
 FIRST YEAR OF GRANT  
 03/09/1998 - 03/31/2002 FY01: \$0 Total: \$109,080  
*Prin. Invest.:* S COUTU  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5210 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8022**  
 COSMIC RAY ENERGETICS AND MASS (CREAM) COSMIC RAY ENERGETICS  
 AND MASS (CREAM)  
 09/22/1998 - 05/31/2000 FY01: \$0 Total: \$85,600  
*Prin. Invest.:* J J BEATTY  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 5220 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8023**  
 GRANT NAG5-5220 - HIGH ENERGY ANTIMATTER TELESCOPE (HEAT) - PI  
 DR. JAMES BEATTY  
 03/16/1999 - 11/30/2001 FY01: \$100,000 Total: \$461,000  
*Prin. Invest.:* J J BEATTY  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5248 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8024**  
 COSMIC RAY ENERGETICS AND MASS (CREAM) COSMIC RAY ENERGETICS  
 AND MASS (CREAM)  
 03/12/2000 - 11/30/2002 FY01: \$152,000 Total: \$296,000  
*Prin. Invest.:* BEATTY  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5250 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8025**  
 FIRST YEAR OF THREE YEAR EFFORT FOR PI DR. STEPHANE COUTU  
 03/23/2000 - 11/30/2002 FY01: \$152,000 Total: \$296,000  
*Prin. Invest.:* S E COUTU  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5256 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8026**  
 MODIFICATION OF IONIZATION PROPERTIES IN THE MIDDLE ATMOSPHERE  
 BY GRAVITY WAVES  
 03/20/2000 - 02/10/2003 FY01: \$266,856 Total: \$514,256  
*Prin. Invest.:* C L CROSKEY  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5277 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8027**  
 RESEARCH IN X-RAY ASTRONOMY RESEARCH IN X-RAY ASTRONOMY  
 06/01/2000 - 05/15/2002 FY01: \$0 Total: \$265,000  
*Prin. Invest.:* D N BURROWS, G P GARMIRE  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5313 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8028**  
 GRAVITY WAVE FORCING THE MESOSPHERE AND LOWER THERMO-  
 SPHERE MOUNTAIN AND CONNECTIVE WAVES  
 02/08/2001 - 02/07/2004 FY01: \$79,287 Total: \$79,287  
*Prin. Invest.:* C L CROSKY  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6207 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8029**  
 MECHANISM OF LENGTH-OF-DAY VARIABILITY  
 08/01/1997 - 12/31/2000 FY01: -\$3,484 Total: \$177,999  
*Prin. Invest.:* S FELDSTEIN  
*Tech. Officer:* GSFC/H FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6389 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8030**  
 MODELING THE AIR-SEA FLUXES OF CARBONYL SULFIDE AND CARBON  
 MONOXIDE USING REMOTELY SENSED DATA  
 10/17/1997 - 08/31/2001 FY01: \$0 Total: \$179,506  
*Prin. Invest.:* R NAJJAR  
*Tech. Officer:* GSFC/J A MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6399 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8031**  
 THE GAS AND THE STARS OF INTERMEDIATE REDSHIFT GALAXIES (LTS A)  
 10/10/1997 - 10/14/2002 FY01: \$58,100 Total: \$283,394  
*Prin. Invest.:* J CHARLTON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6451 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8032**  
 EVALUATION AND INTERCOMPARISON OF THREE-DIMENSIONAL MARINE  
 CARBON CYCLE MODELS  
 10/24/1997 - 12/31/2001 FY01: \$0 Total: \$201,866  
*Prin. Invest.:* R NAJJAR  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6656 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8033**  
 SPACE-TIME SCALING OF WATER TRANSFERS BETWEEN THE LAND  
 SURFACE AND THE LOWER ATMOSPHERE  
 12/04/1997 - 10/31/2000 FY01: \$0 Total: \$163,955  
*Prin. Invest.:* A P BARROS  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6713 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8034**  
 PHASE COMPRESSED IMAGE DATA FOR BROAD-AREA LANDSCAPE  
 CHANGE ANALYSES AND HARMONIZATION OF IMAGE  
 12/30/1997 - 12/31/2000 FY01: \$0 Total: \$87,500  
*Prin. Invest.:* W MEYERS  
*Tech. Officer:* GSFC/D WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6737 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8035**  
 THE STATISTICAL CONSULTING CENTER FOR ASTRONOMY (S CCA)  
 12/17/1997 - 12/31/2001 FY01: \$0 Total: \$97,886  
*Prin. Invest.:* M AKRITAS  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6852 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8036**  
 AN RXTE LONG LOOK AT THE BRIGHT SEYFERT 1 GALAXY MCG-6-30-15  
 01/13/1998 - 01/14/2001 FY01: \$0 Total: \$10,772  
*Prin. Invest.:* W BRANDT  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6907 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8037**  
 SOFT X-RAY RADIATION FROM ISOLATED NEUTRON STARS  
 02/17/1998 - 07/31/2000 FY01: -\$3 Total: \$87,597  
*Prin. Invest.:* G PAVLOV  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7017 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8038**  
 NEUTRON STAR ATMOSPHERES - ATP  
 02/17/1998 - 02/14/2002 FY01: \$0 Total: \$288,142  
*Prin. Invest.:* G G PAVLOV  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7121 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8039**  
 MULTIFREQUENCY MONITORING OF MRK 501  
 04/13/1998 - 04/14/2000 FY01: -\$1,467 Total: \$7,408  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7256 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8040**  
 BROAD-BAND SPECTRA AND VARIABILITY OF THE BRIGHT N ARROW-LINE  
 SEYFERT 1 GALAXY H0707-495 & COORDINATE  
 05/01/1998 - 06/30/2000 FY01: -\$861 Total: \$20,907  
*Prin. Invest.:* W N BRANDT  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7276 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8041**  
 SIMULTANEOUS XTE AND AXAF OBSERVATIONS OF THE CIRCULAR  
 GALAXY MULTIFREQUENCY MONITORING OF  
 04/15/1998 - 04/14/2001 FY01: \$0 Total: \$11,554  
*Prin. Invest.:* G CHARTAS  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7443 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8042**  
 INVESTIGATING MESOSCALE CONVECTIVE SYSTEMS & TROPICAL  
 EASTERLY WAVES IN CENTRAL & WEST AFRICA USING  
 06/12/1998 - 06/14/2001 FY01: \$0 Total: \$140,600  
*Prin. Invest.:* G JENKINS  
*Tech. Officer:* GSFC/R W LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 7547 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8043**  
 SATELLITE TRACKING AND RAINFALL ESTIMATION FOR SHORT-TERM,  
 HEAVILY PRECIPITATING STORM EVENTS  
 06/22/1998 - 06/30/2002 FY01: \$0 Total: \$235,764  
*Prin. Invest.:* J L EVANS  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7776 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8044**  
 REMOTE SENSING OF WEST ANTARCTIC ICE SHEET SURFACE MELTING:  
 RECOGNITION, CONTROLS, AND SIGNIFICANCE  
 10/27/1998 - 12/31/2002 FY01: \$11,210 Total: \$31,220  
*Prin. Invest.:* R ALLEY  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7781 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8045**  
 MEASUREMENT AND ANALYSIS OF THE SPATIAL AND TEMPORAL VARI-  
 ABILITY OF TOPOGRAPHIC PRECIPITATION IN  
 11/13/1998 - 10/31/1999 FY01: -\$1,530 Total: \$158,470  
*Prin. Invest.:* A P BARROS  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7925 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8046**  
 HIGH-ENERGY ABSORPTION IN BLAZARS: PROBING THE INNER JET ENVI-  
 RONMENT (ADP 98)  
 01/03/1999 - 09/14/2000 FY01: -\$70,923 Total: \$6,831  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8005 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8047**  
 A SMALL, LIGHTWEIGHT RADIOMETER TO IMPROVE THE TEMPORAL  
 SAMPLING OF RAINFALL  
 01/12/1999 - 09/30/2000 FY01: -\$21,630 Total: \$194,187  
*Prin. Invest.:* C S RUF  
*Tech. Officer:* GSFC/C D KUMMEROW  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8107 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8048**  
 AXAF, XMM AND ASTRO-E INVESTIGATIONS OF SEYFERT/QUASAR  
 CENTRAL ENGINES: EXPLORING THE ENVIRONMENTS  
 02/05/1999 - 02/14/2002 FY01: \$64,700 Total: \$188,500  
*Prin. Invest.:* W N BRANDT  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8369 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8049**  
 A METASTABLE ASSOCIATED ABSORBER IN THE BROAD-LINE RADIO  
 GALAXY ARP 102B (ADP 98)  
 03/02/1999 - 02/28/2001 FY01: \$0 Total: \$19,942  
*Prin. Invest.:* M ERACELOUS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8401 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8050**  
 SWIFT - PHASE A CONCEPT STUDY  
 03/05/1999 - 08/31/2000 FY01: -\$1,949 Total: \$578,490  
*Prin. Invest.:* J NOUSEK  
*Tech. Officer:* GSFC/L HILLARD  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8422 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8051**  
 2-RAY STUDIES OF YOUNG STELLAR OBJECTS (LTSA 98)  
 04/01/1999 - 04/30/2001 FY01: \$0 Total: \$53,117  
*Prin. Invest.:* E D FEIGELSON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8710 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8052**  
 METHANE & HYDROGEN IN EARTH'S PRIMITIVE ATMOSPHERE  
 08/02/1999 - 09/30/2001 FY01: \$79,200 Total: \$158,579  
*Prin. Invest.:* J F KASTING  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8735 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8053**  
 MERGING MODELS AND OBSERVATIONS OF THE ATMOSPHERIC  
 BOUNDARY LAYER'S MESOSCALE STRUCTURE DURING SGP-9  
 08/17/1999 - 08/14/2002 FY01: \$0 Total: \$117,240  
*Prin. Invest.:* D R STAUFFER  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8738 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8054**  
 SPACE-TIME DYNAMICS OF SOIL MOISTURE & TEMPERATURE -SCALE  
 ISSUES  
 08/17/1999 - 08/14/2002 FY01: \$23,667 Total: \$71,000  
*Prin. Invest.:* D MILLER  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9039 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8055**  
 TECTONIC-CLIMATE INTERACTIONS IN ACTIVE OROGENIC BELTS: QUAN-  
 TIFICATION OF DYNAMIC TOPOGRAPHY WITH S  
 02/10/2000 - 12/31/2000 FY01: -\$9,468 Total: \$82,032  
*Prin. Invest.:* D W BURBANK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9089 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8056**  
 SEARCH FOR NEW EVIDENCE IN PRE-2.0 GA PALEOSOLS & SHALES FOR  
 THE EARLY EVOLUTION OF ATMOSPHERIC OXYGEN  
 02/17/2000 - 01/31/2002 FY01: \$60,000 Total: \$120,000  
*Prin. Invest.:* H OHMOTO, NONE  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9133 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8057**  
 CONSTRAINING THE STRUCTURE OF THE CENTRAL ENGINE OF RADIO-  
 LLOUD AGN ADP 99  
 02/28/2000 - 09/14/2000 FY01: -\$28,219 Total: \$1,446  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 9134 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8058**  
 INTENSIVE RXTE MONITORING OF THE TEV BLAZAR MRK501 (ADP 99)  
 02/28/2000 - 01/31/2001 FY01: -\$23,678 Total: \$0  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9153 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8059**  
 THEORETICAL STUDIES OF GAMMA-RAY BURSTS WITH SWIFT  
 03/02/2000 - 06/30/2002 FY01: \$30,989 Total: \$60,989  
*Prin. Invest.:* P I MESZAROS  
*Tech. Officer:* GSFC/N GEHRELS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9192 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8060**  
 PHYSICS OF GAMMA RAY BURST SOURCES  
 03/08/2000 - 03/14/2002 FY01: \$106,443 Total: \$210,900  
*Prin. Invest.:* P MESZAROS  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9377 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8061**  
 THE ORIGINS AND PROPERTIES OF INTRACLUSTER STARS (LISA 99)  
 04/05/2000 - 03/31/2002 FY01: \$104,747 Total: \$212,803  
*Prin. Invest.:* R CIARDULLO  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9586 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8062**  
 A RADICAL-VELOCITY ASSESSMENT OF CANDIDATE SIM GRID STARS FOR  
 ASTROMETRIC STABILITY, USING  
 05/10/2000 - 05/14/2002 FY01: \$35,000 Total: \$70,000  
*Prin. Invest.:* R A WADE  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9587 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8063**  
 "THIN FILM TRANSISTOR ADDRESSING ARRAYS FOR MICRO- WELL  
 GAMMA RAY DETECTORS"  
 05/12/2000 - 05/14/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* T JACKSON  
*Tech. Officer:* GSFC/S D HUNTER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9918 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8064**  
 AN X-RAY STUDY OF THE MOST DISTANT QUASARS FROM THE SLOAN  
 DIGITAL SKY SURVEY  
 09/05/2000 - 09/14/2002 FY01: \$14,000 Total: \$28,100  
*Prin. Invest.:* W N BRANDT  
*Tech. Officer:* GSFC/R F MUSKOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9924 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8065**  
 A DETAILED STUDY OF TWO NLS1  
 09/05/2000 - 09/14/2002 FY01: \$0 Total: \$6,964  
*Prin. Invest.:* W N BRANDT  
*Tech. Officer:* GSFC/P M ATKINS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9932 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8066**  
 XMM SPECTROSCOPY OF THE X-RAY DETECTED BROAD ABSORPTION  
 LINE QSO CSO 755  
 09/07/2000 - 09/14/2002 FY01: \$15,700 Total: \$32,700  
*Prin. Invest.:* W N BRANDT  
*Tech. Officer:* GSFC/D F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9933 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8067**  
 XMM STUDY OF THE BRIGHT ULTRASOFT NARROW-LINE QUASARS  
 0205+024  
 09/07/2000 - 09/14/2002 FY01: \$0 Total: \$5,945  
*Prin. Invest.:* W N BRANDT  
*Tech. Officer:* GSFC/D F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9934 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8068**  
 CONSTRAINTS ON HO FROM TIME-DELAY MEASUREMENTS OF  
 PG1115+080  
 09/06/2000 - 09/14/2002 FY01: \$16,000 Total: \$36,600  
*Prin. Invest.:* G CHARTAS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9938 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8069**  
 SPECTRUM AND PULSATIONS OF THE NEUTRON STAR CANDIDATE RX  
 J0002+6246  
 09/06/2000 - 09/14/2002 FY01: \$0 Total: \$5,991  
*Prin. Invest.:* G PAVLOV  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9939 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8070**  
 AN XMM STUDY OF THE BRIGHT NARROW-LINE SEYFERT 1 GALAXY  
 ARAKELIAN 564  
 09/06/2000 - 09/14/2002 FY01: \$14,400 Total: \$28,800  
*Prin. Invest.:* W BRANDT  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9940 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8071**  
 XMM SPECTROSCOPY OF MARKARIAN 6: INTRINSIC ABSORPTION AND  
 BLACK HOLE REGION  
 09/06/2000 - 09/14/2002 FY01: \$15,000 Total: \$30,300  
*Prin. Invest.:* W N BRANDT  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9949 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8072**  
 THROUGH BAL QUASARS BRIGHTLY  
 09/07/2000 - 08/31/2002 FY01: \$15,900 Total: \$33,900  
*Prin. Invest.:* G CHARTAS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9970 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8073**  
 PROBING CLASS O PROTOSTARS WITH HARD X-RAYS ---OMC2 -3  
 REGION---  
 09/13/2000 - 09/14/2002 FY01: \$16,000 Total: \$38,300  
*Prin. Invest.:* Y TSUBOI  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9976 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8074**  
 RGS ABUNDANCE MEASUREMENT OF WOLF-RAYET STELLAR WIND  
 09/12/2000 - 09/14/2002 FY01: \$0 Total: \$17,000  
*Prin. Invest.:* Y MAEDA  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9982 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8075**  
 STRUCTURE OF THE ACCRETION FLOWS IN BROAD-LINE RADIO GALAXIES  
 09/13/2000 - 09/14/2002 FY01: \$16,444 Total: \$37,444  
*Prin. Invest.:* M ERACLEOUS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10050 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8076**  
 MERGING MODELS AND OBSERVATIONS OF THE ATMOSPHERIC  
 BOUNDARY LAYER'S MESOSCALE STRUCTURE DURING S  
 09/28/2000 - 05/31/2002 FY01: \$0 Total: \$41,578  
*Prin. Invest.:* K DAVIS  
*Tech. Officer:* GSFC/E ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10079 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8077**  
 MAPPING SPECTRAL LINES FROM THE DIFFUSE X-RAY BACK GROUND  
 10/27/2000 - 10/31/2001 FY01: \$9,500 Total: \$9,500  
*Prin. Invest.:* D N BURROWS, NONE  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10080 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8078**  
 SHADOWING OF THE EXTRAGALACTIC SOFT X-RAY BACK- GROUND  
 10/27/2000 - 10/31/2001 FY01: \$8,900 Total: \$8,900  
*Prin. Invest.:* D N BURROWS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10089 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8079**  
 THE X-RAY PROPERTIES OF LOCAL GALAXIES: BRIDGING THE GAP TO  
 HIGH-Z  
 11/20/2000 - 11/30/2001 FY01: \$6,703 Total: \$6,703  
*Prin. Invest.:* N BRANDT  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10541 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8080**  
 PATTERN-BASED MONITORING OF CHANGE AT MULTIPLE SCALES  
 THROUGH REMOTE SENSING& GIS IN FOREST  
 03/20/2001 - 03/14/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* W L MYERS  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10542 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8081**  
 STATISTICAL CHALLENGES IN MODERN ASTRONOMY III  
 03/13/2001 - 03/14/2002 FY01: \$20,000 Total: \$20,000  
*Prin. Invest.:* G BABU  
*Tech. Officer:* GSFC/D GOLOMBEK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10617 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8082**  
 PENN STATE ACTIVITIES IN THE NASA GSFC TRANSMISSIV E MICRO-  
 SHUTTER ARRAY TECHNOLOGY DEVELOPMENT PROGR  
 03/19/2001 - 03/31/2002 FY01: \$64,156 Total: \$64,156  
*Prin. Invest.:* D GE  
*Tech. Officer:* GSFC/S H MOSELY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10706 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8083**  
 SOFT X-RAY BACKGROUND IN THE GALACTIC ANTI-CENTER (ADP - 2000)  
 04/19/2001 - 04/30/2002 FY01: \$5,209 Total: \$5,209  
*Prin. Invest.:* S PARK, NONE  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10817 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8084**  
 A COMPREHENSIVE STUDY OF THE NARROW ABSORPTION- LINE GAS  
 INTRINSIC TO QUASARS  
 04/24/2001 - 04/30/2002 FY01: \$86,821 Total: \$86,821  
*Prin. Invest.:* M ERACLEOUS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10865 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8085**  
 X-RAY RADIATION FROM NEUTRON STARS (L TSA 2000)  
 05/08/2001 - 05/14/2002 FY01: \$89,000 Total: \$89,000  
*Prin. Invest.:* G PAVLOV  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1272 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8086**  
 GRAVITATIONAL EFFECT ON THE DEVELOPMENT OF LASER WELDPPOOL  
 AND SOLIDIFICATIONMICROSTRUCTURE  
 05/09/1996 - 06/22/2002 FY01: \$0 Total: \$600,000  
*Prin. Invest.:* J SINGH  
*Tech. Officer:* MSFC/P DOTY, MSFC/R POWER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1286 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8087**  
 JOVE RESEARCH  
 01/21/1997 - 08/31/2000 FY01: -\$3,831 Total: \$30,472  
*Prin. Invest.:* G SUBRAMANIAM  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1452 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8088**  
 R/S GRAVITATIONAL EFFECTS ON DISTORTION IN SINTERING  
 02/01/1998 - 01/31/2002 FY01: \$148,750 Total: \$565,000  
*Prin. Invest.:* R M GERMAN  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1530 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8089**  
 NUMERICAL STUDY OF THE ROLE OF SHALLOW CONVECTION ON MOIS-  
 TURE TRANSPORT AND CLIMATE  
 05/06/1998 - 05/30/2001 FY01: \$0 Total: \$423,849  
*Prin. Invest.:* N L SEAMAN  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1732 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8090**  
 DEMONSTRATION OF THROTTLEABLE LOX/H @ INJECTOR CONCEPTS  
 07/01/2000 - 09/30/2001 FY01: \$0 Total: \$98,000  
*Prin. Invest.:* R J SANTORO, R D WOODWARD  
*Tech. Officer:* MSFC/W ANDERSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1761 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8091**  
 CRITICAL CASMIR FORCES  
 05/01/2001 - 04/30/2005 FY01: \$115,000 Total: \$115,000  
*Prin. Invest.:* M CHAN  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 8 1792 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8092**  
 RESEARCH ENTITLED, "VALIDATION DATA FOR FULL FLOW STAGED  
 COMBUSTION INJECTORS"  
 03/13/2001 - 03/31/2005 FY01: \$367,650 Total: \$367,650  
*Prin. Invest.:* R J SANTORO  
*Tech. Officer:* MSFC/K TUCKER  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 8 1844 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8093**  
 FOCUSED ROCKET-EJECTOR ROCKET-BASED COMBINED-CYCLE  
 EXPERIMENTS (RBCC)  
 07/16/2001 - 06/30/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* R J SANTORO, S PAL  
*Tech. Officer:* MSFC/J H RUFF  
*CASE Category:* 42 - AERONAUTICAL ENGR

**NAG 9 1173 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8094**  
 FACILITATED BLOOD PRESSURE CONTROL  
 09/22/1999 - 09/30/2002 FY01: \$133,367 Total: \$281,449  
*Prin. Invest.:* J A PAWELCZYK  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1264 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8095**  
 BONE STRAIN DURING OG EXERCISE  
 11/28/2000 - 10/31/2003 FY01: \$247,831 Total: \$247,831  
*Prin. Invest.:* P CAVANAGH  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 56 - MEDICL

**NAG 9 1372 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8096**  
 MICROFABRICATED OPTICAL BIOSENSOR ARRAYS FOR AIR QUALITY  
 MONITORING  
 08/01/2001 - 09/03/2003 FY01: \$101,397 Total: \$101,397  
*Prin. Invest.:* M V PISHKO  
*Tech. Officer:* JSC/D RUSSO  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAS 3 01082 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8097**  
 REDUCED THERMAL CONDUCTIVITY ZIRCONIA BASED THERMAL BARRIER  
 COATINGS TBC APPLIED ON ALUMINIDE BON  
 03/08/2001 - 03/01/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:*  
*Tech. Officer:* GRC/R DRAPER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAS 5 00024 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8098**  
 CONTRACTOR WILL PROVIDE 3-DIMENSIONAL FIELDS OF ATMOSPHERIC  
 TRACE GASES.  
 11/30/1999 - 11/29/2000 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* W H BRUNE  
*Tech. Officer:* GSFC/J F GLEASON, GSFC/E H HILSENDRATH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 00136 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8099**  
 SWIFT ULTRAVIOLET & OPTICAL TELESCOPES X-RAY TELESCOPE,  
 GROUND STATION SYSTEM  
 04/27/2000 - 12/31/2006 FY01: \$6,876,000 Total: \$10,782,000  
*Prin. Invest.:* J A NOUSEK  
*Tech. Officer:* GSFC/R BORELLI  
*CASE Category:* 11 - ASTRONOMY

**NAS 8 38252 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8100**  
 AXAF CCD IMAGING SPECTROMETER  
 06/27/1990 - 03/01/2002 FY01: \$2,773,000 Total: \$11,442,000  
*Prin. Invest.:* G P GARMIRE  
*Tech. Officer:* MSFC/M E ROSENTHAL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 8 40890 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8101**  
 R/S "EXPERIMENTAL & ANALYTICAL MODELING OF THE ROCKET EJECTOR  
 MODE"  
 09/04/1996 - 07/01/2001 FY01: \$0 Total: \$1,136,163  
*Prin. Invest.:* S PAL, R J SANTORO  
*Tech. Officer:* MSFC/J C MCARTHUR, MSFC/R L MOORE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 9 99095 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8102**  
 FOOT REACTION FORCES DURING SPACE FLIGHT  
 05/01/1999 - 04/30/2002 FY01: \$117,500 Total: \$558,015  
*Prin. Invest.:* P CAVANAGH  
*Tech. Officer:* JSC/M KAMMAN  
*CASE Category:* 56 - MEDICL

**NCC 1 300 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8103**  
 HOX MEASUREMENTS IN PEM TROPOSPHERIC B WITH THE AIRBORNE  
 TROPOSPHERIC HYDROGEN OXIDES SENSOR  
 07/07/1998 - 07/30/2001 FY01: \$1 Total: \$720,141  
*Prin. Invest.:* W H BRUNE  
*Tech. Officer:* LARC/J M HOELL, JR., LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 382 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8104**  
 NASTRAN DMAP FUZZY STRUCTURES PROGRAMMING  
 03/15/2000 - 09/30/2001 FY01: \$49,957 Total: \$104,028  
*Prin. Invest.:* V W SPARROW  
*Tech. Officer:* LARC/R D BUEHRLE/J H ROBINSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 406 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8105**  
 MODELING THE NOISE OF ARBITRARY, MANEUVERING ROTORS  
 09/07/2000 - 08/31/2003 FY01: \$1 Total: \$62,131  
*Prin. Invest.:* K S BRENTNER  
*Tech. Officer:* LARC/H E JONES  
*CASE Category:* 41 - AERONAUTICAL ENGR

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NCC 1 414 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8106**  
TRACE-P OH & HO<sub>2</sub> MEAS'S W/AIRBORNE TROPOSPHERIC HYDROGEN  
OXIDES (ATHOS) ON THE NASA DC-8  
09/25/2000 - 06/30/2002 FY01: \$189,815 Total: \$472,947  
*Prin. Invest.:* W H BRUNE  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 943 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8107**  
PENN STATE ROTORCRAFT CENTER OF EXCELLENCE  
02/26/1996 - 12/31/2000 FY01: \$0 Total: \$1,962,492  
*Prin. Invest.:* F C SMITH, L N LONG  
*Tech. Officer:* ARC/Y H YU, ARC/J M DAVIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1057 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8108**  
CREATING THE PENN STATE ASTROBIOLOGY RESEARCH CENT ER  
09/17/1998 - 06/30/2003 FY01: \$1,421,457 Total: \$3,441,143  
*Prin. Invest.:* H OHMOTO  
*Tech. Officer:* ARC/R A GRYMES, ARC/W W DOLCI  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1122 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8109**  
A NOVEL OXIDATION-RESISTANT THERMAL PROTECTION MAT ERIAL  
06/07/1999 - 08/31/2001 FY01: \$0 Total: \$71,820  
*Prin. Invest.:* L R RADOVIC  
*Tech. Officer:* ARC/C E JOHNSON, ARC/M D REZIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 2 1211 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8110**  
NEW TECHNIQUES FOR DATA FUSION VISUALIZATION & CON DITION  
MONITORING OF COMPLEX SYSTEMS  
01/12/2001 - 12/31/2001 FY01: \$235,000 Total: \$235,000  
*Prin. Invest.:* J L WISE  
*Tech. Officer:* ARC/J E PALLIX  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5307 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8111**  
DETERMINING THE EFFECT OF CARBON DIOXIDE CLOUDS ON MARTIAN  
PALEOCLIMATE  
02/11/1999 - 08/31/2000 FY01: \$0 Total: \$83,000  
*Prin. Invest.:* J F KASTING  
*Tech. Officer:* ARC/R E YOUNG, ARC/R M HABERLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5410 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8112**  
GREENHOUSE MECHANISMS FOR WARMING EARLY MARS  
11/22/2000 - 11/30/2001 FY01: \$45,260 Total: \$45,260  
*Prin. Invest.:* J F KASTINGS  
*Tech. Officer:* ARC/R E YOUNG, ARC/D DESMARAIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 3 597 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8113**  
MULTIAXIAL DEFORMATION STUDY OF HIGH TEMPERATURE M ETALLIC  
MATERIALS  
01/28/1998 - 11/30/2001 FY01: \$0 Total: \$238,796  
*Prin. Invest.:* C J LISSENOEN  
*Tech. Officer:* GRC/B A LERCH, GRC/J R ELLIS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 718 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8114**  
COMPUTATIONAL AND EXPERIMENTAL STUDY OF ENERGETIC MATERIALS  
IN A COUNTERLOW MICROGRAVITY ENVIRONMENT  
06/28/1999 - 06/09/2003 FY01: \$18,798 Total: \$61,980  
*Prin. Invest.:* R A YETTER  
*Tech. Officer:* GRC/D L UBTRAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 3 767 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8115**  
LOW CONDUCTIVE THERMAL BARRIER COATINGS PRODUCED B Y ION  
BEAM ASSISTED EB-PVD WITH CONTROLLED POROSI  
02/01/2000 - 01/31/2003 FY01: \$75,000 Total: \$150,000  
*Prin. Invest.:* D SINGH  
*Tech. Officer:* GRC/J ELDRIDGE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 848 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8116**  
DEFORMATON RESPONSE AND LIFE OF METALLIC COMPOSIT ES  
01/12/2001 - 12/17/2001 FY01: \$100,764 Total: \$100,764  
*Prin. Invest.:* D J LISSENDEN  
*Tech. Officer:* GRC/S M ARNOLD  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 5 432 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8117**  
LUAU II: LEARNING USING ERAS AIRCRAFT MISSIONS FOR UNDER-  
STANDING REMOTE SENSING, ATMOSPHERIC SAMP  
09/20/1999 - 09/30/2002 FY01: \$194,990 Total: \$538,637  
*Prin. Invest.:* D L GRABOWSKI  
*Tech. Officer:* GSFC/R E GABRYS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 508 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8118**  
NASA/GSFC COOPERATIVE ENTERPRISE, PROP # 3552  
08/15/2000 - 08/14/2002 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* J E FREDLEY  
*Tech. Officer:* GSFC/M HAGOPIAN  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 1 01018 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8119**  
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) PREVIOUS  
GRANT NO. NGT-1-52249  
05/25/2001 - 06/30/2003 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* S T KIEMARA  
*Tech. Officer:* LARC/M G BALLEEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52191 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8120**  
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
05/20/1998 - 06/30/2002 FY01: \$24,000 Total: \$78,001  
*Prin. Invest.:* P K MCLAUGHLIN  
*Tech. Officer:* LARC/T NORUM, LARC/B J JANSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52249 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8121**  
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
08/01/2000 - 06/30/2001 FY01: \$12,000 Total: \$22,000  
*Prin. Invest.:* M D LATORELLA  
*Tech. Officer:* LARC/M G BALLIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 2 52275 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8122**  
 NATIONAL ROTORCRAFT TECHNOLOGY CENTER (NRTC) ROTOR CRAFT  
 CENTER OF EXCELLENCE (RCOE)  
 02/14/2001 - 01/31/2002 FY01: \$623,995 Total: \$623,995  
*Prin. Invest.:* E C SMITH  
*Tech. Officer:* GSFC/AWKERR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 3 52359 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8123**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 07/15/1999 - 08/14/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* K W WANG  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 3 52368 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8124**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 06/19/2000 - 08/14/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* D A SANTAVICCA  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 118 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8125**  
 MODELING OF THE WEST ANTARCTIC ICE SHEET TO ASSESS DIVIDE  
 STABILITY & ICE STREAM EVOLUTION/STUDENT  
 05/31/2001 - 08/14/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R B ALLEY  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 5 119 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8126**  
 CHARTING THE COURSE OF CIRCUMSTELLAR MATERIAL STUDENT: JOHN  
 DEBES  
 05/31/2001 - 07/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* JIAN GE  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 127 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8127**  
 TESTING BINARY BLACK HOLE CODES IN STRONG FIELD REGIMES  
 (STUDENT: DAVID GARRISON)  
 06/12/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* P LAGUNA  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 30060 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8128**  
 IMPROVING SHORT-TERM QUANTITATIVE PRECIPITATION FO RECASTING  
 IN MOUNTAINOUS REGIONS  
 10/18/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* A BARROS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30139 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8129**  
 STUDIES OF OH AND HO2 IN THE PRESENCE OF CIRRUS CLOUDS NEAR  
 THE TROPOPAUSE  
 08/27/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* BRUNES, W SIMPAS  
*Tech. Officer:* HQ/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30171 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8130**  
 INTEGRATED SATELLITE, MODEL, AND FIELD-BASED STUDI ES OF  
 CONTROLSON THE EXTENT OF SURFACE MELTING I  
 09/04/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R B ALLEY, B DAS  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30193 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8131**  
 EDDY CORRELATION MEASUREMENT OF CO2 FLUX IN VOLCAN IC-HYDRO-  
 THERMAL ENVIRONMENTS SYS/STUDENT J. LEWIC  
 08/19/1999 - 08/31/2002 FY01: \$22,000 Total: \$60,668  
*Prin. Invest.:* S BRANTLEY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30208 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8132**  
 UNDERSTANDING HIGH TROPICAL CIRRUS/STUDENT: MATTHEW T. BOEHM  
 08/18/1999 - 08/31/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* J VERLINDE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30224 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8133**  
 A UNIFIED DATABASE MODEL FOR THE EXPLORATION AND ANALYSIS OF  
 SPATIOTEMPORAL ENVIRONMENTAL  
 08/14/2000 - 08/31/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* D PEUQUET  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30420 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8134**  
 PREDICTIVE SIGNATURES ASSOCIATED WITH THE DEVELOPM ENT OF  
 TROPICALWEATHER SYSTEMS IN THE EAST  
 09/07/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* G JENKINS, NONE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40064 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8135**  
 SUPPORT TO PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 02/25/1997 - 01/31/2001 FY01: \$0 Total: \$1,865,000  
*Prin. Invest.:* R DEVON  
*Tech. Officer:* HQ/J DASCH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40090 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8136**  
 PENNSYLVANIA SPACE GRANT COLLEGE AND FELLOWSHIP PR OGRAM  
 02/22/2001 - 01/31/2002 FY01: \$482,500 Total: \$482,500  
*Prin. Invest.:* R DEVON  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50178 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8137**  
 AN INVESTIGATION OF CARBON DIOXIDE FLUX MEASUREMENTS IN  
 VOLCANIC & GEOTHERMAL SYSTEMS/GSRP:WERNER C  
 10/09/1997 - 12/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* S BRANTLEY  
*Tech. Officer:* HQ/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50236 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8138**  
 GALAXY DISK EVOLUTION\_(STUDENT: DAVID ANDERSEN)  
 05/27/1999 - 06/30/2002 FY01: \$11,000 Total: \$55,000  
*Prin. Invest.:* M BERSHADY  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50247 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8139**  
 DEEP OBSERVATIONS WITH NASA'S CHANDRA X-RAY OBSERVATORY:  
 RESOLVING THE DISCRETE SOURCES OF THE COS  
 06/02/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* N BRANDT  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50272 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8140**  
 AOTF SPECTROMETER SYSTEM FOR THE REMOTE DETECTION OF PLANT  
 CANOPY NUTRIENT STRESSES IN A NASA CELSS/  
 09/08/1999 - 10/31/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* P N WALKER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50277 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8141**  
 PEERING THROUGH THE CLOUDS: ABSORPTION STUDIES OF LUMINOUS  
 ACTIVE GALAXIES WITH THE NEW GENERA  
 06/20/2000 - 07/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* W BRANDT  
*Tech. Officer:* GSFC/L K SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50296 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8142**  
 COSMIC RAY ENERGETICS AND MASS BALLOON EXPERIMENT STUDENT:  
 ROBERT KILLOREN  
 06/26/2000 - 07/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* S COUTU  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52856 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8143**  
 ADVANCED SPACE PROPULSION USING ANTIMATTER  
 07/01/1998 - 08/14/2001 FY01: -\$10,898 Total: \$55,102  
*Prin. Invest.:* G A SMITH  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 8 52876 PENNSYLVANIA STATE UNIV. - UNIV. PARK 8144**  
 ADVANCED SPACE PROPULSION USING ANTIMATTER, (GSRP)  
 08/13/1999 - 08/14/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* G A SMITH  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2424 PHIL COLLEGE OF PHARMACY & SCIENCE 8145**  
 IN VIVO EVALUATION OF A NOVEL AND IMPROVED INSTRUMENT FOR  
 OBJECTIVE EVALUATION OF OPHTHALMIC LENS  
 05/15/2000 - 08/15/2001 FY01: \$0 Total: \$49,872  
*Prin. Invest.:* D DUBLIN  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10094 SWARTHMORE COLLEGE 8146**  
 HIGH RESOLUTION SPECTROSCOPIC DIAGNOSTICS OF HOT PLASMA IN  
 THE STELLAR WIND OF EPSILON CANIS MAJORI  
 11/21/2000 - 11/30/2001 FY01: \$23,396 Total: \$23,396  
*Prin. Invest.:* D H COHEN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8649 TEMPLE UNIV 8147**  
 TO DEVELOP A PROTOTYPE AUTOMATED NETWORK FAULT DIAGNOSIS  
 SYSTEM FOR A MULTI-CAST BASED IP NETWORK  
 07/28/1999 - 01/31/2001 FY01: \$0 Total: \$59,967  
*Prin. Invest.:* S K BISWAS  
*Tech. Officer:* GSFC/B C DRAKE  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 9 1023 THOMAS JEFFERSON UNIV 8148**  
 FACTORS MODULATING RADIATION INDUCED G2-DELAYS  
 07/01/1998 - 06/30/2001 FY01: \$91,200 Total: \$599,124  
*Prin. Invest.:* C ILIAKIS  
*Tech. Officer:* JSC/F A CUCINOTTA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1342 THOMAS JEFFERSON UNIV 8149**  
 GENETICALLY ENGINEERED COLLAGEN II FOR SMALL BIOMATERIALS  
 08/22/2001 - 09/30/2004 FY01: \$54,000 Total: \$54,000  
*Prin. Invest.:* A FERTALA  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2172 UNIV OF PENNSYLVANIA 8150**  
 COLLOIDAL ASSEMBLY IN ENTROPICALLY DRIVEN LOW-VOLUME FRACTION  
 BINARY PARTICLE SUSPENSION  
 06/08/1998 - 02/28/2002 FY01: \$207,250 Total: \$629,241  
*Prin. Invest.:* A G YODH  
*Tech. Officer:* GRC/R A WILKINSEN  
*CASE Category:* 13 - PHYSICS

**NAG 3 2417 UNIV OF PENNSYLVANIA 8151**  
 ENGINEERING NOVEL BIOCOLLOID SUSPENSIONS ENGINEERING NOVEL  
 BIOCOLLOID SUSPENSIONS  
 05/08/2000 - 11/30/2003 FY01: \$66,500 Total: \$141,500  
*Prin. Invest.:* D A HAMMER  
*Tech. Officer:* GRC/D W GRIFFIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 8767 UNIV OF PENNSYLVANIA 8152**  
 COUPLING COMPUTER VISION AND ASTRONAUT PERFORMANCE FOR  
 MULTI-PERSON MODELING AND ANALYSIS  
 08/25/1999 - 08/31/2001 FY01: \$190,894 Total: \$399,750  
*Prin. Invest.:* D N METAXAS  
*Tech. Officer:* GSFC/R CROUCH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9194**                    **UNIV OF PENNSYLVANIA**                    **8153**  
 MICROWAVE FOREGROUNDS AND THEIR POLARIZATION (PI TRANSF. INST  
 ADV STUDIES NAG5-6034)  
 03/08/2000 - 09/30/2002    FY01: \$93,578                    Total: \$249,941  
*Prin. Invest.:* M TEGMARK  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9229**                    **UNIV OF PENNSYLVANIA**                    **8154**  
 BLAST: A BALLOON-BORNE LARGE-APERTURE SUB-MILLIMETER TELE-  
 SCOPE - A COMPREHENSIVE PLAN FOR GALAC  
 03/20/2000 - 03/30/2002    FY01: \$310,000                    Total: \$621,000  
*Prin. Invest.:* M DEVLIN  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9241**                    **UNIV OF PENNSYLVANIA**                    **8155**  
 SELF-HEALING OF CARBON NANOTUBES  
 03/10/2000 - 03/14/2001    FY01: \$0                    Total: \$22,190  
*Prin. Invest.:* D LUZZI  
*Tech. Officer:* GSFC/H SHAW  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 10731**                    **UNIV OF PENNSYLVANIA**                    **8156**  
 A VERY WIDE AREA SURVEY FOR TRANS-NEPTUNIAN OBJECTS  
 04/11/2001 - 04/14/2002    FY01: \$35,000                    Total: \$35,000  
*Prin. Invest.:* C ALCOCK  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10923**                    **UNIV OF PENNSYLVANIA**                    **8157**  
 MAPPING LARGE-SCALE STRUCTURE IN THE UNIVERSE  
 05/22/2001 - 03/14/2002    FY01: \$129,447                    Total: \$129,447  
*Prin. Invest.:* B JAIN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10924**                    **UNIV OF PENNSYLVANIA**                    **8158**  
 THE CLUSTERING OF GALAXIES AND DARK MATTER AT INTERMEDIATE  
 REDSHIFTS(ATP 99)  
 05/22/2001 - 03/14/2002    FY01: \$67,762                    Total: \$67,762  
*Prin. Invest.:* B JAIN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11099**                    **UNIV OF PENNSYLVANIA**                    **8159**  
 CMB POLARIZATION ANALYSIS (LTSA 2000)  
 07/24/2001 - 10/31/2002    FY01: \$91,884                    Total: \$91,884  
*Prin. Invest.:* M TEGMARK  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1350**                    **UNIV OF PENNSYLVANIA**                    **8160**  
 FOR RESEARCH ENTITLED: QUANTITATIVE ANALYSIS INTER ACTIONS  
 DURING MEMBRANE PROTEIN CRYSTALLIZATION'  
 06/19/1997 - 10/31/2001    FY01: \$173,411                    Total: \$847,373  
*Prin. Invest.:* P LOLL  
*Prin. Invest.:* NONE  
*Tech. Officer:* MSFC/R CROMISE, MSFC/C R TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1483**                    **UNIV OF PENNSYLVANIA**                    **8161**  
 SURFACE TRANSFORMATION OF REACTIVE GLASS IN A MICROGRAVITY  
 ENVIRONMENT  
 02/03/1998 - 01/31/2002    FY01: \$99,750                    Total: \$380,250  
*Prin. Invest.:* P DUCHEYNE  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1683**                    **UNIV OF PENNSYLVANIA**                    **8162**  
 RESEARCH POLYMOSES: TOUGH, GRANT VESICLES FROM BLOCK  
 COPOLYMERS  
 05/26/2000 - 11/30/2003    FY01: \$114,000                    Total: \$164,000  
*Prin. Invest.:* D A  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1047**                    **UNIV OF PENNSYLVANIA**                    **8163**  
 MEASURE UROPONTIN FROM SAMPLE COLLECTION  
 07/21/1998 - 07/31/2000    FY01: -\$1                    Total: \$11,999  
*Prin. Invest.:* J R HOYER  
*Tech. Officer:* JSC/C SAMS  
*CASE Category:* 56 - MEDICL

**NAG 9 1161**                    **UNIV OF PENNSYLVANIA**                    **8164**  
 PREDICTING VULNERABILITY OF PERFORMANCE IMPAIRMENT FROM  
 SLEEP LOSS  
 09/21/1999 - 09/20/2002    FY01: \$167,500                    Total: \$317,500  
*Prin. Invest.:* H VAN D  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1265**                    **UNIV OF PENNSYLVANIA**                    **8165**  
 ENVIRONMENTAL BIOMEDICAL STRESS DATA  
 12/14/2000 - 10/31/2001    FY01: \$70,000                    Total: \$70,000  
*Prin. Invest.:* C J LAMBERTSEN  
*Tech. Officer:* JSC/J STANFORD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1279**                    **UNIV OF PENNSYLVANIA**                    **8166**  
 CREW TASK SIMULATION FOR MAINTENANCE, TRAINING AND SAFETY  
 02/22/2001 - 09/30/2003    FY01: \$142,500                    Total: \$142,500  
*Prin. Invest.:* N BADLER  
*Tech. Officer:* JSC/B WOOLFORD  
*CASE Category:* 56 - MEDICL

**NAG 9 1357**                    **UNIV OF PENNSYLVANIA**                    **8167**  
 IMPACT OF MICROGRAVITY ON HUMAN OSTEBLAST LIFE HISTORY:  
 EXPERIMENTAL INVESTIGATION & NUMERICAL STUD  
 08/22/2001 - 09/30/2004    FY01: \$68,000                    Total: \$68,000  
*Prin. Invest.:* L M SHAPIRO  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT 5 30165**                    **UNIV OF PENNSYLVANIA**                    **8168**  
 DEVELOPMENT OF A TIME RESOLVED VISIBLE AND ULTRAVIOLET SPEC-  
 TROSCOPIC TECHNIQUE FOR MEASURING RES  
 08/31/1998 - 08/31/2001    FY01: \$0                    Total: \$66,000  
*Prin. Invest.:* H DAI, L LETENDRE  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

<b>NGT 5 50210</b>	<b>UNIV OF PENNSYLVANIA</b>	<b>8169</b>	
THE INFLUENCE OF MOLECULAR PROPERTIES ON THE DYNAMICS OF CELL ADHESION			
07/10/1998 - 06/30/2000	FY01: \$0	Total: \$44,000	
<i>Prin. Invest.:</i> D A HAMMER			
<i>Tech. Officer:</i> HQ/A NURRIDIN			
<i>CASE Category:</i> 43 - CHEMICAL ENGR			
<b>NGT 5 50267</b>	<b>UNIV OF PENNSYLVANIA</b>	<b>8170</b>	
ENGINEERING BIOADHESIVE COLLOIDAL SUSPENSIONS			
07/07/1999 - 06/30/2002	FY01: \$22,000	Total: \$66,000	
<i>Prin. Invest.:</i> D A HAMMER			
<i>Tech. Officer:</i> GSFC/L SMITH			
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			
<b>NAG 2 1186</b>	<b>UNIV OF PITTSBURGH</b>	<b>8171</b>	
VESTIBULO-AUTONOMIC CIRCUITS			
03/17/1998 - 03/31/2002	FY01: \$0	Total: \$542,675	
<i>Prin. Invest.:</i> C D BALABAN, C A SCUDDER			
<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY			
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			
<b>NAG 3 1833</b>	<b>UNIV OF PITTSBURGH</b>	<b>8172</b>	
THE DISSOLUTION OF AN INTERFAC BETWEEN MISCIBLE LIQUIDS			
05/28/1996 - 05/28/2000	FY01: -\$60,000	Total: \$115,000	
<i>Prin. Invest.:</i> J V MAHER			
<i>Tech. Officer:</i> GRC/R A WILKINSON			
<i>CASE Category:</i> 13 - PHYSICS			
<b>NAG 3 2132</b>	<b>UNIV OF PITTSBURGH</b>	<b>8173</b>	
SMALL - SCALE STRUCTURE OF TURBULENCE SMALL STRUCTURE OF TURBULENCE			
02/27/1998 - 01/20/2001	FY01: \$0	Total: \$70,000	
<i>Prin. Invest.:</i> W GOLDBURG			
<i>Tech. Officer:</i> GRC/R SKARCH			
<i>CASE Category:</i> 13 - PHYSICS			
<b>NAG 3 2149</b>	<b>UNIV OF PITTSBURGH</b>	<b>8174</b>	
SPECTROSCOPY STUDIES OF SILICON CARBIDE FOR HIGH POWERED APPLICATIONS			
04/02/1998 - 01/24/2001	FY01: \$0	Total: \$200,000	
<i>Prin. Invest.:</i> W J CHOYKE, R P DEVATY			
<i>Tech. Officer:</i> GRC/J A POWELL			
<i>CASE Category:</i> 13 - PHYSICS			
<b>NAG 3 2396</b>	<b>UNIV OF PITTSBURGH</b>	<b>8175</b>	
FORCED TWO-DIMENSIONAL TURBULENCE IN FREELY SUSPENDED FILMS			
04/14/2000 - 11/30/2003	FY01: \$95,000	Total: \$170,000	
<i>Prin. Invest.:</i> D WI			
<i>Tech. Officer:</i> GRC/F P CHIARAMONTE			
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			
<b>NAG 3 2538</b>	<b>UNIV OF PITTSBURGH</b>	<b>8176</b>	
FUNDING			
02/06/2001 - 01/19/2002	FY01: \$60,015	Total: \$60,015	
<i>Prin. Invest.:</i> W J CHOYKE			
<i>Tech. Officer:</i> GRC/D J LARKIN			
<i>CASE Category:</i> 13 - PHYSICS			
<b>NAG 5 661</b>	<b>UNIV OF PITTSBURGH</b>	<b>8177</b>	
SUBORBITAL PROGRAM IN MAGNETOSPHERIC & IONOSPHERIC PHYSICS			
05/04/1990 - 10/31/2001	FY01: \$0	Total: \$1,006,693	
<i>Prin. Invest.:</i> E C ZIPF			
<i>Tech. Officer:</i> GSFC/W B JOHNSON, GSFC/R H PLESS			
<i>CASE Category:</i> 13 - PHYSICS			
<b>NAG 5 3642</b>	<b>UNIV OF PITTSBURGH</b>	<b>8178</b>	
GEOLOGIC MAPPING OF REULL VALLIS, MARS			
02/13/1997 - 09/30/2000	FY01: \$0	Total: \$120,565	
<i>Prin. Invest.:</i> D A CROWN			
<i>Tech. Officer:</i> GSFC/J G GRANT			
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			
<b>NAG 5 3723</b>	<b>UNIV OF PITTSBURGH</b>	<b>8179</b>	
PHOTOMETRIC ANALYSIS OF SPACECRAFT PLANETARY IMAGE			
02/12/1997 - 10/31/2000	FY01: \$0	Total: \$305,442	
<i>Prin. Invest.:</i> S W HAPKE			
<i>Tech. Officer:</i> GSFC/P G ROGERS			
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			
<b>NAG 5 4116</b>	<b>UNIV OF PITTSBURGH</b>	<b>8180</b>	
ELECTRON-ION RECOMBINATION PROCESSES RELATING TO P			
03/03/1997 - 12/31/2001	FY01: \$65,000	Total: \$399,775	
<i>Prin. Invest.:</i> D JOHNSON			
<i>Tech. Officer:</i> GSFC/J BERGSTRALH			
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			
<b>NAG 5 5267</b>	<b>UNIV OF PITTSBURGH</b>	<b>8181</b>	
LABORATORY SUPPORT FOR THE CRYOGENIC WHOLE AIR SAMPLING OF CARBON DIOXIDE IN THE UPPER MESOSPHERE			
06/01/2000 - 05/24/2003	FY01: \$68,870	Total: \$131,870	
<i>Prin. Invest.:</i> E ZIPF			
<i>Tech. Officer:</i> GSFC/J C BINTON			
<i>CASE Category:</i> 13 - PHYSICS			
<b>NAG 5 6164</b>	<b>UNIV OF PITTSBURGH</b>	<b>8182</b>	
A CROSS DISCIPLINARY LITERACY COURSE ON EARTH SYSTEMS IN THE 21ST CENTURY.			
08/27/1997 - 12/30/2001	FY01: \$19,839	Total: \$66,868	
<i>Prin. Invest.:</i> A A PANAH			
<i>Tech. Officer:</i> GSFC/N KHAZENIE			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NAG 5 7930</b>	<b>UNIV OF PITTSBURGH</b>	<b>8183</b>	
THE NATURE AND EVOLUTION OF THE GASEOUS AND STELLAR COMPONENTS OF THE GALAXY POPULATION ASSOCIATE			
12/14/1998 - 12/14/2001	FY01: \$108,598	Total: \$310,981	
<i>Prin. Invest.:</i> D A TURNSHEK			
<i>Tech. Officer:</i> GSFC/D K WEST			
<i>CASE Category:</i> 11 - ASTRONOMY			
<b>NAG 5 8211</b>	<b>UNIV OF PITTSBURGH</b>	<b>8184</b>	
QUANTITATIVE SPECTROSCOPIC ANALYSES OF MASSIVE STARS (LTS98)			
02/26/1999 - 02/28/2002	FY01: \$75,419	Total: \$227,653	
<i>Prin. Invest.:</i> J D HILLIER			
<i>Tech. Officer:</i> GSFC/D K WEST			
<i>CASE Category:</i> 11 - ASTRONOMY			



**NAG 5 8531 UNIV OF PITTSBURGH 8185**  
 MINIATURE IN SITU GEOCHRONOLOGY INSTRUMENT FOR PLANETARY  
 SURFACE DEPLOYMENT: BREADBOARD DEVELOPME  
 06/15/1999 - 06/30/2001 FY01: \$0 Total: \$121,128  
*Prin. Invest.:* B W STEWART  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8546 UNIV OF PITTSBURGH 8186**  
 UNRAVELING THE EVOLUTION OF GALAXIES (L TSA 98)  
 05/21/1999 - 03/31/2002 FY01: \$95,395 Total: \$279,861  
*Prin. Invest.:* A CONNOLLY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9051 UNIV OF PITTSBURGH 8187**  
 AN INTERDISCIPLINARY TEACHER TRAINING PROGRAM ON EARTH  
 SYSTEM SCIENCE USING INFORMATION TECHNOLOGY  
 02/14/2000 - 02/14/2002 FY01: \$36,469 Total: \$76,692  
*Prin. Invest.:* A I PANAH  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9399 UNIV OF PITTSBURGH 8188**  
 MULTIFREQUENCY, MULTIREOLUTION IMAGE DETECTION  
 04/12/2000 - 03/31/2001 FY01: \$0 Total: \$77,300  
*Prin. Invest.:* A CONNOLLY  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9438 UNIV OF PITTSBURGH 8189**  
 MULTI-SPECTRAL REMOTE SENSING OF BRUSH FIRE SCARS IN ARID  
 URBAN REGIONS: ANALYSIS OF FUTURE FIRE AND  
 04/14/2000 - 04/30/2002 FY01: \$59,356 Total: \$105,703  
*Prin. Invest.:* M S RAMSEY  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9439 UNIV OF PITTSBURGH 8190**  
 MONITORING THE HAZARDS OF SILICI VOLCANOES WITH REMOTE  
 SENSING  
 04/14/2000 - 04/30/2002 FY01: \$83,465 Total: \$124,715  
*Prin. Invest.:* M S RAMSEY  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9466 UNIV OF PITTSBURGH 8191**  
 EMPLACEMENT OF TERRESTRIAL & PLANETARY LAVA FLOWS  
 04/18/2000 - 04/14/2003 FY01: \$0 Total: \$58,200  
*Prin. Invest.:* D A CROWN  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9836 UNIV OF PITTSBURGH 8192**  
 MULTI-DIMENSIONAL RADIATIVE TRANSFER IN THE CIRCUM STELLAR  
 MEDIUM  
 10/05/2000 - 10/14/2001 FY01: \$11,736 Total: \$11,736  
*Prin. Invest.:* D HILLIER  
*Tech. Officer:* GSFC/S HEAP  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10222 UNIV OF PITTSBURGH 8193**  
 REMOTE SENSING OF PLANETARY SURFACES: MODELING & APPLICA-  
 TIONS  
 01/11/2001 - 01/14/2002 FY01: \$74,200 Total: \$74,200  
*Prin. Invest.:* B W HAPKE  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10377 UNIV OF PITTSBURGH 8194**  
 TOWARDS UNDERSTANDING STARBURST GALAXIES AT LOW & HIGH  
 REDSHIFT (FUSE-00)  
 02/08/2001 - 02/14/2002 FY01: \$17,000 Total: \$17,000  
*Prin. Invest.:* J D HILLIER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10378 UNIV OF PITTSBURGH 8195**  
 JUST WHAT IS ETA CARINAE (FUSE 00)  
 02/08/2001 - 02/14/2002 FY01: \$30,500 Total: \$30,500  
*Prin. Invest.:* J D HILLIER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10628 UNIV OF PITTSBURGH 8196**  
 ASTROMETRIC OBSERVATION OF PLANETARY SYSTEMS DISCO VERED BY  
 RADIAL VELOCITY TECHNIQUES  
 03/17/2001 - 03/14/2002 FY01: \$24,800 Total: \$24,800  
*Prin. Invest.:* G GATEWOOD  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1360 UNIV OF PITTSBURGH 8197**  
 RESEARCH "USE OF NASA BIOREACTOR TO STUDY CELL CYCLE REGULA-  
 TION"  
 06/05/1997 - 11/29/2000 FY01: -\$95,522 Total: \$271,906  
*Prin. Invest.:* C TALLEY  
*Tech. Officer:* MSFC/P VAUGHN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1587 UNIV OF PITTSBURGH 8198**  
 R/S FREELY SYSPENED LIQUID FILMS AND THEIR APPLICATIONS IN  
 BIOLOGICAL RESEARCH  
 01/28/1999 - 11/30/2002 FY01: \$54,050 Total: \$283,050  
*Prin. Invest.:* X L WU  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

**NAG 9 835 UNIV OF PITTSBURGH 8199**  
 GROWTH, METABOLISM, AND DIFFERENTIATION OF MIP  
 09/19/1995 - 03/17/2000 FY01: -\$99 Total: \$759,860  
*Prin. Invest.:* J M JESSUP  
*Tech. Officer:* JSC/N PELLIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1036 UNIV OF PITTSBURGH 8200**  
 SLEEPING SHORT  
 06/22/1998 - 07/26/2001 FY01: \$217,550 Total: \$695,951  
*Prin. Invest.:* T H MONK  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NAG 9 1234**                      **UNIV OF PITTSBURGH**                      **8201**  
 SLEEP STUDY  
 10/18/2000 - 09/30/2003      FY01: \$267,523                      Total: \$267,523  
*Prin. Invest.:* T H MONK  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 56 - MEDICL

**NAS 8 97111**                      **UNIV OF PITTSBURGH**                      **8202**  
 OPERATION AND MANAGEMENT OF THE NASA MID-ATLANTIC TECHNOLOGY CENTER  
 01/29/1997 - 02/23/2001      FY01: \$354,998                      Total: \$5,354,999  
*Prin. Invest.:* L HUMMEL  
*Tech. Officer:* LARC/P I CARAWAY  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NGT 5 125**                      **UNIV OF PITTSBURGH**                      **8203**  
 EVOLUTION OF THE MARTIAN HIGHLANDS: IMPLICATIONS FROM DRAINAGE BASIN CHARACTERISTICS AND VALLEY  
 06/11/2001 - 06/30/2002      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* D A CROWN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 5 50174**                      **UNIV OF PITTSBURGH**                      **8204**  
 AN INVESTIGATION OF RAMAN SCATTERING IN SYMBIOTIC STARS\_(STUDENT - BIRRIEL, J.)  
 05/22/1998 - 10/31/2000      FY01: -\$19,252                      Total: \$46,748  
*Prin. Invest.:* R SCHULTE-LADBECK  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50207**                      **UNIV OF PITTSBURGH**                      **8205**  
 TWO-DIMENSIONAL HYDRODYNAMICS IN SOAP FILMS UNDERGOING ELECTROMAGNETIC CONVECTION  
 07/09/1998 - 06/30/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* X WU  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50252**                      **UNIV OF PITTSBURGH**                      **8206**  
 AUTOMATED LEARNING WITH PROBABILISTIC NETWORKS FOR STUDY & EXPLORATION OF THE UNIVERSE/STUDENT: DENV  
 06/08/1999 - 06/30/2002      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* M DRUZDZEL  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50256**                      **UNIV OF PITTSBURGH**                      **8207**  
 THE ROLE OF THE CEREBELLUM IN CARDIOVASCULAR RESPONSES TO CHANGES IN GRAVITY STUDENT: MICHAEL HOLME  
 07/07/1999 - 06/30/2001      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* B J YATES  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50292**                      **UNIV OF PITTSBURGH**                      **8208**  
 MULTISENSORY INTEGRATION IN THE VESTIBULAR NUCLEI: IMPLICATIONS FOR RECOVERY OF FUNCTION FOLLOWING  
 07/06/2000 - 06/30/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* B J YATES  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50318**                      **UNIV OF PITTSBURGH**                      **8209**  
 CORTICAL REPRESENTATION OF SPACE IN HUMANS/STUDENT ELISHA MERRIAM  
 07/11/2000 - 07/14/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* C L COLBY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 3136**                      **VILLANOVA UNIV**                      **8210**  
 EVOLUTION OF THE CORONAL STRUCTURE OF THE SUN IN TIME  
 11/01/1995 - 11/14/2000      FY01: \$0                      Total: \$52,646  
*Prin. Invest.:* E F GUINAN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7113**                      **VILLANOVA UNIV**                      **8211**  
 DETERMINING THE PHYSICAL PROPERTIES OF THE MAIN SEQUENCE B STARS  
 03/25/1998 - 03/31/2002      FY01: \$0                      Total: \$44,393  
*Prin. Invest.:* E FITZPATRICK  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8388**                      **VILLANOVA UNIV**                      **8212**  
 NEW INSIGHTS INTO THE STRUCTURE & EVOLUTION OF CV WHITE DWARFS USING THE IUE NEWSIPS FINAL ARCHIVE  
 03/05/1999 - 03/14/2002      FY01: \$0                      Total: \$81,017  
*Prin. Invest.:* E M SION  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8985**                      **VILLANOVA UNIV**                      **8213**  
 SOLAR PHYSICS WITH FUSE: FUV STUDIES OF SOLAR ANALOGS & TWINS - FUSE  
 01/27/2000 - 01/31/2002      FY01: \$0                      Total: \$65,700  
*Prin. Invest.:* E F GUINAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10369**                      **VILLANOVA UNIV**                      **8214**  
 THE COSMIC DISTANCE SCALE: AN ACCURATE DISTANCE TO THE LMC USING ECLIPSING BINARIES (FUSE 00)  
 02/08/2001 - 02/14/2002      FY01: \$62,500                      Total: \$62,500  
*Prin. Invest.:* E F GUINAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10385**                      **VILLANOVA UNIV**                      **8215**  
 A STUDY OF THE ATMOSPHERES OF THE MAIN SEQUENCE B STARS (FUSE 00)  
 02/08/2001 - 02/14/2002      FY01: \$42,500                      Total: \$42,500  
*Prin. Invest.:* E L FITZPATRICK  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10386**                      **VILLANOVA UNIV**                      **8216**  
 PHYSICS OF BOUNDARY LAYER WHITE DWARF ACCRETION IN DWARF NOVAE (FUSE 00)  
 02/08/2001 - 05/31/2002      FY01: \$57,900                      Total: \$57,900  
*Prin. Invest.:* E M SION  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10387** **VILLANOVA UNIV** **8217**  
 THE FUV SUN IN TIME A STUDY OF SOLAR ANALOGS OF DIFFERENT AGES  
 (FUSE 00)  
 02/08/2001 - 02/14/2002 FY01: \$30,400 Total: \$30,400  
 Prin. Invest.: E F GUINAN  
 Tech. Officer: GSFC/G SONNEBORN  
 CASE Category: 11 - ASTRONOMY

**NAG 5 10686** **VILLANOVA UNIV** **8218**  
 CNO ABUNDANCES IN LMC BN AND BC SUPERGIANTS (FUSE 2000)  
 04/04/2001 - 04/14/2002 FY01: \$27,208 Total: \$27,208  
 Prin. Invest.: E L FITPATRICK  
 Tech. Officer: GSFC/G SONNEBORN  
 CASE Category: 11 - ASTRONOMY

## RHODE ISLAND

**NAG 1 2070** **BROWN UNIV** **8219**  
 HI ORDER DISCONTINUOUS GALERKIN METHODS FOR CONVECTION  
 DOMINATED PROBLEMS W/APPLIC TO AEROACOUSTICS  
 05/14/1998 - 11/30/2000 FY01: -\$1 Total: \$44,999  
 Prin. Invest.: C SHU  
 Tech. Officer: LARC/H L ATKINS  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 1 2201** **BROWN UNIV** **8220**  
 REGRESSION MODELS AND ALGORITHMS FOR AERODYNAMICS APPLICATIONS  
 06/01/1999 - 09/30/2000 FY01: \$0 Total: \$50,000  
 Prin. Invest.: A E PEARSON  
 Tech. Officer: LARC/P C MURPHY  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 3 1927** **BROWN UNIV** **8221**  
 DYNAMICS AND MORPHOLOGY OF SUPERFLUID HELIUM DROPS IN A  
 MICROGRAVITY ENVIRONMENT  
 07/24/1996 - 01/08/2001 FY01: \$25,000 Total: \$675,000  
 Prin. Invest.: G M SEIDEL, H MARIS  
 Tech. Officer: GRC/B S SINGH  
 CASE Category: 13 - PHYSICS

**NAG 3 1929** **BROWN UNIV** **8222**  
 KINETIC AND THERMODYNAMIC STUDIES OF MELTING-FREEZING OF  
 HELIUM MICROGRAVITY  
 07/24/1996 - 05/31/2002 FY01: \$49,923 Total: \$403,923  
 Prin. Invest.: D ELBAUM, J M KOSTERLITZ  
 Tech. Officer: GRC/B S SINGH  
 CASE Category: 13 - PHYSICS

**NAG 5 3659** **BROWN UNIV** **8223**  
 PLANETARY GEOPHYSICS AND TECTONICS  
 03/07/1997 - 10/31/2001 FY01: \$77,000 Total: \$379,644  
 Prin. Invest.: E PARMENTIER  
 Tech. Officer: GSFC/J G GRANTS  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 3871** **BROWN UNIV** **8224**  
 REFLECTANCE EXPERIMENT LABORATORY  
 02/14/1997 - 09/30/2001 FY01: \$108,000 Total: \$521,039  
 Prin. Invest.: C M PIETERS  
 Tech. Officer: GSFC/J G GRANT  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 3872** **BROWN UNIV** **8225**  
 BROWN REGIONAL PLANETARY DATA CENTER  
 02/14/1997 - 09/30/2001 FY01: \$0 Total: \$216,769  
 Prin. Invest.: P H SCHULTZ  
 Tech. Officer: GSFC/P G ROGERS  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 3877** **BROWN UNIV** **8226**  
 PLANETARY IMPACT PROCESSES  
 02/14/1997 - 09/30/2002 FY01: \$145,000 Total: \$704,152  
 Prin. Invest.: P H SCHULTZ  
 Tech. Officer: GSFC/D G SENSKE  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 3933** **BROWN UNIV** **8227**  
 GEOLOGICAL MAPPING OF VENUS: ORIGIN OF BASINS AND STRATIGRAPHY  
 02/13/1997 - 02/14/2002 FY01: \$88,200 Total: \$290,950  
 Prin. Invest.: D W HEAD,III  
 Tech. Officer: GSFC/P G ROGERS  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 4366** **BROWN UNIV** **8228**  
 REMOTE SENSING INFO APPLIED TO GEOLOGICAL STUDIES  
 04/29/1997 - 12/31/2000 FY01: \$0 Total: \$170,000  
 Prin. Invest.: C M PIETERS  
 Tech. Officer: GSFC/P G ROGERS  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 4585** **BROWN UNIV** **8229**  
 TECTONIC DEFORMATION PATTERNS ON VENUS: RELATION LITHOSPHERIC PROCESSES AND EVOLUTION  
 05/20/1997 - 09/30/2000 FY01: \$0 Total: \$215,000  
 Prin. Invest.: J W HEAD,III  
 Tech. Officer: GSFC/P G ROGERS  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 4723** **BROWN UNIV** **8230**  
 PLANETARY VOLCANIC PROCESSES: SHALLOW MAGMA RESERVOIR DIVERSITY OF ERUPTION CONDITIONS  
 06/11/1997 - 09/30/2000 FY01: \$0 Total: \$322,000  
 Prin. Invest.: J W HEAD,III  
 Tech. Officer: GSFC/P G ROGERS  
 CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 5133** **BROWN UNIV** **8231**  
 A HIGH RESOLUTION X-RAY DETECTOR USING MAGNETIC BOLOMETERS  
 03/12/1997 - 09/30/2001 FY01: \$0 Total: \$400,000  
 Prin. Invest.: G SEIDEL  
 Tech. Officer: GSFC/B FLOWERS  
 CASE Category: 13 - PHYSICS

**NAG 5 6003** **BROWN UNIV** **8232**  
 THE DYNAMICS OF A SEMI-ARID REGION IN RESPONSE TO POLICY  
 08/26/1997 - 12/31/2000 FY01: \$0 Total: \$355,000  
 Prin. Invest.: J MUSTART  
 Tech. Officer: GSFC/A JANETOS  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6144** **BROWN UNIV** **8233**  
 MARS OBSERVER LASER ALTIMETER (MOLA) PARTICIPATION  
 08/19/1997 - 12/31/2001 FY01: \$100,000 Total: \$560,000  
*Prin. Invest.:* J W HEAD  
*Tech. Officer:* GSFC/D E SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7082** **BROWN UNIV** **8234**  
 AN ULTRASPECTROMETER (MEMUS) FOR PLANETARY SURFACE ANALYSIS  
 03/10/1998 - 03/31/2002 FY01: \$0 Total: \$455,444  
*Prin. Invest.:* P H SCHULTZ  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7866** **BROWN UNIV** **8235**  
 DIAPYCNISM AND SOLID-STATE CONVECTION ON EUROPA  
 01/12/1999 - 12/31/2001 FY01: \$0 Total: \$80,000  
*Prin. Invest.:* D T PAPPALARDO  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8046** **BROWN UNIV** **8236**  
 ORIGIN, STRUCTURE, AND EVOLUTION OF GROOVED TERRAIN ON GANYMEDE AND COMPARISON TO EUROPA  
 01/15/1999 - 01/14/2002 FY01: \$0 Total: \$126,523  
*Prin. Invest.:* D T PAPPALARDO  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8144** **BROWN UNIV** **8237**  
 CRYOMAGMATISM ON GANYMEDE AND EUROPA: PRINCIPLES OF EMPLACEMENT AND RUPTURE AND COMPARISON TO OLYMPUS MONAS  
 02/01/1999 - 09/30/2000 FY01: \$0 Total: \$105,000  
*Prin. Invest.:* D W HEAD, 111  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8174** **BROWN UNIV** **8238**  
 KINETICS OF MELTING AND DISSOLUTION IN LUNAR MATERIALS  
 02/04/1999 - 04/30/2002 FY01: \$63,000 Total: \$188,000  
*Prin. Invest.:* D C HESS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8181** **BROWN UNIV** **8239**  
 EXPERIMENTS AND SPECTRAL STUDIES OF MARTIAN VOLCANIC ROCKS: IMPLICATIONS FOR THE ORIGIN OF PATHFINDER  
 02/16/1999 - 03/31/2002 FY01: \$58,000 Total: \$169,300  
*Prin. Invest.:* M J RUTHERFORD  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8283** **BROWN UNIV** **8240**  
 NORTHERN LOWLANDS OF MARS: TESTS FOR THE PRESENCE OF LAKES, SEAS AND OCEANS IN THE PAST HISTORY OF MARS  
 02/19/1999 - 02/28/2001 FY01: \$0 Total: \$158,400  
*Prin. Invest.:* J W HEAD  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8302** **BROWN UNIV** **8241**  
 MINERALOGY OF LUNAR MATERIALS FROM REFLECTANCE SPECTROSCOPY  
 03/05/1999 - 03/31/2001 FY01: \$0 Total: \$104,000  
*Prin. Invest.:* D M PIETERS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8972** **BROWN UNIV** **8242**  
 MINERALOGY OF THE MARTIAN SURFACE: CRUSTAL COMPOSITION TO SURFACE PROCESSES  
 01/28/2000 - 02/28/2002 FY01: \$74,000 Total: \$144,300  
*Prin. Invest.:* J F MUSTARD  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9287** **BROWN UNIV** **8243**  
 REMOTE SENSING INFORMATION APPLIED TO GEOLOGICAL STUDIES OF PLANETS  
 03/16/2000 - 03/31/2002 FY01: \$10,000 Total: \$48,000  
*Prin. Invest.:* C PIETERS  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9453** **BROWN UNIV** **8244**  
 BLAST: A BALLOON-BORNE LARGE-APERTURE SUB-MILLIMETER TELESCOPE - A COMPREHENSIVE PLAN FOR GALAXY SURVEILLANCE  
 04/13/2000 - 04/14/2002 FY01: \$115,000 Total: \$215,000  
*Prin. Invest.:* G TUCKER  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9522** **BROWN UNIV** **8245**  
 EXPERIMENTAL STUDY OF LUNAR MAGMAS & MAGMATIC PROCESSES  
 04/26/2000 - 04/30/2002 FY01: \$46,000 Total: \$92,000  
*Prin. Invest.:* M J RUTHERFORD  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9589** **BROWN UNIV** **8246**  
 REFLECTANCE & THERMAL INFRARED SPECTROSCOPY OF MARS: RELATIONSHIP BETWEEN ISM & TES FOR COMPOSITION  
 05/12/2000 - 05/14/2002 FY01: \$50,000 Total: \$103,600  
*Prin. Invest.:* J F MUSTARD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9780** **BROWN UNIV** **8247**  
 MARTIAN VOLCANIC EDIFICE & DEPOSIT CHARACTERIZATION: VOLCANIC STYLE, MAGMA TRANSPORT & EDIFICE/CALDERAS  
 07/10/2000 - 06/30/2002 FY01: \$73,000 Total: \$146,000  
*Prin. Invest.:* J W HEAD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10010** **BROWN UNIV** **8248**  
 REGOLITH PROCESSES AND THE COMPOSITIONAL DIVERSITY OF MARE  
 BASALTS  
 09/25/2000 – 09/30/2002 FY01: \$40,000 Total: \$74,000  
*Prin. Invest.:* C M PIETERS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10031** **BROWN UNIV** **8249**  
 ANALYSIS OF LUNAR PROSPECTOR MAGNETOMETER/ELECTRON  
 REFLECTOMETER (MAG/ER) EXPERIMENT DATA TO ASSIST  
 09/28/2000 – 09/30/2002 FY01: \$35,000 Total: \$67,000  
*Prin. Invest.:* J W HEAD III  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10188** **BROWN UNIV** **8250**  
 NORTHEAST REGIONAL PLANETARY DATA CENTER  
 01/03/2001 – 01/14/2002 FY01: \$50,900 Total: \$50,900  
*Prin. Invest.:* P H SCHULTZ  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10383** **BROWN UNIV** **8251**  
 DETECTORS WITH BREAK THROUGH ENERGY RESOLUTION USING  
 MAGNETIC SENSORS  
 02/07/2001 – 01/14/2002 FY01: \$260,030 Total: \$260,030  
*Prin. Invest.:* G SEIDEL  
*Tech. Officer:* GSFC/C STAHLE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10401** **BROWN UNIV** **8252**  
 REMOTE SENSING INFORMATION APPLIED TO GEOLOGICAL STUDIES OF  
 PLANETS  
 02/13/2001 – 01/31/2002 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* C M PIETERS  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 10469** **BROWN UNIV** **8253**  
 MINERALOGY OF LUNAR SAMPLES FROM REFLECTANCE SPECTROSCOPY  
 02/27/2001 – 03/31/2002 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* C PIETERS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 – CHEMISTRY

**NAG 5 10573** **BROWN UNIV** **8254**  
 TESTS FOR STANDING BODIES OF WATER IN THE NORTHERN LOWLANDS  
 AND RELATION TO SOUTH POLAR DEPOSITS IN  
 03/13/2001 – 03/14/2002 FY01: \$80,000 Total: \$80,000  
*Prin. Invest.:* J HEAD  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10665** **BROWN UNIV** **8255**  
 HYDROGEN ISOTOPIC COMPOSITIONS OF INDIVIDUAL ORGANIC  
 COMPOUNDS IN CARBONACEOUS METEORITES  
 03/21/2001 – 03/31/2002 FY01: \$70,000 Total: \$70,000  
*Prin. Invest.:* Y HUANG  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10690** **BROWN UNIV** **8256**  
 VOLCANIC LANDFORMS & DEPOSITS: DIVERSITY OF ERUP TION  
 CONDITIONS & IMPLICATIONS FOR THE ASCENT  
 03/30/2001 – 03/31/2002 FY01: \$36,000 Total: \$36,000  
*Prin. Invest.:* J HEAD  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 11145** **BROWN UNIV** **8257**  
 LANDSCAPE DYNAMICS AND LAND-USE/LAND-COVER CHANGE IN THE  
 GREAT BASIN/MOJAVE DESERT REGION  
 07/25/2001 – 08/14/2002 FY01: \$61,387 Total: \$61,387  
*Prin. Invest.:* J F MUSTARD  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 8 1774** **BROWN UNIV** **8258**  
 COALESCENCE OF SUPERFLUID HELIUM DROPS IN A MICRO- GRAVITY  
 ENVIRONMENT  
 04/30/2001 – 04/29/2005 FY01: \$79,946 Total: \$79,946  
*Prin. Invest.:* H J MARIS  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 – PHYSICS

**NAG 9 1302** **BROWN UNIV** **8259**  
 SNC OXYGEN FUGACITY RECORDED PYROXENES: AN EXPERIMENTAL &  
 ANALYTICAL STUDY  
 06/15/2001 – 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* M RUTHERFORD  
*Tech. Officer:* JSC/J JONES  
*CASE Category:* 56 – MEDICL

**NAG13 39** **BROWN UNIV** **8260**  
 RHODE ISLAND'S NARRAGANSETT BAY FROM SPACE: A PERSPECTIVE  
 FOR THE 21ST CENTURY  
 08/01/1996 – 12/31/2000 FY01: \$0 Total: \$627,750  
*Prin. Invest.:* MUSTARD  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NCC 1 01035** **BROWN UNIV** **8261**  
 RELAXATN & PRECONDITNG 4 HI-ORDER DISCONTINUOUS GALERKIN  
 METHODS W/APPLIC AEROACOUSTICS & H/S FLOW  
 03/21/2001 – 11/30/2003 FY01: \$20,129 Total: \$20,129  
*Prin. Invest.:* C W SHU  
*Tech. Officer:* LARC/H L ATKINS/2  
*CASE Category:* 29 – MATH/COMPUTER SCI, OTHER

**NCC 2 1217** **BROWN UNIV** **8262**  
 CAUSAL REASONING  
 03/13/2001 – 02/28/2002 FY01: \$115,000 Total: \$115,000  
*Prin. Invest.:* S A SLOMAN  
*Tech. Officer:* ARC/M SHAFTO  
*CASE Category:* 22 – COMPUTER SCIENCE

**NCC 5 487** **BROWN UNIV** **8263**  
 PRECISION AND ACCURACY OF ALI DATA FOR THE DETERMINATION OF  
 VEGETATION ABUNDANCE  
 04/05/2000 – 12/31/2001 FY01: \$55,540 Total: \$98,900  
*Prin. Invest.:* J F MUSTARD  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

## RHODE ISLAND

## NASA'S UNIVERSITY PROGRAM

**NCC13 98005** **BROWN UNIV** **8264**  
 BROWN UNIV AFFILIATED RESEARCH CENTER FOR THE NORTHEAST  
 09/15/1998 - 12/31/2001 FY01: \$150,000 Total: \$500,000  
*Prin. Invest.:* J F MUSTARD  
*Tech. Officer:* SSC/H CARR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 01024** **BROWN UNIV** **8265**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/11/2001 - 06/30/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* A KANESKY  
*Tech. Officer:* LARC/M H CARPENTER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 1 01037** **BROWN UNIV** **8266**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/28/2001 - 06/30/2003 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* C SHA  
*Tech. Officer:* LARC/H L ATKINS  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 1 52243** **BROWN UNIV** **8267**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/29/2000 - 06/30/2001 FY01: -\$38 Total: \$21,962  
*Prin. Invest.:* J RYAN, C W SHU  
*Tech. Officer:* LARC/H L ATKINS  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 3 52369** **BROWN UNIV** **8268**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 06/20/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* G P CRAWFORD  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 5 91** **BROWN UNIV** **8269**  
 SWITCHABLE/TUNABLE INTERFERENCE FILTERS FOR REMOTE SENSING  
 APPLICATIONS STUDENT: ADAM FONTECCHIO  
 06/10/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* G CRAWFORD  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 40106** **BROWN UNIV** **8270**  
 RHODE ISLAND SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/06/2001 - 02/28/2002 FY01: \$344,317 Total: \$344,317  
*Prin. Invest.:* P H SCHULTZ  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50166** **BROWN UNIV** **8271**  
 EFFECTS OF HIGH STRAIN-RATE DEFORMATION ON IMPACT MELT  
 GENERATION  
 06/04/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* P H SCHULTZ  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50355** **BROWN UNIV** **8272**  
 INHOMOGENEITIES IN SUPERSTRING COSMOLOGY  
 05/14/2001 - 08/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R BRANDENBERGER  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 90014** **BROWN UNIV** **8273**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 02/03/1997 - 02/28/2001 FY01: -\$96,817 Total: \$780,683  
*Prin. Invest.:* P H SCHULTZ  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 53** **BROWN UNIV** **8274**  
 TRAINING GRANT/REGOLITH PROCESS ON AIRLESS BODIES  
 06/06/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* C PIETERS  
*Tech. Officer:* JSC/D MACKAY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 3 2208** **UNIV OF RHODE ISLAND** **8275**  
 CERAMIC BASED STRAIN SENSORS FOR USE AT HIGH TEMPERATURE  
 11/17/1998 - 07/12/2001 FY01: \$60,000 Total: \$180,000  
*Prin. Invest.:* O GREGORY  
*Tech. Officer:* GRC/J LEI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2229** **UNIV OF RHODE ISLAND** **8276**  
 NUMERICAL SIMULATIONS FOR THE DESIGN OF TERRESTRIAL AND  
 MICROGRAVITY WETTING MICROHYDRODYNAMICS EXP  
 03/09/1999 - 12/31/2000 FY01: \$0 Total: \$30,888  
*Prin. Invest.:* A BOSE  
*Tech. Officer:* GRC/D A JACQUMIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2434** **UNIV OF RHODE ISLAND** **8277**  
 PHASE CHANGE IN LOW AND JITTERING GRAVITY ENVIRONMENT  
 SIMULATED VIA ELECTROMAGNETIC FIELD  
 05/30/2000 - 11/30/2003 FY01: \$36,126 Total: \$71,811  
*Prin. Invest.:* D FAGHRI  
*Tech. Officer:* GRC/H C DEGROH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3736** **UNIV OF RHODE ISLAND** **8278**  
 SURVEY OF OCEAN FRONTS WITH SST, ALTIMETER AND IN  
 03/06/1997 - 09/30/2000 FY01: \$0 Total: \$509,922  
*Prin. Invest.:* P CORNILLON  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6077** **UNIV OF RHODE ISLAND** **8279**  
 PRODUCTION OF WESTERN N ATLANTIC FULL RESOLUTION SST FIELDS  
 FROM THE AVHRR SENSOR  
 10/24/1997 - 06/30/2000 FY01: -\$1,416 Total: \$212,584  
*Prin. Invest.:* D CORNILLON  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6320**                    **UNIV OF RHODE ISLAND**                    **8280**  
 PRODUCTION OF WESTERN NORTH ATLANTIC FULL RESOLUTION THE AVHRR  
 SENSOR  
 09/11/1997 - 05/31/2000                    FY01: \$0                    Total: \$100,000  
*Prin. Invest.:* P CORNILLON  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6560**                    **UNIV OF RHODE ISLAND**                    **8281**  
 DETERMINATION OF OCEAN COLOR PROVINCES IN THE NORTH ATLANTIC  
 10/27/1997 - 10/31/2002                    FY01: \$36,814                    Total: \$440,122  
*Prin. Invest.:* P M STEGMANN  
*Tech. Officer:* GSFC/J YODER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6645**                    **UNIV OF RHODE ISLAND**                    **8282**  
 SATELLITE STUDIES OF PHYTOPLANKTON DYNAMICS AND PRODUCTIVITY  
 IN THE GLOBAL OCEAN AND IN OCEAN M  
 12/01/1997 - 10/14/2001                    FY01: \$0                    Total: \$553,256  
*Prin. Invest.:* J A YODER  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8739**                    **UNIV OF RHODE ISLAND**                    **8283**  
 INVESTIGATION OF AERODYNAMIC AND RADOMETRIC LAND SURFACE  
 TEMPERATURES  
 08/19/1999 - 08/14/2002                    FY01: \$10,678                    Total: \$30,998  
*Prin. Invest.:* Y WANG  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8829**                    **UNIV OF RHODE ISLAND**                    **8284**  
 MULTIPLE INNOVATIVE MODELS IN REGIONAL LAND COVER CHANGE  
 STUDIES  
 09/08/1999 - 09/30/2001                    FY01: \$0                    Total: \$182,484  
*Prin. Invest.:* Y WANG  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9633**                    **UNIV OF RHODE ISLAND**                    **8285**  
 EXTENSION OF THE 1KM PATHFINDER AVHRR SST ARCHIVE BOTH IN TIME  
 AND SPACE  
 05/26/2000 - 04/30/2002                    FY01: \$132,500                    Total: \$226,250  
*Prin. Invest.:* P CORNILLON  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9724**                    **UNIV OF RHODE ISLAND**                    **8286**  
 U.S. COASTAL BLENDED IN SITU AND REMOTELY-SENSED OCEAN CHLOROPHYLL  
 DATA SETS  
 06/29/2000 - 06/30/2002                    FY01: \$22,231                    Total: \$38,467  
*Prin. Invest.:* J YODER  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10554**                    **UNIV OF RHODE ISLAND**                    **8287**  
 WIND-INDUCED SHORT TIME-SCALE FLUCTUATIONS OF PHYTOPLANKTON  
 BIOMASS  
 03/12/2001 - 03/14/2002                    FY01: \$65,264                    Total: \$65,264  
*Prin. Invest.:* B UZ  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10555**                    **UNIV OF RHODE ISLAND**                    **8288**  
 SATELLITE STUDIES OF COUPLED BIOLOGICAL & PHYSICAL VARIABILITY IN  
 OCEAN MARGIN WATERS OF THE NORTHWE  
 03/12/2001 - 03/14/2002                    FY01: \$180,571                    Total: \$180,571  
*Prin. Invest.:* J YODER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC 1 302**                    **UNIV OF RHODE ISLAND**                    **8289**  
 HYDROGEN PEROXIDE, METHYLDROPEROXIDE & FORMALDEHYDE --THEIR  
 RELATIONSHIP TO TROPOSPHERIC OXIDANT CHEM  
 07/14/1998 - 06/30/2001                    FY01: \$0                    Total: \$319,007  
*Prin. Invest.:* B HEIKES  
*Tech. Officer:* LARC/J L RAPER, LARC/R J BENDURA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 408**                    **UNIV OF RHODE ISLAND**                    **8290**  
 HYDROGEN PEROXIDE, METHYLHYDROGEN PEROXIDE, & FORMALDEHYDE  
 TRANSPORT & CHEM EVOLUTION OVER PACIFIC  
 09/07/2000 - 02/14/2003                    FY01: \$90,329                    Total: \$199,870  
*Prin. Invest.:* D W O'SULLIVAN, B G HEIKES  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 1275**                    **UNIV OF RHODE ISLAND**                    **8291**  
 SUBSURFACE BIOSPHERES  
 07/20/2001 - 06/30/2006                    FY01: \$292,933                    Total: \$292,933  
*Prin. Invest.:* S D'HONDT, A TESKE, K HINRICHS  
*Tech. Officer:* ARC/R A GRYMES, ARC/W DOLCI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 307**                    **UNIV OF RHODE ISLAND**                    **8292**  
 THE DISTRIBUTED OCEANOGRAPHIC DATA SYSTEM (DODS): A FRAME-  
 WORK FOR ACCESS TO SCIENTIFIC DATA IN THE EO  
 04/27/1998 - 11/30/2001                    FY01: \$210,000                    Total: \$2,279,200  
*Prin. Invest.:* P CORNILLON  
*Tech. Officer:* GSFC/M MAIDEN  
*CASE Category:* 33 - OCEANOGRAPHY

## SOUTH CAROLINA

**NAG 2 1164**                    **BENEDICT COLLEGE**                    **8293**  
 IDENTIFICATION & ISOLATION OF MICROGRAVITY RESPONSIVE CDNA'S  
 10/06/1997 - 01/14/2001                    FY01: \$0                    Total: \$298,346  
*Prin. Invest.:* L LOWE  
*Tech. Officer:* ARC/R E GRINDELAND, ARC/G S LEE  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2214**                    **CLEMSON UNIV - CLEMSON**                    **8294**  
 THERMAL CONTROL AND ENHANCEMENT OF HEAT CAPACITY OF CRYO-  
 GENIC CAPILLARY PUMPED LOOP AND HEAT PIPE W  
 01/22/1999 - 11/01/2002                    FY01: \$28,310                    Total: \$69,658  
*Prin. Invest.:* D M OCHTERBECK  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3699**                    **CLEMSON UNIV - CLEMSON**                    **8295**  
 ANALYSIS OF COMPTON AND OSSE OBSERVATIONS OF SUPER  
 01/24/1997 - 01/31/2001                    FY01: \$0                    Total: \$52,297  
*Prin. Invest.:* M D LEISING  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4703**                    **CLEMSON UNIV - CLEMSON**                    **8296**  
 THE HISTORY OF THE NUCLEI COMPRISING PLANETARY MAT  
 06/11/1997 - 05/31/2001                    FY01: \$0                    Total: \$136,074  
*Prin. Invest.:* D S MEYER  
*Tech. Officer:* GSFC/D F NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5186**                    **CLEMSON UNIV - CLEMSON**                    **8297**  
 COUPLING OF DYNAMICS IN AURORA FUNDING FOR FIRST YEAR OF  
 GRANT  
 03/30/1998 - 12/31/2002                    FY01: \$110,400                    Total: \$383,363  
*Prin. Invest.:* M F LARSEN  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5242**                    **CLEMSON UNIV - CLEMSON**                    **8298**  
 A SOUNDING ROCKET INVESTIGATION OF THE FINE STRUCTURE IN THE  
 MESOPAUSE REGION  
 03/16/1999 - 02/28/2002                    FY01: \$34,900                    Total: \$244,100  
*Prin. Invest.:* M F LARSEN  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5259**                    **CLEMSON UNIV - CLEMSON**                    **8299**  
 FIRST YEAR OF THREE YEAR EFFORT/ A SEQUENTIAL ROCKET INVES-  
 TIGATION OF WINDS AND PLASMA LAYERS  
 04/11/2000 - 03/23/2003                    FY01: \$99,000                    Total: \$206,700  
*Prin. Invest.:* M F LARSEN  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5317**                    **CLEMSON UNIV - CLEMSON**                    **8300**  
 MAPPING THE E-REGION AND ZONAL WINDS NEAR A STABLE AURORAL  
 ARC, USING A NEAR-HORIZONTAL CHEMICAL TRA  
 03/19/2001 - 02/28/2004                    FY01: \$96,100                    Total: \$96,100  
*Prin. Invest.:* M F LARSEN  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5320**                    **CLEMSON UNIV - CLEMSON**                    **8301**  
 MULTIPLE-SCALE STUDY OF HIGH-LATITUDE JOULE HEATING DURING A  
 SUBSTORM EVENT  
 04/26/2001 - 12/31/2003                    FY01: \$144,700                    Total: \$144,700  
*Prin. Invest.:* M LARSON  
*Tech. Officer:* GSFC/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5325**                    **CLEMSON UNIV - CLEMSON**                    **8302**  
 OBSERVING AND MEASURING EARLY OPTICAL LIGHT CURVES FROM  
 GAMMA-RAY BURSTS WITH LOTIS  
 03/21/2001 - 03/31/2002                    FY01: \$15,000                    Total: \$15,000  
*Prin. Invest.:* D H HARTMANN  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6210**                    **CLEMSON UNIV - CLEMSON**                    **8303**  
 RECONFIGURABLE COMPUTING SYSTEMS FOR REGIONAL VALI APPLICA-  
 TIONS, CONTROL NUMBER GSFC5-3265  
 08/06/1997 - 06/30/2001                    FY01: \$49,924                    Total: \$299,772  
*Prin. Invest.:* D LIGON, III  
*Tech. Officer:* GSFC/W CAMPBELL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 7592**                    **CLEMSON UNIV - CLEMSON**                    **8304**  
 INVESTIGATING THE FEASIBILITY OF, AND LIMITATIONS ASSOCIATED WITH,  
 RECOVERING GRAVITYWAVE PARAMETER  
 07/07/1998 - 06/30/2001                    FY01: \$0                    Total: \$158,676  
*Prin. Invest.:* M P HICKEY  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 7782**                    **CLEMSON UNIV - CLEMSON**                    **8305**  
 PHYSICAL VARIATIONS IN THE RAINDROP SIZE DISTRIBUTION & THEIR  
 EFFECTS ON THE QUANTITATIVE ESTIMATION  
 11/13/1998 - 05/14/2002                    FY01: \$44,910                    Total: \$149,730  
*Prin. Invest.:* C W ULBRICH  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8075**                    **CLEMSON UNIV - CLEMSON**                    **8306**  
 OSSE OBSERVATIONS OF 44Ti IN SNR G266.2-1.2  
 01/15/1999 - 01/14/2001                    FY01: \$0                    Total: \$11,200  
*Prin. Invest.:* M D LEISING  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8304**                    **CLEMSON UNIV - CLEMSON**                    **8307**  
 PRESOLAR DUST GRAINS IN METEORITES: ORIGIN AND MEANING  
 02/25/1999 - 04/14/2002                    FY01: \$58,000                    Total: \$167,000  
*Prin. Invest.:* D CLAYTON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8448**                    **CLEMSON UNIV - CLEMSON**                    **8308**  
 RELATING SOLAR BIRTH TO THE GALAXY  
 04/07/1999 - 03/31/2002                    FY01: \$45,000                    Total: \$130,000  
*Prin. Invest.:* D D CLAYTON  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8605**                    **CLEMSON UNIV - CLEMSON**                    **8309**  
 A PROBLEM SOLVING ENVIRONMENT FOR SCALABLE REMOTE SENSING  
 APPLICATIONS  
 06/24/1999 - 03/31/2001                    FY01: \$0                    Total: \$149,920  
*Prin. Invest.:* W LIGON  
*Tech. Officer:* GSFC/K MOE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8759**                    **CLEMSON UNIV - CLEMSON**                    **8310**  
 MANIPULATION AND CONTACT SENSING VIA TRUNKS, TENTA CLES, AND  
 WHISKERS  
 08/26/1999 - 08/31/2002                    FY01: \$120,039                    Total: \$276,852  
*Prin. Invest.:* I D WALKER  
*Tech. Officer:* GSFC/S DAVISON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



**NAG 5 9267**                    **CLEMSON UNIV - CLEMSON**                    **8311**  
 INVESTIGATION OF PLASMA TURBULENCE IN THE EQUATORIAL  
 IONOSPHERE  
 03/13/2000 - 02/28/2002                    FY01: \$31,082                    Total: \$61,782  
*Prin. Invest.:* D HYSELL  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9459**                    **CLEMSON UNIV - CLEMSON**                    **8312**  
 SILICON - CARBON NANOTUBE HYBRID DEVICE DESIGN: A ROUTE TO  
 NANOSCALE INTEGRATION  
 04/13/2000 - 04/14/2001                    FY01: \$0                    Total: \$25,000  
*Prin. Invest.:* D L CARROLL  
*Tech. Officer:* GSFC/H C SHAW  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 9702**                    **CLEMSON UNIV - CLEMSON**                    **8313**  
 MEASURING THE T144 MASS IN CAS A WITH OSSE  
 06/15/2000 - 06/14/2002                    FY01: \$0                    Total: \$5,000  
*Prin. Invest.:* L THE  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9802**                    **CLEMSON UNIV - CLEMSON**                    **8314**  
 CU/GSFC GCN/SUPER-LOTIS PROJECT COLLABORATION  
 07/19/2000 - 01/31/2001                    FY01: \$0                    Total: \$19,885  
*Prin. Invest.:* D HARTMANN  
*Tech. Officer:* GSFC/N GEHRELS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9824**                    **CLEMSON UNIV - CLEMSON**                    **8315**  
 EXTRACTION OF SINGLE EVENT UPSET PARAMETERS FROM CIRCUIT  
 SIMULATION CODE  
 07/25/2000 - 07/31/2001                    FY01: \$0                    Total: \$25,000  
*Prin. Invest.:* P MCNULTY  
*Tech. Officer:* GSFC/J BARTH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10018**                    **CLEMSON UNIV - CLEMSON**                    **8316**  
 PVFS 2000: AN OPERATIONAL PARALLEL FILE SYSTEM FOR BEOWULF  
 10/02/2000 - 09/30/2002                    FY01: \$152,447                    Total: \$152,447  
*Prin. Invest.:* D LIGON III  
*Tech. Officer:* GSFC/J DORBAND  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10251**                    **CLEMSON UNIV - CLEMSON**                    **8317**  
 STUDIES OF WIND SHEAR INSTABILITIES & GRAVITY WAVES IN THE MLT  
 REGION AIRGLOW & RELATED EFFECTS  
 01/05/2001 - 01/14/2002                    FY01: \$79,898                    Total: \$79,898  
*Prin. Invest.:* M HICKEY  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10367**                    **CLEMSON UNIV - CLEMSON**                    **8318**  
 MINIATURE HEAT TRANSPORT SYSTEM FOR SPACECRAFT THE RMAL  
 CONTROL  
 03/19/2001 - 03/31/2002                    FY01: \$39,300                    Total: \$39,300  
*Prin. Invest.:* D M OCHTERBECK  
*Tech. Officer:* GSFC/J KU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10454**                    **CLEMSON UNIV - CLEMSON**                    **8319**  
 HISTORY OF THE NUCLEI IMPORTANT FOR COSMOCHEMISTRY  
 02/21/2001 - 05/31/2002                    FY01: \$37,000                    Total: \$37,000  
*Prin. Invest.:* B MEYER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10764**                    **CLEMSON UNIV - CLEMSON**                    **8320**  
 THE RADIOACTIVE MILKY WAY & SUPERNOVAE (L TSA 2000)  
 04/23/2001 - 04/30/2002                    FY01: \$77,538                    Total: \$77,538  
*Prin. Invest.:* M D LEISING  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11293**                    **CLEMSON UNIV - CLEMSON**                    **8321**  
 NANO-ELECTRONICS: CIRCUIT DESIGN FOR SILICON/CARBON NANOTUBE  
 INTEGRATION  
 08/22/2001 - 07/31/2002                    FY01: \$25,000                    Total: \$25,000  
*Prin. Invest.:* D L CARROLL  
*Tech. Officer:* GSFC/H SHAW  
*CASE Category:* 13 - PHYSICS

**NAG 5 11329**                    **CLEMSON UNIV - CLEMSON**                    **8322**  
 ALTERNATIVE COMPUTING ROADMAP PROJECT  
 09/25/2001 - 09/30/2004                    FY01: \$33,800                    Total: \$33,800  
*Prin. Invest.:* D SASS  
*Tech. Officer:* GSFC/P CORONADO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 1 01036**                    **CLEMSON UNIV - CLEMSON**                    **8323**  
 ADVANCED CROSS ENTERPRISE TECHNOLOGY DEVELOPMENT FOR NASA  
 MISSIONS  
 04/12/2001 - 04/30/2004                    FY01: \$158,123                    Total: \$158,123  
*Prin. Invest.:* Y SUN  
*Tech. Officer:* LARC/J W CONWELL  
*CASE Category:* 12 - CHEMISTRY

**NCC 2 1114**                    **CLEMSON UNIV - CLEMSON**                    **8324**  
 VIRTUAL REALITY TECHNOLOGY FOR AIRCRAFT VISUAL INSPECTION:  
 TRAINING & JOB AIDING  
 04/23/1999 - 12/31/2001                    FY01: \$105,441                    Total: \$248,169  
*Prin. Invest.:* A K GRAMOPADHYE  
*Tech. Officer:* ARC/B G KANKI, ARC/M M CONNORS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 2 5421**                    **CLEMSON UNIV - CLEMSON**                    **8325**  
 COMBINATORIAL APPROACH FOR SYNTHESIS & CHARACTERIZATION OF  
 CARBON NANOTUBES - A CHARACTERIZATION LA  
 02/15/2001 - 01/31/2002                    FY01: \$91,802                    Total: \$91,802  
*Prin. Invest.:* A M RAO  
*Tech. Officer:* ARC/M MEYYAPPAN, ARC/H PATRIDGE  
*CASE Category:* 13 - PHYSICS

**NGT 1 01036**                    **CLEMSON UNIV - CLEMSON**                    **8326**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/28/2001 - 06/30/2003                    FY01: \$12,000                    Total: \$12,000  
*Prin. Invest.:* Y P SUN  
*Tech. Officer:* LARC/J W CONNELL, LARC/J G SMITH  
*CASE Category:* 12 - CHEMISTRY

## SOUTH CAROLINA

## NASA'S UNIVERSITY PROGRAM

**NGT 1 52238**                    **CLEMSON UNIV - CLEMSON**                    **8327**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/03/2000 - 06/30/2001                    FY01: \$12,000                    Total: \$22,000  
*Prin. Invest.:* Y P SUN  
*Tech. Officer:* LARC/J W CONNELL, LARC/J G SMITH, JR  
*CASE Category:* 12 - CHEMISTRY

**NGT 5 78**                    **CLEMSON UNIV - CLEMSON**                    **8328**  
 IMPROVING HIGH PERFORMANCE I/O IN COMPUTATIONAL DA TA PROC-  
 ESSING SYSTEMS PREVIOUS AWARD WAS ON NGT5-  
 04/15/1999 - 06/30/2000                    FY01: \$0                    Total: \$22,000  
*Prin. Invest.:* LIGON, 11  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 85**                    **CLEMSON UNIV - CLEMSON**                    **8329**  
 COTS CUSTOM HARDWARE: THE RECONFIGURABLE APPROACH TO  
 CLUSTER BASED PARALLEL: STUDENT/KEITH UNDERWOOD  
 05/20/1999 - 08/14/2002                    FY01: \$22,000                    Total: \$66,000  
*Prin. Invest.:* W LIGON  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 109**                    **CLEMSON UNIV - CLEMSON**                    **8330**  
 ALGORITHMS & SCHEDULING FOR PARALLEL I/O (STUDENT: PHILIP CARNS)  
 06/12/2000 - 08/14/2002                    FY01: \$22,000                    Total: \$44,000  
*Prin. Invest.:* W B LIGON  
*Tech. Officer:* GSFC/G SOFFEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 8 52858**                    **CLEMSON UNIV - CLEMSON**                    **8331**  
 ROBUST SPEECH RECOGNITION SCHEME USING PARALLEL MODEL  
 COMBINATION WITH AN ADAPTIVE HYBRID  
 07/23/1998 - 08/14/2001                    FY01: \$0                    Total: \$66,000  
*Prin. Invest.:* J N GOWDY  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT10 52611**                    **CLEMSON UNIV - CLEMSON**                    **8332**  
 GRADUATE STUDENT RESEARCH GRANT  
 09/01/1997 - 07/30/2000                    FY01: \$0                    Total: \$66,000  
*Prin. Invest.:* D DAWSON  
*Tech. Officer:* KSC/G BUCKINGHAM  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 7183**                    **COLLEGE OF CHARLESTON**                    **8333**  
 EXPLORING THE SOLAR SYSTEM IN THE CLASSROOM  
 03/16/1998 - 03/14/2002                    FY01: \$0                    Total: \$48,000  
*Prin. Invest.:* C R COOMBS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10313**                    **COLLEGE OF CHARLESTON**                    **8334**  
 BETA PIC-LIKE CIRCUMSTELLAR GAS DISK AROUND 2 AND --- FUZE-00  
 01/26/2001 - 01/31/2002                    FY01: \$16,000                    Total: \$16,000  
*Prin. Invest.:* J E NEFF  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10625**                    **COLLEGE OF CHARLESTON**                    **8335**  
 AN ARTIFICIAL INTELLIGENCE CLASSIFICATION TOOL & ITS APPLICATION  
 TO GAMMA-RAY BURSTS  
 03/22/2001 - 01/31/2002                    FY01: \$104,054                    Total: \$104,054  
*Prin. Invest.:* J HAKKILA  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10633**                    **COLLEGE OF CHARLESTON**                    **8336**  
 EXPLORING THE SOLAR SYSTEM IN THE CLASSROOM: A DI FFEREN-  
 TIATED MULTISENSORY APPROACH  
 03/17/2001 - 03/14/2002                    FY01: \$40,000                    Total: \$40,000  
*Prin. Invest.:* C RUNYON  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11017**                    **COLLEGE OF CHARLESTON**                    **8337**  
 EARLY BATSE GRB AFTERGLOWS (ADP 2000)  
 06/12/2001 - 06/14/2002                    FY01: \$30,000                    Total: \$30,000  
*Prin. Invest.:* T W GIBLIN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 263**                    **COLLEGE OF CHARLESTON**                    **8338**  
 SOUTHEASTERN OSS-SPACE GRANT REGIONAL EDUCATION CO ALITION:  
 KEYS TO IMPLEMENTING NASA'S OSS EDUCATIO  
 01/12/1998 - 01/14/2002                    FY01: \$270,000                    Total: \$1,030,000  
*Prin. Invest.:* M COLGAN  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/J ROSENTHAL  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 413**                    **COLLEGE OF CHARLESTON**                    **8339**  
 EPSCOR PREPARATION PROGRAM  
 06/18/1999 - 06/14/2002                    FY01: \$0                    Total: \$450,000  
*Prin. Invest.:* M COLGAN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 575**                    **COLLEGE OF CHARLESTON**                    **8340**  
 SOUTH CAROLINA NASA EPSCOR PROGRAM  
 08/23/2001 - 07/31/2004                    FY01: \$300,000                    Total: \$300,000  
*Prin. Invest.:* M COLGAN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40050**                    **COLLEGE OF CHARLESTON**                    **8341**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRA  
 02/03/1997 - 02/28/2002                    FY01: \$0                    Total: \$1,072,676  
*Prin. Invest.:* M COLGAN  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40099**                    **COLLEGE OF CHARLESTON**                    **8342**  
 SOUTH CAROLINA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/28/2001 - 02/28/2002                    FY01: \$256,250                    Total: \$256,250  
*Prin. Invest.:* M COLGAN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1085**                    **FURMAN UNIV**                    **8343**  
 PROSPECTIVE REMEMBERING UNDER COMPLEX, DEMANDING & FLUID  
 CONDITIONS  
 01/27/1999 - 01/14/2002            FY01: \$130,000                    Total: \$401,024  
*Prin. Invest.:* G O EINSTEIN, M A MCDANIEL  
*Tech. Officer:* ARC/R K DISMUKES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1415**                    **MEDICAL UNIV OF SOUTH CAROLINA**                    **8344**  
 EMBRYONIC CELL MIGRATION & METALLOPROTEINASE ACTIVITY ARE  
 AFFECTED BY RANDOMIZATION OF THE GRAVITY  
 07/11/2000 - 06/30/2002            FY01: \$175,655                    Total: \$266,175  
*Prin. Invest.:* S HOFFMAN  
*Tech. Officer:* ARC/M M AVERNER/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1385**                    **MEDICAL UNIV OF SOUTH CAROLINA**                    **8345**  
 RESEARCH "GASTRIC MUCOSAL CELL CULTURE IN SIMULATED  
 MICROGRAVITY  
 06/13/1997 - 12/30/2001            FY01: \$46,976                    Total: \$572,093  
*Prin. Invest.:* A J SMOKA  
*Tech. Officer:* MSFC/N R PELLIS, MSFC/J MAYO  
*CASE Category:* 56 - MEDICL

**NAG 5 8246**                    **SOUTH CAROLINA STATE UNIV**                    **8346**  
 SHARE WITH A PAIR OF PEERS (SWAPOP II)  
 02/19/1999 - 02/28/2002            FY01: \$199,164                    Total: \$586,190  
*Prin. Invest.:* J D SALLEY  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10145**                    **SOUTH CAROLINA STATE UNIV**                    **8347**  
 ENHANCEMENT OF THE SPACE SCIENCE RESEARCH PROGRAM AT SOUTH  
 CAROLINA STATE UNIV  
 01/05/2001 - 12/31/2001            FY01: \$227,000                    Total: \$227,000  
*Prin. Invest.:* D K WALTER  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 116**                    **SOUTH CAROLINA STATE UNIV**                    **8348**  
 CENTER FOR NETWORK RESOURCES AND TRAINING AT SOUTH CAROLINA  
 STATE UNIV  
 08/15/1995 - 08/14/2001            FY01: \$0                    Total: \$3,114,000  
*Prin. Invest.:* D K WALTER  
*Tech. Officer:* GSFC/J BENNETT  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 454**                    **SOUTH CAROLINA STATE UNIV**                    **8349**  
 CURRICULUM ENHANCEMENT THROUGH SPACE SCIENCE RSCH  
 02/11/2000 - 02/28/2001            FY01: \$0                    Total: \$300,000  
*Prin. Invest.:* D K WALTER  
*Tech. Officer:* GSFC/M MATTHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 534**                    **SOUTH CAROLINA STATE UNIV**                    **8350**  
 THE CENTER FOR NASA RESEARCH AND TECHNOLOGY (CNRT) /MUSPIN  
 NRTS PROGRAM.  
 02/01/2001 - 01/31/2002            FY01: \$350,000                    Total: \$350,000  
*Prin. Invest.:* D WALTER  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2108**                    **UNIV OF SOUTH CAROLINA-COLUMBIA**                    **8351**  
 A FUNDAMENTAL STUDY OF MATERIAL FLOW IN FRICTION STIR WELDS  
 09/08/1998 - 07/31/2001            FY01: \$0                    Total: \$37,407  
*Prin. Invest.:* A P REYNOLDS, NONE  
*Tech. Officer:* LARC/R A HAFLEY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 2237**                    **UNIV OF SOUTH CAROLINA-COLUMBIA**                    **8352**  
 DEV OF A NOVEL METH FOR DETERMINATION OF RESIDUAL STRESSES IN  
 A FRICTION STIR WELD - NRA-99-LARC-1  
 09/21/1999 - 07/31/2001            FY01: -\$1                    Total: \$50,693  
*Prin. Invest.:* A P REYNOLDS  
*Tech. Officer:* LARC/R S PLASCIK, LARC/J C NEWMAN, JR.  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 8837**                    **UNIV OF SOUTH CAROLINA-COLUMBIA**                    **8353**  
 STUDY OF LAND-ATMOSPHERE INTERACTIONS USING SATELLITE DATA  
 ASSIMILATION  
 09/22/1999 - 09/30/2001            FY01: \$0                    Total: \$114,265  
*Prin. Invest.:* V LAKSHMI  
*Tech. Officer:* GSFC/P T HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8875**                    **UNIV OF SOUTH CAROLINA-COLUMBIA**                    **8354**  
 COUPLING SATELLITE REMOTE SENSING & UNSTEADY FLOW MODELING  
 FOR DISCHARGE ESTIMATION  
 11/16/1999 - 10/31/2001            FY01: \$0                    Total: \$44,880  
*Prin. Invest.:* V LAKSHMI  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9233**                    **UNIV OF SOUTH CAROLINA-COLUMBIA**                    **8355**  
 THE INFLUENCE OF LAND-ATMOSPHERE INTERACTIONS ON VARIABILITY  
 OF THE NORTH AMERICAN MONSOON  
 04/06/2000 - 04/30/2002            FY01: \$66,109                    Total: \$116,848  
*Prin. Invest.:* V LAKSHMI  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10322**                    **UNIV OF SOUTH CAROLINA-COLUMBIA**                    **8356**  
 FUNDING GRANT FOR PROPOSAL # NRA-99-055-05 TITLED HIGH PER  
 ULTRAVIOLET DETECTORS BASED ON QUATERNAR  
 01/31/2001 - 12/31/2001            FY01: \$472,615                    Total: \$472,615  
*Prin. Invest.:* D KHAN  
*Tech. Officer:* GSFC/B MOTT  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11128**                    **UNIV OF SOUTH CAROLINA-COLUMBIA**                    **8357**  
 EXTENDED VALIDATION OF AMSR-E SOIL MOISTURE PRODUCT S  
 (AQUA-0084-0032)  
 07/27/2001 - 08/31/2002            FY01: \$30,790                    Total: \$30,790  
*Prin. Invest.:* V LAKSHMI  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11253**                    **UNIV OF SOUTH CAROLINA-COLUMBIA**                    **8358**  
 AN ASSESSMENT OF GLOBAL ORGANIC CARBON FLUX ALONG CONTI  
 NENTAL MARGINS  
 08/20/2001 - 08/31/2004            FY01: \$48,613                    Total: \$48,613  
*Prin. Invest.:* R THUNELL  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## SOUTH DAKOTA

## NASA'S UNIVERSITY PROGRAM

**NCC 5 174 UNIV OF SOUTH CAROLINA-COLUMBIA 8359**  
 EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE RESE  
 12/16/1996 - 03/31/2002 FY01: \$500,000 Total: \$2,499,009  
*Prin. Invest.:* J D ODOM  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC13 00003 UNIV OF SOUTH CAROLINA-COLUMBIA 8360**  
 PROGRAM FOR A NASA AFFILIATED RESEARCH CENTER PROGRAM AT  
 THE UNIV OF SOUTH CAROLINA  
 02/01/2000 - 01/31/2002 FY01: \$150,000 Total: \$365,750  
*Prin. Invest.:* J JENSEN  
*Tech. Officer:* SSC/N SOVIK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT13 52712 UNIV OF SOUTH CAROLINA-COLUMBIA 8361**  
 NASA GRADUATE STUDENT PROGRAM-LEWIS HYPERSPECTRAL CHAR-  
 ACTERIZATION OF HAZARDOUS WASTE SITE CLAY CAPS  
 07/22/1997 - 07/31/2000 FY01: -\$6,491 Total: \$59,509  
*Prin. Invest.:* J JENSEN  
*Tech. Officer:* JSC/A JOYCE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT13 52723 UNIV OF SOUTH CAROLINA-COLUMBIA 8362**  
 MACHINE LEARNING GMDH NEURO-FUZZY TECHNIQUES INHERENT  
 OPTICAL PROPERTY ESTIMATED  
 07/22/1999 - 07/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* J JENSEN  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 9624 VOORHEES COLLEGE 8363**  
 EARTH SCIENCE EDUCATION AND RESEARCH INITIATIVE  
 05/23/2000 - 05/14/2002 FY01: \$139,980 Total: \$279,960  
*Prin. Invest.:* C SMITH  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1310 WOFFORD COLLEGE 8364**  
 JOVE RESEARCH  
 01/21/1997 - 08/31/2000 FY01: -\$5,620 Total: \$30,150  
*Prin. Invest.:* D M SCOTT  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 49 - ENGINEERING, OTHER

## SOUTH DAKOTA

**NAG 5 6299 AUGUSTANA COLLEGE 8365**  
 AUGUSTANA COLLEGE, EARTH SYSTEM SCIENCE, CURRICULU  
 09/19/1997 - 08/31/2000 FY01: -\$9,585 Total: \$47,632  
*Prin. Invest.:* V K OLNESS  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7548 OGLALA LAKOTA COLLEGE 8366**  
 OGLALA LAKOTA COLLEGE PACE/MSET  
 07/01/1998 - 09/30/2001 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* J HAAS  
*Tech. Officer:* GSFC/T GULL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10935 OGLALA LAKOTA COLLEGE 8367**  
 NASA/OGLALA LAKOTA COLLEGE SUMMER INST AND RESEARCH INST.  
 NASA HONORS SUPPLEMENTAL SUC  
 06/07/2001 - 06/14/2002 FY01: \$41,500 Total: \$41,500  
*Prin. Invest.:* S PHELPS  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 1680 SOUTH DAKOTA SCHOOL OF MINES & TECH 8368**  
 STUDY OF SOLID STATE SURFACE FOR ELECTRON EMISSION APPLICA-  
 TIONS  
 12/05/1994 - 10/15/2000 FY01: \$0 Total: \$50,708  
*Prin. Invest.:* A PETUKHOV  
*Tech. Officer:* GRC/I L KRAINSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 7746 SOUTH DAKOTA SCHOOL OF MINES & TECH 8369**  
 PROVIDE FOR SCIENTIFIC KNOWLEDGE FOR INDIAN LEARNI NG AND  
 LEADERSHIP FOR MISSION TO PLANET EARTH  
 10/21/1998 - 08/31/2001 FY01: \$100,000 Total: \$300,000  
*Prin. Invest.:* F CAMPONE  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 21 - MATHEMATICS

**NAG 5 8973 SOUTH DAKOTA SCHOOL OF MINES & TECH 8370**  
 EARTH SYSTEMS CONNECTIONS: AN INTEGRATED K-4 SCIENCE, MATH-  
 EMATICS, & TECHNOLOGY CURRICULUM  
 02/15/2000 - 12/31/2001 FY01: \$161,600 Total: \$309,100  
*Prin. Invest.:* L A VIERLING  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1447 SOUTH DAKOTA SCHOOL OF MINES & TECH 8371**  
 UPPER MISSOURI RIVER BASIN HYDROLOGY: PILOT PROJECT  
 02/23/1998 - 09/30/2000 FY01: \$0 Total: \$800,000  
*Prin. Invest.:* S O FAREWELL, P L SMITH  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99021 SOUTH DAKOTA SCHOOL OF MINES & TECH 8372**  
 APPLICATION OF REMOTE SENSING TO FOREST RESOURCE INVENTORY  
 AND HABITAT MODELING  
 08/13/1999 - 10/31/2002 FY01: \$101,404 Total: \$200,040  
*Prin. Invest.:* M PRICE  
*Tech. Officer:* JSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 402 SOUTH DAKOTA SCHOOL OF MINES & TECH 8373**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/14/1999 - 12/31/2001 FY01: \$0 Total: \$450,000  
*Prin. Invest.:* S FARWELL  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 588 SOUTH DAKOTA SCHOOL OF MINES & TECH 8374**  
 THE USE OF REMOTE SENSING FOR MONITORING, PREDICTI ON, AND  
 MANAGEMENT OF HYDROLOGIC, AGRICULTURAL, AND  
 08/31/2001 - 08/31/2004 FY01: \$512,100 Total: \$512,100  
*Prin. Invest.:* S O FARWELL  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

TENNESSEE

**NGT 5 30402 SOUTH DAKOTA SCHOOL OF MINES & TECH 8375**  
 SEMI-ARID GRASSLAND ECOSYSTEM FORCING: REPLACING NATIVE,  
 FREE-RANGING UNGULATE GRAZING WITH HUMAN-  
 09/05/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* P R ZIMMERMAN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40042 SOUTH DAKOTA SCHOOL OF MINES & TECH 8376**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRA  
 01/24/1997 - 02/28/2002 FY01: -\$48,281 Total: \$759,219  
*Prin. Invest.:* S O FARWELL  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40095 SOUTH DAKOTA SCHOOL OF MINES & TECH 8377**  
 SOUTH DAKOTA SPACE GRANT COLLEGE AND FELLOWSHIP PR OGRAM  
 02/28/2001 - 02/28/2002 FY01: \$260,781 Total: \$260,781  
*Prin. Invest.:* S O FARWELL, NONE  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 3445 SOUTH DAKOTA STATE UNIV 8378**  
 CHARACTERIZATION OF LANDSAT-7 GEOMETRY AND RADIOME TRY FOR  
 LAND COVER ANALYSIS.  
 10/04/1996 - 06/30/2001 FY01: \$24,769 Total: \$342,782  
*Prin. Invest.:* HELDER  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3540 SOUTH DAKOTA STATE UNIV 8379**  
 TM RADIOMETRIC CALIBRATION  
 11/19/1996 - 06/30/2001 FY01: \$0 Total: \$266,146  
*Prin. Invest.:* D HELDER  
*Tech. Officer:* GSFC/DL WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11351 SOUTH DAKOTA STATE UNIV 8380**  
 LANDSAT RADOMETRIC CALIBRATION: TOWARDS A 20 YEAR RECORD OF  
 CALIBRATED THEMATIC MAPPER CLASS DAT FO  
 09/14/2001 - 09/14/2004 FY01: \$99,975 Total: \$99,975  
*Prin. Invest.:* D HELDER  
*Tech. Officer:* GSFC/B L MARKHAM  
*CASE Category:* 39 - ENVIRONMENTALSOCI, OTHER

**NCC 5 472 SOUTH DAKOTA STATE UNIV 8381**  
 AN INTEGRATED ASSESSMENT OF THE EARTH OBSRVER - 1 INSTRUMENT  
 SUITE & THE LANDSAT 7 ENHANCED THEMATIC  
 03/08/2000 - 12/31/2001 FY01: \$146,674 Total: \$188,090  
*Prin. Invest.:* D HELDER  
*Tech. Officer:* GSFC/S UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## TENNESSEE

**NAG 3 2454 CHRISTIAN BROTHERS COLLEGE 8382**  
 ROBUST STRATEGY FOR ROCKET ENGINE HEALTH MONITORIN G  
 06/07/2000 - 05/31/2001 FY01: \$57,737 Total: \$144,264  
*Prin. Invest.:* D SANTI  
*Tech. Officer:* GRC/E WONG  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 10344 EAST TENNESSEE STATE UNIV 8383**  
 THE OUTER ATMOSPHERE OF MIRA VARIABLES (FUSE 00)  
 01/31/2001 - 01/31/2002 FY01: \$20,623 Total: \$20,623  
*Prin. Invest.:* D G LUTTERMOSER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1375 EAST TENNESSEE STATE UNIV 8384**  
 METASTABLE SOLUTION STRUCTURE AND OPTIMIZATION STRATEGIES IN  
 PROTEIN CRYSTAL GROWTH  
 06/18/1997 - 09/30/2003 FY01: \$121,057 Total: \$477,499  
*Prin. Invest.:* L WILSON  
*Tech. Officer:* MSFC/B GUYNES, MSFC/J MAYO  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 3 2298 FISK UNIV 8385**  
 SURFACE AND INTERFACIAL STRUCTURES OF METAL ULTRA- THIN FILM  
 ON SIC AT ELEVATED TEMPERATURES  
 10/14/1999 - 11/10/2001 FY01: \$0 Total: \$192,484  
*Prin. Invest.:* D E COLLINS  
*Tech. Officer:* GRC/G HUNTER  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 2308 FISK UNIV 8386**  
 SIZE GRADED QUANTUM DOT SOLAR ENERGY CELLS FOR SPA CE POWER  
 TECHNOLOGY  
 12/10/1999 - 11/30/2001 FY01: \$147,963 Total: \$282,963  
*Prin. Invest.:* D O HENDERSON  
*Tech. Officer:* GRC/E CLARK  
*CASE Category:* 13 - PHYSICS

**NAG 5 8876 FISK UNIV 8387**  
 NOVEL METHODS OF FABRICATION & EVALUATION OF ROOM TEMPERA-  
 TURE X-RAY & GAMMA-RAY CDZNTZ DETECTORS  
 11/24/1999 - 10/31/2000 FY01: \$0 Total: \$35,000  
*Prin. Invest.:* A BURGER  
*Tech. Officer:* GSFC/N GEHRELS  
*CASE Category:* 13 - PHYSICS

**NAG 8 1604 FISK UNIV 8388**  
 OPTICAL TRAPPING AND MANIPULATION OF NANOCRYSTALS CREATED IN  
 A LASER ABLATION PLUME  
 04/21/1999 - 04/20/2002 FY01: \$96,355 Total: \$300,971  
*Prin. Invest.:* D O HENDERSON  
*Tech. Officer:* MSFC/U  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 8 133 FISK UNIV 8389**  
 FOR RESEARCH "FISK UNIV CENTER FOR PHOTONIC MATERIALS AND  
 DEVICES"  
 04/21/1997 - 12/31/2001 FY01: \$1,200,000 Total: \$5,200,000  
*Prin. Invest.:* E SILHERMAN  
*Tech. Officer:* MSFC/D O FRAZIER  
*CASE Category:* 13 - PHYSICS

**NCC 8 195 FISK UNIV 8390**  
 CHARACTERIZATION OF CRYSTALLINE PERFECTION OF BINARY AND  
 TERNARY GAP SEMICONDUCTORS  
 09/30/1999 - 09/29/2001 FY01: \$79,824 Total: \$199,759  
*Prin. Invest.:* A BURGER  
*Tech. Officer:* MSFC/C HUA SU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

TENNESSEE

NASA'S UNIVERSITY PROGRAM

**NAG 8 1486** MIDDLE TENNESSEE STATE UNIV 8391  
 R/S DEVELOPMENT OF ANIONIC POLYELECTROLYTES FOR SOLID STATE BATTERY APPLICATION  
 04/21/1998 - 01/31/2002 FY01: \$15,531 Total: \$164,531  
*Prin. Invest.:* A C FRIEDLI  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6049** RHODES COLLEGE 8392  
 ACCELERATION OF THE SOLAR WIND  
 07/25/1997 - 08/31/2000 FY01: \$0 Total: \$20,370  
*Prin. Invest.:* D MACQUEEN  
*Tech. Officer:* GSFC/M FORMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1419** TENNESSEE STATE UNIV 8393  
 QUALITY OF SERVICE COMPARISONS BETWEEN SATELLITE, MIRCOWAVE, & T1 COMMUNICATIONS  
 07/13/2000 - 06/14/2002 FY01: \$100,000 Total: \$200,000  
*Prin. Invest.:* W A SMITH  
*Tech. Officer:* ARC/K A FREEMAN, ARC/D CHOW  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1473** TENNESSEE STATE UNIV 8394  
 EMBODIMENT OF INTELLIGENT BEHAVIORS ON MOBILE ROBO TS  
 04/18/2001 - 10/31/2001 FY01: \$132,567 Total: \$132,567  
*Prin. Invest.:* M S ZEIN-SABATTO  
*Tech. Officer:* ARC/S P COLOMBANO, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 6052** TENNESSEE STATE UNIV 8395  
 A PARTNERSHIP BETWEEN THE TENNESSEE STATE UNIV CTR OF EXCELLENCE, THE NM SUPERCOMPUTING CHALLENGE &  
 09/27/2001 - 09/30/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* W A SMITH  
*Tech. Officer:* ARC/B J COLLINS, ARC/A CARDENAS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 1797** TENNESSEE STATE UNIV 8396  
 MELTING OF SOLID PARTICLES IN A FLUID UNDER MICROGRAVITY  
 11/28/1995 - 08/31/2000 FY01: \$0 Total: \$599,924  
*Prin. Invest.:* P X TAO  
*Tech. Officer:* GRC/D S SINGH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2272** TENNESSEE STATE UNIV 8397  
 TECHNICAL RESEARCH/MENTORSHIP SYMPOSIUM '99 INTEGRATION OF EDUCATION, WORK CYCLES, AND GRADUATE SCH  
 06/23/1999 - 06/30/2001 FY01: \$0 Total: \$200,000  
*Prin. Invest.:* D B ROGERS  
*Tech. Officer:* GRC/R F LAWRENCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2441** TENNESSEE STATE UNIV 8398  
 COLLEGE BOUND TO GRADUATE SCHOOL COLLEGE BOUND TO GRADUATE SCHOOL  
 05/24/2000 - 11/30/2000 FY01: \$0 Total: \$49,750  
*Prin. Invest.:* D B ROGERS  
*Tech. Officer:* GRC/M CAWTHON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2471** TENNESSEE STATE UNIV 8399  
 TSU RESEARCH PROJECTS FOR INCREASING THE POOL OF MINORITY ENGINEERS  
 07/10/2000 - 06/30/2002 FY01: \$92,400 Total: \$164,800  
*Prin. Invest.:* D ROGERS, NONE  
*Tech. Officer:* GRC/S MERRITT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2577** TENNESSEE STATE UNIV 8400  
 THE NASA ENGINEERING AND SCIENCE COLLABORATIVE THE NASA ENGINEERING AND SCIENCE COLLABORATIVE  
 04/18/2001 - 09/30/2001 FY01: \$762,940 Total: \$762,940  
*Prin. Invest.:* D ROGERS  
*Tech. Officer:* GRC/R LAWRENCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2606** TENNESSEE STATE UNIV 8401  
 COLLEGE BOUND TO GRADUATE SCHOOL PROGRAM COLLEGE BOUND TO GRADUATE SCHOOL PROGRAM  
 05/23/2001 - 09/30/2001 FY01: \$53,212 Total: \$53,212  
*Prin. Invest.:* D ROGERS  
*Tech. Officer:* GRC/M BOROWSKI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10896** TENNESSEE STATE UNIV 8402  
 TSU SPACE SCIENCE AND ASTROBIOLOGY INITIATIVE  
 05/04/2001 - 04/30/2002 FY01: \$200,000 Total: \$200,000  
*Prin. Invest.:* M BUSBY  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 217** TENNESSEE STATE UNIV 8403  
 NEW AUTOMATED WEB BASED TRACKING SYSTEM  
 09/01/1997 - 09/30/2000 FY01: -\$78,110 Total: \$252,490  
*Prin. Invest.:* S SINGH DEVGAN  
*Tech. Officer:* KSC/K BALLARD  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1205** TENNESSEE STATE UNIV 8404  
 A PARTNERSHIP BETWEEN THE TSU CTR. OF EXCELLENCE & THE NM SUPERCOMPUTING CHALLENGE  
 09/26/2000 - 09/30/2001 FY01: \$0 Total: \$70,800  
*Prin. Invest.:* W A SMITH  
*Tech. Officer:* ARC/M E DUENAS, ARC/K FREEMAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 96** TENNESSEE STATE UNIV 8405  
 NASA/TSU NETWORK RESOURCE AND TRAINING SITE  
 08/15/1995 - 08/14/2001 FY01: \$0 Total: \$2,878,000  
*Prin. Invest.:* W A SMITH  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 228** TENNESSEE STATE UNIV 8406  
 UNIV RESEARCH CENTER FOR AUTOMATED SPACE SCI 7/1/97 - 6/30/98.  
 09/05/1997 - 06/30/2000 FY01: \$0 Total: \$3,525,000  
*Prin. Invest.:* M BUSBY  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

TENNESSEE

**NCC 5 511**                      **TENNESSEE STATE UNIV**                      **8407**  
 CENTER FOR AUTOMATED SPACE SCIENCE  
 08/23/2000 - 06/30/2002                      FY01: \$1,065,401                      Total: \$1,500,000  
*Prin. Invest.:* M BUSBY  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 531**                      **TENNESSEE STATE UNIV**                      **8408**  
 NASA/TSU MINORITY UNIVERSITIES INFORMATION NETWORK FOR  
 RESEARCH & EDUCATION/MUSPIN NRTSPROGRAM  
 02/01/2001 - 01/31/2002                      FY01: \$365,321                      Total: \$365,321  
*Prin. Invest.:* W A SMITH  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1279**                      **TENNESSEE TECHNOLOGICAL UNIV**                      **8409**  
 RESEARCH FOR JOVE  
 01/21/1997 - 08/31/2000                      FY01: -\$5                      Total: \$74,995  
*Prin. Invest.:* J C CHAI  
*Tech. Officer:* MSFC/J P DOWDY, MSFC/J R PRUITT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1631**                      **TENNESSEE TECHNOLOGICAL UNIV**                      **8410**  
 ANALYSIS OF NEARLY STEADY PHOTOSPHERIC FLOWS  
 09/07/1999 - 09/08/2002                      FY01: \$58,000                      Total: \$87,000  
*Prin. Invest.:* S HAN  
*Tech. Officer:* MSFC/D HATHAWAY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 8 1749**                      **TENNESSEE TECHNOLOGICAL UNIV**                      **8411**  
 ACTIVE CONTROL OF LARGE, FLEXIBLE SPACE STRUCTURES USING  
 SHAPE MEMORY ALLOYS  
 10/02/2000 - 10/01/2001                      FY01: \$37,813                      Total: \$37,813  
*Prin. Invest.:* S CANFIELD  
*Tech. Officer:* MSFC/C K CARRINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1793**                      **TENNESSEE TECHNOLOGICAL UNIV**                      **8412**  
 CONCEPT DEL AND EVAL OF CAPTURE DEVICES FOR RENED ZOUS WITH  
 TETHER-DRIVEN TRANSFER VEHICLES  
 03/06/2001 - 02/15/2002                      FY01: \$38,000                      Total: \$38,000  
*Prin. Invest.:* S CANFIELD  
*Tech. Officer:* MSFC/K WELZN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1794**                      **TENNESSEE TECHNOLOGICAL UNIV**                      **8413**  
 ENHANCEMENT OF EJECTOR EFFICIENCY IN ADVANCE RE- USABLE  
 PROPULSION ENGINE  
 03/13/2001 - 09/30/2003                      FY01: \$60,000                      Total: \$60,000  
*Prin. Invest.:* S S HAN, J PIEDDIESON  
*Tech. Officer:* MSFC/J J HUTT  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52883**                      **TENNESSEE TECHNOLOGICAL UNIV**                      **8414**  
 HYDROSTATIC EFFECTS ON YIELDING AND FATIGUE LIFE  
 09/10/1999 - 09/09/2002                      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* C WILSON  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52911**                      **TENNESSEE TECHNOLOGICAL UNIV**                      **8415**  
 DEV & EVALUATION OF CAPTURE DEVICES FOR RENDEZVOUS WITH TETH-  
 ER-DRIVEN TRANSFER VEHICLES  
 06/26/2001 - 06/30/2004                      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* S CANFIELD  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 7197**                      **UNIV OF MEMPHIS**                      **8416**  
 NEW DIAGNOSTIC CONSTRAINTS FOR CORONAL HEATING AND LOOP  
 DYNAMICS MODELS  
 04/14/1998 - 04/30/2000                      FY01: -\$1,504                      Total: \$42,033  
*Prin. Invest.:* J T SCHMELZ  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7617**                      **UNIV OF MEMPHIS**                      **8417**  
 FUNDING FOR 'LANDSIDE HAZARD IN RESPONSE TO SHORT TERM  
 CLIMATE CHANGE' (SENH98-0020)  
 07/24/1998 - 06/30/2002                      FY01: \$37,500                      Total: \$225,000  
*Prin. Invest.:* M ELLIS  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9783**                      **UNIV OF MEMPHIS**                      **8418**  
 OBSERVATIONAL CONSTRAINTS FOR CORONAL HEATING MODELS  
 07/06/2000 - 06/30/2002                      FY01: \$29,166                      Total: \$60,429  
*Prin. Invest.:* J T SCHMELZ  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NCC 2 1244**                      **UNIV OF MEMPHIS**                      **8419**  
 SODAS: MODELS OF SELF-ORGANIZING ONTOGENETIC DEVELOPMENT  
 FOR AUTONOMOUS ADAPTIVE SYSTEMS  
 04/05/2001 - 02/28/2002                      FY01: \$150,000                      Total: \$150,000  
*Prin. Invest.:* R KOZMA  
*Tech. Officer:* ARC/T R GOVINDAN, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 9031**                      **UNIV OF TENNESSEE - CHATTANOOGA**                      **8420**  
 PRE-SERVICE TEACHER ENHANCEMENT PROGRAM  
 02/04/2000 - 02/14/2002                      FY01: \$109,673                      Total: \$201,390  
*Prin. Invest.:* T L PATTY  
*Tech. Officer:* GSFC/B MEESON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 1 2163**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8421**  
 ATMOSPHERIC ENTRY STUDIES FOR MARS MISSIONS  
 04/20/1999 - 06/30/2000                      FY01: \$0                      Total: \$20,000  
*Prin. Invest.:* J E LYNE  
*Tech. Officer:* LARC/M M MUNK  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 2292**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8422**  
 HIGH-SPEED PROPULSION SYSTEMS MODELING & ANALYSIS MY 1/3  
 04/18/2000 - 07/31/2000                      FY01: -\$3,556                      Total: \$62,030  
*Prin. Invest.:* D W RIGGINS  
*Tech. Officer:* LARC/C R MCCLINTON, LARC/S H STACK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 4541 UNIV OF TENNESSEE - KNOXVILLE 8423**  
 METEORITE PETROGENESIS  
 05/06/1997 - 03/31/2002 FY01: \$106,000 Total: \$537,000  
*Prin. Invest.:* D V MCSWEEN, JR.  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4842 UNIV OF TENNESSEE - KNOXVILLE 8424**  
 MINERALOGY AND SPECTRAL PROPERTIES OF LUNAR SOIL  
 06/19/1997 - 04/30/2001 FY01: \$0 Total: \$102,000  
*Prin. Invest.:* D A TAYLOR  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8405 UNIV OF TENNESSEE - KNOXVILLE 8425**  
 TOWARD THE CORE COLLAPSE SUPERNOVA MECHANISM: THE NEXT  
 GENERATION INNEUTRINO TRANSPORT AND CONVE  
 03/16/1999 - 08/31/2002 FY01: \$59,000 Total: \$167,694  
*Prin. Invest.:* A MEZZACAPPA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8726 UNIV OF TENNESSEE - KNOXVILLE 8426**  
 PLANETARY PETROLOGY AND GEOCHEMISTRY  
 08/04/1999 - 07/31/2002 FY01: \$24,000 Total: \$70,500  
*Prin. Invest.:* L A TAYLOR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8760 UNIV OF TENNESSEE - KNOXVILLE 8427**  
 TOWARDS INTELLIGENT DISTRIBUTED BIOLUMINESCENCE DE TECTION OF  
 BIOLOGICAL CONTAMINATION AND STRESSORS  
 08/26/1999 - 02/28/2002 FY01: \$131,155 Total: \$375,057  
*Prin. Invest.:* G S SAYLER  
*Tech. Officer:* GSFC/R CROUCH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8773 UNIV OF TENNESSEE - KNOXVILLE 8428**  
 NHSE - THE NATIONAL HPCC SOFTWARE EXCHANGE  
 09/07/1999 - 08/31/2002 FY01: \$50,000 Total: \$340,000  
*Prin. Invest.:* J DONGARRA  
*Tech. Officer:* GSFC/J R FISCHER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8926 UNIV OF TENNESSEE - KNOXVILLE 8429**  
 THE POROSITY OF ASTEROIDS  
 01/07/2000 - 12/31/2001 FY01: \$33,000 Total: \$64,350  
*Prin. Invest.:* D BRITT  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9061 UNIV OF TENNESSEE - KNOXVILLE 8430**  
 THE MINERALOGY OF THE INNER ASTEROID BELT  
 02/15/2000 - 02/14/2003 FY01: \$40,900 Total: \$79,443  
*Prin. Invest.:* D T BRITT  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9158 UNIV OF TENNESSEE - KNOXVILLE 8431**  
 PETROGENESIS OF LUNAR AND PLANETARY CRUSTS AND MANTLES  
 03/03/2000 - 02/28/2001 FY01: \$0 Total: \$109,000  
*Prin. Invest.:* L A TAYLOR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10414 UNIV OF TENNESSEE - KNOXVILLE 8432**  
 PETROGENESIS OF PLANETARY CRUSTS AMD MANTLES AND METEOR-  
 ITES  
 02/14/2001 - 02/14/2002 FY01: \$110,000 Total: \$110,000  
*Prin. Invest.:* L A TAYLOR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10525 UNIV OF TENNESSEE - KNOXVILLE 8433**  
 DUST AND FELDSPAR MINERALOGY ON MARS FROM THERMAL EMISSION  
 SPECTRA  
 03/06/2001 - 03/14/2002 FY01: \$60,700 Total: \$60,700  
*Prin. Invest.:* H MCSWEEN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10582 UNIV OF TENNESSEE - KNOXVILLE 8434**  
 AN INVESTIGATION OF THE PREHISTORY, FORMATION & EVOLUTION OF  
 THE SOLAR SYSTEM THROUGH ULTRASENSIT  
 03/19/2001 - 04/30/2002 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* N THONNARD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10635 UNIV OF TENNESSEE - KNOXVILLE 8435**  
 SPECIAL CONSIDERATIONS IN THE INTERPRETATION OF THERMAL  
 INFRARED SPECTROSCOPY FROM LANDERS AN  
 03/17/2001 - 03/14/2002 FY01: \$73,000 Total: \$73,000  
*Prin. Invest.:* J MOERSCH  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10666 UNIV OF TENNESSEE - KNOXVILLE 8436**  
 RECOGNIZING BIOTIC INFLUENCES ON PLANETARY EVOLU- TION: INVES-  
 TIGATING THE BIOGEOCHEMICAL RECORD OF  
 03/21/2001 - 03/31/2002 FY01: \$82,200 Total: \$82,200  
*Prin. Invest.:* L KAH  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10788 UNIV OF TENNESSEE - KNOXVILLE 8437**  
 REMOTE SENSING FOR MARTIAN EXOPALEONTOLOGY: DETEC TABILITY  
 THRESHOLDS FOR AQUEOUS MINERALS AS A BAS  
 04/23/2001 - 04/30/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* J E MOERSH  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10794 UNIV OF TENNESSEE - KNOXVILLE 8438**  
 MINERALOGY & SPECTRAL PROPERTIES OF LUNAR SOILS  
 04/25/2001 - 04/30/2002 FY01: \$24,000 Total: \$24,000  
*Prin. Invest.:* L TAYLOR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY



## NASA'S UNIVERSITY PROGRAM

## TENNESSEE

**NAG 5 11201 UNIV OF TENNESSEE - KNOXVILLE 8439**  
 MINERALOGICAL MAPPING OF PUTATIVE MARTIAN PALEOLAKE BASINS  
 08/07/2001 - 08/14/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* J E MOERSCH  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1442 UNIV OF TENNESSEE - KNOXVILLE 8440**  
 R/S PROJECT SEE (SATELLITE ENERGY EXCHANGE) TEST OF EQUIVALENCE  
 PRINCIPLE & MEASUREMENT OF GRAVITATION  
 04/24/1998 - 01/31/2003 FY01: \$57,000 Total: \$177,000  
*Prin. Invest.:* A J SANDERS  
*Tech. Officer:* MSFC/J POE  
*CASE Category:* 13 - PHYSICS

**NAG 8 1568 UNIV OF TENNESSEE - KNOXVILLE 8441**  
 REVERSIBLE CRYOGENIC STORAGE OF MACROMOLECULAR CRYSTALS  
 GROWN IN MICROGRAVITY  
 01/15/1999 - 11/30/2002 FY01: \$146,300 Total: \$414,300  
*Prin. Invest.:* G J BUNICK  
*Tech. Officer:* MSFC/B V GUYNES, MSFC/D CHAFEE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1669 UNIV OF TENNESSEE - KNOXVILLE 8442**  
 RESEARCH ENTITLED, "DEVELOPMENT OF A MONTE CARLO RADIATION  
 TRANSPORT CODE SYSTEM FOR HEDS"  
 08/16/2000 - 11/30/2003 FY01: \$57,000 Total: \$107,000  
*Prin. Invest.:* L W TOWNSEND, T A GABRIEL, T W ARMSTRONG  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1826 UNIV OF TENNESSEE - KNOXVILLE 8443**  
 STRUCTURAL STUDIES OF NUCLEOSOMES AND CHROMATIN  
 09/06/2001 - 11/30/2004 FY01: \$57,000 Total: \$57,000  
*Prin. Invest.:* G J BUNICK  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1080 UNIV OF TENNESSEE - KNOXVILLE 8444**  
 BIOLUMINESCENT BIOREPORTER INTEGRATED CIRCUITS FOR  
 MONITORING SPACECRAFT ENVIRONMENTS  
 03/15/1999 - 03/14/2002 FY01: \$93,066 Total: \$386,132  
*Prin. Invest.:* G S SAYLER  
*Tech. Officer:* JPL/D JAN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1121 UNIV OF TENNESSEE - KNOXVILLE 8445**  
 PREDICTING ASTRONAUT RADIATION DOSE FROM SOLAR ENERGETIC  
 07/01/1999 - 06/30/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* J S NEAL  
*Tech. Officer:* JSC/G BADHWAR  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1123 UNIV OF TENNESSEE - KNOXVILLE 8446**  
 MEASUREMENT OF SECONDARY NEUTRON AND CHARGES PARTICAL  
 SPECTRA  
 07/01/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* L W TOWNSEND  
*Tech. Officer:* JSC/F A CUCINOTTA  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1269 UNIV OF TENNESSEE - KNOXVILLE 8447**  
 FUNDING FOR RADIATION IMPACT STUDY  
 03/29/2001 - 06/30/2001 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J NEAL  
*Tech. Officer:* JSC/G D BADHER  
*CASE Category:* 56 - MEDICL

**NAG10 221 UNIV OF TENNESSEE - KNOXVILLE 8448**  
 GRAVITATIONAL EFFECTS ON EMBRYOGENESIS  
 07/31/1997 - 10/31/2000 FY01: -\$690 Total: \$239,788  
*Prin. Invest.:* R CONGES  
*Tech. Officer:* KSC/W KNOTT  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 1187 UNIV OF TENNESSEE - KNOXVILLE 8449**  
 IN SITU & REMOTE SENSING OF MARTIAN GEOLOGY  
 06/29/2000 - 06/30/2001 FY01: \$0 Total: \$29,534  
*Prin. Invest.:* J E MOERSCH, E J HENRIKSEN  
*Tech. Officer:* ARC/T L ROUSH, ARC  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 2 5310 UNIV OF TENNESSEE - KNOXVILLE 8450**  
 DEVELOPING INFORMATION POWER GRID BASED ALGORITHMS & SOFT-  
 WARE  
 03/15/1999 - 02/29/2000 FY01: \$0 Total: \$95,000  
*Prin. Invest.:* J DONGARRA  
*Tech. Officer:* ARC/S SAINI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5312 UNIV OF TENNESSEE - KNOXVILLE 8451**  
 PERFORMANCE MODELING  
 03/19/1999 - 02/29/2000 FY01: \$0 Total: \$90,000  
*Prin. Invest.:* J DONGARRA  
*Tech. Officer:* ARC/SSAINI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 1 52218 UNIV OF TENNESSEE - KNOXVILLE 8452**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/04/1999 - 08/30/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* B R STARR  
*Tech. Officer:* LARC/T A TALAY, LARC/R A LEPSCH  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NGT 5 50206 UNIV OF TENNESSEE - KNOXVILLE 8453**  
 EVALUATION OF CONSTRUCTED MICROBIAL COMMUNITIES AS INOCULA  
 FORBIOLOGICAL SUPPORT SYSTEMS  
 07/09/1998 - 07/14/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* G SAYLER  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

**NGT 5 50286 UNIV OF TENNESSEE - KNOXVILLE 8454**  
 THE PETROLOGY & TEMPORAL & SPATIAL EVOLUTION OF MARTIAN  
 VOLCANISM FROM THERMALEMISSION DATA OF  
 06/22/2000 - 07/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* H Y MCSWEEN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4387 UNIV OF TENN SPACE INST - TULLAHOMA 8455**  
 CONSTRAINING ACCRETION AND DIFFERENTIATION OF PLAN MODELLING  
 04/24/1997 - 02/28/2002 FY01: \$50,000 Total: \$244,100  
*Prin. Invest.:* D Y MCSWEEN, JR.  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAS 8 97301 UNIV OF TENN SPACE INST - TULLAHOMA 8456**  
 CRITICAL PHYSICAL PROCESSES, IGNITION, DDT LENGTHS AND TIME  
 ACCURATE TREATMENTS  
 07/30/1997 - 12/28/2001 FY01: \$59,000 Total: \$254,000  
*Prin. Invest.:* J W MUELHAUSER  
*Tech. Officer:* MSFC/J COLE  
*CASE Category:* 13 - PHYSICS

**NCC 2 5413 UNIV OF TENN SPACE INST - TULLAHOMA 8457**  
 ALGORITHMIC ENHANCEMENTS FOR UNSTEADY AERODYNAMICS &  
 COMBUSTION APPLICATIONS  
 12/14/2000 - 09/30/2001 FY01: \$40,224 Total: \$40,224  
*Prin. Invest.:* S VENKATESWARAN  
*Tech. Officer:* ARC/M E OLSEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2401 VANDERBILT UNIV 8458**  
 SEPARATION OF CARBON MONOXIDE AND CARBON DIOXIDE F OR MARS  
 ISRU  
 04/25/2000 - 11/30/2003 FY01: \$91,738 Total: \$138,305  
*Prin. Invest.:* D LEVAN  
*Tech. Officer:* GRC/R D GREEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 4988 VANDERBILT UNIV 8459**  
 MODEL ATMOSPHERES AND SPECTRA FOR EXTRASOLAR GIANT  
 06/26/1997 - 06/14/2000 FY01: \$0 Total: \$89,354  
*Prin. Invest.:* D SAUMON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7103 VANDERBILT UNIV 8460**  
 INVESTIGATION OF GROUND-BASED SINGLE EVENT EFFECTS : RELATION-  
 SHIP TO SCALING, LOW-POWER, AND OTHER M  
 03/13/1998 - 12/31/1999 FY01: -\$213 Total: \$49,739  
*Prin. Invest.:* L MASSENGILL  
*Tech. Officer:* GSFC/M M GATES  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 8295 VANDERBILT UNIV 8461**  
 AN ADDITIONAL CONSTRAINT ON THE TIMESCALE FOR PLAN ET BUILDING  
 02/22/1999 - 03/31/2001 FY01: \$0 Total: \$29,000  
*Prin. Invest.:* D A WEINTRAUB  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8618 VANDERBILT UNIV 8462**  
 A STUDY OF ION OUTFLOW AS A SOURCE FOR THE MAGNETO SPHERE  
 06/14/1999 - 06/30/2002 FY01: \$102,044 Total: \$172,044  
*Prin. Invest.:* R CHAPPELL  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8906 VANDERBILT UNIV 8463**  
 THE PRESSURE IONIZATION OF HYDROGEN & THE INTERIOR OF JUPITER  
 & SATURN  
 12/29/1999 - 01/31/2002 FY01: \$27,000 Total: \$52,650  
*Prin. Invest.:* D SAUMON  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 13 - PHYSICS

**NAG 5 9565 VANDERBILT UNIV 8464**  
 NEW ISTP SOLAR MAX: A MULTI-SPACECRAFT STUDY OF THE FLOW OF IO-  
 NOSPHERIC PLASMA  
 05/09/2000 - 05/14/2002 FY01: \$0 Total: \$70,000  
*Prin. Invest.:* C CHAPPELL  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9828 VANDERBILT UNIV 8465**  
 SINGLE EVENT EFFECTS IN COMBINATIONAL LOGIC.  
 08/23/2000 - 08/31/2001 FY01: \$0 Total: \$25,000  
*Prin. Invest.:* L MASSENGILL  
*Tech. Officer:* GSFC/J BARTH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10572 VANDERBILT UNIV 8466**  
 THE TIMESCALE FOR THE FORMATION OF PLANETARY SYSTEMS  
 03/13/2001 - 03/31/2002 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* D WEINTRAUB  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1662 VANDERBILT UNIV 8467**  
 RECOVERY OF MINERALS IN MARTIAN SOILS VIA SUPERCRITICAL FLUID  
 EXTRACTIONS.  
 06/01/2000 - 11/30/2003 FY01: \$90,250 Total: \$135,250  
*Prin. Invest.:* K A DEBELAK  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1677 VANDERBILT UNIV 8468**  
 INVESTIGATION OF THE RELATIONSHIP BETWEEN UNDERCOOLING AND  
 SOLIDIFICATION VELOCITY.  
 05/08/2000 - 11/30/2003 FY01: \$142,500 Total: \$222,493  
*Prin. Invest.:* R J BAYUZICK  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1745 VANDERBILT UNIV 8469**  
 FLOW VISUALIZATION STUDIES IN MOLTEN ZONES  
 09/29/2000 - 04/30/2002 FY01: \$32,500 Total: \$62,500  
*Prin. Invest.:* A V ANIKUMER  
*Tech. Officer:* MSFC/R GRUGEL  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1273 VANDERBILT UNIV 8470**  
 DESIGN THROUGH MANUFACTURING: SOLID MODEL-FINITE ELEMENT  
 ANALYSIS INTERFACE  
 01/09/2001 - 09/30/2002 FY01: \$15,500 Total: \$15,500  
*Prin. Invest.:* C HACHEY  
*Tech. Officer:* JSC/R ARONOFF  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 1 01018** **VANDERBILT UNIV** **8471**  
 AEROELASTICITY IN ORNITHOPIC MICRO-AERIAL VEHICLES MY 1/3  
 01/22/2001 - 09/30/2003 FY01: \$33,330 Total: \$33,330  
*Prin. Invest.:* K D FRAMPTOM  
*Tech. Officer:* LARC/D L RANEY, LARC/D E COX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 01031** **VANDERBILT UNIV** **8472**  
 SYSTEMS RISK ASSESSMENT AND ALLOCATION IN CONCEPTUAL DESIGN  
 03/12/2001 - 12/31/2002 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* S MAHADEVAN  
*Tech. Officer:* LARC/T A ZHANG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1127** **VANDERBILT UNIV** **8473**  
 ADSORPTION EQUILIBRIUM & FIXED BED PERFORMANCE FOR REGENERABLE INCINERATOR EXHAUST PURIFICATION & T  
 06/21/1999 - 06/30/2002 FY01: \$68,008 Total: \$180,404  
*Prin. Invest.:* M D LEVAN  
*Tech. Officer:* ARC/J E FINN  
*CASE Category:* 43 - CHEMICAL ENGR

**NCC 2 1238** **VANDERBILT UNIV** **8474**  
 ROBUST METHODS FOR AUTONOMOUS FAULT ADAPTIVE CONTROL OF COMPLEX SYSTEMS  
 04/06/2001 - 02/28/2002 FY01: \$90,000 Total: \$90,000  
*Prin. Invest.:* G BISWAS  
*Tech. Officer:* ARC/R MORRIS, ARC/D J CLANCY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5384** **VANDERBILT UNIV** **8475**  
 MODELING OF HYBRID MEMBRANE/ADSORBER FOR CARBON DIOXIDE REMOVAL AND COMPARISON WITH FOUR-BED MOLE..  
 05/30/2000 - 06/30/2002 FY01: \$36,876 Total: \$48,637  
*Prin. Invest.:* M D LEVAN  
*Tech. Officer:* ARC/J E FINN  
*CASE Category:* 43 - CHEMICAL ENGR

**NGT 1 52227** **VANDERBILT UNIV** **8476**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 01/20/2000 - 12/31/2001 FY01: \$12,001 Total: \$34,001  
*Prin. Invest.:* A COX  
*Tech. Officer:* LARC/G C HORNER  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 105** **VANDERBILT UNIV** **8477**  
 CHARACTERIZATION OF PROTON RADIATION EFFECTS IN LI NEAR BIPOLAR DEVICES & CIRCUITS/STUDENT: H BARNAB  
 05/26/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* R D SCHRIMPF  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 5 40054** **VANDERBILT UNIV** **8478**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATHAN COLLEGE AND FELLOWSHIP PROGRAM.  
 02/12/1997 - 01/31/2001 FY01: \$0 Total: \$1,790,750  
*Prin. Invest.:* A M STRAUSS  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40074** **VANDERBILT UNIV** **8479**  
 TENNESSEE SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2002 FY01: \$460,750 Total: \$460,750  
*Prin. Invest.:* A M STRAUSS  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50209** **VANDERBILT UNIV** **8480**  
 INVESTIGATION OF EFFECTS OF DILUTE OXYGEN SOLUTE ON NUCLEATION OF ZIRCONIUM  
 07/10/1998 - 06/30/2002 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* R BAYUZICK  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 43 - CHEMICAL ENGR

**NGT 8 52839** **VANDERBILT UNIV** **8481**  
 R/S "GRADUATE STUDENT RESEARCH PROGRAM" FELLOWSHIP  
 07/23/1997 - 01/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* M GOLDFARB  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52852** **VANDERBILT UNIV** **8482**  
 RELIABILITY METHODS FOR AEROSPACE STRUCTURES  
 07/01/1998 - 06/14/2000 FY01: -\$491 Total: \$43,017  
*Prin. Invest.:* S MAHADEVAN  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 8 52857** **VANDERBILT UNIV** **8483**  
 SCALED FORCE REFLECTIVE TELEMANIPULATION FOR ONBOARD DESTRUCTIVE MANIPULATION OF MICROGRAVITY  
 07/23/1998 - 08/12/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* M GOLDFARB  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52859** **VANDERBILT UNIV** **8484**  
 INTEGRATION OF HAPTIC FEEDBACK INTO VIRTUAL ENVIRONMENTS FOR MISSION OPERATION APPLICATION  
 07/23/1998 - 08/14/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* M GOLDFARB  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52868** **VANDERBILT UNIV** **8485**  
 RELIABILITY ASSURANCE OF AEROSPACE SYSTEMS  
 09/09/1999 - 09/08/2000 FY01: -\$181 Total: \$17,819  
*Prin. Invest.:* S MAHADEVAN  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 8 52905** **VANDERBILT UNIV** **8486**  
 DESIGN AND FABRICATION OF INDIUM-TIN-OXIDE (ITO) MICRO-SCALE STRAIN SENSORS  
 05/25/2001 - 07/01/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R A WELLES  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 46 - MECHANICAL ENGR

TEXAS

NASA'S UNIVERSITY PROGRAM

**NGT 8 52907** **VANDERBILT UNIV** **8487**  
 AEROSPACE STRUCTURAL SYSTEM RELIABILITY ASSESSMENT  
 05/25/2001 - 07/01/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S MAHADEVAN  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 44 - CIVIL ENGR

**NGT 8 52910** **VANDERBILT UNIV** **8488**  
 UV RAMAN LINESHAPES FOR TEMPERATURE DETERMINATION  
 05/31/2001 - 06/30/2001 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R W PITZ  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 9 52** **VANDERBILT UNIV** **8489**  
 MACHINE PERCEPTION TO FACILITATE HUMAN-ROBOT INTER ACTION  
 07/17/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* R A PETERS II  
*Tech. Officer:* JSC/C J CULBERT  
*CASE Category:* 49 - ENGINEERING, OTHER

TEXAS

**NAG 5 10102** **AUSTIN COLLEGE-SHERMAN** **8490**  
 FLOOD FORECASTING USING A REGIONAL SCALE ATMOSPHERE/LAND-SURFACE MODELING SYSTEM.  
 12/11/2000 - 12/14/2001 FY01: \$32,134 Total: \$32,134  
*Prin. Invest.:* D R BAKER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 2 1355** **BAYLOR COLLEGE OF MEDICINE** **8491**  
 ROLE OF MATH1 IN DEVELOPMENT & FUNCTION OF PROPRIO RECEPTORS  
 07/22/1999 - 07/14/2002 FY01: \$199,554 Total: \$494,733  
*Prin. Invest.:* H J BELLEN, H Y ZOGHBI  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1357** **BAYLOR COLLEGE OF MEDICINE** **8492**  
 THE INTERACTIVE COUPLING OF CYTOSKELETON & SIGNAL TRANSDUCTION ELEMENTS IN GRAVITY SENSITIVITY OF T-  
 07/23/1999 - 07/31/2002 FY01: \$178,021 Total: \$435,419  
*Prin. Invest.:* B B HASHEMI  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1496** **BAYLOR COLLEGE OF MEDICINE** **8493**  
 SENSELESS AND GF11 IN SENSORY NEURON AND HAIR CELL DEVELOPMENT  
 07/11/2001 - 06/30/2002 FY01: \$139,783 Total: \$139,783  
*Prin. Invest.:* H J BELLEN  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1383** **BAYLOR COLLEGE OF MEDICINE** **8494**  
 FOR RESEARCH ENTITLED "LIVER TISSUE ENGINEERING IN MICROGRAVITY ENVIRONMENT"  
 06/26/1997 - 11/30/2001 FY01: \$100,000 Total: \$619,000  
*Prin. Invest.:* B YOFE  
*Tech. Officer:* MSFC/C R TALLEY  
*CASE Category:* 56 - MEDICL

**NAG 8 1387** **BAYLOR COLLEGE OF MEDICINE** **8495**  
 FOR RESEARCH ENTITLED: "TWO DIMENSIONAL CRYSTAL GROWTH IN MICROGRAVITY"  
 06/23/1997 - 11/30/2000 FY01: \$0 Total: \$493,348  
*Prin. Invest.:* T G WENSEL  
*Tech. Officer:* MSFC/B GUYBES, MSFC/J MAYO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1583** **BAYLOR COLLEGE OF MEDICINE** **8496**  
 ISLET CELL ASSEMBLY AND FUNCTION IN A NASA MICROGRAVITY BIOREACTOR  
 02/02/1999 - 11/30/2002 FY01: \$137,750 Total: \$394,748  
*Prin. Invest.:* A S RAJAN, NONE  
*Tech. Officer:* JSC/N R PELLIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1052** **BAYLOR COLLEGE OF MEDICINE** **8497**  
 BIOPHYSICAL MODELS OF DNA DAMAGE, MUTATION, &...  
 08/25/1998 - 09/24/2001 FY01: \$15,000 Total: \$271,674  
*Prin. Invest.:* L E PETERSON  
*Tech. Officer:* JSC/F A CUCINOTTA  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1133** **BAYLOR COLLEGE OF MEDICINE** **8498**  
 DSO MAGNETIC RESONANCE IMAGING MRI AFTER EXPOSURE TO MICROGRAVITY  
 07/21/1999 - 01/30/2001 FY01: \$0 Total: \$90,072  
*Prin. Invest.:* A LEBLANC  
*Tech. Officer:* JSC/L SHACKE/FORD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1153** **BAYLOR COLLEGE OF MEDICINE** **8499**  
 PROTECTING SCIENTIFIC INTEGRITY THROUGH DISCLOSURE OF CONFLICTS OF INTERESTS  
 09/13/1999 - 09/30/2002 FY01: \$238,541 Total: \$534,934  
*Prin. Invest.:* B A BRODY  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1158** **BAYLOR COLLEGE OF MEDICINE** **8500**  
 ROLE OF GROWTH HORMONE SECRETOGOUS AND EXERCISE ON MUSCLE HOMEOSTASIS UNDER MICROGRAVITY  
 10/01/1999 - 10/31/2002 FY01: \$261,666 Total: \$535,172  
*Prin. Invest.:* B J SCHWARTZ  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 56 - MEDICL

**NAG 9 1253** **BAYLOR COLLEGE OF MEDICINE** **8501**  
 EFFECTS OF ANTI-ORTHOSTATIC SUSPENSION ON INNATE IMMUNITY  
 09/11/2000 - 08/31/2003 FY01: \$152,259 Total: \$182,711  
*Prin. Invest.:* C SMITH  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1361**            **BAYLOR COLLEGE OF MEDICINE**            **8502**  
 LIVER TISSUE ENGINEERING IN MICROGRAVITY ENVIRONMENT  
 07/13/2001 - 09/30/2004    FY01: \$47,000            Total: \$47,000  
*Prin. Invest.:* B YOFEF  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 9 58**            **BAYLOR COLLEGE OF MEDICINE**            **8503**  
 NATIONAL SPACE BIOMEDICAL RESEARCH INST  
 03/26/1997 - 09/30/2002    FY01: \$26,478,997            Total: \$68,173,063  
*Prin. Invest.:* B R ALFORD, M.D.  
*Tech. Officer:* JSC/C F SAWIN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 9 61**            **BAYLOR COLLEGE OF MEDICINE**            **8504**  
 PREVENTION OF BED REST OSTEOPOROSIS  
 05/23/1997 - 05/23/2002    FY01: \$419,527            Total: \$2,320,039  
*Prin. Invest.:* A D LE BLANC  
*Tech. Officer:* JSC/L C SHACKELFORD  
*CASE Category:* 56 - MEDICL

**NCC 9 88**            **BAYLOR COLLEGE OF MEDICINE**            **8505**  
 COMPARISON OF STRENGTH TRAINING WITH ISS INTERIM RESISTANCE  
 EXERCISE DEVISE VS FREE  
 07/20/1999 - 01/31/2002    FY01: \$6,720            Total: \$29,760  
*Prin. Invest.:* A BEBLANC  
*Tech. Officer:* JSC/S SCHNEIDER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8566**            **HOUSTON COMMUNITY COLLEGE**            **8506**  
 NASA/HCC SCIENCE CHALLENGE PROGRAM  
 05/20/1999 - 12/31/2000    FY01: \$0            Total: \$150,000  
*Prin. Invest.:* C GARCIA  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10239**            **HOUSTON COMMUNITY COLLEGE**            **8507**  
 NASA HCC SCIENCE CHALLENGE PROGRAM  
 01/10/2001 - 12/31/2001    FY01: \$149,298            Total: \$149,298  
*Prin. Invest.:* C GARCIA  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1065**            **JARVIS CHRISTIAN COLLEGE**            **8508**  
 PACE/MSET SUMMER CAMP CAMP FOR TRAINING & MENTORING  
 01/07/1999 - 12/31/2001    FY01: \$100,000            Total: \$300,000  
*Prin. Invest.:* M J MCKINNEY  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 9 126**            **LAMAR UNIV**            **8509**  
 DEVELOPMENT OF MINIATURE LASER MASS SPECTROMETER SYSTEM  
 FOR PLANETARY STUDIES  
 04/20/2001 - 07/14/2003    FY01: \$200,000            Total: \$200,000  
*Prin. Invest.:* S L JORDAN, G M IRWIN  
*Tech. Officer:* SSC/G A MCKAY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1174**            **LE TOURNEAU UNIV**            **8510**  
 DIAGNOSTIC OF CARNON NANOTUBE FORMATION IN A LASER PRODUCED  
 PLUME  
 10/25/1999 - 10/25/2000    FY01: -\$291            Total: \$15,209  
*Prin. Invest.:* G D DEBOER  
*Tech. Officer:* JSC/B S FILES, JSC/C SCOTT  
*CASE Category:* 13 - PHYSICS

**NAG 9 1274**            **LE TOURNEAU UNIV**            **8511**  
 ANALYSIS OF ARBON NAONTUBE FORMATION & EMISSION SP ECTRA IN  
 LASER ABLATION PROCESS  
 01/09/2001 - 01/30/2002    FY01: \$15,500            Total: \$15,500  
*Prin. Invest.:* G DE BOER  
*Tech. Officer:* JSC/C SCOTT  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 9 1170**            **OUR LADY OF THE LAKE UNIV**            **8512**  
 ENGAGING EDUCATORS IN THE EARTH/SCIENCE ENTERP  
 09/24/1999 - 09/29/2001    FY01: \$60,152            Total: \$199,304  
*Prin. Invest.:* K A WARD  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2065**            **PRAIRIE VIEW A&M UNIV**            **8513**  
 RADIATION EFFECTS ON DC-DC CONVERTERS RADIATION EFFECTS ON  
 DC-DC CONVERTER  
 08/01/1997 - 09/30/1999    FY01: -\$1,557            Total: \$392,157  
*Prin. Invest.:* J O ATTIA, R SCHRIMPF, K F GALLOWAY  
*Tech. Officer:* GRC/M D KANKAM  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 4 148**            **PRAIRIE VIEW A&M UNIV**            **8514**  
 RADIATION EFFECTS ON ELECTRONIC MATERIAL AND DEVICES  
 03/03/1998 - 02/27/2002    FY01: \$0            Total: \$266,999  
*Prin. Invest.:* R WILKINS  
*Tech. Officer:* DFRC/E COX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 210**            **PRAIRIE VIEW A&M UNIV**            **8515**  
 MITIGATION OF HIGH ALTITUDE AND LOW EARTH ORBIT RA DIATION  
 EFFECTS ON MICROELECTRONICSVIA SHIELDING  
 06/07/2000 - 06/06/2003    FY01: \$100,000            Total: \$200,000  
*Prin. Invest.:* D K KIRBY  
*Tech. Officer:* DFRC/D GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 5130**            **PRAIRIE VIEW A&M UNIV**            **8516**  
 STUDY OF RADIATION EFFECTS ON ELECTRONIC DEVICES AT HIGH  
 ATMOSPHERE ALTITUDES  
 07/02/1997 - 09/30/2000    FY01: \$0            Total: \$33,941  
*Prin. Invest.:* R WILKINS  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 6823**            **PRAIRIE VIEW A&M UNIV**            **8517**  
 ENHANCEMENT OF TEXGED, PVAMU TO BE A CENTER OF EXC ELLENCE IN  
 APPLICATIONS OF REMOTE SENSING TO REGI  
 01/30/1998 - 12/31/2000    FY01: \$0            Total: \$53,308  
*Prin. Invest.:* S H SHAKIR  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## TEXAS

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11070**                    **PRAIRIE VIEW A&M UNIV**                    **8518**  
 CENTER FOR APPLIED RADIATION RESEARCH PARTNERSHIP PROGRAM  
 06/29/2001 - 05/31/2002                    FY01: \$200,000                    Total: \$200,000  
*Prin. Invest.:* R WILKINS  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1338**                    **PRAIRIE VIEW A&M UNIV**                    **8519**  
 ESTABLISHMENT OF A SOLAR OBSERVATORY AND STUDIES ON THE  
 SOLAR ATMOSPHERE  
 03/18/1997 - 03/31/2003                    FY01: \$100,000                    Total: \$438,700  
*Prin. Invest.:* T HUANG  
*Tech. Officer:* MSFC/J M DAVIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1644**                    **PRAIRIE VIEW A&M UNIV**                    **8520**  
 ADVANCED FUEL INJECTOR OPTIMIZATION FOR RBCC ENGINE CONCEPT  
 09/30/1999 - 09/30/2002                    FY01: \$100,000                    Total: \$200,000  
*Prin. Invest.:* Z HAQUE, N BUTUK  
*Tech. Officer:* MSFC/A BEAM, MSFC/W LOVE  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 9 1136**                    **PRAIRIE VIEW A&M UNIV**                    **8521**  
 POWER QUALITY AND RELIABILITY  
 08/24/1999 - 08/23/2001                    FY01: \$0                    Total: \$100,000  
*Prin. Invest.:* W F TROTTY, J ATTIA  
*Tech. Officer:* JSC/W C ROEH, JSC/L M ARMENDARIZA  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1241**                    **PRAIRIE VIEW A&M UNIV**                    **8522**  
 USE OF ELCTROMIGRATION TO IMMOBILIZE METAL IONS  
 06/22/2000 - 05/31/2003                    FY01: \$60,000                    Total: \$120,000  
*Prin. Invest.:* R CUERO  
*Tech. Officer:* JSC/D S MCKAY, JSC/L ARMENDARIZ  
*CASE Category:* 55 - AGRICULTURE

**NAG 9 1370**                    **PRAIRIE VIEW A&M UNIV**                    **8523**  
 RADIATION EXPOSURE EFFECTS & SHIELDING ANALYSIS OF CARBON  
 NANOTUBE MATERIALS  
 07/30/2001 - 12/29/2001                    FY01: \$37,000                    Total: \$37,000  
*Prin. Invest.:* R WILKINS  
*Tech. Officer:* JSC/A LEE, JSC/L M ARMENDARIZ  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG13 46**                    **PRAIRIE VIEW A&M UNIV**                    **8524**  
 TEXAS GULF COAST ENVIRONMENTAL DATA CENTER SAME  
 10/04/1995 - 04/20/2001                    FY01: \$0                    Total: \$270,125  
*Prin. Invest.:* S SHAKIR  
*Tech. Officer:* SSC/A JOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 577**                    **PRAIRIE VIEW A&M UNIV**                    **8525**  
 RESEARCH TO SIGNIFICANTLY ENHANCE COMPOSITES SURVI ABILITY AT  
 550 DEGREES F IN OXIDATIVE ENVIRONMENT  
 09/26/1997 - 05/31/2002                    FY01: \$136,102                    Total: \$336,102  
*Prin. Invest.:* LE CARSON-ISABELLE  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NCC 5 115**                    **PRAIRIE VIEW A&M UNIV**                    **8526**  
 ESTABLISHMENT OF A NASA SOUTHWEST REGIONAL NETWORK  
 RESOURCES TRAINING SITE  
 08/15/1995 - 09/14/2001                    FY01: \$62,418                    Total: \$2,926,418  
*Prin. Invest.:* J R WILLIAMS  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 529**                    **PRAIRIE VIEW A&M UNIV**                    **8527**  
 NASA SOUTHWEST REGIONAL NETWORK RESOURCES AND TRAINING  
 SITE/MUSPIN NRTS PROGRAM.  
 02/01/2001 - 01/31/2002                    FY01: \$350,000                    Total: \$350,000  
*Prin. Invest.:* J WILLIAMS  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 591**                    **PRAIRIE VIEW A&M UNIV**                    **8528**  
 IMPROVEMENT OF THE SOLAR OBSERVATION FACILITIES AT PRAIRIE  
 VIEW SOLAR OBSERVATORY  
 09/14/2001 - 09/14/2002                    FY01: \$35,500                    Total: \$35,500  
*Prin. Invest.:* D HUANG  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 11 - ASTRONOMY

**NCC 9 50**                    **PRAIRIE VIEW A&M UNIV**                    **8529**  
 TRANSFERRED FROM HQ (NCCW-0086) & INCR FUND  
 02/13/1997 - 08/30/2000                    FY01: -\$3,323                    Total: \$4,401,470  
*Prin. Invest.:* T N FOGARTY  
*Tech. Officer:* JSC/J D ATKINSON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 9 66**                    **PRAIRIE VIEW A&M UNIV**                    **8530**  
 SOFTWARE ENGINEERING INITIATIVE  
 09/25/1997 - 12/31/2002                    FY01: \$526,692                    Total: \$1,923,119  
*Prin. Invest.:* J D OLIVER  
*Tech. Officer:* JSC/L MCWHORTER, JSC/K MARTINDALE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 9 114**                    **PRAIRIE VIEW A&M UNIV**                    **8531**  
 CENTER APPLIED RADIATION RESEARCH  
 09/27/2000 - 08/31/2005                    FY01: \$999,999                    Total: \$1,419,999  
*Prin. Invest.:* R WILKINS  
*Tech. Officer:* JSC/F A CUCINOTTA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 2134**                    **RICE UNIV**                    **8532**  
 NONLINEAR RECEPITIVITY AND BY-PASS TRANSITION IN THREE-DIMEN-  
 SIONAL BOUNDARY LAYERS NRA 98 LARC5  
 02/10/1999 - 01/31/2002                    FY01: \$39,508                    Total: \$117,458  
*Prin. Invest.:* S S COLLIS  
*Tech. Officer:* LARC/R R ANTOLIFF  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1401**                    **RICE UNIV**                    **8533**  
 VIRTUAL PROTOTYPING FOR CARBON NANOTUBES  
 04/24/2000 - 03/14/2002                    FY01: \$43,212                    Total: \$113,437  
*Prin. Invest.:* B YAKOBSON  
*Tech. Officer:* ARC/M MEYYAPPAN, ARC/H PARTRIDGE  
*CASE Category:* 13 - PHYSICS

**NAG 3 2365**                      **RICE UNIV**                      **8534**  
 THERMAL PROTECTIVE COATING FOR HIGH TEMPERATURE POLYMER  
 COMPOSITES  
 03/23/2000 - 03/31/2001      FY01: \$0                      Total: \$35,000  
*Prin. Invest.:* A BARRON  
*Tech. Officer:* GRC/K C CHUANG  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2534**                      **RICE UNIV**                      **8535**  
 AD HOC NETWORKS IN SPACE AND SURFACE SYSTEMS AD HOC  
 NETWORKS IN SPACE AND SURFACE SYSTEMS  
 03/07/2001 - 12/31/2003      FY01: \$325,082              Total: \$325,082  
*Prin. Invest.:* D B JOHNSON  
*Tech. Officer:* GRC/D FOLTZ  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 2736**                      **RICE UNIV**                      **8536**  
 NATIONAL SOFTWARE EXCHANGE FOR THE HIGH PERFORMANCE  
 COMPUTING COMMUNICATIONS PROGRAM  
 09/22/1994 - 09/30/2000      FY01: \$0                      Total: \$4,187,500  
*Prin. Invest.:* K KENNEDY  
*Tech. Officer:* GSFC/J R FISCHER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 4072**                      **RICE UNIV**                      **8537**  
 NASA SPECIALIZED CENTER OF RESEARCH AND TRAINING IN AL BIOLOGY  
 04/07/1997 - 02/28/2002      FY01: \$362,511              Total: \$3,309,837  
*Prin. Invest.:* L MCINTIRE  
*Tech. Officer:* GSFC/D LASKOWSKY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 4267**                      **RICE UNIV**                      **8538**  
 COMPREHENSIVE COMPUTATIONAL MODEL OF THE EARTH'S ROTATION  
 03/25/1997 - 05/14/2001      FY01: \$0                      Total: \$153,886  
*Prin. Invest.:* D A WOLF  
*Tech. Officer:* GSFC/J BOHLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 4726**                      **RICE UNIV**                      **8539**  
 DEVELOPMENT AND APPLICATIONS OF A MODULAR MODEL OF MAGNETO-  
 SPHERE  
 06/19/1997 - 05/14/2002      FY01: \$0                      Total: \$268,344  
*Prin. Invest.:* D R TOFFOLETTO  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 13 - PHYSICS

**NAG 5 4822**                      **RICE UNIV**                      **8540**  
 THE OPEN POLAR CAP: COMPARISON OF POLAR IMAGES WITH  
 06/17/1997 - 06/14/2001      FY01: \$0                      Total: \$188,000  
*Prin. Invest.:* D W HILL  
*Tech. Officer:* GSFC/J GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 6432**                      **RICE UNIV**                      **8541**  
 MAGNETOSPHERIC CONVECTION AT JUPITER & SATURN  
 10/14/1997 - 07/14/2002      FY01: \$0                      Total: \$216,449  
*Prin. Invest.:* D HILL  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7037**                      **RICE UNIV**                      **8542**  
 SOLAR WIND INTERACTION AT VENUS TO MARS, INCLUDING THE  
 MAGNETIC EFFECTS OF THE MARTIAN CRUSTAL MAGNETIC FIELD  
 02/20/1998 - 02/28/2002      FY01: \$20,000              Total: \$189,498  
*Prin. Invest.:* P A CLOUTIER  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 7980**                      **RICE UNIV**                      **8543**  
 MODELING BATSE GAMMA-RAY BURST CONTINUUM SPECTRA AND SPECTRAL  
 EVOLUTION  
 01/19/1999 - 01/14/2002      FY01: \$0                      Total: \$32,000  
*Prin. Invest.:* E P LIANG  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8131**                      **RICE UNIV**                      **8544**  
 NUMERICAL SIMULATION OF ROTATION-DRIVEN PLASMA TRANSPORT IN  
 THE JOVIAN MAGNETOSPHERE  
 01/28/1999 - 01/31/2002      FY01: \$74,497              Total: \$212,054  
*Prin. Invest.:* D W HILL  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8136**                      **RICE UNIV**                      **8545**  
 "COMPREHENSIVE QUANTITATIVE MODEL OF INNER-MAGNETOSPHERE  
 DYNAMICS."  
 01/29/1999 - 01/31/2002      FY01: \$290,000              Total: \$711,296  
*Prin. Invest.:* R A WOLF  
*Tech. Officer:* GSFC/J GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 8380**                      **RICE UNIV**                      **8546**  
 DATA ANALYSIS FOR POLAR MAGNETIC FIELD EXPERIMENT  
 04/26/1999 - 12/31/2000      FY01: \$0                      Total: \$65,000  
*Prin. Invest.:* P REIFF  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9011**                      **RICE UNIV**                      **8547**  
 FAR-UV OBSERVATIONS OF LOW AND HIGH-EXCITATION HERBIG-HARO  
 SHOCKS - FUZE  
 02/02/2000 - 01/31/2002      FY01: \$0                      Total: \$28,200  
*Prin. Invest.:* P HARTIGAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9077**                      **RICE UNIV**                      **8548**  
 ACCELERATION & TRANSPORT OF ENERGETIC PARTICLES IN THE OUTER  
 MAGNETOSPHERE  
 02/23/2000 - 08/31/2002      FY01: \$82,349              Total: \$157,749  
*Prin. Invest.:* R WOLF  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI-INTERDISCIPLINARY, OTHER

**NAG 5 9212** **RICE UNIV** **8549**  
 SIMULTANEOUS MULTIWAVELENGTH OBSERVATIONS OF GX 339-4 IN 1999  
 AUGUST (ADP 99)  
 03/10/2000 - 03/14/2001 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* E LANG  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9223** **RICE UNIV** **8550**  
 NUMERICAL SIMULATION OF HIGH ENERGY EMISSIONS FROM COMPACT  
 OBJECTS  
 03/14/2000 - 03/14/2002 FY01: \$104,043 Total: \$199,102  
*Prin. Invest.:* E LIANG  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9904** **RICE UNIV** **8551**  
 STUDY OF THE SOFT GAMMA-RAY REPEATERS  
 08/29/2000 - 08/31/2001 FY01: \$0 Total: \$7,900  
*Prin. Invest.:* E P LIANG  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10432** **RICE UNIV** **8552**  
 "PRECISION MINING" OF LARGE SPECTRAL DATA VOLUMES FOR RAPID  
 IDENTIFICATION OF PLANETARY  
 02/27/2001 - 08/31/2002 FY01: \$306,719 Total: \$306,719  
*Prin. Invest.:* E MERENYI  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10816** **RICE UNIV** **8553**  
 MULTIWAVELENGTH STUDY OF LMC X-1 (ADP 2000)  
 04/24/2001 - 04/30/2002 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* E P LIANG  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10841** **RICE UNIV** **8554**  
 EMISSION FROM MAGNETIZED NEUTRON STARS (ATP 2000)  
 05/03/2001 - 05/14/2002 FY01: \$31,005 Total: \$31,005  
*Prin. Invest.:* M G BARING  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1444** **RICE UNIV** **8555**  
 A QUANTUM DEGENERATE FERMI GAS OF 6LI ATOMS  
 02/11/1998 - 01/31/2001 FY01: -\$4 Total: \$206,996  
*Prin. Invest.:* R G HULET  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 8 1467** **RICE UNIV** **8556**  
 INFLUENCE OF REDUCED GRAVITY CONDITIONS ON THE OPTIMIZED  
 GROWTH AND DEPOSITION OF METAL NANOSHELL  
 03/06/1998 - 01/31/2002 FY01: \$61,750 Total: \$232,917  
*Prin. Invest.:* N J HALAS  
*Tech. Officer:* MSFC/C L TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1766** **RICE UNIV** **8557**  
 SUPERFLUID PHASE TRANSITION IN AN ULTRACOLD PERMI GAS  
 04/24/2001 - 04/30/2005 FY01: \$86,663 Total: \$86,663  
*Prin. Invest.:* R G HULET  
*Tech. Officer:* MSFC/D S HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 9 978** **RICE UNIV** **8558**  
 DEVELOPMENT OF PLASMA INJECTOR FOR VSIPR  
 10/17/1997 - 09/30/2001 FY01: \$42,000 Total: \$170,412  
*Prin. Invest.:* A A CHAN  
*Tech. Officer:* JSC/F CHANG-DIAZ  
*CASE Category:* 13 - PHYSICS

**NAG 9 1049** **RICE UNIV** **8559**  
 LASER ABSORPTION SENSORS  
 08/04/1998 - 08/05/2001 FY01: \$119,956 Total: \$419,720  
*Prin. Invest.:* F K TITTLE  
*Tech. Officer:* JPL/D L JAN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 9 1059** **RICE UNIV** **8560**  
 COMPUTATIONAL METHODS  
 12/14/1998 - 12/31/2001 FY01: \$51,704 Total: \$138,187  
*Prin. Invest.:* T E TEZDUYAR  
*Tech. Officer:* JSC/F MARTIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1193** **RICE UNIV** **8561**  
 TO PROVIDE ANALYTICAL MEASUREMENT SERVICES  
 02/03/2000 - 08/30/2000 FY01: -\$6 Total: \$42,994  
*Prin. Invest.:* F K TITTLE  
*Tech. Officer:* JSC/J GRAF  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 9 1249** **RICE UNIV** **8562**  
 APPLICATION OF MACHINE LEARNING TO THE CONTROL OF ADVANCED  
 LIFE SUPPORT SYSTEMS  
 07/19/2000 - 12/31/2001 FY01: \$0 Total: \$20,000  
*Prin. Invest.:* D SUBRAMANIAN  
*Tech. Officer:* JSC/C L FARMER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1285** **RICE UNIV** **8563**  
 MATRIX OF HYPERVELOCITY IMPACT TESTS  
 03/02/2001 - 12/31/2001 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* E V BARRERA  
*Tech. Officer:* JSC/J CREWS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 1219** **RICE UNIV** **8564**  
 INTEGRATED MODELING OF COGNITION AND THE INFORMATION ENVI-  
 RONMENT  
 03/16/2001 - 09/30/2001 FY01: \$95,591 Total: \$95,591  
*Prin. Invest.:* M BYRNE, A KIRLIK  
*Tech. Officer:* ARC/B L BEARD  
*CASE Category:* 69 - PSYCHOLOGY, OTHER



**NCC 2 1279**                      **RICE UNIV**                      **8565**  
 TECHNOLOGY DEVELOPMENT OF MINIATURIZED FAR-INFRARED D  
 SOURCES FOR BIOMOLECULAR SPECTROSCOPY  
 08/23/2001 - 10/14/2002      FY01: \$40,380                      Total: \$40,380  
*Prin. Invest.:* J KONO  
*Tech. Officer:* ARC/B BIEGEL  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 2 5458**                      **RICE UNIV**                      **8566**  
 ELECTRONIC PROPERTIES OF ANTIMONIDE-BASE SEMICONDU CTOR  
 NANOSTRUCTURES FOR THZ GENERATION  
 08/23/2001 - 08/31/2002      FY01: \$59,620                      Total: \$59,620  
*Prin. Invest.:* J KONO  
*Tech. Officer:* ARC/T R GOVINDAN, ARC/B BIEGEL  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 311**                      **RICE UNIV**                      **8567**  
 MUSEUMS TEACHING PLANET EARTH(UTPE)  
 04/11/1998 - 02/28/2003      FY01: \$400,000                      Total: \$1,753,000  
*Prin. Invest.:* P REIFF  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 9 77**                      **RICE UNIV**                      **8568**  
 ADVANCED NANOTECHNOLOGY MATERIALS AND APPLICATIONS  
 10/29/1998 - 10/30/2002      FY01: \$906,000                      Total: \$2,306,000  
*Prin. Invest.:* R C SMALLEY  
*Tech. Officer:* JSC/G K HORIUCHI  
*CASE Category:* 12 - CHEMISTRY

**NGT 1 52215**                      **RICE UNIV**                      **8569**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/01/1999 - 08/31/2000      FY01: -\$369                      Total: \$25,297  
*Prin. Invest.:* S M KELLOGG, S S CULLIS  
*Tech. Officer:* LARC/P J HALEY, LARC/R JOSLIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 2 52252**                      **RICE UNIV**                      **8570**  
 MULTIWAVELENGTH STUDIES OF WOLF-RAYET GALAXIES  
 09/30/1998 - 10/31/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* D J DUFOUR  
*Tech. Officer:* ARC/D J HOLLENBACH  
*CASE Category:* 11 - ASTRONOMY

**NGT 8 52899**                      **RICE UNIV**                      **8571**  
 THE BROADBAND ANALYSIS OF SPECTRAL AND TEMPORAL PROPERTIES  
 OF GAMMA-RAY BURSTS  
 05/25/2001 - 07/01/2004      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* E P LIANG  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 11 - ASTRONOMY

**NGT 9 19**                      **RICE UNIV**                      **8572**  
 NOVEL LASER BASED GAS SENSORS FOR TRAVE GAS DETECTION IN A  
 SPACECRAFT HABITAT  
 08/23/1999 - 06/30/2002      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* F K TITTEL  
*Tech. Officer:* JSC/J C GRAF  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NGT 9 23**                      **RICE UNIV**                      **8573**  
 UNDERSTANDING PROPERTIES OF NANOTUBE REINFORCED ..  
 05/30/1997 - 06/30/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* E V BARRERA  
*Tech. Officer:* JSC/B FILES  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 975**                      **SAN ANTONIO COLLEGE**                      **8574**  
 SPACE AND GEOSCIENCE PROJECT  
 09/25/1997 - 01/15/2000      FY01: -\$4,296                      Total: \$386,071  
*Prin. Invest.:* C GONZALES  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 9 00106**                      **SAN JACINTO COLLEGE**                      **8575**  
 COMPUTER TRAINING  
 09/29/2000 - 09/30/2001      FY01: \$208,729                      Total: \$358,729  
*Prin. Invest.:* N J ANTHA  
*Tech. Officer:* JSC/D DENTON-MISFELDT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 9 137**                      **SAN JACINTO COLLEGE**                      **8576**  
 KC 135 STUDENT FLIGHT PROGRAM  
 09/21/2001 - 08/31/2004      FY01: \$96,328                      Total: \$96,328  
*Prin. Invest.:* M DALTON  
*Tech. Officer:* JSC/D SICKOREZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 9 141**                      **SAN JACINTO COLLEGE**                      **8577**  
 PROVIDE AREOSPACE RELATED EXPERIENCE FOR NON TRADITIONAL  
 COMMUNITY COLLEGE  
 08/15/2001 - 08/31/2003      FY01: \$15,000                      Total: \$15,000  
*Prin. Invest.:* N AVAILABLE  
*Tech. Officer:* JSC/N AVAILABLE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4562**                      **SOUTHERN METHODIST UNIV**                      **8578**  
 CORONAE AND CHASMATA:IMPLICATIONS FOR TERRRESTRIAL  
 05/29/1997 - 11/30/2001      FY01: \$0                      Total: \$249,866  
*Prin. Invest.:* D L HANSEN  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4609**                      **SOUTHERN METHODIST UNIV**                      **8579**  
 TETONIC EVOLUTION OF PLANET SURFACES  
 05/19/1997 - 05/14/2001      FY01: \$0                      Total: \$64,435  
*Prin. Invest.:* D L HANSEN  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9142**                      **SOUTHERN METHODIST UNIV**                      **8580**  
 TETONIC EVOLUTION OF PLANET SURFACES  
 02/29/2000 - 04/14/2003      FY01: \$25,000                      Total: \$48,750  
*Prin. Invest.:* V L HANSEN  
*Tech. Officer:* GSFC/D A SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

TEXAS

NASA'S UNIVERSITY PROGRAM

**NAG 5 10586**                      **SOUTHERN METHODIST UNIV**                      **8581**  
 TERRESTRIAL PLANET EVOLUTION  
 03/13/2001 - 05/14/2002                      FY01: \$65,000                      Total: \$65,000  
*Prin. Invest.:* V L HANSEN  
*Tech. Officer:* GSFC/D SENSEKE  
*CASE Category:* 11 - ASTRONOMY

**NCC 9 54**                      **SOUTHWEST TEXAS STATE UNIV**                      **8589**  
 ORAL HISTORY RESEARCH PROJECT  
 03/01/1999 - 09/30/2001                      FY01: \$10,904                      Total: \$38,683  
*Prin. Invest.:* K MARGERISON  
*Tech. Officer:* JSC/W A LARSEN  
*CASE Category:* 73 - HISTORY

**NAS 1 01104**                      **SOUTHERN METHODIST UNIV**                      **8582**  
 BROAD BAND PYROELECTRIC IR DETECTOR FOR FIRST (FAR-INFARED SPECTROSCOPY OF THE TROPOSPHERE)  
 09/07/2001 - 12/06/2001                      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* Z CELIK-BUTLER, D BUTLER  
*Tech. Officer:* LARC/D G JOHNSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01005**                      **TEXAS A&M UNIV**                      **8590**  
 UNSTEADY RANS COMPUTATIONS OF COMPLEX TURBULENT FLOWS: MODELING & IMPLEMENTATION  
 02/15/2001 - 12/31/2003                      FY01: \$68,009                      Total: \$68,009  
*Prin. Invest.:* S GIRIMAJI  
*Tech. Officer:* LARC/B A SINGER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 1 99100**                      **SOUTHERN METHODIST UNIV**                      **8583**  
 UNCOOLED YTTRIUM BARIUM COPPER OXIDE THERMAL DETECTORS FOR ADVANCED BROAD BAND IR AND FIR  
 09/27/1999 - 09/26/2000                      FY01: \$0                      Total: \$110,122  
*Prin. Invest.:* Z CELIK-BUTLER, D BUTLER  
*Tech. Officer:* LARC/E KIST, JR.  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 01015**                      **TEXAS A&M UNIV**                      **8591**  
 ACTIVE SKIN FOR TURBULENT DRAG REDUCTION  
 02/15/2001 - 02/28/2002                      FY01: \$65,000                      Total: \$65,000  
*Prin. Invest.:* O K REDINIOTIS, D C LAGLOUDAS  
*Tech. Officer:* LARC/M J WALSH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 9 1019**                      **SOUTHWEST TEXAS JUNIOR COLLEGE**                      **8584**  
 PRECOLLEGE AWARD FOR EXCELLENCE PACE/MSET  
 05/28/1998 - 08/31/2001                      FY01: \$0                      Total: \$298,420  
*Prin. Invest.:* A HERNANDEZ, JR.  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01080**                      **TEXAS A&M UNIV**                      **8592**  
 HIERARCHICAL STRATEGY FOR RAPID ANALYSIS ENVIRONMENT  
 05/11/2001 - 01/31/2004                      FY01: \$60,000                      Total: \$60,000  
*Prin. Invest.:* J D WHITCOMB  
*Tech. Officer:* LARC/I S RAJU, LARC/J B RANSOM  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1367**                      **SOUTHWEST TEXAS STATE UNIV**                      **8585**  
 A NASA/UNIV JOINT VENTURE IN SPACE SCIENCE (JOVE). PROVIDES 1ST YEAR FUNDING  
 05/28/1997 - 08/31/2000                      FY01: -\$106                      Total: \$31,708  
*Prin. Invest.:* S F TARSITANO  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 2 1340**                      **TEXAS A&M UNIV**                      **8593**  
 ADAPTATIONS OF VISCERAL & CEREBRAL RESISTANCE ARTICLES TO SIMULATED MICROGRAVITY  
 07/16/1999 - 07/14/2002                      FY01: \$129,582                      Total: \$368,261  
*Prin. Invest.:* M D DELP  
*Tech. Officer:* ARC/M M AVERNER, ARC/R MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 1 324**                      **SOUTHWEST TEXAS STATE UNIV**                      **8586**  
 LOW DIELECTRIC POLYMERS  
 12/08/1998 - 11/30/1999                      FY01: -\$10,657                      Total: \$59,215  
*Prin. Invest.:* P E CASSIDY, M BLANDA  
*Tech. Officer:* LARC/A K ST. CLAIR, LARC/D M STOAKLEY  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2002**                      **TEXAS A&M UNIV**                      **8594**  
 TURBINE BLADE TIP HEAT TRANSFER & FILM COOLING STUDY USING A TRANSIENT LIQUID CRYSTAL IMAGE METHOD  
 01/21/1997 - 12/30/2000                      FY01: -\$40                      Total: \$233,656  
*Prin. Invest.:* J C HAN, S V EKKAD  
*Tech. Officer:* GRC/R J BOYLE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 376**                      **SOUTHWEST TEXAS STATE UNIV**                      **8587**  
 LOW DIELECTRIC POLYMERS  
 03/22/2000 - 08/31/2001                      FY01: \$0                      Total: \$50,000  
*Prin. Invest.:* P E CASSIDY, M T BLANDA  
*Tech. Officer:* LARC/D M STOAKLEY/C C FAY  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2551**                      **TEXAS A&M UNIV**                      **8595**  
 MULTI-BEAM PHASED ARRAY ANTENNAS MULTI-BEAM PHASED ARRAY ANTENNAS  
 02/28/2001 - 02/04/2002                      FY01: \$100,000                      Total: \$100,000  
*Prin. Invest.:* D CHANG  
*Tech. Officer:* GRC/R LEE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 1 01033**                      **SOUTHWEST TEXAS STATE UNIV**                      **8588**  
 LOW DIELECTRIC POLYMERS  
 05/10/2001 - 05/09/2002                      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* P E CASSIDY, S R VENUMBAKA  
*Tech. Officer:* LARC/D M STOAKLEY, LARC/C C FAY  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2617**                      **TEXAS A&M UNIV**                      **8596**  
 ADVANCED LITHIUM ION POLYMER BATTERIES FOR AEROSPACE APPLICATION  
 05/23/2001 - 05/31/2004                      FY01: \$106,000                      Total: \$106,000  
*Prin. Invest.:* D APPLEBY  
*Tech. Officer:* GRC/R BALDWIN  
*CASE Category:* 12 - CHEMISTRY

**NAG 4 212**                      **TEXAS A&M UNIV**                      **8597**  
 A STUDY OF SYSTEM IDENTIFICATION APPROACHES FOR FLUTTER  
 FLIGHT TESTS TEES #00-564  
 06/28/2000 - 05/31/2001      FY01: \$0                      Total: \$35,000  
*Prin. Invest.:* D STRGANAC  
*Tech. Officer:* DFRG/R LIND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3754**                      **TEXAS A&M UNIV**                      **8598**  
 SKELETAL MUSCLE ARTERIOLAR ADAPTATIONS TO STIMULAT  
 11/22/1996 - 05/14/2000      FY01: -\$239                      Total: \$223,430  
*Prin. Invest.:* M D DELP  
*Tech. Officer:* GSFC/M A SHEPANAK  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 4746**                      **TEXAS A&M UNIV**                      **8599**  
 MICROWAVE RADIOMETER AND MULTI-INSTRUMENT ALGORITHM  
 06/26/1997 - 06/30/2001      FY01: -\$65                      Total: \$350,335  
*Prin. Invest.:* T T WILHEIT  
*Tech. Officer:* GSFC/O A THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4753**                      **TEXAS A&M UNIV**                      **8600**  
 STATISTICAL SAMPLING AND ESTIMATION PROBLEMS USING  
 06/27/1997 - 06/30/2000      FY01: -\$47                      Total: \$346,392  
*Prin. Invest.:* G R NORTH  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4776**                      **TEXAS A&M UNIV**                      **8601**  
 VALIDATION AND ESTIMATES OF TROPICAL RAIN AND DIAB  
 06/27/1997 - 06/30/2001      FY01: -\$36                      Total: \$723,066  
*Prin. Invest.:* M I BIGGERSTAFF  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4796**                      **TEXAS A&M UNIV**                      **8602**  
 VALIDATION AND TRANSFERABILITY OF TROPICAL RAIN  
 08/22/1997 - 09/30/2000      FY01: -\$35                      Total: \$391,094  
*Prin. Invest.:* G J NORTH  
*Tech. Officer:* GSFC/O THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6446**                      **TEXAS A&M UNIV**                      **8603**  
 WORLD OCEAN CIRCULATION EXPERIMENT: SUPPORT FOR TH E U.S.  
 WOCE OFFICE  
 11/25/1997 - 12/31/2001      FY01: \$0                      Total: \$375,000  
*Prin. Invest.:* W D NOWLIN  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7751**                      **TEXAS A&M UNIV**                      **8604**  
 DOES SOUTHERN OCEAN SEA ICE AFFECT INTERANNUAL OCEAN VARI-  
 ABILITY  
 11/19/1998 - 12/31/2001      FY01: \$59,424                      Total: \$178,940  
*Prin. Invest.:* A STOESEL  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8706**                      **TEXAS A&M UNIV**                      **8605**  
 NOX PRODUCTION BY LIGHTNING AND ITS IMPACT ON THE CHEMISTRY OF  
 THE UPPER TROPOSPHERE AND LOWER STRATO  
 07/19/1999 - 08/31/2002      FY01: \$87,449                      Total: \$270,455  
*Prin. Invest.:* R ZHANG  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9409**                      **TEXAS A&M UNIV**                      **8606**  
 MODELING TROPICAL ATLANTIC VARIABILITY  
 04/06/2000 - 06/30/2003      FY01: \$35,000                      Total: \$70,000  
*Prin. Invest.:* P CHANG  
*Tech. Officer:* GSFC/K BERGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9455**                      **TEXAS A&M UNIV**                      **8607**  
 CONTINUED DEVELOPMENT OF SNOW AND SEA ICE ALBEDO ALGORITHMS  
 FOR MODERATE RESOLUTION IMAGING  
 04/12/2000 - 12/31/2000      FY01: \$0                      Total: \$19,849  
*Prin. Invest.:* A KLEIN  
*Tech. Officer:* GSFC/D K HALL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9485**                      **TEXAS A&M UNIV**                      **8608**  
 DEVELOPMENT OF A LONG-RANGE SCIENCE PLAN FOR SUB-GLACIAL  
 LAKE EXPLORATION  
 04/25/2000 - 04/30/2001      FY01: \$0                      Total: \$27,335  
*Prin. Invest.:* M C KENNICUT  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9649**                      **TEXAS A&M UNIV**                      **8609**  
 STATISTICAL SAMPLING AND ESTIMATION PROBLEMS USING TRMM DATA  
 06/26/2000 - 11/30/2001      FY01: \$99,000                      Total: \$139,180  
*Prin. Invest.:* G R NORTH  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9697**                      **TEXAS A&M UNIV**                      **8610**  
 VALIDATION OF TRMM RAINFALL AND HEATING ESTIMATES  
 07/26/2000 - 11/30/2001      FY01: \$190,000                      Total: \$200,000  
*Prin. Invest.:* M I BIGGERSTAFF  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9729**                      **TEXAS A&M UNIV**                      **8611**  
 PHYSICAL VALIDATION OF TMI OCEANIC RAINFALL RETRIEVALS  
 06/22/2000 - 11/30/2001      FY01: \$113,000                      Total: \$163,600  
*Prin. Invest.:* T WILHEIT  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10549**                      **TEXAS A&M UNIV**                      **8612**  
 AIRCRAFT-BASED MEASUREMENT OF AEROSOL OPTICAL PROPERTIES  
 03/09/2001 - 03/14/2002      FY01: \$111,414                      Total: \$111,414  
*Prin. Invest.:* D COLLINS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## TEXAS

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10641**                      **TEXAS A&M UNIV**                      **8613**  
 ASSIMILATING SATELLITE-DERIVED SEA-ICE CONCENTRA- TION IN A  
 GLOBAL COUPLEDSEA-ICE-OCEAN GCM  
 03/17/2001 - 03/14/2002      FY01: \$65,640                      Total: \$65,640  
*Prin. Invest.:* S STOESSEL  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 10829**                      **TEXAS A&M UNIV**                      **8614**  
 SUPPORT FOR U.S. WOCE OFFICE AND U.S. GOOS OFFICE  
 04/25/2001 - 04/30/2002      FY01: \$75,000                      Total: \$75,000  
*Prin. Invest.:* W NOWLIN  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 10877**                      **TEXAS A&M UNIV**                      **8615**  
 CONTINUED DEVELOPMENT OF SNOW AND SEA ICE ALBEDO ALGORITHMS  
 FOR THE MODERATE RESOLUTION IMAGING  
 05/16/2001 - 08/31/2001      FY01: \$15,000                      Total: \$15,000  
*Prin. Invest.:* A KLEIN  
*Tech. Officer:* GSFC/D K HALL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11013**                      **TEXAS A&M UNIV**                      **8616**  
 IMPROVEMENT OF RAIN ESTIMATION IN TROPICAL CYCLONE  
 07/10/2001 - 06/14/2002      FY01: \$228,000                      Total: \$228,000  
*Prin. Invest.:* M BOGGERSTAFF  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11144**                      **TEXAS A&M UNIV**                      **8617**  
 EFFECTS OF URBANIZATION ON ECOLOGICAL SERVICES IN A SEMI-ARID  
 REGION OF THE UNITED STATES  
 07/25/2001 - 08/14/2002      FY01: \$94,341                      Total: \$94,341  
*Prin. Invest.:* R LACEY  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1395**                      **TEXAS A&M UNIV**                      **8618**  
 R/S "BULK FLOW ANALYSIS OF HYBRID THRUST BEARINGS FOR  
 ADVANCED CRYOGENIC TURBOPUMPS"  
 07/21/1997 - 12/31/2000      FY01: -\$44                      Total: \$73,420  
*Prin. Invest.:* L SAN ANDREAS  
*Tech. Officer:* MSFC/R L THOM, MSFC/T JETT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1491**                      **TEXAS A&M UNIV**                      **8619**  
 INTENSITY AND ORGANIZATION OF CONVECTION IN HURRICANES AND  
 TROPICAL CYCLONES BEFORE AND AFTER  
 01/30/1998 - 01/31/2001      FY01: -\$45,141                      Total: \$108,815  
*Prin. Invest.:* E J ZIPSER  
*Tech. Officer:* MSFC/J ARNOLD, MSFC/R K KAKAR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1618**                      **TEXAS A&M UNIV**                      **8620**  
 R&D OF HIGH GAIN, HIGH EFFICIENCY, CIRCULAR POLAR- IZED  
 RECTENNAS  
 07/06/1999 - 01/31/2001      FY01: \$0                      Total: \$350,000  
*Prin. Invest.:* K CHANG  
*Tech. Officer:* MSFC/J HOWELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1802**                      **TEXAS A&M UNIV**                      **8621**  
 THERMOPHYSICAL ESEM & TEM CHARACTERIZATION OF CARBON FIBERS"  
 CTE, SPECTROSCOPY & ROUGHNESS STUDY  
 04/20/2001 - 04/19/2002      FY01: \$64,304                      Total: \$64,304  
*Prin. Invest.:* O O OCHOA  
*Tech. Officer:* MSFC/M R EFFINGER, MSFC/P VALENTINE  
*CASE Category:* 47 - METAL & MATERIALSENGR

**NAG 9 1067**                      **TEXAS A&M UNIV**                      **8622**  
 PLANT GROWTH AND METABOLISM AT SUB-AMBIENT ATMOSPHERE PRES-  
 SURES  
 01/06/1999 - 12/31/2001      FY01: \$118,284                      Total: \$465,446  
*Prin. Invest.:* M C DREW  
*Tech. Officer:* JSC/D BARTA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1070**                      **TEXAS A&M UNIV**                      **8623**  
 NONINTRUSIVE METHOD FOR STIRRED SEPARATOR INVENTORY SENSING  
 01/22/1999 - 12/31/2000      FY01: -\$62                      Total: \$55,677  
*Prin. Invest.:* R WILLIAMS, F BEST, I CARSON  
*Tech. Officer:* JSC/S D GLEN  
*CASE Category:* 13 - PHYSICS

**NAG 9 1086**                      **TEXAS A&M UNIV**                      **8624**  
 LOW THRUST VARIABLE ISP ROCKET TRAJECTORY OPTIMIZATION AND  
 ANALYSIS STUDY  
 02/08/1999 - 09/30/2000      FY01: -\$1,870                      Total: \$28,130  
*Prin. Invest.:* S R VACLALIC  
*Tech. Officer:* JSC/E M BRADEN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1119**                      **TEXAS A&M UNIV**                      **8625**  
 STABILITY OF RETORT PROCESSED MILK PRODUCTS  
 07/01/1999 - 06/30/2001      FY01: \$0                      Total: \$60,000  
*Prin. Invest.:* R L RICHTER  
*Tech. Officer:* JSC/C T BOURLAND  
*CASE Category:* 55 - AGRICULTURE

**NAG 9 1145**                      **TEXAS A&M UNIV**                      **8626**  
 SEPARATION OF LIQUID PHASE FR GAS PHASE  
 09/09/1999 - 01/31/2002      FY01: \$0                      Total: \$150,000  
*Prin. Invest.:* J SEYED-YAGOOBI, F R BEST  
*Tech. Officer:* JSC/E K UNGAR  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1188**                      **TEXAS A&M UNIV**                      **8627**  
 NAVIGATION SYSTEMS & TECHNOLOGY LAB (NSR) ATTITUDE DETERMINA-  
 TION  
 01/28/2000 - 12/31/2002      FY01: \$0                      Total: \$159,345  
*Prin. Invest.:* J L CRASSIDIS  
*Tech. Officer:* JSC/J W BELL  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1231**                      **TEXAS A&M UNIV**                      **8628**  
 SYNTHESIS AND EVALUATION OF ROBUST DYNAMIC INVERSION  
 05/22/2000 - 09/30/2001      FY01: \$0                      Total: \$97,320  
*Prin. Invest.:* J L VALASEK  
*Tech. Officer:* JSC/S R MONDAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

## NASA'S UNIVERSITY PROGRAM

TEXAS

**NAG 9 1239**                      **TEXAS A&M UNIV**                      **8629**  
 VARIABLE ISP ROCKET TRAJECTORY OPTIMIZATION  
 06/30/2000 - 12/31/2001      FY01: \$30,000                      Total: \$60,000  
*Prin. Invest.:* S R VADALI  
*Tech. Officer:* JSC/E M BRADEN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1268**                      **TEXAS A&M UNIV**                      **8630**  
 FLIGHT TESTS OF AN UNMANNED POWERED PARACHUTE  
 01/11/2001 - 12/31/2001      FY01: \$219,534                      Total: \$219,534  
*Prin. Invest.:* D T WARD, J L CRASSIDS, D W LUND  
*Tech. Officer:* JSC/A STRAHAN, JSC/C J CERIMELE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1277**                      **TEXAS A&M UNIV**                      **8631**  
 MICROFABRICATED OPTICAL BIOSENSOR ARRAYS FOR AIR QUALITY  
 MONITORING  
 01/24/2001 - 09/30/2003      FY01: \$0                      Total: \$0  
*Prin. Invest.:* M V PISHKO  
*Tech. Officer:* JSC/D RUSSO  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 9 1328**                      **TEXAS A&M UNIV**                      **8632**  
 IMMWPS SEPARATOR KC-135 FLIGHT DIAGNOSTIC TESTING  
 06/18/2001 - 08/01/2002      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* F R BEST  
*Tech. Officer:* JSC/K HURLBERT  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG10 304**                      **TEXAS A&M UNIV**                      **8633**  
 SCOPING DESIGN FOR ZERO GRAVITY ULLAGE TESTING SCOPING DESIGN  
 FOR ZERO GRAVITY ULLAGE TESTING  
 08/08/2001 - 09/30/2001      FY01: \$22,500                      Total: \$22,500  
*Prin. Invest.:* F R BEST  
*Tech. Officer:* KSC/T R REINARTS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAS 5 32593**                      **TEXAS A&M UNIV**                      **8634**  
 STUDY ENTITLED MIMR SCIENCE TEAM MEMBERSHIP  
 12/15/1993 - 12/30/2001      FY01: \$245,000                      Total: \$1,277,013  
*Prin. Invest.:* T T WILHEIT  
*Tech. Officer:* GSFC/P HWONG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 9 00100**                      **TEXAS A&M UNIV**                      **8635**  
 OPERATION & MANAGEMENT OF RTTC  
 12/22/2000 - 12/21/2001      FY01: \$900,000                      Total: \$900,000  
*Prin. Invest.:* G SERA, B CORNWELL, B NAUKE  
*Tech. Officer:* GRC/K W LASSMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 9 97002**                      **TEXAS A&M UNIV**                      **8636**  
 TEXAS A & M LOW-SPEED WIND TUNNEL (LSWT) TESTING  
 04/02/1997 - 04/02/2001      FY01: \$15,225                      Total: \$204,145  
*Prin. Invest.:* J L MARTINEZ  
*Tech. Officer:* JSC/S G LABBE, JSC/C J CERIMELE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 9 99096**                      **TEXAS A&M UNIV**                      **8637**  
 PROPORTIONAL COUNTERS FOR NEUTRON MEASUREMENTS  
 08/17/1999 - 06/29/2001      FY01: \$0                      Total: \$117,096  
*Prin. Invest.:* L A BRABY  
*Tech. Officer:* JSC/G D BADHWAR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 386**                      **TEXAS A&M UNIV**                      **8638**  
 MICRO SPACECRAFT ATTITUDE SENSOR SYSTEM (MSAS) NASA HQS  
 CETDP COMPETITION  
 03/13/2000 - 01/31/2003      FY01: \$160,000                      Total: \$360,000  
*Prin. Invest.:* J L JUNKINS  
*Tech. Officer:* LARC/L G HORTA  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 2 1166**                      **TEXAS A&M UNIV**                      **8639**  
 ARTERIAL REMODELING AND FUNCTIONAL ADAPTATIONS INDUCED BY  
 MICROGRAVITY  
 03/22/2000 - 03/14/2002      FY01: \$316,193                      Total: \$706,193  
*Prin. Invest.:* M D DELP  
*Tech. Officer:* ARC/M F VASQUES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 3 516**                      **TEXAS A&M UNIV**                      **8640**  
 THE CENTER FOR SPACE POWER  
 11/26/1996 - 11/03/2001      FY01: \$1,015,500                      Total: \$3,727,501  
*Prin. Invest.:* F R BEST  
*Tech. Officer:* GRC/J E CALOGERAS, GRC/R L SOVIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 602**                      **TEXAS A&M UNIV**                      **8641**  
 THERMAL CONTROL AND ENHANCEMENT OF HEAT TRANSPORT CAPACITY  
 OF CRYOGENICS CAPILLARY PUMPED LOOPS AND  
 03/20/1998 - 01/28/2002      FY01: \$51,276                      Total: \$257,963  
*Prin. Invest.:* J SEYED-YAGOOBI, J M OCHTERBECK, J 3 BYRAN  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 762**                      **TEXAS A&M UNIV**                      **8642**  
 SMART STRUCTURAL COMPONENTS FOR INCREASED FLIGHT S PEED,  
 SAFETY & CAPACITY USING MAGNETIC BEARINGS A  
 01/18/2000 - 12/02/2001      FY01: \$105,641                      Total: \$213,464  
*Prin. Invest.:* B D PALAZZOLO  
*Tech. Officer:* GRC/G T MONTAGUE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 793**                      **TEXAS A&M UNIV**                      **8643**  
 EXPERIMENTAL STUDY OF THE EFFECTS OF WAKES ON SEPA RATION IN  
 LOW PRESSURE TURBINE FLOW  
 04/20/2000 - 05/31/2002      FY01: \$45,000                      Total: \$131,735  
*Prin. Invest.:* I SCHOBELIRI  
*Tech. Officer:* GRC/D ASHPIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 836**                      **TEXAS A&M UNIV**                      **8644**  
 LOW POWER LOSS, FAIL SAFE MAGNETIC SUSPENSIONS FOR ENERGY  
 STORAGE AND ATTITUDE CONTROL FLYWHEELS  
 01/04/2001 - 01/01/2004      FY01: \$337,470                      Total: \$337,470  
*Prin. Invest.:* D PALAZZOLO  
*Tech. Officer:* GRC/K P MCLALLIN  
*CASE Category:* 46 - MECHANICAL ENGR

## TEXAS

## NASA'S UNIVERSITY PROGRAM

**NCC 4 152**                      **TEXAS A&M UNIV**                      **8645**  
 CONTINUOUS COMMISSIONING PROPOSAL CONTINUOUS COMMISSIONING  
 PROPOSAL  
 06/18/2001 - 05/31/2002      FY01: \$70,000                      Total: \$70,000  
*Prin. Invest.:* W TURNER  
*Tech. Officer:* DFRC/J TORRES  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 359**                      **TEXAS A&M UNIV**                      **8646**  
 MISSION GEOGRAPHY  
 08/24/1998 - 01/31/2002      FY01: \$0                      Total: \$900,542  
*Prin. Invest.:* S BEDNARZ  
*Tech. Officer:* HQ/P MOUNTJOY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 448**                      **TEXAS A&M UNIV**                      **8647**  
 VISION-BASED NAVIGATION FOR SPACECRAFT FORMATION FLYING  
 12/21/1999 - 12/31/2001      FY01: \$64,970                      Total: \$353,730  
*Prin. Invest.:* D L JUNKINS  
*Tech. Officer:* GSFC/L MARKLEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 456**                      **TEXAS A&M UNIV**                      **8648**  
 UNSOLICITED PROPOSAL FOR A COOPERATIVE AGREEMENT BETWEEN  
 THE TEXAS ENGINEERING EXPERIMENT STATION  
 03/03/2000 - 02/28/2002      FY01: \$0                      Total: \$1,045,000  
*Prin. Invest.:* F R BEST  
*Tech. Officer:* GSFC/J LANDERS  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 517**                      **TEXAS A&M UNIV**                      **8649**  
 BUILDING AN INTERDISCIPLINARY RESEARCH INFRASTRUCTURE IN  
 APPLIED COMPUTER SCIENCE, GEOGRAPHIC INFOR  
 09/25/2000 - 09/30/2001      FY01: \$386,604                      Total: \$486,604  
*Prin. Invest.:* C STEIDLEY  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 169**                      **TEXAS A&M UNIV**                      **8650**  
 R/S INVESTIGATION OF NEURONAL PHYSIOLOGY IN SIMULATED  
 MICROGRAVITY USING SMART FLUORESCENT ...  
 03/12/1999 - 11/30/2002      FY01: \$133,000                      Total: \$371,000  
*Prin. Invest.:* G COTE  
*Tech. Officer:* JSC/M ANDERSON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 8 226**                      **TEXAS A&M UNIV**                      **8651**  
 PROMOTE COMMERCIALY FUNDED ENGINEERING RESEARCH &  
 TECHNOLOGY DEVELOPMENT ON THE INT'L SPACE STATION  
 05/01/2001 - 10/31/2001      FY01: \$716,000                      Total: \$716,000  
*Prin. Invest.:* D BOYLE  
*Tech. Officer:* MSFC/S LAMBING  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 9 69**                      **TEXAS A&M UNIV**                      **8652**  
 NASA COMMERCIAL SPACE TO ADBOCATE & SUPPORT COMMERCIAL  
 ENGINEERING ON ISS  
 05/07/1998 - 05/06/2001      FY01: \$200,000                      Total: \$2,132,789  
*Prin. Invest.:* D R BOYLE, M SCHULLER, F R BEST  
*Tech. Officer:* JSC/C G PARRA, JSC/R C HAHL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 30211**                      **TEXAS A&M UNIV**                      **8653**  
 HYDROLOGIC CONSEQUENCES OF SHRUB SAVANNA EXPANSION  
 STUDENT: WYLIE N. HARRIS  
 08/20/1999 - 08/31/2001      FY01: \$0                      Total: \$22,000  
*Prin. Invest.:* T BOUTTON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30408**                      **TEXAS A&M UNIV**                      **8654**  
 EVALUATION OF SHRUB ENCROACHMENT ON WATER AVAILABILITY IN  
 SEMI-ARIDRANGELAND OF THE SOUTHWEST  
 08/15/2001 - 08/31/2004      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* C MUNSTER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30417**                      **TEXAS A&M UNIV**                      **8655**  
 UNDERSTANDING AND ASSESSING POTENTIAL PREDICTABILITY OF THE  
 SACZ & SPCZ USING NASA/NSIPP ANDNCAR/C  
 09/06/2001 - 08/31/2004      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* P CHANG  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 34**                      **TEXAS A&M UNIV**                      **8656**  
 KINETICS OF NITRIFICATION BY ISO TOPE DILUTION IN GROWTH OF  
 WHEAT USING ZEOPONICS  
 06/04/1998 - 07/01/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* R W WEAVER  
*Tech. Officer:* JSC/D G SICKOREZ  
*CASE Category:* 55 - AGRICULTURE

**NGT 9 39**                      **TEXAS A&M UNIV**                      **8657**  
 1999 SUMMER FACULTY FELLOWSHIP PROGRAM  
 04/21/1999 - 12/31/2000      FY01: \$0                      Total: \$385,000  
*Prin. Invest.:* W A HYMAN, R BANNEROT  
*Tech. Officer:* JSC/D SICKOREZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 54**                      **TEXAS A&M UNIV**                      **8658**  
 2001 SUMMER FACULTY FELLOWSHIP PROGRAM  
 06/29/2001 - 12/31/2002      FY01: \$359,417                      Total: \$359,417  
*Prin. Invest.:* W A HYMAN  
*Tech. Officer:* JSC/D SICKOREZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9196**                      **TEXAS A&M UNIV-CORPUS CHRISTI**                      **8659**  
 THE TRANSLINGUAL EARTH SYSTEM SCIENCE EDUCATION CENTER  
 03/10/2000 - 09/14/2001      FY01: \$0                      Total: \$154,580  
*Prin. Invest.:* G BLOUNT  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7159**                      **TEXAS A&M UNIV-KINGSVILLE**                      **8660**  
 SIMULATION SUPPORT FOR THE DEVELOPMENT OF GLAST  
 03/16/1998 - 08/31/2001      FY01: \$0                      Total: \$104,000  
*Prin. Invest.:* D SUSON  
*Tech. Officer:* GSFC/D THOMPSON  
*CASE Category:* 13 - PHYSICS

**NAG 8 1650**                    **TEXAS A&M UNIV-KINGSVILLE**                    **8661**  
 EXPANDABLE SOFTWARE REUSE LIBRARY  
 01/20/2000 - 01/19/2002                    FY01: \$0                    Total: \$29,291  
*Prin. Invest.:* B SCHREUR  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 9 1093**                    **TEXAS A&M UNIV-KINGSVILLE**                    **8662**  
 DESIGN OF LOW BIT RATE SIGNAL COMPRESSOR FOR EFFICIENT  
 RECORDING  
 04/26/1999 - 04/30/2002                    FY01: \$84,669                    Total: \$263,313  
*Prin. Invest.:* S W PARK  
*Tech. Officer:* JSC/K L HAMES  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 7040**                    **TEXAS CHRISTIAN UNIV**                    **8663**  
 CRITICAL TESTS OF STELLAR EVOLUTION\_(LTSA)  
 03/02/1998 - 02/28/2002                    FY01: \$8,900                    Total: \$33,800  
*Prin. Invest.:* P MARCUM  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1356**                    **TEXAS CHRISTIAN UNIV**                    **8664**  
 EXPERIMENTAL ASSESSMENT OF MULTICOMPONENT EFFECTS IN DIFFU-  
 SION-DOMINATED TRANSPORT PROTEIN CRYSTAL  
 05/23/1997 - 05/31/2001                    FY01: \$29,362                    Total: \$298,362  
*Prin. Invest.:* J G ALBRIGHT  
*Tech. Officer:* MSFC/B L GUYNES, MSFC/J MAYO  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 8934**                    **TEXAS COLLEGE**                    **8665**  
 TEXAS COLLEGE CENTER FOR EXCELLENCE IN MATHEMATICS SCIENCE &  
 TECHNOLOGY & A TECHNOLOGY PLACE FOR KID  
 01/19/2000 - 01/14/2001                    FY01: \$0                    Total: \$915,000  
*Prin. Invest.:* T NAMBOODIRI  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11002**                    **TEXAS COLLEGE**                    **8666**  
 TEXAS COLLEGE CENTER FOR EXCELLENCE IN MATHEMATICS SCIENCE &  
 TECHNOLOGY & A TECHNOLOGY PLACE FOR KID  
 06/01/2001 - 05/31/2002                    FY01: \$998,000                    Total: \$998,000  
*Prin. Invest.:* M NAMBOODIRI  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1447**                    **TEXAS SOUTHERN UNIV**                    **8667**  
 DEVELOPMENT OF NATURAL LANGUAGE UNDERSTANDING GRAM MARS  
 FOR INTELLIGENT MONITORING  
 09/29/2000 - 09/14/2001                    FY01: \$14,998                    Total: \$99,998  
*Prin. Invest.:* O H CRINER  
*Tech. Officer:* ARC/Y O GAWDIK, ARC/B J COLLINS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 9 1132**                    **TEXAS SOUTHERN UNIV**                    **8668**  
 FIELD TESTING  
 07/16/1999 - 07/31/2001                    FY01: \$0                    Total: \$43,000  
*Prin. Invest.:* D C DAVIS  
*Tech. Officer:* JSC/M K EWERT  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1194**                    **TEXAS SOUTHERN UNIV**                    **8669**  
 MOLD DEVELOPMENT IN HYDROPONICS  
 04/25/2000 - 04/24/2003                    FY01: \$72,000                    Total: \$132,000  
*Prin. Invest.:* O A JEJELOWO  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 55 - AGRICULTURE

**NAG 9 1227**                    **TEXAS SOUTHERN UNIV**                    **8670**  
 SILICON UPTAKE IN HYDROPONICS BY GRAMINACEOUS CROP PLANTS  
 06/22/2000 - 06/30/2003                    FY01: \$50,000                    Total: \$112,000  
*Prin. Invest.:* G A JEJEDOWO  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 55 - AGRICULTURE

**NCC 9 80**                    **TEXAS SOUTHERN UNIV**                    **8671**  
 HIGH PRESSURE LABORATORY  
 12/02/1998 - 05/31/2004                    FY01: \$300,000                    Total: \$899,675  
*Prin. Invest.:* B L WILSON  
*Tech. Officer:* JSC/C B AGEE  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 2192**                    **TEXAS TECH UNIV**                    **8672**  
 THE HEAVY OZONE PROBLEM NRA-98-OES-04  
 09/28/1999 - 12/31/2002                    FY01: \$51,106                    Total: \$101,235  
*Prin. Invest.:* G I GELLENE  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 2005**                    **TEXAS TECH UNIV**                    **8673**  
 ARCJET ELECTRODE DEGRDATION RESEARCH  
 01/24/1997 - 08/31/2001                    FY01: \$0                    Total: \$690,930  
*Prin. Invest.:* E A O'HAIR, M KRISTIANSEN, J C DICKENS  
*Tech. Officer:* GRC/L R PINERO  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 5156**                    **TEXAS TECH UNIV**                    **8674**  
 OPTIMIZATION STUDIES FOR ACCESS CALORIMETRY INCREMENTAL  
 FUNDING FOR FIRST YEAR OF GRANT  
 03/26/1998 - 05/31/2001                    FY01: \$0                    Total: \$251,762  
*Prin. Invest.:* R WIGMANS  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 9505**                    **TEXAS TECH UNIV**                    **8675**  
 DEVELOPMENT OF A PARALLEL VERSION OF SEQUENCENL WITH EXPERI-  
 MENTS ON & APPLICATION TO NEURAL NETWORK  
 04/26/2000 - 08/31/2001                    FY01: \$0                    Total: \$90,000  
*Prin. Invest.:* D COOKE  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 5257**                    **TEXAS TECH UNIV**                    **8676**  
 INFORMATION INTEGRATION IN JUDGEMENTS OF TEMPORAL RANGE  
 03/02/1998 - 06/30/2000                    FY01: \$0                    Total: \$74,992  
*Prin. Invest.:* P R DELUCIA  
*Tech. Officer:* ARC/M K KAISER  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 9 108**                      **TEXAS TECH UNIV**                      **8677**  
 PLANT RESEARCH IN EDU & WATER REUSE/RECYCLING  
 07/07/2000 - 09/30/2001                      FY01: \$0                      Total: \$915,000  
*Prin. Invest.:* J L SMITH, L V URBAN, E B PEFFLEY  
*Tech. Officer:* JSC/D L HENNINGER, JSC/K R DAUES  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 9 143**                      **TEXAS TECH UNIV**                      **8678**  
 PLANT RESEARCH IN EDU, WATER REUSE/RECYCLING  
 09/28/2001 - 09/30/2002                      FY01: \$1,497,000                      Total: \$1,497,000  
*Prin. Invest.:* J L SMITH  
*Tech. Officer:* JSC/D L HENNINGER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1192**                      **TEXAS WOMAN'S UNIV**                      **8679**  
 VALIDATION OF A DETAILED MECHANISM FOR HYDRAZINE DECOMPOSITION  
 01/21/2000 - 07/06/2000                      FY01: \$0                      Total: \$15,499  
*Prin. Invest.:* N E MEAGHER  
*Tech. Officer:* JSC/R SAULSBERRY  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

**NAG 9 1278**                      **TRINITY UNIV**                      **8680**  
 KALMAN FILTER BASED SENSOR FUSION FOR ESTIMATION OF MOBILE ROBOT LOCATION AND ORIENTATION  
 01/12/2001 - 12/31/2001                      FY01: \$15,400                      Total: \$15,400  
*Prin. Invest.:* K NICKELS  
*Tech. Officer:* JSC/K BAKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 2 1284**                      **UNIV HOUSTON-HOUSTON**                      **8681**  
 A NON-INVASIVE ANALYSIS OF MUSCULOSKETAL COLLAGEN METABOLISM FROM URINE OF RHESUS MONKEYS DURING A  
 01/26/1999 - 11/30/1999                      FY01: \$0                      Total: \$25,000  
*Prin. Invest.:* A C VAILAS  
*Tech. Officer:* ARC/R E GRINDELAND, ARC/K L SOUZA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1840**                      **UNIV HOUSTON-HOUSTON**                      **8682**  
 TWO-PHASE GAS-LIQUID FLOWS IN MICROGRAVITY: EXPERIMENTAL AND THEORETICAL INVESTIGATION OF ANNULAR  
 05/02/1996 - 05/01/2001                      FY01: \$0                      Total: \$320,000  
*Prin. Invest.:* V BALAKOTIAH, S JAYAWARDENA  
*Tech. Officer:* GRC/B S MOTIL  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 4765**                      **UNIV HOUSTON-HOUSTON**                      **8683**  
 LL CHODRITES  
 06/06/1997 - 05/31/2001                      FY01: \$0                      Total: \$71,674  
*Prin. Invest.:* D M REID  
*Tech. Officer:* GSFC/D NAVATech. Officer: NONE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7840**                      **UNIV HOUSTON-HOUSTON**                      **8684**  
 WINDS, WATER BUDGETS, AND STABLE ISOTOPES IN TROPICAL CYCLONES USING TRMM AND QUICKSCAT  
 01/06/1999 - 12/31/2001                      FY01: \$44,054                      Total: \$148,877  
*Prin. Invest.:* J R LAWRENCE  
*Tech. Officer:* GSFC/R W LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8126**                      **UNIV HOUSTON-HOUSTON**                      **8685**  
 SUPERCONDUCTING COATING ON SAPPHIRE MEMBRANE--GOAL IS TO ATTEMPT IMPROVED STABILITY OF COATING  
 02/04/1999 - 01/31/2000                      FY01: \$0                      Total: \$3,600  
*Prin. Invest.:* C (PAUL CHU)  
*Tech. Officer:* GSFC/J C BRASUNAS  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 8140**                      **UNIV HOUSTON-HOUSTON**                      **8686**  
 THE ORIGINS OF TRANSLATION  
 02/03/1999 - 01/31/2002                      FY01: \$80,000                      Total: \$235,360  
*Prin. Invest.:* D FOX  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10714**                      **UNIV HOUSTON-HOUSTON**                      **8687**  
 ADVANCED ADIABATIC DEMAGNETIZATION REFRIGERATORS FOR CONTINUOUS COOLING FROM 10K TO 50MK  
 04/12/2001 - 05/31/2002                      FY01: \$15,000                      Total: \$15,000  
*Prin. Invest.:* P W CHU  
*Tech. Officer:* GSFC/P J SHIRRON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1363**                      **UNIV HOUSTON-HOUSTON**                      **8688**  
 "EPITAXIAL GROWTH OF PROTEIN CRYSTALS ON SELF-ASSEMBLED MONOLAYERS"  
 06/02/1997 - 11/30/2001                      FY01: \$0                      Total: \$419,000  
*Prin. Invest.:* J M FRIEDMAN  
*Tech. Officer:* MSFC/B GUYNES, MSFC/J MAYO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1658**                      **UNIV HOUSTON-HOUSTON**                      **8689**  
 DEVELOPMENT OF SPACE RADIATION MONTE-CARLO COMPUT-ER SIMULATION BASED ON FLUKA & ROOT CODE  
 05/01/2000 - 11/30/2003                      FY01: \$114,000                      Total: \$184,000  
*Prin. Invest.:* L S PINSKY  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 867**                      **UNIV HOUSTON-HOUSTON**                      **8690**  
 NASA-ASEE SUMMER FACULTY FELLOWSHIPS  
 05/09/1996 - 06/06/2002                      FY01: \$0                      Total: \$1,213,000  
*Prin. Invest.:* R B BANNEROT  
*Tech. Officer:* JSC/D SICKOREZ  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 904**                      **UNIV HOUSTON-HOUSTON**                      **8691**  
 CHARACTERIZATION OF EXHAUST PLUME OF VARIABLE IMPULSE PLASMA ROCKET  
 09/23/1996 - 08/31/2000                      FY01: \$0                      Total: \$59,500  
*Prin. Invest.:* D BERING  
*Tech. Officer:* JSC/F CHANG-DIAZ  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 985**                      **UNIV HOUSTON-HOUSTON**                      **8692**  
 INVESTIGATE & DEVELOP ADVANCED TRAINING TECHNOLOGY  
 01/16/1998 - 08/31/2002                      FY01: -\$93,094                      Total: \$1,123,078  
*Prin. Invest.:* B LOFTIN  
*Tech. Officer:* JSC/R SAVELY  
*CASE Category:* 22 - COMPUTER SCIENCE



**NAG 9 1012 UNIV HOUSTON-HOUSTON 8693**  
 TWO PHASE SYSTEMS FOR MARS-G  
 05/20/1998 - 06/30/2001 FY01: \$0 Total: \$70,411  
*Prin. Invest.:* L C WHITTE  
*Tech. Officer:* JSC/J D CORNWELL  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1055 UNIV HOUSTON-HOUSTON 8694**  
 URBAN EXPERIENCE PROGRAM  
 09/22/1998 - 09/30/2001 FY01: \$0 Total: \$105,000  
*Prin. Invest.:* T MINDIOLA, JR.  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1103 UNIV HOUSTON-HOUSTON 8695**  
 THE SEARCH FOR MICROBIAL BIOMARKERS IN TERRESTRIAL DEPOSITS  
 05/04/1999 - 03/09/2004 FY01: \$20,000 Total: \$60,000  
*Prin. Invest.:* H S CHAFETZ  
*Tech. Officer:* JSC/E K GIBSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1140 UNIV HOUSTON-HOUSTON 8696**  
 OPTIMAL CHARACTERIZATION OF THE ORBITAL DEBRIS ENVIR FROM  
 MULTIPLE MEASMENTS  
 08/15/1999 - 08/14/2000 FY01: \$0 Total: \$32,061  
*Prin. Invest.:* T J HEBERT  
*Tech. Officer:* JSC/E G STANSBERRY, JSC/J R THEALL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1152 UNIV HOUSTON-HOUSTON 8697**  
 THERAPEUTIC EFFICACY OF GROWTH HORMONE  
 09/20/1999 - 11/08/2002 FY01: \$179,551 Total: \$384,418  
*Prin. Invest.:* D A MARTINEZ  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1223 UNIV HOUSTON-HOUSTON 8698**  
 TEXAS LEARNING AND COMPUTATIONAL CENTER  
 10/23/2000 - 08/16/2002 FY01: \$3,661,000 Total: \$3,661,000  
*Prin. Invest.:* G VALIAS, B BOYCO  
*Tech. Officer:* JSC/R P KEHOE, JSC/S P CAMPBELL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 9 1287 UNIV HOUSTON-HOUSTON 8699**  
 ADVANCED CROSS ENTERPRISE TECHNOLOGY DEVELOPMENT F OR  
 NASA MISSIONS  
 03/27/2001 - 03/31/2003 FY01: \$382,000 Total: \$382,000  
*Prin. Invest.:* A IGNATIEV  
*Tech. Officer:* JSC/R S BAIRD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1293 UNIV HOUSTON-HOUSTON 8700**  
 DEVELOPMENT OF REDUCED SURFACE WAVE ANTENNAS FOR THE NASA/  
 JSC NAVIGATION  
 04/16/2001 - 04/30/2004 FY01: \$39,394 Total: \$39,394  
*Prin. Invest.:* J T WILLIAMS  
*Tech. Officer:* JSC/J W BELL  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1305 UNIV HOUSTON-HOUSTON 8701**  
 GRADUATE STUDENT RESERACH PROGRAM CARBON NANOTUBE  
 POLYMER NANOCOMPOSITES  
 06/14/2001 - 07/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R KRISHNAMOORTI  
*Tech. Officer:* JSC/B FILES  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 9 1347 UNIV HOUSTON-HOUSTON 8702**  
 NOVEL TISSUE ASSEMBLIES: MODELS FOR ENTERIC PATHOGENESIS  
 07/07/2001 - 07/31/2002 FY01: \$25,894 Total: \$25,894  
*Prin. Invest.:* L S PINSKY  
*Tech. Officer:* JSC/G BADHWAR  
*CASE Category:* 13 - PHYSICS

**NAG 9 1363 UNIV HOUSTON-HOUSTON 8703**  
 URBAN EXPERIENCE PROGRAM  
 07/10/2001 - 07/11/2004 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* T MINDIOLA  
*Tech. Officer:* JSC/L M ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 5394 UNIV HOUSTON-HOUSTON 8704**  
 THE SCALABILITY OF OPENMP ON LARGE-SCALE DISTRIBUT ED SHARED-  
 MEMORY ARCHITECTURES SUCH AS THESGI OR  
 08/14/2000 - 08/31/2001 FY01: \$70,000 Total: \$95,000  
*Prin. Invest.:* B CHAPMAN  
*Tech. Officer:* ARC/J YAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5396 UNIV HOUSTON-HOUSTON 8705**  
 MINERALS & SUBMICROMETER FORMS AS BIOSIGNATURES  
 08/28/2000 - 08/31/2002 FY01: \$15,000 Total: \$30,000  
*Prin. Invest.:* A D HAYMET  
*Tech. Officer:* ARC/D F BLAKE  
*CASE Category:* 12 - CHEMISTRY

**NCC 8 127 UNIV HOUSTON-HOUSTON 8706**  
 FOR RESEARCH "CONTINUATION OF SUPPORT FOR THE COMMERCIAL  
 SPACE CENTER, SPACE VACUUM EPITAXY CTR  
 01/21/1997 - 10/14/2001 FY01: \$1,000,000 Total: \$7,500,000  
*Prin. Invest.:* A IGNATIEV, S S PEI  
*Tech. Officer:* MSFC/S J LAMBING  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 9 57 UNIV HOUSTON-HOUSTON 8707**  
 VIRTUAL REALITY TRAINING CYBERSICKNESS & EFFECTS OF SENSORI-  
 MOTOR FUNCTIONS  
 02/22/2000 - 09/30/2000 FY01: -\$3,153 Total: \$20,053  
*Prin. Invest.:* R B LOFTIN  
*Tech. Officer:* JSC/D HARM  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

**NCC 9 70 UNIV HOUSTON-HOUSTON 8708**  
 UH NASA TECHNOLOGY COMMERCIALIZATION  
 03/24/1998 - 12/31/2001 FY01: \$400,000 Total: \$1,200,000  
*Prin. Invest.:* A V VAILLAS  
*Tech. Officer:* JSC/H L DAVIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

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NASA'S UNIVERSITY PROGRAM

**NGT 3 52356 UNIV HOUSTON-HOUSTON 8709**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT  
 RESEARCH PROGRAM  
 07/01/1999 - 08/31/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* V BALAKOTAIAH  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 170 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8717**  
 R/S DIFFERENTIATION OF 3 DIMENSIONAL CO-CULTURES OF MYOFIBRO-  
 BLASTS, PRENEOPLASTIC  
 03/23/1999 - 11/30/2002 FY01: \$176,800 Total: \$440,800  
*Prin. Invest.:* V CHOPPA  
*Tech. Officer:* MSFC/N CHOPPA  
*CASE Category:* 56 - MEDICL

**NGT 5 50182 UNIV HOUSTON-HOUSTON 8710**  
 PRIMORDIAL PEPTIDE SYNTHESIS IN THE ORIGIN OF LIFE  
 05/27/1998 - 06/30/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* G E FOX  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 12 - CHEMISTRY

**NCC 9 81 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8718**  
 UTMB/NASA-JSC GRADUATE MED TRAINING IN AEROSPACE MEDICINE  
 12/07/1998 - 09/30/2003 FY01: \$355,654 Total: \$687,534  
*Prin. Invest.:* J R DAVIS  
*Tech. Officer:* JSC/R BILLICA  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 859 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8711**  
 SPACE MEDICINE FELLOWSHIP PROPOSAL  
 06/10/1996 - 06/30/2001 FY01: \$0 Total: \$136,188  
*Prin. Invest.:* W A WASSON  
*Tech. Officer:* JSC/R BILLICA  
*CASE Category:* 56 - MEDICL

**NCC 9 123 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8719**  
 SPATIAL REORIENTATION OF SENSORIMOTOR BALANCE CONTROL IN  
 ALTERED GRAVITY  
 02/22/2001 - 11/30/2003 FY01: \$7,450 Total: \$7,450  
*Prin. Invest.:* G KAUFMAN  
*Tech. Officer:* JSC/B PALOSKI  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1155 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8712**  
 NUTRITIONAL INTERVENTION TO IMPROVE MUSCLE PROTEIN METABO-  
 LISM DURING STRESS  
 09/16/1999 - 11/30/2002 FY01: \$207,426 Total: \$386,092  
*Prin. Invest.:* A A FERRANDO  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 56 - MEDICL

**NGT 9 47 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8720**  
 TRAINING PROGRAM FOR TWO STUDENTS @ GRADUATE SCHOOL OF  
 BIOMEDICAL SCIENCES  
 04/12/2000 - 05/31/2002 FY01: \$50,000 Total: \$100,000  
*Prin. Invest.:* C W COOPER  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAS 9 01006 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8713**  
 ISS FLIGHT EXPERIMENT E129  
 01/23/2001 - 12/31/2004 FY01: \$226,059 Total: \$226,059  
*Prin. Invest.:* A D BARRET  
*Tech. Officer:* JSC/M ANDERSON  
*CASE Category:* 56 - MEDICL

**NAG 2 952 UNIV OF TEXAS-HLTH SCI CTR-SAN ANTONIO 8721**  
 DEVELOPMENT OF BESTIBULAR ORGANS IN MICROGRAVITY  
 12/16/1994 - 11/30/2000 FY01: \$0 Total: \$757,735  
*Prin. Invest.:* M L WIEDERHOLD  
*Tech. Officer:* ARC/W E HINDS, ARC/C M WINGET  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAS 9 97147 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8714**  
 PROTEIN TURNOVER DURING SPACE FLIGHT  
 02/24/1997 - 08/31/2002 FY01: \$160,000 Total: \$618,000  
*Prin. Invest.:* A FERRANDO  
*Tech. Officer:* JSC/A LEE  
*CASE Category:* 56 - MEDICL

**NAG 9 1206 UNIV OF TEXAS-HLTH SCI CTR-SAN ANTONIO 8722**  
 USE OF NASA BIOREACTOR TO STUDY CELL CYCLE REGULATION  
 03/01/2000 - 02/28/2002 FY01: \$150,000 Total: \$337,785  
*Prin. Invest.:* J M JESSUP  
*Tech. Officer:* JSC/S GONDA  
*CASE Category:* 56 - MEDICL

**NAS 9 98138 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8715**  
 SMALL PAYLOAD EXPERIMENT  
 10/28/1998 - 10/27/2001 FY01: \$104,356 Total: \$299,356  
*Prin. Invest.:* M MCGINNIS  
*Tech. Officer:* JSC/C HAVEN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG10 180 UNIV OF TEXAS-HLTH SCI CTR-SAN ANTONIO 8723**  
 FUNCT DEV IN A MODEL VESTIBULAS SYS  
 01/18/1996 - 09/30/2002 FY01: -\$6,750 Total: \$703,425  
*Prin. Invest.:* M L WIEDERHOLD  
*Tech. Officer:* KSC/W M KNOTT  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1160 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8716**  
 STREPTOCOCCUS PNEUMONIAE GENE EXPRESSION AND VIRUL ENCE  
 POTENTIAL IN THE SPACE ENVIRONMENT  
 02/11/2000 - 01/14/2002 FY01: \$86,901 Total: \$237,517  
*Prin. Invest.:* D NIESSEL  
*Tech. Officer:* ARC/C M WINGET, ARC/D REISS-BUBENHEIM  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1634 UNIV OF TEXAS-PAN AMERICAN 8724**  
 OPTIMAL DESIGN OF HYBRID PASSIVE VISCOELASTIC AND ACTIVE  
 PIEZOELECTRIC DAMPING LAYERS  
 09/30/1999 - 09/30/2001 FY01: \$98,256 Total: \$196,469  
*Prin. Invest.:* A LUMSDAINE  
*Tech. Officer:* MSFC/A BEAM, MSFC/W LOVE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1169 UNIV OF TEXAS-PAN AMERICAN 8725**  
 PAARTNERSHIP FOR SCIENCE AND ENGR STUDENT SUCCESS  
 09/27/1999 - 09/29/2001 FY01: \$58,861 Total: \$195,825  
*Prin. Invest.:* R FOWLER, J LANAGABEER  
*Tech. Officer:* JSC/S GONZALEZ, JSC/L ARMENDARIZ  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 2 962 UNIV OF TEXAS, HEALTH SCI CTR-DALLAS 8726**  
 SPACE FLIGHT, STRESS & PLASTICITY  
 02/07/1995 - 12/31/2000 FY01: \$0 Total: \$573,376  
*Prin. Invest.:* S T BRADY  
*Tech. Officer:* ARC/D REISS-BUBENHEIM, ARC/W E HINDS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 4846 UNIV OF TEXAS, HEALTH SCI CTR-DALLAS 8727**  
 THE ROLE OF CARDIAC MECHANICS IN BLOOD PRESSURE RE TATIC  
 STRESS  
 06/27/1997 - 09/30/2001 FY01: \$0 Total: \$525,000  
*Prin. Invest.:* B LEVINE, NONE  
*Tech. Officer:* GSFC/V SCHNEIDER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1033 UNIV OF TEXAS, HEALTH SCI CTR-DALLAS 8728**  
 MICROCIRCULATORY ADJUSTMENT TO SIMULATED MICROGRAVITY EXPO-  
 SURE IN HUMANS  
 07/16/1998 - 07/14/2002 FY01: \$107,722 Total: \$475,700  
*Prin. Invest.:* C G CRANDALL  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 56 - MEDICL

**NAG 9 19429 UNIV OF TEXAS, HEALTH SCI CTR-DALLAS 8729**  
 INTEGRATION OF NEURAL CARDIOVASCULAR CONTROL IN SPACE  
 10/31/1995 - 09/30/2000 FY01: \$0 Total: \$889,471  
*Prin. Invest.:* C G BLOMQUIST  
*Tech. Officer:* JSC/A M LEE  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 19540 UNIV OF TEXAS, HEALTH SCI CTR-DALLAS 8730**  
 ADAPTIVE CHANGES IN CARDIOVASCULAR CONTROL AT MICROGRAVITY  
 02/13/1996 - 07/31/2000 FY01: \$0 Total: \$965,190  
*Prin. Invest.:* C G BLOMQUIST, NONE  
*Tech. Officer:* JSC/C M SMITH  
*CASE Category:* 56 - MEDICL

**NAG 2 1505 UNIV. OF TEXAS MD ANDERSON CANCER CENTER 8731**  
 GRAVITY AND INTERGRIN MEDIATED HUMAN LYMPHOCYTE AD HESION  
 07/26/2001 - 07/14/2002 FY01: \$119,339 Total: \$119,339  
*Prin. Invest.:* B W MCINTYRE  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1347 UNIV. OF TEXAS MD ANDERSON CANCER CENTER 8732**  
 USE OF NASA BIOREACTORS IN A NOVEL SCHEME FOR IMMUNIZATION  
 AGAINST CANCER  
 06/18/1997 - 12/31/2000 FY01: \$0 Total: \$457,338  
*Prin. Invest.:* C A SAVARY  
*Tech. Officer:* JSC/S R GONDAS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1348 UNIV. OF TEXAS MD ANDERSON CANCER CENTER 8733**  
 APPLICATION OF BIOREACTOR TECHNOLOGY ANALYSIS AND COUNTER  
 MEASURE DEVELOPMENT OF MICROGRAVITY  
 06/18/1997 - 11/30/2001 FY01: \$35,000 Total: \$404,467  
*Prin. Invest.:* E H GRIMM  
*Tech. Officer:* JSC/S R GONDAS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1570 UNIV. OF TEXAS MD ANDERSON CANCER CENTER 8734**  
 APPLICATION OF BIOREACTOR TECHNOLOGY FOR A PRECLINICAL HUMAN  
 MODEL OF MELANOMA  
 03/19/1999 - 11/02/2003 FY01: \$128,250 Total: \$364,250  
*Prin. Invest.:* E A GRIMM  
*Tech. Officer:* MSFC/B V GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1261 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8735**  
 RELATIONSHIP OF MORPHOGENESIS & MINERALIZATION TO GRAVITY IN  
 SPACEFLOWN ALGAE  
 09/01/1998 - 12/31/2001 FY01: \$78,079 Total: \$236,387  
*Prin. Invest.:* P J DUKE  
*Tech. Officer:* ARC/O SANTOS, ARC/P D SAVAGE  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1498 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8736**  
 CYTOPLASMIC/GOLGI INTERACTIONS IN THE NANOFABRICAT ION OF  
 BIOMINERAL COMPOSITES - A GENETIC APPROACH  
 07/05/2001 - 06/30/2002 FY01: \$92,688 Total: \$92,688  
*Prin. Invest.:* M E MARSH  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 4710 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8737**  
 GRAVITY AND THE REGULATION OF A CENTRAL GROWTH FAC  
 06/11/1997 - 01/31/2002 FY01: \$0 Total: \$409,271  
*Prin. Invest.:* E DURBAN  
*Tech. Officer:* GSFC/M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 8 1585 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8738**  
 IMPACT/MICROGRAVITY ON IMMUNOGENICITY ASSOCIATED WITH  
 BISTRUCTURAL CHANGES/PANCRATIC ISLETS  
 03/19/1999 - 12/31/2002 FY01: \$120,650 Total: \$333,083  
*Prin. Invest.:* L P RUTZKY  
*Tech. Officer:* MSFC/B V GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 813 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8739**  
 EFFECT OF MICROGRAVITY ON HUMAN SKIN EQUIVALENT  
 08/11/1995 - 12/19/2000 FY01: -\$1,303 Total: \$237,697  
*Prin. Invest.:* D DIMITRIJEVICH  
*Tech. Officer:* JSC/N PELLIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 834 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8740**  
 USE OF ROTATING WALL VESSEL TO FACILITATE CULTURE OF NORWALK  
 VIRUS  
 08/22/1995 - 08/31/2000 FY01: -\$773 Total: \$699,227  
*Prin. Invest.:* P JOHNSON  
*Tech. Officer:* JSC/N PELLIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 952 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8741**  
 EXERCISE DURING PREBREATHE: REDUCTION OF THE H-2-O  
 PREBREATHE TIME  
 08/14/1997 - 02/14/2001 FY01: \$0 Total: \$54,000  
*Prin. Invest.:* C FIFE  
*Tech. Officer:* JSC/M R POWELL  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1040 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8742**  
 EFFECTS OF CIRCADIAN RHYTHMS ON DEPRESSION OUTCOME  
 06/22/1998 - 06/30/2002 FY01: \$65,519 Total: \$294,519  
*Prin. Invest.:* B BUTLER  
*Tech. Officer:* JSC/C SAWIN  
*CASE Category:* 56 - MEDICL

**NAG 9 1144 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8743**  
 DUST STIMULANTS ON LUNG INFLAMMATION AND ALVEOLAR MACRO-  
 PHAGE FUNCTION  
 09/20/1999 - 09/19/2002 FY01: -\$2,994 Total: \$7,006  
*Prin. Invest.:* A HOLIAN  
*Tech. Officer:* JSC/J T JAMES  
*CASE Category:* 56 - MEDICL

**NAG 9 1247 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8744**  
 DEVELOP REINFORCEMENT LEARNING TECHNIQUES FOR EFFIC IENT  
 TRAINING ROBOTIC SYSTEMS  
 07/18/2000 - 07/19/2002 FY01: \$0 Total: \$60,000  
*Prin. Invest.:* H WANG, J ZHANG, T R JOHNSON  
*Tech. Officer:* JSC/R T SAVELY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 9 1353 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8745**  
 EFFECT OF MICROGRAVITY ON PANCREATIC ISLET XENOTRANSPLATA-  
 TION,VASCULARIZATION & STEM CELL  
 07/27/2001 - 09/30/2004 FY01: \$37,000 Total: \$37,000  
*Prin. Invest.:* L P RUTZKY, S M STEPKOWSKI, S M KATZ  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 56 - MEDICL

**NCC 2 1234 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8746**  
 HUMAN CENTERED INTELLIGENT FLIGHT SURGEON CONSOLE  
 03/29/2001 - 02/28/2002 FY01: \$98,000 Total: \$98,000  
*Prin. Invest.:* J ZHANG  
*Tech. Officer:* ARC/P M JONES, ARC/M G SHAFTO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 8 168 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8747**  
 NUTRITION IMMUNOMODULATION IN MICROGRAVITY  
 03/05/1999 - 11/30/2002 FY01: \$139,650 Total: \$421,650  
*Prin. Invest.:* A D KULKARNI  
*Tech. Officer:* JSC/S GONDAS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 9 82 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8748**  
 EVA PREBREATHE REDUCTION PROTOCOL  
 03/11/1999 - 03/10/2003 FY01: \$0 Total: \$275,000  
*Prin. Invest.:* B BUTLER  
*Tech. Officer:* JSC/M GERNHARDT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 9 90 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8749**  
 GAS PHASE FORMATION, GROWTH AND EFFECTS OF SURFACE TENSION  
 02/11/2000 - 02/20/2002 FY01: \$0 Total: \$55,162  
*Prin. Invest.:* B D BUTLER, NONE  
*Tech. Officer:* JSC/M R POWELL  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 9 103 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8750**  
 CHARACTERIZATION OF AUTONOMIC FUNCTION  
 02/21/2000 - 02/20/2003 FY01: \$7,417 Total: \$14,834  
*Prin. Invest.:* R F LODATO  
*Tech. Officer:* JSC/J MECK  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT 9 46 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8751**  
 TRAINING PROGRAM FOR TWO STUDENTS AT THE GRADUATE SCHOOL OF  
 BIOMEDICAL SCIENCES  
 04/07/2000 - 05/31/2002 FY01: \$50,000 Total: \$100,000  
*Prin. Invest.:* J WEINDER  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1083 UNIV OF HOUSTON - CLEAR LAKE 8752**  
 COX REGRESSION MODLELING AND ANALYSIS OF NASA/JSC EXPERI-  
 MENTAL DATA ON DECOMPRESSION SICKNESS  
 02/20/1999 - 09/30/2001 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* R S CHHIKARA  
*Tech. Officer:* JSC/M POWELL  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1295 UNIV OF HOUSTON - CLEAR LAKE 8753**  
 OPC-BASED CONTROL SYSTEM FOR BIO-PLEX  
 04/23/2001 - 05/31/2001 FY01: \$3,000 Total: \$3,000  
*Prin. Invest.:* T FEAGIN  
*Tech. Officer:* JSC/D OVERLAND  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 9 30 UNIV OF HOUSTON - CLEAR LAKE 8754**  
 RESEARCH FOR COMPUTING & INFORMATION SYSTEMS  
 08/08/1994 - 06/30/2002 FY01: \$9,039,548 Total: \$32,550,998  
*Prin. Invest.:* E T DICKERSON  
*Tech. Officer:* JSC/R T SAVELY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 9 76 UNIV OF HOUSTON - CLEAR LAKE 8755**  
 STATISTICAL PROCESS CONTROL OF SHUTTLE MAINT OPS  
 09/24/1998 - 09/23/2000 FY01: -\$57 Total: \$32,628  
*Prin. Invest.:* R S CHHIKARA  
*Tech. Officer:* JSC/JARRELL  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 9 48 UNIV OF HOUSTON - CLEAR LAKE 8756**  
 NASA IMAGE INST FOR GEOGRAPHY & EARTH SCIENCE TEACHERS  
 06/01/2000 - 12/31/2000 FY01: \$0 Total: \$21,900  
*Prin. Invest.:* J N MACIR  
*Tech. Officer:* JSC/N G ROBERTSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<p><b>NAG 5 10149 UNIV OF HOUSTON - DOWNTOWN 8757</b>  AN URBAN OUTREACH PROGRAM IN SPACE SCIENCE: A COLL ABORATIVE EFFORT BETWEEN NASA,HISPANIC SERVING &amp; 01/03/2001 - 12/31/2001 FY01: \$212,998 Total: \$212,998  Prin. Invest.: P A MORRIS-SMITH  Tech. Officer: GSFC/P SAKIMOTO  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NGT 5 50179 UNIV OF NORTH TEXAS HLTH SCI.CTR AT FT.WORTH 8765</b>  SLEEP RESTRICTION AND MECHANISMS OF ORTHOSTATIC TO LERANCE 10/31/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  Prin. Invest.: M SMITH  Tech. Officer: HQ/A NURRIDIN  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 9 1018 UNIV OF HOUSTON - DOWNTOWN 8758</b>  PRECOLLEGE AWARD FOR EXCELLENCE PACE/MSET 05/01/1998 - 04/30/2001 FY01: \$0 Total: \$299,400  Prin. Invest.: R ALO  Tech. Officer: JSC/L ARMENDARIZ  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 1 01017 UNIV OF TEXAS - ARLINGTON 8766</b>  NANO-FILM OF HIGH RESOLUTION PRESSURE SENSING 03/01/2001 - 12/15/2001 FY01: \$23,239 Total: \$23,239  Prin. Invest.: S P JOSHI  Tech. Officer: LARC/S K KAHNG  CASE Category: 43 - CHEMICAL ENGR</p>
<p><b>NAG 9 1113 UNIV OF HOUSTON - DOWNTOWN 8759</b>  ACIENT LIFE IN ROCKS ON EARTH 05/14/1999 - 05/13/2002 FY01: \$10,000 Total: \$30,000  Prin. Invest.: P A MORRIS-SMITH  Tech. Officer: JSC/E K GIBSON  CASE Category: 32 - GEOLOGICAL SCIENCE</p>	<p><b>NCC 2 5395 UNIV OF TEXAS - ARLINGTON 8767</b>  SCHEDULING &amp; LOAD BALANCING ON THE INFORMATION POW ER GRID 08/15/2000 - 10/31/2001 FY01: \$60,320 Total: \$85,320  Prin. Invest.: S K DAS  Tech. Officer: ARC/R BISWAS, ARC/D KWAK  CASE Category: 22 - COMPUTER SCIENCE</p>
<p><b>NAG 9 1114 UNIV OF HOUSTON - DOWNTOWN 8760</b>  ACIENT LIFE IN ROCKS ON EARTH 05/14/1999 - 05/13/2002 FY01: \$10,000 Total: \$30,000  Prin. Invest.: P A MORRIS-SMITH  Tech. Officer: JSC/E K GIBSON  CASE Category: 32 - GEOLOGICAL SCIENCE</p>	<p><b>NGT 5 30382 UNIV OF TEXAS - ARLINGTON 8768</b>  MINING OF STRUCTURAL DATA TO DISCOVER PRABABILISTI C SUBSTRUC- TURESJOSEPH T.POTTS 08/13/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  Prin. Invest.: D COOK  Tech. Officer: GSFC/M WEI  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 4891 UNIV OF NORTH TEXAS 8761</b>  THE PRODUCTION, CONCENTRATION, AND ARRANGEMENT OF INOR- GANIC HOSTS 06/19/1997 - 08/31/2000 FY01: \$0 Total: \$210,000  Prin. Invest.: D S BRATERMAN  Tech. Officer: GSFC/M MEYER  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NAG 1 2197 UNIV OF TEXAS - AUSTIN 8769</b>  A COMPUTATIONAL PROCEDURE FOR THREE DIMENSIONAL STRESS ANALYSIS FRACTURES 05/19/1999 - 05/31/2000 FY01: -\$2,300 Total: \$61,893  Prin. Invest.: M E MEAR  Tech. Officer: LARC/J C NEWMAN, JR., LARC/I S RAJU  CASE Category: 46 - MECHANICAL ENGR</p>
<p><b>NAG 5 3744 UNIV OF NORTH TEXAS HLTH SCI.CTR AT FT.WORTH 8762</b>  MICROGRAVITY: SLEEP DEPRIVATION AND AUTONOMIC CONT 03/11/1997 - 03/14/2001 FY01: \$0 Total: \$263,844  Prin. Invest.: M SMITH, NONE  Tech. Officer: GSFC/V SCHNEIDER  CASE Category: 59 - LIFE SCIENCE, OTHER</p>	<p><b>NAG 1 01109 UNIV OF TEXAS - AUSTIN 8770</b>  APPLICATION OF HOS AND VOLTERRA MODELS TO AEROELASTIC SYSTEM IDENTIFICATION 07/18/2001 - 12/17/2001 FY01: \$35,000 Total: \$35,000  Prin. Invest.: E J POWERS  Tech. Officer: LARC/W A SILVA  CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 5 4668 UNIV OF NORTH TEXAS HLTH SCI.CTR AT FT.WORTH 8763</b>  CARTOID BAROREFLEX FUNCTION DURING PROLONGED EXERC 06/17/1997 - 05/31/2001 FY01: \$0 Total: \$301,896  Prin. Invest.: P B RAVEN  Tech. Officer: GSFC/V SCHNEIDER  CASE Category: 59 - LIFE SCIENCE, OTHER</p>	<p><b>NAG 2 1053 UNIV OF TEXAS - AUSTIN 8771</b>  FAR-INFRARED EMISSION-LINE OBSERVATIONS FROM THE K AO 06/17/1996 - 02/29/2000 FY01: -\$5,883 Total: \$4,877  Prin. Invest.: H L DINERSTEIN  Tech. Officer: ARC/L QUAIFFE, ARC/C B WILTSEE  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 9 1262 UNIV OF NORTH TEXAS HLTH SCI.CTR AT FT.WORTH 8764</b>  VESTIBULAR MODULATION OF AUTOMNOMIC RESPONSES TO ORTHOS- TASIS 11/16/2000 - 10/31/2003 FY01: \$173,598 Total: \$173,598  Prin. Invest.: M L SMITH, D ORR, D E WATENPAUGH  Tech. Officer: JSC/C W LLOYD  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 2 1347 UNIV OF TEXAS - AUSTIN 8772</b>  CELLULAR BASES OF LIGHT REGULATED GRAVITY RESPONSE S 07/23/1999 - 06/30/2002 FY01: \$116,663 Total: \$305,884  Prin. Invest.: S J ROUX  Tech. Officer: ARC/M M AVERNER, ARC/R D MACELROY  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>

**NAG 2 1349**                      **UNIV OF TEXAS - AUSTIN**                      **8773**  
 EVOLUTIONARY ORIGIN OF BODY AXIS SEGMENTATION IN A NNELEIDS &  
 ARTHROPODS  
 07/20/1999 - 07/14/2002                      FY01: \$179,476                      Total: \$397,675  
*Prin. Invest.:* S M SHANKLAND  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1839**                      **UNIV OF TEXAS - AUSTIN**                      **8774**  
 INSTABILITIES IN SURFACE-TENSION DRIVEN CONVECTION  
 05/06/1996 - 05/05/2001                      FY01: \$0                      Total: \$500,000  
*Prin. Invest.:* H L SWINNEY  
*Tech. Officer:* GRC/A T CHAI  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 1901**                      **UNIV OF TEXAS - AUSTIN**                      **8775**  
 PRECISION MEASUREMENTS WITH TRAPPED LASER-COOLED ATOMS IN A  
 MICROGRAVITY ENVIRONMENT  
 06/14/1996 - 01/01/2001                      FY01: \$17,000                      Total: \$432,000  
*Prin. Invest.:* D J HEINZEN  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2240**                      **UNIV OF TEXAS - AUSTIN**                      **8776**  
 LASER VELOCIMETER FOR STUDIES OF MICROGRAVITY COMBUSTION  
 FLOWFIELDS  
 02/26/1999 - 01/13/2002                      FY01: \$89,750                      Total: \$247,750  
*Prin. Invest.:* P L VARGHESE  
*Tech. Officer:* GRC/P S GREENBERG  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2265**                      **UNIV OF TEXAS - AUSTIN**                      **8777**  
 COMPOSITE FLYWHEEL PRELOAD MONITOR COMPOSITE FLYWHEEL  
 PRELOAD MONITOR  
 05/12/1999 - 03/31/2000                      FY01: \$0                      Total: \$50,153  
*Prin. Invest.:* J L BENO  
*Tech. Officer:* GRC/D CHRISTOPHER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2602**                      **UNIV OF TEXAS - AUSTIN**                      **8778**  
 ADVANCED FLYWHEEL MATERIALS DEVELOPMENT PROGRAM FOR HIGH  
 SPECIFIC ENERGY, SPACE APPLICATIONS  
 05/01/2001 - 03/31/2002                      FY01: \$50,030                      Total: \$50,030  
*Prin. Invest.:* R THOMPSON  
*Tech. Officer:* GRC/K MCLALLIN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2633**                      **UNIV OF TEXAS - AUSTIN**                      **8779**  
 HIGH PERFORMANCE AIGAN AND GAN POWER ELECTRONIC DEVICES  
 06/18/2001 - 08/31/2002                      FY01: \$35,914                      Total: \$35,914  
*Prin. Invest.:* D D DUPUIS  
*Tech. Officer:* GRC/G SCHWARZE  
*CASE Category:* 13 - PHYSICS

**NAG 5 1603**                      **UNIV OF TEXAS - AUSTIN**                      **8780**  
 HST - GTO  
 05/20/1991 - 09/30/2000                      FY01: \$0                      Total: \$8,767,603  
*Prin. Invest.:* W H JEFFERYS  
*Tech. Officer:* GSFC/J JELETIC  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 1616**                      **UNIV OF TEXAS - AUSTIN**                      **8781**  
 STELLAR SPECTROSCOPY AND THE HUBBLE SPACE TELESCOPE  
 05/24/1991 - 10/31/2000                      FY01: -\$924                      Total: \$483,130  
*Prin. Invest.:* D L LAMBERT  
*Tech. Officer:* GSFC/E RUITBERG  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3348**                      **UNIV OF TEXAS - AUSTIN**                      **8782**  
 ANALYSIS OF ISO DATA  
 08/12/1996 - 08/14/2000                      FY01: \$0                      Total: \$264,800  
*Prin. Invest.:* D L LAMBERT  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3431**                      **UNIV OF TEXAS - AUSTIN**                      **8783**  
 PARASEC-SCALE ENVIRONMENT OF LIMINOUS AGN: SPECTROSCOPIC  
 CLUES TO WINDS, JETS, AND ACCRETION  
 10/01/1996 - 09/30/2002                      FY01: \$0                      Total: \$712,606  
*Prin. Invest.:* B J WILLS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3649**                      **UNIV OF TEXAS - AUSTIN**                      **8784**  
 OBTAINING RELATIVITY AND OTHER RELEVANT PARAMETERS RANGING  
 DATA  
 03/06/1997 - 02/28/2001                      FY01: \$0                      Total: \$118,376  
*Prin. Invest.:* D J SHELLUS  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3786**                      **UNIV OF TEXAS - AUSTIN**                      **8785**  
 MCDONALD OBSERVATORY SUPPORT: HARLAN SMITH POST-DO PLAN-  
 ETARY SCIENCE  
 03/19/1997 - 12/31/2001                      FY01: \$32,820                      Total: \$251,849  
*Prin. Invest.:* D N BASH  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3930**                      **UNIV OF TEXAS - AUSTIN**                      **8786**  
 COMBUSTION IN ASTROPHYSICS  
 03/12/1997 - 03/14/2000                      FY01: -\$1                      Total: \$47,579  
*Prin. Invest.:* C J WHEELER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4208**                      **UNIV OF TEXAS - AUSTIN**                      **8787**  
 INVESTIGATIONS OF COMETS: HALE-BOPP, THE KUIPER BELT OPPORTU-  
 NITY  
 03/14/1997 - 09/14/2000                      FY01: \$0                      Total: \$261,131  
*Prin. Invest.:* D L COCHRAN  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4209**                      **UNIV OF TEXAS - AUSTIN**                      **8788**  
 MICROMACHINED DIFFRACTION GRATINGS FOR COMPACT IR  
 03/14/1997 - 03/30/2001                      FY01: \$0                      Total: \$217,746  
*Prin. Invest.:* D JAFFE  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4384**                      **UNIV OF TEXAS - AUSTIN**                      **8789**  
 RADIAL VELOCITY DETECTION OF EXTRA-SOLAR PLANETARY  
 04/24/1997 - 02/28/2001                      FY01: \$0                      Total: \$510,003  
*Prin. Invest.:* D D COCHRAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5170**                      **UNIV OF TEXAS - AUSTIN**                      **8790**  
 DETERMINATION OF TIME-VARYING EARTH GRAVITY FIELD F Y  
 07/17/1997 - 12/31/2000                      FY01: \$0                      Total: \$170,000  
*Prin. Invest.:* M CHENG  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 5171**                      **UNIV OF TEXAS - AUSTIN**                      **8791**  
 MEASUREMENT AND INTERPRETATION OF TEMPORAL VARIATION OF GRAVITY FIELD  
 USING GPS AND SLR  
 07/17/1997 - 07/14/2001                      FY01: \$0                      Total: \$162,000  
*Prin. Invest.:* R R EM  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6309**                      **UNIV OF TEXAS - AUSTIN**                      **8792**  
 EARTH SYSTEM DYNAMICS: THE DETERMINATION & INTERPRETATION OF  
 THE GLOBAL ANGULAR MOMENTUM BUDGET USING  
 10/10/1997 - 12/31/2000                      FY01: \$0                      Total: \$3,759,000  
*Prin. Invest.:* B TAPLEY  
*Tech. Officer:* GSFC/J LABRECQUE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6368**                      **UNIV OF TEXAS - AUSTIN**                      **8793**  
 ASTROMETRY AND DYNAMICS OF NEAR-EARTH OBJECTS AND KIRKWOOD  
 GAPS  
 09/25/1997 - 03/31/2001                      FY01: \$0                      Total: \$196,812  
*Prin. Invest.:* D S BARKER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6395**                      **UNIV OF TEXAS - AUSTIN**                      **8794**  
 MULTISCALE SOIL MOISTURE VARIABILITY FROM COMBINED REMOTE  
 SENSING, MODELING, AND OBSERVATIONS  
 10/21/1997 - 06/30/2000                      FY01: -\$11,832                      Total: \$162,238  
*Prin. Invest.:* J FAMILIETTI  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6728**                      **UNIV OF TEXAS - AUSTIN**                      **8795**  
 GENERAL RELATIVISTIC AND GRAVITATIONAL PHYSICS PARAMETERS  
 FROM LUNAR LASER RANGING DATA  
 12/11/1997 - 12/31/2001                      FY01: \$0                      Total: \$198,000  
*Prin. Invest.:* P J SHELUS  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6754**                      **UNIV OF TEXAS - AUSTIN**                      **8796**  
 GROUND BASED STUDIES OF THE OUTER PLANETS  
 12/15/1997 - 12/31/2000                      FY01: \$0                      Total: \$243,476  
*Prin. Invest.:* L M TRAFTON  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7002**                      **UNIV OF TEXAS - AUSTIN**                      **8797**  
 TIME SERIES ANALYSIS OF THE UV FLICKERING IN AGN  
 02/09/1998 - 02/14/2001                      FY01: \$0                      Total: \$100,000  
*Prin. Invest.:* E ROBINSON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7203**                      **UNIV OF TEXAS - AUSTIN**                      **8798**  
 TRACING THE MASS IN AN EVOLUTIONARY SEQUENCE  
 04/23/1998 - 04/14/2002                      FY01: \$0                      Total: \$165,643  
*Prin. Invest.:* N J EVANS, 11  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7363**                      **UNIV OF TEXAS - AUSTIN**                      **8799**  
 THE EVOLUTION OF THE INTERGALACTIC MEDIUM AND THE FORMATION  
 OF GALAXIES AND LARGE-SCALE STRUCTURE IN  
 04/30/1998 - 05/31/2000                      FY01: -\$2,644                      Total: \$47,356  
*Prin. Invest.:* P R SHAPIRO  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7582**                      **UNIV OF TEXAS - AUSTIN**                      **8800**  
 "MAPPING NEAR-SURFACE SALINIZATION USING LONG-WAVE LENGTH-  
 AIRSAR" (SENH98-0113)  
 08/04/1998 - 07/31/2002                      FY01: \$21,000                      Total: \$126,000  
*Prin. Invest.:* J G PAINE  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7660**                      **UNIV OF TEXAS - AUSTIN**                      **8801**  
 'PATTERNS OF SHORELINE CHANGE AND HURRICANE WASHOVER ON  
 BARRIER ISLANDS' (SENH98-0094)  
 09/09/1998 - 08/31/2002                      FY01: \$100,000                      Total: \$600,000  
*Prin. Invest.:* J C GIBEAUT  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7693**                      **UNIV OF TEXAS - AUSTIN**                      **8802**  
 FUNDING FOR 'REMOTE SENSING, GIS AND THE ANCIENT TERRITORY: A  
 PROJECT FOR THE CHOROS OF CHERONESOS  
 09/17/1998 - 03/31/2001                      FY01: \$0                      Total: \$250,023  
*Prin. Invest.:* J C CARTER  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7791**                      **UNIV OF TEXAS - AUSTIN**                      **8803**  
 SPATIALLY-RESOLVED, GROUND-BASED OBSERVATIONS OF MARTIAN  
 ATMOSPHERIC WATER VAPOR: 1999-2002 APP  
 12/14/1998 - 08/30/2002                      FY01: \$134,008                      Total: \$203,708  
*Prin. Invest.:* D S BARKER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7821**                      **UNIV OF TEXAS - AUSTIN**                      **8804**  
 THE EVOLUTION OF THE INTERGALACTIC MEDIUM AND THE FORMATION  
 OF GALAXIES AND LARGE-SCALE STRUCTURE IN  
 02/19/1999 - 02/28/2001                      FY01: \$0                      Total: \$78,000  
*Prin. Invest.:* P R SHAPIRO  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7910**                    **UNIV OF TEXAS - AUSTIN**                    **8805**  
 CHARACTERIZING THE SIPLE COAST ICE STREAM SYSTEM USING  
 SATELLITE IMAGES, IMPROVED TOPOGRAPHY, AND IN  
 12/07/1998 - 12/31/2001            FY01: \$29,721                    Total: \$82,341  
*Prin. Invest.:* D D BLANKENSHIP  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7937**                    **UNIV OF TEXAS - AUSTIN**                    **8806**  
 SUPERNOVAE AND COSMOLOGY  
 12/21/1998 - 12/31/2001            FY01: \$109,307                    Total: \$314,815  
*Prin. Invest.:* P HOEFELICH  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8143**                    **UNIV OF TEXAS - AUSTIN**                    **8807**  
 IMPROVED NUMERICAL MODELING OF LOW-DENSITY ATMOSPHERIC  
 FLOW ON IO  
 02/01/1999 - 12/31/2001            FY01: \$47,776                    Total: \$152,688  
*Prin. Invest.:* D GOLDSTEIN  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8290**                    **UNIV OF TEXAS - AUSTIN**                    **8808**  
 OPTIMAL LAND INITIALIZATION FOR SEASONAL CLIMATE PREDICTIONS  
 02/24/1999 - 02/28/2002            FY01: \$99,181                    Total: \$297,543  
*Prin. Invest.:* J S FAMIGLIETTI  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8301**                    **UNIV OF TEXAS - AUSTIN**                    **8809**  
 PHOTOMETRIC DETECTION OF EXTRA-SOLAR PLANETS  
 02/24/1999 - 02/28/2002            FY01: \$97,300                    Total: \$269,600  
*Prin. Invest.:* W P COCHRAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8381**                    **UNIV OF TEXAS - AUSTIN**                    **8810**  
 PHYSICS OF ULTRA-MAGNETIZED NEUTRON STARS (ATP 98)  
 05/13/1999 - 05/15/2000            FY01: -\$6,290                    Total: \$43,710  
*Prin. Invest.:* R C DUNCAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8611**                    **UNIV OF TEXAS - AUSTIN**                    **8811**  
 SOIL MOISTURE VARIABILITY AND ITS ROLE IN LAND ATMOSPHERE  
 INTERACTION DURING SGP97  
 06/11/1999 - 06/14/2001            FY01: \$0                            Total: \$124,590  
*Prin. Invest.:* J S FAMIGLIETTI  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8704**                    **UNIV OF TEXAS - AUSTIN**                    **8812**  
 USING THE IMPACT OF THE LUNAR PROSPECTOR ORBITER INTO A POLAR  
 COLD TRAP TO DETECT WATER ICE  
 07/21/1999 - 07/14/2000            FY01: \$0                            Total: \$50,000  
*Prin. Invest.:* D B GOLDSTEIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8798**                    **UNIV OF TEXAS - AUSTIN**                    **8813**  
 VARIATIONS IN SPACE GEODETIC IN TIME SERIES DUE TO WATER REDIS-  
 TRIBUTION AND OTHER SOURCES.  
 11/02/1999 - 11/14/2001            FY01: \$100,000                    Total: \$210,000  
*Prin. Invest.:* C R WILSON  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8858**                    **UNIV OF TEXAS - AUSTIN**                    **8814**  
 HIGH INDEX GRISMS FOR MID-INFRARED SPECTROSCOPY.  
 09/28/1999 - 01/31/2002            FY01: \$137,475                    Total: \$288,671  
*Prin. Invest.:* D T JAFFE  
*Tech. Officer:* GSFC/F HERRERO  
*CASE Category:* 13 - PHYSICS

**NAG 5 9003**                    **UNIV OF TEXAS - AUSTIN**                    **8815**  
 THE CHEMICAL COMPOSITION OF PRIMITIVE BODIES IN THE SOLAR  
 SYSTEM  
 01/27/2000 - 01/31/2003            FY01: \$121,186                    Total: \$205,886  
*Prin. Invest.:* A L COCHRAN  
*Tech. Officer:* GSFC/T H MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9144**                    **UNIV OF TEXAS - AUSTIN**                    **8816**  
 RECONSTRUCTION OF HISTORICAL SEA LEVEL VARIATIONS USING TIDE  
 GAUGE DATA AND EMPIRICAL ORTHOGONAL  
 02/29/2000 - 02/28/2002            FY01: \$25,000                    Total: \$50,000  
*Prin. Invest.:* D P CHAMBERS  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9163**                    **UNIV OF TEXAS - AUSTIN**                    **8817**  
 IMPROVEMENT IN GEOID MODELS FOR OCEAN CIRCULATION STUDIES  
 03/08/2000 - 03/14/2002            FY01: \$40,000                    Total: \$80,000  
*Prin. Invest.:* B TAPLEY  
*Tech. Officer:* GSFC/F HERBERT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9227**                    **UNIV OF TEXAS - AUSTIN**                    **8818**  
 RADIAL VELOCITY DETECTION OF EXTRA-SOLAR PLANETARY SYSTEMS  
 03/13/2000 - 03/30/2002            FY01: \$140,000                    Total: \$280,000  
*Prin. Invest.:* W COCHRAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9230**                    **UNIV OF TEXAS - AUSTIN**                    **8819**  
 IMPROVED SILICON DIFFRACTION GRATINGS FOR NEAR-IR SPECTROSCOPY  
 FROM SPACE  
 03/20/2000 - 03/20/2002            FY01: \$143,000                    Total: \$244,736  
*Prin. Invest.:* D JAFFE  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9239**                    **UNIV OF TEXAS - AUSTIN**                    **8820**  
 FAR-UV ABSORPTION-LINE SPECTROSCOPY OF THE NEUTRAL  
 ENVELOPES OF PLANETARY NEBULAE - FUSE  
 03/09/2000 - 03/14/2002            FY01: \$0                            Total: \$73,600  
*Prin. Invest.:* G SONNEBORN  
*Tech. Officer:* GSFC/H DINERSTEIN  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 9302**                      **UNIV OF TEXAS - AUSTIN**                      **8821**  
 REQUEST FOR SUPPLEMENTAL FUNDING FOR COX POSTDOCTORAL FELLOW  
 03/20/2000 - 03/31/2002              FY01: \$0                      Total: \$22,500  
*Prin. Invest.:* C WHEELER  
*Tech. Officer:* GSFC/D GOLOBEK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10458**                      **UNIV OF TEXAS - AUSTIN**                      **8829**  
 INFRARED SPECTRAL SURVEY OF YOUNG STELLAR/PLANETARY SYSTEMS WITH SUB-AU SPATIAL RESOLUTION  
 02/26/2001 - 02/28/2002              FY01: \$35,000                      Total: \$35,000  
*Prin. Invest.:* P HARVEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9321**                      **UNIV OF TEXAS - AUSTIN**                      **8822**  
 A PARALLEL GENETICS-ALGORITHM-BASED APPROACH TO WHITE DWARF PULSATION MODELS  
 03/22/2000 - 03/31/2002              FY01: \$77,200                      Total: \$152,900  
*Prin. Invest.:* D E WINGET  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10488**                      **UNIV OF TEXAS - AUSTIN**                      **8830**  
 FROM MOLECULAR CLOUD CORE TO PROTOPLANETARY DISK: TRACING THE MASS  
 02/27/2001 - 02/28/2002              FY01: \$60,000                      Total: \$60,000  
*Prin. Invest.:* N J EVANS, II  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9829**                      **UNIV OF TEXAS - AUSTIN**                      **8823**  
 SPACECRAFT RENDEZVOUS NAVIGATION WITH INTEGRATED INS-GPS.  
 08/23/2000 - 08/31/2001              FY01: \$0                      Total: \$80,382  
*Prin. Invest.:* R H BISHOP  
*Tech. Officer:* GSFC/R CARPENTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10766**                      **UNIV OF TEXAS - AUSTIN**                      **8831**  
 JETS FROM NEUTRON STARS (ATP-2000)  
 04/23/2001 - 04/30/2002              FY01: \$53,900                      Total: \$53,900  
*Prin. Invest.:* J WHEELER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9989**                      **UNIV OF TEXAS - AUSTIN**                      **8824**  
 EARTH SYSTEM DYNAMICS: THE DETERMINATION & INTERRELATIONSHIP OF THE GLOBAL ANGULAR MOMENTUM BUDGET USING  
 09/21/2000 - 03/31/2002              FY01: \$540,000                      Total: \$1,087,000  
*Prin. Invest.:* B D TAPLEY  
*Tech. Officer:* GSFC/J LABRECQUE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10767**                      **UNIV OF TEXAS - AUSTIN**                      **8832**  
 SUPPLEMENT FOR THEORY POSTDOC (ATP-2000)  
 05/03/2001 - 04/30/2002              FY01: \$16,000                      Total: \$16,000  
*Prin. Invest.:* J WHEELER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10121**                      **UNIV OF TEXAS - AUSTIN**                      **8825**  
 20TH TEXAS SYMPOSIUM ON RELATIVISTIC ASTROPHYSICS  
 11/28/2000 - 05/31/2001              FY01: \$15,000                      Total: \$15,000  
*Prin. Invest.:* J C WHEELER  
*Tech. Officer:* GSFC/L KALUZIENSKI  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10825**                      **UNIV OF TEXAS - AUSTIN**                      **8833**  
 REIONIZATION OF THE UNIVERSE (ATP - 2000)  
 05/01/2001 - 05/14/2002              FY01: \$111,390                      Total: \$111,390  
*Prin. Invest.:* P R SHAPIRO  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10183**                      **UNIV OF TEXAS - AUSTIN**                      **8826**  
 ASTROMETRY OF NEW & UNDER-OBSERVED NEAR-EARTH OBJECTS-(NEOS) AT MCDONALD OBSERVATORY  
 01/22/2001 - 01/31/2002              FY01: \$99,400                      Total: \$99,400  
*Prin. Invest.:* E BARKER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10826**                      **UNIV OF TEXAS - AUSTIN**                      **8834**  
 FORMATION OF STAR CLUSTERS (ATP - 2000)  
 05/01/2001 - 05/14/2002              FY01: \$79,332                      Total: \$79,332  
*Prin. Invest.:* H MARTEL  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10195**                      **UNIV OF TEXAS - AUSTIN**                      **8827**  
 GENERAL RELATIVISTIC & GRAVITATIONAL PHYSICS PARAMETERS FROM LUNAR LASER RANGING DATA  
 12/28/2000 - 12/31/2001              FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* P J SHELUS  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11203**                      **UNIV OF TEXAS - AUSTIN**                      **8835**  
 SATELLITE LASER RANGING DATA ANALYSIS AND QUALITY CONTROL  
 08/09/2001 - 08/14/2004              FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* R J EANES  
*Tech. Officer:* GSFC/D L CARTER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10435**                      **UNIV OF TEXAS - AUSTIN**                      **8828**  
 GROUND BASED STUDIES OF THE OUTER PLANETS  
 02/20/2001 - 02/28/2002              FY01: \$130,600                      Total: \$130,600  
*Prin. Invest.:* L TRAFTON  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11278**                      **UNIV OF TEXAS - AUSTIN**                      **8836**  
 DECENTRALIZED CONTROL FOR SATELLITES  
 08/21/2001 - 08/31/2002              FY01: \$86,835                      Total: \$86,835  
*Prin. Invest.:* E LIGHTSEY  
*Tech. Officer:* GSFC/J R CARPENTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1764**                      **UNIV OF TEXAS - AUSTIN**                      **8837**  
 SEARCH FOR TIME REVERALS SYMETRY VIOLATION WITH LASER-COOLED  
 ATOMS  
 05/01/2001 - 04/30/2005              FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* D J HEINZMAN  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 841**                      **UNIV OF TEXAS - AUSTIN**                      **8838**  
 DESIGN OF AUTOMATIC CONTROL FOR HUMAN/LCG THERMAL INTERAC-  
 TION  
 09/25/1995 - 10/25/1999              FY01: -\$4,778                      Total: \$128,829  
*Prin. Invest.:* K R DILLER  
*Tech. Officer:* JSC/C LIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 994**                      **UNIV OF TEXAS - AUSTIN**                      **8839**  
 1998 NASA REDUCED GRAVITY STUDENT FLIGHT OPS  
 02/23/1998 - 01/31/2001              FY01: \$0                      Total: \$606,263  
*Prin. Invest.:* B D TAPLEY, B O FORT  
*Tech. Officer:* JSC/D G SICKOREZ, JSC/N G ROBERTSON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1060**                      **UNIV OF TEXAS - AUSTIN**                      **8840**  
 NASA STUDENT COMPETITION  
 12/14/1998 - 08/31/2002              FY01: \$47,000                      Total: \$161,029  
*Prin. Invest.:* B D TAPLEY  
*Tech. Officer:* JSC/H C MANDELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1117**                      **UNIV OF TEXAS - AUSTIN**                      **8841**  
 DEVELOP SINGLE COMPUTATIONAL APPROACH TO  
 05/24/1999 - 05/26/2000              FY01: \$0                      Total: \$14,000  
*Prin. Invest.:* D B GOLDSTEIN, P L VARGHESE  
*Tech. Officer:* JSC/F E LUMPKIN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1124**                      **UNIV OF TEXAS - AUSTIN**                      **8842**  
 X381CRV GPS RECEIVER SUPPORT  
 07/01/1999 - 12/31/1999              FY01: -\$3,295                      Total: \$42,917  
*Prin. Invest.:* G E LIGHTSEY  
*Tech. Officer:* JSC/G C BLACKBURN, JSC/K W DUNN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1187**                      **UNIV OF TEXAS - AUSTIN**                      **8843**  
 INTERNATIONAL SPACE STATION GPS RECEIVER SUPPORT  
 02/02/2000 - 01/31/2002              FY01: \$97,443                      Total: \$197,271  
*Prin. Invest.:* G E LIGHTSEY  
*Tech. Officer:* JSC/G C BLACKBURN, JSC/J M COX  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1189**                      **UNIV OF TEXAS - AUSTIN**                      **8844**  
 NAVIGATION SYSTEMS AND TECHNOLOGY LAB  
 01/28/2000 - 12/31/2002              FY01: \$100,720                      Total: \$198,377  
*Prin. Invest.:* G LIGHTSEY  
*Tech. Officer:* JSC/J W BELL  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1213**                      **UNIV OF TEXAS - AUSTIN**                      **8845**  
 ANALYSIS AND MEASUREMENT OF THERMAL INSULATION PROPERNES OF  
 EVAC HOLLOW FIBERS  
 03/01/2000 - 05/31/2001              FY01: \$0                      Total: \$37,718  
*Prin. Invest.:* H L PAUL, K R DILLER  
*Tech. Officer:* JSC/L A TREVINO  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1225**                      **UNIV OF TEXAS - AUSTIN**                      **8846**  
 MARS PRECISION LANDING TASK  
 04/13/2000 - 09/30/2002              FY01: \$145,500                      Total: \$247,503  
*Prin. Invest.:* R BISHOP  
*Tech. Officer:* JSC/E M BRADEN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1244**                      **UNIV OF TEXAS - AUSTIN**                      **8847**  
 HYBRID PARTICLE ELEMENT SIMULATION OF IMPACT ON COMPOSITE  
 ORBITAL DEBRIS SHIELDS  
 07/11/2000 - 06/30/2002              FY01: \$52,000                      Total: \$123,539  
*Prin. Invest.:* E P FAHRENTHOLD  
*Tech. Officer:* JSC/E L CHRISTIANSEN, JSC/J H KERR  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1275**                      **UNIV OF TEXAS - AUSTIN**                      **8848**  
 CULTURAL AND PERSONALITY DETERMINANTS OF PERFORMANCE AND  
 ERROR MANAGMENT  
 02/22/2001 - 01/31/2003              FY01: \$137,548                      Total: \$137,548  
*Prin. Invest.:* R L HELMREICH  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 56 - MEDICL

**NAG 9 1286**                      **UNIV OF TEXAS - AUSTIN**                      **8849**  
 NASA REDUCED GRAVEITY STUDENT FLIGHT CAMPAIGN 2001  
 03/05/2001 - 12/31/2001              FY01: \$405,444                      Total: \$405,444  
*Prin. Invest.:* B D TAPLEY  
*Tech. Officer:* JSC/D SICKOREZ  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1323**                      **UNIV OF TEXAS - AUSTIN**                      **8850**  
 LOW THRUST CAPTURE INVESTIGATION  
 06/13/2001 - 10/31/2001              FY01: \$20,000                      Total: \$20,000  
*Prin. Invest.:* R BISHOP  
*Tech. Officer:* JSC/T CRANE  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG10 202**                      **UNIV OF TEXAS - AUSTIN**                      **8851**  
 EARLY DEVELOPMENT OF FERN GAMETOPHYTES IN MICROSCAVITY  
 10/16/1996 - 12/31/2000              FY01: \$0                      Total: \$400,625  
*Prin. Invest.:* S J POUX  
*Tech. Officer:* KSC/W M KNOTT  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG10 288**                      **UNIV OF TEXAS - AUSTIN**                      **8852**  
 MAG-LEV LAUNCH ASSIST TECHNOLOGY DEMONSTRATOR MAG-LEV  
 LAUNCH ASSIST TECHNOLOGY DEMONSTRATOR  
 07/17/2000 - 03/31/2001              FY01: \$0                      Total: \$94,998  
*Prin. Invest.:* R ZOWARKA  
*Tech. Officer:* KSC/F ADAMS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG10 295**                      **UNIV OF TEXAS - AUSTIN**                      **8853**  
 EARLY DEVELOPMENT OF FERN GAMETOPHYTES IN MICROGRA VITY  
 02/05/2001 - 04/30/2005      FY01: \$30,000                      Total: \$30,000  
*Prin. Invest.:* D ROUX  
*Tech. Officer:* KSC/D SCHULTZ  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAS 3 00119**                      **UNIV OF TEXAS - AUSTIN**                      **8854**  
 FLYWHEEL ROTOR HEALTH MONITORING RESEARCH & DEVELOPMENT  
 04/26/2000 - 04/25/2003      FY01: \$85,000                      Total: \$115,000  
*Prin. Invest.:* J BENO  
*Tech. Officer:* GRC/K MCLALLIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 3 00135**                      **UNIV OF TEXAS - AUSTIN**                      **8855**  
 DC-DC HIGH VOLTAGE CONVERTER TECHNOLOGY DEMONSTRATION  
 05/25/2000 - 11/24/2000      FY01: \$0                      Total: \$168,618  
*Prin. Invest.:* W A WALLS  
*Tech. Officer:* GRC/P GEORGE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 3 01133**                      **UNIV OF TEXAS - AUSTIN**                      **8856**  
 FLYWHEEL ARBOR DEVELOPMENT  
 05/30/2001 - 05/29/2002      FY01: \$357,000                      Total: \$357,000  
*Prin. Invest.:* R H BENO, R THOMPSON  
*Tech. Officer:* GRC/K L MCLALLIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAS 3 99169**                      **UNIV OF TEXAS - AUSTIN**                      **8857**  
 FLYWHEEL ROTOR HUB AND RIM HARDWARE FOR THE ACESE FOR ISS  
 07/08/1999 - 03/07/2002      FY01: \$1,751,233                      Total: \$3,656,324  
*Prin. Invest.:* J H BENO, R C THOMPSON  
*Tech. Officer:* JSC/K KONNO  
*CASE Category:* 46 - MECHANICAL ENGR

**NAS 5 01096**                      **UNIV OF TEXAS - AUSTIN**                      **8858**  
 MCDONALD LASER RANGING STATION SUPPORT SERVICES  
 03/01/2001 - 02/28/2004      FY01: \$307,000                      Total: \$307,000  
*Prin. Invest.:* P J SHELUS  
*Tech. Officer:* GSFC/D L CARTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 5 32997**                      **UNIV OF TEXAS - AUSTIN**                      **8859**  
 OPERATION, MAINTENANCE AND ENGINEERING DEVELOPMENT OF THE  
 UNIV OF TX LASER RANGING STATION  
 04/17/1996 - 02/28/2001      FY01: \$135,000                      Total: \$2,258,846  
*Prin. Invest.:* P J SHELUS, R RICKLETS, J WIAN  
*Tech. Officer:* GSFC/J MCGARRY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 5 97213**                      **UNIV OF TEXAS - AUSTIN**                      **8860**  
 GRAVITY RECOVERY AND CLIMATE EXPERIMENT (GRACE)  
 08/12/1997 - 06/12/2006      FY01: \$1,841,500                      Total: \$6,286,000  
*Prin. Invest.:* B TAPLEY  
*Tech. Officer:* GSFC/R FITZGERALD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 5 99005**                      **UNIV OF TEXAS - AUSTIN**                      **8861**  
 GLAS SCIENCE TEAM LEADER.  
 11/25/1998 - 12/01/2002      FY01: \$1,455,000                      Total: \$3,505,000  
*Prin. Invest.:* R SCHUTZ  
*Tech. Officer:* GSFC/G SMITH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 303**                      **UNIV OF TEXAS - AUSTIN**                      **8862**  
 DURABILITY OF SANDWICH STRUCTURES  
 06/04/1998 - 04/30/2000      FY01: -\$3,593                      Total: \$110,324  
*Prin. Invest.:* K LIECHTI, S KYRIAKIDES  
*Tech. Officer:* LARC/T S GRITES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 677**                      **UNIV OF TEXAS - AUSTIN**                      **8863**  
 INVESTIGATION OF STRAIN/VORTICITY AND LARGE-SCALE FLOW STRUC-  
 TURE IN TURBULENT NONPREMIXED JET FLAMES  
 02/26/1999 - 01/13/2003      FY01: \$118,540                      Total: \$292,697  
*Prin. Invest.:* N T CLEMENS  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 154**                      **UNIV OF TEXAS - AUSTIN**                      **8864**  
 GRAND CHALLENGE RESEARCH  
 08/21/1996 - 06/30/2000      FY01: \$0                      Total: \$900,000  
*Prin. Invest.:* G CAREY  
*Tech. Officer:* GSFC/J R FISCHER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 5 463**                      **UNIV OF TEXAS - AUSTIN**                      **8865**  
 EVALUATION AND VALIDATION OF EO-1 AND LANDSAT 7 IMAGERY  
 THROUGH AN ANALYSIS OF LAND COVER/LAND USE  
 02/29/2000 - 12/31/2001      FY01: \$166,237                      Total: \$206,250  
*Prin. Invest.:* W A WHITE  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 9 73**                      **UNIV OF TEXAS - AUSTIN**                      **8866**  
 SIMULATION OF HYPERVELOCITY IMPACT ON AL-NEXTEL KEVLOR  
 ORBITAL DEBRIS SHIELDS  
 08/10/1998 - 06/30/2000      FY01: -\$194                      Total: \$81,558  
*Prin. Invest.:* E P FAHRENTHOLD  
*Tech. Officer:* JSC/E L CHRISTIANSEN  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 1 52147**                      **UNIV OF TEXAS - AUSTIN**                      **8867**  
 GRADUATE STUDENT RESEARCH PROGRAM (GSRP)  
 07/26/1996 - 12/31/2001      FY01: \$12,000                      Total: \$110,001  
*Prin. Invest.:* W T FOWLER  
*Tech. Officer:* LARC/T A TOLAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 72**                      **UNIV OF TEXAS - AUSTIN**                      **8868**  
 GSRP TRAINING GRANT - PAUL THOMPSON - MASS DISTRIBUTION IN THE  
 EARTH'S SYSTEMS: SPACE GEODETIC MEA  
 06/04/1998 - 08/31/2001      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* B D TAPLEY  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/G S SOFFEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

## TEXAS

## NASA'S UNIVERSITY PROGRAM

**NGT 5 81 UNIV OF TEXAS - AUSTIN 8869**  
 A STUDY OF LAND/ATMOSPHERE INTERACTIONS IN THE DEV ELOPMENT  
 OF MESOSCALE CONVECTIVE SYSTEMS USING A  
 05/11/1999 - 08/31/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* J S FAMIGLIETTI  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 5 30162 UNIV OF TEXAS - AUSTIN 8870**  
 ESTIMATING CHANGES IN CONTINENTAL WATER STORAGE FR OM  
 SATELLITE OBSERVA- TIONS OF THETIME DEPENDENT  
 08/31/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J S FAMIGLIETTI, ROD  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40053 UNIV OF TEXAS - AUSTIN 8871**  
 TEXAS SPACE GRANT CONSORTUM & GLOBE TEACHER TRAINI  
 02/12/1997 - 01/31/2001 FY01: -\$29,600 Total: \$2,060,783  
*Prin. Invest.:* B D TAPLEY  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40083 UNIV OF TEXAS - AUSTIN 8872**  
 TEXAS SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2002 FY01: \$504,600 Total: \$504,600  
*Prin. Invest.:* B TAPLEY  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50239 UNIV OF TEXAS - AUSTIN 8873**  
 IMPROVED ESTIMATION OF SURFACE TOPOGRAPHY & VEGETA TION  
 STRUCTURE BY COMBINING INTERFEROMETRIC SAR  
 06/03/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* M CRAWFORD  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50301 UNIV OF TEXAS - AUSTIN 8874**  
 GALAXY EVOLUTION AT REDSHIFTS OF Z=1-2  
 06/29/2000 - 06/30/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* G J HILL  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50361 UNIV OF TEXAS - AUSTIN 8875**  
 AUTONOMOUS RENDEZVOUS BETWEEN MULTIPLE SPACECRAFT IN A  
 CENTRAL BODY GRAVITY FIELD WITH DETAILED SENS  
 05/31/2001 - 08/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* C OCAMPO  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50371 UNIV OF TEXAS - AUSTIN 8876**  
 RNAI ANALYSIS OF GRAVIRY SIGNAL TRANSDUCTION IN CERATOPERIS  
 RICHARDII  
 06/13/2001 - 07/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* S ROUX, NONE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 20 UNIV OF TEXAS - AUSTIN 8877**  
 TRAINING GRANT  
 07/08/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* R H BISHOP  
*Tech. Officer:* JSC/D J PEARSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 35 UNIV OF TEXAS - AUSTIN 8878**  
 TRAINING GRANT  
 06/04/1998 - 12/31/2000 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* R H BISHOP  
*Tech. Officer:* JSC/B COCKRELL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 4187 UNIV OF TEXAS - DALLAS 8879**  
 DEVELOPMENT AND DEMONSTRATION OF A ROBUST MICRO-EL PRES-  
 SURE TRANSDUCER FOR LOW ALTITUDE SATELLITE AN  
 04/01/1997 - 10/30/2000 FY01: \$0 Total: \$183,721  
*Prin. Invest.:* D D EARLE  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 4465 UNIV OF TEXAS - DALLAS 8880**  
 THE SPATIAL DISTRIBUTION OF IONOSPHERIC PLASMA AND IGH  
 LATITUDES  
 05/27/1997 - 04/30/2001 FY01: \$0 Total: \$282,115  
*Prin. Invest.:* D A HEELIS  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5257 UNIV OF TEXAS - DALLAS 8881**  
 A SEQUENTIAL ROCKET INVESTIGATION OF WINDS AND PLASMAS LAYERS  
 IN THE NIGHTTIME E-REGION  
 02/28/2000 - 02/21/2003 FY01: \$396,987 Total: \$728,087  
*Prin. Invest.:* G D EARLE  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 9297 UNIV OF TEXAS - DALLAS 8882**  
 A WEB-BASED DISTRIBUTION OF IONOSPHERIC THERMAL PLASMA DATA  
 FROM THE DMSP SPACECRAFT  
 04/17/2000 - 04/30/2002 FY01: \$80,000 Total: \$155,000  
*Prin. Invest.:* M HAIRSTON  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9476 UNIV OF TEXAS - DALLAS 8883**  
 TURBO CODES & THEIR APPLICATION IN MOBILE SYSTEMS  
 04/24/2000 - 04/30/2002 FY01: \$50,000 Total: \$99,999  
*Prin. Invest.:* J P FONSEKA  
*Tech. Officer:* GSFC/P H YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10271 UNIV OF TEXAS - DALLAS 8884**  
 A MODEL OF IONOSPHERIC VELOCITY STRYCTURE IN THE HIGH  
 LATITUDE F-REGION  
 01/08/2001 - 01/31/2002 FY01: \$64,902 Total: \$64,902  
*Prin. Invest.:* R HEELIS  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10335 UNIV OF TEXAS - DALLAS 8885**  
 DEVELOPMENT OF A RAM WIND SENSOR FOR PLANETARY THERMO-  
 SPHERIC STUDIES-PROPOSAL #273  
 02/06/2001 - 12/31/2001 FY01: \$329,980 Total: \$329,980  
*Prin. Invest.:* G D EARLE  
*Tech. Officer:* GSFC/C STAHLE  
*CASE Category:* 13 - PHYSICS

**NAG 5 01068 UNIV OF TEXAS - DALLAS 8886**  
 THE COUPLED ION-NEUTRAL DYNAMICS INVESTIGATION.  
 12/13/2000 - 12/31/2005 FY01: \$1,275,000 Total: \$1,275,000  
*Prin. Invest.:* R A HEELIS  
*Tech. Officer:* GSFC/J BYRD  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50354 UNIV OF TEXAS - DALLAS 8887**  
 LOW-LATITUDE IONOSPHERIC PLASMA DEPLETION: STRUTURE AND  
 DYNAMICS  
 05/11/2001 - 05/14/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R A HEELIS  
*Tech. Officer:* GSFC/M E MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1012 UNIV OF TEXAS - EL PASO 8888**  
 MONITORING SOFTWARE THROUGH INTEGRITY CONSTRAINTS  
 09/21/1995 - 08/31/2000 FY01: \$0 Total: \$180,487  
*Prin. Invest.:* A Q GATES  
*Tech. Officer:* ARC/M R LOWRY, ARC/G S LEE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1138 UNIV OF TEXAS - EL PASO 8889**  
 VERIFICATION OF NASA MISSION-CRITICAL SOFTWARE WIT HOUT  
 SACRIFICING PERFORMANCE  
 07/14/1997 - 06/30/2001 FY01: \$0 Total: \$199,887  
*Prin. Invest.:* P J TELLER  
*Tech. Officer:* ARC/LOWRY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 1820 UNIV OF TEXAS - EL PASO 8890**  
 NOVEL CDS-CTDE SOLAR CELL STRUCTURES ON FLEXBILE M ETAL FOIL  
 SUBSTRATES  
 04/16/1996 - 04/15/2000 FY01: -\$402 Total: \$263,838  
*Prin. Invest.:* V P SINGH, J C MCCLURE, G B LUSH  
*Tech. Officer:* GRC/E B CLARK  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2303 UNIV OF TEXAS - EL PASO 8891**  
 THIN-FILM SOLAR CELLS FOR SPACE APPLICATION THIN-FILM SOLAR  
 CELLS FOR SPACE APPLICATION  
 11/23/1999 - 10/28/2002 FY01: \$199,449 Total: \$399,394  
*Prin. Invest.:* G B LUSH  
*Tech. Officer:* GRC/A HEPP  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 4 150 UNIV OF TEXAS - EL PASO 8892**  
 (FAR) AN IMAGING FRANEWORK FOR AERODYNAMIC, FLUID MECHANIC,  
 AND HEAT TRANSFER SCIENIFIC-GRADE  
 03/03/1998 - 02/27/2001 FY01: \$0 Total: \$294,177  
*Prin. Invest.:* R WICKER  
*Tech. Officer:* DFRC/J BRADEN, DFRC/K K GUPTA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6163 UNIV OF TEXAS - EL PASO 8893**  
 INTRODUCTORY TRAINING FOR PRE-SERVICE TEACHERS IN  
 08/01/1997 - 07/31/2000 FY01: \$0 Total: \$60,000  
*Prin. Invest.:* V HARDER  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8881 UNIV OF TEXAS - EL PASO 8894**  
 DATA ASSIMILATIVE ANALYSIS OF THE GGS DATA SET USING GLOBAL  
 SIMULATIONS  
 11/30/1999 - 05/31/2001 FY01: \$0 Total: \$18,070  
*Prin. Invest.:* D E LOPEZ  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 13 - PHYSICS

**NAG 5 8882 UNIV OF TEXAS - EL PASO 8895**  
 SCIENCE EDUCATIONAL INSTRUCTIONAL MATERIALS FOR ISTP/SOLARMAX  
 11/30/1999 - 01/14/2002 FY01: \$0 Total: \$53,228  
*Prin. Invest.:* R E LOPEZ  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8883 UNIV OF TEXAS - EL PASO 8896**  
 THE ASSIMILATION OF SATELLITE DATA INTO GLOBAL MHD SIMULATIONS  
 (SEC GI PROGRAM)  
 11/30/1999 - 08/31/2000 FY01: \$0 Total: \$8,275  
*Prin. Invest.:* R E LOPEZ  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 9213 UNIV OF TEXAS - EL PASO 8897**  
 PROBING NEUTRINO-INDUCED NUCLEOSYNTHESIS FROM THE ABUN-  
 DANCES OF FLUORINEBORON, LITHIUM, & OXYGEN  
 03/23/2000 - 03/31/2002 FY01: \$95,985 Total: \$180,925  
*Prin. Invest.:* V E SMITH  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9542 UNIV OF TEXAS - EL PASO 8898**  
 REMOTE SENSING SPECTRAL IDENTIFICATION OF FRESHWAT ER  
 PLANKTON  
 05/09/2000 - 05/14/2002 FY01: \$99,957 Total: \$199,849  
*Prin. Invest.:* D SCHULZ-MAKUCH  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10151 UNIV OF TEXAS - EL PASO 8899**  
 CONNECTING SUN CITY WITH SUN-EARTH CONNECTIONS  
 01/03/2001 - 12/31/2001 FY01: \$223,990 Total: \$223,990  
*Prin. Invest.:* R LOPEZ  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10507 UNIV OF TEXAS - EL PASO 8900**  
 STUDIES OF SOLAR WIND-MAGNETOSPHERE COUPLING THRU DETAILED  
 COMPARISON OF OBSERVATIONS & RESULTS  
 03/01/2001 - 02/28/2002 FY01: \$95,916 Total: \$95,916  
*Prin. Invest.:* R LOPEZ  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

TEXAS

NASA'S UNIVERSITY PROGRAM

**NAG 8 1393 UNIV OF TEXAS - EL PASO 8901**  
 R/S "PLASTIC OPTICAL FIBERS FOR ELECTRO-OPTIC ALL- OPTIC AND OPTICAL SENSING APPLICATIONS"  
 08/18/1997 - 08/17/2000 FY01: \$0 Total: \$299,870  
 Prin. Invest.: C DIRK  
 Tech. Officer: MSFC/B PENN  
 CASE Category: 13 - PHYSICS

**NCC 5 97 UNIV OF TEXAS - EL PASO 8909**  
 THE UNIV OF TEXAS AT EL PASO NETWORK RESOURCES AND TRAINING SITES  
 08/15/1995 - 08/14/2001 FY01: \$0 Total: \$2,623,999  
 Prin. Invest.: M KOLITSKY  
 Tech. Officer: GSFC/J BENNETT  
 CASE Category: 22 - COMPUTER SCIENCE

**NAG 8 1645 UNIV OF TEXAS - EL PASO 8902**  
 INVESTIGATION OF FRICTION STIR WELDING  
 09/30/1999 - 09/30/2001 FY01: \$30,000 Total: \$200,000  
 Prin. Invest.: J C MCCLURE  
 Tech. Officer: MSFC/A BEAM, MSFC/W LOVE  
 CASE Category: 47 - METAL & MATERIALS ENGR

**NCC 5 207 UNIV OF TEXAS - EL PASO 8910**  
 DISTANCE LEARNING STRATEGIES PROMOTING MINORITY AC AND RESOURCES  
 06/11/1997 - 05/31/2000 FY01: \$0 Total: \$392,605  
 Prin. Invest.: M A KOLITSKY  
 Tech. Officer: GSFC/R D EASON  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1099 UNIV OF TEXAS - EL PASO 8903**  
 DATA FUSION METHODOLOGISTS FOR DAMAGE MONITORING OF AEROSPACE STRUCTURES  
 05/15/1999 - 05/14/2002 FY01: \$50,000 Total: \$155,189  
 Prin. Invest.: C FERREGUT  
 Tech. Officer: JSC/A R ROCHA  
 CASE Category: 41 - AERONAUTICAL ENGR

**NCC 5 209 UNIV OF TEXAS - EL PASO 8911**  
 PAN AMERICAN CENTER FOR EARTH AND ENVIRONMENTAL ST  
 07/24/1997 - 06/30/2001 FY01: \$0 Total: \$3,379,953  
 Prin. Invest.: S A STARKS  
 Tech. Officer: GSFC/P SAKIMOTO  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1100 UNIV OF TEXAS - EL PASO 8904**  
 FUNDAMENTAL STUDIES OF CRATERING PHENOMMENA  
 05/21/1999 - 05/31/2002 FY01: \$52,000 Total: \$155,773  
 Prin. Invest.: L E MURR  
 Tech. Officer: JSC/F HORZ  
 CASE Category: 59 - LIFE SCIENCE, OTHER

**NCC 5 468 UNIV OF TEXAS - EL PASO 8912**  
 CERTIFICATION OF MATHEMATICS AND SCIENCE TEACHERS  
 03/07/2000 - 03/14/2002 FY01: \$179,697 Total: \$377,157  
 Prin. Invest.: S BLAKE  
 Tech. Officer: GSFC/C HOLLINGSWORTH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1171 UNIV OF TEXAS - EL PASO 8905**  
 EXPERIMENTS FOR THE GRANTS AND COOP AGREEMENT HANDBOOKS  
 09/28/1999 - 08/31/2002 FY01: \$60,995 Total: \$199,339  
 Prin. Invest.: L E MURR  
 Tech. Officer: JSC/L ARMENDARIZ  
 CASE Category: 47 - METAL & MATERIALS ENGR

**NCC 5 498 UNIV OF TEXAS - EL PASO 8913**  
 PAN AMERICAN CENTER FOR EARTH AND ENVIRONMENTAL STUDIES  
 05/01/2000 - 06/30/2001 FY01: \$565,401 Total: \$1,000,000  
 Prin. Invest.: S STARKS  
 Tech. Officer: GSFC/J LAMBRECQUE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG10 225 UNIV OF TEXAS - EL PASO 8906**  
 CONTINUOUS HAZARD TRACKING & FAILURE ANALYSIS METHODOLOGY  
 09/17/1997 - 09/30/2002 FY01: \$99,600 Total: \$298,983  
 Prin. Invest.: R QUINTANA  
 Tech. Officer: KSC/B DELIWALA  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 535 UNIV OF TEXAS - EL PASO 8914**  
 PROPELLING SCIENCE CONTENT INTO THE NEW MILLENNIUM /MUSPIN NRTS PROGRAM.  
 02/01/2001 - 01/31/2002 FY01: \$350,000 Total: \$350,000  
 Prin. Invest.: H L SCHULTE  
 Tech. Officer: GSFC/J HARRINGTON  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG10 287 UNIV OF TEXAS - EL PASO 8907**  
 NONPARAMETRIC INFERENCE UNDER ORDER CONSTRAINTS FO R COMPLETE AND CENSORED DATE: MATERIALS SCIENCE  
 06/28/2000 - 06/27/2003 FY01: \$87,000 Total: \$180,089  
 Prin. Invest.: D ROJO  
 Tech. Officer: KSC/R LEE  
 CASE Category: 21 - MATHEMATICS

**NCC 8 137 UNIV OF TEXAS - EL PASO 8915**  
 R/S "ANALYSIS OF FRICTION STIR WELDING"  
 05/27/1997 - 05/26/2000 FY01: -\$15 Total: \$398,518  
 Prin. Invest.: J MCCLURE  
 Tech. Officer: MSFC/J DING  
 CASE Category: 47 - METAL & MATERIALS ENGR

**NCC 2 5441 UNIV OF TEXAS - EL PASO 8908**  
 SCIENCE OPPORTUNITY PLANNING FOR THE CASSINI SATUR N MISSION  
 06/26/2001 - 07/31/2002 FY01: \$7,840 Total: \$7,840  
 Prin. Invest.: S M ROACH  
 Tech. Officer: ARC/J N CUZZI  
 CASE Category: 11 - ASTRONOMY

**NAG 9 1054 UNIV OF TEXAS AT BROWNSVILLE 8916**  
 PRE MATH, SCIENCE, ENGINEERING & TECH SPT PROGRAM  
 09/18/1998 - 08/31/2001 FY01: \$0 Total: \$75,578  
 Prin. Invest.: O RIVAS  
 Tech. Officer: JSC/L ARMENDARIZ  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

NASA'S UNIVERSITY PROGRAM

UTAH

**NAG 9 1064 UNIV OF TEXAS AT BROWNSVILLE 8917**  
 NRA PACE/MSET BLAST-OFF TO AN ENGINEERING CAREER  
 01/07/1999 - 01/06/2002 FY01: \$100,000 Total: \$300,000  
*Prin. Invest.:* W WELLS  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1238 UNIV OF TEXAS AT BROWNSVILLE 8918**  
 SOUTH TEXAS ENGINEERING MATH & SCIENCE PROGRAM  
 06/15/2000 - 05/18/2001 FY01: \$0 Total: \$4,000  
*Prin. Invest.:* J GARCIA  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1304 UNIV OF TEXAS AT BROWNSVILLE 8919**  
 PRE MATH SCIENCE ENGINEERING & TECH SPT (MSET)  
 05/18/2001 - 08/26/2002 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* A RIVAS  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 438 UNIV OF TEXAS AT BROWNSVILLE 8920**  
 C+P=M2T: SOUTH TEXAS MASTER MATHEMATICS TEACHER PREPARATION  
 PROGRAMS  
 03/03/2000 - 02/28/2002 FY01: \$35,689 Total: \$231,849  
*Prin. Invest.:* J TELESE  
*Tech. Officer:* GSFC/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1383 UNIV OF TEXAS AT SAN ANTONIO 8921**  
 PARALLEL AERODYNAMICS SIMULATION IN DISTRIBUTED ENVIRONMENTS  
 09/14/1999 - 08/31/2002 FY01: \$0 Total: \$194,961  
*Prin. Invest.:* A T CHRONPOULOS  
*Tech. Officer:* ARC/B J COLLINS, ARC/G S LEE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 6040 UNIV OF TEXAS AT SAN ANTONIO 8922**  
 CHANGING THE PARADIGM; PREPARING STUDENTS FOR THE COMPUTING  
 PROFESSION IN THE 21ST CENTURY  
 12/15/1999 - 02/28/2002 FY01: \$100,000 Total: \$190,713  
*Prin. Invest.:* R F SINCOVEC  
*Tech. Officer:* ARC/M J LEON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2297 UNIV OF TEXAS AT SAN ANTONIO 8923**  
 PARTNERSHIP IN PROBABILISTIC STRUCTURAL ANALYSIS METHODS  
 10/05/1999 - 08/31/2002 FY01: \$100,000 Total: \$200,000  
*Prin. Invest.:* R D MANTEUFEL  
*Tech. Officer:* GRC/C CHAMIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1720 UNIV OF TEXAS AT SAN ANTONIO 8924**  
 LATIN HYPERCUBE SAMPLING IN RELIABILITY ANALYSIS  
 06/07/2000 - 06/06/2003 FY01: \$96,084 Total: \$192,102  
*Prin. Invest.:* R MANTUEFEL  
*Tech. Officer:* MSFC/F SAFIE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 950 UNIV OF TEXAS AT SAN ANTONIO 8925**  
 TEXAS PREFRESHMAN ENGINEERING PROGRAM  
 07/16/1997 - 09/26/2001 FY01: \$0 Total: \$792,812  
*Prin. Invest.:* M P BERRIOZABAL  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 21 - MATHEMATICS

**NAG 9 1301 UNIV OF TEXAS AT SAN ANTONIO 8926**  
 TEXAS PREFRESHMAN ENGINEERING (TEXPREP) 2001  
 05/08/2001 - 08/28/2002 FY01: \$198,000 Total: \$198,000  
*Prin. Invest.:* M P BERRIOZABAL  
*Tech. Officer:* JSC/L M ARMENDARIZ  
*CASE Category:* 21 - MATHEMATICS

**NAG 9 1382 UNIV OF TEXAS AT TYLER 8927**  
 CFD ANALYSIS OF LASER-ABLATION CARBON NANOTUBE PRODUCTION  
 09/17/2001 - 08/31/2002 FY01: \$15,000 Total: \$15,000  
*Prin. Invest.:* R B GREENDYKE  
*Tech. Officer:* JSC/C D SCOTT  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 5 465 UNIV OF THE INCARNATE WORD 8928**  
 INTEGRATING MATH AND SCIENCE FOR PRE-SERVICE & IN-SERVICE  
 PARTNERSHIPS  
 03/08/2000 - 02/28/2003 FY01: \$140,048 Total: \$280,180  
*Prin. Invest.:* J BEAUFORD  
*Tech. Officer:* GSFC/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

UTAH

**NAG 4 215 BRIGHAM YOUNG UNIV 8929**  
 ROBUST COMMAND LINKS FOR FLIGHT TERMINATION ROBUST COMMAND  
 LINKS FOR FLIGHT TERMINATION  
 10/30/2000 - 09/30/2001 FY01: \$72,034 Total: \$72,034  
*Prin. Invest.:* M D RICE  
*Tech. Officer:* DFRC/R D SAKAHARA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 7711 BRIGHAM YOUNG UNIV 8930**  
 FDG FOR 'GEOLOGIC AND ARCHAEOLOGIC APPLICATIONS OF HIGH-RES-  
 OLUTION SAR' PI:DAVID V. ARNOLD, SENH98  
 09/28/1998 - 09/30/2002 FY01: \$187,310 Total: \$374,778  
*Prin. Invest.:* D V ARNOLD  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8746 BRIGHAM YOUNG UNIV 8931**  
 POLAR ICE SHEET MONITORING FROM LONG TERM SCATTEROMETER  
 AND RADIOMETER OBSERVATIONS  
 08/18/1999 - 08/31/2002 FY01: \$90,086 Total: \$266,355  
*Prin. Invest.:* D LONG  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9625 BRIGHAM YOUNG UNIV 8932**  
 SCATTEROMETER CLIMATE RECORD PATHFINDER  
 05/23/2000 - 04/30/2002 FY01: \$160,333 Total: \$265,000  
*Prin. Invest.:* D LONG  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9638** **BRIGHAM YOUNG UNIV** **8933**  
 SYNERGISTIC USE OF TRMM AND SEAWINDS DATA  
 06/08/2000 - 11/30/2001 FY01: \$50,000 Total: \$64,583  
*Prin. Invest.:* D G LONG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 8 52877** **BRIGHAM YOUNG UNIV** **8934**  
 HEAT ADDITION IN A FIXED GEOMETRY SCRAMJET ENGINE.  
 08/24/1999 - 08/14/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* R DAINES  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 2048** **UNIV OF UTAH** **8935**  
 CLOUD SCALE NUMERICAL MODELING OF THE ARCTIC BOUND ARY LAYER  
 04/01/1998 - 06/30/2001 FY01: \$1 Total: \$256,654  
*Prin. Invest.:* S K KRUEGER  
*Tech. Officer:* LARC/D S MCDUGAL, LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2083** **UNIV OF UTAH** **8936**  
 FACILITY FOR ATMOSPHERIC REMOTE SENSING (FARS) CIRRUS  
 MEASUREMENTS FOR FIRE III  
 06/30/1998 - 05/31/2001 FY01: \$1 Total: \$171,001  
*Prin. Invest.:* K SASSON  
*Tech. Officer:* LARC/V E DELNORE, LARC/J L RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2250** **UNIV OF UTAH** **8937**  
 USING GRIOND-BASED MEASUREMENTS AND RETRIEVALS TO VALIDATE  
 SATELLITE DATA  
 01/19/2000 - 10/31/2002 FY01: \$73,869 Total: \$134,028  
*Prin. Invest.:* X DONG  
*Tech. Officer:* LARC/P MINNIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2319** **UNIV OF UTAH** **8938**  
 MOLECULAR DYNAMICS SIMULATIONS OF RANDOM IONOMERS AND  
 NANOCOMPOSITES  
 07/14/2000 - 06/30/2003 FY01: \$85,473 Total: \$117,438  
*Prin. Invest.:* G D SMITH, M A GLASSER, NONE  
*Tech. Officer:* LARC/J A HINKLEY, LARC/T S GATES  
*CASE Category:* 12 - CHEMISTRY

**NAG 2 1444** **UNIV OF UTAH** **8939**  
 THE UAV CIRRUS CLOUD MEASUREMENT PROGRAM: A PROPO SAL IN  
 SUPPORT THE NASA ESE UAV  
 09/27/2000 - 12/31/2000 FY01: \$0 Total: \$90,000  
*Prin. Invest.:* G G MACE, NONE  
*Tech. Officer:* ARC/S S WEGENER, ARC/R S HIPSKIN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 2403** **UNIV OF UTAH** **8940**  
 SIMULATION OF COMBUSTION SYSTEMS WITH REALISTIC G-JITTER  
 04/26/2000 - 03/22/2003 FY01: \$40,755 Total: \$85,601  
*Prin. Invest.:* D E MELL  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2548** **UNIV OF UTAH** **8941**  
 SECONDARY FIRES: INITIATION & EXTINGUISHMENT SECONDARY FIRES:  
 INITIATION & EXTINGUISHMENT  
 02/23/2001 - 11/30/2004 FY01: \$30,001 Total: \$30,001  
*Prin. Invest.:* W MELL  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2624** **UNIV OF UTAH** **8942**  
 A JOINT SIMULATION AND EXPERIMENTAL STUDY OF NANOC OMPOSITE  
 SOLID POLYMERN ELECTROLYTES  
 05/25/2001 - 12/31/2003 FY01: \$90,000 Total: \$90,000  
*Prin. Invest.:* G D SMITH  
*Tech. Officer:* GRC/B MCKISSOCK  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 3902** **UNIV OF UTAH** **8943**  
 ORBITING ARRAY OF WIDE-ANGLE LIGHT COLLECTORS (OWL ORBITING  
 "EYES" TO STUDY AIR SHOWERS INITIATED BY  
 03/03/1997 - 02/28/2002 FY01: \$0 Total: \$120,646  
*Prin. Invest.:* E C LOH  
*Tech. Officer:* GSFC/L M BARBIER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4452** **UNIV OF UTAH** **8944**  
 RADIATION ANTICARCINOGENESIS BY THIAZOLIDINE PRODR  
 05/20/1997 - 02/28/2000 FY01: \$0 Total: \$362,768  
*Prin. Invest.:* R WARTERS  
*Tech. Officer:* GSFC/W SHIMMERLING  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 6458** **UNIV OF UTAH** **8945**  
 CLOUD PROPERTY & SURFACE RADIATION OBSERVATIONS & DIAGNOS-  
 TICS IN SUPPORT OF EOS, CERES, MODIA & MISR  
 10/14/1997 - 03/31/2002 FY01: \$260,627 Total: \$1,735,394  
*Prin. Invest.:* G MACE  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7447** **UNIV OF UTAH** **8946**  
 CONTINUED SUPPORT OF THE GCTE FOCUS 1 OFFICE (ECOS YSTEM  
 PHYSIOLOGY)  
 06/19/1998 - 01/31/2002 FY01: \$151,419 Total: \$450,420  
*Prin. Invest.:* J R EHLERINGER  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7521** **UNIV OF UTAH** **8947**  
 INVESTIGATION OF PHYSICAL PROCESS DYNAMICS DURING COLD  
 SEASON FLOODING  
 06/18/1998 - 06/14/2001 FY01: \$0 Total: \$37,247  
*Prin. Invest.:* D TARBOTON  
*Tech. Officer:* GSFC/E ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7828** **UNIV OF UTAH** **8948**  
 EGRET OBSERVING TIME REQUEST FOR GAMMA-RAY BURSTS  
 11/16/1998 - 11/30/1999 FY01: \$0 Total: \$14,997  
*Prin. Invest.:* B J DINGUS  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 7871** **UNIV OF UTAH** **8949**  
 THE GLACIER DYNAMICS AND MASS FLUX OF ANTARCTIC ICE STREAMS  
 FROM RADARSAT INSAR  
 01/21/1999 - 12/31/2001 FY01: \$49,386 Total: \$146,060  
*Prin. Invest.:* R FORESTER  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8277** **UNIV OF UTAH** **8950**  
 ACCRETION ONTO SUPERMASSIVE BLACK HOLES: OBSERVATIONAL  
 SIGNALS FROM 3-D33-DIMENSION (ATP 98)  
 03/02/1999 - 02/28/2002 FY01: \$44,645 Total: \$109,239  
*Prin. Invest.:* B C BROMLEY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8339** **UNIV OF UTAH** **8951**  
 GLOBAL DISTRIBUTION OF LIGHTNING FROM THE DTD AND RELATE  
 GLOBAL DISTRIBUTION OF MCSS FROM TH  
 04/26/1999 - 03/31/2001 FY01: \$0 Total: \$142,337  
*Prin. Invest.:* E ZIPSER  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8550** **UNIV OF UTAH** **8952**  
 THE SPATIAL AND TEMPORAL CHARACTERISTICS OF HIGH LATITUDE  
 SEASONAL SNOW MELT AS DETECTED BY PASSIVE  
 06/02/1999 - 05/31/2002 FY01: \$0 Total: \$128,886  
*Prin. Invest.:* K JEZEK  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8561** **UNIV OF UTAH** **8953**  
 VALIDATION AND TRANSFERABILITY OF TROPICAL RAIN ESTIMATION  
 METHODS  
 05/17/1999 - 09/30/2001 FY01: \$0 Total: \$313,521  
*Prin. Invest.:* E J ZIPSER  
*Tech. Officer:* GSFC/R W LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9717** **UNIV OF UTAH** **8954**  
 VALIDATION AND TRANSFERABILITY OF TROPICAL LATENT HEATING ESTI-  
 MATES  
 06/21/2000 - 11/30/2001 FY01: \$172,000 Total: \$217,924  
*Prin. Invest.:* E J ZIPSER  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10136** **UNIV OF UTAH** **8955**  
 SAR ANALYSIS OF THE WESTERN SAINT ELIAS OROGEN, ALASKA  
 12/04/2000 - 11/30/2001 FY01: \$46,997 Total: \$46,997  
*Prin. Invest.:* R L BRUHN  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10682** **UNIV OF UTAH** **8956**  
 REMOTE SENSING OF INTENSITY & ORGANIZATION OF CON- VECTION IN  
 HURRICANES & TROPICAL CYCLONES BEFORE  
 05/10/2001 - 05/14/2002 FY01: \$89,500 Total: \$89,500  
*Prin. Invest.:* E J ZIPSER  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1665** **UNIV OF UTAH** **8957**  
 NOVEL MICROSTRUCTURES FOR POLYMER-LIQUID CRYSTAL CO-COMPOSITE  
 MATERIALS  
 06/15/2000 - 11/30/2003 FY01: \$104,500 Total: \$154,500  
*Prin. Invest.:* J J MAGDA  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1797** **UNIV OF UTAH** **8958**  
 INTENSITY & ORGANIZATION OF CONVECTION IN HURRI- CANES AND  
 TROPICAL CYCLONES BEFORE & AFTER LANDFAL  
 03/07/2001 - 01/31/2002 FY01: \$45,140 Total: \$45,140  
*Prin. Invest.:* E J ZIPSER  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 00120** **UNIV OF UTAH** **8959**  
 MEASUREMENT OF THE ATMOSPHERIC UV NIGHTGLOW FROM A HIGH  
 ALTITUDE BALLON (NIGHTGLOW).  
 02/01/2000 - 05/31/2002 FY01: \$52,540 Total: \$102,540  
*Prin. Invest.:* E LOHBER, E LOH  
*Tech. Officer:* GSFC/L BARBIER  
*CASE Category:* 11 - ASTRONOMY

**NCC 1 256** **UNIV OF UTAH** **8960**  
 DEVELOPMENT OF PREDICTIVE CAPABILITIES FOR DAMAGE TOLERANCE  
 IN STITCHED COMPOSITE MATERIALS  
 05/01/1997 - 04/30/2001 FY01: -\$1 Total: \$207,021  
*Prin. Invest.:* D O ADAMS  
*Tech. Officer:* LARC/J R REEDERS  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 5 297** **UNIV OF UTAH** **8961**  
 CARBON AND OXYGEN ISOTOPE RATIO CO2 FLUX ANALYSES AT THE SOIL,  
 CANOPY, AND LANDSCAPE SCALES  
 06/16/1998 - 12/31/2001 FY01: \$250,535 Total: \$855,598  
*Prin. Invest.:* J EHLERINGER  
*Tech. Officer:* GSFC/D DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30184** **UNIV OF UTAH** **8962**  
 IMPLICATIONS OF ARCTIC WARMING AS DETERMINED BY SNOWMELT  
 ONSET DATES OBSERVED WITH REMOTELY SENSE  
 08/19/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* R R FORSTER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30202** **UNIV OF UTAH** **8963**  
 THE O OF ATMOSPHERIC CO2: SEEING THE GRASSLAND THROUGH THE  
 BLADES/STUDENT: BRENT HELLIKER  
 08/19/1999 - 08/31/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* J R EHLERINGER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30398** **UNIV OF UTAH** **8964**  
 RETRIEVAL OF CIRRUS CLOUD MICROPHYSICAL PARAMETERS AND ANAL-  
 YSIS OF THE RELATIONSHIP BETWEEN PROPERT  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* G MACE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30423** **UNIV OF UTAH** **8965**  
 PRECIPITATION FEATURES ACCORDING TO TRMM: DIURNAL CYCLE AND  
 EVALUATION OF RAINFALL PRODUCTS (STUDE  
 09/07/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* E SIPZER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40066** **UNIV OF UTAH** **8966**  
 SPACE GRANT GEOSPATIAL EXTENSION SPECIALIST PROGRAM  
 03/09/2000 - 03/14/2001 FY01: \$0 Total: \$431,250  
*Prin. Invest.:* D WESTENSKOW  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40101** **UNIV OF UTAH** **8967**  
 ROCKY MOUNTAIN UTAH SPACE GRANT COLLEGE AND FELLOW SHIP  
 PROGRAM  
 03/01/2001 - 01/31/2002 FY01: \$431,250 Total: \$431,250  
*Prin. Invest.:* W WESTENSKOW  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 1484** **UTAH STATE UNIV** **8968**  
 THE FLOW OF PLASMA IN THE SOLAR TERRESTRIAL ENVIRONMENT  
 11/26/1990 - 09/30/1999 FY01: \$0 Total: \$2,127,745  
*Prin. Invest.:* R W SCHUNK  
*Tech. Officer:* GSFC/T J BIRMINGHAM  
*CASE Category:* 13 - PHYSICS

**NAG 5 4469** **UTAH STATE UNIV** **8969**  
 SATELLITE STUDIES OF STORM TIME MID- AND LOW-LATIT ODYNAMICS  
 05/21/1997 - 09/30/2001 FY01: \$0 Total: \$309,200  
*Prin. Invest.:* D G FEJER  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5046** **UTAH STATE UNIV** **8970**  
 A ROCKET INVESTIGATION OF MESOSPHERIC EDDY DIFFU- SION  
 EFFECTS ON AIRGLOW & ODD OXYGEN CHEMISTRY  
 08/03/1995 - 06/30/2001 FY01: \$0 Total: \$271,756  
*Prin. Invest.:* J C ULWICK  
*Tech. Officer:* GSFC/P H PLESS  
*CASE Category:* 13 - PHYSICS

**NAG 5 5187** **UTAH STATE UNIV** **8971**  
 CODA - COUPLING OF DYNAMICS AND AURORA FUNDING FOR FIRST  
 YEAR OF GRANT  
 03/30/1998 - 03/31/2003 FY01: \$103,391 Total: \$411,231  
*Prin. Invest.:* C M SWENSON, NONE  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5189** **UTAH STATE UNIV** **8972**  
 A ROCKET INVESTIGATION OF ELECTRON DENSITY STRUCTURE,  
 E-FIELDS AND AEROSOLS DURING PMSE AND N  
 03/27/1998 - 03/31/2001 FY01: \$0 Total: \$419,648  
*Prin. Invest.:* J C ULWICK  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5245** **UTAH STATE UNIV** **8973**  
 FIRST YEAR OF A THREE YEAR GRANT NAG5-5245 PI DR. JAMES C.  
 ULWICK  
 03/29/1999 - 03/28/2002 FY01: \$99,289 Total: \$390,470  
*Prin. Invest.:* J C ULWICK  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5258** **UTAH STATE UNIV** **8974**  
 FIRST YEAR OF THREE YEAR EFFORT/ ROCKET INVESTIGATION OF WINDS  
 ASSOCIATED W/E-REGION  
 04/11/2000 - 03/23/2003 FY01: \$94,700 Total: \$147,900  
*Prin. Invest.:* C M SWENSON  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5293** **UTAH STATE UNIV** **8975**  
 IONOSPHERIC NANOSATELLITE FORMATION (ION-F) IONOSPHERIC NANO-  
 SATELLITE FORMATION (ION-F)  
 05/23/2000 - 05/17/2003 FY01: \$200,770 Total: \$317,170  
*Prin. Invest.:* B G FEJER  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 7597** **UTAH STATE UNIV** **8976**  
 SNOW HYDROLOGY: THE PARAMETERIZATION OF SUBGRID PR OCESSES  
 WITHIN APHYSICALLY BASED SNOW ENERG  
 07/21/1998 - 07/14/2002 FY01: \$0 Total: \$163,240  
*Prin. Invest.:* D G TARBOTON  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8227** **UTAH STATE UNIV** **8977**  
 "THE FLOW OF PLASMA IN THE SOLAR TERRESTRIAL ENVI RONMENT".  
 02/24/1999 - 03/31/2002 FY01: \$290,000 Total: \$838,470  
*Prin. Invest.:* R W SCHUNK  
*Tech. Officer:* GSFC/J M GREBOWSKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8638** **UTAH STATE UNIV** **8978**  
 PLASMAPAUSE AND ITS ENVIRONMENT: A PROPOSAL FOR COOPERATIVE  
 STUDIES  
 08/11/1999 - 07/31/2002 FY01: \$24,000 Total: \$70,500  
*Prin. Invest.:* B G FEJER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9290** **UTAH STATE UNIV** **8979**  
 ION-F: A SPACE-BASED TESTBED FOR DISTRIBUTED FORMA TION  
 CONTROL USING THE USUSAT NANOSATELLITE  
 03/17/2000 - 03/31/2001 FY01: \$0 Total: \$47,000  
*Prin. Invest.:* R FULLMER  
*Tech. Officer:* GSFC/K LUU  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NAG 5 10215** **UTAH STATE UNIV** **8980**  
 SATELLITE STUDIES OF STORM-TIME THERMOSPHERIC WIND S  
 01/05/2001 - 01/14/2002 FY01: \$81,000 Total: \$81,000  
*Prin. Invest.:* B G FEJER  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

UTAH

**NAG 5 10716**                      **UTAH STATE UNIV**                      **8981**  
 MULTIPLIERLESS FILTERS FOR REAL-TIME PROCESSING OF HYPERSPECTRAL IMAGES  
 04/10/2001 - 04/30/2002                      FY01: \$62,000                      Total: \$62,000  
*Prin. Invest.:* T BOSE  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 11282**                      **UTAH STATE UNIV**                      **8982**  
 USING REMOTE SENSING & IN SITU NETWORK OBSERVATION TO EVALUATE & IMPROVE THE PERFORMANCE OF  
 08/17/2001 - 08/31/2004                      FY01: \$82,344                      Total: \$82,344  
*Prin. Invest.:* M WHITE  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1750**                      **UTAH STATE UNIV**                      **8983**  
 EXTENSION OF ATLANTA/HOUSTON URBAN HEAT ISLAND STUDIES USING ASTER IMAGERY  
 11/13/2000 - 11/19/2001                      FY01: \$11,573                      Total: \$11,573  
*Prin. Invest.:* R GILES  
*Tech. Officer:* MSFC/D QUATTROCHI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 9 999**                      **UTAH STATE UNIV**                      **8984**  
 CROP OPTIMIZATION AND FAILURE ANALYSIS USING CO2  
 04/25/1998 - 04/25/2004                      FY01: \$216,919                      Total: \$619,240  
*Prin. Invest.:* B G BUGBEE, L R JOHNSON  
*Tech. Officer:* KSC/R M WHEELER  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 9 1237**                      **UTAH STATE UNIV**                      **8985**  
 CO2 GAS EXCHANGE TO DETERMINE THE FACTORS CONTROLLING RESPIRATION & CARBON USE IN CROP PLANTS  
 06/16/2000 - 07/01/2003                      FY01: \$21,219                      Total: \$42,275  
*Prin. Invest.:* B BUGBEE  
*Tech. Officer:* JSC/D BARTA  
*CASE Category:* 55 - AGRICULTURE

**NAG 9 1284**                      **UTAH STATE UNIV**                      **8986**  
 OPTIMIZATION OF ROOT ZONE SUBSTRATES FOR REDUCED GRAVITY EXPERIEMENTS  
 02/22/2001 - 01/31/2002                      FY01: \$95,000                      Total: \$95,000  
*Prin. Invest.:* G BINGHAM  
*Tech. Officer:* JSC/K DAUES  
*CASE Category:* 56 - MEDICL

**NAS 1 00071**                      **UTAH STATE UNIV**                      **8987**  
 SENSOR MODULE DEVELOPMENT AND SUPPORT FOR GIFTS  
 06/19/2000 - 02/14/2002                      FY01: \$4,433,550                      Total: \$9,313,550  
*Prin. Invest.:* G BINGHAM, W SMITH  
*Tech. Officer:* LARC/W A ROETTKER, LARC/J B MILLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 20467**                      **UTAH STATE UNIV**                      **8988**  
 SOUNDING OF THE ATMOSPHERE USING BROADBAND EMISSION RADIOMETRY (SABER) INSTRUMENT  
 03/28/1995 - 10/31/2001                      FY01: \$120,000                      Total: \$17,051,680  
*Prin. Invest.:* J ULWICK, D J BAKER, R ESPLIN  
*Tech. Officer:* LARC/M D VANEK, LARC/T C DENKINS  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAS 8 97107**                      **UTAH STATE UNIV**                      **8989**  
 REMOTE SENSING AND MODELING OF URBAN LANDCOVER  
 01/29/1997 - 01/28/2001                      FY01: \$0                      Total: \$135,127  
*Prin. Invest.:* R R GILLIES  
*Tech. Officer:* MSFC/T MILLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 8 98221**                      **UTAH STATE UNIV**                      **8990**  
 ELECTRONIC PROPERTIES OF MATERIALS WITH APPLICATION TO SPACECRAFT CHARGING  
 06/18/1998 - 09/17/2002                      FY01: \$55,202                      Total: \$331,736  
*Prin. Invest.:* J R DENNISON  
*Tech. Officer:* MSFC/S PEARSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 831**                      **UTAH STATE UNIV**                      **8991**  
 SEED-TO-SEED EXPERIMENT (EXPERIMENTS ON RUSSIAN SPACE STATION MIR)  
 10/26/1993 - 06/30/2000                      FY01: \$0                      Total: \$3,535,217  
*Prin. Invest.:* W F CAMPBELL, G E BINGHAM, D L BUBENHEIM  
*Tech. Officer:* ARC/G C JAHNS, ARC/C M WINGET  
*CASE Category:* 55 - AGRICULTURE

**NCC 2 5466**                      **UTAH STATE UNIV**                      **8992**  
 FLOUROMETRIC DETECTION OF MICROORGANISMS ON STERILIZED SURFACES  
 09/26/2001 - 09/14/2002                      FY01: \$60,570                      Total: \$60,570  
*Prin. Invest.:* L S POWERS  
*Tech. Officer:* ARC/C P MCKAY, ARC/B F SMITH  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 5 219**                      **UTAH STATE UNIV**                      **8993**  
 HOLOGRAPHIC LIDAR CONCEPTS AND APPLICATIONS  
 08/19/1997 - 10/31/2001                      FY01: \$0                      Total: \$79,520  
*Prin. Invest.:* T D WILKERSON  
*Tech. Officer:* GSFC/G SCHWEMMER  
*CASE Category:* 11 - ASTRONOMY

**NCC 8 162**                      **UTAH STATE UNIV**                      **8994**  
 ANALYSIS OF SPATIAL AND TEMPORAL VARIABILITY OF THE WARM SEASON LAND SURFACE ENERGY BUDGET  
 11/02/1998 - 10/31/2001                      FY01: \$0                      Total: \$75,115  
*Prin. Invest.:* R R GILLIES  
*Tech. Officer:* MSFC/W LAPENTA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC13 18**                      **UTAH STATE UNIV**                      **8995**  
 NASA-SPONSORED VISTING INVESTIGATOR PROGRAM AFFILIATE CENTER FOR THE WESTERN UNITED STATES  
 09/12/1996 - 12/31/1999                      FY01: \$0                      Total: \$515,023  
*Prin. Invest.:* D BAKER  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NCC13 00005**                      **UTAH STATE UNIV**                      **8996**  
 AFFILIATED RESEARCH CENTER PROGRAM SAME  
 03/06/2000 - 03/05/2005                      FY01: \$153,212                      Total: \$365,666  
*Prin. Invest.:* R D RAMSEY, D BAKER, C HALL  
*Tech. Officer:* SSC/A PEEK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## VERMONT

## NASA'S UNIVERSITY PROGRAM

**NGT 5 40047**                      **UTAH STATE UNIV**                      **8997**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM  
 02/11/1997 - 01/31/2002      FY01: \$0                                      Total: \$1,354,372  
*Prin. Invest.:* D BAKER  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52866**                      **UTAH STATE UNIV**                      **8998**  
 MONITORING OZONE CONCENTRATIONS AND INJURY IN HIGH ELEVATION  
 DOUGLAS FIR NEAR SALT LAKE CITY  
 07/24/1998 - 06/30/2001      FY01: \$0                                      Total: \$44,000  
*Prin. Invest.:* F BAKER  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 8 52885**                      **UTAH STATE UNIV**                      **8999**  
 EXPERIMENTAL STUDY OF THE SECONDARY ELECTRON EMISSION  
 06/22/2000 - 08/31/2003      FY01: \$22,000                              Total: \$44,000  
*Prin. Invest.:* J DENNISON  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 13 - PHYSICS

**NGT10 52617**                      **UTAH STATE UNIV**                      **9000**  
 PLANT RESIDE DEGRADATION PRODUCTS IN REGENERATIVE LIFE  
 SUPPORT SYSTEMS  
 07/14/1998 - 12/01/2001      FY01: \$7,500                                      Total: \$73,500  
*Prin. Invest.:* P GROSSEL  
*Tech. Officer:* KSC/R WHEELER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

## VERMONT

**NAG 5 6118**                      **MIDDLEBURY COLLEGE**                      **9001**  
 CORONAL MASS EJECTIONS AND LARGE-SCALE EVOLUTION O  
 08/08/1997 - 09/14/2000      FY01: \$0                                      Total: \$87,880  
*Prin. Invest.:* P WOLFSON  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8020**                      **MIDDLEBURY COLLEGE**                      **9002**  
 SN 1006: PROBING THE SYNCHROTRON ORIGIN OF THE X- RAYS AND  
 MEASURING PROPER MOTIONS \_ADP98  
 01/06/1999 - 12/31/2001      FY01: \$0                                      Total: \$39,632  
*Prin. Invest.:* P WINKLER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9733**                      **MIDDLEBURY COLLEGE**                      **9003**  
 ENERGETICS & INITIATION OF CORONAL MASS EJECTIONS  
 06/30/2000 - 06/30/2002      FY01: \$30,950                              Total: \$56,328  
*Prin. Invest.:* R WOLFSON  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 4138**                      **UNIV OF VERMONT**                      **9004**  
 MAPPING NORTHERN METHANE SOURCES AND SINKS IN THE USING  
 RADARSAT  
 03/17/1997 - 12/31/2000      FY01: \$0                                      Total: \$237,500  
*Prin. Invest.:* D MORRISSEY  
*Tech. Officer:* GSFC/R H THOMAS  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 5 5135**                      **UNIV OF VERMONT**                      **9005**  
 EFFECTS OF A SOUNDING ROCKET FLIGHT ON DROSOPHIA- TEST BED  
 FOR MOTILITY & METABOLISM EXPERIMENTS  
 04/14/1997 - 10/13/2000      FY01: \$0                                      Total: \$34,947  
*Prin. Invest.:* T KELLER  
*Tech. Officer:* GSFC/W JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 7247**                      **UNIV OF VERMONT**                      **9006**  
 CORE FORMATION UNDER DYNAMIC CONDITIONS: AN EXPERIMENTAL  
 STUDY  
 04/28/1998 - 12/31/2000      FY01: \$0                                      Total: \$60,000  
*Prin. Invest.:* T RUSHMER  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9532**                      **UNIV OF VERMONT**                      **9007**  
 CORE FORMATION UNDER DYNAMIC CONDITIONS: SILICATE- METAL  
 DISTRIBUTION WITH DIFFERENTIAL STRESS  
 04/27/2000 - 04/30/2001      FY01: \$0                                      Total: \$20,000  
*Prin. Invest.:* T RUSHMER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10463**                      **UNIV OF VERMONT**                      **9008**  
 CORE FORMATION UNDER DYNAMIC CONDITIONS: AN EXPERIMENTAL  
 DEFORMATION INVESTIGATION  
 02/27/2001 - 02/28/2002      FY01: \$40,000                              Total: \$40,000  
*Prin. Invest.:* T RUCHMER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1281**                      **UNIV OF VERMONT**                      **9009**  
 JOVE RESEARCH  
 01/21/1997 - 08/31/2000      FY01: -\$2,876                                      Total: \$52,124  
*Prin. Invest.:* G MIRCHANDANI  
*Tech. Officer:* MSFC/J F DOWDY, MSFC/J R PRUITT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 5342**                      **UNIV OF VERMONT**                      **9010**  
 LAND COVER MAPPING IN NORTHERN ECOSYSTEMS USING AD EOS/  
 POLDER  
 08/17/1999 - 04/30/2000      FY01: \$0                                      Total: \$35,000  
*Prin. Invest.:* G P LIVINGSTON, L A MORRISSEY  
*Tech. Officer:* ARC/V C VANDERBILT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 5399**                      **UNIV OF VERMONT**                      **9011**  
 LAND COVER MAPPING IN NORTHERN ECOSYSTEMS USING AD EOS/  
 POLDER  
 09/18/2000 - 07/31/2001      FY01: \$0                                      Total: \$30,000  
*Prin. Invest.:* G P LIVINGSTON  
*Tech. Officer:* ARC/V C VANDERBILT, ARC/E P CONDON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

NASA'S UNIVERSITY PROGRAM

VIRGINIA

**NCC 5 394**                      **UNIV OF VERMONT**                      **9012**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/13/1999 - 11/01/2001      FY01: \$0                      Total: \$450,000  
*Prin. Invest.:* W D LAKIN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 581**                      **UNIV OF VERMONT**                      **9013**  
 VERMONT NASA EPSCOR PROGRAM  
 08/15/2001 - 07/31/2004      FY01: \$125,000              Total: \$125,000  
*Prin. Invest.:* W D LAKIN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40045**                      **UNIV OF VERMONT**                      **9014**  
 NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRA  
 01/24/1997 - 02/28/2001      FY01: \$0                      Total: \$973,750  
*Prin. Invest.:* W D LAKIN  
*Tech. Officer:* HQ/J DASCH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40110**                      **UNIV OF VERMONT**                      **9015**  
 VERMONT SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 03/02/2001 - 02/28/2002      FY01: \$256,250              Total: \$256,250  
*Prin. Invest.:* W LAKIN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

VIRGINIA

**NAG 1 2219**                      **CHRISTOPHER NEWPORT UNIV**                      **9016**  
 TECHNOLOGY DEVELOPMENT IMPLEMENTATION, AND ASSESS- MENT.  
 K-16 PRE-SERVICE, IN-SERVICE, AND DISTANCE  
 08/20/1999 - 07/31/2002      FY01: \$537,835              Total: \$1,112,468  
*Prin. Invest.:* R CATON  
*Tech. Officer:* LARC/T E PINELLI, LARC/R A HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2284**                      **CHRISTOPHER NEWPORT UNIV**                      **9017**  
 AN EXPERIMENT IN EDUCATIONAL TECHNOLOGY-EVALUATING A CYBER-  
 BASED MODEL FOR LEARNING  
 03/28/2000 - 12/15/2001      FY01: \$0                      Total: \$88,000  
*Prin. Invest.:* L LAMBERT  
*Tech. Officer:* LARC/D BUSHNELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01070**                      **CHRISTOPHER NEWPORT UNIV**                      **9018**  
 LOW TEMP SUPERCONDUCTING QUANTUM INTERFERENCE (SQUID)  
 NONDESTRUCTIVE EVALUATION (NDE) APPLIC'S  
 06/01/2001 - 05/31/2002      FY01: \$30,070              Total: \$30,070  
*Prin. Invest.:* R SELIM  
*Tech. Officer:* LARC/M NAMKUNG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 6503**                      **CHRISTOPHER NEWPORT UNIV**                      **9019**  
 VALIDATION OF MSMT. OF POLLUTION IN THE TROPOSPHER E (MOPITT)  
 EXPERIMENT BY GROUND-BASED INFRARED SO  
 10/29/1997 - 03/31/2002      FY01: \$95,705              Total: \$496,543  
*Prin. Invest.:* N POUGATCHEV  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 11 - ASTRONOMY

**NCC 1 277**                      **CHRISTOPHER NEWPORT UNIV**                      **9020**  
 DEV OF A 3-DIMENSIONAL HEAVY ION, CHARGED PARTICLE BOLTZMANN  
 TRANSPORT SOLVER  
 02/13/1998 - 01/31/2001      FY01: -\$14,121              Total: \$244,484  
*Prin. Invest.:* C K CHANG  
*Tech. Officer:* LARC/R C SINGLETERRY, JR., LARC/J W WILSON  
*CASE Category:* 13 - PHYSICS

**NCC 1 318**                      **CHRISTOPHER NEWPORT UNIV**                      **9021**  
 AIRCRAFT AND GROUND-BASED SPECTROSCOPIC MEASURE- MENTS OF  
 TROPOSPHERIC CO, CO2,CH4,N2O, AND H2O  
 09/18/1998 - 04/30/2001      FY01: -\$9,354              Total: \$200,365  
*Prin. Invest.:* N POUGATCHER, M BUONCRISTIANI  
*Tech. Officer:* LARC/G W SOCHSE, LARC/D E HINTON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 01028**                      **CHRISTOPHER NEWPORT UNIV**                      **9022**  
 THEORETICAL AND COMPUTATIONAL DEVELOPMENT OF A GALACTIC  
 COSMIC RAY (GCR) BOUNDARY CONDITION MODEL  
 03/08/2001 - 01/31/2004      FY01: \$92,586              Total: \$92,586  
*Prin. Invest.:* K CHANG  
*Tech. Officer:* LARC/R C SINGLETERRY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 435**                      **CHRISTOPHER NEWPORT UNIV**                      **9023**  
 THE NASA WHY FILES, PROBLEM-BASED LEARNING INTEGRA TING  
 BROADCAST VIDEO AND THE INTERNET.  
 09/24/1999 - 09/30/2002      FY01: \$96,459              Total: \$244,396  
*Prin. Invest.:* N B FREEMAN  
*Tech. Officer:* GSFC/D GABRYS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2077**                      **COLLEGE OF WILLIAM AND MARY**                      **9024**  
 BELL-CURVE BASED EVOLUTIONARY STRATEGIES FOR STRUCTURAL  
 OPTIMIZATION  
 06/08/1998 - 07/31/2000      FY01: -\$4                      Total: \$86,446  
*Prin. Invest.:* R K KINCAID  
*Tech. Officer:* LARC/J SOBIESKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2168**                      **COLLEGE OF WILLIAM AND MARY**                      **9025**  
 AN ADVANCED HIERARCHICAL HYBRID ENVIRONMENT FOR RELIABILITY  
 AND PERFORMANCE MODELING  
 03/24/1999 - 02/28/2002      FY01: \$112,025              Total: \$302,429  
*Prin. Invest.:* G CIARDO  
*Tech. Officer:* LARC/P W GOODE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 2271**                      **COLLEGE OF WILLIAM AND MARY**                      **9026**  
 A UNIFORM ONTOLOGY FOR SOFTWARE INTERFACES  
 03/21/2000 - 02/28/2002      FY01: \$0                      Total: \$44,752  
*Prin. Invest.:* S FEYOCK  
*Tech. Officer:* LARC/P C SCHUTTE/A C TRUJILLO  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 1 2314**                      **COLLEGE OF WILLIAM AND MARY**                      **9027**  
 PREPARATION AND CHARACTERIZATION OF POLYIMIDE NANOCOMPO-  
 SITES  
 06/26/2000 - 06/14/2002      FY01: \$0                      Total: \$17,495  
*Prin. Invest.:* R A ORWOLL  
*Tech. Officer:* LARC/J W CONNELL, LARC/J G SMITH  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 2320 COLLEGE OF WILLIAM AND MARY 9028**  
 BELL-CURVE BASED EVOLUTIONARY STRATEGIES FOR STRUCTURAL OPTIMIZATION  
 07/07/2000 - 07/31/2001 FY01: \$26,000 Total: \$42,245  
*Prin. Invest.:* R K KINCAID  
*Tech. Officer:* LARC/J SOBIESKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01107 COLLEGE OF WILLIAM AND MARY 9029**  
 PREPARATION AND CHARACTERIZATION OF POLYIMIDE NANOCOMPOSITES  
 07/09/2001 - 06/14/2002 FY01: \$2,920 Total: \$2,920  
*Prin. Invest.:* R A ORWOLL  
*Tech. Officer:* LARC/J W CONNELL  
*CASE Category:* 12 - CHEMISTRY

**NAS 1 00146 COLLEGE OF WILLIAM AND MARY 9030**  
 SPECTROSCOPIC RESEARCH AND ANALYSES OF SAGE III DATA PRODUCTS  
 01/19/2001 - 01/18/2006 FY01: \$101,000 Total: \$101,000  
*Prin. Invest.:* D BRENNER  
*Tech. Officer:* LARC/W CHU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 98039 COLLEGE OF WILLIAM AND MARY 9031**  
 SAGE SCIENCE INVESTIGATION  
 06/30/1998 - 08/31/2000 FY01: \$0 Total: \$207,437  
*Prin. Invest.:* D C BENNER  
*Tech. Officer:* LARC/W P CHU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 239 COLLEGE OF WILLIAM AND MARY 9032**  
 THE DEVELOPMENT OF MATERIALS FOR STRUCTURES AND RADIATION SHIELDING IN SPACE  
 07/17/1996 - 12/31/2000 FY01: -\$1,620 Total: \$169,738  
*Prin. Invest.:* R L KIEFER, R A ORWOLL  
*Tech. Officer:* LARC/S A THIBEAULT  
*CASE Category:* 12 - CHEMISTRY

**NCC 1 327 COLLEGE OF WILLIAM AND MARY 9033**  
 PREDICTION FOR RADIATION SHIELDING MATERIALS  
 01/27/1999 - 12/18/2001 FY01: \$99,660 Total: \$294,189  
*Prin. Invest.:* R L KIEFER  
*Tech. Officer:* LARC/S A THIBEAULT  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 1 356 COLLEGE OF WILLIAM AND MARY 9034**  
 CYBER SIMULATION FOR COMPOSITE MAT'LS & STRUCTURES IN AERONAUTICS AND AEROSPACE  
 09/28/1999 - 09/30/2002 FY01: \$150,000 Total: \$324,060  
*Prin. Invest.:* D M MANOS, R B PIPES  
*Tech. Officer:* LARC/J H STARNES, JR.  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 390 COLLEGE OF WILLIAM AND MARY 9035**  
 HIGH RESOLUTION SPECTROSCOPY TO SUPPORT ATMOSPHERIC MEASUREMENTS  
 03/29/2000 - 03/31/2003 FY01: \$139,600 Total: \$292,100  
*Prin. Invest.:* D C BENNER, M D VENKATARAMAN  
*Tech. Officer:* LARC/M H SMITH/C P RINSLAND  
*CASE Category:* 13 - PHYSICS

**NCC 1 01030 COLLEGE OF WILLIAM AND MARY 9036**  
 DEV & APPLIC NON-LINEAR IMAGE ENHANCEMENT & MULTI-SENSOR FUSION TECHNIQ'S HAZY/DARK IMAG'G CONDITIO  
 03/06/2001 - 02/08/2004 FY01: \$100,000 Total: \$100,000  
*Prin. Invest.:* Z RAHMAD  
*Tech. Officer:* LARC/D J JOBSON, LARC/S D HARRAH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 01056 COLLEGE OF WILLIAM AND MARY 9037**  
 LARGE SCALE PRODUCTION OF CARBON NANOTUBES USING THE JEFFERSON LAB FREE ELECTRON LASER  
 07/25/2001 - 07/24/2002 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* B C HOLLOWAY  
*Tech. Officer:* LARC/M W SMITH  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 1 01008 COLLEGE OF WILLIAM AND MARY 9038**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/04/2001 - 06/30/2004 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* N M ALEXANDROV, V TORCZON  
*Tech. Officer:* LARC/R HATHAWAY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 1 01010 COLLEGE OF WILLIAM AND MARY 9039**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/04/2001 - 06/30/2004 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* M HINDERS  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52180 COLLEGE OF WILLIAM AND MARY 9040**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 01/12/1998 - 12/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J S BOGHOSIAN  
*Tech. Officer:* LARC/P H JOHNSTON  
*CASE Category:* 13 - PHYSICS

**NGT 1 52195 COLLEGE OF WILLIAM AND MARY 9041**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) YEAR ONE  
 06/26/1998 - 06/30/2000 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* A S MINER, G CIARDO  
*Tech. Officer:* LARC/P W GOODE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 1 52200 COLLEGE OF WILLIAM AND MARY 9042**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 07/21/1998 - 08/31/2002 FY01: \$24,000 Total: \$78,000  
*Prin. Invest.:* R A ORWOLL  
*Tech. Officer:* LARC/J W CONNELL, LARC/J A HINKLEY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 1 52204 COLLEGE OF WILLIAM AND MARY 9043**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 09/04/1998 - 08/31/2002 FY01: \$14,500 Total: \$82,000  
*Prin. Invest.:* M HINDERS  
*Tech. Officer:* LARC/T E PINELLI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 310**      **ESTRN VA MED SCHL-ESTRN VA MED AUTHORITY**      **9044**  
 STRESS COUNTER-RESPONSE TRAINING VIA PHYSIOLOGICAL SELF  
 REGULATIONS DURING FLIGHT SIMULATION  
 07/29/1998 - 06/30/2000      FY01: \$0      Total: \$60,762  
*Prin. Invest.:* O S PALSSON  
*Tech. Officer:* LARC/A T POPE, LARC/P C SCHUTTE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 1 2258**      **GEORGE MASON UNIV**      **9045**  
 INVENTIVE DESIGN: AN EVOLUTIONARY COMPUTATION APPROACH  
 01/05/2000 - 08/31/2001      FY01: \$18,999      Total: \$133,999  
*Prin. Invest.:* T ARCISZEWSKI, D A SCHUM, K DEJONG  
*Tech. Officer:* LARC/J J REHDER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 2316**      **GEORGE MASON UNIV**      **9046**  
 MIDDLE ATMOSPHERIC HYDROGEN PHOTOCHEMISTRY  
 06/23/2000 - 06/22/2001      FY01: \$1      Total: \$32,001  
*Prin. Invest.:* M SUMMERS  
*Tech. Officer:* LARC/G MADDREA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01030**      **GEORGE MASON UNIV**      **9047**  
 INVENTIVE DESIGN: AN EVOLUTIONARY COMPUTATION APPROACH  
 03/09/2001 - 09/30/2004      FY01: \$179,069      Total: \$179,069  
*Prin. Invest.:* T ARCISZEWSKI, K D JONG  
*Tech. Officer:* LARC/J J RENDER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 2 1289**      **GEORGE MASON UNIV**      **9048**  
 ABATEMENT OF AUTOMATION ERRORS BY TRAINING BASED ON COGNITIVE  
 MODELS  
 02/01/1999 - 12/31/2001      FY01: \$108,167      Total: \$279,804  
*Prin. Invest.:* D B DAVIS, P A IKOMI, R WHOLT  
*Tech. Officer:* ARC/S M CASNER  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 5 4140**      **GEORGE MASON UNIV**      **9049**  
 MULTISENSOR MAPPING OF AFRICAN SETTLEMENTS AND REF  
 04/12/1997 - 06/30/2001      FY01: \$0      Total: \$125,771  
*Prin. Invest.:* B HAACK  
*Tech. Officer:* GSFC/R H THOMAS  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NAG 5 7065**      **GEORGE MASON UNIV**      **9050**  
 INTERPLANETARY DUST DISTRIBUTION AND THE DIRBE DATA  
 03/11/1998 - 03/14/2000      FY01: \$0      Total: \$123,700  
*Prin. Invest.:* L OZNEROY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8834**      **GEORGE MASON UNIV**      **9051**  
 THE REDSHIFT DEPENDENCE OF THE INTERACTION- ACTIVITY CONNECTION  
 AMONG ULTRALUMINOUS STARBURST  
 11/18/1999 - 09/30/2001      FY01: \$29,734      Total: \$58,845  
*Prin. Invest.:* J WALLIN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9035**      **GEORGE MASON UNIV**      **9052**  
 ANALYSES OF OCEANIC MONTHLY RAIN RATE PARAMETERS DERIVED  
 FROM TMI  
 02/09/2000 - 02/14/2001      FY01: \$0      Total: \$50,232  
*Prin. Invest.:* L S CHIU  
*Tech. Officer:* GSFC/A T CHANG  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9636**      **GEORGE MASON UNIV**      **9053**  
 CONTINUOUS PRECIPITATION ESTIMATES FROM TRMM & MESOSCALE  
 MODELS  
 05/25/2000 - 07/14/2001      FY01: \$67,901      Total: \$82,901  
*Prin. Invest.:* L CHIU  
*Tech. Officer:* GSFC/J A WEINMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9669**      **GEORGE MASON UNIV**      **9054**  
 HYDROGEN CHEMISTRY IN THE POLAR MESOSPHERE  
 06/22/2000 - 06/30/2002      FY01: \$100,900      Total: \$193,100  
*Prin. Invest.:* M E SUMMERS  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9781**      **GEORGE MASON UNIV**      **9055**  
 PROBLEM SOLVING ON LOOSELY COUPLED SYSTEM  
 07/07/2000 - 01/31/2002      FY01: \$30,283      Total: \$62,283  
*Prin. Invest.:* P Y WANG  
*Tech. Officer:* GSFC/J DORBAND  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10038**      **GEORGE MASON UNIV**      **9056**  
 LOW-LUMINOSITY NUCLEAR ACCRETION IN NGC 4261 & NGC 6251  
 09/27/2000 - 09/30/2002      FY01: \$16,000      Total: \$38,518  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10073**      **GEORGE MASON UNIV**      **9057**  
 HIGH-ENERGY ABSORPTION IN BLAZARS: PROBING THE INNER JET ENVIRONMENT  
 (ADP 98)  
 10/30/2000 - 06/30/2002      FY01: \$70,923      Total: \$70,923  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10177**      **GEORGE MASON UNIV**      **9058**  
 A PROTOTYPE CLUSTERING TECHNIQUE FOR DATA MINING & KNOWLEDGE  
 DISCOVERY BASED ON A DATA PYRAMID MODE  
 01/04/2001 - 01/14/2002      FY01: \$132,000      Total: \$132,000  
*Prin. Invest.:* D KAFATOS  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/K L MOE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10243**      **GEORGE MASON UNIV**      **9059**  
 CONSTRAINING THE STRUCTURE OF THE CENTRAL ENGINE OF RADIO-  
 LOUD AGN ADP99  
 01/17/2001 - 09/14/2002      FY01: \$28,219      Total: \$28,219  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10244**                    **GEORGE MASON UNIV**                    **9060**  
 INTENSIVE RXTE MONITORING OF THE TEV BLAZAR MRK501 (ADP 99)  
 01/18/2001 - 01/31/2002    FY01: \$23,678                    Total: \$23,678  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10708**                    **GEORGE MASON UNIV**                    **9061**  
 STRUCTURE OF THE ACCRETION FLOW IN RADIO-LOUD AGN  
 04/23/2001 - 04/30/2002    FY01: \$104,959                    Total: \$104,959  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10776**                    **GEORGE MASON UNIV**                    **9062**  
 COBE/DIRBE DATA AND THE ZODIACAL CLOUD (ADP 2000)  
 04/26/2001 - 04/30/2002    FY01: \$121,000                    Total: \$121,000  
*Prin. Invest.:* L OZNEROY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10879**                    **GEORGE MASON UNIV**                    **9063**  
 ANALYSES OF RAIN RATE PARAMETERS DERIVED FROM TMI:  
 CONDITIONAL RAIN RATE AND RAIN FRACTIONS  
 05/10/2001 - 05/14/2002    FY01: \$25,162                    Total: \$25,162  
*Prin. Invest.:* L CHIU  
*Tech. Officer:* GSFC/A T CHANG  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11346**                    **GEORGE MASON UNIV**                    **9064**  
 SATELLITE MICROWAVE ESTIMATES OF OCEANIC RAINFALL AND SNOW  
 OVER LAND  
 09/13/2001 - 09/14/2002    FY01: \$110,158                    Total: \$110,158  
*Prin. Invest.:* L CHIU  
*Tech. Officer:* GSFC/A T CHANG  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 01009**                    **GEORGE MASON UNIV**                    **9065**  
 VIRGINIA ACCESS  
 09/19/2001 - 09/18/2002    FY01: \$997,800                    Total: \$997,800  
*Prin. Invest.:* M KAFATOS  
*Tech. Officer:* SSC/W GRAHAM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCA 1 01004**                    **GEORGE MASON UNIV**                    **9066**  
 VIRGINIA SATSLAB  
 08/31/2001 - 04/30/2002    FY01: \$500,000                    Total: \$500,000  
*Prin. Invest.:* G DONOHUE  
*Tech. Officer:* LARC/J R BURLEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 143**                    **GEORGE MASON UNIV**                    **9067**  
 EARTH SYSTEM SCIENCE DATA SUPPORT  
 07/15/1996 - 06/14/2001    FY01: \$1,501,220                    Total: \$7,132,077  
*Prin. Invest.:* M KAFATOS  
*Tech. Officer:* GSFC/S KEMPLER  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 245**                    **GEORGE MASON UNIV**                    **9068**  
 DEVELOPMENT OF POSEIDON OCEAN MODEL FOR NSIPP  
 10/08/1997 - 10/14/2000    FY01: \$0                    Total: \$207,650  
*Prin. Invest.:* P SCHOPF  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC 5 306**                    **GEORGE MASON UNIV**                    **9069**  
 SEASONAL & INTERANNUAL EARTH SCIENCE INFORMANTION PARTNER  
 (SIESIP)  
 04/09/1998 - 11/30/2001    FY01: \$115,000                    Total: \$2,350,000  
*Prin. Invest.:* M KAFATOS  
*Tech. Officer:* GSFC/M MAIDEN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 360**                    **GEORGE MASON UNIV**                    **9070**  
 CONTINUING CAREER PROGRAM (CCP)  
 08/26/1998 - 08/31/2003    FY01: \$951,813                    Total: \$1,732,716  
*Prin. Invest.:* R R STOUGH  
*Tech. Officer:* GSFC/A J MATURO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 522**                    **GEORGE MASON UNIV**                    **9071**  
 DEVELOPMENT OF POSEIDON OCEAN MODEL FOR NSIPP  
 12/18/2000 - 12/31/2001    FY01: \$150,207                    Total: \$150,207  
*Prin. Invest.:* P S SCHOPF  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC 5 555**                    **GEORGE MASON UNIV**                    **9072**  
 JOINT INTERDISCIPLINARY EARTH SCIENCE  
 05/04/2001 - 06/14/2002    FY01: \$2,441,161                    Total: \$2,441,161  
*Prin. Invest.:* M KAFATOS  
*Tech. Officer:* GSFC/M MCCUMBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 1 1936**                    **HAMPTON UNIV**                    **9073**  
 MIXING, NOISE, AND THRUST BENEFITS USING CORRU- GATED DESIGNS  
 05/27/1997 - 06/05/2000    FY01: -\$1,088                    Total: \$348,912  
*Prin. Invest.:* M H MORGAN, M M GILJINSKY  
*Tech. Officer:* LARC/J W POSEY, LARC/M K PONTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 1941**                    **HAMPTON UNIV**                    **9074**  
 CHARACTERIZATION OF MOLECULAR INTERACTIONS AT METAL/POLYMER  
 COMPOSITE SURFACES AND INTERPHASES  
 05/30/1997 - 12/31/2000    FY01: \$0                    Total: \$300,000  
*Prin. Invest.:* J C WILLIAMS  
*Tech. Officer:* LARC/T L ST. CLAIR, LARC/S H LOWTHER  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 1947**                    **HAMPTON UNIV**                    **9075**  
 CONCEPTS FOR ATMOSPHERIC SCIENCE EDUCATION (CASE)  
 06/17/1997 - 06/30/2000    FY01: -\$355                    Total: \$361,595  
*Prin. Invest.:* M P MCCORMICK, J M RUSSELL, III  
*Tech. Officer:* LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE



**NAG 1 1963**                      **HAMPTON UNIV**                      **9076**  
 INVESTIGATIONS OF TROPICAL ATMOSPHERIC RADIATIVE ENERGY  
 BALANCE USING CERS AND TRMM DATA  
 09/03/1997 - 02/28/2001      FY01: -\$11,437                      Total: \$1,018,385  
*Prin. Invest.*: B LIN  
*Tech. Officer*: LARC/B A WIENCKI  
*CASE Category*: 31 - ATMOSPHERIC SCIENCE

**NAG 1 2135**                      **HAMPTON UNIV**                      **9077**  
 STUDY OF CONTRAILS AND ATMOSPHERIC RADIATION MEAS (ARM) DATA  
 PROJECT DEVELOPMENT  
 01/19/1999 - 01/18/2002      FY01: \$115,057                      Total: \$285,939  
*Prin. Invest.*: M P MCCORMICK, J M RUSSELL, 111  
*Tech. Officer*: LARC/P MINNIS  
*CASE Category*: 31 - ATMOSPHERIC SCIENCE

**NAG 1 2170**                      **HAMPTON UNIV**                      **9078**  
 DEVELOPMENT AND COMPARISON OF GLOBAL AEROSOL, WATER VAPOR,  
 AND OZONE CLIMATOLOGIES USING SAGE II  
 03/25/1999 - 02/28/2002      FY01: \$63,000                      Total: \$213,000  
*Prin. Invest.*: M P MCCORMICK  
*Tech. Officer*: LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category*: 31 - ATMOSPHERIC SCIENCE

**NAG 1 2206**                      **HAMPTON UNIV**                      **9079**  
 TOP-OF-ATMOSPHERE CLEAR-SKY BROADBAND RADIATIVE FLUX AND  
 DIRECT AEROSOL RADIATIVE FORCING FROM  
 06/21/1999 - 06/30/2002      FY01: \$57,548                      Total: \$164,555  
*Prin. Invest.*: N G LOEB, B LIN, J HU  
*Tech. Officer*: LARC/V E DELNORE, LARC/J L RAPER  
*CASE Category*: 31 - ATMOSPHERIC SCIENCE

**NAG 1 2207**                      **HAMPTON UNIV**                      **9080**  
 OPENING NATIVE AMERICAN CAREER PATHS IN MATHEMATIC SCIENCE,  
 AND TECHNOLOGY  
 07/01/1999 - 06/30/2000      FY01: -\$7,138                      Total: \$67,862  
*Prin. Invest.*: C LOWE  
*Tech. Officer*: LARC/R HATHAWAY  
*CASE Category*: 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2223**                      **HAMPTON UNIV**                      **9081**  
 EVALUATION OF THE EFFECT OF WATER VAPOR ON THE PERFORMANCE  
 OF NASA'S NMRO CATALYSIT FOR CARBON  
 08/31/1999 - 03/31/2002      FY01: \$74,869                      Total: \$199,869  
*Prin. Invest.*: A AKYURTLU  
*Tech. Officer*: LARC/D R SCHRYER  
*CASE Category*: 41 - AERONAUTICAL ENGR

**NAG 1 2224**                      **HAMPTON UNIV**                      **9082**  
 STUDENT FIELD TESTING OF THE HAMPTON UNIV COMPACT OZONE LIDAR  
 SYSTEM CERTIFICATION OF  
 08/24/1999 - 12/31/2001      FY01: \$75,000                      Total: \$200,000  
*Prin. Invest.*: T H CHYBA  
*Tech. Officer*: LARC/J FISHMAN  
*CASE Category*: 31 - ATMOSPHERIC SCIENCE

**NAG 1 2256**                      **HAMPTON UNIV**                      **9083**  
 HAMPTON UNIV-COLLEGE OF CONTINUING EDUCATION AEROSCIENCE  
 CENTER  
 12/22/1999 - 11/30/2000      FY01: -\$4,460                      Total: \$145,540  
*Prin. Invest.*: C REEVES  
*Tech. Officer*: LARC/S MOSSENBERG  
*CASE Category*: 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2318**                      **HAMPTON UNIV**                      **9084**  
 THEORET & OBSERVAT'L DETERM OF GLOBAL & REGIONAL RADIATION  
 BUDG, FORC'G & FEEDBACK TOP-OF-ATMOSPHERE  
 07/18/2000 - 10/31/2003      FY01: \$463,052                      Total: \$524,152  
*Prin. Invest.*: N G LOEB  
*Tech. Officer*: LARC/G G GIBSON  
*CASE Category*: 31 - ATMOSPHERIC SCIENCE

**NAG 1 2331**                      **HAMPTON UNIV**                      **9085**  
 THE AMERICAN INDIAN EDUCATIONAL OPPORTUNITIES 2000 PROGRAM  
 09/29/2000 - 07/31/2002      FY01: \$0                      Total: \$75,000  
*Prin. Invest.*: R SCHWAN  
*Tech. Officer*: LARC/R A HATHAWAY  
*CASE Category*: 79 - SOCIAL SCIENCE, OTHER

**NAG 1 01075**                      **HAMPTON UNIV**                      **9086**  
 STATISTICAL METHODS FOR RAPID AEROTHERMAL ANALYSIS AND DESIGN  
 TECHNOLOGY  
 04/27/2001 - 01/09/2002      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.*: D J DEPRIEST, C B MORGAN  
*Tech. Officer*: LARC/R A THOMPSON  
*CASE Category*: 41 - AERONAUTICAL ENGR

**NAG 1 01089**                      **HAMPTON UNIV**                      **9087**  
 THE AMERICAN INDIAN EDUCATIONAL OPPORTUNITIES 2001 PROGRAM  
 06/13/2001 - 06/10/2002      FY01: \$100,000                      Total: \$100,000  
*Prin. Invest.*: R SCHWAN  
*Tech. Officer*: LARC/R A HATHAWAY  
*CASE Category*: 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01096**                      **HAMPTON UNIV**                      **9088**  
 TOP-OF-ATMOSPHERE ALBEDO ESTIMATION FROM POLDER MULTI-  
 ANGLE MEASUREMENTS: EVALUATION OF WATER AND  
 06/20/2001 - 05/31/2004      FY01: \$52,279                      Total: \$52,279  
*Prin. Invest.*: N G LOEB, Y HU  
*Tech. Officer*: LARC/V E DELNORE  
*CASE Category*: 31 - ATMOSPHERIC SCIENCE

**NAG 2 1331**                      **HAMPTON UNIV**                      **9089**  
 APPLIED CFD RESEARCH & TRAINING  
 06/21/1999 - 06/14/2002      FY01: \$100,000                      Total: \$300,000  
*Prin. Invest.*: H HU  
*Tech. Officer*: ARC/R C STRAWN  
*CASE Category*: 41 - AERONAUTICAL ENGR

**NAG 3 2189**                      **HAMPTON UNIV**                      **9090**  
 OPTICAL ELECTRONIC BRAGG REFLECTION SENSOR SYSTEM WITH  
 HYDRODYNAMIC FLOW APPLICATIONS  
 08/07/1998 - 05/30/2002      FY01: \$95,000                      Total: \$439,999  
*Prin. Invest.*: D R LYONS  
*Tech. Officer*: GRC/D GRIFFIN  
*CASE Category*: 49 - ENGINEERING, OTHER

**NAG 3 2249** **HAMPTON UNIV** **9091**  
 ADVANCED METHODS FOR AIRCRAFT ENGINE THRUST AND NOISE BENEFITS. NOZZLE-INLET FLOW ANALYSIS  
 04/01/1999 - 01/26/2002 FY01: \$100,000 Total: \$300,000  
*Prin. Invest.:* M H MORGAN  
*Tech. Officer:* GRC/I BLANKSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2422** **HAMPTON UNIV** **9092**  
 NUMERICAL SIMULATION OF ONE- AND TWO-PHASE FLOWS IN PROPULSION SYSTEMS  
 05/31/2000 - 12/31/2002 FY01: \$100,000 Total: \$200,000  
*Prin. Invest.:* M GILLINSKY  
*Tech. Officer:* GRC/I M BLANKSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2495** **HAMPTON UNIV** **9093**  
 CORRUGATED AND COMPOSED NOZZLES APPLICATION FOR THRUST AND JET NOISE BENEFITS VIA UEET PROGRAM  
 10/27/2000 - 09/30/2003 FY01: \$125,000 Total: \$125,000  
*Prin. Invest.:* D GILLINSKY  
*Tech. Officer:* GRC/D W LAM  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2618** **HAMPTON UNIV** **9094**  
 ANALYSIS OF ANTIOXIDANT AND PHOSPHOINOSITOL SIGNAL TRANSDUCTION PATHWAY(S) IN PLANTS AFTER EXPOSURE  
 05/31/2001 - 04/30/2005 FY01: \$55,000 Total: \$55,000  
*Prin. Invest.:* C M OKPODU  
*Tech. Officer:* GRC/D W GRIFFIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 5299** **HAMPTON UNIV** **9095**  
 DYNAMICAL INTERPRETATION OF AEROSOL INFLUENCES ON DOBSON SPECTROPHOTOMETER  
 07/18/2000 - 08/31/2001 FY01: \$11,640 Total: \$49,078  
*Prin. Invest.:* D P MCCORMICK  
*Tech. Officer:* GSFC/F SCHMIDLIN  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 6296** **HAMPTON UNIV** **9096**  
 HAMPTON UNIV - OPTICAL RADIATION IN ATMOSPHERE  
 09/19/1997 - 02/28/2001 FY01: \$0 Total: \$224,973  
*Prin. Invest.:* D A TEMPLE  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7001** **HAMPTON UNIV** **9097**  
 STUDIES OF THE CLIMATOLOGY, LONG-TERM TRENDS, AND QUASI-BIENNIAL OSCILLATION OF CHEMICAL TRACERS IN  
 04/07/1998 - 03/31/2001 FY01: \$0 Total: \$151,599  
*Prin. Invest.:* D M RUSSELL,111  
*Tech. Officer:* GSFC/C JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8648** **HAMPTON UNIV** **9098**  
 "PROPOSAL FOR MEMBERSHIP TO THE AEROSOL RADIATIVE FORCING SCIENCE TEAM"  
 08/16/1999 - 01/31/2002 FY01: \$14,910 Total: \$44,730  
*Prin. Invest.:* M MCCORMICK  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9156** **HAMPTON UNIV** **9099**  
 PROGRAM FOR IMPROVING SUCCESS IN SCIENCE, ENGINEERING, AND MATHEMATICS (PRISEM)  
 03/03/2000 - 02/28/2003 FY01: \$85,487 Total: \$183,864  
*Prin. Invest.:* C RANKINS  
*Tech. Officer:* GSFC/M STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9171** **HAMPTON UNIV** **9100**  
 STUDIES OF POLAR MESOSPHERIC CLOUDS FROM OBSERVATIONS BY THE STUDENT NITRIC OXIDE EXPLORER  
 03/08/2000 - 02/28/2002 FY01: \$77,307 Total: \$149,307  
*Prin. Invest.:* S M BAILEY  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10015** **HAMPTON UNIV** **9101**  
 HAMPTON UNIV COLLEGE OF CONTINUING EDUCATION AEROSCIENCE CENTER  
 09/21/2000 - 09/30/2001 FY01: \$250,000 Total: \$300,000  
*Prin. Invest.:* C L REAVES  
*Tech. Officer:* GSFC/C S PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10063** **HAMPTON UNIV** **9102**  
 ANALYSIS OF STUDENT NITRIC OXIDE EXPLORER SOLAR X-RAY PHOTOMETER MEASUREMENTS  
 11/15/2000 - 11/30/2001 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* S M BAILEY  
*Tech. Officer:* GSFC/C P HOLMES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10163** **HAMPTON UNIV** **9103**  
 A SPACE SCIENCE CURRICULUM AT HAMPTON UNIV: DEVELOPMENT OF A MINOR, FACULTY ENHANCEMENT,  
 12/13/2000 - 12/31/2001 FY01: \$244,997 Total: \$244,997  
*Prin. Invest.:* S M BAILEY  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10796** **HAMPTON UNIV** **9104**  
 CONCEPT STUDY FOR THE "AERONOMY OF ICE IN THE MESOSPHERE" (AIM) MISSION AO-99-OSS-05  
 05/01/2001 - 04/30/2002 FY01: \$347,116 Total: \$347,116  
*Prin. Invest.:* D M RUSSELL  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11065** **HAMPTON UNIV** **9105**  
 STUDIES OF CLIMATOLOGY & LONG-TERM CHANGES OF CHEMICAL TRACERS IN THE MIDDLE ATMOSPHERE USING UARS DATA & HALO  
 06/28/2001 - 06/30/2002 FY01: \$44,492 Total: \$44,492  
*Prin. Invest.:* J M RUSSELL  
*Tech. Officer:* GSFC/C JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11126** **HAMPTON UNIV** **9106**  
 AURORA 2001 (ADVANCED UNDERGRADUATE RESEARCH USING OPTICAL RADIATION IN THE ATMOSPHERE)  
 07/18/2001 - 07/14/2002 FY01: \$75,000 Total: \$75,000  
*Prin. Invest.:* J RUSSELL  
*Tech. Officer:* GSFC/B W MEESON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 1 97042** **HAMPTON UNIV** **9107**  
 PRINCIPAL INVESTIGATOR SERVICES TO SUPPORT SAGE II AND III, SABER,  
 HALOE, LITE AND LIDAR PROGRAMS.  
 09/29/1997 - 09/30/2001 FY01: \$222,672 Total: \$1,119,104  
*Prin. Invest.:* P MCCORMICK  
*Tech. Officer:* LARC/R L DUNCAN/  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 99108** **HAMPTON UNIV** **9108**  
 PICASSO-CENA INTERNATIONAL SCIENCE ADVISORY PANEL, SCIENCE  
 ACTIVITIES, ALGORITHM IMPLEMENTATION& OU  
 02/01/2000 - 01/31/2002 FY01: \$799,421 Total: \$1,749,171  
*Prin. Invest.:* M P MCCORMICK, A H OMAR  
*Tech. Officer:* LARC/G G GIBSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 251** **HAMPTON UNIV** **9109**  
 RESEARCH CENTER FOR OPTICAL PHYSICS MY 1/5  
 03/18/1997 - 12/31/2001 FY01: \$1,218,999 Total: \$5,218,999  
*Prin. Invest.:* D A TEMPLE  
*Tech. Officer:* LARC/R HATHAWAY  
*CASE Category:* 13 - PHYSICS

**NCC 1 358** **HAMPTON UNIV** **9110**  
 NASA-ASEE SUMMER FACULTY FELLOWSHIP PROGRAM 2000  
 03/27/2000 - 12/31/2001 FY01: \$0 Total: \$584,055  
*Prin. Invest.:* D DEPRIEST  
*Tech. Officer:* LARC/R HATHAWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 366** **HAMPTON UNIV** **9111**  
 DEVELOPMENT OF ADVANCED AIRCRAFT ANTENNA DESIGN AND ANAL-  
 YSIS TECHNIQUES  
 01/11/2000 - 12/31/2002 FY01: \$1 Total: \$77,034  
*Prin. Invest.:* A O OLADIPUPO, C J REDDY, NONE  
*Tech. Officer:* LARC/F B BECK, LARC/M C BAILEY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 1 379** **HAMPTON UNIV** **9112**  
 2000 LANGLEY AEROSCIENCE RESEARCH SUMMER SCHOLARS PROGRAM  
 (LARSS)  
 03/02/2000 - 03/02/2001 FY01: \$22,797 Total: \$833,950  
*Prin. Invest.:* C LOWE  
*Tech. Officer:* LARC/R A HATHAWAY, LARC/C T PRIOR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 01034** **HAMPTON UNIV** **9113**  
 2001 LANGLEY AEROSCIENCE RESEARCH SUMMER SCHOLARS (LARSS)  
 PROGRAM  
 03/20/2001 - 03/02/2002 FY01: \$885,074 Total: \$885,074  
*Prin. Invest.:* R SCHWAN  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 01059** **HAMPTON UNIV** **9114**  
 CENTER FOR LIDAR & ATMOSPHERIC SCIENCES STUDENTS (FORMERLY  
 GSFC NCC-5-348)  
 08/22/2001 - 06/30/2003 FY01: \$500,000 Total: \$500,000  
*Prin. Invest.:* D A TEMPLE, A OMAR  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 348** **HAMPTON UNIV** **9115**  
 CENTER FOR LIDAR AND ATMOSPHERIC SCIENCES STUDENTS  
 06/29/1998 - 06/30/2003 FY01: \$0 Total: \$1,495,533  
*Prin. Invest.:* D A TEMPLE  
*Tech. Officer:* HQ/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 52261** **HAMPTON UNIV** **9116**  
 DEVELOPMENT OF AN ASTROBIOLOGY EDUCATION CURRICULUM AT  
 HAMPTON UNIV  
 12/06/1999 - 10/31/2001 FY01: \$103,000 Total: \$199,877  
*Prin. Invest.:* B FAISON  
*Tech. Officer:* ARC/D DESMARAIS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 3 52354** **HAMPTON UNIV** **9117**  
 UV INDUCED DENSIFICATION AND ABLATION DURING THE FORMATION OF  
 BRAGG GRATINGS IN GE-DOPED SiO2 PREFO  
 06/25/1999 - 06/30/2001 FY01: \$21,850 Total: \$65,850  
*Prin. Invest.:* D R LYONS  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 13 - PHYSICS

**NAG 1 2155** **JAMES MADISON UNIV** **9118**  
 CHAOS AND THERMAL SCIENCES LABORATORY (CATS LAB) MY 1/3  
 03/05/1999 - 12/31/2001 FY01: \$0 Total: \$89,892  
*Prin. Invest.:* A A TEATE  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2186** **JAMES MADISON UNIV** **9119**  
 INFRARED DEVELOPMENT AND TESTING LABORATORY WITH DEVELOP-  
 MENT OF ATMOSPHERIC CO IMAGING INSTRUMENT  
 04/29/1999 - 02/28/2002 FY01: \$0 Total: \$141,800  
*Prin. Invest.:* J J MILES  
*Tech. Officer:* LARC/A D LITTLE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 01093** **JAMES MADISON UNIV** **9120**  
 DETERMINATION OF MATL NEAR THE GLASS TRANSITION TEMPERATURE  
 FOR AN ISOGRID BOOM  
 06/25/2001 - 11/30/2001 FY01: \$14,974 Total: \$14,974  
*Prin. Invest.:* J R BLANDINO  
*Tech. Officer:* LARC/J A WOODS-VEDELER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10701** **JAMES MADISON UNIV** **9121**  
 DEVELOPMENT OF TEST TECHNOLOGY FOR THIN-FILM MEMBRANE  
 STRUCTURES  
 04/05/2001 - 04/14/2002 FY01: \$49,965 Total: \$49,965  
*Prin. Invest.:* J BLANDINO  
*Tech. Officer:* GSFC/J JOHNSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 394** **MARY WASHINGTON COLLEGE** **9122**  
 A PROPOSAL FOR THE ESTABLISHMENT OF A CENTER FOR EXPERI-  
 MENTAL AERODYNAMICS (CEA)  
 04/24/2000 - 03/31/2005 FY01: \$240,820 Total: \$340,820  
*Prin. Invest.:* C P BRITCHER, R LASH, R LASH  
*Tech. Officer:* LARC/J C YU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 1944**                      **NORFOLK STATE UNIV**                      **9123**  
 VISUALIZATION OF ATMOSPHERIC WATER VAPOR DATA FOR SAGE  
 06/09/1997 - 12/29/2000      FY01: \$0                      Total: \$282,643  
*Prin. Invest.:* M KUNG  
*Tech. Officer:* LARC/W P CHU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 1948**                      **NORFOLK STATE UNIV**                      **9124**  
 RURAL OUTREACH PROGRAM  
 06/19/1997 - 06/30/2000      FY01: -\$31,509                      Total: \$328,491  
*Prin. Invest.:* C COLEMAN  
*Tech. Officer:* LARC/S CANRIGHT, LARC/E PRIOR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2125**                      **NORFOLK STATE UNIV**                      **9125**  
 TECHNICAL EDUCATION OUTREACH MATERIALS SCIENCE AND  
 TECHNOLOGY BASED ON NASAS MATERIALS RESEARCH  
 01/12/1999 - 12/31/2001      FY01: \$44,000                      Total: \$119,000  
*Prin. Invest.:* J JACOBS, S R CHAUDHURY  
*Tech. Officer:* LARC/E T PRIOR, LARC/R HATHAWAY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 2172**                      **NORFOLK STATE UNIV**                      **9126**  
 DEVELOPMENT OF SOLID-STATE LASER MATERIALS FOR APPLICATION IN  
 LASERS FOR ATMOSPHERIC OZONE & WATER  
 03/30/1999 - 12/31/2001      FY01: \$0                      Total: \$100,000  
*Prin. Invest.:* M NOGINOV, G LOUITS  
*Prin. Invest.:* NONE  
*Tech. Officer:* LARC/N P BARNES, LARC/J C BARNES  
*CASE Category:* 13 - PHYSICS

**NAG 1 2226**                      **NORFOLK STATE UNIV**                      **9127**  
 PORTSMOUTH ATMOSPHERIC SCIENCE SCHOOL PROJECT (PASS)  
 08/24/1999 - 07/31/2002      FY01: \$0                      Total: \$199,728  
*Prin. Invest.:* C COLEMAN  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2228**                      **NORFOLK STATE UNIV**                      **9128**  
 NONSELECTIVE ROOMTEMPERATURE MICROBOLMETERS BASED ON  
 CMB THIN FILMS  
 08/30/1999 - 07/31/2001      FY01: \$73,412                      Total: \$196,520  
*Prin. Invest.:* E S GILLMAN  
*Tech. Officer:* LARC/J C BARNES  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2230**                      **NORFOLK STATE UNIV**                      **9129**  
 PRE-SERVICE TEACHER CONFERENCE MY 1/2  
 09/03/1999 - 07/31/2001      FY01: -\$21,000                      Total: \$204,000  
*Prin. Invest.:* P TUCKER-HOGAN  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01127**                      **NORFOLK STATE UNIV**                      **9130**  
 THE CHROME HONORS PROGRAM  
 09/26/2001 - 09/30/2002      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* E WILSON  
*Tech. Officer:* LARC/R HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2289**                      **NORFOLK STATE UNIV**                      **9131**  
 NOVEL HIGH EFFICIENT ORGANIC PHOTOVOLTAIC MATERIAL S  
 08/30/1999 - 07/21/2001      FY01: \$0                      Total: \$299,816  
*Prin. Invest.:* S SUN  
*Tech. Officer:* GRC/A F HEPP  
*CASE Category:* 12 - CHEMISTRY

**NAG 4 165**                      **NORFOLK STATE UNIV**                      **9132**  
 VARIATIONAL METHOD IN DESIGN OPTIMIZATION  
 02/26/1999 - 02/26/2002      FY01: \$91,845                      Total: \$293,464  
*Prin. Invest.:* D HULBERT  
*Tech. Officer:* DFRC/K GUPTA, DFRC/E COX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 6298**                      **NORFOLK STATE UNIV**                      **9133**  
 NORFOLK STATE UNIV RESEARCH EXPERIENCE IN EA  
 09/15/1997 - 07/31/2002      FY01: \$75,608                      Total: \$223,270  
*Prin. Invest.:* W J RODRIGUEZ  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8541**                      **NORFOLK STATE UNIV**                      **9134**  
 SUMMER WORKSHOP PROGRAM TO PROVIDE EMERGING EDUCATORS  
 WITH THE FAMILIARITY & KNOWLEDGE TO UTILIZE IN C  
 05/12/1999 - 05/14/2002      FY01: \$20,346                      Total: \$40,295  
*Prin. Invest.:* S CHAUDHURY  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8653**                      **NORFOLK STATE UNIV**                      **9135**  
 DESIGN AND PERFORMANCE TESTS OF ULTRA-COMPACT CALORIMETERS  
 FOR HIGH ENERGY ASTROPHYSICS  
 08/19/1999 - 07/31/2002      FY01: \$80,075                      Total: \$279,385  
*Prin. Invest.:* C W SALGADO  
*Tech. Officer:* GSFC/R E STREITMATTER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9257**                      **NORFOLK STATE UNIV**                      **9136**  
 BRINGING EDUCATION & SCIENCE TOGETHER FOR SYSTEMIC TRAINING &  
 EMPOWERMENT OF PRESERVICE TEACHERS  
 03/15/2000 - 02/28/2002      FY01: \$199,832                      Total: \$379,977  
*Prin. Invest.:* G GOLEMBIEWSKI  
*Tech. Officer:* GSFC/B L WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9374**                      **NORFOLK STATE UNIV**                      **9137**  
 SCENARIO BASED LEARNING: INQUIRY FOR A DIGITAL EARTH  
 04/05/2000 - 03/31/2002      FY01: \$77,461                      Total: \$172,370  
*Prin. Invest.:* W J RODRIGUEZ  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10140**                      **NORFOLK STATE UNIV**                      **9138**  
 A NASA-HBCU PARTNERSHIP TO ENHANCE MINORITY EDUCATION &  
 RESEARCH PARTICIPATION IN THE SPACE SCIENCE  
 12/12/2000 - 12/31/2001      FY01: \$203,891                      Total: \$203,891  
*Prin. Invest.:* C W SALGADO  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NCC 1 280**                      **NORFOLK STATE UNIV**                      **9139**  
 FEASIBILITY STUDY OF PIEZOELECTRIC ACTUATORS DRIVE N BY A MICRO-  
 WAVE  
 03/06/1998 - 03/05/2002      FY01: \$0                      Total: \$300,000  
*Prin. Invest.:* K D SONG  
*Tech. Officer:* LARC/S H CHOI  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 1 338**                      **NORFOLK STATE UNIV**                      **9140**  
 1999 SUMMER PRE-SERVICE TEACHER ENHANCEMENT INST  
 04/15/1999 - 03/31/2000      FY01: -\$25,719                      Total: \$220,253  
*Prin. Invest.:* R TUCKER-HOGAN, R CHAUCHURY  
*Tech. Officer:* LARC/R A HATHAWAY, LARC/E J PRIOR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 391**                      **NORFOLK STATE UNIV**                      **9141**  
 2000 - PRE-SERVICE TEACHER ENHANCEMENT INST  
 04/13/2000 - 03/31/2001      FY01: -\$46,887                      Total: \$200,147  
*Prin. Invest.:* P TUCKER-HOGAN  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 01049**                      **NORFOLK STATE UNIV**                      **9142**  
 DEVELOPMENT OF NOVEL COMPOSITE AND RANDOM MATERIAL FOR  
 NONLINEAR OPTICS AND LASERS - TRANSFER FROM  
 06/06/2001 - 09/14/2004      FY01: \$420,000                      Total: \$420,000  
*Prin. Invest.:* L MATTIX  
*Tech. Officer:* LARC/J C BARNES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 1 01053**                      **NORFOLK STATE UNIV**                      **9143**  
 2001 PRE-SERVICE TEACHER INST  
 05/10/2001 - 03/31/2002      FY01: \$225,000                      Total: \$225,000  
*Prin. Invest.:* P TUCKER-HOGAN  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 01055**                      **NORFOLK STATE UNIV**                      **9144**  
 MISSION-LEVERAGED EDUCATION: NSU-NASA INNOVATIVE UNDERGRAD-  
 UATE MODEL MIEN11UM A NASA PAIR PROJECT  
 06/29/2001 - 02/28/2002      FY01: \$297,940                      Total: \$297,940  
*Prin. Invest.:* W RODRIGUEZ  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 01057**                      **NORFOLK STATE UNIV**                      **9145**  
 2001 PRE-SERVICE TEACHER CONFERENCE  
 08/14/2001 - 07/31/2002      FY01: \$150,029                      Total: \$150,029  
*Prin. Invest.:* P E MCNEIL, S PROCTOR  
*Tech. Officer:* LARC/R HATHAWAY, LARC/E J PRIOR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 457**                      **NORFOLK STATE UNIV**                      **9146**  
 MISSION-LEVERAGED EDUCATION: NSU-NASA INNOVATIVE UNDERGRAD-  
 UATE MODEL  
 02/22/2000 - 03/31/2001      FY01: \$0                      Total: \$292,845  
*Prin. Invest.:* L MATTIX  
*Tech. Officer:* GSFC/M MATTHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 514**                      **NORFOLK STATE UNIV**                      **9147**  
 DEVELOPMENT OF NOVEL COMPOSITE & RANDOM MATERIALS FOR  
 NONLINEAR OPTICS & LASERS  
 08/31/2000 - 03/31/2001      FY01: -\$450,044                      Total: \$49,956  
*Prin. Invest.:* L MATTIX  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 1982**                      **OLD DOMINION UNIV**                      **9148**  
 FINITE ELEMENT ANALYSIS OF REVERBERATION CHAMBERS MY 1/3  
 12/15/1997 - 12/31/2000      FY01: \$9,588                      Total: \$193,508  
*Prin. Invest.:* C F BUNTING, D T NGUYEN  
*Tech. Officer:* LARC/K J MOELLER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 2100**                      **OLD DOMINION UNIV**                      **9149**  
 TRANSITION IN SUPERSONIC FLOWS WITH CORNERS  
 08/11/1998 - 12/31/2000      FY01: -\$145                      Total: \$62,264  
*Prin. Invest.:* P BALAKUMAR  
*Tech. Officer:* LARC/C R MCCLINTON, LARC/D E REUBUSH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2101**                      **OLD DOMINION UNIV**                      **9150**  
 THE INFLUENCE OF NAT. CULTURE ON FLT CREW PERF: A CULTURE-CEN-  
 TERED APPROACH TO HUMAN FACTORS  
 08/25/1998 - 08/31/2000      FY01: -\$12,019                      Total: \$72,955  
*Prin. Invest.:* D DAVIS  
*Tech. Officer:* LARC/P C SCHUTTE  
*CASE Category:* 62 - PSYCHOLOGY SOCIAL ASPECTS

**NAG 1 2141**                      **OLD DOMINION UNIV**                      **9151**  
 EXPERIMENTAL & NUMERICAL ANALYSIS OF STRUCTURAL ACOUSTIC  
 CONTROL FOR INTERIOR NOISE REDUCTION  
 02/03/1999 - 05/15/2000      FY01: -\$88                      Total: \$59,912  
*Prin. Invest.:* C MEI  
*Tech. Officer:* LARC/T L TURNER, LARC/K P SHEPHERD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2143**                      **OLD DOMINION UNIV**                      **9152**  
 OBJECT-ORIENTED APPROACH TO HIGHER-LEVEL NETWORK  
 MONITORING AND MAMAGEMENT  
 02/01/1999 - 05/30/2000      FY01: -\$3                      Total: \$31,214  
*Prin. Invest.:* R MUKKAMALA  
*Tech. Officer:* LARC/E SIMAN-TOV  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 2150**                      **OLD DOMINION UNIV**                      **9153**  
 PANEL FLUTTER AND SONIC FATIGUE ANALYSIS FOR RLV  
 02/09/1999 - 09/30/2000      FY01: -\$13                      Total: \$44,987  
*Prin. Invest.:* C MEI  
*Tech. Officer:* LARC/M L BLOSSER, LARC/S J SCOTTI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2195**                      **OLD DOMINION UNIV**                      **9154**  
 PROCESS COST MODELING FOR MULTIDISCIPLINARY DESIGN APPLICA-  
 TIONS  
 05/21/1999 - 03/31/2002      FY01: \$60,000                      Total: \$145,000  
*Prin. Invest.:* H P BAO  
*Tech. Officer:* LARC/W T FREEMAN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2211**                      **OLD DOMINION UNIV**                      **9155**  
 DEVELOPMENT OF A TRANSIENT CUT-OFF GRID FOR FOCUS SCHLIEREN  
 07/12/1999 - 06/14/2002      FY01: \$0                      Total: \$26,000  
*Prin. Invest.:* G R HOY, K S SCHANZE  
*Tech. Officer:* LARC/M A TALLEY, LARC/A W BURNER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 2251**                      **OLD DOMINION UNIV**                      **9156**  
 DISTURBANCE DYNAMICS IN TRANSITIONAL & TURBULENT BOUNDARY  
 LAYERS  
 11/23/1999 - 11/01/2000      FY01: -\$1,097                      Total: \$25,903  
*Prin. Invest.:* C E GROSCH  
*Tech. Officer:* LARC/T B GATSKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2252**                      **OLD DOMINION UNIV**                      **9157**  
 USER ACCEPTABILITY OF PHYSIOLOGICAL AND OTHER MEASURES OF  
 HAZARDOUS STATES OF AWARENESS  
 11/23/1999 - 02/28/2001      FY01: \$0                      Total: \$29,180  
*Prin. Invest.:* T L DICKINSON, F G FREEMAN, P M MIKULKA  
*Tech. Officer:* LARC/A T POPE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 1 2254**                      **OLD DOMINION UNIV**                      **9158**  
 EXTERNAL VALIDITY CONSIDERATIONS OF A BIOCYBERNETIC SYSTEM  
 FOR ADAPTIVE AUTOMATION  
 11/23/1999 - 12/31/2000      FY01: -\$569                      Total: \$15,644  
*Prin. Invest.:* M W SCERBO, P J MIKULKA, F G FREEMAN  
*Tech. Officer:* LARC/A T POPE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 1 2265**                      **OLD DOMINION UNIV**                      **9159**  
 DUCTED FAN NOISE PREDICTION --- ENHANCEMENT TO TRIEM3D AND  
 APPLICATIONS  
 02/01/2000 - 08/30/2000      FY01: -\$13                      Total: \$51,153  
*Prin. Invest.:* M H DUNN, J TWEED  
*Tech. Officer:* LARC/F FARASSAT, LARC/J W POSEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2266**                      **OLD DOMINION UNIV**                      **9160**  
 NUMERICAL SIMULATIONS OF MIXING AND COMBUSTION IN SCRAMJET  
 ENGINES  
 01/31/2000 - 12/31/2002      FY01: \$39,734                      Total: \$77,991  
*Prin. Invest.:* S W TIWARI, T O MOHIELDIN  
*Tech. Officer:* LARC/D E REUBUSH, LARC/C R MCCLENTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2278**                      **OLD DOMINION UNIV**                      **9161**  
 IMPLICATIONS OF AUTOMOTIVE AND TRUCKING ON-BOARD INFORMATION  
 SYSTEMS FOR GENERAL AVIATION COCKPIT  
 03/15/2000 - 03/31/2002      FY01: \$0                      Total: \$45,380  
*Prin. Invest.:* P KACHROO, P J KAUFFMAN  
*Tech. Officer:* LARC/E J JOHNSON/H P STOUGH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2279**                      **OLD DOMINION UNIV**                      **9162**  
 DESIGN & ANALYSIS OF ARCHITECTURES FOR STRUCTURAL HEALTH  
 MONITORING SYSTEMS  
 03/13/2000 - 02/28/2002      FY01: \$50,458                      Total: \$92,995  
*Prin. Invest.:* R MUKKAMALA  
*Tech. Officer:* LARC/S L VAZQUEZ/E G COOPER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 2289**                      **OLD DOMINION UNIV**                      **9163**  
 NOISE PREDICTION FOR ADVANCED ENGINE/AIRFRAME CONFIGURATIONS  
 USING THE EQUIVALENT SOURCE METHOD  
 04/04/2000 - 03/03/2001      FY01: \$0                      Total: \$139,831  
*Prin. Invest.:* J TWEED, M H DUNN  
*Tech. Officer:* LARC/R A GOLUB/D P GARBER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2294**                      **OLD DOMINION UNIV**                      **9164**  
 COMPARISON OF FATIGUE LIFE ESTIMATION USING EQUIVALENT LINEAR-  
 RIZATION & TIME DOMAIN SIMULATION METHOD  
 05/03/2000 - 09/30/2000      FY01: \$0                      Total: \$12,000  
*Prin. Invest.:* C MEI  
*Tech. Officer:* LARC/S A RIZZI, LARC/K P SHEPHERD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2297**                      **OLD DOMINION UNIV**                      **9165**  
 N-FACTOR COMPUTATIONS FOR THE X-33 VEHICLE  
 06/01/2000 - 10/31/2000      FY01: -\$3                      Total: \$27,401  
*Prin. Invest.:* P BALAKUMAR  
*Tech. Officer:* LARC/H H HAMILTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2300**                      **OLD DOMINION UNIV**                      **9166**  
 STRUCTURE-COMPATIBLE NONLINEAR HEAT TRANSFER ANALYSIS  
 ESTIMATED, ORDER ADAPTIVITY & DESIGN OPTIMI  
 05/26/2000 - 05/14/2003      FY01: \$60,000                      Total: \$95,000  
*Prin. Invest.:* G HOU  
*Tech. Officer:* LARC/K S BEY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 2303**                      **OLD DOMINION UNIV**                      **9167**  
 NATIONAL CULTURE, CREW RESOURCES MANAGEMENT, AND TEAM  
 PERFORMANCE IN A FLIGHT SIMULATION  
 06/02/2000 - 05/15/2003      FY01: \$146,952                      Total: \$229,952  
*Prin. Invest.:* D D DAVIS  
*Tech. Officer:* LARC/P C SHUTTIE, LARC/A C TRUJILLO  
*CASE Category:* 62 - PSYCHOLOGY SOCIAL ASPECTS

**NAG 1 2315**                      **OLD DOMINION UNIV**                      **9168**  
 MANAGEMENT (BY VSGC) OF THE 2000 NATIONAL GENERAL AVIATION  
 DESIGN COMPETITION (AWARDS AT OSHKOSH)  
 06/28/2000 - 09/30/2000      FY01: -\$2,251                      Total: \$67,120  
*Prin. Invest.:* M L SANDY  
*Tech. Officer:* LARC/H W JARRETT III  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2323**                      **OLD DOMINION UNIV**                      **9169**  
 AN APPROACH TO THE REUSE OF TECHNICAL MATERIALS FOR EDUCATIONAL  
 PURPOSES  
 08/25/2000 - 01/31/2001      FY01: -\$267                      Total: \$29,322  
*Prin. Invest.:* I B LEVINESTEIN  
*Tech. Officer:* LARC/W H BRYANT, LARC/C L HARRELL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 2330**                      **OLD DOMINION UNIV**                      **9170**  
 INVESTIGATION OF ERROR PATTERNS IN GEOGRAPHICAL DATABASES  
 09/29/2000 - 07/31/2002      FY01: \$74,678                      Total: \$79,678  
*Prin. Invest.:* D A DRYER, P KAUFFMAN  
*Tech. Officer:* LARC/D R JONES, LARC/P W GOODE  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 1 01012**                      **OLD DOMINION UNIV**                      **9171**  
 MODELING DISTURBANCE DYNAMICS IN TRANSITIONAL AND TURBULENT  
 BOUNDARY LAYERS  
 12/20/2000 – 10/31/2001                      FY01: \$27,000                      Total: \$27,000  
*Prin. Invest.:* C E GROSCH  
*Tech. Officer:* LARC/T B GATSKI  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 01028**                      **OLD DOMINION UNIV**                      **9172**  
 NONLINEAR AND FAILURE ANALYSIS OF COMPOSITE STRUCTURES  
 02/05/2001 – 12/31/2001                      FY01: \$60,000                      Total: \$60,000  
*Prin. Invest.:* A K NOOR  
*Tech. Officer:* LARC/J H STARNES, JR  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 01033**                      **OLD DOMINION UNIV**                      **9173**  
 PARALLEL DOMAIN DECOMPOSITION FORMULATION AND SOFTWARE FOR  
 LARGE-SCALE UNSYMMETRICAL 3D APPLICATI  
 02/22/2001 – 01/14/2004                      FY01: \$30,000                      Total: \$30,000  
*Prin. Invest.:* D T NGUYEN  
*Tech. Officer:* LARC/W R WATSON, LARC/M G JONES  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 01043**                      **OLD DOMINION UNIV**                      **9174**  
 ULTRA NANOSTRUCTURED COMPOSITE FIBERS  
 03/26/2001 – 03/25/2004                      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* R B PIPES  
*Tech. Officer:* LARC/T S GATES  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 1 01044**                      **OLD DOMINION UNIV**                      **9175**  
 INVESTIGATION WAVE PROPAGATIONS IN DISCONTINUOUS GALERKIN  
 METHOD  
 03/26/2001 – 02/28/2004                      FY01: \$19,021                      Total: \$19,021  
*Prin. Invest.:* F HU  
*Tech. Officer:* LARC/H L ATKINS  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 01047**                      **OLD DOMINION UNIV**                      **9176**  
 MANAGEMENT (BY VSGC) OF 2000-2001 NATIONAL GENERAL AVIATION  
 DESIGN COMPETITION  
 04/12/2001 – 09/30/2001                      FY01: \$25,000                      Total: \$25,000  
*Prin. Invest.:* M L SANDY  
*Tech. Officer:* LARC/H W JARRETT  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 01068**                      **OLD DOMINION UNIV**                      **9177**  
 NOISE PREDICTION FOR ADVANCED AIRCRAFT CONFIGUR- ATIONS USING  
 THE EQUIVALENT SOURCE METHOD  
 04/23/2001 – 04/22/2003                      FY01: \$90,000                      Total: \$90,000  
*Prin. Invest.:* M H DUNN  
*Tech. Officer:* LARC/D P GARBER, LARC/R A GOLUB  
*CASE Category:* 29 – MATH/COMPUTER SCI, OTHER

**NAG 1 01071**                      **OLD DOMINION UNIV**                      **9178**  
 MODIFICATION OF EXISTING METHOD OF MOMENT CODE FOR LARGE  
 OBJECTS USING PHYSICAL OPTICS  
 04/20/2001 – 05/31/2002                      FY01: \$30,212                      Total: \$30,212  
*Prin. Invest.:* R P JOSHI  
*Tech. Officer:* LARC/M D DESHBANDE  
*CASE Category:* 45 – ELECTRICAL ENGR

**NAG 1 01076**                      **OLD DOMINION UNIV**                      **9179**  
 PARALLEL COMPUTATIONAL STUDIES OF THE DIRECT SIMULATION MONTE  
 CARLO METHOD IN FLUID DYNAMICS  
 05/16/2001 – 05/31/2004                      FY01: \$34,618                      Total: \$34,618  
*Prin. Invest.:* D E KEYES, P BOGACKI  
*Tech. Officer:* LARC/J N MOSS  
*CASE Category:* 22 – COMPUTER SCIENCE

**NAG 1 01077**                      **OLD DOMINION UNIV**                      **9180**  
 DEV NUMERICAL MODELS 4 PERF PREDICTIONS OF SINGLE PHOTON  
 AVALANCHE PHOTODETECTORS 4 2-MICRON REGIME  
 05/16/2001 – 12/31/2001                      FY01: \$20,000                      Total: \$20,000  
*Prin. Invest.:* R P JOSHI  
*Tech. Officer:* GSFC/M N ABEDIN  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 1 01086**                      **OLD DOMINION UNIV**                      **9181**  
 REDUCING DESIGN RISK USING DESIGN METHODS  
 05/17/2001 – 03/17/2002                      FY01: \$9,988                      Total: \$9,988  
*Prin. Invest.:* R UNAL  
*Tech. Officer:* LARC/R A LEPSCH  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 01092**                      **OLD DOMINION UNIV**                      **9182**  
 ERROR ANALYSIS FOR DISCONTINUOUS GALERKIN METHOD FOR  
 PARABOLIC PROBLEMS  
 06/27/2001 – 06/30/2003                      FY01: \$20,000                      Total: \$20,000  
*Prin. Invest.:* H KANEKO, NONE  
*Tech. Officer:* LARC/K S BEY  
*CASE Category:* 21 – MATHEMATICS

**NAG 1 01097**                      **OLD DOMINION UNIV**                      **9183**  
 A PROJECT DEV MODEL FOR ASSESSING THE FEAS OF AUTO MOTIVE-  
 TRUCKING INFO SYS W/APPLICS TO GEN AVIATIO  
 06/29/2001 – 06/30/2002                      FY01: \$59,990                      Total: \$59,990  
*Prin. Invest.:* P J KAUFFMANN, P KACHROO  
*Tech. Officer:* LARC/E J JOHNSON, LARC/H P STOUGH  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 01121**                      **OLD DOMINION UNIV**                      **9184**  
 YOUNG PHD'S IN HUMAN SPACE FLIGHT INST  
 08/31/2001 – 08/31/2002                      FY01: \$29,852                      Total: \$29,852  
*Prin. Invest.:* E WILSON  
*Tech. Officer:* LARC/R HATHAWAY  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 2 1319**                      **OLD DOMINION UNIV**                      **9185**  
 PRELIMINARY ANALYSIS OF PHOTOREADING  
 04/21/1999 – 09/30/1999                      FY01: -\$10                      Total: \$9,955  
*Prin. Invest.:* D S MCNAMARA  
*Tech. Officer:* ARC/I BARSHI  
*CASE Category:* 69 – PSYCHOLOGY, OTHER

**NAG 2 1481**                      **OLD DOMINION UNIV**                      **9186**  
 DATA-LINK AIRCRAFT COMMUNICATIONS: AN EXAMINATION OF INTER-  
 FERENCE, COHERENCE, & WORKLOAD  
 05/04/2001 – 04/30/2002                      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* D S MCNAMARA, M SCERBO  
*Tech. Officer:* ARC/I BARSHI, ARC/S LOZITO  
*CASE Category:* 69 – PSYCHOLOGY, OTHER

**NAG 3 2483** **OLD DOMINION UNIV** **9187**  
 THREE DIMENSIONAL THERMAL SIMULATION STUDIES OF SI C JUNCTION  
 DIODES CONTAINING SCREW DISLOCATIONS U  
 08/18/2000 - 12/31/2000 FY01: \$0 Total: \$20,916  
*Prin. Invest.:* D P JOSHI  
*Tech. Officer:* GRC/P G NEUDECK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 4515** **OLD DOMINION UNIV** **9188**  
 STUDYING THE EARTH'S ENVIRONMENT IN SPACE: CLASSR ACTIVITIES  
 WITH INSTRUCTION RESOURCES.  
 06/02/1997 - 12/31/2000 FY01: \$0 Total: \$166,896  
*Prin. Invest.:* E SMITH  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 5131** **OLD DOMINION UNIV** **9189**  
 INVOLVING STUDENTS IN THE DESIGNING AND DEVELOPING OF A SCIEN-  
 TIFIC BALLOON PAYLOAD-BALLOONLAUNCH PR  
 07/02/1997 - 03/31/2000 FY01: \$0 Total: \$35,000  
*Prin. Invest.:* A PIERCE  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10528** **OLD DOMINION UNIV** **9190**  
 RESPONSE OF SEA ICE AND MARINE ECOSYSTEMS TO THE OBSERVED  
 WARMING TRENDS IN THE ARTIC  
 03/19/2001 - 03/14/2002 FY01: \$116,806 Total: \$116,806  
*Prin. Invest.:* G F COTA  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11259** **OLD DOMINION UNIV** **9191**  
 PHYSICAL BIOLOGICAL INTERACTIONS AND THE CARBON CYCLE OF THE  
 TROPICAL PACIFIC AND ATLANTIC\_OCEANS  
 08/20/2001 - 08/31/2004 FY01: \$92,899 Total: \$92,899  
*Prin. Invest.:* E HOFMANN  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1813** **OLD DOMINION UNIV** **9192**  
 RESEARCH GRANT  
 04/30/2001 - 01/31/2002 FY01: \$20,000 Total: \$20,000  
*Prin. Invest.:* R PRABHAKARAN  
*Tech. Officer:* MSFC/A T NETTLES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 9 1270** **OLD DOMINION UNIV** **9193**  
 VIRTUAL REALITY TRAINING  
 12/18/2000 - 12/18/2003 FY01: \$96,246 Total: \$96,246  
*Prin. Invest.:* R LOFTIN  
*Tech. Officer:* JSC/R SAVELY, JSC/D G SICKOREZ  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 1 99160** **OLD DOMINION UNIV** **9194**  
 TESTBED OF INTEROPERABLE MULTIDISCIPLINARY DIGITAL LIBRARIES  
 09/22/1999 - 09/21/2002 FY01: \$284,000 Total: \$497,970  
*Prin. Invest.:* K MALY  
*Tech. Officer:* LARC/M M LITTLE, LARC/N R KAPLAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 5 97132** **OLD DOMINION UNIV** **9195**  
 REMOTE SENSING OF OCEAN COLOR IN THE ARCTIC  
 09/01/1997 - 02/28/2001 FY01: \$0 Total: \$640,608  
*Prin. Invest.:* G F COTA  
*Tech. Officer:* GSFC/C MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NCA 1 188** **OLD DOMINION UNIV** **9196**  
 VA SPACE GRANT CONSORTIUM ENVIRONMENT IMPACT  
 08/04/2000 - 10/31/2001 FY01: \$15,000 Total: \$75,000  
*Prin. Invest.:* M L SANDY  
*Tech. Officer:* LARC/S A COOKE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 227** **OLD DOMINION UNIV** **9197**  
 INVESTIGATION OF ADVANCED COMPOSITE MATERIALS AND AUTOMATED  
 PROCESS  
 05/17/1996 - 09/30/2000 FY01: -\$9,068 Total: \$730,725  
*Prin. Invest.:* S TIWARI  
*Tech. Officer:* LARC/N J JOHNSTON, LARC/R J CANO  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 1 320** **OLD DOMINION UNIV** **9198**  
 STUDY OF APPLICATION OF GREEN'S FUNCTION METHODS APPLIED TO  
 SPACE RADIATION PROTECTION  
 09/23/1998 - 09/30/2001 FY01: \$0 Total: \$106,507  
*Prin. Invest.:* J H HEINBOCKEL  
*Tech. Officer:* LARC/R C SINGLETERRY, LARC/J W WILSON  
*CASE Category:* 13 - PHYSICS

**NCC 1 322** **OLD DOMINION UNIV** **9199**  
 EXPERIMENTAL DEVELOPMENT AND PHYSICAL ANALYSIS OF JET AND  
 VORTEX ACTUATORS  
 11/17/1998 - 08/31/2000 FY01: -\$31 Total: \$58,464  
*Prin. Invest.:* O A KANDIL, J T LACHOWICZ  
*Tech. Officer:* LARC/C YAO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 349** **OLD DOMINION UNIV** **9200**  
 INST FOR SCIENTIFIC & EDUCATIONAL TECHNOLOGY (FOLLOW-ON TO  
 NCC-1-232)  
 06/28/1999 - 02/15/2002 FY01: \$321,761 Total: \$1,005,542  
*Prin. Invest.:* S N TIWARI  
*Tech. Officer:* LARC/S E MASSENBERG, LARC/E J PRIOR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 363** **OLD DOMINION UNIV** **9201**  
 AUTOMATED, NON-AUTOCLAVE, COMPOSITE MATERIALS FABRICATION  
 (NRA 99-LARC-1)  
 11/29/1999 - 11/30/2002 FY01: \$135,325 Total: \$285,325  
*Prin. Invest.:* R B PIPES  
*Tech. Officer:* LARC/T HOU  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 1 364** **OLD DOMINION UNIV** **9202**  
 PSYCHOPHYSIOLOGICAL CONTROL OF ACOGNITIVE TASK USING ADAP-  
 TIVE AUTOMATION  
 12/09/1999 - 11/30/2001 FY01: \$0 Total: \$31,530  
*Prin. Invest.:* F G FREEMAN  
*Tech. Officer:* LARC/A T POPE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER



**NCC 1 369**                      **OLD DOMINION UNIV**                      **9203**  
DOCUMENT AND DISSEMINATE THE RESULTS OF WIND TUNNEL TESTS OF  
WRIGHT FLYER AIRCRAFT AND  
01/31/2000 – 12/31/2001      FY01: \$75,000                      Total: \$175,000  
*Prin. Invest.:* R L ASH  
*Tech. Officer:* LARC/A G PRICE  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NCC 1 371**                      **OLD DOMINION UNIV**                      **9204**  
TWO AND THREE DIMENSIONAL ELASTIC-PLASTIC FINITE ELEMENT ANAL-  
YSES OF TAPERED/COLDWORKED FASTENERS  
02/07/2000 – 12/31/2002      FY01: \$93,774                      Total: \$168,070  
*Prin. Invest.:* S A TIWARI, B R SESHADRI  
*Tech. Officer:* LARC/J C NEWMAN, LARC/D R AMBUR  
*CASE Category:* 49 – ENGINEERING, OTHER

**NCC 1 389**                      **OLD DOMINION UNIV**                      **9205**  
A COMPARISON OF QUASI-STATE INDENTATION & DROP-WT IMPACT  
TESTING ON CARBON/EPOXY LAMINATES  
03/14/2000 – 09/30/2001      FY01: \$0                      Total: \$45,000  
*Prin. Invest.:* R PRABHAKARAN  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NCC 1 392**                      **OLD DOMINION UNIV**                      **9206**  
STOCHASTIC DYNAMICAL MODELS FOR DIGITAL CONTROL SYSTEMS IN  
ELECTROMAGNETIC ENVIRONMENTS (EME)  
04/07/2000 – 03/31/2003      FY01: \$179,326                      Total: \$304,326  
*Prin. Invest.:* W S GRAY, O R GONZALEZ  
*Tech. Officer:* LARC/C M BELCASTRO  
*CASE Category:* 46 – MECHANICAL ENGR

**NCC 1 396**                      **OLD DOMINION UNIV**                      **9207**  
AN ALGORITHM FOR TRANSPORT OF ANISOTROPIC NEUTRONS  
05/03/2000 – 09/30/2002      FY01: \$60,000                      Total: \$79,321  
*Prin. Invest.:* J TWEED  
*Tech. Officer:* LARC/R C SINGLETERRY, LARC/J W WILSON  
*CASE Category:* 13 – PHYSICS

**NCC 1 403**                      **OLD DOMINION UNIV**                      **9208**  
LASER MATERIALS PROCESSING FOR NASA AEROSPACE STRUCTURAL  
MATERIALS  
06/23/2000 – 12/30/2000      FY01: -\$1,569                      Total: \$29,307  
*Prin. Invest.:* K NAGARATHNAM  
*Tech. Officer:* LARC/K M TAMINGER  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NCC 1 404**                      **OLD DOMINION UNIV**                      **9209**  
BOLTZMANN TRANSPORT CODE UPDATE: PARALLELIZATION AND INTE-  
GRATED DESIGN METHODS  
07/11/2000 – 07/16/2003      FY01: \$143,000                      Total: \$188,000  
*Prin. Invest.:* J H HEINBOCKEL, J NEALY  
*Tech. Officer:* LARC/R C SINGLETERRY JR, LARC/J W WILSON  
*CASE Category:* 29 – MATH/COMPUTER SCI, OTHER

**NCC 1 01012**                      **OLD DOMINION UNIV**                      **9210**  
EVALUATING THE ABILITY OF HEART RATE AND EEG TO CONTROL ALERT-  
NESS DURING PERFORMANCE  
12/29/2000 – 08/31/2002      FY01: \$70,895                      Total: \$70,895  
*Prin. Invest.:* F G FREEMAN, M W SCERBO, P J MIKULKA  
*Tech. Officer:* LARC/L J PRINZEL  
*CASE Category:* 69 – PSYCHOLOGY, OTHER

**NCC 1 01014**                      **OLD DOMINION UNIV**                      **9211**  
CENTER FOR ADVANCED ENGINEERING ENVIRONMENTS  
01/24/2001 – 12/31/2003      FY01: \$550,000                      Total: \$550,000  
*Prin. Invest.:* A K NOOR  
*Tech. Officer:* LARC/R D BRAUN, LARC/K A CANNON  
*CASE Category:* 49 – ENGINEERING, OTHER

**NCC 1 01015**                      **OLD DOMINION UNIV**                      **9212**  
ADV'D APPLIC'S FOR ADIFOR 3.0 FOR EFFICIENT CALCU- LATION OF  
1ST&2ND-ORDER CFD SENSITIVITY DERIVITIV  
02/01/2001 – 12/31/2001      FY01: \$62,562                      Total: \$62,562  
*Prin. Invest.:* A C TAYLOR, III  
*Tech. Officer:* LARC/P A NEWMAN  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NCC 1 01032**                      **OLD DOMINION UNIV**                      **9213**  
FIELD PENETRATION STUDIES STATISTICS AND BOUNDING  
03/23/2001 – 12/31/2001      FY01: \$61,411                      Total: \$61,411  
*Prin. Invest.:* C F BUNTING, L L VAHALA  
*Tech. Officer:* LARC/T X NGUYEN  
*CASE Category:* 45 – ELECTRICAL ENGR

**NCC 1 01040**                      **OLD DOMINION UNIV**                      **9214**  
RESERCH ON INTELLIGENT SYNTHESIS ENVIRONMENT  
03/27/2001 – 03/31/2002      FY01: \$500,000                      Total: \$500,000  
*Prin. Invest.:* A K NOOR, R B LOFFIN  
*Tech. Officer:* LARC/J J REHDER  
*CASE Category:* 29 – MATH/COMPUTER SCI, OTHER

**NCC 1 01043**                      **OLD DOMINION UNIV**                      **9215**  
NASA – ASEE SUMMER FACULTY RESEARCH PROGRAM 2001  
04/06/2001 – 12/31/2001      FY01: \$593,708                      Total: \$593,708  
*Prin. Invest.:* B TIWARI, D DEPRIEST  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NCC 1 01052**                      **OLD DOMINION UNIV**                      **9216**  
AUTOMATED TOW PLACEMENT PROCESSING & CHARACTERI- ZATION OF  
COMPOSITES  
06/22/2001 – 12/31/2003      FY01: \$29,940                      Total: \$29,940  
*Prin. Invest.:* R PRABHAKARAN, NONE  
*Tech. Officer:* LARC/T H HOU  
*CASE Category:* 13 – PHYSICS

**NCC 5 258**                      **OLD DOMINION UNIV**                      **9217**  
PHYSICAL-BIOLOGICAL INTERACTIONS IN THE GLOBAL EQU ATORIAL  
SURFACE LAYER  
11/17/1997 – 10/31/2001      FY01: \$0                      Total: \$376,303  
*Prin. Invest.:* E HOFMANN  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 11 – ASTRONOMY

**NCC 5 592** **OLD DOMINION UNIV** **9218**  
 NASA USRP UNDERGRADUATE STUDENT RESEARCH PROGRAM, VIRGINIA  
 SPACEGRANT CONSORTIUM.  
 09/19/2001 - 09/14/2004 FY01: \$999,626 Total: \$999,626  
*Prin. Invest.:* M SANDY  
*Tech. Officer:* GSFC/J GORMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 9 135** **OLD DOMINION UNIV** **9219**  
 VIRTUAL REALITY TRAINING/CYBERSICKNESS & EFFECTS ON SENSOR-  
 MOTOR FUNCTIONS  
 07/20/2001 - 09/30/2002 FY01: \$23,206 Total: \$23,206  
*Prin. Invest.:* R B LOFTIN  
*Tech. Officer:* JSC/D L HARM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 01001** **OLD DOMINION UNIV** **9220**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 11/02/2000 - 09/30/2001 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* M D LEE  
*Tech. Officer:* LARC/J L BURT, LARC/D B SHAFER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 01005** **OLD DOMINION UNIV** **9221**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 05/22/2001 - 06/30/2004 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* M SCERBO  
*Tech. Officer:* LARC/R HATHAWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 01011** **OLD DOMINION UNIV** **9222**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/04/2001 - 06/30/2004 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* D A JACOBS  
*Tech. Officer:* LARC/S D YOUNG, LARC/D L BLACKSTOCK  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 1 01013** **OLD DOMINION UNIV** **9223**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/06/2001 - 06/30/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* L VAHALA  
*Tech. Officer:* LARC/T X NGUYEN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 1 01014** **OLD DOMINION UNIV** **9224**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/06/2001 - 06/30/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D H ELSAYED-ALI  
*Tech. Officer:* LARC/R DEYOUNG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 1 01015** **OLD DOMINION UNIV** **9225**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 05/25/2001 - 06/30/2003 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* F G FREEMAN  
*Tech. Officer:* LARC/L J PRENZEL, LARC/A T POPE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NGT 1 01019** **OLD DOMINION UNIV** **9226**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 05/29/2001 - 06/30/2003 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* M W SCERBO  
*Tech. Officer:* LARC/J R COMSTOCK, JR, LARC/A T POPE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NGT 1 01020** **OLD DOMINION UNIV** **9227**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 05/30/2001 - 06/30/2003 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* M SCERBO  
*Tech. Officer:* LARC/D B SHAFER, LARC/V CRISP  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 01021** **OLD DOMINION UNIV** **9228**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 05/31/2001 - 06/30/2003 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D D DOVES  
*Tech. Officer:* LARC/P C SCHUTTE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NGT 1 01027** **OLD DOMINION UNIV** **9229**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/12/2001 - 06/30/2004 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* J HUANG  
*Tech. Officer:* LARC/P FERGEN  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 1 01029** **OLD DOMINION UNIV** **9230**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/14/2001 - 06/30/2003 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* S ZOHORIOD  
*Tech. Officer:* LARC/D B SHAFER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 01030** **OLD DOMINION UNIV** **9231**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/15/2001 - 09/30/2003 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* M SCERBO  
*Tech. Officer:* LARC/J L BURT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52124** **OLD DOMINION UNIV** **9232**  
 GRADUATE STUDENT RESEARCHER PROGRAM (GSRP)  
 05/15/1996 - 06/30/2000 FY01: \$0 Total: \$88,000  
*Prin. Invest.:* K L WISE, J B COOPER  
*Tech. Officer:* LARC/B J JENSEN  
*CASE Category:* 12 - CHEMISTRY

**NGT 1 52171** **OLD DOMINION UNIV** **9233**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 05/29/1997 - 12/31/2000 FY01: \$0 Total: \$77,000  
*Prin. Invest.:* C P BRITCHER  
*Tech. Officer:* LARC/N J GROOW  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52193** **OLD DOMINION UNIV** **9234**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/20/1998 - 06/30/2000 FY01: -\$93 Total: \$43,907  
*Prin. Invest.:* A FITZGIBBONS  
*Tech. Officer:* LARC/P C SHUTTE  
*CASE Category:* 62 - PSYCHOLOGY SOCIAL ASPECTS

## NASA'S UNIVERSITY PROGRAM

VIRGINIA

<b>NGT 1 52201</b>	<b>OLD DOMINION UNIV</b>	<b>9235</b>	<b>NGT 1 52231</b>	<b>OLD DOMINION UNIV</b>	<b>9244</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
08/31/1998 - 06/30/2000	FY01: -\$9,611	Total: \$34,389	04/21/2000 - 06/30/2001	FY01: \$12,000	Total: \$22,000
<i>Prin. Invest.:</i> C K AASEN			<i>Prin. Invest.:</i> F G FREEMAN		
<i>Tech. Officer:</i> LARC/A E MOTLEY, III, LARC/A G HAGEMANN			<i>Tech. Officer:</i> LARC/L J PRINZEL		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER		
<b>NGT 1 52208</b>	<b>OLD DOMINION UNIV</b>	<b>9236</b>	<b>NGT 1 52232</b>	<b>OLD DOMINION UNIV</b>	<b>9245</b>
NASA-ASEE SUMMER FACULTY RESEARCH PROGRAM			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
03/11/1999 - 12/31/2000	FY01: -\$4,429	Total: \$572,585	04/24/2000 - 06/30/2001	FY01: \$12,000	Total: \$22,000
<i>Prin. Invest.:</i> S N TUIVORE			<i>Prin. Invest.:</i> J M STARK		
<i>Tech. Officer:</i> LARC/R A HATHAWAY			<i>Tech. Officer:</i> LARC/J R COMSTOCK, JR, LARC/A T POPE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER		
<b>NGT 1 52210</b>	<b>OLD DOMINION UNIV</b>	<b>9237</b>	<b>NGT 1 52235</b>	<b>OLD DOMINION UNIV</b>	<b>9246</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
05/26/1999 - 06/30/2002	FY01: \$22,000	Total: \$66,000	04/25/2000 - 06/30/2001	FY01: \$12,001	Total: \$22,001
<i>Prin. Invest.:</i> D T NGUYEN			<i>Prin. Invest.:</i> P HIX, S ZAHORIAN		
<i>Tech. Officer:</i> LARC/J SOBIESKI			<i>Tech. Officer:</i> LARC/D B SHAFER		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 1 52211</b>	<b>OLD DOMINION UNIV</b>	<b>9238</b>	<b>NGT 1 52236</b>	<b>OLD DOMINION UNIV</b>	<b>9247</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
05/26/1999 - 06/30/2001	FY01: -\$9,066	Total: \$34,934	04/27/2000 - 06/30/2001	FY01: \$12,000	Total: \$22,000
<i>Prin. Invest.:</i> H SAYID ELE			<i>Prin. Invest.:</i> M SCERBO		
<i>Tech. Officer:</i> LARC/R J DEYOUNG			<i>Tech. Officer:</i> LARC/D B SHAFER/V CRISP		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 1 52219</b>	<b>OLD DOMINION UNIV</b>	<b>9239</b>	<b>NGT 1 52241</b>	<b>OLD DOMINION UNIV</b>	<b>9248</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
06/04/1999 - 06/30/2001	FY01: \$12,001	Total: \$44,001	06/08/2000 - 05/31/2001	FY01: \$0	Total: \$22,000
<i>Prin. Invest.:</i> F G FREEMAN			<i>Prin. Invest.:</i> D LOCKWOOD		
<i>Tech. Officer:</i> LARC/A T POPE, LARC/L J PRINZEL, 111			<i>Tech. Officer:</i> LARC/G W SACHSE		
<i>CASE Category:</i> 61 - PSYCHOLOGY BIOLOGY			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NGT 1 52220</b>	<b>OLD DOMINION UNIV</b>	<b>9240</b>	<b>NGT 1 52245</b>	<b>OLD DOMINION UNIV</b>	<b>9249</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
06/04/1999 - 06/30/2001	FY01: \$12,000	Total: \$44,000	07/10/2000 - 06/30/2002	FY01: \$34,001	Total: \$44,001
<i>Prin. Invest.:</i> G D COATES			<i>Prin. Invest.:</i> R UNAL		
<i>Tech. Officer:</i> LARC/A T POPE, LARC/L J PRINZEL, 111			<i>Tech. Officer:</i> LARC/A A MOORE		
<i>CASE Category:</i> 61 - PSYCHOLOGY BIOLOGY			<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR		
<b>NGT 1 52221</b>	<b>OLD DOMINION UNIV</b>	<b>9241</b>	<b>NGT 5 40059</b>	<b>OLD DOMINION UNIV</b>	<b>9250</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			IN SUPPORT OF THE NATIONAL SPACE GRANT COLLEGE PROGRAM		
06/29/1999 - 12/31/2000	FY01: -\$4,274	Total: \$27,726	02/21/1997 - 01/31/2001	FY01: -\$219,809	Total: \$1,733,189
<i>Prin. Invest.:</i> A A FINK, D A MAJOR			<i>Prin. Invest.:</i> M L SANDY		
<i>Tech. Officer:</i> LARC/P C SCHUTTE			<i>Tech. Officer:</i> GSFC/L KEFFER		
<i>CASE Category:</i> 62 - PSYCHOLOGY SOCIAL ASPECTS			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 1 52229</b>	<b>OLD DOMINION UNIV</b>	<b>9242</b>	<b>NGT 5 40070</b>	<b>OLD DOMINION UNIV</b>	<b>9251</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			GENERAL AVIATION DESIGN COMPETITION FUNDING IN SUP PORT OF THE		
04/21/2000 - 06/30/2001	FY01: \$0	Total: \$22,000	VIRGINIA NATIONAL SPACE GRANT COLLEGE		
<i>Prin. Invest.:</i> H ELSAVIDELE			01/03/2001 - 12/31/2001	FY01: \$874,114	Total: \$874,114
<i>Tech. Officer:</i> LARC/R J DEYOUNG			<i>Prin. Invest.:</i> M SANDY		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>Tech. Officer:</i> GSFC/D DETROYE		
			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 1 52230</b>	<b>OLD DOMINION UNIV</b>	<b>9243</b>	<b>NGT 5 40080</b>	<b>OLD DOMINION UNIV</b>	<b>9252</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			VIRGINIA SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM		
04/21/2000 - 06/30/2001	FY01: \$0	Total: \$22,000	02/09/2001 - 01/31/2002	FY01: \$694,809	Total: \$694,809
<i>Prin. Invest.:</i> M MIHALECZ			<i>Prin. Invest.:</i> M SANDY		
<i>Tech. Officer:</i> LARC/P C SCHUTTE			<i>Tech. Officer:</i> GSFC/D D DETROYE		
<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

**NAG 5 5165**                      **ROANOKE COLLEGE**                      **9253**  
 IMPROVED MODELING FOR THE COSMIC RAY ORIGIN FUNDING FOR FIRST  
 YEAR OF GRANT  
 03/09/1998 – 03/31/2002      FY01: \$0                      Total: \$115,750  
*Prin. Invest.:* C H TSAO  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 – PHYSICS

**NAG 8 1208**                      **ROANOKE COLLEGE**                      **9254**  
 JOVE  
 09/25/1995 – 08/31/2000      FY01: \$0                      Total: \$51,008  
*Prin. Invest.:* A F BARGHOUTY  
*Tech. Officer:* MSFC/D SIX  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 1 1964**                      **UNIV OF VIRGINIA**                      **9255**  
 INTELLIGENT PROCESSING OF MATERIALS FOR DESIGN AND MANUFAC-  
 TURING, ETC.  
 09/30/1997 – 12/31/2000      FY01: \$0                      Total: \$4,877,789  
*Prin. Invest.:* H N WADLEY  
*Tech. Officer:* LARC/C MOORE  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 2016**                      **UNIV OF VIRGINIA**                      **9256**  
 EFFECT OF DISCONTINUITIES AND UNCERTAINTIES ON THE RESPONSE  
 AND FAILURE OF COMPOSITE STRUCTURES  
 02/27/1998 – 01/31/2001      FY01: -\$5,885                      Total: \$283,396  
*Prin. Invest.:* A K NOOR  
*Tech. Officer:* LARC/J H STARNES  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 2031**                      **UNIV OF VIRGINIA**                      **9257**  
 LOAD DIFFUSION IN COMPOSITE STRUCTURES  
 03/25/1998 – 03/24/2000      FY01: -\$1                      Total: \$39,333  
*Prin. Invest.:* C O HORGAN  
*Tech. Officer:* LARC/J H STARNES, LARC/M P NEMETH  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 2131**                      **UNIV OF VIRGINIA**                      **9258**  
 DUAL-MODE COMBUSTION (FOLLOW-ON TO NAG-1-2085)  
 01/26/1999 – 10/31/2001      FY01: \$144,412                      Total: \$469,412  
*Prin. Invest.:* J C MCDANIEL, E H MASLAN, H K CHELLIAH  
*Tech. Officer:* LARC/D E REUBUSH, LARC/C R MCCLINTON  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 2176**                      **UNIV OF VIRGINIA**                      **9259**  
 DAMAGE-TOLERANCE OF LIGHT AEROSPACE ALLOYS UNDER DEMANDING  
 MECHANICAL & ELECTROCHEMICAL CONDITIONS  
 03/31/1999 – 12/31/2000      FY01: \$0                      Total: \$343,937  
*Prin. Invest.:* R P GANGLOFF, E A STARKE  
*Tech. Officer:* LARC/D L DICUS, LARC/N S DOMACK  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 1 2282**                      **UNIV OF VIRGINIA**                      **9260**  
 METALLURGICAL FACTORS CONTROLLING LOCALIZED CORROSION AND  
 STRESS CORROSION CRACK INITIATION IN  
 03/22/2000 – 02/28/2001      FY01: \$1                      Total: \$49,501  
*Prin. Invest.:* D A LITTLE, J R SCULLY  
*Tech. Officer:* LARC/M S DOMACK/D L DICUS  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 1 2290**                      **UNIV OF VIRGINIA**                      **9261**  
 PRACTICAL USE OF FORMAL TECHNIQUES IN AEROSPACE IN SOFTWARE  
 SYSTEMS  
 05/01/2000 – 11/30/2002      FY01: \$217,616                      Total: \$367,616  
*Prin. Invest.:* J C KNIGHT, D E EVANS  
*Tech. Officer:* LARC/K J HAYHURST  
*CASE Category:* 22 – COMPUTER SCIENCE

**NAG 1 2321**                      **UNIV OF VIRGINIA**                      **9262**  
 DEVELOPMENT OF SENSORY ALLOYS FOR ACOUSTIC STRAIN MONITORS  
 08/14/2000 – 08/31/2001      FY01: \$89,977                      Total: \$129,977  
*Prin. Invest.:* G SHIFLET  
*Tech. Officer:* LARC/R PIASCNIK  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 1 01022**                      **UNIV OF VIRGINIA**                      **9263**  
 END EFFECTS AND LOAD DIFFUSION IN COMPOSITE STRUCTURES  
 03/21/2001 – 12/31/2001      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* C O HORGAN  
*Tech. Officer:* LARC/M P NEMETH  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 1 01051**                      **UNIV OF VIRGINIA**                      **9264**  
 EXPERIMENTAL CHARACTERIZATION OF CONTINUUM/ RAREFIELD FLOWS  
 05/18/2001 – 02/29/2004      FY01: \$49,972                      Total: \$49,972  
*Prin. Invest.:* J C MCDANIEL, JR, D E CECIL  
*Tech. Officer:* LARC/C E GLASS  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 1 01120**                      **UNIV OF VIRGINIA**                      **9265**  
 UNSTEADY AERODYNAMICS OF FLAPPING WINGS  
 08/16/2001 – 08/31/2004      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* N NAJ-HARERI  
*Tech. Officer:* LARC/D D MOERDER  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 3 1916**                      **UNIV OF VIRGINIA**                      **9266**  
 INSTABILITY MECHANISMS OF THERMALLY-DRIVEN INTERFACIAL FLOWS  
 IN LIGHT-ENCAPSULATED CRYSTALGROWTH  
 07/16/1996 – 07/16/2001      FY01: \$0                      Total: \$336,000  
*Prin. Invest.:* H HAJ-HARIRI  
*Tech. Officer:* GRC/T GLASGOW  
*CASE Category:* 46 – MECHANICAL ENGR

**NAG 3 1928**                      **UNIV OF VIRGINIA**                      **9267**  
 HETEROGENEOUS COMB OF POROUS SOLID FUEL PART UNDER MICRO-  
 GRAV: A COMPREHENSIVE THERO & EXPSTUDIES  
 07/23/1996 – 07/24/2001      FY01: \$0                      Total: \$215,705  
*Prin. Invest.:* H CHELLIAH, F MILLER  
*Tech. Officer:* GRC/H ROSS  
*CASE Category:* 46 – MECHANICAL ENGR

**NAG 3 2359**                      **UNIV OF VIRGINIA**                      **9268**  
 RLV THRUST CELL LINER COATING ANALYSIS AND OPTIMIZATION  
 03/16/2000 – 09/30/2001      FY01: \$23,000                      Total: \$81,500  
*Prin. Invest.:* M J PINDER  
*Tech. Officer:* GRC/S M ARNOLD  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 3 2411**                      **UNIV OF VIRGINIA**                      **9269**  
 IMPACT OF INTERNALLY-COOLED FUNCTIONALLY GRADED CYLINDERS  
 05/09/2000 - 04/04/2001      FY01: \$0                      Total: \$30,000  
*Prin. Invest.:* M J PINDERA  
*Tech. Officer:* GRC/S M ARNOLD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2524**                      **UNIV OF VIRGINIA**                      **9270**  
 HOMOGENIZED AND SMART HOTFGM  
 01/19/2001 - 11/30/2001      FY01: \$160,057                      Total: \$160,057  
*Prin. Invest.:* M PINDERA  
*Tech. Officer:* GRC/S M ARNOLD  
*CASE Category:* 44 - CIVIL ENGR

**NAG 5 3633**                      **UNIV OF VIRGINIA**                      **9271**  
 CHARGED PARTICLE INDUCED ALTERATIONS OF SURFACES I  
 03/13/1997 - 01/31/2002      FY01: \$0                      Total: \$145,005  
*Prin. Invest.:* R E JOHNSON  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3931**                      **UNIV OF VIRGINIA**                      **9272**  
 EROSIONAL PROCESSES ON MARS  
 03/12/1997 - 02/28/2002      FY01: \$60,000                      Total: \$293,763  
*Prin. Invest.:* A D HOWARD  
*Tech. Officer:* GSFC/J G GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3973**                      **UNIV OF VIRGINIA**                      **9273**  
 ADVANCED COMPUTATIONAL METHODS FOR THE NUMERICAL S METEOROLOGICAL FLOW PROBLEMS  
 03/03/1997 - 01/31/2001      FY01: \$0                      Total: \$326,830  
*Prin. Invest.:* J J DORNING  
*Tech. Officer:* GSFC/K H BERGMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4192**                      **UNIV OF VIRGINIA**                      **9274**  
 ION COLLISION PROCESSES: PLASMA INTERACTIONS WITH AN NEUTRAL CORONA  
 04/10/1997 - 03/31/2002      FY01: \$83,600                      Total: \$408,848  
*Prin. Invest.:* D E JOHNSON  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4283**                      **UNIV OF VIRGINIA**                      **9275**  
 EROSION AND ALTERATION OF INTERSTELLAR AND INTERPL  
 04/07/1997 - 05/31/2002      FY01: \$35,000                      Total: \$177,700  
*Prin. Invest.:* D E JOHNSON  
*Tech. Officer:* GSFC/D BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4332**                      **UNIV OF VIRGINIA**                      **9276**  
 SUBLIMATION AND OPTICAL PROPERTIES OF ICES AT LOW TO SOLAR SYSTEM OBJECTS  
 04/30/1997 - 08/31/2001      FY01: \$0                      Total: \$193,971  
*Prin. Invest.:* D A BARAGIOLA  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4779**                      **UNIV OF VIRGINIA**                      **9277**  
 AQUARIUS  
 06/18/1997 - 12/31/2000      FY01: -\$881                      Total: \$594,192  
*Prin. Invest.:* M GARSTANG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6043**                      **UNIV OF VIRGINIA**                      **9278**  
 EFFECTS OF THE DEVELOPMENT OF THE BAIKAL-AMUR MAIN PATTERNS OF BOREAL FOREST COVER AND CARBON FLUXES  
 07/23/1997 - 07/31/2000      FY01: \$0                      Total: \$159,113  
*Prin. Invest.:* H SHUGART  
*Tech. Officer:* GSFC/A JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6351**                      **UNIV OF VIRGINIA**                      **9279**  
 VEMAP PHASE II  
 09/12/1997 - 05/31/2001      FY01: \$0                      Total: \$292,215  
*Prin. Invest.:* T SMITH  
*Tech. Officer:* GSFC/A JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6384**                      **UNIV OF VIRGINIA**                      **9280**  
 THE COUPLING LAND-USE AND LAND-COVER CHANGES, AND MIOMBO WOODLANDS  
 09/26/1997 - 10/31/2001      FY01: \$0                      Total: \$570,165  
*Prin. Invest.:* P DESANKER  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6403**                      **UNIV OF VIRGINIA**                      **9281**  
 CRITICAL TESTS OF STELLAR EVOLUTION (L TSA)  
 10/10/1997 - 10/14/2002      FY01: \$86,400                      Total: \$400,799  
*Prin. Invest.:* R O'CONNELL  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6507**                      **UNIV OF VIRGINIA**                      **9282**  
 THE DEVELOPMENT OF SUBMILLIMETER WAVELENGTH RECEIVERS FOR MICROWAVEREMOTE SENSING  
 11/04/1997 - 05/31/2000      FY01: \$0                      Total: \$356,217  
*Prin. Invest.:* J HESLER  
*Tech. Officer:* GSFC/L HILLIARD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6828**                      **UNIV OF VIRGINIA**                      **9283**  
 GAS EVOLUTION FROM ICY SURFACES  
 01/15/1998 - 07/31/2001      FY01: \$0                      Total: \$130,643  
*Prin. Invest.:* R BARAGIOLA  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7033**                      **UNIV OF VIRGINIA**                      **9284**  
 EVALUATION OF INCREMENTAL RELEASES OF ECS USER INTERFACES AND THE DEVELOPMENT OF HDF/HDF-EOS  
 02/19/1998 - 09/30/2000      FY01: -\$571                      Total: \$113,280  
*Prin. Invest.:* G D EMMITT  
*Tech. Officer:* GSFC/H K RAMPRIYAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## VIRGINIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 7104**                      **UNIV OF VIRGINIA**                      **9285**  
 ULTRAVIOLET SPECTRAL DIAGNOSTICS FOR OLD STELLAR POPULATIONS  
 03/13/1998 - 03/31/2001                      FY01: \$0                      Total: \$41,875  
*Prin. Invest.:* R T ROOD  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7266**                      **UNIV OF VIRGINIA**                      **9286**  
 SOUTHERN AFRICAN VALIDATION OF EOS GROUND AND AIRB ORNE  
 INSTRUMENTATION AND VALIDATION ACTIVITIES  
 04/30/1998 - 08/30/2001                      FY01: \$0                      Total: \$499,858  
*Prin. Invest.:* R J SWAPP  
*Tech. Officer:* GSFC/J PRIVETTE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7417**                      **UNIV OF VIRGINIA**                      **9287**  
 CENTRAL AFRICAN REGIONAL PROJECT FOR THE ENVIRONME NT:  
 REMOTE SENSING AND GIS SUPPORT ACTIVITIES  
 05/22/1998 - 01/31/2000                      FY01: -\$789                      Total: \$178,211  
*Prin. Invest.:* C JUSTICE  
*Tech. Officer:* GSFC/C TUCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7500**                      **UNIV OF VIRGINIA**                      **9288**  
 MAGNETOHYDRODYNAMICS OF THE SOLAR NEBULA  
 06/01/1998 - 05/31/2002                      FY01: \$0                      Total: \$164,000  
*Prin. Invest.:* S BALBUS  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7749**                      **UNIV OF VIRGINIA**                      **9289**  
 SPUTTERING OF THE MARTIAN ATMOSPHERE  
 11/04/1998 - 12/31/2001                      FY01: \$59,370                      Total: \$173,751  
*Prin. Invest.:* R E JOHNSON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7862**                      **UNIV OF VIRGINIA**                      **9290**  
 SAFARI 2000: A SOUTHERN AFRICAN REGIONAL SCIENCE I NITIATIVE  
 01/08/1999 - 01/31/2002                      FY01: \$95,347                      Total: \$252,864  
*Prin. Invest.:* C O JUSTICE  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7939**                      **UNIV OF VIRGINIA**                      **9291**  
 "COLLABORATIVE PARTICIPATION OF SOUTH AFRICAN AIRB ORNE VALIDA-  
 TIONPLATFORM IN SAFARI2000"  
 01/04/1999 - 09/14/2001                      FY01: \$0                      Total: \$300,704  
*Prin. Invest.:* R J SWAPP  
*Tech. Officer:* GSFC/M KING  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7956**                      **UNIV OF VIRGINIA**                      **9292**  
 LAND SURFACE CHARACTERIZATION OF SOUTHERN AFRICAN SAVANNAS:  
 CARBONCYCLING AND SENSITIVITY TO E  
 01/07/1999 - 01/31/2002                      FY01: \$170,833                      Total: \$605,642  
*Prin. Invest.:* H H SHUGART  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8088**                      **UNIV OF VIRGINIA**                      **9293**  
 SUPERNOVA-INFLUENCED STAR FORMATION  
 01/27/1999 - 12/31/2001                      FY01: \$45,000                      Total: \$130,000  
*Prin. Invest.:* D A CHEVALIER  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8130**                      **UNIV OF VIRGINIA**                      **9294**  
 MODELS OF PULSAR NEBULAE (ATP 98)  
 02/11/1999 - 02/14/2002                      FY01: \$63,700                      Total: \$185,500  
*Prin. Invest.:* R A CHEVALIER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8162**                      **UNIV OF VIRGINIA**                      **9295**  
 LAND COVER AND LAND USE CHANGE PROJECT SCIENTIST S UPPORT  
 02/08/1999 - 08/31/2001                      FY01: \$0                      Total: \$537,535  
*Prin. Invest.:* C O JUSTICE  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8232**                      **UNIV OF VIRGINIA**                      **9296**  
 SUPERNOVA REMNANTS: INTERSTELLAR AND CIRCUMSTELLAR INTER-  
 ACTIONS (ATP98)  
 02/11/1999 - 02/14/2002                      FY01: \$60,000                      Total: \$180,000  
*Prin. Invest.:* R A CHEVALIER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8444**                      **UNIV OF VIRGINIA**                      **9297**  
 LABORATORY SIMULATIONS OF RADIATION EFFECTS ON PLA NETARY  
 SURFACES  
 04/07/1999 - 05/31/2002                      FY01: \$109,000                      Total: \$164,000  
*Prin. Invest.:* R A BARAGIOLA, NONE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8585**                      **UNIV OF VIRGINIA**                      **9298**  
 EXTENDING THE VOCABULARY FOR CROSS-DISCIPLINARY SEARCHING  
 OF EOS DATA  
 06/24/1999 - 06/30/2001                      FY01: \$0                      Total: \$153,917  
*Prin. Invest.:* J C FRENCH  
*Tech. Officer:* GSFC/K MOE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8612**                      **UNIV OF VIRGINIA**                      **9299**  
 TOWARD REAL-TIME ANALYSIS OF TERRESTRIAL CARBON CYCLING  
 06/11/1999 - 01/31/2000                      FY01: -\$460                      Total: \$65,540  
*Prin. Invest.:* W R EMANUEL  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8663**                      **UNIV OF VIRGINIA**                      **9300**  
 LOW COST TERAHERTZ FREQUENCY MULTIPLIERS FOR SOFIA AND  
 EXPLORER MISSIONS  
 07/07/1999 - 01/14/2002                      FY01: \$0                      Total: \$267,552  
*Prin. Invest.:* T CROWE  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 8670**                      **UNIV OF VIRGINIA**                      **9301**  
 ESTIMATING ROOT ZONE SOIL MOISTURE AND EXPLORING SCALE ASPECTS OF ITS COUPLING TO THE ATMOSPHERIC  
 07/08/1999 - 07/14/2002      FY01: \$119,291                      Total: \$346,695  
*Prin. Invest.:* J D ALBERTSON  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8749**                      **UNIV OF VIRGINIA**                      **9302**  
 TO DEVELOPE A COMPACT, AMBIENT TEMPERATURE 500 GHZ RECEIVER FOR USE IN PASSIVE MICROWAVE REMOTE SEN  
 08/25/1999 - 09/30/2001      FY01: \$0                      Total: \$97,000  
*Prin. Invest.:* J L HESLER  
*Tech. Officer:* GSFC/J R WANG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8838**                      **UNIV OF VIRGINIA**                      **9303**  
 CENTRAL AFRICAN REGIONAL PROJECT FOR THE ENVIRON MENT: REMOTE SENSING AND GIS SUPPORT ACTIVITIES  
 09/23/1999 - 09/30/2000      FY01: \$0                      Total: \$158,271  
*Prin. Invest.:* C O JUSTICE  
*Tech. Officer:* GSFC/C J TUCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8902**                      **UNIV OF VIRGINIA**                      **9304**  
 MARTIAN CRATERED HIGHLANDS FIELD CONFERENCE  
 12/28/1999 - 12/31/2001      FY01: \$0                      Total: \$22,000  
*Prin. Invest.:* A HOWARD  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8954**                      **UNIV OF VIRGINIA**                      **9305**  
 FAR-ULTRAVIOLET STUDIES OF METAL-DEFICIENT BLUE COMPACT DWARF GALAXIES - FUSE  
 01/24/2000 - 01/31/2002      FY01: \$0                      Total: \$54,300  
*Prin. Invest.:* T X THUAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9266**                      **UNIV OF VIRGINIA**                      **9306**  
 NUMERICAL MAGNETOHYDRODYNAMIC STUDIES OF ACCRETION DISKS (ATP 99)  
 03/13/2000 - 03/14/2002      FY01: \$94,530                      Total: \$184,364  
*Prin. Invest.:* J HAWLEY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9289**                      **UNIV OF VIRGINIA**                      **9307**  
 OPERATIONALIZING GOF C IN THE MIOMBO REGION & QUES TIONS OF CARBON MIOMBO REGION A SOURCE ORSINK  
 03/27/2000 - 04/30/2002      FY01: \$129,986                      Total: \$216,693  
*Prin. Invest.:* P V DESANKER  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9357**                      **UNIV OF VIRGINIA**                      **9308**  
 REGIONAL ANALYSIS OF LAND-ATMOSPHERE FEEDBACKS IN SOUTHERN AFRICAN SAVANNAS: A SYNTHESIS ACTIVITIES  
 04/05/2000 - 04/30/2002      FY01: \$281,176                      Total: \$463,121  
*Prin. Invest.:* H H SHUGART  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9654**                      **UNIV OF VIRGINIA**                      **9309**  
 PRODUCTION OF DIABATIC HEATING IN THE TROPICAL TROPOSPHERE  
 06/05/2000 - 05/31/2002      FY01: \$111,000                      Total: \$183,333  
*Prin. Invest.:* J D FUENTES  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9747**                      **UNIV OF VIRGINIA**                      **9310**  
 INTEGRATING A MANUAL THESAURUS WITH AUTOMATED TERM SUGGES-TION TECHNIQUES FOR CROSS-DISCIPLINARY  
 07/11/2000 - 01/14/2002      FY01: \$0                      Total: \$82,338  
*Prin. Invest.:* J FRENCH  
*Tech. Officer:* GSFC/K MOE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 9758**                      **UNIV OF VIRGINIA**                      **9311**  
 MOLECULAR ISTOPIC COMPOSITION OF ORGANIC COMPOUNDS IN ANTARCTIC METEORITES  
 06/28/2000 - 06/30/2001      FY01: \$0                      Total: \$51,810  
*Prin. Invest.:* S MACKO  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9900**                      **UNIV OF VIRGINIA**                      **9312**  
 ARE THE SCUBA DEEP SURVEY SOURCES STARBURSTS OR AGN?  
 09/06/2000 - 09/14/2001      FY01: \$0                      Total: \$12,300  
*Prin. Invest.:* T X THUAN  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10074**                      **UNIV OF VIRGINIA**                      **9313**  
 STELLAR MASS LOSS VERSUS EXTERNAL ACCRETION IN X-RAY BRIGHT ELLIPTICALS  
 10/27/2000 - 10/31/2002      FY01: \$40,000                      Total: \$40,000  
*Prin. Invest.:* C L SARAZIN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10075**                      **UNIV OF VIRGINIA**                      **9314**  
 MERGER SHOCKS IN CLUSTERS OF GALAXIES  
 10/27/2000 - 10/31/2002      FY01: \$38,700                      Total: \$38,700  
*Prin. Invest.:* C L SARAZIN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10173**                      **UNIV OF VIRGINIA**                      **9315**  
 CHARGED PARTICLE ALTERATIONS OF THE SURFACES IN THE OUTER SOLAR SYSTEM  
 12/21/2000 - 01/31/2002      FY01: \$39,000                      Total: \$39,000  
*Prin. Invest.:* R E JOHNSON, NONE  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

VIRGINIA

NASA'S UNIVERSITY PROGRAM

**NAG 5 10250**                      **UNIV OF VIRGINIA**                      **9316**  
 OBSERVATIONS OF O VI EMISSION IN THE HOT HALO OF NGC 891 (FUSE  
 00)  
 02/15/2001 - 02/14/2002      FY01: \$69,997                      Total: \$69,997  
*Prin. Invest.:* E M MURPHY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10341**                      **UNIV OF VIRGINIA**                      **9317**  
 THE INTERSTELLAR MEDIUM OF BLUE COMPACT DWARF GALAXIES (FUSE  
 00)  
 02/05/2001 - 02/14/2002      FY01: \$77,800                      Total: \$77,800  
*Prin. Invest.:* T X THUAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10436**                      **UNIV OF VIRGINIA**                      **9318**  
 STRUCTURE & REFLECTANCE OF SURFACES OF ICY BODIES: LABORA-  
 TORY SIMULATIONS  
 02/20/2001 - 02/28/2002      FY01: \$50,500                      Total: \$50,500  
*Prin. Invest.:* R A BARAGIOLA  
*Tech. Officer:* GSFC/D SENSE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10606**                      **UNIV OF VIRGINIA**                      **9319**  
 ANALYSIS OF IN-SITU OBSERVATIONS OF AEROSOLS OVER SOUTHERN  
 AFRICA  
 03/15/2001 - 03/14/2002      FY01: \$71,973                      Total: \$71,973  
*Prin. Invest.:* R SWAP  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10655**                      **UNIV OF VIRGINIA**                      **9320**  
 MAGNETOHYDRODYNAMICS IN PROTOSTELLAR DISKS  
 03/20/2001 - 05/31/2002      FY01: \$30,000                      Total: \$30,000  
*Prin. Invest.:* S BALBUS  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10956**                      **UNIV OF VIRGINIA**                      **9321**  
 ADVANCED IMAGE PROCESSING FOR IMAGE2000 ENHANCE- MENTS  
 05/30/2001 - 05/31/2002      FY01: \$50,000                      Total: \$50,000  
*Prin. Invest.:* G WILLIAMS  
*Tech. Officer:* WFF/B MERRITT  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 5 10985**                      **UNIV OF VIRGINIA**                      **9322**  
 SOUTHERN AFRICAN VALIDATION OF EOS GROUND AND AIR- BORNE  
 INSTRUMENTATION AND VALIDATION ACTIVITIES  
 05/31/2001 - 05/31/2002      FY01: \$58,997                      Total: \$58,997  
*Prin. Invest.:* R J SWAPP  
*Tech. Officer:* GSFC/J PRIVETTE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11341**                      **UNIV OF VIRGINIA**                      **9323**  
 CARPE GIS MAPPING ACTIVITY  
 09/24/2001 - 09/30/2002      FY01: \$9,004                      Total: \$9,004  
*Prin. Invest.:* C O JUSTICE  
*Tech. Officer:* GSFC/C J TUCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1567**                      **UNIV OF VIRGINIA**                      **9324**  
 MEMBRANE PROTEIN CRYSTALLIZATION SCREENS BASED UPON FUNDA-  
 MENTAL PHENOMENOLOGY OF SOLUTIONS  
 12/22/1998 - 11/30/2002      FY01: \$101,550                      Total: \$459,550  
*Prin. Invest.:* M C WIENER  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 13 - PHYSICS

**NAG 8 1832**                      **UNIV OF VIRGINIA**                      **9325**  
 A DIRECTED APPROACH TO MEMBRANE PROTEIN CRYSTALLO- GRAPHY  
 09/05/2001 - 11/30/2004      FY01: \$91,000                      Total: \$91,000  
*Prin. Invest.:* M C WIENER  
*Tech. Officer:* MSFC/B Q GUYNES  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAS 1 99098**                      **UNIV OF VIRGINIA**                      **9326**  
 ANALYTICAL AERONAUTICAL SAFETY SOFTWARE TOOL  
 03/26/1999 - 11/25/2001      FY01: \$228,087                      Total: \$700,087  
*Prin. Invest.:* J BECHTA-DUGAN, K J SULLIZAN  
*Tech. Officer:* LARC/H A ROELANT, LARC/D J PORTER,JR.  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 3 97190**                      **UNIV OF VIRGINIA**                      **9327**  
 HOTFGM CYLINDER A COUPLED MICRO MACROSTRUCTURAL TH EORY  
 10/29/1997 - 03/01/2000      FY01: \$0                      Total: \$157,629  
*Prin. Invest.:* M PINDERG, J ABOUDI  
*Tech. Officer:* GRC/S ARNOLD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 237**                      **UNIV OF VIRGINIA**                      **9328**  
 NASA-VIRGINIA CONSORTIUM OF ENGINEERING & SCIENCE UNIVERSITIES  
 PH.D RESEARCH ASSISTANTSHIP PROGRAM  
 07/16/1996 - 08/31/2000      FY01: -\$7,828                      Total: \$469,099  
*Prin. Invest.:* D CHESTNUTT  
*Tech. Officer:* LARC/S E MASSENBERG, LARC/E J PRIOR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 263**                      **UNIV OF VIRGINIA**                      **9329**  
 CENTER FOR ADVANCED COMPUTATIONAL TECHNOLOGY MY 1/3  
 08/20/1997 - 12/31/2000      FY01: -\$71,498                      Total: \$1,653,503  
*Prin. Invest.:* A K NOORE  
*Tech. Officer:* LARC/K A CANNON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 342**                      **UNIV OF VIRGINIA**                      **9330**  
 ROBUST ADAPTIVE CONTROL IN THE PRESENCE OF UNCERTAINTIES AND  
 FAILURES  
 06/08/1999 - 05/31/2002      FY01: \$52,000                      Total: \$129,001  
*Prin. Invest.:* G TAO  
*Tech. Officer:* LARC/S M JOSHI, LARC/C M BELCASTRO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 361**                      **UNIV OF VIRGINIA**                      **9331**  
 NONLINEAR IMPEDANCE OF POROUS MATERIALS  
 11/12/1999 - 11/14/2002      FY01: \$54,473                      Total: \$106,473  
*Prin. Invest.:* W E ZORUMSKI  
*Tech. Officer:* LARC/T L PARROTT, LARC/M G JONES  
*CASE Category:* 13 - PHYSICS



## NASA'S UNIVERSITY PROGRAM

VIRGINIA

**NCC 1 01009**                      **UNIV OF VIRGINIA**                      **9332**  
 DEVELOPMENT & EVALUATION OF LAP JOINT SIMULANT ENVIRONMENTS  
 FOR ACCELERATED TESTING  
 12/14/2000 – 12/31/2002      FY01: \$60,000                      Total: \$60,000  
*Prin. Invest.:* R G KELLY  
*Tech. Officer:* LARC/R S PIASCIK  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NCC 2 1093**                      **UNIV OF VIRGINIA**                      **9333**  
 WHEN ARE THE IMMERSIVE DISPLAYS USEFUL: PERCEPTUAL & TASK  
 CONSIDERATIONS?  
 03/09/1999 – 02/28/2002      FY01: \$145,117                      Total: \$441,768  
*Prin. Invest.:* D R PROFFITT  
*Tech. Officer:* ARC/M K KAISER  
*CASE Category:* 69 – PSYCHOLOGY, OTHER

**NCC 2 1192**                      **UNIV OF VIRGINIA**                      **9334**  
 THE TOPOGRAPHY & BASIN DEPOSITS OF THE EQUATORIAL HIGHLANDS  
 08/28/2000 – 08/31/2001      FY01: \$11,000                      Total: \$22,000  
*Prin. Invest.:* A D HOWARD  
*Tech. Officer:* ARC/J M MOORE  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NCC 2 5415**                      **UNIV OF VIRGINIA**                      **9335**  
 THEORETICAL CALCULATIONS OF POLYNUCLEAR TRANSITION METAL  
 CARBONYLS  
 01/19/2001 – 01/31/2002      FY01: \$60,000                      Total: \$60,000  
*Prin. Invest.:* L S ANDREWS  
*Tech. Officer:* ARC/H PARTRIDGE  
*CASE Category:* 12 – CHEMISTRY

**NCC 8 171**                      **UNIV OF VIRGINIA**                      **9336**  
 MODELING PROSTATE CANCER SKELETAL METASTASIS AND GENE  
 THERAPY  
 03/01/1999 – 11/30/2002      FY01: \$169,100                      Total: \$463,100  
*Prin. Invest.:* L W CHUNG  
*Tech. Officer:* MSFC/D R MORRISON  
*CASE Category:* 51 – BIOLOGY (EXCLUDING ENVIR)

**NGT 1 01016**                      **UNIV OF VIRGINIA**                      **9337**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/22/2001 – 06/30/2003      FY01: \$12,000                      Total: \$12,000  
*Prin. Invest.:* B W JOHNSON  
*Tech. Officer:* LARC/P M GOODE, LARC/A T MORRIS  
*CASE Category:* 29 – MATH/COMPUTER SCI, OTHER

**NGT 1 01031**                      **UNIV OF VIRGINIA**                      **9338**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/22/2001 – 06/30/2003      FY01: \$12,000                      Total: \$12,000  
*Prin. Invest.:* J C MCDANIEL, JR  
*Tech. Officer:* LARC/C E GLASS  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NGT 1 52187**                      **UNIV OF VIRGINIA**                      **9339**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 06/04/1998 – 09/30/2000      FY01: \$0                      Total: \$44,000  
*Prin. Invest.:* C T HEROKOVICH  
*Tech. Officer:* LARC/J H STORRIES  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NGT 1 52212**                      **UNIV OF VIRGINIA**                      **9340**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/28/1999 – 06/30/2000      FY01: –\$589                      Total: \$21,411  
*Prin. Invest.:* D A STAACK, J C MCDANREL  
*Tech. Officer:* LARC/C E GLASS, LARC/C G MILLER  
*CASE Category:* 13 – PHYSICS

**NGT 1 52234**                      **UNIV OF VIRGINIA**                      **9341**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/26/2000 – 12/31/2000      FY01: –\$3                      Total: \$11,914  
*Prin. Invest.:* H G WOOD  
*Tech. Officer:* LARC/R H THOMAS  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NGT 1 52237**                      **UNIV OF VIRGINIA**                      **9342**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 04/27/2000 – 06/30/2001      FY01: \$12,000                      Total: \$22,000  
*Prin. Invest.:* C R ELKS  
*Tech. Officer:* LARC/P W GOODE, LARC/A T MORRIS  
*CASE Category:* 29 – MATH/COMPUTER SCI, OTHER

**NGT 1 52244**                      **UNIV OF VIRGINIA**                      **9343**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 08/07/2000 – 06/30/2001      FY01: \$12,000                      Total: \$22,000  
*Prin. Invest.:* R W KENT  
*Tech. Officer:* LARC/L E JONES  
*CASE Category:* 49 – ENGINEERING, OTHER

**NGT 1 52247**                      **UNIV OF VIRGINIA**                      **9344**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 08/01/2000 – 06/30/2001      FY01: \$12,000                      Total: \$22,000  
*Prin. Invest.:* J C MCDANIEL JR, D E CECIL  
*Tech. Officer:* GSFC/C E GLASS  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NGT 5 30365**                      **UNIV OF VIRGINIA**                      **9345**  
 NEE MODIFICATION BY AEROSOL RADIATIVE FORCING/JORDAN G. BARR  
 08/13/2001 – 08/31/2004      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* J FUENTES  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NGT 5 30418**                      **UNIV OF VIRGINIA**                      **9346**  
 STRUCTURAL DYNAMICS OF SOUTHERN AFRICAN SAVANNAS A LONG THE  
 KALAHARITRANSECT—STUDENT: KELLY C  
 09/10/2001 – 08/31/2004      FY01: \$22,000                      Total: \$22,000  
*Prin. Invest.:* H SHUGART  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NGT 5 50062**                      **UNIV OF VIRGINIA**                      **9347**  
 APPROACHES FOR IMPROVING ACCESS TO NASA'S SCIENTIF  
 08/04/1997 – 06/30/2000      FY01: –\$73                      Total: \$65,927  
*Prin. Invest.:* J FRENCH  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NGT 5 50305**                      **UNIV OF VIRGINIA**                      **9348**  
 USING NOVEL MEMBRANE PROTEIN CRYSTALLIZATION SCREE NS FOR  
 THE STRUCTURE DETERMINATION OF ACHLORIDE  
 07/07/2000 - 06/30/2002      FY01: \$21,140                      Total: \$42,252  
*Prin. Invest.:* M C WIENER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT10 52620**                      **UNIV OF VIRGINIA**                      **9349**  
 TRAINING GRANT UNDER A GRADUATE STUDENT RESEARCHER'S  
 PROGRAM  
 06/22/1999 - 07/30/2002      FY01: \$22,000                      Total: \$66,000  
*Prin. Invest.:* A MILLS  
*Tech. Officer:* KSC/R WHEELER  
*CASE Category:* 55 - AGRICULTURE

**NAG 1 1851**                      **VA POLYTECHNIC INST & ST UNIV**                      **9350**  
 AIRCRAFT NONLINEAR DYNAMICS STUDIES  
 06/26/1996 - 08/15/2000      FY01: -\$1                      Total: \$229,641  
*Prin. Invest.:* F H LUTZE, W H MASON  
*Tech. Officer:* LARC/J V FOSTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 1881**                      **VA POLYTECHNIC INST & ST UNIV**                      **9351**  
 RESIN FILM INFUSION (RFI) PROCESS MODELING FOR LARGE TRANSPORT  
 AIRCRAFT WING STRUCTURES  
 11/22/1996 - 05/15/2000      FY01: -\$1                      Total: \$437,187  
*Prin. Invest.:* A C LOOS  
*Tech. Officer:* LARC/H B DEXTER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 1895**                      **VA POLYTECHNIC INST & ST UNIV**                      **9352**  
 THE NASA-VIRGINIA TECH COMPOSITE PROGRAM: INVESTIGATION OF  
 COMPOSITE STRUCTURES  
 01/29/1997 - 08/31/2000      FY01: \$0                      Total: \$202,273  
*Prin. Invest.:* M W HYER  
*Tech. Officer:* LARC/J H STAMES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 1942**                      **VA POLYTECHNIC INST & ST UNIV**                      **9353**  
 TURBULENCE IN HELICOPTER ROTOR FLOWS AND THE MECHANISM OF  
 NOISE PRODUCTION  
 06/04/1997 - 12/31/2000      FY01: -\$39                      Total: \$272,827  
*Prin. Invest.:* W J DEVENPORT  
*Tech. Officer:* LARC/C L BURLEY, LARC/T F BROOKS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 1959**                      **VA POLYTECHNIC INST & ST UNIV**                      **9354**  
 EARTH RADIATION MEASUREMENT SCIENCE MY 1/3  
 08/05/1997 - 08/15/2000      FY01: -\$14,501                      Total: \$298,184  
*Prin. Invest.:* G L SMITH, J R MAHAN  
*Tech. Officer:* LARC/R B LEE, III, LARC/R L HUFFMAN, JR.  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2106**                      **VA POLYTECHNIC INST & ST UNIV**                      **9355**  
 EVALUATION AND IMPROVEMENT OF EARTH RADIATION BUDGET DATA  
 SETS  
 09/17/1998 - 09/30/2001      FY01: \$237,527                      Total: \$674,454  
*Prin. Invest.:* M P HAEFFELIN  
*Tech. Officer:* LARC/D F YOUNG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2111**                      **VA POLYTECHNIC INST & ST UNIV**                      **9356**  
 AIRPLANE CONTROL ALLOCATION STUDY  
 09/16/1998 - 08/07/2000      FY01: -\$1                      Total: \$99,500  
*Prin. Invest.:* W C DURHAM  
*Tech. Officer:* LARC/J V FOSTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2128**                      **VA POLYTECHNIC INST & ST UNIV**                      **9357**  
 INVESTIGATION OF NOVEL SPACE-BORNE BROADBAND RADIO METER  
 CONCEPTS  
 01/07/1999 - 10/31/2001      FY01: \$105,319                      Total: \$297,806  
*Prin. Invest.:* J R MAHAN  
*Tech. Officer:* LARC/R B LEE, ARC/R L HUFFMAN, JR.  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2137**                      **VA POLYTECHNIC INST & ST UNIV**                      **9358**  
 CONTROL OF FAN NOISE FROM TURBOFAN ENGINES USING ADAPTIVE  
 HERSHEY-QUINCKE TUBES, NRA 98-LARC-3  
 01/28/1999 - 04/15/2001      FY01: \$0                      Total: \$179,377  
*Prin. Invest.:* R A BURDISO  
*Tech. Officer:* LARC/C H GERHOLD, LARC/J W POSEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2158**                      **VA POLYTECHNIC INST & ST UNIV**                      **9359**  
 HYBRID ACTIVE-PASSIVE SYSTEMS FOR CONTROL OF AIRCRAFT  
 INTERIOR NOISE  
 03/09/1999 - 12/31/2001      FY01: \$146,739                      Total: \$414,882  
*Prin. Invest.:* C R FULLER  
*Tech. Officer:* LARC/D L PALUMBO  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 2190**                      **VA POLYTECHNIC INST & ST UNIV**                      **9360**  
 EFFICIENT HYBRID ACTUATION USING SOLID-STATE ACTUATORS  
 07/06/1999 - 04/30/2002      FY01: -\$300                      Total: \$314,123  
*Prin. Invest.:* D J LEO, H H CUDNEY  
*Tech. Officer:* LARC/G C HORNER, LARC/R G REMUS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 2246**                      **VA POLYTECHNIC INST & ST UNIV**                      **9361**  
 CONTROL LAW -- CONTROL ALLOCATION INTERACTION  
 09/17/1999 - 09/30/2000      FY01: \$0                      Total: \$25,000  
*Prin. Invest.:* W C DURHAM  
*Tech. Officer:* LARC/J B DAVIDSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2272**                      **VA POLYTECHNIC INST & ST UNIV**                      **9362**  
 AERODYNAMIC STUDIES RELATED TO THE AEROACOUSTICS OF  
 TILTROTOR BLADES  
 03/24/2000 - 02/28/2003      FY01: \$80,000                      Total: \$160,000  
*Prin. Invest.:* W J DAVENPORT  
*Tech. Officer:* LARC/C L BURLEY, LARC/T F BROOKS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2277**                      **VA POLYTECHNIC INST & ST UNIV**                      **9363**  
 FINITE ELEMENT MODEL UPDATING OF UNCERTAIN SYSTEMS  
 03/08/2000 - 02/28/2003      FY01: \$30,000                      Total: \$62,117  
*Prin. Invest.:* R KAPANIA  
*Tech. Officer:* LARC/L G HORTA, LARC/J JUANG  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 2281 VA POLYTECHNIC INST & ST UNIV 9364**  
 AEROELASTIC MODELING & BEHAVIOR OF LIFTING SURFACES INCORPORATING AERODYNAMIC & STRUCTURAL  
 03/21/2000 - 09/30/2000 FY01: \$0 Total: \$26,000  
*Prin. Invest.:* L LIBRESCU  
*Tech. Officer:* LARC/W A SILVA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2286 VA POLYTECHNIC INST & ST UNIV 9365**  
 ANALYSIS OF COMPOSITE STRUCTURES USING NON-TRADITIONAL METHODS  
 03/30/2000 - 03/31/2001 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* R K KAPAUIA  
*Tech. Officer:* LARC/I S RAJU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2298 VA POLYTECHNIC INST & ST UNIV 9366**  
 RESIDUAL STRESS EFFECTS IN ANISOTROPIC COMPOSITE LAMINATES  
 05/24/2000 - 05/15/2003 FY01: \$50,000 Total: \$80,000  
*Prin. Invest.:* M W HYER  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2309 VA POLYTECHNIC INST & ST UNIV 9367**  
 ANALYSIS FOR THE PROGRESSIVE FAILURE RESPONSE OF TEXTILE COMPOSITE FUSELAGE FRAMES  
 06/14/2000 - 06/09/2001 FY01: \$29,312 Total: \$49,312  
*Prin. Invest.:* E R JOHNSON  
*Tech. Officer:* LARC/R L BOITNOTT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2310 VA POLYTECHNIC INST & ST UNIV 9368**  
 PUNCTURE-HEALING PROPERTIES OF CARBON NANOTUBE-FILLED IONOMERS  
 07/05/2000 - 07/31/2003 FY01: \$62,980 Total: \$102,870  
*Prin. Invest.:* T C WARD  
*Tech. Officer:* LARC/E J SIOCHI, LARC/T L ST. CLAIR  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 2324 VA POLYTECHNIC INST & ST UNIV 9369**  
 FORMATION OF METAL NANOPHASES IN POLYMERIC MATRICES VIA SUPERCRITICAL FLUID INFUSION  
 08/24/2000 - 04/30/2001 FY01: \$7,000 Total: \$39,053  
*Prin. Invest.:* L T TAYLOR  
*Tech. Officer:* LARC/T L ST. CLAIR, LARC/E J SIOCHI  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 2325 VA POLYTECHNIC INST & ST UNIV 9370**  
 FUNDAMENTAL STUDIES OF HQ TUBES WITH MODE MEASUREMENTS  
 08/30/2000 - 08/15/2001 FY01: \$42,316 Total: \$62,316  
*Prin. Invest.:* R A BURDISSO  
*Tech. Officer:* LARC/C H GERHOLD, LARC/J W POSEY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 01007 VA POLYTECHNIC INST & ST UNIV 9371**  
 NONLINEAR AEROELASTICITY OF LIFTING SURFACES BY FUNCTIONAL SERIES TECHNIQUES: SUBCRITICAL  
 11/21/2000 - 09/30/2003 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* L LEBESCU  
*Tech. Officer:* LARC/W A SILVA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01018 VA POLYTECHNIC INST & ST UNIV 9372**  
 OPTICAL FIBER STRAIN SENSOR INSTRUMENTATION FOR HIGH TEMPERATURE AEROSPACE STRUCTURAL MONITORING  
 01/18/2001 - 12/31/2001 FY01: \$66,999 Total: \$66,999  
*Prin. Invest.:* A WANG, G PICKRELL, R MAY  
*Tech. Officer:* LARC/R S ROGOWSKI  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 01021 VA POLYTECHNIC INST & ST UNIV 9373**  
 VIRGINIA FIRST LEGO (VAFL).....COMPLETION  
 02/16/2001 - 02/28/2001 FY01: \$7,500 Total: \$7,500  
*Prin. Invest.:* C E NUNNALLY, W DUGGINS, E L NELSON  
*Tech. Officer:* LARC/J M SEATON, LARC/J L EVANS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 01072 VA POLYTECHNIC INST & ST UNIV 9374**  
 FAILURE OF NONCIRCULAR COMPOSITE CYLINDERS MY 1/3  
 04/24/2001 - 05/15/2004 FY01: \$42,000 Total: \$42,000  
*Prin. Invest.:* M W HYER  
*Tech. Officer:* LARC/M P NEMETH  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 01100 VA POLYTECHNIC INST & ST UNIV 9375**  
 STUDY OF REQUIREMENTS ASND CONSTRAINTS FOR FOUR PASSENGER PERSONAL AIR VEHICLE EXPLORATION CONCEPT  
 06/16/2001 - 12/31/2001 FY01: \$50,000 Total: \$50,000  
*Prin. Invest.:* J MARCHMAN, W MASON  
*Tech. Officer:* LARC/M D MOORE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01101 VA POLYTECHNIC INST & ST UNIV 9376**  
 THIN-WALLED STRUCTURES MULTIPLE INTERACTIVE FUNCTIONS-FOUNDATIONS OF THE THEORY AND BEHAVIOR  
 07/16/2001 - 07/15/2004 FY01: \$35,000 Total: \$35,000  
*Prin. Invest.:* L LIBRESCU  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 01104 VA POLYTECHNIC INST & ST UNIV 9377**  
 INTEGRATION OF MACRO FIBER COMPOSITES INTO THE DYNAMICS AND CONTROL OF AN INFLATED TORUS  
 06/16/2001 - 06/15/2002 FY01: \$39,999 Total: \$39,999  
*Prin. Invest.:* D J INMAN  
*Tech. Officer:* LARC/W K WILKIE  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 01105 VA POLYTECHNIC INST & ST UNIV 9378**  
 EVOLUTIONARY STRATEGIES FOR PASSIVE/ACTIVE TAILORING OF THIN AND MODERATELY THICK WALLED  
 06/20/2001 - 06/19/2004 FY01: \$43,517 Total: \$43,517  
*Prin. Invest.:* Z GURDAL  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 01112 VA POLYTECHNIC INST & ST UNIV 9379**  
 NEW MEAS & INTERPRETATION PROTOCOLS FOR SATELLITE-BASED EARTH RADIATION BUDGET (ERB) OBSERVATIONS  
 08/15/2001 - 09/30/2004 FY01: \$36,835 Total: \$36,835  
*Prin. Invest.:* M A HAEFFELIN  
*Tech. Officer:* LARC/D F YOUNG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01123 VA POLYTECHNIC INST & ST UNIV 9380**  
 ANALYSIS FOR THE PROGRESSIVE FAILURE RESPONSE OF TEXTILE  
 COMPOSITE FUSELAGE FRAMES  
 09/18/2001 - 06/09/2002 FY01: \$19,000 Total: \$19,000  
 Prin. Invest.: E R JOHNSON  
 Tech. Officer: LARC/R B OITNOTT  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 2 1180 VA POLYTECHNIC INST & ST UNIV 9381**  
 DESIGN SPACE EXPLORATION FOR MDO ON A TERAFLUP COM PUTER  
 02/26/1998 - 01/31/2001 FY01: \$0 Total: \$102,830  
 Prin. Invest.: B GROSSMAN, LT WATSON, W H MASON  
 Tech. Officer: ARC/G H KLOPTER  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 2 1292 VA POLYTECHNIC INST & ST UNIV 9382**  
 NON-PARAMETIC METHODS FOR AUTOMATED LFIGHT DATA CL ASSIFICA-  
 TION  
 02/12/1999 - 08/31/2000 FY01: -\$7,593 Total: \$153,024  
 Prin. Invest.: M R ANDERSON  
 Tech. Officer: ARC/J C STALER  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 2 1486 VA POLYTECHNIC INST & ST UNIV 9383**  
 PERFORMANCE PREDICTION & VALIDATION FOR SMALL VTOL UAVS  
 06/18/2001 - 02/28/2002 FY01: \$123,980 Total: \$123,980  
 Prin. Invest.: A MYKLEBUST  
 Tech. Officer: ARC/T NAUMONICE, ARC/C E HANGE  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 2 1521 VA POLYTECHNIC INST & ST UNIV 9384**  
 ACCELERATING DESIGN INTEGRATED AIRCRAFT SYNTHESIS TOOLS  
 09/10/2001 - 08/31/2002 FY01: \$159,020 Total: \$159,020  
 Prin. Invest.: A MYKLEBUST, J H BOHN  
 Tech. Officer: ARC/D A WARDWELL  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 3 2093 VA POLYTECHNIC INST & ST UNIV 9385**  
 AN INTEGRATED SYSTEMS APPROACH TOWARDS ACTIVE CONT ROL OF  
 THERMO-ACOPUSTIC INSTABILITIES  
 12/15/1997 - 10/31/2001 FY01: \$0 Total: \$292,803  
 Prin. Invest.: U VANDSBURGER, W R SAUNDERS, B GANESHAN  
 Tech. Officer: GRC/J E MAY  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG 3 2098 VA POLYTECHNIC INST & ST UNIV 9386**  
 ACTIVE & PASSIVE BLADE VIBRATION CONTROL USING MEM S  
 12/22/1997 - 11/30/2001 FY01: \$0 Total: \$292,228  
 Prin. Invest.: W NG  
 Tech. Officer: GRC/O MEHMED, GRC/G L STEFKO  
 CASE Category: 46 - MECHANICAL ENGR

**NAG 3 2100 VA POLYTECHNIC INST & ST UNIV 9387**  
 DURABILITY OF CERAMIC MATRIX COMPOSITES AT HIGH TE MPERATURES:  
 EXPERIMENTAL STUDIES& PRODICTIVE MO  
 01/06/1998 - 11/19/2001 FY01: \$0 Total: \$200,184  
 Prin. Invest.: W A CURTIN  
 Tech. Officer: GRC/M H JASKOWIAK  
 CASE Category: 47 - METAL & MATERIALS ENGR

**NAG 4 204 VA POLYTECHNIC INST & ST UNIV 9388**  
 DIRECT MEASUREMENTS OF SKIN FRICTION ON HIGH-SPEED FLIGHT  
 VEHICLES  
 03/30/2000 - 03/30/2001 FY01: -\$161 Total: \$74,839  
 Prin. Invest.: J A SCHETZ  
 Tech. Officer: DFRC/T T BUI  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 4 218 VA POLYTECHNIC INST & ST UNIV 9389**  
 RESEARCH AND DEVELOPMENT OF SCRAMJET SKIN FRICTION AND HEAT  
 FLUX INSTRUMENTATION FOR FLIGHT RESEARC  
 01/31/2001 - 01/03/2002 FY01: \$75,000 Total: \$75,000  
 Prin. Invest.: J A SCHETZ  
 Tech. Officer: DFRC/T T BUI  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 5 5099 VA POLYTECHNIC INST & ST UNIV 9390**  
 UNDERSTANDING SIGMA NAUGHT BLOOMS AND THEIR EFFECTS ON  
 RADAR ALTIMETERS  
 12/11/1996 - 11/30/1999 FY01: -\$69 Total: \$81,931  
 Prin. Invest.: G E BROWN  
 Tech. Officer: GSFC/G E KAYNE  
 CASE Category: 33 - OCEANOGRAPHY

**NAG 5 5295 VA POLYTECHNIC INST & ST UNIV 9391**  
 IONOSPHERIC NANOSATELLITE FORMATION (ION-F) SCIENCE  
 06/01/2000 - 05/25/2003 FY01: \$51,970 Total: \$99,070  
 Prin. Invest.: W SCALES  
 Tech. Officer: GSFC/J C BRINTON  
 CASE Category: 13 - PHYSICS

**NAG 5 8343 VA POLYTECHNIC INST & ST UNIV 9392**  
 FLUID INCLUSION STUDY OF VOLATILES IN SNC METEORIT ES  
 04/08/1999 - 12/31/2000 FY01: \$0 Total: \$71,000  
 Prin. Invest.: R J BODNAR  
 Tech. Officer: HQ/J BOYCE  
 CASE Category: 11 - ASTRONOMY

**NAG 5 9291 VA POLYTECHNIC INST & ST UNIV 9393**  
 ION-F: A SPACE-BASED TESTBED FOR DISTRIBUTED FORMA TION  
 CONTROL USING THE HOKIESAT NANOSATELLITE  
 03/17/2000 - 03/31/2002 FY01: \$110,000 Total: \$157,000  
 Prin. Invest.: C HALLPrin. Invest.: NONE  
 Tech. Officer: GSFC/K LUU  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 5 9744 VA POLYTECHNIC INST & ST UNIV 9394**  
 LEONARDO MISSION UNIQUE ORBITS  
 06/29/2000 - 12/01/2000 FY01: -\$867 Total: \$16,383  
 Prin. Invest.: D FOLTA  
 Tech. Officer: GSFC/S HUGHES  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 5 10548 VA POLYTECHNIC INST & ST UNIV 9395**  
 NET ECOSYSTEM PRODUCTIVITY OF MANAGED FORESTS  
 03/14/2001 - 03/14/2002 FY01: \$107,659 Total: \$107,659  
 Prin. Invest.: R WYNNE  
 Tech. Officer: GSFC/M WEI  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10733 VA POLYTECHNIC INST & ST UNIV 9396**  
 FLUID AND MELT INCLUSION STUDIES OF VOLATILES IN PLANETARY  
 SAMPLES  
 04/11/2001 - 04/14/2002 FY01: \$25,000 Total: \$25,000  
*Prin. Invest.:* R BODNAR, NONE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10818 VA POLYTECHNIC INST & ST UNIV 9397**  
 "CONTROL EFFECTIVENESS FOR LEONARDO MISSION ORBITS"  
 04/24/2001 - 09/30/2001 FY01: \$40,000 Total: \$40,000  
*Prin. Invest.:* C HALL  
*Tech. Officer:* GSFC/S HUGHES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 11315 VA POLYTECHNIC INST & ST UNIV 9398**  
 TETHERED FORMATION FLYING STUDY-CROSS ENTERPRISE TECH. DEV.  
 PROGRAM  
 09/05/2001 - 08/31/2004 FY01: \$32,447 Total: \$32,447  
*Prin. Invest.:* C HALL  
*Tech. Officer:* GSFC/D QUINN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1846 VA POLYTECHNIC INST & ST UNIV 9399**  
 MATERIAL CHARACTERIZATION OF ELASTOMERIC ADHESIVE  
 08/09/2001 - 08/09/2002 FY01: \$66,983 Total: \$66,983  
*Prin. Invest.:* D A DILLIARD  
*Tech. Officer:* MSFC/M E PRINCE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAS 1 99128 VA POLYTECHNIC INST & ST UNIV 9400**  
 ADVANCED MODELING AND ANALYSIS TECHNIQUES FOR ADVANCED  
 BROADBAND DETECTOR DEVELOPMENT  
 07/30/1999 - 07/28/2000 FY01: \$0 Total: \$39,923  
*Prin. Invest.:* J R MAHAN  
*Tech. Officer:* LARC/E KIST, JR.  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCA 1 01002 VA POLYTECHNIC INST & ST UNIV 9401**  
 VA POLYTECHNIC INST FOR NAT. DECISION SPT SIM MODEL FRAMEWORK  
 DEV  
 03/15/2001 - 10/31/2001 FY01: \$94,100 Total: \$94,100  
*Prin. Invest.:* A A TRANI, H SWINGLE  
*Tech. Officer:* LARC/S A COOKE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 344 VA POLYTECHNIC INST & ST UNIV 9402**  
 INNOVATIVE LINER CONCEPTS  
 06/17/1999 - 09/30/2000 FY01: -\$8,785 Total: \$120,515  
*Prin. Invest.:* R H THOMAS  
*Tech. Officer:* LARC/T L PARROTT, LARC/M G JONES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 346 VA POLYTECHNIC INST & ST UNIV 9403**  
 A UNIFIED PROGRAM FOR THE FLIGHT DYNAMICS AND AERO SERVOELAS-  
 TICITY OF WHOLE AIRCRAFT  
 06/17/1999 - 06/15/2002 FY01: \$50,000 Total: \$115,000  
*Prin. Invest.:* L MEIROVITCH  
*Tech. Officer:* LARC/M R WAZAK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 367 VA POLYTECHNIC INST & ST UNIV 9404**  
 LOW SPEED ROTOR/FUSELAGE INTERACTIONAL AERODYNAMICS  
 01/12/2000 - 10/30/2002 FY01: \$35,186 Total: \$137,867  
*Prin. Invest.:* D D BOYD, R W BARNWELL  
*Tech. Officer:* LARC/H E JONES/Z T APPLIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 398 VA POLYTECHNIC INST & ST UNIV 9405**  
 INTERFACE FINITE ELEMENTS FOR ANALYSIS OF FRACTURE INITIATION &  
 PROGRESSION  
 05/15/2000 - 05/14/2003 FY01: \$84,284 Total: \$107,278  
*Prin. Invest.:* E R JOHNSON  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 405 VA POLYTECHNIC INST & ST UNIV 9406**  
 SCIENTIFIC INVESTIGATIONS WITH RADIATION BUDGET DATA  
 08/10/2000 - 08/15/2003 FY01: \$111,068 Total: \$135,383  
*Prin. Invest.:* G L SMITH  
*Tech. Officer:* LARC/R B LEE III, LARC/R L HUFFMAN JR.  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 01029 VA POLYTECHNIC INST & ST UNIV 9407**  
 DEVELOPMENT OF AN EFFICIENT BINAURAL SIMULATION FOR THE ANAL-  
 YSIS OF STRUCTURAL ACOUSTIC DATA  
 03/14/2001 - 12/31/2002 FY01: \$50,757 Total: \$50,757  
*Prin. Invest.:* M E JOHNSON  
*Tech. Officer:* LARC/S A RIZZI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 01037 VA POLYTECHNIC INST & ST UNIV 9408**  
 VARTM MODEL DEVELOPMENT AND VERIFICATION  
 04/12/2001 - 04/11/2004 FY01: \$74,989 Total: \$74,989  
*Prin. Invest.:* A C LOOS  
*Tech. Officer:* LARC/R J CANO, LARC/B J JENSEN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 1 01044 VA POLYTECHNIC INST & ST UNIV 9409**  
 NEW NANO-SPHERE MATERIALS: MAGNETIC AND DIELECTRIC PROPER-  
 TIES OF THE A3N@C80 ENDOHEDRAL  
 04/12/2001 - 01/12/2004 FY01: \$70,650 Total: \$70,650  
*Prin. Invest.:* H C DORN  
*Tech. Officer:* LARC/S H CHOI, LARC/G C KING  
*CASE Category:* 12 - CHEMISTRY

**NCC 2 5433 VA POLYTECHNIC INST & ST UNIV 9410**  
 AEROELASTIC DESIGN OF WINGS USING NON-TRADITIONAL METHODS  
 04/25/2001 - 09/30/2002 FY01: \$47,023 Total: \$47,023  
*Prin. Invest.:* R K KAPANIA  
*Tech. Officer:* ARC/T L HOLST, ARC/G GURASWANY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 3 866 VA POLYTECHNIC INST & ST UNIV 9411**  
 HIGH TEMPERATURE PROTON EXCHANGE MEMBRANDS FOR FUE L CELLS  
 02/20/2001 - 12/31/2001 FY01: \$69,815 Total: \$69,815  
*Prin. Invest.:* J E MCGRATH  
*Tech. Officer:* GRC/M B MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NGT 1 01002 VA POLYTECHNIC INST & ST UNIV 9412**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 11/14/2000 – 10/31/2001 FY01: \$17,721 Total: \$17,721  
*Prin. Invest.:* J J KELLEY  
*Tech. Officer:* LARC/R H THOMAS  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NGT 1 01003 VA POLYTECHNIC INST & ST UNIV 9413**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 01/26/2001 – 12/31/2001 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* T C WARD  
*Tech. Officer:* LARC/E J SIOCHI, LARC/J A HINKLEY  
*CASE Category:* 12 – CHEMISTRY

**NGT 1 01033 VA POLYTECHNIC INST & ST UNIV 9414**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/22/2001 – 06/30/2004 FY01: \$12,000 Total: \$12,000  
*Prin. Invest.:* T LONG  
*Tech. Officer:* LARC/E J SIOCHI  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NGT 1 01035 VA POLYTECHNIC INST & ST UNIV 9415**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/25/2001 – 06/30/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D P TELIONES  
*Tech. Officer:* LARC/A E WASHBURN, LARC/W L SELLERS  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NGT 1 01038 VA POLYTECHNIC INST & ST UNIV 9416**  
 GSRP  
 09/10/2001 – 12/31/2002 FY01: \$10,000 Total: \$10,000  
*Prin. Invest.:* M AHMADIAN  
*Tech. Officer:* LARC/D L PALUMBO  
*CASE Category:* 46 – MECHANICAL ENGR

**NGT 1 52112 VA POLYTECHNIC INST & ST UNIV 9417**  
 GRADUATE STUDENT RESEARCHER PROGRAM  
 06/19/1995 – 06/30/2000 FY01: \$1 Total: \$110,001  
*Prin. Invest.:* M W HYER  
*Tech. Officer:* LARC/J H STARNES, JR.  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NGT 1 52174 VA POLYTECHNIC INST & ST UNIV 9418**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/29/1997 – 08/31/2000 FY01: -\$2,227 Total: \$63,773  
*Prin. Invest.:* J A NEWMAN  
*Tech. Officer:* LARC/R S PIASCLK  
*CASE Category:* 49 – ENGINEERING, OTHER

**NGT 1 52184 VA POLYTECHNIC INST & ST UNIV 9419**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/12/1998 – 06/30/2001 FY01: \$24,000 Total: \$78,000  
*Prin. Invest.:* J BURTON  
*Tech. Officer:* LARC/J M SEATON  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NGT 1 52202 VA POLYTECHNIC INST & ST UNIV 9420**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 09/01/1998 – 06/30/2000 FY01: -\$1,584 Total: \$42,416  
*Prin. Invest.:* J R MOHAN  
*Tech. Officer:* LARC/M HENDERSON  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NGT 1 52224 VA POLYTECHNIC INST & ST UNIV 9421**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 09/27/1999 – 08/31/2001 FY01: \$12,000 Total: \$44,000  
*Prin. Invest.:* G J OGLE  
*Tech. Officer:* LARC/J M SEATON  
*CASE Category:* 22 – COMPUTER SCIENCE

**NGT 1 52226 VA POLYTECHNIC INST & ST UNIV 9422**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 12/20/1999 – 12/31/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* A C LOOS  
*Tech. Officer:* LARC/N J JOHNSTON  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NGT 1 52246 VA POLYTECHNIC INST & ST UNIV 9423**  
 TRAINING GRANT – ADAPTIVE SYSTEM IDENTIFICATION AN D CONTROL  
 TECHNIQUES FOR STRUCTURAL NOISE REDUC-  
 08/25/2000 – 06/14/2001 FY01: \$24,543 Total: \$36,543  
*Prin. Invest.:* M AHMODEON  
*Tech. Officer:* LARC/D L PALOMBO  
*CASE Category:* 49 – ENGINEERING, OTHER

**NGT 1 52248 VA POLYTECHNIC INST & ST UNIV 9424**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 08/01/2000 – 06/30/2002 FY01: \$24,001 Total: \$34,001  
*Prin. Invest.:* A M SMITH, J R MAHAN  
*Tech. Officer:* LARC/K J PRIESTLEY, LARC/R B LEE III  
*CASE Category:* 46 – MECHANICAL ENGR

**NGT 5 30198 VA POLYTECHNIC INST & ST UNIV 9425**  
 ESTIMATING FOREST VEGETATION BIOMASS USING AIRBORNE LIDAR  
 MEASUREMENTS STUDENT: SORIN POPESCU  
 08/24/1999 – 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* R H WYNNE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NGT 5 50260 VA POLYTECHNIC INST & ST UNIV 9426**  
 A SHARED AUGMENTED REALITY SYSTEM FOR COMMUNICATIO N ACROSS  
 ENVIRONMENTS STUDENT: WILLIAM STADERMAN  
 07/07/1999 – 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* B M KLEINER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NGT 5 50262 VA POLYTECHNIC INST & ST UNIV 9427**  
 SHORT-TERM TIME COURSE SKELETAL RESPONSES TO HIGH INTENSITY  
 PHYSICAL ACTIVITY  
 07/08/1999 – 06/30/2000 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* W HERBERT  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NGT 8 52909 VA POLYTECHNIC INST & ST UNIV 9428**  
 DEVELOPMENT OF SELF-MONITORING AND SELF-HEALING BOLTD JOINTS  
 05/25/2001 – 07/01/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* D J INMAN  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 46 – MECHANICAL ENGR

**NAG 1 2302 VIRGINIA COMMONWEALTH UNIV 9429**  
 ELECTRIC FIELD-MEDIATED PROCESSING OF POLYMERS  
 06/07/2000 - 01/14/2002 FY01: \$0 Total: \$38,512  
*Prin. Invest.:* G E WNEK, T W HAAS, G L BOWLIN  
*Tech. Officer:* LARC/J S HARRISON, LARC/E J SIOCHI  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 1 01042 VIRGINIA COMMONWEALTH UNIV 9430**  
 A MINIATURE EMBEDDED RECONFIGURABLE COMPUTER AND LOGIC  
 MODULE  
 04/09/2001 - 02/21/2002 FY01: \$39,957 Total: \$39,957  
*Prin. Invest.:* J H TUCKER, NONE  
*Tech. Officer:* LARC/Q A SHAMS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 8 1276 VIRGINIA COMMONWEALTH UNIV 9431**  
 STUDIES ON POLYMERIZATION AND NANOPARTICLE COMPOSITES  
 04/25/1996 - 04/30/2000 FY01: -\$255 Total: \$339,745  
*Prin. Invest.:* S EL-SHALL  
*Tech. Officer:* MSFC/D R WOODARD, MSFC/B G PENN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1484 VIRGINIA COMMONWEALTH UNIV 9432**  
 R/S GAS PHASE POLYMERIZATION AND NUCLEATION EXPERIMENTS IN  
 MICROGRAVITY  
 02/01/1998 - 01/31/2002 FY01: \$114,000 Total: \$430,000  
*Prin. Invest.:* M S EL-SHALL  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 12 - CHEMISTRY

**NAS 9 19539 VIRGINIA COMMONWEALTH UNIV 9433**  
 NEUROLAB EXPERIMENT DOCUMENT FOR E-049  
 02/22/1996 - 09/30/2001 FY01: \$0 Total: \$915,438  
*Prin. Invest.:* D ECKBURG  
*Tech. Officer:* JSC/A LEE  
*CASE Category:* 56 - MEDICL

**NAS 9 19541 VIRGINIA COMMONWEALTH UNIV 9434**  
 AUTONOMIC MECHANISMS DURING PROLONGED WEIGHTLESSNESS  
 03/14/1996 - 02/28/2002 FY01: \$0 Total: \$749,668  
*Prin. Invest.:* H B CHERMSIDE  
*Tech. Officer:* JSC/C M BUNTIN  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NCC 3 645 VIRGINIA COMMONWEALTH UNIV 9435**  
 INVESTIGATION OF BOUNDARY LAYER DEVELOPMENT I LOW- PRESSURE  
 TURBINE STAGES  
 09/03/1998 - 10/31/2000 FY01: \$0 Total: \$127,310  
*Prin. Invest.:* D J DORNEY  
*Tech. Officer:* GRC/D E ASHPIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 9 87 VIRGINIA COMMONWEALTH UNIV 9436**  
 MEDICAL INFORMANTICS AND TECH APPLICATIONS CONSORTIUM  
 07/01/1999 - 06/30/2002 FY01: \$2,528,884 Total: \$5,772,199  
*Prin. Invest.:* R C MERRELL  
*Tech. Officer:* JSC/J S LOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## WASHINGTON

**NAG 5 7672 CENTRAL WASHINGTON UNIV 9437**  
 FUNDING FOR VARIATIONS IN SEA LEVEL CHANGE ALONG THE CASCADIA  
 MARGIN (SENH98-0083)  
 09/01/1998 - 06/30/2002 FY01: \$37,000 Total: \$294,208  
*Prin. Invest.:* M MILLER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10501 CENTRAL WASHINGTON UNIV 9438**  
 APPLICATIONS OF DIGITAL ELEVATION MODELS TO THE ACTIVE  
 TECTONICS & PALEOCLIMATE OF CENTRAL ASIA  
 03/02/2001 - 02/28/2002 FY01: \$19,000 Total: \$19,000  
*Prin. Invest.:* C RUBIN  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 6041 EASTERN WASHINGTON UNIV 9439**  
 THE SCIENCE OLYMPIAD PROJECT  
 02/08/2000 - 01/31/2001 FY01: \$0 Total: \$25,000  
*Prin. Invest.:* R SOLTERO  
*Tech. Officer:* ARC/D JAMES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 6034 HERITAGE COLLEGE 9440**  
 ENHANCING SCIENCE TEACHER TRAINING USING WATER RESOURCES &  
 GLOBE  
 06/10/1999 - 03/31/2002 FY01: \$182,311 Total: \$512,930  
*Prin. Invest.:* P T ALEXANDER  
*Tech. Officer:* ARC/B J COLLINS, ARC/G S LEE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 99027 HERITAGE COLLEGE 9441**  
 APPLICATION OF REMOTELY SENSED INFORMATION TO ENVIRONMENTAL  
 PROBLEMS OF HISPANICS AND NATIVE AM  
 09/08/1999 - 09/26/2001 FY01: \$51,950 Total: \$198,642  
*Prin. Invest.:* J W FALCO  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 62 - PSYCHOLOGY SOCIAL ASPECTS

**NCC 5 423 NORTHWEST INDIAN COLLEGE 9442**  
 ASSESSING AGRICULTURAL LAND CONVERSION IMPACTS TO TRIBAL FISHERIES  
 USING NASA SATELLITE IMAGERY  
 09/13/1999 - 08/31/2001 FY01: \$97,754 Total: \$175,043  
*Prin. Invest.:* G BLEDSOE  
*Tech. Officer:* GSFC/M JASINSKI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2055 UNIV OF WASHINGTON 9443**  
 STRUCTURAL DESIGN METHODOLOGY BASED ON CONCEPTS OF UNCERTAINTY  
 05/08/1998 - 06/30/2000 FY01: -\$976 Total: \$200,547  
*Prin. Invest.:* K Y LIN  
*Tech. Officer:* LARC/W J STROUD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2072**                      **UNIV OF WASHINGTON**                      **9444**  
 COORD'D PARAMETERIZATION DEV & LG-EDDY SIMULATION FOR MARINE  
 & ARCTIC CLOUD-TOPPED BOUNDARY LAYERS  
 06/12/1998 - 03/31/2002      FY01: \$19,000                      Total: \$236,000  
*Prin. Invest.:* C S BRETHERTON  
*Tech. Officer:* LARC/D S MCDUGAL, LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2079**                      **UNIV OF WASHINGTON**                      **9445**  
 AIRBORNE STUDIES IN THE ARCTIC IN SUPPORT OF FIRE III  
 06/12/1998 - 03/31/2002      FY01: \$41,000                      Total: \$736,064  
*Prin. Invest.:* P V HOBBS, D A HEGG  
*Tech. Officer:* LARC/D S MCDUGAL, LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2193**                      **UNIV OF WASHINGTON**                      **9446**  
 DYNAMICAL COUPLING OF STRATOSPHERE & TROPOSPHERE  
 05/12/1999 - 03/30/2002      FY01: \$112,524                      Total: \$354,994  
*Prin. Invest.:* J R HOLTON  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2200**                      **UNIV OF WASHINGTON**                      **9447**  
 COUPLING SATELLITE AND GROUND-BASED INSTRUMENTS TO MAP  
 CLIMATE FORCING BY ANTHROPOGENIC AEROSOLS  
 06/04/1999 - 08/15/2000      FY01: -\$197                      Total: \$76,866  
*Prin. Invest.:* R J CHARLSON  
*Tech. Officer:* LARC/C A HOSTELER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2296**                      **UNIV OF WASHINGTON**                      **9448**  
 PROBABILISTIC STRUCTURAL INSPECTION OPTIMIZATION WITH BAYESIAN  
 UPDATING OF DAMAGE CHARACTERISTICS  
 06/01/2000 - 06/30/2002      FY01: \$72,000                      Total: \$130,000  
*Prin. Invest.:* K Y LIN  
*Tech. Officer:* LARC/W J STLOUD, LARC/I S RAJU  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 01029**                      **UNIV OF WASHINGTON**                      **9449**  
 INTEGRATED AEROSERVOELASTIC OPTIMIZATION OF FULL- SCALE  
 STRAIN-ACTUATED AIRPLANES: TOOLS DEVELOP-  
 02/15/2001 - 12/31/2003      FY01: \$53,000                      Total: \$53,000  
*Prin. Invest.:* E LIVNE  
*Tech. Officer:* LARC/C D WIESEMAN, LARC/R C SCOTT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01078**                      **UNIV OF WASHINGTON**                      **9450**  
 TOUGHENED RESIN DEVELOPMENT AND COMPOSITE SYSTEMS FOR  
 VARTM APPLICATIONS  
 05/24/2001 - 05/30/2004      FY01: \$118,500                      Total: \$118,500  
*Prin. Invest.:* J C SEFERIS  
*Tech. Officer:* LARC/B J JENSEN, LARC/R J CANO  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 2 1157**                      **UNIV OF WASHINGTON**                      **9451**  
 PRESSURE SENSITIVE PAINT: IMPROVED QUALITY CONTROL &  
 REFERENCING  
 08/27/1997 - 01/14/2000      FY01: -\$361                      Total: \$371,639  
*Prin. Invest.:* M P GOUTERMAN  
*Tech. Officer:* ARC/J H BELL, ARC/E T SCHAIRER  
*CASE Category:* 12 - CHEMISTRY

**NAG 2 1450**                      **UNIV OF WASHINGTON**                      **9452**  
 NETWORK SERVER PARADIGMS FOR AIR TRAFFIC MANAGEMENT  
 AUTOMATION  
 12/14/2000 - 12/31/2001      FY01: \$27,939                      Total: \$27,939  
*Prin. Invest.:* S DEVASIA  
*Tech. Officer:* ARC/G MEYER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 2 1514**                      **UNIV OF WASHINGTON**                      **9453**  
 THE ROLE OF THE HOMEBOX TRANSCRIPTION FACTOR, CPRO X1, IN  
 DEVELOPMENT OF THE VESTIBULAR PERIPHERY IN  
 08/17/2001 - 07/14/2002      FY01: \$71,220                      Total: \$71,220  
*Prin. Invest.:* J S STONE  
*Prin. Invest.:* NONE  
*Tech. Officer:* ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1837**                      **UNIV OF WASHINGTON**                      **9454**  
 PHORETIC AND RADIMEDTRIC FORCE MEASUREMENT ON MICR OPAR-  
 TICLS UN MICROGRAVITY CONDITIONS  
 04/22/1996 - 09/30/2000      FY01: -\$1,971                      Total: \$318,029  
*Prin. Invest.:* E J DAVIS  
*Tech. Officer:* GRC/J S LING, GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 1865**                      **UNIV OF WASHINGTON**                      **9455**  
 INDIUM MONO-ION OSCILLATOR II  
 07/23/1996 - 01/01/2001      FY01: \$0                      Total: \$450,000  
*Prin. Invest.:* W NAGOURNEY, M DEHMELT  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2379**                      **UNIV OF WASHINGTON**                      **9456**  
 BUOYANCY-DRIVEN INSTABILITIES IN SINGLE-BUBBLE SON OLUMINES-  
 CENCE (REF.# 123814)  
 04/04/2000 - 11/30/2003      FY01: \$95,000                      Total: \$160,000  
*Prin. Invest.:* T J MATULA  
*Tech. Officer:* GRC/N R HALL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2455**                      **UNIV OF WASHINGTON**                      **9457**  
 PRESSURE SENSITIVE (PSP) FOR TWO SENSOR LIFETIME MEASUREMENT  
 OF PRESSURE AND TEMPERATURE  
 06/07/2000 - 09/30/2002      FY01: \$65,000                      Total: \$105,000  
*Prin. Invest.:* D GOUTERMAN  
*Tech. Officer:* GRC/T BENCIC  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2517**                      **UNIV OF WASHINGTON**                      **9458**  
 INVESTIGATION OF THE LIFTOFF AND BLOWOUT OF TRANSITIONAL AND  
 TURBULENT JET FLAMES  
 01/09/2001 - 11/30/2004      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* D RILEY  
*Tech. Officer:* GRC/J E BROOKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 2767**                      **UNIV OF WASHINGTON**                      **9459**  
 THE ACCRETION AND SPECTRUM OF U GEM IN QUIESCENCE  
 10/26/1994 - 11/14/1999      FY01: -\$346                      Total: \$27,950  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 3023**                      **UNIV OF WASHINGTON**                      **9460**  
 THE EVOLUTION OF GALAXIES AND CLUSTERS OF GALAXIES  
 10/02/1995 - 09/30/2000      FY01: \$0                      Total: \$270,000  
*Prin. Invest.:* G R LAKE  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3121**                      **UNIV OF WASHINGTON**                      **9461**  
 A STUDY OF MAGNETIC ACCRETION IN VV PUP AND BL HYI  
 10/18/1995 - 10/31/2000      FY01: \$0                      Total: \$20,346  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3170**                      **UNIV OF WASHINGTON**                      **9462**  
 POLAR ULTRAVIOLET IMAGING DATA ANALYSIS  
 02/22/1996 - 12/31/1999      FY01: -\$9                      Total: \$1,880,266  
*Prin. Invest.:* G K PARKS  
*Tech. Officer:* GSFC/R A HOFFMAN  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 5 3345**                      **UNIV OF WASHINGTON**                      **9463**  
 SPACE SPECTROSCOPY OF THE WHITE DWARFS IN CATACLYS MIC VARI-  
 ABLES: PROBES OF ACCRETION PROCESSES.....  
 08/13/1996 - 08/14/2000      FY01: \$0                      Total: \$99,837  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4242**                      **UNIV OF WASHINGTON**                      **9464**  
 A THEORETICAL STUDY OF PROCESSES DRIVING THE FORMA  
 04/17/1997 - 04/14/2001      FY01: \$0                      Total: \$204,872  
*Prin. Invest.:* T QUIN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4375**                      **UNIV OF WASHINGTON**                      **9465**  
 POLAR EXCHANGE AT THE SEA SURFACE  
 06/11/1997 - 05/31/2001      FY01: \$0                      Total: \$2,914,703  
*Prin. Invest.:* D A ROTHROCK  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4473**                      **UNIV OF WASHINGTON**                      **9466**  
 INTERPLANETARY DUST  
 06/02/1997 - 03/14/2001      FY01: \$0                      Total: \$552,000  
*Prin. Invest.:* D E BROWNLEE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4540**                      **UNIV OF WASHINGTON**                      **9467**  
 THERMAL HISTORY OF LUNAR CRUSTAL ROCKS  
 05/06/1997 - 12/14/2001      FY01: \$34,000                      Total: \$165,000  
*Prin. Invest.:* D S MCCALLUM  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4630**                      **UNIV OF WASHINGTON**                      **9468**  
 AEROSOL CONCENTRATIONS AND LARGE SCALE CLOUD DISTR  
 BOUNDARY LAYER  
 05/21/1997 - 01/31/2000      FY01: -\$490                      Total: \$120,807  
*Prin. Invest.:* M B BAKER  
*Tech. Officer:* GSFC/M CHOU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4681**                      **UNIV OF WASHINGTON**                      **9469**  
 ENERGY DISTRIBUTION WITHIN THE TERRESTRIAL MAGNETO WITH  
 NUMERICAL MODELS  
 06/17/1997 - 03/31/2000      FY01: -\$7                      Total: \$105,129  
*Prin. Invest.:* D MCCARTHY, NONE  
*Tech. Officer:* GSFC/J GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 4712**                      **UNIV OF WASHINGTON**                      **9470**  
 TITLE: THE REGIONAL AMAZON MODEL SYNOPTIC SCALE H  
 BIOGEOCHEMICAL CYCLES FROM EOS (EOSRAM)  
 06/23/1997 - 06/30/2001      FY01: \$0                      Total: \$1,169,956  
*Prin. Invest.:* J RICHEY  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4739**                      **UNIV OF WASHINGTON**                      **9471**  
 RADIATIVE TRANSFER IN SNOW TERRAIN FOR APPLICATION REMOTE  
 SENSING  
 06/17/1997 - 03/14/2001      FY01: \$0                      Total: \$106,208  
*Prin. Invest.:* L TSANG  
*Tech. Officer:* GSFC/A T CHANG  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4791**                      **UNIV OF WASHINGTON**                      **9472**  
 MONITORING THE ACCRETION OF TWO OLD NOVAE  
 06/17/1997 - 12/31/2000      FY01: \$0                      Total: \$5,000  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4795**                      **UNIV OF WASHINGTON**                      **9473**  
 TRMM VALIDATION: INTEGRATION OF TRMM SATELLITE AN DATA TO  
 DETERMINE TROPICAL HEATING  
 09/08/1997 - 03/15/2001      FY01: \$0                      Total: \$806,179  
*Prin. Invest.:* R A HOUZE, JR.  
*Tech. Officer:* GSFC/R W LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 5183**                      **UNIV OF WASHINGTON**                      **9474**  
 DROPPS: DISTRIBUTION AND ROLE OF PARTICLES IN THE POLAR SUMMER  
 MESOSPHERE  
 03/13/1998 - 03/31/2002      FY01: \$0                      Total: \$168,353  
*Prin. Invest.:* R H HOLZWORTH  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5190**                      **UNIV OF WASHINGTON**                      **9475**  
 ATMOSPHERIC LIGHTNING ATMOSPHERIC LIGHTNING  
 04/16/1998 - 04/20/2002      FY01: \$0                      Total: \$201,960  
*Prin. Invest.:* M MCCARTHY  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

## WASHINGTON

## NASA'S UNIVERSITY PROGRAM

**NAG 5 5294**                      **UNIV OF WASHINGTON**                      **9476**  
 IONOSPHERIC NANOSATELLITE FORMATION (ION-F) SCIENCE  
 06/01/2000 - 05/25/2003      FY01: \$70,792                      Total: \$91,092  
*Prin. Invest.:* J D SAHR  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6626**                      **UNIV OF WASHINGTON**                      **9484**  
 CODES TO ENABLE DIRECT SIMULATION OF SOLAR SYSTEM FORMATION.  
 11/17/1997 - 11/14/2001      FY01: \$0                      Total: \$451,354  
*Prin. Invest.:* G LAKE  
*Tech. Officer:* GSFC/J FISCHER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6067**                      **UNIV OF WASHINGTON**                      **9477**  
 IMPACT OF FOREST CLEARCUTTING IN THE PACIFIC NORTH OD EVENTS  
 07/28/1997 - 07/31/2001      FY01: \$0                      Total: \$255,000  
*Prin. Invest.:* A GILLESPIE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6688**                      **UNIV OF WASHINGTON**                      **9485**  
 A CONTINUED STUDY OF ACCRETION IN MAGNETIC SYSTEMS WITH  
 LARGE RATIOS OF SOFT/HARD X-RAYS  
 12/01/1997 - 10/31/2000      FY01: \$0                      Total: \$11,520  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6101**                      **UNIV OF WASHINGTON**                      **9478**  
 CLIMATE PROCESSES OVER THE OCEAN  
 07/24/1997 - 07/31/2001      FY01: \$0                      Total: \$1,674,000  
*Prin. Invest.:* D HARTMANN  
*Tech. Officer:* GSFC/J A CURRAN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6819**                      **UNIV OF WASHINGTON**                      **9486**  
 SATELLITE OBSERVATIONS OF ICE SHEET CLIMATE VARIATIONS ON  
 DECADEAL TIME SCALES  
 01/08/1998 - 12/31/2000      FY01: -\$263                      Total: \$339,203  
*Prin. Invest.:* D WINEBRENNER  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6297**                      **UNIV OF WASHINGTON**                      **9479**  
 UNIV OF WASHINGTON - RESEARCH EARTH SYSTEMS  
 09/15/1997 - 08/31/2000      FY01: \$0                      Total: \$225,000  
*Prin. Invest.:* J M DECOSMO  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6894**                      **UNIV OF WASHINGTON**                      **9487**  
 SATELLITE STUDIES OF THE ICE COVERS OF THE OKHOTSK & SIBERIAN  
 SHELF SEAS  
 01/16/1998 - 12/31/2000      FY01: \$0                      Total: \$162,550  
*Prin. Invest.:* S MARTIN  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6328**                      **UNIV OF WASHINGTON**                      **9480**  
 PLASMODESMATA AND THE CONTROL OF GRAVITROPISM  
 09/11/1997 - 09/30/2001      FY01: \$0                      Total: \$65,000  
*Prin. Invest.:* D CLELAND  
*Tech. Officer:* GSFC/M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 6924**                      **UNIV OF WASHINGTON**                      **9488**  
 GRANT  
 02/04/1998 - 01/31/2001      FY01: \$0                      Total: \$478,269  
*Prin. Invest.:* G PARKS  
*Tech. Officer:* GSFC/M HESSE  
*CASE Category:* 13 - PHYSICS

**NAG 5 6463**                      **UNIV OF WASHINGTON**                      **9481**  
 BROADBAND INFRARED THERMOMETER MEASUREMENTS FOR MO DIS  
 VALIDATION  
 10/14/1997 - 03/31/2002      FY01: \$175,168                      Total: \$801,752  
*Prin. Invest.:* A T JESSUP  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7090**                      **UNIV OF WASHINGTON**                      **9489**  
 WAVE DYNAMICS AND TRANSPORT IN THE MIDDLE ATMOSPHERE (UARS)  
 02/24/1998 - 02/28/2001      FY01: \$0                      Total: \$297,883  
*Prin. Invest.:* D R HOLTON  
*Tech. Officer:* GSFC/A DOUGLASS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6493**                      **UNIV OF WASHINGTON**                      **9482**  
 VALIDATION OF RADARSAT GEOPHYSICAL PROCESSOR SYSTEMS PROD-  
 UCTS  
 10/27/1997 - 09/30/2001      FY01: \$0                      Total: \$366,447  
*Prin. Invest.:* R LINDSAY  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7114**                      **UNIV OF WASHINGTON**                      **9490**  
 WIND DATA ANALYSIS USING THE 3-D INSTRUMENT  
 03/31/1998 - 03/31/2002      FY01: \$0                      Total: \$392,000  
*Prin. Invest.:* G PARKS  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6505**                      **UNIV OF WASHINGTON**                      **9483**  
 ESTIMATION OF FLOOD HAZARDS THROUGH REMOTE SENSING AND  
 MODELING (SENH 06-0114, LETTENMAIR AND WOOD)  
 10/24/1997 - 04/30/2001      FY01: \$0                      Total: \$152,500  
*Prin. Invest.:* D LETTENMAIR  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/H FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7278**                      **UNIV OF WASHINGTON**                      **9491**  
 XTE PROPOSAL - THE OUTBURST CYCLE OF V803 CEN  
 04/15/1998 - 04/30/2001      FY01: \$0                      Total: \$10,353  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

NASA'S UNIVERSITY PROGRAM

WASHINGTON

**NAG 5 7300 UNIV OF WASHINGTON 9492**  
 EVALUATION OF HYDROLOGIC CONTROLS ON CATCHMENT SCALE ENERGY & MOISTURE FLUXES  
 05/27/1998 - 04/30/2001 FY01: \$0 Total: \$107,072  
*Prin. Invest.:* D LETTENMAIER  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7330 UNIV OF WASHINGTON 9493**  
 XTE PROPOSAL - TIMING THE X-RAY SOURCE IN NCG 6652 : THE REMAINING LUMINOUS GLOBULAR CLUSTER  
 04/24/1998 - 04/30/2002 FY01: \$0 Total: \$20,200  
*Prin. Invest.:* B MARGON  
*Tech. Officer:* GSFC/L KALUZIENSKI  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7495 UNIV OF WASHINGTON 9494**  
 MAPPING THE SPATIAL DISTRIBUTION AND TIME EVOLUTION OF SNOW-WATER EQUIVALENT WITH PASSIVE MICROWAVE  
 06/29/1998 - 09/14/2001 FY01: \$0 Total: \$350,000  
*Prin. Invest.:* L TSANG  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7526 UNIV OF WASHINGTON 9495**  
 EVALUATION OF OCEANIC COOL-SKIN AND WARM LAYER MODELS USING LONG-TERM MEASUREMENTS  
 06/08/1998 - 05/31/2002 FY01: \$100,000 Total: \$435,721  
*Prin. Invest.:* A T JESSUP  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7550 UNIV OF WASHINGTON 9496**  
 AIRBORNE MICROWAVE IMAGING OF RIVER VELOCITIES  
 06/30/1998 - 12/31/2001 FY01: \$0 Total: \$330,000  
*Prin. Invest.:* W J PLANT  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7604 UNIV OF WASHINGTON 9497**  
 CIS NET: IN SITU AND REMOTE MONITORING OF PRODUCTIVITY AND NUTRIENT CYCLES IN PUGET SOUND  
 07/21/1998 - 09/30/2001 FY01: \$23,691 Total: \$179,832  
*Prin. Invest.:* B FROST  
*Tech. Officer:* GSFC/J W MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7675 UNIV OF WASHINGTON 9498**  
 UTILIZATION OF THE UNIV OF WASHINGTON'S AIRBORNE MEASUREMENTS FOR STUDIES OF THE RADIATIVE EFFECTS OF  
 09/09/1998 - 08/31/2002 FY01: \$138,062 Total: \$396,062  
*Prin. Invest.:* P V HOBBS  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7732 UNIV OF WASHINGTON 9499**  
 POLAR UVI MISSION DATA ANALYSIS EXTENDED MISSION  
 09/29/1998 - 09/30/2001 FY01: \$0 Total: \$1,141,740  
*Prin. Invest.:* G K PARKS  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 7819 UNIV OF WASHINGTON 9500**  
 EOS OBSERVATION RESOURCE  
 12/14/1998 - 12/31/2001 FY01: \$0 Total: \$549,872  
*Prin. Invest.:* P V HOBBS  
*Tech. Officer:* GSFC/M D KING  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7847 UNIV OF WASHINGTON 9501**  
 VARIABILITY OF NET PRECIPITATION OVER ANTARCTIC SEA ICE AND ITS EFFECTS ON ICE-OCEAN INTERACTIONS  
 11/23/1998 - 12/31/2001 FY01: \$110,629 Total: \$328,625  
*Prin. Invest.:* A SCHWEIGER  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7886 UNIV OF WASHINGTON 9502**  
 VALIDATION OF ACOUSTICAL RAINFALL MEASUREMENTS  
 12/02/1998 - 09/30/2001 FY01: \$31,893 Total: \$201,504  
*Prin. Invest.:* J A NYSTUEN  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7932 UNIV OF WASHINGTON 9503**  
 THE COUNTERPARTS OF THE LUMINOUS, BURSTING X-RAY SOURCES IN GLOBULAR CLUSTERS - LTS A98  
 01/04/1999 - 01/14/2002 FY01: \$49,033 Total: \$141,508  
*Prin. Invest.:* S F ANDERSON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8089 UNIV OF WASHINGTON 9504**  
 SOLAR WIND/IONOSPHERIC COUPLING IN THE MASS LOADING OF THE MAGNETOSPHERE AND THE FORMATION OF THE GE  
 01/28/1999 - 02/28/2002 FY01: \$81,870 Total: \$224,963  
*Prin. Invest.:* R M WINGLEE  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8109 UNIV OF WASHINGTON 9505**  
 AIRBORNE IN SITU MEASUREMENTS FOR TRMM VALIDATION STUDIES AT KWAJALEIN  
 02/08/1999 - 02/14/2002 FY01: \$80,927 Total: \$690,698  
*Prin. Invest.:* P V HOBBS  
*Tech. Officer:* GSFC/R W LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8164 UNIV OF WASHINGTON 9506**  
 TOOLS TO PROBE THE OUTER COMETARY SYSTEM AND TO SIMULATE THE FORMATION AND EVOLUTION OF THE SOLAR  
 02/08/1999 - 01/31/2002 FY01: \$163,200 Total: \$470,969  
*Prin. Invest.:* G LAKE  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8296 UNIV OF WASHINGTON 9507**  
 DYNAMICS AND THERMODYNAMICS OF THE NORTH PACIFIC OCEAN  
 02/23/1999 - 02/28/2002 FY01: \$155,047 Total: \$456,973  
*Prin. Invest.:* K KELLY  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## WASHINGTON

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8363**                    **UNIV OF WASHINGTON**                    **9508**  
 VALIDATION OF THE LIDAR RETRIEVAL OF AEROSOL EXTINCTION  
 03/15/1999 - 03/14/2001                    FY01: \$0                    Total: \$168,058  
*Prin. Invest.:* D S COVERT  
*Tech. Officer:* GSFC/M MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8374**                    **UNIV OF WASHINGTON**                    **9509**  
 ANALYSIS OF ASCA AND ROSAT OBSERVATIONS OF CATAclysmic VARIABLES (ADP98)  
 03/03/1999 - 03/14/2001                    FY01: \$0                    Total: \$20,000  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8684**                    **UNIV OF WASHINGTON**                    **9510**  
 INVESTIGATION OF THE RELATIONSHIPS BETWEEN AEROSOL PHYSICAL AND CHEMICAL PROPERTIES  
 07/16/1999 - 07/14/2002                    FY01: \$14,600                    Total: \$43,841  
*Prin. Invest.:* D A HEGG  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8784**                    **UNIV OF WASHINGTON**                    **9511**  
 MOTOR PROTEINS AS SHUTTLES FOR DIRECTED TRANSPORT IN SYNTHETIC MATRICES  
 09/27/1999 - 01/31/2003                    FY01: \$197,600                    Total: \$477,605  
*Prin. Invest.:* V VOGEL  
*Tech. Officer:* GSFC/S DAVISON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8801**                    **UNIV OF WASHINGTON**                    **9512**  
 "AIRCRAFT SUPPORT FOR SAFARI-2000"  
 12/13/1999 - 12/14/2001                    FY01: \$0                    Total: \$582,932  
*Prin. Invest.:* P V HOBBS  
*Tech. Officer:* GSFC/M D KING  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8966**                    **UNIV OF WASHINGTON**                    **9513**  
 O VI EMISSION LINES IN HYADES STARS - FUSE  
 01/24/2000 - 01/31/2002                    FY01: \$0                    Total: \$33,400  
*Prin. Invest.:* E H BOHM-VITENSE  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8981**                    **UNIV OF WASHINGTON**                    **9514**  
 THE ORIGIN OF PECULIAR UV LINE RATIOS IN MAGNETIC CATAclysmic VARIABLES - FUSE  
 01/24/2000 - 01/31/2002                    FY01: \$0                    Total: \$14,900  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9022**                    **UNIV OF WASHINGTON**                    **9515**  
 "UNIV OF WASHINGTON PARTICIPATION IN SAFARI- 2000"  
 02/08/2000 - 02/14/2002                    FY01: \$183,000                    Total: \$467,176  
*Prin. Invest.:* P V HOBBS  
*Tech. Officer:* GSFC/M D KING  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9086**                    **UNIV OF WASHINGTON**                    **9516**  
 ENHANCING THE LASER-LUNAR RANGING TEST OF THE STRONG EQUIVALENCE PRINCIPLE  
 02/17/2000 - 01/31/2002                    FY01: \$40,000                    Total: \$77,500  
*Prin. Invest.:* J GUNDLACH  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9250**                    **UNIV OF WASHINGTON**                    **9517**  
 ION-F: A SPACE-BASED TESTBED FOR DISTRIBUTED FORMATION CONTROL USING THE DAWGSTAR NANOSAT  
 03/17/2000 - 03/31/2002                    FY01: \$40,000                    Total: \$87,000  
*Prin. Invest.:* M CAMPPELL  
*Tech. Officer:* GSFC/K LUU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9324**                    **UNIV OF WASHINGTON**                    **9518**  
 NEXT GENERATION SPACE TELESCOPE (NGST) AD HOC SCIENCE WORKING GROUP (ASWG) ACTIVITY  
 03/21/2000 - 03/14/2001                    FY01: \$0                    Total: \$22,779  
*Prin. Invest.:* B MARGON  
*Tech. Officer:* GSFC/E P SMITH  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 9334**                    **UNIV OF WASHINGTON**                    **9519**  
 ROLE OF THE POLAR OCEANS IN GLOBAL CLIMATE  
 06/19/2000 - 08/31/2002                    FY01: \$310,000                    Total: \$485,000  
*Prin. Invest.:* D A ROTHROCK  
*Tech. Officer:* GSFC/K PATRINGTON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9416**                    **UNIV OF WASHINGTON**                    **9520**  
 UNDERSTANDING WATER, CLIMATE AND GLOBAL CHANGE: A GEWEX GLOBAL WATER AND ENERGY PATHFINDER DATA SET  
 04/25/2000 - 04/30/2002                    FY01: \$67,965                    Total: \$111,665  
*Prin. Invest.:* D LETTENMAIER  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9454**                    **UNIV OF WASHINGTON**                    **9521**  
 TERRESTRIAL HYDROLOGY & CLIMATE STUDIES USING EOS- ERA DATA  
 05/17/2000 - 04/14/2002                    FY01: \$91,211                    Total: \$154,023  
*Prin. Invest.:* D LETTENMAIER  
*Tech. Officer:* GSFC/P HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9657**                    **UNIV OF WASHINGTON**                    **9522**  
 RELATIONSHIP BETWEEN PRECIPITATING CONVECTION AND EASTERLY WAVE DYNAMICS IN THE WESTERN CENTRAL PACIFIC  
 06/22/2000 - 05/31/2002                    FY01: \$91,000                    Total: \$147,000  
*Prin. Invest.:* C BRETHERTON  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9668**                    **UNIV OF WASHINGTON**                    **9523**  
 COMBINED USE OF TRMM SATELLITE GROUND-VALIDATION DATA TO MAP CONVECTIVE & STRATIFORM PRECIPITATION  
 06/19/2000 - 11/30/2001                    FY01: \$243,000                    Total: \$290,070  
*Prin. Invest.:* R A HOUZE  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9720**                      **UNIV OF WASHINGTON**                      **9524**  
 JOINT-PROBABILITY ANALYSIS OF THE NATURAL VARIABILITY OF TROPICAL OCEANIC PRECIPITATION  
 06/21/2000 - 06/30/2002      FY01: \$164,000                      Total: \$231,083  
*Prin. Invest.:* S E YUTER  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9830**                      **UNIV OF WASHINGTON**                      **9525**  
 USE OF TRMM DATA TO EVALUATE BENEFITS OF POST-2002 GLOBAL PRECIPITATION MISSION FOR LAND SURFACE HYD  
 08/23/2000 - 08/31/2002      FY01: \$62,000                      Total: \$124,000  
*Prin. Invest.:* D LETTENMAIER  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9835**                      **UNIV OF WASHINGTON**                      **9526**  
 MICROWAVE PASSIVE REMOTE SENSING OF SNOW: SCATTERING MODELS  
 07/26/2000 - 09/14/2001      FY01: \$0                      Total: \$44,104  
*Prin. Invest.:* L TSANG  
*Tech. Officer:* GSFC/A T CHANG  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9854**                      **UNIV OF WASHINGTON**                      **9527**  
 SEA ICE KINEMATICS & THICKNESS FROM RGPS: OBSERVATIONS & THEORY  
 08/03/2000 - 09/30/2001      FY01: \$80,853                      Total: \$197,355  
*Prin. Invest.:* H STERN  
*Tech. Officer:* GSFC/K PARTINGTON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9906**                      **UNIV OF WASHINGTON**                      **9528**  
 ESTIMATION OF WEST ANTARCTIC MASS BALANCE USING ICESAT/GLAS  
 09/08/2000 - 09/14/2002      FY01: \$44,197                      Total: \$87,101  
*Prin. Invest.:* C F RAYMOND  
*Tech. Officer:* GSFC/J ZWALLY  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10092**                      **UNIV OF WASHINGTON**                      **9529**  
 USE OF RADARSAT DATA TO PREDICT THE EFFECTS OF LAKE & WETLAND STORAGE ON THE FLOW OF ARCTIC RIVERS  
 11/20/2000 - 11/30/2001      FY01: \$74,049                      Total: \$74,049  
*Prin. Invest.:* D LETTENMAIER  
*Tech. Officer:* GSFC/K PARTINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10114**                      **UNIV OF WASHINGTON**                      **9530**  
 SURFACE WIND SPEED & FLUXES FROM SYNTHETIC APERTURE RADAR: VALIDATION & APPLICATION TO THE  
 11/22/2000 - 11/30/2001      FY01: \$158,480                      Total: \$158,480  
*Prin. Invest.:* P MOURAD  
*Tech. Officer:* GSFC/K PARTINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10225**                      **UNIV OF WASHINGTON**                      **9531**  
 ICE SHEETS SURFACE AND BED BOUNDARY CONDITIONS FROM REMOTE SENSING  
 01/04/2001 - 01/14/2002      FY01: \$116,663                      Total: \$116,663  
*Prin. Invest.:* D WINEBRENNER  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10246**                      **UNIV OF WASHINGTON**                      **9532**  
 UNDERSTANDING THE ENIGMATIC SW SEX STARS (FUSE 00)  
 02/12/2001 - 02/14/2002      FY01: \$46,000                      Total: \$46,000  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10342**                      **UNIV OF WASHINGTON**                      **9533**  
 MODELING CONTINENTAL SCALE EROSION IN MOUNTAINOUS REGIONS  
 02/05/2001 - 01/31/2002      FY01: \$98,864                      Total: \$98,864  
*Prin. Invest.:* D R MONTGOMERY  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10343**                      **UNIV OF WASHINGTON**                      **9534**  
 ACCRETION ONTO MAGNETIC WHITE DWARFS (FUSE 00)  
 01/31/2001 - 01/31/2002      FY01: \$48,845                      Total: \$48,845  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10400**                      **UNIV OF WASHINGTON**                      **9535**  
 THE ORIGIN OF PECULIAR UV LINE RATIOS IN THE MAGNETIC CATAclysmic VARIABLE AE AQR (FUSE 2000)  
 04/02/2001 - 05/31/2002      FY01: \$14,440                      Total: \$14,440  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10404**                      **UNIV OF WASHINGTON**                      **9536**  
 VALIDATION OF LIDAR RETRIEVAL OF AEROSOL EXTINCTION  
 04/02/2001 - 03/31/2002      FY01: \$85,488                      Total: \$85,488  
*Prin. Invest.:* D S COVERT  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10499**                      **UNIV OF WASHINGTON**                      **9537**  
 INTERPLANETARY DUST  
 03/13/2001 - 03/14/2003      FY01: \$361,000                      Total: \$361,000  
*Prin. Invest.:* D E BROWNLEE  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10570**                      **UNIV OF WASHINGTON**                      **9538**  
 NUMERICAL CALCULATION OF THE MAGNETIC FIELDS GENERATED BY OCEAN TIDES & THEIR COMPARISON WITH SATEL  
 03/13/2001 - 03/14/2002      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* R TYLER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10621**                      **UNIV OF WASHINGTON**                      **9539**  
 LAGRANGIAN ASSIMILATION OF SATELLITE DATA FOR CLIMATE STUDIES  
 03/19/2001 - 03/31/2002      FY01: \$79,269                      Total: \$79,269  
*Prin. Invest.:* R LINDSAY  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## WASHINGTON

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10624**                      **UNIV OF WASHINGTON**                      **9540**  
 CLIMATE PROCESSES OVER THE OCEANS  
 03/20/2001 - 03/31/2002                      FY01: \$596,979                      Total: \$596,979  
*Prin. Invest.:* D L HARTMANN  
*Tech. Officer:* GSFC/A ANDERSON  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 10745**                      **UNIV OF WASHINGTON**                      **9541**  
 "UNIV OF WASHINGTON AIRBORNE STUDIES IN SUPP ORT OF THE  
 CLAMS-2001 FIELD STUDY"  
 04/17/2001 - 02/28/2002                      FY01: \$384,511                      Total: \$384,511  
*Prin. Invest.:* P V HOBBS  
*Tech. Officer:* GSFC/M D KING  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10903**                      **UNIV OF WASHINGTON**                      **9542**  
 A KINETIC STUDY OF PARTICLE ACCELERATION IN MAGNET OSPHERIC  
 CURRENT SHEETS & COMPARISON WITH OBSERVAT  
 05/08/2001 - 05/14/2002                      FY01: \$87,737                      Total: \$87,737  
*Prin. Invest.:* M J BRITTNACHER  
*Tech. Officer:* GSFC/J F SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10962**                      **UNIV OF WASHINGTON**                      **9543**  
 MODELING IONOSPHERIC OUTFLOW IN GEOPHYSICALLY RELEVANT  
 COORDINATE SYSTEMS  
 05/23/2001 - 05/31/2002                      FY01: \$68,222                      Total: \$68,222  
*Prin. Invest.:* R M WINGLEE  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11057**                      **UNIV OF WASHINGTON**                      **9544**  
 MULTISENSOR ASSESSMENT OF ARCTIC POLYNYA VARIABILITY & ITS  
 ASSOCIATION WITH LARGE-SCALE CHANGE  
 06/22/2001 - 06/30/2002                      FY01: \$46,515                      Total: \$46,515  
*Prin. Invest.:* S MARTIN  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11079**                      **UNIV OF WASHINGTON**                      **9545**  
 A ONE-YEAR PILOT STUDY FOR THE INCLUSION OF ACTIVE OPTICAL  
 SENSORS INTO PALACE FLOATS  
 08/06/2001 - 08/14/2002                      FY01: \$56,557                      Total: \$56,557  
*Prin. Invest.:* S RISER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 7 99001**                      **UNIV OF WASHINGTON**                      **9546**  
 GRANT FOR PI OF THE STARDUST PROGRAM (PHASE E)  
 05/21/1999 - 06/30/2004                      FY01: \$0                      Total: \$183,221  
*Prin. Invest.:* D E BROWNLEE  
*Tech. Officer:* HQ/M DAHL  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1424**                      **UNIV OF WASHINGTON**                      **9547**  
 R/S IMPROVING OCEANIC STORM FORECASTING AND ANALYSIS THROUGH  
 ASSIMILATION OF REMOTE SENSING  
 01/13/1998 - 12/31/2001                      FY01: -\$300                      Total: \$340,596  
*Prin. Invest.:* R A BROWN  
*Tech. Officer:* MSFC/J M SIMONDS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1512**                      **UNIV OF WASHINGTON**                      **9548**  
 WATER TRANSPORT TO THE UPPER TROPOSPHERE BY CONVECTIVE  
 SYSTEMS, AS INFERRED FROM GLOBAL  
 04/06/1998 - 04/05/2002                      FY01: \$0                      Total: \$126,560  
*Prin. Invest.:* M BAKER  
*Tech. Officer:* MSFC/J R BLOCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1647**                      **UNIV OF WASHINGTON**                      **9549**  
 POLLUTION AND LIGHTNING  
 10/15/1999 - 09/30/2002                      FY01: \$0                      Total: \$95,177  
*Prin. Invest.:* M B BAKER  
*Tech. Officer:* MSFC/D SAMUELSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1756**                      **UNIV OF WASHINGTON**                      **9550**  
 FEASIBILITY STUDY FOR A SPACE-BASED TEST OF THE STRONG EQUIV-  
 ALENCE PRINCIPLE USING LUNAR RANGING.  
 04/23/2001 - 02/01/2006                      FY01: \$120,000                      Total: \$120,000  
*Prin. Invest.:* E G ADELBERGER, K NORDVEDT, C STUBBS  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1776**                      **UNIV OF WASHINGTON**                      **9551**  
 ULTRHIGH RESOLUTION OPTICAL FREQUENCY STANDARD USING  
 INDIVIDUAL INDIUM IONS  
 04/20/2001 - 02/01/2004                      FY01: \$80,000                      Total: \$80,000  
*Prin. Invest.:* W NAGOURNEY  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1849**                      **UNIV OF WASHINGTON**                      **9552**  
 FRC ACCELERATION SPACE THRUSTER (FAST)  
 08/30/2001 - 11/30/2001                      FY01: \$9,273                      Total: \$9,273  
*Prin. Invest.:* J SLOUGH  
*Tech. Officer:* MSFC/A MARTIN, MSFC/F THIO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 9 1258**                      **UNIV OF WASHINGTON**                      **9553**  
 VISUAL ANATOMIC GUIDANCE TO FACILITATE ULTRASOUND IMAGE  
 ACQUISITION  
 09/07/2000 - 08/31/2001                      FY01: \$169,943                      Total: \$203,932  
*Prin. Invest.:* F H SHEEHAN, NONE  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1271**                      **UNIV OF WASHINGTON**                      **9554**  
 DNA MICROCHIP BASED MICROBIAL MONITORING  
 12/08/2000 - 11/30/2002                      FY01: \$260,856                      Total: \$260,856  
*Prin. Invest.:* D STAHL  
*Tech. Officer:* JSC/D L JAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1343**                      **UNIV OF WASHINGTON**                      **9555**  
 MICROARRAYS OF CELLULAR MEMBRANE PATCHES FOR ION CHANNEL  
 STUDIES OF ION CHANNEL FUNCTION  
 08/01/2001 - 09/30/2004                      FY01: \$54,000                      Total: \$54,000  
*Prin. Invest.:* A FOLCH  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 43 - CHEMICAL ENGR

**NAS 1 18940**                      **UNIV OF WASHINGTON**                      **9556**  
 SAGE III SCIENCE INVESTIGATION SUPPORT, P.I. PETER V. HOBBS  
 10/27/1989 - 01/31/2005                      FY01: \$26,147                      Total: \$428,027  
*Prin. Invest.:* P V HOBBS  
*Tech. Officer:* LARC/G MADDREA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 1 99105**                      **UNIV OF WASHINGTON**                      **9557**  
 COUPLING PICASSO-CENA TO IN SITU MEASUREMENTS FOR ESTIMATION  
 OF DIRECT AEROSOL RADIATIVE FORCING  
 05/17/1999 - 05/16/2002                      FY01: \$95,000                      Total: \$153,650  
*Prin. Invest.:* R J CHARLSON *Prin. Invest.:* NONE  
*Tech. Officer:* LARC/G GIBSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 00212**                      **UNIV OF WASHINGTON**                      **9558**  
 MATLAB-BASED ADAPTIVE COMPUTING FOR NASA IMAGE  
 09/29/2000 - 09/28/2002                      FY01: \$227,273                      Total: \$227,273  
*Prin. Invest.:* S HAUCK  
*Tech. Officer:* GSFC/J STEPHENS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 5 00213**                      **UNIV OF WASHINGTON**                      **9559**  
 RECONFIGURABLE COMPUTING BASED COMPRESSION FOR SPACEBORNE  
 HYPERSPECTRAL IMAGES.  
 09/29/2000 - 09/28/2002                      FY01: \$187,143                      Total: \$187,143  
*Prin. Invest.:* S HAUCK  
*Tech. Officer:* GSFC/J STEPHENS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 5 30613**                      **UNIV OF WASHINGTON**                      **9560**  
 INVESTIGATION DEFINITION PHASE FOR CLUSTER PLASMA SPEC-  
 TROMETRY  
 02/21/1989 - 02/09/2001                      FY01: \$5                      Total: \$5,175,503  
*Prin. Invest.:* G K PARKS  
*Tech. Officer:* GSFC/J L CHRISTENSEN  
*CASE Category:* 13 - PHYSICS

**NAS 5 31372**                      **UNIV OF WASHINGTON**                      **9561**  
 INTERMEDIATE THERMAL INFRARED RADIOMETER (EOS INVESTIGATION)  
 02/19/1992 - 12/14/2001                      FY01: \$418,503                      Total: \$3,484,852  
*Prin. Invest.:* A R GILLESPIE  
*Tech. Officer:* GSFC/H BLODGET  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 402**                      **UNIV OF WASHINGTON**                      **9562**  
 REMOTE & IN-SITU MEASUREMENT OF AEROSOL OPTICAL PROPERTIES IN  
 THE BOUNDARY LAYER  
 07/24/2000 - 09/14/2003                      FY01: -\$20,000                      Total: \$3,200  
*Prin. Invest.:* T L COVERT, T L ANDERSON  
*Tech. Officer:* LARC/C A HOSTETLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 1273**                      **UNIV OF WASHINGTON**                      **9563**  
 HABITABLE PLANETS AND EVOLUTION OF BIOLOGICAL COMPLEXITY  
 07/20/2001 - 06/30/2002                      FY01: \$575,000                      Total: \$575,000  
*Prin. Invest.:* P D WARD, J T STALEY, D A KRING  
*Tech. Officer:* ARC/R A GRAYMES, ARC/W W DOLCI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 5463**                      **UNIV OF WASHINGTON**                      **9564**  
 MATHEMATICAL MODELING OF METABOLIC NETWORKS AND ALGORIT-  
 HMIC DEVELOPMENT FOR HIGH-THROUGHPUT MULTIDI  
 09/14/2001 - 09/14/2002                      FY01: \$29,994                      Total: \$29,994  
*Prin. Invest.:* H QIAN  
*Tech. Officer:* ARC/S LIANG, ARC/B A BIEGEL  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 5 326**                      **UNIV OF WASHINGTON**                      **9565**  
 SUPPORT OF THE UNIV OF WASHINGTON'S RESEARCH AIRCRAFT FOR  
 NASASTUDIES (PROPOSAL #1111017)  
 03/23/1998 - 02/28/2002                      FY01: \$0                      Total: \$934,204  
*Prin. Invest.:* P V HOBBS  
*Tech. Officer:* GSFC/M D KING  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 345**                      **UNIV OF WASHINGTON**                      **9566**  
 BIOGEOCHEMICAL DYNAMICS IN RIVER CORRIDORS OF THE AMAZON  
 BASIN AND THEIR RESPONSE TO ANTHROPOGENIC C  
 06/25/1998 - 12/31/2001                      FY01: \$193,552                      Total: \$537,352  
*Prin. Invest.:* J E RICHEY  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 363**                      **UNIV OF WASHINGTON**                      **9567**  
 TWO-HANDED INTERFACE IMPROVEMENTS FOR THE STEREO SC OPIC  
 ANALYZER  
 09/22/1998 - 09/30/2000                      FY01: \$0                      Total: \$81,830  
*Prin. Invest.:* T FURNESS  
*Tech. Officer:* GSFC/A ROBERTS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 550**                      **UNIV OF WASHINGTON**                      **9568**  
 SUPPORT OF THE UNIV OF WASHINGTON'S RESEARCH AIRCRAFT FOR  
 NASA STUDIES  
 05/11/2001 - 04/30/2002                      FY01: \$340,214                      Total: \$340,214  
*Prin. Invest.:* P HOBBS  
*Tech. Officer:* GSFC/C YUHAS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 584**                      **UNIV OF WASHINGTON**                      **9569**  
 MICROWAVE REMOTE SENSING OF FROZEN PRECIPITATION  
 08/23/2001 - 08/31/2004                      FY01: \$36,000                      Total: \$36,000  
*Prin. Invest.:* R HOUZE  
*Tech. Officer:* GSFC/J A WEINMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 8 231**                      **UNIV OF WASHINGTON**                      **9570**  
 MINI-MAGNETOSPHERIC PLASMA PROPULSION-RADIATION SHIELDING  
 (M2PS-S)  
 09/05/2001 - 12/31/2002                      FY01: \$86,311                      Total: \$86,311  
*Prin. Invest.:* R M WINGLEE  
*Tech. Officer:* MSFC/J H ADAMS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 9 56**                      **UNIV OF WASHINGTON**                      **9571**  
 RESEARCH GRANT  
 02/22/2000 - 01/15/2002                      FY01: \$37,955                      Total: \$48,392  
*Prin. Invest.:* D E PARKER  
*Tech. Officer:* JSC/D HARM, JSC/J J BLOOMBERG  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## WASHINGTON

## NASA'S UNIVERSITY PROGRAM

**NGT 2 52219 UNIV OF WASHINGTON 9572**  
 INFRARED STUDY OF HERBIG AE/BE SYSTEMS  
 08/19/1996 - 08/31/2002 FY01: \$0 Total: \$76,000  
*Prin. Invest.:* D BROWNLEE  
*Tech. Officer:* ARC/D H WOODEN, ARC/F C WITTEBORN  
*CASE Category:* 11 - ASTRONOMY

**NGT 2 52281 UNIV OF WASHINGTON 9573**  
 A PRESSURE SENSITIVE PAINT FOR THE STUDY OF UNSTEADY FLOWS  
 OVER FLEXIBLE BOUNDARIES  
 07/27/2001 - 08/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J B CALLIS  
*Tech. Officer:* ARC/J H BELL, ARC/E S SCHAIRER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 66 UNIV OF WASHINGTON 9574**  
 COMPUTATIONAL OPTICS YEAR 1 OF 2 YEAR COMMITMENT PERIOD OF  
 PERFORMANCE SEPT. 1, 1998 TO AUG. 31, 1  
 05/27/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J BURKE  
*Tech. Officer:* GSFC/G SOFFEN  
*CASE Category:* 21 - MATHEMATICS

**NGT 5 98 UNIV OF WASHINGTON 9575**  
 A NEW MECHANISM FOR DEGASSING AT HIGH-SULFUR VOLCANOES  
 08/23/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* C NEWHALL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 126 UNIV OF WASHINGTON 9576**  
 SIMULATING GALAXY GROUPS. STUDENT: DARREN S. REED  
 06/11/2001 - 06/30/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* T QUINN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 5 30120 UNIV OF WASHINGTON 9577**  
 PREDICTING LAND SURFACE FLUXES OF FRESH WATER TO THE ARCTIC  
 OCEAN ESSF RECIPIENT: SANTIAGO GASSO  
 10/01/1997 - 08/31/2000 FY01: -\$9 Total: \$65,991  
*Prin. Invest.:* D LETTENMAIER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30121 UNIV OF WASHINGTON 9578**  
 ASSESSING THE GLOBAL CHARACTERISTICS OF AEROSOLS: WHAT IS THE  
 INFLUENCE OF HUMIDITY IN COLUMNAR AEROSOLS  
 10/01/1997 - 03/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* D HEGG  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30149 UNIV OF WASHINGTON 9579**  
 COMBINED USE OF REMOTE SENSING AND BIOGEOCHEMICAL MODELING  
 TO ESTIMATE PRIMARY PRODUCTION AND CARBON  
 08/28/1998 - 08/31/2001 FY01: \$0 Total: \$55,000  
*Prin. Invest.:* J E RICHEY, WILHELM  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30157 UNIV OF WASHINGTON 9580**  
 MODELING THE FLAMMABILITY OF BRAZILIAN AMAZON FORESTS AT THE  
 FOREST-SAVANNA ECOTONE  
 08/28/1998 - 08/31/2001 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* T M HINCKLEY  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30161 UNIV OF WASHINGTON 9581**  
 COUPLING LAND-SURFACE AND RIVERINE WATER AND CARBON CYCLES  
 IN THE AMAZON BASIN: DEVELOPMENT OF A MODEL  
 08/31/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J E RICHEY, MAYORGA  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30195 UNIV OF WASHINGTON 9582**  
 THE ARCTIC OSCILLATION SIGNATURE IN NORTHERN HEMISPHERE  
 CLIMATE  
 08/18/1999 - 12/31/2000 FY01: \$0 Total: \$23,727  
*Prin. Invest.:* J M WALLACE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30213 UNIV OF WASHINGTON 9583**  
 IMPROVING MODEL PARAMETERIZATIONS OF GAS EXCHANGE: QUANTIFI-  
 CATION OF BUBBLE DYNAMICS BY MEASUREMENT  
 08/20/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* S R EMERSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30220 UNIV OF WASHINGTON 9584**  
 OPPORTUNITIES FOR IMPROVING WESTERN WATER MANAGEMENT  
 THROUGH REMOTE SENSING & HYDROLOGIC MODELING  
 08/24/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* D P LETTENMAIER  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30343 UNIV OF WASHINGTON 9585**  
 TROPICAL FOREST PHENOLOGY ACROSS ENVIRONMENTAL GRADIENTS  
 IN PANAMA: A MULTISCALE STUDY USING REMOTE SENSING  
 08/21/2000 - 08/31/2002 FY01: \$22,000 Total: \$44,000  
*Prin. Invest.:* T HINCKLEY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30378 UNIV OF WASHINGTON 9586**  
 TRMM-OBSERVED STARTIFORM PRECIPITATION FRACTION RELATED TO  
 LARGE-SCALE TROPICAL CIRCULATION/COURTNEY  
 08/13/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* R HOUZE, JR  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



## NASA'S UNIVERSITY PROGRAM

WASHINGTON

**NGT 5 40017**                      **UNIV OF WASHINGTON**                      **9587**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 12/19/1996 - 01/31/2001      FY01: \$0                      Total: \$1,664,616  
*Prin. Invest.:* G K PARKS  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40084**                      **UNIV OF WASHINGTON**                      **9588**  
 WASHINGTON SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2002      FY01: \$447,050                      Total: \$447,050  
*Prin. Invest.:* J DECOSMO  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50078**                      **UNIV OF WASHINGTON**                      **9589**  
 NUMERICAL SIMULATION OF DAMPED LYMAN-ALPHA SYSTEMS  
 08/26/1997 - 12/30/2000      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* G LAKE  
*Tech. Officer:* GSFC/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50285**                      **UNIV OF WASHINGTON**                      **9590**  
 THREE DIMENSIONAL SIMULATIONS OF THE SOLAR WIND INTERACTION  
 WITH MAGNETIC ANOMALIES ON THE SURFACE  
 06/23/2000 - 08/31/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* R WINGLEE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50298**                      **UNIV OF WASHINGTON**                      **9591**  
 CALCULATION OF THE MERGER PHASE OF BINARY BLACK HOLES USING  
 NUMERICAL RELATIVITY/STUDENT LUISA BU  
 06/28/2000 - 06/30/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* J BARDEEN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50299**                      **UNIV OF WASHINGTON**                      **9592**  
 AN EMPIRICAL MEASURE OF GALAXY EVOLUTION IN CLUSTERS  
 06/28/2000 - 06/30/2002      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* J DALCANTON  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50334**                      **UNIV OF WASHINGTON**                      **9593**  
 DETERMINING THE EFFECTS OF CLOUDS & SEA ICE ON THE EARTH RADI-  
 ATION BUDGET IN THE SOUTHERNOCEAN  
 08/17/2000 - 08/31/2001      FY01: \$22,000                      Total: \$44,000  
*Prin. Invest.:* S WARREN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 8 52862**                      **UNIV OF WASHINGTON**                      **9594**  
 MODELING OF ELECTRICAL EFFECTS ON THE DYNAMICS OF SOLIDIFICA-  
 TION  
 07/27/1998 - 08/13/2000      FY01: \$0                      Total: \$22,000  
*Prin. Invest.:* L N BRUSH  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 2 1198**                      **WASHINGTON STATE UNIV**                      **9595**  
 LIGNIFICATION: A NEW PARADIGM  
 04/02/1998 - 05/31/2002      FY01: \$0                      Total: \$375,000  
*Prin. Invest.:* N G LEWIS  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 2 1513**                      **WASHINGTON STATE UNIV**                      **9596**  
 DETERMINING THE COMPLEX ORGAIZATIONAL NATURE OF PH ENOLIC  
 RADICAL-RADICAL COUPLING IN VASCULAR PLANT  
 08/17/2001 - 07/14/2002      FY01: \$64,999                      Total: \$64,999  
*Prin. Invest.:* N G LEWIS  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2114**                      **WASHINGTON STATE UNIV**                      **9597**  
 SINGLE BUBBLE SONOLUMINESCENCE IN LOW GRAVITY AND OPTICAL  
 RADIATION PRESSURE POSITIONING OF THE BUBB  
 02/24/1998 - 09/30/2000      FY01: \$0                      Total: \$130,000  
*Prin. Invest.:* P L MARSTON, W E TORRUELLAS  
*Tech. Officer:* GRC/N R HALL  
*CASE Category:* 13 - PHYSICS

**NAG 3 2378**                      **WASHINGTON STATE UNIV**                      **9598**  
 PASSIVE AND ACTIVE STABILIZATION OF LIQUID BRIDGES IN LOW  
 GRAVITY  
 04/04/2000 - 03/09/2004      FY01: \$155,612                      Total: \$255,612  
*Prin. Invest.:* D MARSTON  
*Tech. Officer:* GRC/C NIEDERHAUS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 4035**                      **WASHINGTON STATE UNIV**                      **9599**  
 RECONSTRUCTION OF THREE-DIMENSIONAL SHAPE AND SPIN FROM  
 RADAR DATA  
 02/27/1997 - 03/31/2001      FY01: \$0                      Total: \$173,975  
*Prin. Invest.:* D HUDSON  
*Tech. Officer:* GSFC/J G GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4841**                      **WASHINGTON STATE UNIV**                      **9600**  
 CALCIUM/CALMODULIN-MEDIATED GRAVITROPIC RESPONSE I  
 06/19/1997 - 09/15/2001      FY01: \$0                      Total: \$497,400  
*Prin. Invest.:* B POOVAIAH  
*Tech. Officer:* GSFC/M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 9345**                      **WASHINGTON STATE UNIV**                      **9601**  
 ACCRETION OF INTERPLANETARY DUST: A NEW RECORD FROM 3-HE IN  
 POLAR ICE CORES  
 03/30/2000 - 03/31/2002      FY01: \$30,000                      Total: \$60,000  
*Prin. Invest.:* E BROOK  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10462**                      **WASHINGTON STATE UNIV**                      **9602**  
 PHYSICAL MODELING OF ASTEROIDS USING RADAR & OPICAL DATA  
 02/26/2001 - 03/31/2002      FY01: \$45,000                      Total: \$45,000  
*Prin. Invest.:* D HUDSON  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## WEST VIRGINIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10637**                      **WASHINGTON STATE UNIV**                      **9603**  
 USING SATELLITE OBSERVATIONS TO QUANTIFY BIOMASS BURNING EMISSIONS OF NOX & HYDROCARBONS IN THE  
 03/19/2001 - 03/14/2002                      FY01: \$83,167                      Total: \$83,167  
*Prin. Invest.:* L JAEGLER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11364**                      **WASHINGTON STATE UNIV**                      **9604**  
 CALCIUM/CALMODULIN MEDIATED GRAVITROPIC RESPONSE IN PLANTS  
 09/27/2001 - 09/30/2002                      FY01: \$163,806                      Total: \$163,806  
*Prin. Invest.:* B W POOVAIAH  
*Tech. Officer:* GSFC/M AVERNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1477**                      **WASHINGTON STATE UNIV**                      **9605**  
 R/S A COMPARATIVE MODELING STUDY OF MAGNETIC AND ELECTROSTATIC LEVITATION IN MICROGRAVITY  
 03/26/1998 - 01/31/2003                      FY01: \$0                      Total: \$254,167  
*Prin. Invest.:* B Q LI  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1693**                      **WASHINGTON STATE UNIV**                      **9606**  
 R/S "STUDY OF MAGNETIC FIELD EFFECTS ON CONVECTION AND SOLIDIFICATION IN NORMAL AND MICROGRAVITY"  
 06/02/2000 - 11/30/2003                      FY01: \$0                      Total: \$45,000  
*Prin. Invest.:* B Q LI  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 5 00177**                      **WASHINGTON STATE UNIV**                      **9607**  
 PARTICIPATION IN THE OZONE MONITORING INSTRUMENT SCIENCE TEAM  
 06/09/2000 - 10/31/2004                      FY01: \$68,217                      Total: \$118,217  
*Prin. Invest.:* G MOUNT  
*Tech. Officer:* GSFC/J C RIVERA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5346**                      **WASHINGTON STATE UNIV**                      **9608**  
 LOW-POWER FAST SOI ELECTRONICS FOR SPACE APPLICATIONS  
 08/22/1999 - 07/31/2001                      FY01: \$0                      Total: \$49,100  
*Prin. Invest.:* M A OSMAN  
*Tech. Officer:* ARC/B A BIEGEL, ARC/T R GOVINDAN  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 2 5407**                      **WASHINGTON STATE UNIV**                      **9609**  
 TRANSPORT IN MOLECULAR STRUCTURES  
 10/30/2000 - 12/31/2001                      FY01: \$60,910                      Total: \$60,910  
*Prin. Invest.:* M A OSMAN  
*Tech. Officer:* ARC/N HALL  
*CASE Category:* 13 - PHYSICS

**NCC 8 92**                      **WASHINGTON STATE UNIV**                      **9610**  
 "STUDY OF MAGNETIC DUMPING EFFECT ON CONVECTION & SOLIDIFICATION UNDER G-JITTER CONDITIONS"  
 04/19/1996 - 04/21/2001                      FY01: \$0                      Total: \$360,000  
*Prin. Invest.:* B Q LI  
*Tech. Officer:* MSFC/C R TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 3 52330**                      **WASHINGTON STATE UNIV**                      **9611**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 06/10/1997 - 08/15/2000                      FY01: \$0                      Total: \$66,000  
*Prin. Invest.:* P MARSTON  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 13 - PHYSICS

**NAG 5 8248**                      **WHITMAN COLLEGE**                      **9612**  
 ORFEUS IMAPS MISSION SUPPORT  
 03/09/1999 - 09/30/2000                      FY01: \$0                      Total: \$31,299  
*Prin. Invest.:* U J SOFIA  
*Tech. Officer:* GSFC/R POLIDAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8249**                      **WHITMAN COLLEGE**                      **9613**  
 THE PROPERTIES OF INTERSTELLAR DUST & APPLICATIONS TO ASTROPHYSICAL PROBLEMS  
 03/09/1999 - 09/30/2000                      FY01: \$0                      Total: \$25,500  
*Prin. Invest.:* U SOFIA  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9249**                      **WHITMAN COLLEGE**                      **9614**  
 FUV EXTINCTION: UNIQUE INSIGHTS INTO THE NATURE & ROLE OF SMALL DUST GRAINS - FUSE  
 03/16/2000 - 03/14/2002                      FY01: \$0                      Total: \$21,954  
*Prin. Invest.:* U SOFIA  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 3 2510**                      **WHITWORTH COLLEGE**                      **9615**  
 DEVELOPMENT OF A METHOD TO SPECTROSCOPICALLY ANALYZE CARBON GRID EROSION IN ION THRUSTERS  
 12/07/2000 - 12/31/2001                      FY01: \$15,924                      Total: \$15,924  
*Prin. Invest.:* D STEVENS  
*Tech. Officer:* GRC/D DOMOMKOS  
*CASE Category:* 13 - PHYSICS

## WEST VIRGINIA

**NAG 5 11072**                      **BLUEFIELD STATE COLLEGE**                      **9616**  
 EMERGIN LEADER'S INST  
 07/06/2001 - 07/14/2002                      FY01: \$100,000                      Total: \$100,000  
*Prin. Invest.:* F WOOTEN BLANKS  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1194**                      **MARSHALL UNIV**                      **9617**  
 CALBINDINS & APOPTOSIS AFTERSHORT TERM SPACE FLIGHT  
 03/25/1998 - 05/31/2001                      FY01: \$0                      Total: \$103,026  
*Prin. Invest.:* W B RHOTEN, I N SERGEEV  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 5 542**                      **MARSHALL UNIV**                      **9618**  
 RCBI ADVANCED COMPOSITES TECHNOLOGY INITIATIVE  
 03/20/2001 - 03/31/2002                      FY01: \$2,300,000                      Total: \$2,300,000  
*Prin. Invest.:* M R JULIAN  
*Tech. Officer:* GSFC/M KIENLEN  
*CASE Category:* 49 - ENGINEERING, OTHER

## NASA'S UNIVERSITY PROGRAM

## WEST VIRGINIA

**NGT 9 24**                    **UNIV OF CHARLESTON -WEST VIRGINIA**                    **9619**  
 GRADUATE STUDENT RESEARCH PROGRAM  
 06/02/1997 - 06/30/2000                    FY01: -\$14,851                    Total: \$29,149  
*Prin. Invest.:* C COOMBS, J NETTLES  
*Tech. Officer:* JSC/D A MORRISON  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11088**                    **WEST VIRGINIA STATE COLLEGE**                    **9620**  
 APPLICATION OF NASA'S REMOTE SENSING SATELLITES TO ENVIRONMENTAL RESEARCH AND EARTH SCIENCE EDUCATION  
 07/25/2001 - 06/30/2002                    FY01: \$70,000                    Total: \$70,000  
*Prin. Invest.:* J MAYHUGH  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11103**                    **WEST VIRGINIA STATE COLLEGE**                    **9621**  
 NASA SCIENCE AND TECHNOLOGY SCHOLAR PROGRAM  
 07/31/2001 - 07/31/2002                    FY01: \$30,000                    Total: \$30,000  
*Prin. Invest.:* E V GRIFFIN, SR  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2096**                    **WEST VIRGINIA UNIV**                    **9622**  
 ROLE OF TURBULENCE IN CHEMICAL AND DYNAMICAL PROCESSES IN THE NEAR-FIELD WAKE OF SUBSONIC AIRCRAFT  
 09/14/1998 - 12/15/2001                    FY01: \$102,570                    Total: \$299,190  
*Prin. Invest.:* R F TURCO, W S LEWELLEN  
*Tech. Officer:* LARC/W L GROSE, LARC/B E ANDERSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2132**                    **WEST VIRGINIA UNIV**                    **9623**  
 INVESTIGATION OF POINT DOPPLER VELOCIMETRY (PDV) FOR TRANSDUCER DETECTION IN BOUNDARY LAYERS  
 01/15/1999 - 01/12/2000                    FY01: -\$89                    Total: \$47,558  
*Prin. Invest.:* J M KUHLMAN  
*Tech. Officer:* LARC/J F MEYERS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1158**                    **WEST VIRGINIA UNIV**                    **9624**  
 AIRNET REMOTELY CONTROLLED B747 SCAL MODEL; TRANS FROM AMES  
 10/2000; GSFC STARTS SUPP 2  
 08/25/1997 - 01/31/2001                    FY01: \$0                    Total: \$150,000  
*Prin. Invest.:* M R NAPOLITANO  
*Tech. Officer:* ARC/W F BROOKS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 6468**                    **WEST VIRGINIA UNIV**                    **9625**  
 INVESTIGATION OF THE ENERGY BALANCE OF SOLAR WIND ELECTRONS: ULYSSES OBSERVATIONS  
 11/13/1997 - 01/31/2001                    FY01: \$0                    Total: \$113,529  
*Prin. Invest.:* E SCIME  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10218**                    **WEST VIRGINIA UNIV**                    **9626**  
 LABORATORY MEASUREMENTS OF BROADBAND EXTREMELY-LOW FREQUENCY (BB-ELF) WAVE EXCITATION THRESHOLDS & TRANSDUCER DETECTION  
 01/05/2001 - 01/14/2002                    FY01: \$98,769                    Total: \$98,769  
*Prin. Invest.:* M KOEPKE  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1494**                    **WEST VIRGINIA UNIV**                    **9627**  
 MARS ENVIRONMENTAL COMPATIBILITY ASSESSMENT  
 06/11/1998 - 05/31/2002                    FY01: \$50,000                    Total: \$243,541  
*Prin. Invest.:* T MELOY  
*Tech. Officer:* MSFC/J POE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1496**                    **WEST VIRGINIA UNIV**                    **9628**  
 TECHNOLOGY EDUCATION BIOTECHNOLOGY CURRICULUM (TBEC)  
 09/23/1998 - 08/31/2000                    FY01: -\$863                    Total: \$93,817  
*Prin. Invest.:* J G WELLS  
*Tech. Officer:* MSFC/D LONGEDDY  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 979**                    **WEST VIRGINIA UNIV**                    **9629**  
 APPLIED RESEARCH IN SOFTWARE VERIFICATION & VALIDATION TRANS. FROM ARC  
 10/1/00 START MOD 21 HERE  
 02/27/1997 - 02/28/2002                    FY01: \$1,909,964                    Total: \$11,843,674  
*Prin. Invest.:* A C COGLEY, J SHAUB, S M EASTERBROOK  
*Tech. Officer:* ARC/D S OSBURN  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 2 6043**                    **WEST VIRGINIA UNIV**                    **9630**  
 NASA AMES FACILITY EDUCATION OUTREACH PROGRAM  
 05/10/2000 - 10/31/2000                    FY01: \$147,692                    Total: \$227,054  
*Prin. Invest.:* K DAVIS, E PULE  
*Tech. Officer:* ARC/D OZBURN, ARC/S YASSINI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 406**                    **WEST VIRGINIA UNIV**                    **9631**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/17/1999 - 06/30/2001                    FY01: \$0                    Total: \$450,000  
*Prin. Invest.:* M JARAIEDI  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 570**                    **WEST VIRGINIA UNIV**                    **9632**  
 WEST VIRGINIA NASA EPSCOR PROGRAM  
 07/13/2001 - 07/31/2002                    FY01: \$291,600                    Total: \$291,600  
*Prin. Invest.:* M JARAIEDI  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40055**                    **WEST VIRGINIA UNIV**                    **9633**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE AND FELLOWSHIP PROGRAM.  
 02/12/1997 - 02/28/2001                    FY01: -\$1,584                    Total: \$972,166  
*Prin. Invest.:* M JARAIEDI  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40120**                    **WEST VIRGINIA UNIV**                    **9634**  
 WEST VIRGINIA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/14/2001 - 02/28/2002                    FY01: \$257,834                    Total: \$257,834  
*Prin. Invest.:* M JARAIEDI  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50009** **WEST VIRGINIA UNIV** **9635**  
 ASSESSING THE CONSEQUENCES OF OZONE DEPLETION ON EFFECTS OF  
 ULTRAVIOLET-B RADIATION ON PLANT LITER Q  
 02/10/1997 - 08/31/2000 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* W T PETERJOHN  
*Tech. Officer:* GSFC/A NURRIDIN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 50103** **WEST VIRGINIA UNIV** **9636**  
 DEBRIS SLIDE HAZARDS IN THE CENTRAL APPALACHIANS: CONTROLLING  
 FACTORS VIA LARGE SCALE SURFICIAL MAPP  
 09/06/1997 - 08/31/2000 FY01: \$0 Total: \$44,000  
*Prin. Invest.:* S KITE  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6961** **WHEELING JESUIT UNIV** **9637**  
 CLASSROOM OF THE FUTURE  
 02/06/1998 - 06/30/2000 FY01: -\$195 Total: \$299,748  
*Prin. Invest.:* R MYERS  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8628** **WHEELING JESUIT UNIV** **9638**  
 EARTH SYSTEM SCIENCE EDUCATION ALLIANCE  
 06/24/1999 - 06/30/2002 FY01: \$200,815 Total: \$588,498  
*Prin. Invest.:* R J MEYERS  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 3 858** **WHEELING JESUIT UNIV** **9639**  
 THE SYNTHESIS OF INDIUM, GALLIUM AND COPPER DITHIO CARBAMATE  
 COMPLEXES FOR DEPOSITION FOR SPACE AND  
 02/01/2001 - 12/31/2001 FY01: \$9,020 Total: \$9,020  
*Prin. Invest.:* N N DUFFY  
*Tech. Officer:* GRC/A F HEPP  
*CASE Category:* 12 - CHEMISTRY

**NCC 5 440** **WHEELING JESUIT UNIV** **9640**  
 NATIONAL TECHNOLOGY TRANSFER CENTER: NASA TECHN. TRANSFER &  
 COMMERCIALIZATION PROGRAM  
 11/09/1999 - 11/30/2001 FY01: \$7,284,000 Total: \$14,457,000  
*Prin. Invest.:* J P ALLEN  
*Tech. Officer:* GSFC/N CHEEKS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 451** **WHEELING JESUIT UNIV** **9641**  
 CLASSROOM OF THE FUTURE PROGRAM  
 01/28/2000 - 12/31/2001 FY01: \$1,900,000 Total: \$3,840,000  
*Prin. Invest.:* N NAIK  
*Tech. Officer:* GSFC/S CANRIGHT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## WISCONSIN

**NAG 3 2293** **LAC COURTE OREILLES OJIBWA COMM COLL** **9642**  
 RENEWABLE ENERGY AND SUSTAINABLE DEVELOPMENT INST PROJECT  
 09/24/1999 - 09/30/2001 FY01: \$100,000 Total: \$200,000  
*Prin. Invest.:* D H ANDERSON  
*Tech. Officer:* GRC/A F HEPP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1156** **MARQUETTE UNIV** **9643**  
 LIMB MUSCLE FUNCTION WITH UNLOADING AND COUNTERMEASURES  
 09/15/1999 - 09/30/2002 FY01: \$186,026 Total: \$404,487  
*Prin. Invest.:* R H FITTS  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 9 18768** **MARQUETTE UNIV** **9644**  
 EFFECTS OF WEIGHTLESSNESS ON HUMAN SINGLE MUSCLE F IBER  
 FUNCTION FOR SLS-3  
 08/31/1992 - 12/31/1999 FY01: \$2,466 Total: \$972,628  
*Prin. Invest.:* R H FITTS, NONE  
*Tech. Officer:* JSC/V ELLERBEE  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 9 116** **MARQUETTE UNIV** **9645**  
 LIFE SCIENCE EXPERIMENT EFFECT OF PROLONGED SPACEFLIGHT ON  
 HUMAN SKELETAL MUSCLE  
 01/05/2001 - 04/01/2004 FY01: \$300,000 Total: \$300,000  
*Prin. Invest.:* D L COSTILL, D R RILEY, R H FITTS  
*Tech. Officer:* JSC/D BAUMANN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 2 956** **MEDICAL COLLEGE OF WISCONSIN** **9646**  
 THE EFFECTS OF MICROGRAVITY ON NEUROMUSCULAR DEVELOPMENT  
 01/20/1995 - 10/31/2001 FY01: \$0 Total: \$871,961  
*Prin. Invest.:* D A RILEY  
*Tech. Officer:* ARC/W E HINDS, ARC/D M WINGET  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1422** **MEDICAL COLLEGE OF WISCONSIN** **9647**  
 EVALUATION OF THE QUALITY OF PRESERVATION OF ARCHIVED FIXED  
 TISSUE SAMPLES FOR ULTRASTRUCTURAL STUDY  
 07/18/2000 - 07/31/2002 FY01: \$0 Total: \$42,000  
*Prin. Invest.:* D A RILEY  
*Tech. Officer:* ARC/R D MACELROY, ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2242** **UNIV WISCONSIN-PLATTEVILLE** **9648**  
 SLOW CRACK GROWTH AND FATIGUE LIFE PREDICTION OF CERAMIC  
 COMPONENTS SUBJECTED TO VARIABLE LOAD HIST  
 03/10/1999 - 11/01/2000 FY01: \$0 Total: \$42,000  
*Prin. Invest.:* O JADAAN  
*Tech. Officer:* GRC/N N NEMETH  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 40097** **UNIV OF WISCONSIN - GREEN BAY** **9649**  
 WISCONSIN SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 03/06/2001 - 02/28/2002 FY01: \$473,250 Total: \$473,250  
*Prin. Invest.:* R A YINGST  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1163 UNIV OF WISCONSIN - LA CROSSE 9650**  
 A WORKBENCH FOR VOLUMETRIC DATA FILTERING AND SEGMENTATION ALGORITHMS  
 03/16/2000 - 12/31/2001 FY01: \$0 Total: \$31,901  
*Prin. Invest.:* S O SENGER  
*Tech. Officer:* ARC/J D SMITH/P  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 1 2073 UNIV OF WISCONSIN - MADISON 9651**  
 THE COLLECTION AND ANALYSIS OF HIGH SPECTRAL- RESOLUTION INFRARED RADIANCES AS PART OF FIRE  
 05/26/1998 - 11/30/2001 FY01: \$0 Total: \$354,000  
*Prin. Invest.:* S A ACKERMAN, H RECERCOMB  
*Tech. Officer:* LARC/V E DELNORE, LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2162 UNIV OF WISCONSIN - MADISON 9652**  
 MODELING AND ANALYSIS OF SAGE CONSTITUENT MIXING IN THE LOWER STRATOSPHERE AND UPPER TROPOSPHERE  
 03/16/1999 - 12/31/2001 FY01: \$90,000 Total: \$310,000  
*Prin. Invest.:* M H HITCHMAN  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2196 UNIV OF WISCONSIN - MADISON 9653**  
 THE CONTINUATION OF CLOUD STATISTICS FOR NASA CLIMATE CHANGE STUDIES (NAG-1-1830 FOLLOW-ON/NRA)  
 05/21/1999 - 04/17/2001 FY01: \$0 Total: \$80,000  
*Prin. Invest.:* D P WYLIE  
*Prin. Invest.:* NONE  
*Tech. Officer:* LARC/V E DELNORE, LARC/J L ROPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2322 UNIV OF WISCONSIN - MADISON 9654**  
 OVERLAPPING CLOUD INVESTIGATIONS USING MODIS, CERES AND ARM CART SITE DATA  
 08/18/2000 - 12/31/2001 FY01: \$64,891 Total: \$139,891  
*Prin. Invest.:* S ACKERMAN  
*Tech. Officer:* LARC/J A GREEN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1189 UNIV OF WISCONSIN - MADISON 9655**  
 MOLECULAR GENETICS OF ROOT THIGMORESPONSIVENESS IN ARABIDOPSIS THALIANA  
 03/19/1998 - 03/31/2001 FY01: \$0 Total: \$451,867  
*Prin. Invest.:* P H MASSON  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1220 UNIV OF WISCONSIN - MADISON 9656**  
 SKELETAL MUSCLE GROWTH OF REPAIR DURING MICROGRAVITY  
 05/20/1998 - 06/30/2001 FY01: \$0 Total: \$347,962  
*Prin. Invest.:* E SCHULTZ  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1336 UNIV OF WISCONSIN - MADISON 9657**  
 MOLECULAR CLONING & CHARACTERIZATION OF THE AGR1 GENE OF ARABIDOPSIS THALIANA  
 07/15/1999 - 06/30/2002 FY01: \$156,379 Total: \$392,490  
*Prin. Invest.:* P MASSON  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1380 UNIV OF WISCONSIN - MADISON 9658**  
 EFFECT OF SPACE FLIGHT ON ADRENAL MEDULLARY FUNCTION  
 09/01/1999 - 02/28/2001 FY01: \$0 Total: \$90,070  
*Prin. Invest.:* P I LELKES  
*Tech. Officer:* ARC/R D MACELROY, ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1492 UNIV OF WISCONSIN - MADISON 9659**  
 MOLECULAR GENETICS OF ROOT THIGMORESPONSIVENESS IN ARABIDOPSIS  
 07/05/2001 - 08/30/2002 FY01: \$61,049 Total: \$61,049  
*Prin. Invest.:* P H MASSON  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1510 UNIV OF WISCONSIN - MADISON 9660**  
 SKELETAL MUSCLE GROWTH AND REPAIR DURING MICROGRAVITY  
 07/24/2001 - 11/30/2002 FY01: \$71,752 Total: \$71,752  
*Prin. Invest.:* E SCHULTZ  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 647 UNIV OF WISCONSIN - MADISON 9661**  
 DEVELOPMENT & FLIGHT OF WIDE FIELD IMAGING SURVEY POLARIMETER  
 03/01/1988 - 12/31/2000 FY01: \$0 Total: \$3,639,890  
*Prin. Invest.:* K H NORDSIECK  
*Tech. Officer:* GSFC/L J EARLY, GSFC/R H PLESS  
*CASE Category:* 13 - PHYSICS

**NAG 5 674 UNIV OF WISCONSIN - MADISON 9662**  
 SPATIAL HETERODYNE SPECTROMETER FOR INVESTIGATION OF INTERSTELLAR FAR ULTRAVIOLET EMISSION LINES  
 11/30/1990 - 01/31/2002 FY01: \$0 Total: \$2,125,999  
*Prin. Invest.:* R J REYNOLDS  
*Tech. Officer:* GSFC/L J EARLY, GSFC/R H PLESS  
*CASE Category:* 13 - PHYSICS

**NAG 5 679 UNIV OF WISCONSIN - MADISON 9663**  
 COSMIC X-RAY PHYSICS  
 03/25/1991 - 04/30/2001 FY01: \$0 Total: \$3,194,189  
*Prin. Invest.:* D MCCAMMON  
*Tech. Officer:* GSFC/L J EARLY, GSFC/R H PLESS  
*CASE Category:* 13 - PHYSICS

**NAG 5 2720 UNIV OF WISCONSIN - MADISON 9664**  
 CONTINUING INVESTIGATION OF SINGLE-PHOTON CALORIMETERS FOR X-RAY SPECTROSCOPY  
 09/08/1994 - 07/31/2000 FY01: \$0 Total: \$454,788  
*Prin. Invest.:* D MCCAMMON  
*Tech. Officer:* GSFC/R L KELLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 2854**                    **UNIV OF WISCONSIN - MADISON**                    **9665**  
 MULTI-WAVELENGTH DIAGNOSTICS OF ROTATION AND NON-S PHERICAL  
 WINDS IN THE WOLF-RAYET STAR  
 12/22/1994 - 09/30/1999    FY01: -\$1,846                    Total: \$226,153  
*Prin. Invest.:* J P CASSINELLI  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3513**                    **UNIV OF WISCONSIN - MADISON**                    **9666**  
 INTEGRATING BIOGEOCHEMICAL ECOLOGICAL AND HYDROLOG DYNAMIC  
 BIOSPHERE  
 11/18/1996 - 11/14/2000    FY01: \$0                    Total: \$903,971  
*Prin. Invest.:* J A FOLEY  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3524**                    **UNIV OF WISCONSIN - MADISON**                    **9667**  
 STUDIES OF THE HOT INTERSTELLAR MEDIUM AND HALO OF STRUCTURE  
 & SPECTRAL CHARACTERISTICS OF THE LOW E  
 11/13/1996 - 05/14/2002    FY01: \$144,000                    Total: \$575,390  
*Prin. Invest.:* W T SANDERS, NONE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3769**                    **UNIV OF WISCONSIN - MADISON**                    **9668**  
 NEW MATHEMATICAL METHODS FOR VARIATIONAL OBJECTIVE ESTIMA-  
 TION  
 02/13/1997 - 09/30/2002    FY01: \$0                    Total: \$360,000  
*Prin. Invest.:* G WAHBA  
*Tech. Officer:* GSFC/K H BERGMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4484**                    **UNIV OF WISCONSIN - MADISON**                    **9669**  
 CO-INVESTIGATOR TO NRA-96-OSS-07 "PRECISION BALLOON OF ANISO-  
 TROPY IN THE CMBR"  
 05/30/1997 - 05/31/2000    FY01: \$0                    Total: \$123,000  
*Prin. Invest.:* P TIMBIE  
*Tech. Officer:* GSFC/R SILVERBERG  
*CASE Category:* 13 - PHYSICS

**NAG 5 4751**                    **UNIV OF WISCONSIN - MADISON**                    **9670**  
 CHARACTERIZING THE SPATIAL AND TEMPORAL DISTRIBUTION THICKNESS  
 OVER THE ATLANTIC BASIN UTILIZING GOES-  
 06/17/1997 - 05/31/2000    FY01: \$0                    Total: \$150,000  
*Prin. Invest.:* E PRINS  
*Tech. Officer:* GSFC/B N HOLBEN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 5252**                    **UNIV OF WISCONSIN - MADISON**                    **9671**  
 FLIGHT OF FAR-ULTRAVIOLET SPECTROPOLARIMETER (FUSP) AND  
 DEVELOPMENT AND FLIGHT OF CUPID PINORDSIECK  
 02/04/2000 - 02/03/2003    FY01: \$420,000                    Total: \$815,640  
*Prin. Invest.:* K H NORDSIECK, NONE  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5253**                    **UNIV OF WISCONSIN - MADISON**                    **9672**  
 UV POLARIMETRIC OBSERVATIONS OF RESONANCE LINE AND DUST SCAT-  
 TERING  
 02/18/2000 - 02/03/2003    FY01: \$0                    Total: \$136,000  
*Prin. Invest.:* W HARIS  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5270**                    **UNIV OF WISCONSIN - MADISON**                    **9673**  
 STUDIES OF THE COSMIC X-RAY BACKGROUND FIRST YEAR FUNDING  
 04/11/2000 - 04/06/2003    FY01: \$350,000                    Total: \$667,000  
*Prin. Invest.:* D MCCAMMON  
*Tech. Officer:* GSFC/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5272**                    **UNIV OF WISCONSIN - MADISON**                    **9674**  
 FIRST FUNDING FOR PHASE 1 OF CIRRUS PROJECT FIRST FUNDING FOR  
 PHASE 1 OF CIRRUS PROJECT  
 04/17/2000 - 04/13/2006    FY01: \$0                    Total: \$299,808  
*Prin. Invest.:* S ACKERMAN  
*Tech. Officer:* GSFC/D L PIERCE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6032**                    **UNIV OF WISCONSIN - MADISON**                    **9675**  
 THE EVOLUTION OF GALAXY IMAGE STRUCTURE TO Z=3  
 10/08/1997 - 10/14/2001    FY01: \$55,100                    Total: \$270,000  
*Prin. Invest.:* M BERSHADY  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6248**                    **UNIV OF WISCONSIN - MADISON**                    **9676**  
 PLANETARY IMAGING FOURIER TRANSFORM SPECTROMETER  
 08/19/1997 - 07/31/2000    FY01: \$0                    Total: \$405,000  
*Prin. Invest.:* D A SROMOVSKY  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6457**                    **UNIV OF WISCONSIN - MADISON**                    **9677**  
 VALIDATION OF ASTER AND MODIS SURFACE-TEMPERATURE AND  
 VEGETATION PRODUCTS WITH SURFACE-FLUX APPLICATIONS  
 10/15/1997 - 03/31/2002    FY01: \$200,274                    Total: \$849,751  
*Prin. Invest.:* S T GOWER  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICALSCIENCE, OTHER

**NAG 5 6535**                    **UNIV OF WISCONSIN - MADISON**                    **9678**  
 REMOTE SENSING TEACHING AND RESEARCH IN SUPPORT OF CREATING  
 A VISION FOR THE ENVIRONMENT AS A WHOLE  
 10/24/1997 - 09/30/1999    FY01: -\$12,264                    Total: \$411,705  
*Prin. Invest.:* D MACKAY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6546**                    **UNIV OF WISCONSIN - MADISON**                    **9679**  
 SYNOPTIC MONITORING OF THE IO TORUS: SPECTROSCOPY, DOPPLER  
 IMAGERY, AND PHOTOMETRY  
 10/29/1997 - 10/31/2000    FY01: \$0                    Total: \$151,084  
*Prin. Invest.:* F SCHERB  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6787 UNIV OF WISCONSIN - MADISON 9680**  
 GROUND-BASED OBSERVATION OF [IO] 6300A EMISSION FR OM IO'S  
 ATMOSPHERE  
 02/06/1998 - 03/31/2001 FY01: \$0 Total: \$180,000  
*Prin. Invest.:* F SCHERB  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6788 UNIV OF WISCONSIN - MADISON 9681**  
 CLOUDS ON NEPTUNE: MOTIONS, EVOLUTION, STRUCTURE  
 02/06/1998 - 03/31/2001 FY01: \$0 Total: \$230,780  
*Prin. Invest.:* L A SROMOVSKY  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6833 UNIV OF WISCONSIN - MADISON 9682**  
 THE MEASUREMENT OF VACUUM ULTRAVIOLET ATOMIC TRANSITION  
 PROBABILITIES OF ASTROPHYSICAL INTEREST  
 01/07/1998 - 12/31/2000 FY01: \$0 Total: \$264,780  
*Prin. Invest.:* J LAWLER  
*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7026 UNIV OF WISCONSIN - MADISON 9683**  
 AN ULTRA-LOW BANDWIDTH DIGITAL IMAGING SYSTEM FOR SPACECRAFT  
 02/26/1998 - 06/30/2001 FY01: \$0 Total: \$138,000  
*Prin. Invest.:* J W PERCIVAL  
*Tech. Officer:* GSFC/R SPAGNUOLO  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 7192 UNIV OF WISCONSIN - MADISON 9684**  
 ENHANCEMENTS TO THE GOES ARCHIVE  
 03/23/1998 - 03/31/2000 FY01: \$0 Total: \$132,561  
*Prin. Invest.:* F BRETHERTON  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7214 UNIV OF WISCONSIN - MADISON 9685**  
 PRESIDENTIAL EARLY CAREER AWARD FOR SCIENTISTS AND ENGINEERS  
 04/06/1998 - 04/30/2002 FY01: \$100,000 Total: \$366,666  
*Prin. Invest.:* J FOLEY, NONE  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7298 UNIV OF WISCONSIN - MADISON 9686**  
 CARBON BUDGETS FOR BOREAS AND OTHER BOREAL FORESTS :  
 TOWARDS A BETTER UNDERSTANDING OF FACTORS IN  
 04/24/1998 - 04/30/2000 FY01: \$0 Total: \$148,350  
*Prin. Invest.:* S T GOWER  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7444 UNIV OF WISCONSIN - MADISON 9687**  
 A COMPREHENSIVE INVESTIGATION OF THE STRUCTURING OF THE  
 INTERSTELLAR MEDIUM BY MASSIVE STARS - L  
 06/09/1998 - 06/14/2000 FY01: -\$5 Total: \$59,995  
*Prin. Invest.:* B P WAKKER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7572 UNIV OF WISCONSIN - MADISON 9688**  
 "A STUDY OF ATMOSPHERIC SCATTERING CONTRIBUTIONS TO GLAS  
 LIDAR RETURNS FROM THE EARTH'S SURFACE"  
 07/24/1998 - 09/30/2001 FY01: \$80,000 Total: \$220,000  
*Prin. Invest.:* E W ELORANTA  
*Tech. Officer:* GSFC/J D SPINHIRNE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7605 UNIV OF WISCONSIN - MADISON 9689**  
 CRITICAL REVIEW OF CHINESE RESEARCH ON THE SOLAR INFLUENCES  
 ON CLIMATE  
 07/22/1998 - 07/31/2002 FY01: \$0 Total: \$218,976  
*Prin. Invest.:* P WANG  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7626 UNIV OF WISCONSIN - MADISON 9690**  
 ANALYSIS OF THE IUE SPECTRA OBTAINED DURING THE SH OEMAKER/  
 LEVY ENCOUNTER  
 08/03/1998 - 09/30/1999 FY01: \$0 Total: \$62,665  
*Prin. Invest.:* D M HARRIS  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7661 UNIV OF WISCONSIN - MADISON 9691**  
 A STUDY OF UNCERTAINTIES FOR MODIS CLOUD RETRIEVALS OF  
 OPTICAL THICKNESS AND EFFECTIVE RADIUS  
 09/02/1998 - 03/31/2001 FY01: -\$49,408 Total: \$110,269  
*Prin. Invest.:* D PINCUS  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7931 UNIV OF WISCONSIN - MADISON 9692**  
 PHYSICS OF AN UNSTABLE WIND FROM THE UNSTABLE STAR P CYGNI  
 ADP-98  
 12/14/1998 - 12/14/2001 FY01: \$0 Total: \$121,000  
*Prin. Invest.:* K H NORDSIECK  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7952 UNIV OF WISCONSIN - MADISON 9693**  
 INTEGRATED STUDIES OF COMET C/199501 (HALE-BOPP) USING THE  
 RESULTS OF THE UNIV WI/GSFC OBSER CAMPAI  
 12/17/1998 - 12/31/2002 FY01: \$98,357 Total: \$276,256  
*Prin. Invest.:* D M HARRIS  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8057 UNIV OF WISCONSIN - MADISON 9694**  
 INTERPRETATION OF RADIATIVE ENERGY FLUXES IN JUPITER'S  
 ATMOSPHERE  
 01/15/1999 - 01/31/2001 FY01: \$0 Total: \$128,085  
*Prin. Invest.:* L A SROMOVSKY  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8069 UNIV OF WISCONSIN - MADISON 9695**  
 BIGFOOT--CHARACTERIZING LAND COVER, LAI AND NPP AT THE LAND-  
 SCAPE SCALE FOR EOS/MODIS VALIDATION  
 01/28/1999 - 12/31/2001 FY01: \$169,401 Total: \$575,038  
*Prin. Invest.:* S T GOWER  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8280 UNIV OF WISCONSIN - MADISON 9696**  
 THE HISTORY AND INITIAL MASS FUNCTION OF THE LAMBDA A ORIONIS  
 STAR FORMING REGION(ADP 98)  
 04/15/1999 - 02/28/2002 FY01: \$0 Total: \$56,505  
*Prin. Invest.:* R D MATHIEU  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8333 UNIV OF WISCONSIN - MADISON 9697**  
 X-RAY OBSERVATIONS OF INTRIGUING NOVAE (ADP98)  
 03/02/1999 - 02/29/2000 FY01: \$0 Total: \$29,190  
*Prin. Invest.:* H B OGELMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8417 UNIV OF WISCONSIN - MADISON 9698**  
 THEORETICAL STUDIES OF THE DIFFUSE INTERSTELLAR MEDIUM (ATP 98)  
 03/25/1999 - 03/31/2002 FY01: \$199,925 Total: \$290,025  
*Prin. Invest.:* D P COX  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8537 UNIV OF WISCONSIN - MADISON 9699**  
 X-RAY DETECTORS FOR SPECTROSCOPY OF 0.1-0.3 KEV EXTENDED  
 SOURCES WITH SUB-EV RESOLUTION.  
 07/09/1999 - 07/14/2002 FY01: \$139,500 Total: \$284,116  
*Prin. Invest.:* D MCCAMMON/*Prin. Invest.:* NONE  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 13 - PHYSICS

**NAG 5 8554 UNIV OF WISCONSIN - MADISON 9700**  
 LONG-TERM WATER FLUX CHANGES FROM CONVERTING OLD- GROWTH  
 PINE FOREST TO HARDWOOD FORESTS IN NORTH  
 06/17/1999 - 06/30/2002 FY01: \$118,552 Total: \$319,128  
*Prin. Invest.:* D MACKAY  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8588 UNIV OF WISCONSIN - MADISON 9701**  
 A LOW COST ATTITUDE DETERMINATION SYSTEM & IMAGER WITH  
 EMBEDDED COMPRESSION.  
 07/09/1999 - 07/14/2001 FY01: \$0 Total: \$560,530  
*Prin. Invest.:* J W PERCIVAL  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 8597 UNIV OF WISCONSIN - MADISON 9702**  
 THE ROLE OF LAND USE AND LAND COVER CHANGE ON THE TERRES-  
 TRIAL WATER BALANCE OF THE MISSISSIPPI BASIN  
 06/11/1999 - 06/30/2002 FY01: \$111,735 Total: \$294,621  
*Prin. Invest.:* J A FOLEY  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8625 UNIV OF WISCONSIN - MADISON 9703**  
 DOCUMENTING, UNDERSTANDING, AND PREDICTING THE AGGREGATE  
 SURFACE RADIATION FLUXES FOR SHEBA  
 08/31/1999 - 06/14/2000 FY01: \$0 Total: \$57,159  
*Prin. Invest.:* J R KEY  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8639 UNIV OF WISCONSIN - MADISON 9704**  
 SIMPLE MODELS OF THE SPATIAL DISTRIBUTION OF CLOUD RADIATIVE  
 PROPERTIES FOR REMOTE SENSING STUDIES  
 06/29/1999 - 09/30/2001 FY01: -\$42,593 Total: \$47,887  
*Prin. Invest.:* R PINCUS  
*Tech. Officer:* GSFC/W WISCOMBE  
*CASE Category:* 31 - ATMOSPHERICSCIENCE

**NAG 5 8652 UNIV OF WISCONSIN - MADISON 9705**  
 CONTINUING INVESTIGATION OF SINGLE-PHOTON CALORIMETERS FOR  
 X-RAY SPECTROSCOPY  
 08/19/1999 - 09/30/2001 FY01: \$0 Total: \$100,000  
*Prin. Invest.:* D MCCAMMON  
*Tech. Officer:* GSFC/R L KELLEY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8967 UNIV OF WISCONSIN - MADISON 9706**  
 OBSERVATIONAL CONSTRAINTS FOR THE GALACTIC FOUNDATION - FUSE  
 01/24/2000 - 01/31/2003 FY01: \$0 Total: \$56,200  
*Prin. Invest.:* R BENJAMIN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9024 UNIV OF WISCONSIN - MADISON 9707**  
 OBSERVATIONAL CONSTRAINTS FOR THE GALACTIC FOUNTAIN-FUSE  
 HIGH VELOCITY CLOUDS: ORIGIN  
 02/28/2000 - 02/28/2002 FY01: \$0 Total: \$70,459  
*Prin. Invest.:* B P WAKKER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9028 UNIV OF WISCONSIN - MADISON 9708**  
 EARTH SCIENCE COMPONENT FOR ACADEMIC PROFESSIONAL ENHANCE-  
 MENT (ESCAPE)  
 02/04/2000 - 02/14/2002 FY01: \$43,781 Total: \$86,975  
*Prin. Invest.:* S S LIMAYE  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9084 UNIV OF WISCONSIN - MADISON 9709**  
 STATISTICAL ANALYSIS OF ATMOSPHERIC OZONE DATA FOR TREND  
 FEATURES & STUDIES ON STATISTICAL METHODOLOGY  
 02/16/2000 - 08/31/2001 FY01: \$0 Total: \$30,000  
*Prin. Invest.:* G C REINSEL  
*Tech. Officer:* GSFC/P K BHARTIA  
*CASE Category:* 31 - ATMOSPHERICSCIENCE

**NAG 5 9179 UNIV OF WISCONSIN - MADISON 9710**  
 THE ORIGINS OF GALACTIC HALO GAS: ACCRETION AND FOUNTAIN  
 FLOWS (LTSA 99)  
 03/07/2000 - 03/14/2002 FY01: \$104,421 Total: \$201,637  
*Prin. Invest.:* B P WAKKER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY



**NAG 5 9226 UNIV OF WISCONSIN - MADISON 9711**  
 SPECTRAL DIAGNOSTICS FOR EARLY-TYPE STARS IN SUPPO RT OF HIGH-  
 RESOLUTION SATELLITE OBSERVATIONS (LTS)  
 03/09/2000 - 03/14/2002 FY01: \$20,033 Total: \$39,060  
*Prin. Invest.:* J CASSINELLI  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9295 UNIV OF WISCONSIN - MADISON 9712**  
 DIAGNOSTIC & PREDICTIVE STUDIES OF THE EARTH'S HYDROLOGIC  
 CYCLE USING MODEL-ASSIMILATED & REMOTE  
 04/13/2000 - 12/31/2001 FY01: \$195,000 Total: \$305,000  
*Prin. Invest.:* D R JOHNSON  
*Tech. Officer:* GSFC/R ATLAS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9389 UNIV OF WISCONSIN - MADISON 9713**  
 INTERNATIONAL MODIS/AIRS PROCESSING PACKAGE (IMAPP) FOR EOS  
 DIRECT BROADCAST DATA  
 04/04/2000 - 04/14/2003 FY01: \$250,000 Total: \$500,000  
*Prin. Invest.:* A HUANG  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9436 UNIV OF WISCONSIN - MADISON 9714**  
 MONITORING AND MODELING OF LAND-SURFACE ENERGY AND WATER  
 FLUXES USING AN ENHANCED PATHFINDER DATABASE  
 04/13/2000 - 04/30/2002 FY01: \$192,532 Total: \$343,710  
*Prin. Invest.:* G DIAK  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9452 UNIV OF WISCONSIN - MADISON 9715**  
 HUMAN ACTIVITY AND A CHANGING BIOSPHERE  
 04/13/2000 - 04/30/2002 FY01: \$298,535 Total: \$495,681  
*Prin. Invest.:* J FOLLEY  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9483 UNIV OF WISCONSIN - MADISON 9716**  
 COLLABORATIVE ANALYSIS AND VISUALIZATION OF SPACE SCIENCE DATA  
 USING JAVA AND VISAD  
 04/21/2000 - 04/30/2001 FY01: \$0 Total: \$85,000  
*Prin. Invest.:* W T SANDERS  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9567 UNIV OF WISCONSIN - MADISON 9717**  
 PRECISION BALLOON-BORNE MEASUREMENTS OF THE ANISOTROPY IN  
 THE COSMIC INFRARED & FAR-INFRARED BACKGR  
 05/05/2000 - 05/14/2001 FY01: \$0 Total: \$79,980  
*Prin. Invest.:* P TIMBE  
*Tech. Officer:* GSFC/E S CHENG  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9673 UNIV OF WISCONSIN - MADISON 9718**  
 DETERMINATION OF MOMENTUM TRANSPORT, ORGANIZATION, &  
 TEMPORAL INTENSITY OF DEEP TROPICAL CONVECTION  
 06/01/2000 - 05/31/2002 FY01: \$40,000 Total: \$60,339  
*Prin. Invest.:* J R MECIKALSKI, NONE  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9688 UNIV OF WISCONSIN - MADISON 9719**  
 APPLICATION OF REMOTE SENSING TO ASSESS THE IMPACT OF SHORT  
 TERM CLIMATE VARIABILITY ON COASTAL SEDIM  
 06/14/2000 - 06/14/2002 FY01: \$150,000 Total: \$200,000  
*Prin. Invest.:* P MENZEL  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9712 UNIV OF WISCONSIN - MADISON 9720**  
 GLAST: A GEV ALL-SKY MONITOR OF TRANSIENT PHENOMENA  
 06/15/2000 - 06/14/2002 FY01: \$34,994 Total: \$54,989  
*Prin. Invest.:* P DINGUS  
*Tech. Officer:* GSFC/S LAMBROS  
*CASE Category:* 13 - PHYSICS

**NAG 5 9894 UNIV OF WISCONSIN - MADISON 9721**  
 IMPROVED TRMM RAINFALL ESTIMATES FROM A COMBINATION OF  
 SATELLITE & SURFACE HYDROLOGICAL OBSERVATIONS  
 08/25/2000 - 11/30/2001 FY01: \$105,000 Total: \$163,020  
*Prin. Invest.:* G W PETTY  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9931 UNIV OF WISCONSIN - MADISON 9722**  
 THE NEARBY STARBURST DWARF GALAXY NGC 625  
 09/07/2000 - 09/14/2001 FY01: \$0 Total: \$6,400  
*Prin. Invest.:* H A KOBULNICKY  
*Tech. Officer:* GSFC/D F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9999 UNIV OF WISCONSIN - MADISON 9723**  
 OPTIMIZATION OF THE GODDARD PROFILING (GPROF) ALGORITHM FOR  
 SUBTROPICAL AND EXTRATROPICAL RAINFALL  
 11/17/2000 - 12/31/2001 FY01: \$34,641 Total: \$34,641  
*Prin. Invest.:* G W PETTY  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10196 UNIV OF WISCONSIN - MADISON 9724**  
 THE MEASUREMENT OF ATOMIC TRANSITION PROBABILITIES FOR SPEC-  
 TRAL LINES IN THE FUSE BAND  
 01/04/2001 - 12/31/2001 FY01: \$60,000 Total: \$60,000  
*Prin. Invest.:* J E LAWLER  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10204 UNIV OF WISCONSIN - MADISON 9725**  
 MINIATURE ADIABATIC DEMAGNETIZATION REFRIGERATOR  
 12/28/2000 - 12/31/2001 FY01: \$160,000 Total: \$160,000  
*Prin. Invest.:* P TIMBIE  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<p><b>NAG 5 10258</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9726</b>            ANTENNA COUPLED TRANSITION EDGE MICROBOLOMETERS WITH            ON-CHIP FILTERING &amp; DUAL POLARIZATION SENSITI            01/31/2001 - 12/31/2001      FY01: \$223,105      Total: \$223,105  <i>Prin. Invest.:</i> P TIMBIE  <i>Tech. Officer:</i> GSFC/J CHERVENAK            CASE Category: 13 - PHYSICS</p>	<p><b>NAG 5 11242</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9734</b>            LINKING IN-SITU MEASUREMENTS, REMOTE SENSING, AND MODELS TO            VALIDATE MODIS PRODUCTS RELATED TO TH            08/17/2001 - 08/31/2004      FY01: \$93,203      Total: \$93,203  <i>Prin. Invest.:</i> S T GOWER  <i>Tech. Officer:</i> GSFC/D WICKLAND            CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 10273</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9727</b>            SOME NEW MATHEMATICAL METHODS FOR VARIATIONAL OBJECTIVE            ANALYSIS &amp; ACCURACY ESTIMATION, WITH EM            01/16/2001 - 01/14/2002      FY01: \$65,000      Total: \$65,000  <i>Prin. Invest.:</i> G WAHBA  <i>Tech. Officer:</i> GSFC/Y SUD            CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 11245</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9735</b>            INTERANNUAL TO DECADE AIR-SEA CARBON FLUXES: ANALYSIS OF            MARINE PRODUCTIVITY AND NUTRIENT D            08/16/2001 - 08/31/2004      FY01: \$117,204      Total: \$117,204  <i>Prin. Invest.:</i> A WINGUTH  <i>Tech. Officer:</i> GSFC/J MARRA            CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 10415</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9728</b>            LMC 1995, THE THIRD SUPERSOFT X-RAY NOVA            02/21/2001 - 02/28/2003      FY01: \$21,667      Total: \$21,667  <i>Prin. Invest.:</i> M ORIO  <i>Tech. Officer:</i> GSFC/R MUSHOTZKY            CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11303</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9736</b>            ANALYSIS OF DYNAMICAL PROCESSES IMPORTANT TO CLIMATE CHANGE            08/31/2001 - 08/31/2003      FY01: \$100,002      Total: \$100,002  <i>Prin. Invest.:</i> M HITCHMAN  <i>Tech. Officer:</i> GSFC/P DECOLA            CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 10729</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9729</b>            CONTINUED DEVELOPMENT OF A PLANETARY IMAGING FOURIER TRANS-            FORM SPECTROMETER (PIFITS)            04/10/2001 - 04/14/2002      FY01: \$50,000      Total: \$50,000  <i>Prin. Invest.:</i> L SROMOVSKY  <i>Tech. Officer:</i> GSFC/B BETTS            CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 8 1320</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9737</b>            RESEARCH DEVELOPMENT OF ATMOSPHERIC PHYSICAL RETRIEVAL            METHODOLOGIES USING SATELLITE DATA            01/31/1997 - 01/31/2002      FY01: \$0      Total: \$200,000  <i>Prin. Invest.:</i> G DIAK  <i>Tech. Officer:</i> MSFC/F R ROBERTSON, MSFC/J ARNOLD            CASE Category: 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 10770</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9730</b>            STAR FORMATION FEEDBACK ON GALAXY EVOLUTION (LISA 2000)            04/26/2001 - 04/30/2002      FY01: \$114,544      Total: \$114,544  <i>Prin. Invest.:</i> H A KOBULNICKY  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN            CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 8 1459</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9738</b>            R/S PHYSICAL SIMULATION OF MARANGONI CONVECTION IN WELD POOLS            02/01/1998 - 01/31/2002      FY01: \$90,250      Total: \$340,417  <i>Prin. Invest.:</i> S KOU  <i>Tech. Officer:</i> MSFC/P M DOTY            CASE Category: 47 - METAL &amp; MATERIALS ENGR</p>
<p><b>NAG 5 11085</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9731</b>            CLIMATE AND HUMAN IMPACTS ON WATER RESOURCES IN AFRICA            07/20/2001 - 08/14/2002      FY01: \$80,503      Total: \$80,503  <i>Prin. Invest.:</i> M COE  <i>Tech. Officer:</i> GSFC/G GUTMAN            CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 8 1460</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9739</b>            R/S DYNAMIC REDUCTION AND THE CREATION OF FINE GRAINED            CERAMICS FROM INVISCID MELTS            02/01/1998 - 01/31/2002      FY01: \$79,800      Total: \$306,467  <i>Prin. Invest.:</i> R F COOPER  <i>Tech. Officer:</i> MSFC/C TALLEY            CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 11155</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9732</b>            VALIDATION OF THE ATMOSPHERIC INFRARED SOUNDER (AIRS) OVER            THE ANTARCTIC PLATEAU (AQUA-0080-033) NRA            08/08/2001 - 08/31/2004      FY01: \$21,375      Total: \$21,375  <i>Prin. Invest.:</i> D C TOBIN  <i>Tech. Officer:</i> GSFC/D STARR            CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 8 1651</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9740</b>            INVESTIGATION OF SENSOR AND ACTUATOR PLACEMENT TECHNIQUES            11/09/1999 - 11/15/2000      FY01: \$0      Total: \$32,640  <i>Prin. Invest.:</i> D C KAMMER  <i>Tech. Officer:</i> MSFC/M L TINKER, MSFC/F M BUGG            CASE Category: 46 - MECHANICAL ENGR</p>
<p><b>NAG 5 11221</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9733</b>            MAGNETIC FIELDS ON OB STARS (ATP 2000)            08/09/2001 - 08/14/2004      FY01: \$5,023      Total: \$5,023  <i>Prin. Invest.:</i> J P CASSINELLI  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN            CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 8 1672</b>      <b>UNIV OF WISCONSIN - MADISON</b>      <b>9741</b>            ANALYSIS OF CONTAINERLESS SOLIDIFICATION MICRO-STRUCTURES IN            UNDERCOOLED MELT SAND COMPOSITE SYS            05/26/2000 - 11/30/2003      FY01: \$85,500      Total: \$125,500  <i>Prin. Invest.:</i> J N PEREPEZKO  <i>Tech. Officer:</i> MSFC/P DOTY            CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>

<p><b>NAG 8 1719</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9742</b>  FILED REVERSED CONFIGURATION FUSION PROPULSION  05/04/2000 - 04/15/2003      FY01: \$27,000                    Total: \$59,000  Prin. Invest.: J SANTARIUS  Tech. Officer: MSFC/F THEO  CASE Category: 22 - COMPUTER SCIENCE</p>	<p><b>NAS 1 96004</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9750</b>  IDIQ FOR SATELLITE DATA/SITE LICENSE  05/01/1996 - 04/29/2001      FY01: \$0                                    Total: \$317,171  Prin. Invest.: N APPLICABLE  Tech. Officer: LARC/R C HUFFMAN, JR., LARC/P MINNIS  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 8 1783</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9743</b>  ALL-OPTICAL HIGH DENSITY COLD ATOM SOURCES  05/04/2001 - 03/30/2005      FY01: \$60,000                    Total: \$60,000  Prin. Invest.: T G WALKER  Tech. Officer: MSFC/D S HUBBARD  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAS 1 99106</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9751</b>  ANALYSIS OF COMBINED PICASSO-CENA AND MODIS DATA  05/17/1999 - 05/16/2002      FY01: \$69,354                    Total: \$149,754  Prin. Invest.: S A ACKERMAN  Tech. Officer: LARC/G GIBSON  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 8 1820</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9744</b>  INVESTIGATION OF TECHNIQUES FOR SENSOR PLACEMENT, ACTUATOR  PLACEMENT, AND TARGETMODE SELECTION...  05/15/2001 - 05/15/2002      FY01: \$39,940                    Total: \$39,940  Prin. Invest.: D C KAMMER  Tech. Officer: MSFC/M L TINKER  CASE Category: 46 - MECHANICAL ENGR</p>	<p><b>NAS 5 30131</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9752</b>  SPACE TELESCOPE IMAGINE SPECTROGRAPH SUPPORT  09/22/1987 - 01/31/2002      FY01: \$157,000                    Total: \$1,290,954  Prin. Invest.: F ROESLER  Tech. Officer: GSFC/H D VITAGLIANO  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 9 1008</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9745</b>  CONTROL-CREW NETWORK COMMUNICATIONS DURING ROUTINE AND  NON-ROUTINE EVENTS  05/01/1998 - 11/01/2000      FY01: \$0                                    Total: \$304,650  Prin. Invest.: B S CALDWELL  Tech. Officer: JSC/B WOOLFORD  CASE Category: 59 - LIFE SCIENCE, OTHER</p>	<p><b>NAS 5 31367</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9753</b>  EOS STUDY  12/30/1991 - 12/14/2001      FY01: \$792,750                    Total: \$5,576,095  Prin. Invest.: P MENZEL  Tech. Officer: GSFC/D TOLL, GSFC/B CONBOY  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 9 1039</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9746</b>  MEASUREMENT OF BODY COMPOSITION FOR NUTRITIONAL ASSESMENT  IN MICROGRAVITY  06/13/1998 - 07/15/2001      FY01: \$0                                    Total: \$284,907  Prin. Invest.: D SCHOELLER  Tech. Officer: KSC/C LLYOD  CASE Category: 59 - LIFE SCIENCE, OTHER</p>	<p><b>NAS 5 31375</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9754</b>  EOS AIRS INVESTIGATION  01/13/1992 - 12/14/2001      FY01: \$425,000                    Total: \$2,652,889  Prin. Invest.: H REVERCOMB  Tech. Officer: GSFC/E KREINS  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG13 99008</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9747</b>  MIDWEST CENTER FOR NATURAL RESOURCE MGMT SAME  03/03/1999 - 03/02/2002      FY01: \$0                                    Total: \$1,500,000  Prin. Invest.: G DIAK  Tech. Officer: SSC/C HILL  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAS 5 31377</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9755</b>  EOS INVESTIGATION: ALGORITHM DEVELOPMENT WITH HIS/ AIRS  01/08/1992 - 12/14/2001      FY01: \$210,000                    Total: \$1,998,640  Prin. Invest.: W L SMITH  Tech. Officer: GSFC/E KREINS  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAS 1 00070</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9748</b>  ENG. &amp; SCIENTIFIC SUPPORT FOR NAST-I  09/15/2000 - 10/30/2001      FY01: \$476,434                    Total: \$1,100,485  Prin. Invest.: F A BEST  Tech. Officer: LARC/A ROYAL  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAS 5 99004</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9756</b>  GLAS SCIENCE TEAM LEADER.  11/25/1998 - 12/01/2002      FY01: \$85,000                    Total: \$273,000  Prin. Invest.: C BENTLEY  Tech. Officer: GSFC/G SMITH  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAS 1 00072</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9749</b>  ALGORITHM DEVELOPMENT, MEASUREMENT CONCEPT VALIDATION, DATA  PROCESSING AND ED./PUBLIC OUTREACH  11/06/2000 - 10/30/2001      FY01: \$1,698,000                    Total: \$1,698,000  Prin. Invest.: H REVERCOMB  Tech. Officer: LARC/V PARSONS  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NCC 1 01011</b>                    <b>UNIV OF WISCONSIN - MADISON</b>                    <b>9757</b>  TROPOSPHERIC MODEL STUDIES OF TRACE P FIELD DATA: REGIONAL  ASSESMT OF STRATOSPHERIC-TROPOSPHERIC EXCHANGE  01/19/2001 - 01/31/2003      FY01: \$42,224                    Total: \$42,224  Prin. Invest.: M H HITCHMAN, G J TRIPOLI  Tech. Officer: LARC/J H CRAWFORD  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>

<b>NCC 2 542</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9758</b>		
PSYCHOPHYSICAL EVALUATION OF THREE-DIMENSIONAL AUDITORY DISPLAYS				
05/01/1988 - 03/31/2000	FY01: \$0		Total: \$1,583,828	
<i>Prin. Invest.:</i> F L WIGHTMAN				
<i>Tech. Officer:</i> ARC/E M WENZEL				
<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER				
<b>NCC 2 5260</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9759</b>		
STUDY OF MEMORY SYSTEM PERFORMANCE FOR FLUID FLOW POST-PROCESSING TOOLS				
03/17/1998 - 10/31/1999	FY01: \$0		Total: \$66,630	
<i>Prin. Invest.:</i> P CAO				
<i>Tech. Officer:</i> ARC/M GERALD-YAMASAKI				
<i>CASE Category:</i> 22 - COMPUTER SCIENCE				
<b>NCC 2 5323</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9760</b>		
TOWARDS A COMMON SERVICE SPECIFICATION & MATCHMAKING FRAMEWORK FOR GRID APPLICATIONS				
05/07/1999 - 04/30/2001	FY01: \$0		Total: \$40,000	
<i>Prin. Invest.:</i> M LIVNY				
<i>Tech. Officer:</i> ARC/W E JOHNSTON, ARC/G F MORELLO				
<i>CASE Category:</i> 22 - COMPUTER SCIENCE				
<b>NCC 2 5449</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9761</b>		
FE ISOTOPE STUDIES OF MICROBIAL ECOLOGY				
07/27/2001 - 07/31/2002	FY01: \$93,518		Total: \$93,518	
<i>Prin. Invest.:</i> C M JOHNSON, B L BEARD				
<i>Tech. Officer:</i> ARC/W W DOLCI				
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER				
<b>NCC 5 294</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9762</b>		
HIGH RESOLUTION CARBON EXCHANGE OVER LARGE-SCALE AMAZONIA BASED ON MODELING AND GOES SATELLITE				
06/10/1998 - 12/31/2001	FY01: \$34,885		Total: \$149,659	
<i>Prin. Invest.:</i> J M NORMAN				
<i>Tech. Officer:</i> GSFC/D W DEERING				
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER				
<b>NCC 5 335</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9763</b>		
THE EFFECTS OF TROPICAL FOREST CONVERSION: ECOLOGICAL RESEARCH IN THE LARGE-SCALE BIOSPHERE-ATMOSPHERE				
06/16/1998 - 12/31/2001	FY01: \$25,684		Total: \$92,579	
<i>Prin. Invest.:</i> J FOLEY				
<i>Tech. Officer:</i> GSFC/D DEERING				
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER				
<b>NCC 5 354</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9764</b>		
"GSFC COOPERATIVE GRADUATE RESEARCH ASSISTANTSHIPS"				
08/04/1998 - 08/31/2001	FY01: \$0		Total: \$124,644	
<i>Prin. Invest.:</i> M H HITCHMAN				
<i>Tech. Officer:</i> GSFC/A J NEGRİ				
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE				
<b>NCC 5 365</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9765</b>		
MODELING WETLANDS AND THEIR ROLE IN HYDROLOGICAL AND BIOGEOCHEMICAL CYCLES				
09/24/1998 - 09/30/2001	FY01: \$0		Total: \$50,033	
<i>Prin. Invest.:</i> J A FOLEY				
<i>Tech. Officer:</i> HQ/L TRAVIS				
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE				
<b>NCC 8 129</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9766</b>		
R/S "CONTINUATION SUPPORT FOR WISCONSIN CENTER FOR SPACE AUTHORIZATION & ROBOTICS"				
01/30/1997 - 10/31/2001	FY01: \$2,683,000		Total: \$10,148,486	
<i>Prin. Invest.:</i> W L ZHOU, J R BULA				
<i>Tech. Officer:</i> MSFC/A L MATISAK				
<i>CASE Category:</i> 54 - ENVIRONMENTAL BIOLOGY				
<b>NCC13 00004</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9767</b>		
MAXIMIZING MUTUAL OPPORTUNITIES: PARTNERSHIP AMONG NASA, UW-MAD AND PRIVATE INDUSTRY				
03/06/2000 - 03/05/2002	FY01: \$195,000		Total: \$345,000	
<i>Prin. Invest.:</i> T LILLESAND				
<i>Tech. Officer:</i> SSC/A PEEK				
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER				
<b>NGT 5 46</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9768</b>		
PRECISE MEASUREMENT OF COSMOLOGICAL PARAMETERS V COSMIC MICROWAVE BACKGROUND ANISOTROPY				
06/23/1997 - 06/30/2001	FY01: \$0		Total: \$88,000	
<i>Prin. Invest.:</i> P TIMBIE				
<i>Tech. Officer:</i> GSFC/M S BURRELL				
<i>CASE Category:</i> 11 - ASTRONOMY				
<b>NGT 5 115</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9769</b>		
THREE-DIMENSIONAL MULTI-WAVELENGTH MODELING TECHNIQUES FOR ANALYSIS OF ASPHERICAL STELLAR				
06/04/2001 - 06/30/2002	FY01: \$21,383		Total: \$21,383	
<i>Prin. Invest.:</i> K H NORDSIECK <i>Prin. Invest.:</i> NONE				
<i>Tech. Officer:</i> GSFC/M S BURRELL				
<i>CASE Category:</i> 11 - ASTRONOMY				
<b>NGT 5 30119</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9770</b>		
EVALUATING THE ROLE OF LAND USE IN THE TERRESTRIAL BIOSPHERE OVER THE LAST CENTURY - ESSF RECIPIENT: NA				
10/01/1997 - 08/31/2000	FY01: \$0		Total: \$66,000	
<i>Prin. Invest.:</i> J FOLEY				
<i>Tech. Officer:</i> GSFC/G ASRAR				
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER				
<b>NGT 5 30146</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9771</b>		
POROELASTIC ANALYSIS OF COSEISMIC AND POSTSEISMIC DEFORMATION ASSOCIATED WITH THE 1992 LANDERS, CALIF				
08/31/1998 - 08/31/2001	FY01: \$0		Total: \$66,000	
<i>Prin. Invest.:</i> H F WANG				
<i>Tech. Officer:</i> GSFC/M Y WEI				
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER				
<b>NGT 5 30160</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9772</b>		
SCALE-DEPENDENT CLIMATE CHANGE DUE TO DEFORESTATION IN AMAZONIA				
08/31/1998 - 08/31/2001	FY01: \$0		Total: \$66,000	
<i>Prin. Invest.:</i> W BRINKMANN, NONE				
<i>Tech. Officer:</i> GSFC/M Y WEI				
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER				

**NGT 5 30176 UNIV OF WISCONSIN - MADISON 9773**  
 EFFECTS OF LOGGING ACTIVITY ON BIOPHYSICAL PROCESS ES AND  
 CARBON CYCLING WITHIN CANADIAN BOREAL FORE  
 08/12/1999 - 08/31/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* J FOLEY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30396 UNIV OF WISCONSIN - MADISON 9774**  
 THE IMPACT OF CLIMATE AND AGRICULTURE ACTIVITY ON NITRATE  
 EXPORT TO THE OCEAN  
 08/14/2001 - 08/31/2004 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* J FOLEY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50185 UNIV OF WISCONSIN - MADISON 9775**  
 PRECISION MEASUREMENTS OF THE POLARIZATION OF THE COSMIC  
 MICROWAVE BACKGROUND RADIATION  
 05/27/1998 - 08/31/2001 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* P TIMBIE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50295 UNIV OF WISCONSIN - MADISON 9776**  
 DWARF ELLIPTICALS IN CLUSTERS: THE FIRST GALAXIES STUDENT:  
 CHRISTOPHER CONSELICE  
 06/26/2000 - 12/31/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* J S GALLAGHER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52865 UNIV OF WISCONSIN - MADISON 9777**  
 PARAMETERIZATION AND SCALE ISSUES ASSOCIATED WITH MACROSCALE  
 WATERSHET MODELING  
 07/27/1998 - 05/13/2002 FY01: \$0 Total: \$66,000  
*Prin. Invest.:* J F CRUISE  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 1 354 UNIV OF WISCONSIN - MILWAUKEE 9778**  
 PION PRODUCTION CROSS SECTIONS  
 08/02/1999 - 06/26/2002 FY01: \$60,000 Total: \$128,671  
*Prin. Invest.:* J W NORBURY  
*Tech. Officer:* LARC/R C SINGLETERRY, JR., LARC/J W WILSON  
*CASE Category:* 13 - PHYSICS

**NCC 8 173 UNIV OF WISCONSIN - MILWAUKEE 9779**  
 PC12 PHEOCHROMOCYTOMA CELLS: A PROVEN MODEL SYSTEM FOR  
 OPTIMIZING 3-D CELL CULTURE  
 03/01/1999 - 11/30/2002 FY01: -\$127,376 Total: \$151,876  
*Prin. Invest.:* P I LELKES  
*Tech. Officer:* JSC/D R MORRISON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 1 52217 UNIV OF WISCONSIN - MILWAUKEE 9780**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/01/1999 - 06/30/2002 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* S R BLATTNING, J W NORBURY  
*Tech. Officer:* LARC/R C SINGLETERRY, JR., LARC/J W WILSON  
*CASE Category:* 13 - PHYSICS

**NGT 5 40039 UNIV OF WISCONSIN - MILWAUKEE 9781**  
 THE NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 01/29/1997 - 02/28/2001 FY01: -\$217,000 Total: \$889,673  
*Prin. Invest.:* J W NORBURY  
*Tech. Officer:* GSFC/D E DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4108 UNIVERSTY OF WISCONSIN-OSHKOSH 9782**  
 REMOTE SENSING OF PHYTOPLANKTON PRODUCTION IN THE SOUTHERN  
 OCEAN  
 04/01/1997 - 03/31/2000 FY01: \$0 Total: \$79,528  
*Prin. Invest.:* M P LIZOTTE  
*Tech. Officer:* GSFC/K R ARRIGO  
*CASE Category:* 33 - OCEANOGRAPHY

## WYOMING

**NAG 1 2164 UNIV OF WYOMING 9783**  
 EVALUATION OF SAGE II AND BALLOON-BARNE STRATO- SPHERIC  
 AEROSOL MEASUREMENTS  
 03/18/1999 - 12/31/2001 FY01: \$46,493 Total: \$138,058  
*Prin. Invest.:* T DESHLER  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01063 UNIV OF WYOMING 9784**  
 SYNTHETIC JET INTERACTION WITH A TURBULENT BOUNDARY LAYER  
 FLOW  
 04/11/2001 - 04/10/2002 FY01: \$32,885 Total: \$32,885  
*Prin. Invest.:* D R SMITH  
*Tech. Officer:* LARC/F J CHEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 208 UNIV OF WYOMING 9785**  
 REDUCTION OF BASE DRUG ON LAUNCH VEHICLES REDUCTION OF BASE  
 DRUG ON LAUNCH VEHICLES  
 05/22/2000 - 03/31/2002 FY01: \$38,974 Total: \$74,384  
*Prin. Invest.:* D W NAUGHTON  
*Tech. Officer:* DFRC/S A WHITMORE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3861 UNIV OF WYOMING 9786**  
 ASSESSMENT OF CLIMATIC AND ANTHROPOGENIC IMPACTS O CYCLE  
 CONSTRAINED BY ATMOSPHERIC MEASUREMENTS AND  
 02/03/1997 - 01/14/2002 FY01: \$0 Total: \$129,885  
*Prin. Invest.:* E HUNT, JR.  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3935 UNIV OF WYOMING 9787**  
 INFRARED SPECKLE INTERFEROMETRY OF IO  
 03/25/1997 - 11/30/2000 FY01: \$0 Total: \$134,084  
*Prin. Invest.:* D R HOWELL  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6628 UNIV OF WYOMING 9788**  
 INVESTIGATIONS OF SULFATE AEROSOLS AND POLAR STRATOSPHERIC  
 CLOUDS USING COMBINED OBSERVATIONS FROM  
 11/18/1997 - 11/30/2000 FY01: \$0 Total: \$169,003  
*Prin. Invest.:* D E HERVIG  
*Tech. Officer:* GSFC/A DOUGLASS  
 CASE Category: 31 - ATMOSPHERIC SCIENCE

**NAG 5 8904 UNIV OF WYOMING 9789**  
 THERMAL EMISSION FROM LAVA FLOWS  
 12/28/1999 - 12/31/2001 FY01: \$0 Total: \$14,400  
*Prin. Invest.:* R HOWELL  
*Tech. Officer:* GSFC/J GRANT  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8917 UNIV OF WYOMING 9790**  
 MULTI-WAVELENGTH MODELING OF HOT SPOTS ON LO  
 01/18/2000 - 12/31/2001 FY01: \$0 Total: \$20,100  
*Prin. Invest.:* R N HOWELL  
*Tech. Officer:* GSFC/D BOGAN  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11191 UNIV OF WYOMING 9791**  
 TO ENHANCE GROUND-BASED OBSERVATIONAL SUPPORT FOR TRAN-  
 SIENT ASTRONOMY RESEARCH  
 09/07/2001 - 09/14/2002 FY01: \$18,160 Total: \$18,160  
*Prin. Invest.:* R CANTERNA  
*Tech. Officer:* GSFC/J P NORRIS  
 CASE Category: 11 - ASTRONOMY

**NAG 9 1176 UNIV OF WYOMING 9792**  
 DEVELOP SECURE INTERNET BASED DATA TRANSFER SYSTEM FOR  
 COUNTERMEASURES EVALUATION & VALIDATION PROJ  
 11/15/1999 - 11/14/2001 FY01: \$0 Total: \$70,931  
*Prin. Invest.:* R E GANTENBEIN  
*Tech. Officer:* GSFC/C LUNDQUIST  
 CASE Category: 59 - LIFE SCIENCE, OTHER

**NAS 1 18945 UNIV OF WYOMING 9793**  
 SAGE III SCIENCE INVESTIGATION SUPPORT P.I. - DR. GABOR VALI  
 01/17/1990 - 01/31/2005 FY01: \$20,000 Total: \$438,300  
*Prin. Invest.:* G VALI  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R MCMASTER  
 CASE Category: 31 - ATMOSPHERIC SCIENCE

**NCC 2 5315 UNIV OF WYOMING 9794**  
 AUTOMATIC FRINGE DETECTION FOR OIL FILM INTERFEROMETRY SKIN-  
 FRICTION MEASUREMENT  
 04/12/1999 - 06/30/2001 FY01: \$0 Total: \$40,108  
*Prin. Invest.:* J W NAUGHTON  
*Tech. Officer:* ARC/D M DRIVER, ARC/G ZILLIAC  
 CASE Category: 41 - AERONAUTICAL ENGR

**NCC 5 414 UNIV OF WYOMING 9795**  
 EPSCOR PREPARATION PROGRAM  
 06/18/1999 - 08/31/2001 FY01: \$0 Total: \$428,236  
*Prin. Invest.:* P JOHNSON  
*Tech. Officer:* GSFC/D DETROYE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30350 UNIV OF WYOMING 9796**  
 EFFECTS OF WIND ON SNOWPACK DISTRIBUTION & SUBSEQUENT MELT-  
 WATER ROUTING ON ECOSYSTEM PROPERTIES/STU  
 08/24/2000 - 08/31/2002 FY01: \$21,996 Total: \$43,992  
*Prin. Invest.:* W REINER  
*Tech. Officer:* GSFC/M WEI  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40008 UNIV OF WYOMING 9797**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM  
 02/03/1997 - 02/28/2001 FY01: -\$36,504 Total: \$770,996  
*Prin. Invest.:* P E JOHNSON  
*Tech. Officer:* GSFC/D DETROYE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40102 UNIV OF WYOMING 9798**  
 WYOMING SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/01/2001 - 02/28/2002 FY01: \$249,004 Total: \$249,004  
*Prin. Invest.:* P E JOHNSON  
*Tech. Officer:* GSFC/D D DETROYE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 36 UNIV OF WYOMING 9799**  
 TRAINING GRANT  
 06/04/1998 - 11/01/2001 FY01: \$22,000 Total: \$66,000  
*Prin. Invest.:* R 3 GANTENBEIN  
*Tech. Officer:* JSC/D G SICKOREZ  
 CASE Category: 22 - COMPUTER SCIENCE

PUERTO RICO

**NAG 2 1176 PONCE SCHOOL OF MEDICINE 9800**  
 MECHANISMS OF UV-B INDUCED FREE RADICAL OXIDATIVE DAMAGE IN  
 BOVINE LENSES & HUMAN FIBROBLASTS  
 02/11/1998 - 08/28/2002 FY01: \$0 Total: \$300,000  
*Prin. Invest.:* J L MATTA  
*Tech. Officer:* ARC/H L D'ANTONI  
 CASE Category: 54 - ENVIRONMENTAL BIOLOGY

**NAG 2 1385 PONCE SCHOOL OF MEDICINE 9801**  
 DNA REPAIR & SUSCEPTIBILITY TO UV-INDUCED BASAL CELL CARCINOMA  
 IN PUERTO RICAN POPULATIONS  
 10/26/1999 - 10/31/2001 FY01: \$67,000 Total: \$200,000  
*Prin. Invest.:* J L MATTA  
*Tech. Officer:* ARC/H L D'ANTONI  
 CASE Category: 56 - MEDICL

**NAG 5 5302 UNIV OF PUERTO RICO - MAYAGUEZ 9802**  
 CORAL REEF MONITORING BY REMOTE SENSING OF CORAL SPAWN  
 09/05/2000 - 12/31/2002 FY01: \$0 Total: \$17,000  
*Prin. Invest.:* E WEIL, J LOPEZ, R ARMSTRONG  
*Tech. Officer:* WFF/C W WRIGHT  
 CASE Category: 33 - OCEANOGRAPHY

**NAG 5 6031 UNIV OF PUERTO RICO - MAYAGUEZ 9803**  
 DYNAMIC TOPOGRAPHY, GRAVITY, & SURFACE DEFORMATION : APPLICATION TO HAZARD ASSESSMENT OF ERUPTING IS  
 10/02/1997 - 09/30/1999 FY01: \$0 Total: \$194,327  
*Prin. Invest.:* G MATTIOLI  
*Tech. Officer:* GSFC/H FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7198 UNIV OF PUERTO RICO - MAYAGUEZ 9804**  
 CATS-CARIBBEAN TIME SERIES: A SERIAL OBSERVING STATION IN THE NORTHEASTERN CARIBBEAN SEA  
 05/04/1998 - 06/30/2001 FY01: \$0 Total: \$126,000  
*Prin. Invest.:* J CORREDOR  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10255 UNIV OF PUERTO RICO - MAYAGUEZ 9805**  
 CURRICULUM INTEGRATION THROUGH SOLAR EDUCATION PROGRAM (CITSEP)  
 01/12/2001 - 01/14/2002 FY01: \$55,106 Total: \$55,106  
*Prin. Invest.:* J G GONZALEZ LAGO  
*Tech. Officer:* GSFC/G COLON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11296 UNIV OF PUERTO RICO - MAYAGUEZ 9806**  
 CATS CARIBBEAN TIME SERIES: A SERIAL OBSERVING STATION IN THE NORTHEASTERN CARIBBEAN SEA  
 08/29/2001 - 09/30/2002 FY01: \$65,200 Total: \$65,200  
*Prin. Invest.:* J CORREDOR  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1344 UNIV OF PUERTO RICO - MAYAGUEZ 9807**  
 RESEARCH "ELECTROOPTICAL EFFECTS ON THIN ORGANIC FILMS OF 3-NITROANILINE & 2-CYCLO-OCTYLALUMINO..."  
 04/24/1997 - 04/23/2000 FY01: -\$5,565 Total: \$289,916  
*Prin. Invest.:* A LYDERMAN, NONE  
*Tech. Officer:* MSFC/B PENN  
*CASE Category:* 13 - PHYSICS

**NAG 8 1389 UNIV OF PUERTO RICO - MAYAGUEZ 9808**  
 RESEARCH "THERMAL PROPERTIES OF MELT-GLASS TRANSITIONS OF ORGANIC COMPOUNDS FOR NONLINEAR OPTICAL APPLICATIONS"  
 07/09/1997 - 08/15/2001 FY01: \$0 Total: \$433,378  
*Prin. Invest.:* A BARRIENTOS  
*Tech. Officer:* MSFC/M VLASSE  
*CASE Category:* 13 - PHYSICS

**NAG10 243 UNIV OF PUERTO RICO - MAYAGUEZ 9809**  
 MASTAP - TEACHER ENHANCEMENT PROJECT  
 04/15/1998 - 10/18/2001 FY01: \$0 Total: \$574,328  
*Prin. Invest.:* B RAMIREZ  
*Tech. Officer:* KSC/J DIGGS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 257 UNIV OF PUERTO RICO - MAYAGUEZ 9810**  
 SODIUM CHLORIDE AND NITRATE SEPARATION/RECOVERY FROM CELLULOSE WASTES  
 04/20/1999 - 04/19/2002 FY01: \$82,537 Total: \$264,146  
*Prin. Invest.:* G COLON  
*Tech. Officer:* KSC/J SAYER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG13 54 UNIV OF PUERTO RICO - MAYAGUEZ 9811**  
 ANALYSIS OF THE INHERENT AND APPARENT OPTICAL PROPERTIES  
 07/16/1997 - 12/31/2000 FY01: \$0 Total: \$299,899  
*Prin. Invest.:* R A ARMSTRONG  
*Tech. Officer:* SSC/R L MILLER  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG13 99029 UNIV OF PUERTO RICO - MAYAGUEZ 9812**  
 DEVELOPMENT AND VALIDATION OF BIO-OPTICAL ALGORITHMS IN COASTAL WATER  
 09/15/1999 - 09/25/2002 FY01: \$52,990 Total: \$199,980  
*Prin. Invest.:* F GILBES  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 5 215 UNIV OF PUERTO RICO - MAYAGUEZ 9813**  
 "TROPICAL ATMOSPHERIC SCIENCES CENTER" / THE NASA/PUERTO RICO EPSCOR PROGRAM.  
 07/07/1997 - 06/30/2002 FY01: \$0 Total: \$1,800,000  
*Prin. Invest.:* B G WEINER  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 252 UNIV OF PUERTO RICO - MAYAGUEZ 9814**  
 TROPICAL CENTER FOR EARTH AND SPACE STUDIES  
 10/29/1997 - 09/30/2000 FY01: \$0 Total: \$3,612,115  
*Prin. Invest.:* R FERNANDEZ-SEIN  
*Tech. Officer:* GSFC/D WILLIAMS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 340 UNIV OF PUERTO RICO - MAYAGUEZ 9815**  
 PARTNERSHIP FOR SPATIAL AND COMPUTATIONAL RESEARCH  
 06/22/1998 - 05/31/2002 FY01: \$462,561 Total: \$1,838,192  
*Prin. Invest.:* R VASQUEZ  
*Tech. Officer:* HQ/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 518 UNIV OF PUERTO RICO - MAYAGUEZ 9816**  
 TROPICAL CENTER FOR EARTH AND SPACE STUDIES  
 10/05/2000 - 09/30/2001 FY01: \$1,190,981 Total: \$1,190,981  
*Prin. Invest.:* R FERNANDEZ-SEIN  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30364 UNIV OF PUERTO RICO - MAYAGUEZ 9817**  
 THEORETICAL QUANTUM STUDY OF THE DISSOCIATION & ADSORPTION DYNAMICS OF HC1 ON STRATOSPHERIC AEROSOL  
 08/24/2000 - 08/31/2001 FY01: \$0 Total: \$22,000  
*Prin. Invest.:* A J CRUZ  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40012 UNIV OF PUERTO RICO - MAYAGUEZ 9818**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLLEGE  
 AND FELLOWSHIP PROGRAM.  
 01/30/1997 - 08/31/2001 FY01: \$0 Total: \$1,150,000  
*Prin. Invest.:* D G WEINER  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT13 52746 UNIV OF PUERTO RICO - MAYAGUEZ 9819**  
 VERTICAL VARIABILITY IN BIO-OPTICAL PROPERTIES OF COASTAL WATERS  
 -ROLE IN DEV OF NEW REMOTE SENSING  
 09/25/2000 - 09/24/2002 FY01: \$22,000 Total: \$33,000  
*Prin. Invest.:* M ROSADO  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2636 UNIV OF PUERTO RICO HUMACAO UNIV COLLEGE 9820**  
 RF PROPAGATION EFFECTS IN TROPICAL RAIN ZONE RF PROPAGATION  
 EFFECTS IN TROPICAL RAIN ZONE  
 09/24/2001 - 09/14/2002 FY01: \$10,000 Total: \$10,000  
*Prin. Invest.:* J C CERSOSIMO  
*Tech. Officer:* GRC/R ACOSTA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 9050 UNIV OF PUERTO RICO-RIO PIEDRAS 9821**  
 INTERACTIONS AND DIVERSITY: EARTH SYSTEM SCIENCE & BEYOND  
 03/01/2000 - 02/14/2001 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* I L APONTE-AVELLANE  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10321 UNIV OF PUERTO RICO-RIO PIEDRAS 9822**  
 FUNDING FOR GRANT FOR PROPOSAL NUMBER NRA-99-05-05 5-1085  
 TITLED "DIAMOND ULTRAVIOLET SENSORS  
 01/31/2001 - 12/31/2001 FY01: \$260,883 Total: \$260,883  
*Prin. Invest.:* D MORELL  
*Tech. Officer:* GSFC/B MOTT  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1709 UNIV OF PUERTO RICO-RIO PIEDRAS 9823**  
 LAND MANAGEMENT IN THE TROPIC AND ITS EFFECTS ON THE GLOBAL  
 ENVIRONMENT  
 03/20/2000 - 03/19/2003 FY01: \$500,000 Total: \$1,000,000  
*Prin. Invest.:* B R WEINER  
*Tech. Officer:* MSFC/W J LOVE  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NCC 5 407 UNIV OF PUERTO RICO-RIO PIEDRAS 9824**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/17/1999 - 07/31/2002 FY01: \$0 Total: \$450,000  
*Prin. Invest.:* B R WEINER  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 595 UNIV OF PUERTO RICO-RIO PIEDRAS 9825**  
 PUERTO RICO NASA EPSCOR PROGRAM  
 09/24/2001 - 08/31/2004 FY01: \$350,000 Total: \$350,000  
*Prin. Invest.:* B WEINER  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 3 52376 UNIV OF PUERTO RICO-RIO PIEDRAS 9826**  
 GRADUATE STUDENT RESEARCH  
 06/08/2001 - 08/31/2002 FY01: \$22,000 Total: \$22,000  
*Prin. Invest.:* C R CABRERA  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 12 - CHEMISTRY

**NGT 5 40091 UNIV OF PUERTO RICO-RIO PIEDRAS 9827**  
 PUERTO RICO SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/22/2001 - 02/28/2002 FY01: \$406,250 Total: \$406,250  
*Prin. Invest.:* W WEINER  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10240 UNIV OF TURABO 9828**  
 ENGINEERING PREPARATORY PROJECT FOR HISPANIC HIGH SCHOOL  
 STUDENTS  
 01/05/2001 - 02/28/2002 FY01: \$192,998 Total: \$192,998  
*Prin. Invest.:* A COURTIER  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 90064 UNIV OF TURABO 9829**  
 ENGINEERING PREPARATORY PROJECT FOR HISPANIC HIGH  
 03/04/1997 - 02/28/2001 FY01: \$0 Total: \$773,678  
*Prin. Invest.:* B A MARRERO  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 49 - ENGINEERING, OTHER

AUSTRALIA

**NAG 1 2113 UNIV OF QUEENSLAND 9832**  
 SCRAMJET GROUND TEST TO FLIGHT TEST CORRELATION  
 10/28/1998 - 09/30/1999 FY01: \$0 Total: \$50,000  
*Prin. Invest.:* A PAULL  
*Tech. Officer:* LARC/A H AUSLENDER, LARC/R T VOLAND  
*CASE Category:* 41 - AERONAUTICAL ENGR

CANADA

**NAG 5 9875 BROCK UNIV 9833**  
 U.S.-CANADA: FLUORESCENCE-BASED DIAGNOSTIC OF IRON LIMITATION  
 FOR ANALYSIS OF NATURAL PHYTOPLANKTON  
 08/22/2000 - 08/31/2001 FY01: \$0 Total: \$21,000  
*Prin. Invest.:* D BRUCE  
*Tech. Officer:* GSFC/M BEHRENFELD  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

GREAT BRITAIN

**NAG 2 1339 UNIV OF GREENWICH 9834**  
 TOOLS FOR RAPID PARALLELIZATION OF LEGACY FORTRAN COMPUTA-  
 TIONAL MECHANICS CODES  
 07/27/1999 - 06/30/2000 FY01: \$0 Total: \$150,000  
*Prin. Invest.:* M CROSS  
*Tech. Officer:* ARC/S SAINI  
*CASE Category:* 22 - COMPUTER SCIENCE



**NAGW 2127**                      **UNIV OF WALES**                      **9835**  
 SOLUTION ALGORITHMS FOR HIGH SPEED COMPRESSIBLE FLOWS  
 06/15/1990 - 04/30/2002      FY01: \$14,000                      Total: \$672,400  
*Prin. Invest.:* O C ZIENKIEWICZ  
*Tech. Officer:* ARC/K K GUPTA, ARC/K L PETERSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

## NETHERLANDS

**NAG 1 2129**    **DELFT UNIV OF TECHNOLOGY-NETHERLANDS**                      **9836**  
 INVESTIGATION OF THE SENSITIVITY OF THE BUCKLING LOAD TO VARI-  
 ATIONS IN DESIGN PARAMETERS AND GEOMET  
 01/14/1999 - 12/31/2001      FY01: \$25,000                      Total: \$75,001  
*Prin. Invest.:* J ARBOCZ  
*Tech. Officer:* LARC/J H STARNES, JR., LARC/M P NEMETH  
*CASE Category:* 41 - AERONAUTICAL ENGR

## NEW ZEALAND

**NAG 2 1395**                      **UNIV OF OTAGO**                      **9837**  
 THE ROLE OF AIRCRAFT ACCIDENT AND INCIDENT CASE HI STORIES IN  
 AVIATION SAFETY AND TRAINING  
 02/03/2000 - 01/31/2002      FY01: \$83,292                      Total: \$171,484  
*Prin. Invest.:* D O'HARE  
*Tech. Officer:* ARC/I BARSHI  
*CASE Category:* 41 - AERONAUTICAL ENGR

## PERU

**NAS 5 99121**    **UNIV NACIONAL DE SAN AGUSTIN - AREQUIPA**                      **9838**  
 OPERATE & MAINTAIN LASER TRACKING STATION AT AREQUIPA PERU  
 03/18/1999 - 01/23/2002      FY01: \$152,587                      Total: \$429,377  
*Prin. Invest.:* N APPLICABLE  
*Tech. Officer:* GSFC/D L CARTER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## RUSSIA

**NCC 1 353**                      **ALL RUSSIAN SCI RES INST VIAM**                      **9830**  
 EVALUATION OF LIGHTWEIGHT ALLOYS & ADVANCED MATERIALS PROC-  
 ESSING FOR AIRFRAMS & SPACE VEHICLE  
 01/13/2000 - 11/30/2001      FY01: \$67,000                      Total: \$222,000  
*Prin. Invest.:* J FRIDLANDER  
*Tech. Officer:* LARC/R K BIRD  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 1 01005**    **MOSCOW INST OF PHYSICS & TECHNOLOGY**                      **9831**  
 INVEST A/C WAKE MOD 4 MITIGATN/REDUCTN OF HARMFUL ATMOSPH  
 EFFECTS SUBSONIC/SUPRSONIC A/C ENGINE EXH  
 09/20/2001 - 09/19/2004      FY01: \$100,000                      Total: \$100,000  
*Prin. Invest.:* M L KOGAN, W L GROSS  
*Tech. Officer:* LARC/W L GROSS, LARC/R S ECKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

# NASA'S UNIVERSITY PROGRAM APPENDIX CROSS INDEX BY FIELD OF SCIENCE AND ENGINEERING

The fields used here are specified by Amendment J, "Standard Classification of Fields of Science and Engineering," to Office of Management and Budget (OMB) Circular A-46, "Standards for Statistical Surveys." Field codes are interpreted as follows:

<p><i>PHYSICAL SCIENCES</i></p> <p>11 ASTRONOMY 12 CHEMISTRY 13 PHYSICS 19 PHYSICAL SCIENCES, NEC*</p>	<p><i>ENVIRONMENTAL SCIENCES</i> (Terrestrial and extraterrestrial)</p> <p>31 ATMOSPHERIC SCIENCES 32 GEOLOGICAL SCIENCES 33 OCEANOGRAPHY 39 ENVIRONMENTAL SCIENCES, NEC*</p>	<p><i>LIFE SCIENCES</i></p> <p>51 BIOLOGICAL SCIENCES 54 ENVIRONMENTAL BIOLOGY 55 AGRICULTURAL SCIENCES 56 MEDICAL SCIENCES 59 LIFE SCIENCES, NEC*</p>	<p><i>SOCIAL SCIENCES</i></p> <p>71 ANTHROPOLOGY 72 ECONOMICS 73 HISTORY 74 LINGUISTICS 75 POLITICAL SCIENCE 76 SOCIOLOGY 79 SOCIAL SCIENCE, NEC*</p>
<p><i>MATHEMATICAL/COMPUTER SCIENCE</i></p> <p>21 MATHEMATICS 22 COMPUTER SCIENCES 29 MATHEMATICAL COMPUTER SCIENCES, NEC*</p>	<p><i>ENGINEERING</i></p> <p>41 AERONAUTICAL 42 ASTRONAUTICAL 43 CHEMICAL 44 CIVIL 45 ELECTRICAL 46 MECHANICAL 47 METALLURGY AND MATERIALS 49 ENGINEERING, NEC*</p>	<p><i>PSYCHOLOGY</i></p> <p>61 BIOLOGICAL 62 SOCIAL SCIENCES 69 PSYCHOLOGY, NEC*</p>	<p><i>OTHER SCIENCES**</i></p> <p>99 ALL DISCIPLINE(S)</p>

\* Not elsewhere classified (For interdisciplinary projects and others not listed by discipline name)  
\*\* For interdisciplinary projects which cannot be classified within any of the preceding main fields

Abbreviations used in the *Technical Officer Location* column are discussed in the prefatory pages.

11	ARIZONA STATE UNIV	D BOGAN	GSFC	R GREELY	NAG 5 8897	21
11	ARIZONA STATE UNIV	D BOGAN	GSFC	S A FAGENTS	NAG 5 8898	
11	ARIZONA STATE UNIV	D K WEST	GSFC	M POLITANO	NAG 5 8481	21
11	ARIZONA STATE UNIV	D K WEST	GSFC	S G STARRFIELD	NAG 5 8278	20
11	ARIZONA STATE UNIV	D K WEST	GSFC	S STARRFIELD	NAG 5 6741	20
11	ARIZONA STATE UNIV	D NAVA	GSFC	T G SHARP	NAG 5 9381	21
11	ARIZONA STATE UNIV	D SENSKÉ	GSFC	R GREELY	NAG 5 10460	22
11	ARIZONA STATE UNIV	G SONNEBORN	GSFC	A P COWLEY	NAG 5 8805	21
11	ARIZONA STATE UNIV	G SONNEBORN	GSFC	J B HOLBERG	NAG 5 10316	22
11	ARIZONA STATE UNIV	G SONNEBORN	GSFC	S G STARRFIELD	NAG 5 9395	21
11	ARIZONA STATE UNIV	J BOYCE	GSFC	D R HUSS	NAG 5 8173	20
11	ARIZONA STATE UNIV	J BOYCE	GSFC	D WYCKOFF	NAG 5 4280	20
11	ARIZONA STATE UNIV	J BOYCE	GSFC	G HUSS	NAG 5 10449	22
11	ARIZONA STATE UNIV	J BOYCE	GSFC	L A LESHIN	NAG 5 8286	21
11	ARIZONA STATE UNIV	J BOYCE	GSFC	P R BUSECK	NAG 5 9352	21
11	ARIZONA STATE UNIV	J BOYCE	GSFC	P R CHRISTIANSON	NAG 5 10310	22
11	ARIZONA STATE UNIV	J BOYCE	GSFC	R GREELEY	NAG 5 8721	21
11	ARIZONA STATE UNIV	J BOYCE	GSFC	R GREELY	NAG 5 9773	22
11	ARIZONA STATE UNIV	J BOYCE	GSFC	S WYCKOFF	NAG 5 10077	22
11	ARIZONA STATE UNIV	J BOYCE	HQ	D A LESHIN	NAG 5 7640	20
11	ARIZONA STATE UNIV	J BOYCE	HQ	D R HUSS	NAG 5 8158	20
11	ARIZONA STATE UNIV	J BOYCE	HQ	L LESHIN	NAG 5 7540	20
11	ARIZONA STATE UNIV	J BOYCE	HQ	P A WEHINGER	NAG 5 7199	20
11	ARIZONA STATE UNIV	J BOYCE	HQ	R GREELEY	NAG 5 8453	21
11	ARIZONA STATE UNIV	J BOYCE	HQ	T G SHARP	NAG 5 7285	20
11	ARIZONA STATE UNIV	J GRANT	GSFC	R GREELEY	NAG 5 8948	21
11	ARIZONA STATE UNIV	J M BOYCE	GSFC	S FAGENTS	NAG 5 11199	22
11	ARIZONA STATE UNIV	J M BOYCE	GSFC	S WYCKOFF	NAG 5 10753	22
11	ARIZONA STATE UNIV	R OLIVERSEN	GSFC	S STARRFIELD	NAG 5 9263	21
11	AUBURN UNIV	D BRUNNER	GSFC	H W BRANDHORST	NCC 5 459	3
11	AUBURN UNIV	D EVANS	GSFC	D LIN	NAG 5 8081	3
11	BLOOMSBURG UNIV	J GRANT	GSFC	M K SHEPARD	NAG 5 7964	435
11	BOSTON COLLEGE	R J OLIVERSEN	GSFC	S J CAREY	NAG 5 10824	276
11	BOSTON UNIV	D K WEST	GSFC	A P MARSCHER	NAG 5 3839	277
11	BOSTON UNIV	D WEST	GSFC	J R MATTOX	NAG 5 3384	276
11	BOSTON UNIV	H HASAN	GSFC	D CHAKRABARTI	NAG 5 3999	277

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	BOSTON UNIV	J BREDEKAMP	GSFC	J D SULLIVAN	NAG 5 8147	278
11	BOSTON UNIV	J LING	GSFC	N CROOKER	NAG 5 6658	277
11	BOSTON UNIV	J M BOYCE	GSFC	M MENDILLO	NAG 5 11077	279
11	BOSTON UNIV	J R BYRD	GSFC	P CHAKRABARTI	NAG 5 10801	279
11	BOSTON UNIV	J SWANK	GSFC	A MARSCHER	NAG 5 7331	277
11	BOSTON UNIV	L CHRISTENSEN	GSFC	N U CROOKER	NAG 5 7049	277
11	BOSTON UNIV	L KALUZIENSKI	GSFC	T BRAINERD	NAG 5 8756	278
11	BOSTON UNIV	R BEEBE	GSFC	D A YOUNG	NAG 5 7861	278
11	BOSTON UNIV	R BEEBE	GSFC	M MENDILLO	NAG 5 6755	277
11	BOSTON UNIV	R J OLIVERSEN	GSFC	J M JACKSON	NAG 5 10808	279
11	BOSTON UNIV	R OLIVERSEN	GSFC	A MARSCHER	NAG 5 9161	278
11	BOSTON UNIV	T MORGAN	GSFC	J BAUMGARDNER	NAG 5 10496	279
11	BOSTON UNIV	T MORGAN	GSFC	M MENDILLO	NAG 5 8012	278
11	BOWIE STATE UNIV	J TILTON	GSFC	M MAREBOYANA	NAG 5 2829	239
11	BROWN UNIV	B CAMPBELL	GSFC	P H SCHULTZ	NAG 5 7082	458
11	BROWN UNIV	C STAHLE	GSFC	G SEIDEL	NAG 5 10383	459
11	BROWN UNIV	D BOGAN	GSFC	D T PAPPALARDO	NAG 5 8046	458
11	BROWN UNIV	D NAVA	GSFC	M J RUTHERFRD	NAG 5 9522	458
11	BROWN UNIV	D SENSKE	GSFC	J HEAD	NAG 5 10690	459
11	BROWN UNIV	D SENSKE	GSFC	P H SCHULTZ	NAG 5 10188	459
11	BROWN UNIV	G STRINGFELLOW	GSFC	G TUCKER	NAG 5 9453	458
11	BROWN UNIV	J BOYCE	GSFC	C M PIETERS	NAG 5 10010	459
11	BROWN UNIV	J BOYCE	GSFC	D C HESS	NAG 5 8174	458
11	BROWN UNIV	J BOYCE	GSFC	D M PIETERS	NAG 5 8302	458
11	BROWN UNIV	J BOYCE	GSFC	J F MUSTARD	NAG 5 9589	458
11	BROWN UNIV	J BOYCE	GSFC	J W HEAD III	NAG 5 10031	459
11	BROWN UNIV	J BOYCE	HQ	J W HEAD	NAG 5 8283	458
11	BROWN UNIV	J BOYCE	HQ	M J RUTHERFORD	NAG 5 8181	458
11	BROWN UNIV	J M BOYCE	GSFC	J HEAD	NAG 5 10573	459
11	BROWN UNIV	L SMITH	GSFC	P H SCHULTZ	NGT 5 50166	460
11	BROWN UNIV	M MEYER	GSFC	Y HUANG	NAG 5 10665	459
11	BROWN UNIV	R BEEBE	GSFC	D T PAPPALARDO	NAG 5 7866	458
11	BROWN UNIV	R BEEBE	GSFC	D W HEAD	NAG 5 8144	458
11	CALIFORNIA INST OF TECH	A NURRIDIN	HQ	S G DJORGOVSKI	NGT 5 50215	49
11	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	S BOGGS	NAG 5 5286	43
11	CALIFORNIA INST OF TECH	B BETTS	GSFC	J KIRSCHVINK	NAG 5 10410	47
11	CALIFORNIA INST OF TECH	B CAMPBELL	GSFC	J BEAUCHAMP	NAG 5 7081	44
11	CALIFORNIA INST OF TECH	B WORRALL	GSFC	E STONE	NAG 5 6912	44
11	CALIFORNIA INST OF TECH	D K WEST	GSFC	B T SOIFER	NAG 5 3560	42
11	CALIFORNIA INST OF TECH	D K WEST	GSFC	E PHINNEY	NAG 5 7034	44
11	CALIFORNIA INST OF TECH	D K WEST	GSFC	J M CARPENTER	NAG 5 8217	45
11	CALIFORNIA INST OF TECH	D K WEST	GSFC	P M GOLDREICH	NAG 5 7008	44
11	CALIFORNIA INST OF TECH	D K WEST	GSFC	R BLANDFORD	NAG 5 7007	44
11	CALIFORNIA INST OF TECH	D K WEST	GSFC	S KULKARNI	NAG 5 6402	44
11	CALIFORNIA INST OF TECH	D NAVA	GSFC	D M STOLPER	NAG 5 4318	43
11	CALIFORNIA INST OF TECH	D NAVA	GSFC	D S BURNETT	NAG 5 4319	43
11	CALIFORNIA INST OF TECH	D SENSKE	GSFC	T AHRENS	NAG 5 10208	47
11	CALIFORNIA INST OF TECH	D VEANS	GSFC	M E BROWN	NAG 5 8463	45
11	CALIFORNIA INST OF TECH	D WEST	GSFC	T A PRINCE	NAG 5 3239	42
11	CALIFORNIA INST OF TECH	E J WOLLACK	GSFC	A E LANGE	NAG 5 10317	47
11	CALIFORNIA INST OF TECH	F A HERRERO	GSFC	S BOGGS	NAG 5 8743	45
11	CALIFORNIA INST OF TECH	F SNOW	GSFC	C MARTIN	NAS 5 98034	49
11	CALIFORNIA INST OF TECH	G STRINGFELLOW	GSFC	A LANGE	NAG 5 9344	46
11	CALIFORNIA INST OF TECH	G STRINGFELLOW	GSFC	A LANGE	NAG 5 9856	46
11	CALIFORNIA INST OF TECH	G STRINGFELLOW	GSFC	P A BLAKE	NAG 5 4692	43
11	CALIFORNIA INST OF TECH	H HASAN	GSFC	K THORNE	NAG 5 6840	44
11	CALIFORNIA INST OF TECH	H HASAN	GSFC	P A BLAKE	NAG 5 4097	42
11	CALIFORNIA INST OF TECH	H THRONSON	GSFC	D E LANGE	NAG 5 6573	44
11	CALIFORNIA INST OF TECH	H THRONSON	GSFC	D SERABYN	NAG 5 4196	42
11	CALIFORNIA INST OF TECH	J A GRANT	GSFC	T AHRENS	NAG 5 8915	45
11	CALIFORNIA INST OF TECH	J A GRANT	GSFC	T J AHRENS	NAG 5 8907	45
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	A INGERSOLL	NAG 5 11288	48
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	A P INGERSOL	NAG 5 9601	46
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	B C MURRAY	NAG 5 9606	46
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	D A PAPANASTASSIOU	NAG 5 8251	45
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	D I SARGENT	NAG 5 4599	43

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	D STEVENSON	NAG 5 10602	47
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	G A BLAKE	NAG 5 9434	46
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	G BLAKE	NAG 5 10467	47
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	G J WASSERBURG	NAG 5 10293	47
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	P A BLAKE	NAG 5 4383	43
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	R SARI	NAG 5 10761	48
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	S KULKARNI	NAG 5 6981	44
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	S R KULKARNI	NAG 5 8318	45
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	S SARGENT	NAG 5 9530	46
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	Y YUNG	NAG 5 10724	48
11	CALIFORNIA INST OF TECH	J BOYCE	HQ	D HILLENBRAND	NAG 5 7501	45
11	CALIFORNIA INST OF TECH	J BOYCE	HQ	P LINDBLOM	NAG 5 4093	42
11	CALIFORNIA INST OF TECH	J M BOYCE	GSFC	D STEVENSON	NAG 5 10587	47
11	CALIFORNIA INST OF TECH	J M BOYCE	GSFC	S KULKARNI	NAG 5 10558	47
11	CALIFORNIA INST OF TECH	J R BYRD	GSFC	D A MEWALDT	NAG 5 10804	48
11	CALIFORNIA INST OF TECH	M MEYER	GSFC	J L KIRSCHVINK	NAG 5 10618	47
11	CALIFORNIA INST OF TECH	R BEEBE	GSFC	D P INGERSOLL	NAG 5 8049	45
11	CALIFORNIA INST OF TECH	R F MUSHOTZKY	GSFC	F WALTER	NAG 5 9919	46
11	CALIFORNIA INST OF TECH	R F MUSHOTZKY	GSFC	L M LUBIN	NAG 5 9920	46
11	CALIFORNIA INST OF TECH	R H PLESS	GSFC	C MARTIN	NAG 5 5052	43
11	CALIFORNIA INST OF TECH	R J OLIVERSEN	GSFC	D THOMPSON	NAG 5 10955	48
11	CALIFORNIA INST OF TECH	R J OLIVERSEN	GSFC	E PHINNEY	NAG 5 10707	48
11	CALIFORNIA INST OF TECH	R J OLIVERSEN	GSFC	M P KAMIONKOWSKI	NAG 5 9821	46
11	CALIFORNIA INST OF TECH	R J OLIVERSEN	GSFC	R J BRUNNER	NAG 5 10885	48
11	CALIFORNIA INST OF TECH	R MUSHOTZKY	GSFC	F A HARRISON	NAG 5 10047	47
11	CALIFORNIA INST OF TECH	T MORGAN	GSFC	E SERABYN	NAG 5 6816	44
11	CALIFORNIA INST OF TECH	W J WAGNER	GSFC	D G LIBBRECHT	NAG 5 6173	44
11	CALIFORNIA INST OF TECH	W WAGNER	GSFC	I SACKMANN	NAG 5 7166	44
11	CALIFORNIA STATE UNIV - FULLERTON	G SONNEBORN	GSFC	K CHEN	NAG 5 10312	51
11	CALIFORNIA STATE UNIV - FULLERTON	J BOYCE	GSFC	D WOOLUM	NAG 5 9433	51
11	CALIFORNIA STATE UNIV - FULLERTON	J BOYCE	GSFC	D WOOLUM	NAG 5 4945	51
11	CALIFORNIA STATE UNIV - FULLERTON	J BOYCE	GSFC	D WOOLUM	NAG 5 10695	51
11	CALIFORNIA STATE UNIV - LOS ANGELES	D BOGAN	GSFC	K KHURANA	NAG 5 8945	52
11	CALIFORNIA STATE UNIV - NORTHRIDGE	J E ALLEN	GSFC	M J PENN	NCC 5 381	53
11	CALIFORNIA STATE UNIV - NORTHRIDGE	J SHARBER	GSFC	D A CHAPMAN	NAG 5 7778	52
11	CALIFORNIA STATE UNIV - NORTHRIDGE	W J WAGNER	GSFC	G A CHAPMAN	NAG 5 4973	52
11	CALIFORNIA STATE UNIV - NORTHRIDGE	W WAGNER	GSFC	G A CHAPMAN	NAG 5 7191	52
11	CARNEGIE - MELLON UNIV	B H HANKS	GSFC	T KANADE	NCC 5 223	439
11	CARNEGIE - MELLON UNIV	D K WEST	GSFC	A K ROMER	NAG 5 7926	437
11	CARNEGIE - MELLON UNIV	D K WEST	GSFC	R E GRIFFITHS	NAG 5 7898	437
11	CARNEGIE - MELLON UNIV	D LAVERY	GSFC	W WHITTAKER	NAG 5 7707	436
11	CARNEGIE - MELLON UNIV	D MACHI	GSFC	D GRIFFITHS	NAG 5 3651	436
11	CARNEGIE - MELLON UNIV	D WEST	GSFC	R NICHOL	NAG 5 6548	436
11	CARNEGIE - MELLON UNIV	L SMITH	GSFC	W WHITTAKER	NGT 5 50248	439
11	CARNEGIE - MELLON UNIV	N WHITE	GSFC	R E GRIFFITHS	NAG 5 9902	437
11	CARNEGIE - MELLON UNIV	P M ATKINS	GSFC	A F PTAK	NAG 5 9922	437
11	CARNEGIE - MELLON UNIV	R F MUSHOTZKY	GSFC	A ROMER	NAG 5 9899	437
11	CARNEGIE - MELLON UNIV	R J OLIVERSEN	GSFC	T MIYAJI	NAG 5 10875	437
11	CARNEGIE - MELLON UNIV	R MUSHOTZKY	GSFC	A F PTAK	NAG 5 10170	437
11	CARNEGIE - MELLON UNIV	R MUSHOTZKY	GSFC	R C NICHOL	NAG 5 10014	437
11	CARNEGIE - MELLON UNIV	R MUSHOTZKY	GSFC	T MIYAJI	NAG 5 10043	437
11	CASE WESTERN RESERVE UNIV	D K WEST	GSFC	C MIHOS	NAG 5 7019	407
11	CASE WESTERN RESERVE UNIV	J BOYCE	GSFC	R HARVEY	NAG 5 11122	407
11	CASE WESTERN RESERVE UNIV	J BOYCE	HQ	R HARVEY	NAG 5 6715	407
11	CHRISTOPHER NEWPORT UNIV	D STARR	GSFC	N POUGATCHEV	NAG 5 6503	507
11	CITY UNIV COLL OF NY YORK COLLEGE	P SAKIMOTO	GSFC	M SPERGEL	NAG 5 10152	367
11	CLAREMONT MCKENNA COLLEGE	M C GUHATHAKURTA	GSFC	D C HIGDON	NAG 5 8017	53
11	CLARK ATLANTA UNIV	R BEEBE	GSFC	S TAYAL	NAG 5 6889	180
11	CLEMSON UNIV - CLEMSON	D F NAVA	GSFC	D S MEYER	NAG 5 4703	462
11	CLEMSON UNIV - CLEMSON	J BOYCE	HQ	D D CLAYTON	NAG 5 8448	462
11	CLEMSON UNIV - CLEMSON	J P NORRIS	GSFC	L THE	NAG 5 9702	463
11	CLEMSON UNIV - CLEMSON	J P NORRIS	GSFC	M D LEISING	NAG 5 3699	461
11	CLEMSON UNIV - CLEMSON	J P NORRIS	GSFC	M D LEISING	NAG 5 8075	462
11	CLEMSON UNIV - CLEMSON	N GEHRELS	GSFC	D HARTMANN	NAG 5 9802	463
11	CLEMSON UNIV - CLEMSON	R J OLIVERSEN	GSFC	M D LEISING	NAG 5 10764	463
11	COLLEGE OF CHARLESTON	G SONNEBORN	GSFC	J E NEFF	NAG 5 10313	464

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	COLLEGE OF CHARLESTON	J BOYCE	GSFC	C R COOMBS	NAG 5 7183	464
11	COLLEGE OF CHARLESTON	J M BOYCE	GSFC	C RUNYON	NAG 5 10633	464
11	COLLEGE OF CHARLESTON	J ROSENDAHAL	GSFC	M COLGAN	NCC 5 263	464
11	COLLEGE OF CHARLESTON	R J OLIVERSEN	GSFC	T W GIBLIN	NAG 5 11017	464
11	COLLEGE OF WOOSTER	G SONNEBORN	GSFC	B BOROSON	NAG 5 10396	412
11	COLLEGE OF WOOSTER	K HARTNETT	GSFC	B BOROSON	NAG 5 10233	412
11	COLORADO SCH OF MINES	J BOYCE	GSFC	M B DUKE	NAG 5 9684	119
11	COLUMBIA UNIV	B A MERRITT	GSFC	E APRILE	NAG 5 5280	370
11	COLUMBIA UNIV	C ROSENZWEIG	GSFC	M CANE	NAG 5 4058	369
11	COLUMBIA UNIV	D F MUSHOTZKY	GSFC	F B PAERLES	NAG 5 9929	373
11	COLUMBIA UNIV	D F MUTSHOTZKY	GSFC	D J HELFAND	NAG 5 9928	373
11	COLUMBIA UNIV	D K WEST	GSFC	A P CROTTIS	NAG 5 3502	369
11	COLUMBIA UNIV	D K WEST	GSFC	D HELFAND	NAG 5 6035	370
11	COLUMBIA UNIV	D K WEST	GSFC	E V GOTTHELF	NAG 5 7935	371
11	COLUMBIA UNIV	D K WEST	GSFC	J O PATTERSON	NAG 5 7977	371
11	COLUMBIA UNIV	D K WEST	GSFC	J P HALPERN	NAG 5 7814	371
11	COLUMBIA UNIV	D K WEST	GSFC	K M LEIGHLY	NAG 5 7971	371
11	COLUMBIA UNIV	D NAVA	GSFC	D LONGHI	NAG 5 4649	370
11	COLUMBIA UNIV	J P NORRIS	GSFC	U OBERLACK	NAG 5 7846	371
11	COLUMBIA UNIV	J P NORRIS	GSFC	U OBERLACK	NAG 5 9653	372
11	COLUMBIA UNIV	J SWANK	GSFC	E GOTTHELF	NAG 5 7740	371
11	COLUMBIA UNIV	N E WHITE	GSFC	S M KAHN	NAG 5 7737	371
11	COLUMBIA UNIV	P ATKINS	GSFC	D HELFAND	NAG 5 9870	372
11	COLUMBIA UNIV	R F MUSHOTZKY	GSFC	D J HELFAND	NAG 5 9946	373
11	COLUMBIA UNIV	R F MUSHOTZKY	GSFC	F B PAERELS	NAG 5 9898	372
11	COLUMBIA UNIV	R J OLIVERSEN	GSFC	E V GOTTHELF	NAG 5 9136	372
11	COLUMBIA UNIV	R J OLIVERSEN	GSFC	J P HALPERN	NAG 5 9094	372
11	COLUMBIA UNIV	R J OLIVERSEN	GSFC	J P HALPERN	NAG 5 9095	372
11	COLUMBIA UNIV	R J OLIVERSEN	GSFC	M P KAMIONKOWSKI	NAG 5 8506	371
11	COLUMBIA UNIV	R M MUSHOTZKY	GSFC	E V GOTTHELF	NAG 5 9911	373
11	COLUMBIA UNIV	R MUSHOTZKY	GSFC	C A SCHARF	NAG 5 10082	373
11	COLUMBIA UNIV	R MUSHOTZKY	GSFC	J P HALPERN	NAG 5 9950	373
11	CORNELL UNIV	A CARRO	GSFC	D VEVERKA	NAG 5 8067	377
11	CORNELL UNIV	D B JARRETT	HQ	J F VEVERKA	NASW 00005	380
11	CORNELL UNIV	D K WEST	GSFC	D LAI	NAG 5 8484	378
11	CORNELL UNIV	D K WEST	GSFC	S TUEKOLSKY	NAG 5 7264	377
11	CORNELL UNIV	D K WEST	GSFC	T J LOREDO	NAG 5 3427	376
11	CORNELL UNIV	D SENSKA	GSFC	B E CLARK	NAG 5 10289	379
11	CORNELL UNIV	D SENSKA	GSFC	J F BELL	NAG 5 10636	379
11	CORNELL UNIV	D SENSKA	GSFC	J VEVERKA	NAG 5 10434	379
11	CORNELL UNIV	D SENSKA	GSFC	P NICHOLSON	NAG 5 10438	379
11	CORNELL UNIV	F M FLASAR	GSFC	B J CONRATH	NCC 5 375	381
11	CORNELL UNIV	F M FLASAR	GSFC	P J GIERASCH	NCC 5 322	381
11	CORNELL UNIV	F M FLASAR	GSFC	P J GIERASCH	NCC 5 539	381
11	CORNELL UNIV	G MUCKLOW	GSFC	G J STACEY	NAG 5 8673	378
11	CORNELL UNIV	G STRINGFELLOW	GSFC	D L HERTER	NAG 5 6495	377
11	CORNELL UNIV	J BERGSTALH	GSFC	D J GIERABCH	NAG 5 3862	376
11	CORNELL UNIV	J BOYCE	GSFC	J F BELL	NAG 5 9774	379
11	CORNELL UNIV	J BOYCE	GSFC	P GIERASCH	NAG 5 10579	379
11	CORNELL UNIV	J BOYCE	GSFC	R LOVELACE	NAG 5 9735	379
11	CORNELL UNIV	J BOYCE	GSFC	R O POHL	NAG 5 10584	379
11	CORNELL UNIV	J BOYCE	GSFC	R V LOVELACE	NAG 5 10559	379
11	CORNELL UNIV	J BOYCE	HQ	D F CHERNOFF	NAG 5 8356	378
11	CORNELL UNIV	J BOYCE	HQ	D J BANDFIELD	NAG 5 8282	378
11	CORNELL UNIV	J BOYCE	HQ	R O POHL	NAG 5 7508	377
11	CORNELL UNIV	J GRANT	GSFC	D E CLARK	NAG 5 7892	377
11	CORNELL UNIV	J M BOYCE	GSFC	B CONRATH	NAG 5 10580	379
11	CORNELL UNIV	J M BOYCE	GSFC	R SULLIVAN	NAG 5 10574	379
11	CORNELL UNIV	J PNORRIS	GSFC	I M WASSERMAN	NAG 5 3800	376
11	CORNELL UNIV	J T BERGSTALH	HQ	J R HOUCK	NASW 99008	380
11	CORNELL UNIV	J W POE	MSFC	J M PARPIA	NAG 8 1438	380
11	CORNELL UNIV	L D DEMING	GSFC	J HARRINGTON	NAG 5 7373	377
11	CORNELL UNIV	L D DEMING	GSFC	J HARRINGTON	NAG 5 9594	378
11	CORNELL UNIV	P CRANE	GSFC	A SIEVERS	NAG 5 9140	378
11	CORNELL UNIV	R BEEBE	GSFC	D HARRINGTON	NAG 5 7965	377
11	CORNELL UNIV	R BEEBE	GSFC	D J GIERASCH	NAG 5 7864	377

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	CORNELL UNIV	R BEEBE	GSFC	P HELFENSTEIN	NAG 5 8010	377
11	CORNELL UNIV	R OLIVERSEN	GSFC	R LOVELACE	NAG 5 9047	378
11	CORNELL UNIV	T H MORGAN	GSFC	W BOTTKE	NAG 5 9082	378
11	CORNELL UNIV	T MORGAN	GSFC	D BANFIELD	NAG 5 7919	377
11	CORNELL UNIV	T MORGAN	GSFC	D S HOWELL	NAG 5 8070	377
11	DARTMOUTH COLLEGE	D EVANS	GSFC	B U SONNERUP	NAG 5 7185	344
11	DARTMOUTH COLLEGE	D EVANS	GSFC	M K HUDSON	NAG 5 7689	344
11	DARTMOUTH COLLEGE	L ZANETTI	GSFC	M K HUDSON	NGT 5 95	345
11	DARTMOUTH COLLEGE	R OLIVERSEN	GSFC	B CHABOYER	NAG 5 9225	344
11	DARTMOUTH COLLEGE	R PETRE	GSFC	J THORSTENSEN	NAG 5 3212	343
11	DEPAUL UNIV	J ROSENDFAL	GSFC	C C NARASIMHAN	NCC 5 272	200
11	DINE COLLEGE	P SAKIMOTO	GSFC	S SEMKEN	NAG 5 10254	24
11	DRAKE UNIV	D K WEST	GSFC	A MARSTON	NAG 5 6854	222
11	DREXEL UNIV	D K WEST	GSFC	S L MCMILLAN	NAG 5 6964	440
11	DREXEL UNIV	J CENTRELLA	GSFC	M VALLIERES	NAG 5 11119	440
11	DREXEL UNIV	R J OLIVERSEN	GSFC	S L MCMILLAN	NAG 5 10775	440
11	DREXEL UNIV	R OLIVERSEN	GSFC	S MCMILLAN	NAG 5 9264	440
11	EAST TENNESSEE STATE UNIV	G SONNEBORN	GSFC	D G LUTTERMOSER	NAG 5 10344	467
11	EASTERN NEW MEX. UNIV - MAIN CAMP.	P SAKIMOTO	GSFC	S NUTTER	NAG 5 10150	360
11	FAIRFIELD UNIV	G MUCKLOW	GSFC	N HAEGEL	NAG 5 8650	144
11	FLA INTERNATIONAL UNIV	R HARTLE	GSFC	K HARDY	NAG 5 3826	162
11	FLORIDA A&M UNIV	P SAKIMOTO	GSFC	C A WEATHERFORD	NAG 5 10148	164
11	FLORIDA INST OF TECH	D WEST	GSFC	M A WOOD	NAG 5 3103	165
11	FLORIDA INST OF TECH	R J OLIVERSEN	GSFC	M ZHANG	NAG 5 10888	165
11	FLORIDA STATE UNIV	J BOYCE	HQ	J C CAIN	NAG 5 8284	167
11	FLORIDA STATE UNIV	M MEYER	GSFC	I FRIEDMAN	NAG 5 9845	168
11	FRANKLIN-MARSHALL COLLEGE	D K WEST	GSFC	D BACKMAN	NAG 5 6858	441
11	GEORGE MASON UNIV	D K WEST	GSFC	J WALLIN	NAG 5 8834	509
11	GEORGE MASON UNIV	D K WEST	GSFC	L OZNEROY	NAG 5 7065	509
11	GEORGE MASON UNIV	M MCCUMBER	GSFC	M KAFATOS	NCC 5 555	510
11	GEORGE MASON UNIV	R J OLIVERSEN	GSFC	L OZNEROY	NAG 5 10776	510
11	GEORGE MASON UNIV	R J OLIVERSEN	GSFC	R M SAMBRUNA	NAG 5 10073	509
11	GEORGE MASON UNIV	R J OLIVERSEN	GSFC	R M SAMBRUNA	NAG 5 10243	509
11	GEORGE MASON UNIV	R J OLIVERSEN	GSFC	R M SAMBRUNA	NAG 5 10244	510
11	GEORGE MASON UNIV	R J OLIVERSEN	GSFC	R M SAMBRUNA	NAG 5 10708	510
11	GEORGE MASON UNIV	R MUSHOTZKY	GSFC	R M SAMBRUNA	NAG 5 10038	509
11	GEORGE MASON UNIV	S KEMPLER	GSFC	M KAFATOS	NCC 5 143	510
11	GEORGE WASHINGTON UNIV	J BOYCE	GSFC	G M KEATING	NAG 5 8287	152
11	GEORGE WASHINGTON UNIV	R BEEBE	GSFC	D A LEVIN	NAG 5 8068	152
11	GEORGIA INST OF TECH	J BOYCE	HQ	D P BRADLEY	NAG 5 7450	184
11	GEORGIA INST OF TECH	J M BOYCE	GSFC	J BRADLEY	NAG 5 10632	184
11	GEORGIA STATE UNIV	D K WEST	GSFC	D GIES	NAG 5 6904	188
11	GEORGIA STATE UNIV	H HASAN	GSFC	S T MANSON	NAG 5 7752	188
11	GEORGIA STATE UNIV	H THRONSON	GSFC	D PERERA	NAG 5 4950	188
11	GRAMBLING STATE UNIV	B PENN	MSFC	C WALTON	NAG 8 1392	233
11	HAMPTON UNIV	J R BYRD	GSFC	D M RUSSELL	NAG 5 10796	512
11	HAMPTON UNIV	P SAKIMOTO	GSFC	S M BAILEY	NAG 5 10163	512
11	HARVARD UNIV	D K WEST	GSFC	L E HERNQUIST	NAG 5 8727	284
11	HARVARD UNIV	D NAVA	GSFC	D B JACOBSEN	NAG 5 4720	283
11	HARVARD UNIV	D NAVA	GSFC	D G AGEE	NAG 5 4713	283
11	HARVARD UNIV	D RIND	GSFC	D JACOB	NAG 5 3553	283
11	HARVARD UNIV	E SMITH	GSFC	R KIRSHNER	NAG 5 7768	284
11	HARVARD UNIV	G SONNEBORN	GSFC	J C RAYMOND	NAG 5 9019	284
11	HARVARD UNIV	H HASAN	GSFC	W H PARKINSON	NAG 5 4348	283
11	HARVARD UNIV	H THRONSON	GSFC	P NAHUM	NAG 5 4522	283
11	HARVARD UNIV	J BERGSTRALH	GSFC	D X SASSELOV	NAG 5 4216	283
11	HARVARD UNIV	J BOYCE	GSFC	A W CAMERON	NAG 5 8467	284
11	HARVARD UNIV	J BOYCE	GSFC	D B JACOBSEN	NAG 5 4430	283
11	HARVARD UNIV	J BOYCE	GSFC	S B JACOBSEN	NAG 5 9571	284
11	HARVARD UNIV	J BOYCE	HQ	D SISTERSON	NAG 5 4302	283
11	HARVARD UNIV	M MEYER	GSFC	H D HOLLAND	NAG 5 10631	285
11	HARVARD UNIV	R BEEBE	GSFC	W H PARKINSON	NAG 5 7859	284
11	HARVARD UNIV	R J OLIVERSEN	GSFC	A LOEB	NAG 5 7039	283
11	HARVARD UNIV	R J OLIVERSEN	GSFC	R NARAYAN	NAG 5 10780	285
11	HARVARD UNIV	R MUSHOTZKY	GSFC	J E GRINDLAY	NAG 5 10040	284
11	HARVARD UNIV	R MUSHOTZKY	GSFC	J E GRINDLAY	NAG 5 10046	284

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	HARVARD UNIV	R MUSHOTZKY	GSFC	R NARAYAN	NAG 5 10105	284
11	HAVERFORD COLLEGE	R J OLIVERSEN	GSFC	S P BOUGHN	NAG 5 9285	441
11	HOWARD UNIV	R BEEBE	GSFC	J HALPERN	NAG 5 6835	154
11	INDIANA UNIV - BLOOMINGTON	B MERRIT	WFF	J MUSSER	NAG 5 5224	215
11	INDIANA UNIV - BLOOMINGTON	D WEST	GSFC	STEIMAN-CAMERON	NAG 5 6773	215
11	INDIANA UNIV - BLOOMINGTON	G SONNEBORN	GSFC	S SHORE	NAG 5 9236	215
11	INDIANA UNIV - BLOOMINGTON	J BOYCE	GSFC	A BASU	NAG 5 9369	215
11	INDIANA UNIV - BLOOMINGTON	J BOYCE	GSFC	D H DURISEN	NAG 5 4295	215
11	IOWA STATE UNIV	D K WEST	GSFC	S D KAWALER	NAG 5 8352	223
11	IOWA STATE UNIV	J GRANT	GSFC	D J SCHEERES	NAG 5 7756	223
11	IOWA STATE UNIV	J SWANK	GSFC	M A CATANESE	NAG 5 7070	222
11	IOWA STATE UNIV	J SWANK	GSFC	M A CATANESE	NAG 5 7423	223
11	IOWA STATE UNIV	W WAGNER	GSFC	L A WILLSON	NAG 5 8465	223
11	JOHNS HOPKINS UNIV	B BETTS	GSFC	R L MCNUTT	NAG 5 8516	244
11	JOHNS HOPKINS UNIV	B BETTS	GSFC	R W MCENTIRE	NAG 5 9719	247
11	JOHNS HOPKINS UNIV	B BETTS	GSFC	W BRINCKERHOFF	NAG 5 10693	249
11	JOHNS HOPKINS UNIV	BCAMPBELL	GSFC	A F CHENG	NAG 5 7080	243
11	JOHNS HOPKINS UNIV	D CLING	GSFC	D M RUST	NAG 5 7921	244
11	JOHNS HOPKINS UNIV	D EVANS	GSFC	D G SIBECK	NAG 5 7920	243
11	JOHNS HOPKINS UNIV	D EVANS	GSFC	D Y LUJ	NAG 5 7797	243
11	JOHNS HOPKINS UNIV	D K WEST	GSFC	A S SZALAY	NAG 5 3503	242
11	JOHNS HOPKINS UNIV	D K WEST	GSFC	G R MEURER	NAG 5 8279	244
11	JOHNS HOPKINS UNIV	D R MENGERS	GSFC	H W MOOS	NAS 5 32985	252
11	JOHNS HOPKINS UNIV	D R MENGERS	GSFC	K R SEMBACH	NAG 5 3485	242
11	JOHNS HOPKINS UNIV	D WEST	GSFC	D A NEUFELD	NAG 5 3542	242
11	JOHNS HOPKINS UNIV	D WEST	GSFC	G A KRISS	NAG 5 3255	242
11	JOHNS HOPKINS UNIV	G H MUCKLOW	GSFC	D G MITCHELL	NAG 5 8687	245
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	A FULLERTON	NAG 5 10650	249
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	C HOWK	NAG 5 10957	250
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	H A WEAVER	NAG 5 10921	250
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	J A MORSE	NAG 5 8955	245
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	L BIANCHI	NAG 5 8965	245
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	L BIANCHI	NAG 5 10364	248
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	P CHAYER	NAG 5 10647	249
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	R L SHELTON	NAG 5 10394	248
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	R SANKRIT	NAG 5 10248	248
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	R SANKRIT	NAG 5 10380	248
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	S D FRIEDMAN	NAG 5 10355	248
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	S R MCCANDLISS	NAG 5 8994	245
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	S R MCCANDLISS	NAG 5 10403	248
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	T M HECKMAN	NAG 5 9012	245
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	T M HECKMAN	NAG 5 10302	248
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	W V DIXON	NAG 5 10405	249
11	JOHNS HOPKINS UNIV	H HASAN	GSFC	D R MCCANDLISS	NAG 5 4261	242
11	JOHNS HOPKINS UNIV	J BOYCE	GSFC	D MAUK	NAG 5 8191	244
11	JOHNS HOPKINS UNIV	J BOYCE	GSFC	S L MURCHIE	NAG 5 8171	244
11	JOHNS HOPKINS UNIV	J E ROBINSON	GSFC	N AVAILABLE	NAS 5 01072	252
11	JOHNS HOPKINS UNIV	J J WOLFF	GSFC	D GRANT	NAS 5 97179	252
11	JOHNS HOPKINS UNIV	J JELETIC	GSFC	H FORD	NAG 5 7697	243
11	JOHNS HOPKINS UNIV	J M BOYCE	GSFC	O BARNOUIN-JHA	NAG 5 11211	251
11	JOHNS HOPKINS UNIV	J R BYRD	GSFC	D ZHENG	NAG 5 10798	249
11	JOHNS HOPKINS UNIV	J SPANN	GSFC	S WING	NAG 5 10971	250
11	JOHNS HOPKINS UNIV	J WOLFF	GSFC	T COUGHLIN	NAS 5 97271	252
11	JOHNS HOPKINS UNIV	K E WEAVER	GSFC	E T VISHNIAC	NCC 5 447	252
11	JOHNS HOPKINS UNIV	L CAROFF	ARC	T HENRY	NAG 2 1392	241
11	JOHNS HOPKINS UNIV	M MELLOTT	GSFC	R E ERLANDSON	NAG 5 9118	246
11	JOHNS HOPKINS UNIV	M SMITH	MSFC	R GIACCONI	NAG 8 1527	251
11	JOHNS HOPKINS UNIV	P HUNTER	GSFC	S R NYLUND	NAG 5 8149	244
11	JOHNS HOPKINS UNIV	R A HOFFMAN	GSFC	N J FOX	NAG 5 9903	247
11	JOHNS HOPKINS UNIV	R BEEBE	GSFC	C P PARANICAS	NAG 5 7863	243
11	JOHNS HOPKINS UNIV	R BEEBE	GSFC	D STROBEL	NAG 5 7769	243
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	M A HOUDASHELT	NAG 5 10922	250
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	A S SZALAY	NAG 5 9186	246
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	C A NORMAN	NAG 5 10807	250
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	E COLBERT	NAG 5 9878	247
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	J H KROLIK	NAG 5 9187	246

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	S RIDGWAY	NAG 5 10762	249
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	T HECKMAN	NAG 5 6400	243
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	T YAQOOB	NAG 5 10769	249
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	W V DIXON	NAG 5 10916	250
11	JOHNS HOPKINS UNIV	R M MUSHOTZKY	GSFC	T HECKMAN	NAG 5 9910	247
11	JOHNS HOPKINS UNIV	R MUSHOTSKY	GSFC	J H KROLIK	NAG 5 10304	248
11	JOHNS HOPKINS UNIV	R MUSHOTZKY	GSFC	H FORD	NAG 5 10176	247
11	JOHNS HOPKINS UNIV	R MUSHOTZKY	GSFC	L M LUBIN	NAG 5 10511	249
11	JOHNS HOPKINS UNIV	R MUSHOTZKY	GSFC	M E KAISER	NAG 5 9837	247
11	JOHNS HOPKINS UNIV	R MUSHOTZKY	GSFC	T HECKMAN	NAG 5 9948	247
11	JOHNS HOPKINS UNIV	R MUSHOTZKY	GSFC	W BLAIR	NAG 5 9963	247
11	JOHNS HOPKINS UNIV	R OLIVERSEN	GSFC	B S JAIN	NAG 5 9220	246
11	JOHNS HOPKINS UNIV	R OLIVERSEN	GSFC	E PERLMAN	NAG 5 9278	246
11	JOHNS HOPKINS UNIV	R OLIVERSEN	GSFC	E S PEARLMAN	NAG 5 9533	246
11	JOHNS HOPKINS UNIV	R OLIVERSEN	GSFC	L BIANCHI	NAG 5 9219	246
11	JOHNS HOPKINS UNIV	R POLIDAN	GSFC	G KRISS	NAG 5 6764	243
11	JOHNS HOPKINS UNIV	S CURTIS	GSFC	R GREEWALD	NAG 5 8361	244
11	JOHNS HOPKINS UNIV	T MORGAN	GSFC	H WEAVER	NAG 5 7186	243
11	JOHNS HOPKINS UNIV	WWAGNER	GSFC	D M RUST	NAG 5 8331	244
11	LOUISIANA STATE UNIV - BATON ROUGE	D K WEST	GSFC	G C CLAYATON	NAG 5 7933	234
11	LOUISIANA STATE UNIV - BATON ROUGE	D WEST	GSFC	G CHANMUGAM	NAG 5 3082	233
11	LOUISIANA STATE UNIV - BATON ROUGE	G SONNEBORN	GSFC	G C CLAYTON	NAG 5 10185	234
11	LOUISIANA STATE UNIV - BATON ROUGE	J NORRIS	GSFC	J STACY	NAG 5 8100	234
11	LOUISIANA STATE UNIV - BATON ROUGE	J P NORRIS	GSFC	J STACY	NAG 5 7355	234
11	LOUISIANA STATE UNIV - BATON ROUGE	R J OLIVERSEN	GSFC	G C CLAYTON	NAG 5 9709	234
11	LOUISIANA STATE UNIV - BATON ROUGE	R J OLIVERSEN	GSFC	J FRANK	NAG 5 8497	234
11	LOUISIANA STATE UNIV - BATON ROUGE	R OLIVERSEN	GSFC	G CLAYTON	NAG 5 9203	234
11	LOYOLA MARYMOUNT UNIV	D EVANS	GSFC	J SANNY	NAG 5 7050	53
11	MASSACHUSETTS INST OF TECH	D C LING	GSFC	D J LAZARUS	NAG 5 7794	292
11	MASSACHUSETTS INST OF TECH	D C LING	GSFC	D J LAZARUS	NAG 5 7967	292
11	MASSACHUSETTS INST OF TECH	D K WEST	GSFC	M H VAN PUTTEN	NAG 5 7012	291
11	MASSACHUSETTS INST OF TECH	D K WEST	GSFC	S A RAPPAPORT	NAG 5 8368	293
11	MASSACHUSETTS INST OF TECH	D K WEST	GSFC	V M KASPI	NAG 5 8063	292
11	MASSACHUSETTS INST OF TECH	D K WEST	GSFC	W H LEWIN	NAG 5 3558	289
11	MASSACHUSETTS INST OF TECH	G MUCKLOW	GSFC	M W BAUTZ	NAG 5 8668	293
11	MASSACHUSETTS INST OF TECH	J BERGSTRALH	GSFC	B BURKE	NAG 5 6523	291
11	MASSACHUSETTS INST OF TECH	J BERGSTRALH	GSFC	D L ELLIOT	NAG 5 3940	289
11	MASSACHUSETTS INST OF TECH	J BERGSTRALH	GSFC	D P BINZEL	NAG 5 3939	289
11	MASSACHUSETTS INST OF TECH	J BOYCE	GSFC	D L GROVE	NAG 5 10522	295
11	MASSACHUSETTS INST OF TECH	J BOYCE	GSFC	J I RICHARDSON	NAG 5 8720	293
11	MASSACHUSETTS INST OF TECH	J BOYCE	GSFC	M T ZUBER	NAG 5 8707	293
11	MASSACHUSETTS INST OF TECH	J BOYCE	GSFC	T GROVE	NAG 5 10728	295
11	MASSACHUSETTS INST OF TECH	J BOYCE	GSFC	T L GROVE	NAG 5 9525	294
11	MASSACHUSETTS INST OF TECH	J BOYCE	HQ	P L GROVE	NAG 5 4768	290
11	MASSACHUSETTS INST OF TECH	J KING	GSFC	A J LAZARUS	NAG 5 8031	292
11	MASSACHUSETTS INST OF TECH	J LING	GSFC	K PAULARENA	NAG 5 6473	291
11	MASSACHUSETTS INST OF TECH	J N CUZZI	ARC	J L ELLIOT	NAG 2 855	287
11	MASSACHUSETTS INST OF TECH	J SWANK	GSFC	D CHAKRABARTY	NAG 5 7517	292
11	MASSACHUSETTS INST OF TECH	J SWANK	GSFC	G CLARK	NAG 5 4485	290
11	MASSACHUSETTS INST OF TECH	J SWANK	GSFC	G W CLARK	NAG 5 7279	291
11	MASSACHUSETTS INST OF TECH	J SWANK	GSFC	R A REMILLARD	NAG 5 7375	292
11	MASSACHUSETTS INST OF TECH	J SWANK	GSFC	R A REMILLARD	NAG 5 7480	292
11	MASSACHUSETTS INST OF TECH	J SWANK	GSFC	S A RAPPAPORT	NAG 5 8244	293
11	MASSACHUSETTS INST OF TECH	J SWANK	GSFC	S RAPPAPORT	NAG 5 4115	290
11	MASSACHUSETTS INST OF TECH	J SWANK	GSFC	V KASPI	NAG 5 4879	290
11	MASSACHUSETTS INST OF TECH	J SWANK	GSFC	W LEWIN	NAG 5 4733	290
11	MASSACHUSETTS INST OF TECH	J SWANK	GSFC	W LEWIN	NAG 5 7481	292
11	MASSACHUSETTS INST OF TECH	M MEYER	GSFC	J GROTZINGER	NAG 5 6722	291
11	MASSACHUSETTS INST OF TECH	M MEYER	GSFC	S A BOWRING	NAG 5 8814	293
11	MASSACHUSETTS INST OF TECH	N B CUMINGS	MSFC	G RICKER	NAS 8 37716	297
11	MASSACHUSETTS INST OF TECH	P CRANE	GSFC	B F BURKE	NAG 5 9763	294
11	MASSACHUSETTS INST OF TECH	R J OLIVERSEN	GSFC	F A RASIO	NAG 5 8460	293
11	MASSACHUSETTS INST OF TECH	R J OLIVERSEN	GSFC	W H LEWIN	NAG 5 9135	293
11	MASSACHUSETTS INST OF TECH	R J OLIVERSEN	GSFC	W H LEWIN	NAG 5 10815	295
11	MASSACHUSETTS INST OF TECH	R K OLIVERSEN	GSFC	W CUI	NAG 5 7990	292
11	MASSACHUSETTS INST OF TECH	R MUSHOTZKY	GSFC	B M GAENSLER	NAG 5 9962	294



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	MASSACHUSETTS INST OF TECH	R MUSHOTZKY	GSFC	C R CANIZARES	NAG 5 10008	295
11	MASSACHUSETTS INST OF TECH	R MUSHOTZKY	GSFC	D S DAVIS	NAG 5 10107	295
11	MASSACHUSETTS INST OF TECH	R MUSHOTZKY	GSFC	W LEWIN	NAG 5 10192	295
11	MASSACHUSETTS INST OF TECH	R OLIVERSEN	GSFC	G ALLEN	NAG 5 9237	294
11	MASSACHUSETTS INST OF TECH	R PETRE	GSFC	M SCHATTEBURG	NCC 5 330	299
11	MASSACHUSETTS INST OF TECH	R PETRE	GSFC	M SCHATTEBURG	NCC 5 525	299
11	MASSACHUSETTS INST OF TECH	T MORGAN	GSFC	A RIVKIN	NAG 5 10604	295
11	MASSACHUSETTS INST OF TECH	T MORGAN	GSFC	J ELLIOT	NAG 5 10444	295
11	MASSACHUSETTS INST OF TECH	W DAVIS	GSFC	H BRADT	NAG 5 30612	297
11	MEDGAR EVERS COLLEGE	P SAKIMOTO	GSFC	L P JOHNSON	NAG 5 10142	382
11	MICHIGAN STATE UNIV	W J WAGNER	GSFC	R F STEIN	NAG 5 9563	307
11	MICHIGAN TECHNOLOGICAL UNIV	D K WEST	GSFC	A BORYSOW	NAG 5 3689	308
11	MICHIGAN TECHNOLOGICAL UNIV	J P NORRIS	GSFC	R J NEMIROFF	NAG 5 4756	309
11	MIDDLEBURY COLLEGE	D K WEST	GSFC	P WINKLER	NAG 5 8020	506
11	MIDDLEBURY COLLEGE	W J WAGNER	GSFC	P WOLFSON	NAG 5 6118	506
11	MONTANA STATE UNIV	D DETROYE	GSFC	W HISCOCK	NCC 5 240	338
11	MONTANA STATE UNIV	M J HAGYARD	MSFC	R C CANFIELD	NAG 8 1399	337
11	MONTANA STATE UNIV	M MEYER	GSFC	D M WARD	NAG 5 8824	337
11	MONTANA STATE UNIV	M MEYER	GSFC	T R MCDERMOTT	NAG 5 8807	337
11	MONTANA STATE UNIV	W WAGNER	GSFC	D CANFIELD	NAG 5 6110	337
11	MOORHEAD STATE UNIV	J BOYCE	HQ	R O COLSON	NAG 5 7366	320
11	MOREHOUSE COLLEGE	J BERGSTRALH	GSFC	J KING	NAG 5 6602	188
11	NEW JERSEY INST OF TECH	D EVANS	GSFC	P R GOODE	NAG 5 7454	350
11	NEW JERSEY INST OF TECH	H NEEDLEMAN	GSFC		NAG 5 5144	350
11	NEW JERSEY INST OF TECH	W J WAGNER	GSFC	D R GOODE	NAG 5 4919	350
11	NEW JERSEY INST OF TECH	W WAGNER	GSFC	D E GARY	NAG 5 8466	351
11	NEW JERSEY INST OF TECH	W WAGNER	GSFC	H WANG	NAG 5 7085	350
11	NEW JERSEY INST OF TECH	W WAGNER	GSFC	M F WOODARD	NAG 5 8485	351
11	NEW JERSEY INST OF TECH	W WAGNER	GSFC	P R GOODE	NAG 5 11007	351
11	NEW MEXICO HIGHLANDS UNIV	T MORGAN	GSFC	D V RYAN	NAG 5 8734	361
11	NEW MEXICO INST OF MINING & TECH	M Y WEI	GSFC	F M PHILLIPS	NGT 5 30169	362
11	NEW MEXICO STATE UNIV - LAS CRUCES	B A MERRITT	GSFC	S J STOCHAJ	NAG 5 5159	362
11	NEW MEXICO STATE UNIV - LAS CRUCES	C P MCKAY	ARC	M MARLEY	NAG 2 6007	362
11	NEW MEXICO STATE UNIV - LAS CRUCES	D C LING	GSFC	D R WEBBER	NAG 5 7795	362
11	NEW MEXICO STATE UNIV - LAS CRUCES	D K WEST	GSFC	A KLYPIN	NAG 5 3842	362
11	NEW MEXICO STATE UNIV - LAS CRUCES	D K WEST	GSFC	A KLYPIN	NAG 5 8242	363
11	NEW MEXICO STATE UNIV - LAS CRUCES	F C JONES	GSFC	W R WEBBER	NAG 5 7524	362
11	NEW MEXICO STATE UNIV - LAS CRUCES	J HARRINGTON	GSFC	H BAPTISTE	NAG 5 11311	363
11	NEW MEXICO STATE UNIV - LAS CRUCES	J M BOYCE	GSFC	J R MURPHY	NAG 5 11164	363
11	NEW MEXICO STATE UNIV - LAS CRUCES	J M BOYCE	GSFC	V SOLOMATOV	NAG 5 10578	363
11	NEW MEXICO STATE UNIV - LAS CRUCES	R J OLIVERSEN	GSFC	M S MARLEY	NAG 5 9273	363
11	NEW MEXICO STATE UNIV - LAS CRUCES	T MORGAN	GSFC	D J CHANOVER	NAG 5 7904	362
11	NY UNIV	R OLIVERSEN	GSFC	G FARRAR	NAG 5 9246	383
11	NORFOLK STATE UNIV	P SAKIMOTO	GSFC	C W SALGADO	NAG 5 10140	514
11	NORTH CAROLINA STATE UNIV	D K WEST	GSFC	S P REYNOLDS	NAG 5 7153	400
11	NORTH CAROLINA STATE UNIV	N WHITE	GSFC	K BORKOWSKI	NAG 5 7406	400
11	NORTH CAROLINA STATE UNIV	R J OLIVERSEN	GSFC	S P REYNOLDS	NAG 5 10940	400
11	NORTH DAKOTA STATE UNIV	R PATER	LARC	M SOUCEK	NGT 1 52159	404
11	NORTHEAST LOUISIANA UNIV	J M BOYCE	GSFC	D A DE HON	NAG 5 4293	235
11	NORTHERN ARIZONA UNIV	J BERGSTRALH	GSFC	C GRIFFITH	NAG 5 8525	24
11	NORTHERN ARIZONA UNIV	J BERGSTRALH	GSFC	D BARNES	NAG 5 4995	24
11	NORTHERN ARIZONA UNIV	J BOYCE	HQ	C A GRIFFITH	NAG 5 8146	24
11	NORTHERN ARIZONA UNIV	J BOYCE	HQ	D M CORNELISON	NAG 5 8203	24
11	NORTHERN ARIZONA UNIV	T MORGAN	GSFC	C A GRIFFITH	NAG 5 6790	24
11	NORTHERN ARIZONA UNIV	T MORGAN	GSFC	S C TEGLER	NAG 5 7757	24
11	NORTHWESTERN UNIV	D K WEST	GSFC	R E TAAM	NAG 5 7011	202
11	NORTHWESTERN UNIV	D SENSKE	GSFC	M S ROBINSON	NAG 5 10847	202
11	NORTHWESTERN UNIV	G SONNEBORN	GSFC	D M MEYER	NAG 5 10323	202
11	NORTHWESTERN UNIV	G SONNEBORN	GSFC	D M MEYER	NAG 5 10465	202
11	NORTHWESTERN UNIV	G SONNEBORN	GSFC	J T LAUROESCH	NAG 5 10324	202
11	NORTHWESTERN UNIV	J BOYCE	HQ	M S ROBINSON	NAG 5 8294	202
11	NORTHWESTERN UNIV	J D JORDAN	LARC	C A MIRKIN	NAG 1 01058	201
11	NORTHWESTERN UNIV	R J OLIVERSEN	GSFC	F YUSEF-ZADEH	NAG 5 9188	202
11	NORTHWESTERN UNIV	R OLIVERSEN	GSFC	D MEYER	NAG 5 9272	202
11	NORTHWESTERN UNIV	W ZHANG	GSFC	M ULMER	NAG 5 10598	202
11	OHIO STATE UNIV	D K WEST	GSFC	A K PRADHAN	NAG 5 8423	416

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	OHIO STATE UNIV	D K WEST	GSFC	B M PETERSON	NAG 5 8397	416
11	OHIO STATE UNIV	D K WEST	GSFC	M H PINSONNEAULT	NAG 5 7150	415
11	OHIO STATE UNIV	D WEST	GSFC	A PRADHAN	NAG 5 6908	415
11	OHIO STATE UNIV	D WEST	GSFC	P ESKRIDGE	NAG 5 7116	415
11	OHIO STATE UNIV	G SONNEBORN	GSFC	S MATHUR	NAG 5 10320	417
11	OHIO STATE UNIV	H HASAN	GSFC	D K PRADHAN	NAG 5 7903	416
11	OHIO STATE UNIV	H THRONSON	GSFC	E HERBST	NAG 5 7252	415
11	OHIO STATE UNIV	J BOYCE	GSFC	D DEPOY	NAG 5 10678	417
11	OHIO STATE UNIV	J BOYCE	GSFC	D L DEPOY	NAG 5 8313	416
11	OHIO STATE UNIV	J BOYCE	HQ	D L DEPOY	NAG 5 7589	415
11	OHIO STATE UNIV	R J OLIVERSEN	GSFC	S MATHUR	NAG 5 9270	416
11	OHIO STATE UNIV	R K OLIVERSEN	GSFC	D H WEINBERG	NAG 5 3525	414
11	OHIO STATE UNIV	R MUSHOTZKY	GSFC	S MATHUR	NAG 5 9936	416
11	OHIO STATE UNIV	R MUSHOTZKY	GSFC	S MATHUR	NAG 5 9937	416
11	OHIO UNIV	R J OLIVERSEN	GSFC	B MCNAMARA	NAG 5 11025	419
11	OLD DOMINION UNIV	J MARRA	GSFC	E HOFMANN	NCC 5 258	519
11	OREGON STATE UNIV	J BOYCE	GSFC	J R BARNES	NAG 5 9771	432
11	PENN STATE UNIV	D F MUSHOTZKY	GSFC	W N BRANDT	NAG 5 9932	447
11	PENN STATE UNIV	D F MUSHOTZKY	GSFC	W N BRANDT	NAG 5 9933	447
11	PENN STATE UNIV	D K WEST	GSFC	G G PAVLOV	NAG 5 7017	445
11	PENN STATE UNIV	D K WEST	GSFC	G PAVLOV	NAG 5 6907	445
11	PENN STATE UNIV	D K WEST	GSFC	J CHARLTON	NAG 5 6399	445
11	PENN STATE UNIV	D K WEST	GSFC	M ERACLEOUS	NAG 5 8369	446
11	PENN STATE UNIV	D K WEST	GSFC	W N BRANDT	NAG 5 8107	446
11	PENN STATE UNIV	D NAVA	GSFC	D WOLSZCZAN	NAG 5 4301	444
11	PENN STATE UNIV	D WEST	GSFC	M AKRITAS	NAG 5 6737	445
11	PENN STATE UNIV	D WEST	GSFC	P MESZAROS	NAG 5 2857	444
11	PENN STATE UNIV	J SWANK	GSFC	G CHARTAS	NAG 5 7276	445
11	PENN STATE UNIV	J SWANK	GSFC	R M SAMBRUNA	NAG 5 7121	445
11	PENN STATE UNIV	J SWANK	GSFC	W BRANDT	NAG 5 6852	445
11	PENN STATE UNIV	J SWANK	GSFC	W N BRANDT	NAG 5 7256	445
11	PENN STATE UNIV	L HILLARD	GSFC	J NOUSEK	NAG 5 8401	446
11	PENN STATE UNIV	M MEYER	GSFC	H OHMOTO	NAG 5 9089	446
11	PENN STATE UNIV	M MEYER	GSFC	J F KASTING	NAG 5 8710	446
11	PENN STATE UNIV	M S BURRELL	GSFC	JIAN GE	NGT 5 119	451
11	PENN STATE UNIV	N GEHRELS	GSFC	P I MESZAROS	NAG 5 9153	447
11	PENN STATE UNIV	P M ATKINS	GSFC	W N BRANDT	NAG 5 9924	447
11	PENN STATE UNIV	R BORELLI	GSFC	J A NOUSEK	NAG 5 00136	449
11	PENN STATE UNIV	R F MUSHOTZKY	GSFC	G PAVLOV	NAG 5 9938	447
11	PENN STATE UNIV	R F MUSHOTZKY	GSFC	W N BRANDT	NAG 5 9940	447
11	PENN STATE UNIV	R F MUSHOTZKY	GSFC	W N BRANDT	NAG 5 9918	447
11	PENN STATE UNIV	R J OLIVERSEN	GSFC	E D FEIGELSON	NAG 5 8422	446
11	PENN STATE UNIV	R J OLIVERSEN	GSFC	G PAVLOV	NAG 5 10865	448
11	PENN STATE UNIV	R J OLIVERSEN	GSFC	M ERACLEOUS	NAG 5 10817	448
11	PENN STATE UNIV	R J OLIVERSEN	GSFC	R CIARDULLO	NAG 5 9377	447
11	PENN STATE UNIV	R J OLIVERSEN	GSFC	R M SAMBRUNA	NAG 5 7925	446
11	PENN STATE UNIV	R J OLIVERSEN	GSFC	R M SAMBRUNA	NAG 5 9133	446
11	PENN STATE UNIV	R J OLIVERSEN	GSFC	R M SAMBRUNA	NAG 5 9134	447
11	PENN STATE UNIV	R J OLIVERSEN	GSFC	S PARK	NAG 5 10706	448
11	PENN STATE UNIV	R MUSHOTZKY	GSFC	D N BURROWS	NAG 5 10079	448
11	PENN STATE UNIV	R MUSHOTZKY	GSFC	D N BURROWS	NAG 5 10080	448
11	PENN STATE UNIV	R MUSHOTZKY	GSFC	G CHARTAS	NAG 5 9934	447
11	PENN STATE UNIV	R MUSHOTZKY	GSFC	G CHARTAS	NAG 5 9949	447
11	PENN STATE UNIV	R MUSHOTZKY	GSFC	M ERACLEOUS	NAG 5 9982	448
11	PENN STATE UNIV	R MUSHOTZKY	GSFC	N BRANDT	NAG 5 10089	448
11	PENN STATE UNIV	R MUSHOTZKY	GSFC	W BRANDT	NAG 5 9939	447
11	PENN STATE UNIV	R MUSHOTZKY	GSFC	Y MAEDA	NAG 5 9976	448
11	PENN STATE UNIV	R MUSHOTZKY	GSFC	Y TSUBOI	NAG 5 9970	447
11	PENN STATE UNIV	R OLIVERSEN	GSFC	P MESZAROS	NAG 5 9192	447
11	PENN STATE UNIV	S D HUNTER	GSFC	T JACKSON	NAG 5 9587	447
11	PENN STATE UNIV	S H MOSELY	GSFC	D GE	NAG 5 10617	448
11	POMONA COLLEGE	J BOYCE	GSFC	E GROSFILS	NAG 5 10498	54
11	PRAIRIE VIEW A&M UNIV	J HARRINGTON	GSFC	D HUANG	NCC 5 591	476
11	PRAIRIE VIEW A&M UNIV	J M DAVIS	MSFC	T HUANG	NAG 8 1338	476
11	PRINCETON UNIV	A NURRIDIN	HQ	M YAMADA	NGT 5 50193	355
11	PRINCETON UNIV	C BENNET	GSFC	L PAGE	NAG 5 10481	354

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	PRINCETON UNIV	D K WEST	GSFC	B PACZYNSKI	NAG 5 7016	352
11	PRINCETON UNIV	D K WEST	GSFC	B T DRAINE	NAG 5 7030	353
11	PRINCETON UNIV	D K WEST	GSFC	D N SPERGEL	NAG 5 7154	353
11	PRINCETON UNIV	D K WEST	GSFC	R CEN	NAG 5 8365	353
11	PRINCETON UNIV	D K WEST	GSFC	S D TREMAINE	NAG 5 7066	353
11	PRINCETON UNIV	D K WEST	GSFC	U SELJAK	NAG 5 8084	353
11	PRINCETON UNIV	D VITAGLINO	GSFC	E JENKINS	NAG 5 30110	355
11	PRINCETON UNIV	D WEST	GSFC	G KNAPP	NAG 5 6734	352
11	PRINCETON UNIV	D WEST	GSFC	G R KNAPP	NAG 5 3364	352
11	PRINCETON UNIV	J BOYCE	GSFC	J GOODMAN	NAG 5 8385	353
11	PRINCETON UNIV	J BOYCE	GSFC	S TREMAINE	NAG 5 10456	354
11	PRINCETON UNIV	J BOYCE	HQ	S D TREMAINE	NAG 5 7310	353
11	PRINCETON UNIV	R CUDDAPAH	GSFC	D WILKINSON	NAG 5 96021	355
11	PRINCETON UNIV	R J OLIVERSEN	GSFC	B T DRAINE	NAG 5 10811	354
11	PRINCETON UNIV	R J OLIVERSEN	GSFC	G R KNAPP	NAG 5 11094	354
11	PRINCETON UNIV	R J OLIVERSEN	GSFC	J N BACHALL	NAG 5 7047	353
11	PRINCETON UNIV	R J OLIVERSEN	GSFC	J P OSTRIKER	NAG 5 9284	353
11	PRINCETON UNIV	R J OLIVERSEN	GSFC	T M TRIPP	NAG 5 11136	354
11	PRINCETON UNIV	R OLIVERSEN	GSFC	E TURNER	NAG 5 9274	353
11	PRINCETON UNIV	S SOBIESKI	GSFC	E J GROTH	NAG 5 1629	352
11	PURDUE UNIV	D NAVA	GSFC	D E LIPSCHUTZ	NAG 5 4304	218
11	PURDUE UNIV	J SWANK	GSFC	J P FINLEY	NAG 5 7387	218
11	PURDUE UNIV	J SWANK	GSFC	J P FINLEY	NAG 5 7388	218
11	PURDUE UNIV	JBOYCE	GSFC	M LIPSCHUTZ	NAG 5 10422	218
11	PURDUE UNIV	R BEEBE	GSFC	T ZWIER	NAG 5 8155	218
11	PURDUE UNIV	R J OLIVERSEN	GSFC	W CUI	NAG 5 9098	218
11	PURDUE UNIV	R J OLIVERSEN	GSFC	W CUI	NAG 5 9998	218
11	RENSSELAER POLYTECH INST	D K WEST	GSFC	D C WHITTET	NAG 5 7884	384
11	RENSSELAER POLYTECH INST	D SENSKE	GSFC	D J GAFFEY	NAG 5 10345	385
11	RENSSELAER POLYTECH INST	M A MEYER	GSFC	D P FERRIS	NAG 5 7598	384
11	RENSSELAER POLYTECH INST	T MORGAN	GSFC	M J GAFFEY	NAG 5 8976	385
11	RHODES COLLEGE	M FORMAN	GSFC	D MACQUEEN	NAG 5 6049	468
11	RICE UNIV	D EVANS	GSFC	D W HILL	NAG 5 8131	477
11	RICE UNIV	D J HOLLENBACH	ARC	D J DUFOUR	NGT 2 52252	479
11	RICE UNIV	G SONNEBORN	GSFC	P HARTIGAN	NAG 5 9011	477
11	RICE UNIV	J P NORRIS	GSFC	E P LIANG	NAG 5 7980	477
11	RICE UNIV	J P NORRIS	GSFC	E P LIANG	NAG 5 9904	478
11	RICE UNIV	R J OLIVERSEN	GSFC	E P LIANG	NAG 5 10816	478
11	RICE UNIV	R J OLIVERSEN	GSFC	M G BARING	NAG 5 10841	478
11	RICE UNIV	R OLIVERSEN	GSFC	E LANG	NAG 5 9212	478
11	RICE UNIV	R OLIVERSEN	GSFC	E LIANG	NAG 5 9223	478
11	RICE UNIV	S NASH-STEVENSON	MSFC	E P LIANG	NGT 8 52899	479
11	ROCHESTER INST OF TECH	H HASAN	GSFC	D NINKOV	NAG 5 3728	386
11	ROCHESTER INST OF TECH	P CRANE	GSFC	Z NINKOV	NAG 5 9090	386
11	ROWAN UNIV	J M BOYCE	GSFC	D R KLASSEN	NAG 5 11076	356
11	ROWAN UNIV	T MORGAN	GSFC	D KLASSEN	NAG 5 6776	356
11	RUTGERS ST UNIV N	D F MUSHOTZKY	GSFC	J P HUGHES	NAG 5 9927	358
11	RUTGERS ST UNIV N	D K WEST	GSFC	A B KOSOWSKY	NAG 5 7015	357
11	RUTGERS ST UNIV N	D K WEST	GSFC	D MERRITT	NAG 5 6037	357
11	RUTGERS ST UNIV N	D NAVA	GSFC	D F HERZOG	NAG 5 4327	356
11	RUTGERS ST UNIV N	J BOYCE	GSFC	J S DELANEY	NAG 5 9528	357
11	RUTGERS ST UNIV N	J BOYCE	GSFC	R H HEWINS	NAG 5 4597	356
11	RUTGERS ST UNIV N	J BOYCE	GSFC	R HEWINS	NAG 5 10495	358
11	RUTGERS ST UNIV N	J BOYCE	HQ	J S DELANEY	NAG 5 8820	357
11	RUTGERS ST UNIV N	KRUEGER	GSFC	C L JOSEPH	NAG 5 3158	356
11	RUTGERS ST UNIV N	R HEWINS	GSFC	J BOYCE	NAG 5 9259	357
11	RUTGERS ST UNIV N	R J OLIVERSEN	GSFC	D MERRITT	NAG 5 9046	357
11	RUTGERS ST UNIV N	R J OLIVERSEN	GSFC	L FERRARESE	NAG 5 10003	358
11	RUTGERS ST UNIV N	R K OLIVERSEN	GSFC	J P HUGHES	NAG 5 3432	356
11	RUTGERS ST UNIV N	R MUSHOTZKY	GSFC	J P HUGHES	NAG 5 9979	358
11	RUTGERS ST UNIV N	R MUSHOTZKY	GSFC	J P HUGHES	NAG 5 9990	358
11	RUTGERS ST UNIV N	W WAGNER	GSFC	C L JOSEPH	NAG 5 7148	357
11	SAN DIEGO STATE UNIV	G SONNEBORN	GSFC	J WOOD	NAG 5 10376	54
11	SAN JOSE STATE UNIV	D J HOLLEN	ARC	M J KAUFMAN	NCC 2 5338	57
11	SAN JOSE STATE UNIV	D J HOLLENBACH	ARC	M J KAUFMAN	NCC 2 5460	58
11	SAN JOSE STATE UNIV	J BOYCE	GSFC	A BRIDGER	NAG 5 9766	56

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	SAN JOSE STATE UNIV	J N CUZZI	ARC	P A HAMILL	NCC 2 5465	58
11	SAN JOSE STATE UNIV	J N CUZZI	ARC	P J HAMIL	NCC 2 1248	57
11	SAN JOSE STATE UNIV	K ZAHALE	ARC	P J HAMILL	NCC 2 984	56
11	SAN JOSE STATE UNIV	K ZAHNLE	ARC	P HAMILL	NCC 2 5435	58
11	SAN JOSE STATE UNIV	R E YOUNG	ARC	A BRIDGER	NCC 2 1168	57
11	SAN JOSE STATE UNIV	R M HABERLE	ARC	S S RAFKIN	NCC 2 5326	57
11	SAN JOSE STATE UNIV	T L ROUSH	ARC	P A HAMILL	NCC 2 1285	57
11	SONOMA STATE UNIV	A M PARSONS	GSFC	L R COMINSKY	NAG 5 11328	59
11	SONOMA STATE UNIV	A PARSONS	GSFC	L WHITLOCK	NAG 5 9495	58
11	SONOMA STATE UNIV	N GEHRELS	GSFC	D COMINSKY	NAG 5 7267	58
11	SONOMA STATE UNIV	N GEHRELS	GSFC	L R COMINSKY	NAG 5 8603	58
11	SONOMA STATE UNIV	N GEHRELS	GSFC	L R COMINSKY	NAG 5 9782	59
11	SOUTH CAROLINA STATE UNIV	P SAKIMOTO	GSFC	D K WALTER	NAG 5 10145	465
11	SOUTHERN METHODIST UNIV	D SENSKE	GSFC	V L HANSEN	NAG 5 10586	480
11	SOUTHERN UNIV & A&M COLLEGE	P SAKIMOTO	GSFC	G STACY	NAG 5 10253	236
11	SOUTHWESTERN INDIAN POLYTECH INST	P SAKIMOTO	GSFC	C L ABEITA	NAG 5 10143	364
11	STANFORD UNIV	D WEST	GSFC	R V WAGONER	NAG 5 3102	60
11	STANFORD UNIV	D WEST	GSFC	R W ROMANI	NAG 5 3263	60
11	STANFORD UNIV	G D HOLMAN	GSFC	V PETROSIAN	NAG 5 8600	61
11	STANFORD UNIV	H HASAN	GSFC	A C WALKER	NAG 5 7464	61
11	STANFORD UNIV	H HASAN	GSFC	D A LIPA	NAG 5 3985	60
11	STANFORD UNIV	H HASAN	GSFC	P CABRERA	NAG 5 3775	60
11	STANFORD UNIV	J BOYCE	GSFC	P H SCHERRER	NAG 5 8714	61
11	STANFORD UNIV	J BOYCE	GSFC	T IRELAND	NAG 5 9887	62
11	STANFORD UNIV	J BOYCE	HQ	R ZARE	NAG 5 7208	61
11	STANFORD UNIV	J BOYCE	HQ	T IRELAND	NAG 5 7609	61
11	STANFORD UNIV	J GRADY	GSFC	B CABRERA	NAG 5 98151	64
11	STANFORD UNIV	J GURMAN	GSFC	P SCHERRER	NAG 5 3077	60
11	STANFORD UNIV	J M BOYCE	GSFC	G TYLER	NAG 5 10576	63
11	STANFORD UNIV	J N CUZZI	ARC	A L TYLER	NCC 2 908	64
11	STANFORD UNIV	J R BYRD	GSFC	C EVERITT	NAG 5 10799	63
11	STANFORD UNIV	M MEYER	GSFC	D R LOWE	NAG 5 9842	62
11	STANFORD UNIV	P CRANE	GSFC	B CABRERA	NAG 5 9087	62
11	STANFORD UNIV	S LAMBROSS	GSFC	P MICHELSON	NAG 5 00147	64
11	STANFORD UNIV	W J WAGNER	GSFC	D H SCHERRER	NAG 5 6112	61
11	STANFORD UNIV	W WAGNER	GSFC	V PETROSIAN	NAG 5 7144	61
11	STATE UNIV OF NY - ALBANY	D WICKLAND	GSFC	D R FITZJARRALD	NAG 5 6227	386
11	STATE UNIV OF NY - ALBANY	J BOYCE	GSFC	J A GRANT	NAG 5 9764	387
11	STATE UNIV OF NY - ALBANY	M MEYER	GSFC	N E LEHMAN	NAG 5 8815	386
11	STATE UNIV OF NY - BUFFALO	B BETTS	GSFC	J GRANT	NAG 5 9658	388
11	STATE UNIV OF NY - STONY BROOK	D BOGAN	GSFC	J L FOX	NAG 5 6879	389
11	STATE UNIV OF NY - STONY BROOK	D K WEST	GSFC	F M WALTER	NAG 5 7978	389
11	STATE UNIV OF NY - STONY BROOK	D K WEST	GSFC	F M WALTER	NAG 5 8437	390
11	STATE UNIV OF NY - STONY BROOK	D WEST	GSFC	J M LATTIMER	NAG 5 2863	388
11	STATE UNIV OF NY - STONY BROOK	D WEST	GSFC	K M LANZETTA	NAG 5 3261	389
11	STATE UNIV OF NY - STONY BROOK	G SONNEBORN	GSFC	F M WALKER	NAG 5 8980	390
11	STATE UNIV OF NY - STONY BROOK	G SONNEBORN	GSFC	F M WALTER	NAG 5 10318	390
11	STATE UNIV OF NY - STONY BROOK	J BERGSTALH	GSFC	D LISSAUER	NAG 5 6544	389
11	STATE UNIV OF NY - STONY BROOK	J BOYCE	GSFC	D J LISSAUER	NAG 5 4640	389
11	STATE UNIV OF NY - STONY BROOK	J BOYCE	GSFC	J J LISSAUER	NAG 5 9680	390
11	STATE UNIV OF NY - STONY BROOK	J BOYCE	HQ	M SIMON	NAG 5 8462	390
11	STATE UNIV OF NY - STONY BROOK	J BOYCE	HQ	S M MCLENNAN	NAG 5 8169	389
11	STATE UNIV OF NY - STONY BROOK	J CAMPBELL	GSFC	E CARPENTER	NAG 5 6565	389
11	STATE UNIV OF NY - STONY BROOK	J LING	GSFC	D A FORMAN	NAG 5 8106	389
11	STATE UNIV OF NY - STONY BROOK	J M BOYCE	GSFC	S MCLENNAN	NAG 5 10583	390
11	STATE UNIV OF NY - STONY BROOK	M DAH	GSFC	M ZHANG	NAG 5 3135	388
11	STATE UNIV OF NY - STONY BROOK	M MEYER	GSFC	M A SCHOONEN	NAG 5 9029	390
11	STATE UNIV OF NY - STONY BROOK	R J OLIVERSEN	GSFC	R A WIJERS	NAG 5 10772	390
11	STATE UNIV OF NY - STONY BROOK	R MUSHOTZKY	GSFC	F M WALTER	NAG 5 9958	390
11	STATE UNIV OF NY COL - PLATTSBURGH	J BOYCE	GSFC	G J FLYNN	NAG 5 9383	391
11	STEVENS INST OF TECH	D BOGAN	GSFC	K BECKER	NAG 5 8971	360
11	SWARTHMORE COLLEGE	R MUSHOTZKY	GSFC	D H COHEN	NAG 5 10094	452
11	SYRACUSE UNIV	H HASAN	GSFC	G VIDALI	NAG 5 6822	393
11	SYRACUSE UNIV	P CRANE	GSFC	G VIDALI	NAG 5 9093	393
11	TEXAS A&M UNIV	J LANDERS	GSFC	F R BEST	NCC 5 456	484
11	TEXAS CHRISTIAN UNIV	D K WEST	GSFC	P MARCUM	NAG 5 7040	485

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	THE CATHOLIC UNIV OF AMERICA	A I POLAND	GSFC	V ANDRETTA	NCC 5 377	160
11	THE CATHOLIC UNIV OF AMERICA	A SMITH	GSFC	F C BRUHWEILER	NAG 5 1413	156
11	THE CATHOLIC UNIV OF AMERICA	B E WOODGATE	GSFC	F C BRUHWEILER	NAG 5 8752	158
11	THE CATHOLIC UNIV OF AMERICA	B WOODGATE	GSFC	F C BRUHWEILER	NAG 5 8622	158
11	THE CATHOLIC UNIV OF AMERICA	B WOODGATE	GSFC	F C BRUHWEILER	NAG 5 10006	159
11	THE CATHOLIC UNIV OF AMERICA	C BOWERS	GSFC	F BRUHWEILER	NAG 5 6026	157
11	THE CATHOLIC UNIV OF AMERICA	C CRANNEL	GSFC	F C BRUHWEILER	NAG 5 10013	159
11	THE CATHOLIC UNIV OF AMERICA	D C REUTER	GSFC	F C BRUHWEILER	NAG 5 10095	159
11	THE CATHOLIC UNIV OF AMERICA	D K WEST	GSFC	F C BRUHWEILER	NAG 5 3487	156
11	THE CATHOLIC UNIV OF AMERICA	D LECKRONE	GSFC	F BRUHWEILER	NAG 5 6674	157
11	THE CATHOLIC UNIV OF AMERICA	D NAVA	GSFC	D DICKINSON	NAG 5 4345	156
11	THE CATHOLIC UNIV OF AMERICA	D WEST	GSFC	M SMITH	NAG 5 8793	158
11	THE CATHOLIC UNIV OF AMERICA	G D HOLMAN	GSFC	L OFMAN	NAG 5 10867	159
11	THE CATHOLIC UNIV OF AMERICA	G SONNEBORN	GSFC	D CRENSHAW	NAG 5 10382	159
11	THE CATHOLIC UNIV OF AMERICA	G SONNEBORN	GSFC	F C BRUHWEILER	NAG 5 8631	158
11	THE CATHOLIC UNIV OF AMERICA	G SONNEBORN	GSFC	F C BRUHWEILER	NAG 5 8968	158
11	THE CATHOLIC UNIV OF AMERICA	G SONNEBORN	GSFC	R IPING	NAG 5 10944	160
11	THE CATHOLIC UNIV OF AMERICA	G SONNEBORN	GSFC	T BROWN	NAG 5 9696	158
11	THE CATHOLIC UNIV OF AMERICA	G SONNEBORN	GSFC	V KRASNOPOLSKY	NAG 5 10931	160
11	THE CATHOLIC UNIV OF AMERICA	G SONNEBORN	GSFC	V KRASNOPOLSKY	NAG 5 11014	160
11	THE CATHOLIC UNIV OF AMERICA	J BOYCE	GSFC	G WILLIGER	NAG 5 10680	159
11	THE CATHOLIC UNIV OF AMERICA	J BOYCE	GSFC	R D STARR	NAG 5 8529	157
11	THE CATHOLIC UNIV OF AMERICA	J BOYCE	GSFC	T DICKINSON	NAG 5 8508	157
11	THE CATHOLIC UNIV OF AMERICA	J BOYCE	GSFC	V KRASNOPOLSKY	NAG 5 10575	159
11	THE CATHOLIC UNIV OF AMERICA	J PEARL	GSFC	D D SMITH	NAG 5 7132	157
11	THE CATHOLIC UNIV OF AMERICA	J SWANK	GSFC	R D ROBINSON	NAG 5 8691	158
11	THE CATHOLIC UNIV OF AMERICA	K G CARPENTER	GSFC	R D ROBINSON	NAG 5 6239	157
11	THE CATHOLIC UNIV OF AMERICA	L F BURLQGA	GSFC	Y C WHANG	NAG 5 9394	158
11	THE CATHOLIC UNIV OF AMERICA	L ORWIG	GSFC	R D STARR	NCC 5 380	161
11	THE CATHOLIC UNIV OF AMERICA	M ACUNA	GSFC	N GOPALSWAMY	NCC 5 376	160
11	THE CATHOLIC UNIV OF AMERICA	M J MUMMA	GSFC	M DISANTI	NCC 5 130	160
11	THE CATHOLIC UNIV OF AMERICA	M J MUMMA	GSFC	N RUSSO	NCC 5 210	160
11	THE CATHOLIC UNIV OF AMERICA	M L KAISER	GSFC	N GOPALSWAMY	NAG 5 8998	158
11	THE CATHOLIC UNIV OF AMERICA	M L KAISER	GSFC	N GOPALSWAMY	NAG 5 10231	159
11	THE CATHOLIC UNIV OF AMERICA	M M FRUEND	GSFC	F C BRUHWEILER	NAG 5 9865	158
11	THE CATHOLIC UNIV OF AMERICA	R BEEBE	GSFC	D J BOGAN	NAG 5 8312	157
11	THE CATHOLIC UNIV OF AMERICA	R BEEBE	GSFC	N RUSSO	NAG 5 7753	157
11	THE CATHOLIC UNIV OF AMERICA	R J OLIVERSEN	GSFC	F C BRUHWEILER	NAG 5 11137	160
11	THE CATHOLIC UNIV OF AMERICA	R J OLIVERSEN	GSFC	G W WAHLGREN	NAG 5 9539	158
11	THE CATHOLIC UNIV OF AMERICA	R J OLIVERSEN	GSFC	P C CHEN	NAG 5 11327	160
11	THE CATHOLIC UNIV OF AMERICA	R J OLIVERSEN	GSFC	R D ROBINSON	NAG 5 10870	159
11	THE CATHOLIC UNIV OF AMERICA	R K OLIVERSEN	GSFC	C R PROFFITT	NAG 5 8276	157
11	THE CATHOLIC UNIV OF AMERICA	R R FISCHER	GSFC	S GIBSON	NAG 5 7413	157
11	THE CATHOLIC UNIV OF AMERICA	S G NEFF	GSFC	P C CHEN	NAG 5 10033	159
11	THE CATHOLIC UNIV OF AMERICA	S HEAP	GSFC	F C BRUHWEILER	NAG 5 11342	160
11	THE CATHOLIC UNIV OF AMERICA	T MORGAN	GSFC	D A DISANTI	NAG 5 7905	157
11	THE CATHOLIC UNIV OF AMERICA	T MORGAN	GSFC	D DISANTI	NAG 5 4362	156
11	THE CATHOLIC UNIV OF AMERICA	T MORGAN	GSFC	N D RUSSO	NAG 5 10795	159
11	THE CATHOLIC UNIV OF AMERICA	T MORGAN	GSFC	V A KRASNOPOLSKY	NAG 5 7078	157
11	THE CATHOLIC UNIV OF AMERICA	T MORGAN	GSFC	V A KRASNOPOLSKY	NAG 5 9400	158
11	THE CATHOLIC UNIV OF AMERICA	T MORGAN	GSFC	V KRASNOPOLSKY	NAG 5 10492	159
11	THE CATHOLIC UNIV OF AMERICA	T R GULL	GSFC	A BOGGESS	NAG 5 3378	156
11	THE CATHOLIC UNIV OF AMERICA	W J WAGNER	GSFC	D GOPALSWAMY	NAG 5 6139	157
11	THE CATHOLIC UNIV OF AMERICA	W WAGNER	GSFC	T MORAN	NAG 5 9888	158
11	THE UNIV OF CENTRAL FLORIDA	B BETTS	GSFC	R G SELLAR	NAG 5 10730	169
11	THE UNIV OF CENTRAL FLORIDA	J BOYCE	HQ	N G BARLOW	NAG 5 8265	169
11	TRINITY COLLEGE	R BEEBE	GSFC	D WEIR	NAG 5 8048	144
11	UNIV HOUSTON-HOUSTON	D NAVA	GSFC	D M REID	NAG 5 4765	486
11	UNIV HOUSTON-HOUSTON	M MEYER	GSFC	D FOX	NAG 5 8140	486
11	UNIV OF MINN	D EVANS	GSFC	C CATTELL	NGT 5 30109	325
11	UNIV OF MINN	D EVANS	GSFC	D LIN	NAG 5 8205	322
11	UNIV OF MINN	G A SOFFEN	GSFC	K DAVIDSON	NGT 5 102	325
11	UNIV OF MINN	G STRINGFELLOW	GSFC	R HUMPHREYS	NAG 5 9407	323
11	UNIV OF MINN	G STRINGFELLOW	GSFC	S HANANY	NAG 5 9349	323
11	UNIV OF MINN	J BOYCE	HQ	R O PEPIN	NAG 5 7094	322
11	UNIV OF MINN	J SHARBER	GSFC	D L LYSAK	NAG 5 8082	322

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF MINN	J SPANN	GSFC	C A CATTELL	NAG 5 11124	323
11	UNIV OF MINN	M H ACUNA	GSFC	N LIN	NAG 5 7462	322
11	UNIV OF MINN	M KAISER	GSFC	K GOETZ	NAG 5 9146	322
11	UNIV OF MINN	M L KAISER	GSFC	K GOETZ	NAG 5 10178	323
11	UNIV OF MINN	R J OLIVERSEN	GSFC	T W JONES	NAG 5 10774	323
11	UNIV OF MINN	R OLIVERSEN	GSFC	E SKILLMAN	NAG 5 9221	323
11	UNIV OF MINN	T MORGAN	GSFC	D J JONES	NAG 5 7906	322
11	UNIV OF ALABAMA - BIRMINGHAM	B CAMPBELL	GSFC	T J WDOWIAK	NAG 5 7079	6
11	UNIV OF ALABAMA - BIRMINGHAM	H HASAN	GSFC	T WDOWIAK	NAG 5 6815	6
11	UNIV OF ALABAMA - BIRMINGHAM	J BOYCE	GSFC	D WDOWIAK	NAG 5 4853	6
11	UNIV OF ALABAMA - BIRMINGHAM	J BOYCE	GSFC	T WDOWIAK	NAG 5 10694	6
11	UNIV OF ALABAMA - BIRMINGHAM	M MEYER	GSFC	T WDOWIAK	NAG 5 8819	6
11	UNIV OF ALABAMA - HUNTSVILLE	D EVANS	GSFC	D SHELDON	NAG 5 7655	8
11	UNIV OF ALABAMA - HUNTSVILLE	D K WEST	GSFC	J PACIESAS	NAG 5 6021	8
11	UNIV OF ALABAMA - HUNTSVILLE	D K WEST	GSFC	M S BRIGGS	NAG 5 7972	8
11	UNIV OF ALABAMA - HUNTSVILLE	D K WEST	GSFC	R LIEU	NAG 5 8210	9
11	UNIV OF ALABAMA - HUNTSVILLE	D K WEST	GSFC	S ZHANG	NAG 5 7927	8
11	UNIV OF ALABAMA - HUNTSVILLE	D K WEST	GSFC	S ZHANG	NAG 5 8523	9
11	UNIV OF ALABAMA - HUNTSVILLE	D SCHAEFER	MSFC	A G OSTROGORSKY	NCC 8 97	13
11	UNIV OF ALABAMA - HUNTSVILLE	G SONNEBORN	GSFC	R LIEU	NAG 5 8956	9
11	UNIV OF ALABAMA - HUNTSVILLE	J A LING	GSFC	P A MILLER	NAG 5 4608	7
11	UNIV OF ALABAMA - HUNTSVILLE	J BREDEKAMP	GSFC	G A GERMANY	NAG 5 8303	9
11	UNIV OF ALABAMA - HUNTSVILLE	J H BREDEKAMP	GSFC	M SHEA	NAG 5 8009	8
11	UNIV OF ALABAMA - HUNTSVILLE	J H BREDEKAMP	GSFC	M SHEA	NAG 5 8011	8
11	UNIV OF ALABAMA - HUNTSVILLE	J P NORRIS	GSFC	R KIPPEN	NAG 5 7809	8
11	UNIV OF ALABAMA - HUNTSVILLE	J P NORRIS	GSFC	R MALLOZZI	NAG 5 3675	7
11	UNIV OF ALABAMA - HUNTSVILLE	J P NORRIS	GSFC	R PREECE	NAG 5 7811	8
11	UNIV OF ALABAMA - HUNTSVILLE	J P NORRIS	GSFC	S ZHANG	NAG 5 8440	9
11	UNIV OF ALABAMA - HUNTSVILLE	J P NORRIS	GSFC	W PACIESAS	NAG 5 8606	9
11	UNIV OF ALABAMA - HUNTSVILLE	J P NORRIS	GSFC	W PACIESAS	NAG 5 8620	9
11	UNIV OF ALABAMA - HUNTSVILLE	J P NORRIS	GSFC	W PACIESAS	NAG 5 9686	10
11	UNIV OF ALABAMA - HUNTSVILLE	J SWANK	GSFC	C ROBINSON	NAG 5 8234	9
11	UNIV OF ALABAMA - HUNTSVILLE	J SWANK	GSFC	S N ZHANG	NAG 5 8690	9
11	UNIV OF ALABAMA - HUNTSVILLE	J SWANK	GSFC	W PACIESAS	NAG 5 4111	7
11	UNIV OF ALABAMA - HUNTSVILLE	J SWANK	GSFC	W S PACIESAS	NAG 5 7494	8
11	UNIV OF ALABAMA - HUNTSVILLE	M MELLOTT	GSFC	G A GERMANY	NAG 5 6986	8
11	UNIV OF ALABAMA - HUNTSVILLE	N WHITE	GSFC	S ZHANG	NAG 5 8433	9
11	UNIV OF ALABAMA - HUNTSVILLE	P M ATKINS	GSFC	R LIEU	NAG 5 9923	10
11	UNIV OF ALABAMA - HUNTSVILLE	R HOFFMAN	GSFC	H COMFORT	NAG 5 8034	9
11	UNIV OF ALABAMA - HUNTSVILLE	R J OLIVERSEN	GSFC	J W SULENTIC	NAG 5 10782	10
11	UNIV OF ALABAMA - HUNTSVILLE	R J OLIVERSEN	GSFC	M R KIPPEN	NAG 5 10949	11
11	UNIV OF ALABAMA - HUNTSVILLE	R J OLIVERSEN	GSFC	R LIEU	NAG 5 9183	9
11	UNIV OF ALABAMA - HUNTSVILLE	R J OLIVERSEN	GSFC	V C CONNAUGHTON	NAG 5 11209	11
11	UNIV OF ALABAMA - HUNTSVILLE	R J OLIVERSEN	GSFC	W PACIESAS	NAG 5 9292	10
11	UNIV OF ALABAMA - HUNTSVILLE	R MUSHOTZKY	GSFC	E A RICHARDS	NAG 5 10099	10
11	UNIV OF ALABAMA - HUNTSVILLE	R MUSHOTZKY	GSFC	S N ZHANG	NAG 5 10009	10
11	UNIV OF ALABAMA - HUNTSVILLE	R MUSHOTZKY	GSFC	S N ZHANG	NAG 5 10012	10
11	UNIV OF ALABAMA - HUNTSVILLE	R OLIVERSEN	GSFC	W PACIESAS	NAG 5 9244	10
11	UNIV OF ALABAMA - HUNTSVILLE	W J WAGNER	GSFC	J J MILLER	NAG 5 8480	9
11	UNIV OF ALABAMA - UNIV	D K WEST	GSFC	J W SULENTIC	NAG 5 8407	15
11	UNIV OF ALABAMA - UNIV	G SONNEBORN	GSFC	W C KEEL	NAG 5 8959	15
11	UNIV OF ALABAMA - UNIV	J BOYCE	GSFC	R H TIPPING	NAG 5 8269	15
11	UNIV OF ALABAMA - UNIV	N WHITE	GSFC	R E WHITE III	NAG 5 2574	15
11	UNIV OF ALABAMA - UNIV	N WHITE	GSFC	R E WHITE	NAG 5 6934	15
11	UNIV OF ALABAMA - UNIV	R J OLIVERSEN	GSFC	J W SULENTIC	NAG 5 10914	15
11	UNIV OF ALABAMA - UNIV	R MUSHOTZKY	GSFC	J W SULENTIC	NAG 5 11204	15
11	UNIV OF ALASKA - FAIRBANKS	G H TROFFORD	GSFC	J MILLER	NCA 5 112	19
11	UNIV OF ALASKA - FAIRBANKS	J BOYCE	GSFC	V SHARPTON	NAG 5 8722	18
11	UNIV OF ALASKA - FAIRBANKS	L ZANETTI	GSFC	W A BRISTOW	NAG 5 7799	17
11	UNIV OF ALASKA - FAIRBANKS	M MELLOTT	GSFC	G V KHAZANOV	NAG 5 6976	17
11	UNIV OF ARIZONA	A NURRIDIN	HQ	R H BROWN	NGT 5 50190	40
11	UNIV OF ARIZONA	C R MCCREIGHT	ARC	E T YOUNG	NAG 2 1446	25
11	UNIV OF ARIZONA	D C LING	GSFC	J GIACALONE	NAG 5 7793	29
11	UNIV OF ARIZONA	D C LING	GSFC	K HSIEH	NAG 5 7966	29
11	UNIV OF ARIZONA	D K WEST	GSFC	D GARNETT	NAG 5 7734	28
11	UNIV OF ARIZONA	D K WEST	GSFC	F MELIA	NAG 5 8239	30

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF ARIZONA	D K WEST	GSFC	M STEINMETZ	NAG 5 7151	28
11	UNIV OF ARIZONA	D K WEST	GSFC	R C KENNICUTT	NAG 5 8426	30
11	UNIV OF ARIZONA	D NAVA	GSFC	D D SWINDLE	NAG 5 4767	27
11	UNIV OF ARIZONA	D NAVA	GSFC	D V BOYNTON	NAG 5 4944	27
11	UNIV OF ARIZONA	E SMITH	GSFC	M MEYER	NAG 5 7763	29
11	UNIV OF ARIZONA	G SONNEBORN	GSFC	G SCHMIDT	NAG 5 10245	33
11	UNIV OF ARIZONA	G SONNEBORN	GSFC	J B HOLBERG	NAG 5 8995	31
11	UNIV OF ARIZONA	G SONNEBORN	GSFC	J B HOLBERG	NAG 5 10315	34
11	UNIV OF ARIZONA	G SONNEBORN	GSFC	J B HOLBERG	NAG 5 10700	35
11	UNIV OF ARIZONA	G STRINGFELLOW	GSFC	D F BERNATH	NAG 5 9577	32
11	UNIV OF ARIZONA	G STRINGFELLOW	GSFC	L M ZIURYS	NAG 5 3785	26
11	UNIV OF ARIZONA	H HASAN	GSFC	D P LESSER	NAG 5 4042	26
11	UNIV OF ARIZONA	J A GRANT	GSFC	A RIVKIN	NAG 5 8916	31
11	UNIV OF ARIZONA	J BERGSTRALH	GSFC	D B HUBBARD	NAG 5 4214	27
11	UNIV OF ARIZONA	J BERGSTRALH	GSFC	D FINK	NAG 5 3937	26
11	UNIV OF ARIZONA	J BOYCE	GSFC	A CAMERON	NAG 5 9609	33
11	UNIV OF ARIZONA	J BOYCE	GSFC	A S MCEWEN	NAG 5 9775	33
11	UNIV OF ARIZONA	J BOYCE	GSFC	D JULL	NAG 5 4832	27
11	UNIV OF ARIZONA	J BOYCE	GSFC	D L HOOD	NAG 5 4845	27
11	UNIV OF ARIZONA	J BOYCE	GSFC	D S MCMILLAN	NAG 5 4598	27
11	UNIV OF ARIZONA	J BOYCE	GSFC	L L HOOD	NAG 5 11168	36
11	UNIV OF ARIZONA	J BOYCE	GSFC	P H SMITH	NAG 5 10267	34
11	UNIV OF ARIZONA	J BOYCE	GSFC	S BOUGHER	NAG 5 10660	35
11	UNIV OF ARIZONA	J BOYCE	GSFC	S W BOUGHER	NAG 5 8152	30
11	UNIV OF ARIZONA	J BOYCE	GSFC	V R BAKER	NAG 5 9790	33
11	UNIV OF ARIZONA	J BOYCE	GSFC	W BOYNTON	NAG 5 10452	34
11	UNIV OF ARIZONA	J BOYCE	HQ	A BURROWS	NAG 5 7499	28
11	UNIV OF ARIZONA	J BOYCE	HQ	J GANGULY	NAG 5 7364	28
11	UNIV OF ARIZONA	J BOYCE	HQ	J LUNINE	NAG 5 7211	28
11	UNIV OF ARIZONA	J BOYCE	HQ	J LUNINE	NAG 5 10450	34
11	UNIV OF ARIZONA	J BOYCE	HQ	L KESZTHELYI	NAG 5 8308	30
11	UNIV OF ARIZONA	J BOYCE	HQ	L L HOOD	NAG 5 8185	30
11	UNIV OF ARIZONA	J BOYCE	HQ	P H SMITH	NAG 5 8349	30
11	UNIV OF ARIZONA	J BOYCE	HQ	T D SWINDLE	NAG 5 7215	28
11	UNIV OF ARIZONA	J GRANT	GSFC	A S MCEWEN	NAG 5 8911	31
11	UNIV OF ARIZONA	J GRANT	GSFC	V R BAKER	NAG 5 8908	31
11	UNIV OF ARIZONA	J JELETIC	GSFC	R THOMPSON	NAG 5 7923	29
11	UNIV OF ARIZONA	J JELETIC	GSFC	R THOMPSON	NAG 5 10843	35
11	UNIV OF ARIZONA	J LING	GSFC	B R SANDEL	NAG 5 7089	28
11	UNIV OF ARIZONA	J LING	GSFC	J JOKIPPI	NAG 5 6620	28
11	UNIV OF ARIZONA	J M BOYCE	GSFC	A BURROWS	NAG 5 10629	34
11	UNIV OF ARIZONA	J M BOYCE	GSFC	A CAMERON	NAG 5 11153	36
11	UNIV OF ARIZONA	J M BOYCE	GSFC	P E GEISSLER	NAG 5 11169	36
11	UNIV OF ARIZONA	J M BOYCE	GSFC	S W BOUGHER	NAG 5 11183	36
11	UNIV OF ARIZONA	J M BOYCE	GSFC	T SWINDLE	NAG 5 10734	35
11	UNIV OF ARIZONA	J SHARBER	GSFC	W A SPRIGG	NAG 5 7780	29
11	UNIV OF ARIZONA	M AFORMAN	GSFC	M KOTA	NAG 5 4834	27
11	UNIV OF ARIZONA	M MEYER	GSFC	E PIERAZZO	NAG 5 10592	34
11	UNIV OF ARIZONA	M MEYER	GSFC	H MELOSH	NAG 5 7509	28
11	UNIV OF ARIZONA	N GEHRELS	GSFC	B PETERSON	NAG 5 9803	33
11	UNIV OF ARIZONA	N WHITE	GSFC	J BECHTOLD	NAG 5 2962	26
11	UNIV OF ARIZONA	P CRANE	GSFC	J HOLBERG	NAG 5 9072	31
11	UNIV OF ARIZONA	P E HUNTER	GSFC	A S BURROWS	NAG 5 10760	35
11	UNIV OF ARIZONA	R BEEBE	GSFC	D E GEISSLER	NAG 5 8340	30
11	UNIV OF ARIZONA	R BEEBE	GSFC	D GREENBERG	NAG 5 7957	29
11	UNIV OF ARIZONA	R BEEBE	GSFC	D HERBERT	NAG 5 8051	29
11	UNIV OF ARIZONA	R BEEBE	GSFC	D S MCEWEN	NAG 5 7865	29
11	UNIV OF ARIZONA	R BEEBE	GSFC	J STANSBERRY	NAG 5 8509	30
11	UNIV OF ARIZONA	R H THOMAS	GSFC	D F BERNATH	NAG 5 4142	26
11	UNIV OF ARIZONA	R J OLIVERSEN	GSFC	A I ZABLUDOFF	NAG 5 11108	35
11	UNIV OF ARIZONA	R J OLIVERSEN	GSFC	A S BURROWS	NAG 5 7073	28
11	UNIV OF ARIZONA	R J OLIVERSEN	GSFC	C D IMPEY	NAG 5 9306	32
11	UNIV OF ARIZONA	R J OLIVERSEN	GSFC	J HOLBERG	NAG 5 9181	32
11	UNIV OF ARIZONA	R J OLIVERSEN	GSFC	J HOLBERG	NAG 5 9182	32
11	UNIV OF ARIZONA	R MUSHOTZKY	GSFC	A I ZABLUDOFF	NAG 5 9957	33
11	UNIV OF ARIZONA	R OLIVERSEN	GSFC	D F ZARITSKY	NAG 5 9691	33

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF ARIZONA	R OLIVERSEN	GSFC	F MELIA	NAG 5 9205	32
11	UNIV OF ARIZONA	R OLIVERSON	GSFC	M STEINMETZ	NAG 5 10827	35
11	UNIV OF ARIZONA	S D BARTHELOMY	GSFC	B PETERSON	NAG 5 11348	36
11	UNIV OF ARIZONA	T H MORGAN	GSFC	S M LARSON	NAG 5 9081	31
11	UNIV OF ARIZONA	T MORGAN	GSFC	A L SPRAGUE	NAG 5 9234	32
11	UNIV OF ARIZONA	T MORGAN	GSFC	D CAMPINS	NAG 5 8006	29
11	UNIV OF ARIZONA	T MORGAN	GSFC	D S MCMILLAN	NAG 5 7854	29
11	UNIV OF ARIZONA	T MORGAN	GSFC	H CAMPINS	NAG 5 10441	34
11	UNIV OF ARIZONA	T MORGAN	GSFC	M SYKES	NAG 5 10442	34
11	UNIV OF ARIZONA	T MORGAN	GSFC	M V SYKES	NAG 5 7758	29
11	UNIV OF ARIZONA	T MORGAN	GSFC	R BROWN	NAG 5 10446	34
11	UNIV OF ARIZONA	T MORGAN	GSFC	R H BROWN	NAG 5 7083	28
11	UNIV OF ARIZONA	T MORGAN	GSFC	R MCMILLAN	NAG 5 10447	34
11	UNIV OF ARIZONA	T MORGAN	GSFC	R S MCMILLAN	NAG 5 7533	28
11	UNIV OF ARIZONA	T MORGAN	GSFC	S LARSON	NAG 5 8015	29
11	UNIV OF ARIZONA	W HUEBNER	GSFC	D L SPRAGUE	NAG 5 4984	27
11	UNIV OF ARIZONA	W HUEBNER	GSFC	D M HUNTEN	NAG 5 4166	26
11	UNIV OF ARKANSAS - LITTLE ROCK	D DETROYE	HQ	M HUDSON	NCC 5 260	40
11	UNIV OF ARK MAIN CAMP - FAYETTEVILLE	D NAVA	GSFC	D H BENOIT	NAG 5 4317	41
11	UNIV OF CALIFORNIA - BERKELEY	A F HASLER	GSFC	I HAWKINS	NAG 5 7356	71
11	UNIV OF CALIFORNIA - BERKELEY	B BETTS	GSFC	A WESTPHAL	NAG 5 10411	74
11	UNIV OF CALIFORNIA - BERKELEY	B DANCHI	GSFC	C TOWNES	NAG 5 9926	74
11	UNIV OF CALIFORNIA - BERKELEY	C P MCKAY	ARC	I DEPATER	NGT 2 52258	77
11	UNIV OF CALIFORNIA - BERKELEY	D EVANS	GSFC	R P LIN	NGT 5 30110	78
11	UNIV OF CALIFORNIA - BERKELEY	D GOLOMBEK	GSFC	J DUPUIS	NAG 5 10851	75
11	UNIV OF CALIFORNIA - BERKELEY	D GOORVITCH	ARC	C E HEILES	NCC 2 142	76
11	UNIV OF CALIFORNIA - BERKELEY	D GOORVITCH	ARC	M COHEN	NCC 2 1125	76
11	UNIV OF CALIFORNIA - BERKELEY	D J HOLLENBACH	ARC	C F MCKEE	NGT 2 52278	77
11	UNIV OF CALIFORNIA - BERKELEY	D J HOLLENBACH	ARC	F H SHU	NCC 2 1080	76
11	UNIV OF CALIFORNIA - BERKELEY	D J HOLLENBACH	ARC	F H SHU	NCC 2 5416	76
11	UNIV OF CALIFORNIA - BERKELEY	D J HOLLENBACH	ARC	C F MCKEE	NCC 2 5289	76
11	UNIV OF CALIFORNIA - BERKELEY	D K WEST	GSFC	A V FILIPPENKO	NAG 5 3556	69
11	UNIV OF CALIFORNIA - BERKELEY	D K WEST	GSFC	C M JOHNS-KRULL	NAG 5 8209	71
11	UNIV OF CALIFORNIA - BERKELEY	D K WEST	GSFC	D M SMITH	NAG 5 7265	70
11	UNIV OF CALIFORNIA - BERKELEY	D K WEST	GSFC	K C HURLEY	NAG 5 3500	69
11	UNIV OF CALIFORNIA - BERKELEY	D K WEST	GSFC	M COHEN	NAG 5 7936	71
11	UNIV OF CALIFORNIA - BERKELEY	D K WEST	GSFC	M I DAVIS	NAG 5 3499	69
11	UNIV OF CALIFORNIA - BERKELEY	D K WEST	GSFC	S VENNES	NAG 5 6551	70
11	UNIV OF CALIFORNIA - BERKELEY	D WEST	GSFC	B FLYNN	NAG 5 6748	70
11	UNIV OF CALIFORNIA - BERKELEY	D WEST	GSFC	M COHEN	NAG 5 4884	69
11	UNIV OF CALIFORNIA - BERKELEY	D WEST	GSFC	T BROADHURST	NAG 5 3280	68
11	UNIV OF CALIFORNIA - BERKELEY	F SNOW	GSFC	R P LIN	NAG 5 98033	76
11	UNIV OF CALIFORNIA - BERKELEY	G MUCKLOW	GSFC	O H SIEGMUND	NAG 5 8667	72
11	UNIV OF CALIFORNIA - BERKELEY	G SONNEBORN	GSFC	B C FLYNN	NAG 5 9973	74
11	UNIV OF CALIFORNIA - BERKELEY	G SONNEBORN	GSFC	G H FISHER	NAG 5 8984	72
11	UNIV OF CALIFORNIA - BERKELEY	G SONNEBORN	GSFC	J DUPIUS	NAG 5 10393	74
11	UNIV OF CALIFORNIA - BERKELEY	G SONNEBORN	GSFC	W V DIXON	NAG 5 8962	72
11	UNIV OF CALIFORNIA - BERKELEY	G STRINGFELLOW	GSFC	D J SAYKALLY	NAG 5 4521	69
11	UNIV OF CALIFORNIA - BERKELEY	G STRINGFELLOW	GSFC	P L RICHARDS	NAG 5 9398	73
11	UNIV OF CALIFORNIA - BERKELEY	H HASAN	GSFC	D EDELSTEIN	NAG 5 7755	71
11	UNIV OF CALIFORNIA - BERKELEY	H HASAN	GSFC	D H SIEGMUND	NAG 5 3913	69
11	UNIV OF CALIFORNIA - BERKELEY	H HASAN	GSFC	D V HURWITZ	NAG 5 4194	69
11	UNIV OF CALIFORNIA - BERKELEY	H SMITH	GSFC	J SILK	NAG 5 8262	71
11	UNIV OF CALIFORNIA - BERKELEY	H THRONSON	GSFC	D L RICHARD	NAG 5 4454	69
11	UNIV OF CALIFORNIA - BERKELEY	J BERGSTRALH	GSFC	D SPINRAD	NAG 5 6103	70
11	UNIV OF CALIFORNIA - BERKELEY	J BOYCE	GSFC	C M JOHNS-KRULL	NAG 5 8098	71
11	UNIV OF CALIFORNIA - BERKELEY	J BOYCE	GSFC	D W MARCY	NAG 5 8861	72
11	UNIV OF CALIFORNIA - BERKELEY	J BOYCE	GSFC	F SHU	NAG 5 10433	74
11	UNIV OF CALIFORNIA - BERKELEY	J BOYCE	HQ	B Y WELSH	NAG 5 7311	70
11	UNIV OF CALIFORNIA - BERKELEY	J HILLMAN	GSFC	I DE PATER	NAG 5 6890	70
11	UNIV OF CALIFORNIA - BERKELEY	J LING	GSFC	J G LUHMANN	NAG 5 7951	71
11	UNIV OF CALIFORNIA - BERKELEY	J LING	GSFC	S D BALE	NAG 5 7961	71
11	UNIV OF CALIFORNIA - BERKELEY	J M BOYCE	GSFC	F H SHU	NAG 5 9909	73
11	UNIV OF CALIFORNIA - BERKELEY	J M BOYCE	GSFC	P MARCUS	NAG 5 10664	74
11	UNIV OF CALIFORNIA - BERKELEY	J M BOYCE	GSFC	W DIETRICH	NAG 5 11179	75
11	UNIV OF CALIFORNIA - BERKELEY	J M BOYCE	GSFC	W WELCH	NAG 5 10657	74



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF CALIFORNIA - BERKELEY	J P NORRIS	GSFC	K C HURLEY	NAG 5 9701	73
11	UNIV OF CALIFORNIA - BERKELEY	J R BYRD	GSFC	D EDELSTEIN	NAG 5 10800	75
11	UNIV OF CALIFORNIA - BERKELEY	J R BYRD	GSFC	D WESTPHAL	NAG 5 10803	75
11	UNIV OF CALIFORNIA - BERKELEY	J R BYRD	GSFC	G H FISHER	NAG 5 10839	75
11	UNIV OF CALIFORNIA - BERKELEY	J SWANK	GSFC	K C HURLEY	NAG 5 7343	71
11	UNIV OF CALIFORNIA - BERKELEY	J SWANK	GSFC	K C HURLEY	NAG 5 8206	71
11	UNIV OF CALIFORNIA - BERKELEY	L SMITH	GSFC	C F MCKEE	NGT 5 50253	79
11	UNIV OF CALIFORNIA - BERKELEY	M L KAISER	GSFC	S BALE	NAG 5 9115	72
11	UNIV OF CALIFORNIA - BERKELEY	N GEHRELS	GSFC	K HURLEY	NAG 5 9210	72
11	UNIV OF CALIFORNIA - BERKELEY	P CRANE	GSFC	J EDELSTEIN	NAG 5 9091	72
11	UNIV OF CALIFORNIA - BERKELEY	P CRANE	GSFC	O SIEGMUND	NAG 5 9149	72
11	UNIV OF CALIFORNIA - BERKELEY	R J OLIVERSEN	GSFC	G F SMOOT	NAG 5 6552	70
11	UNIV OF CALIFORNIA - BERKELEY	R J OLIVERSEN	GSFC	I ROTH	NAG 5 10866	75
11	UNIV OF CALIFORNIA - BERKELEY	R J OLIVERSEN	GSFC	K C HURLEY	NAG 5 10710	74
11	UNIV OF CALIFORNIA - BERKELEY	R J OLIVERSEN	GSFC	O H SIEGMUND	NAG 5 9130	72
11	UNIV OF CALIFORNIA - BERKELEY	R J OLIVERSEN	GSFC	R MALINA	NCC 5 138	77
11	UNIV OF CALIFORNIA - BERKELEY	R K OLIVERSEN	GSFC	M DAVIS	NAG 5 7833	71
11	UNIV OF CALIFORNIA - BERKELEY	R OLIVERSEN	GSFC	K H HURLEY	NAG 5 9126	72
11	UNIV OF CALIFORNIA - BERKELEY	T MORGAN	GSFC	K C HURLEY	NAG 5 9503	73
11	UNIV OF CALIFORNIA - BERKELEY	W HUEBNER	GSFC	D DE PATER	NAG 5 4202	69
11	UNIV OF CALIFORNIA - BERKELEY	W WAGNER	GSFC	G H FISHER	NAG 5 8468	72
11	UNIV OF CALIFORNIA - DAVIS	D K WEST	GSFC	R H BECKER	NAG 5 8391	80
11	UNIV OF CALIFORNIA - DAVIS	D K WEST	GSFC	S STANFORD	NAG 5 8430	80
11	UNIV OF CALIFORNIA - DAVIS	M MEYER	GSFC	D Y SUMNER	NAG 5 10591	81
11	UNIV OF CALIFORNIA - DAVIS	R BEEBE	GSFC	W JACKSON	NAG 5 8258	80
11	UNIV OF CALIFORNIA - DAVIS	R F MUSHOTZKY	GSFC	R H BECKER	NAG 5 9947	81
11	UNIV OF CALIFORNIA - DAVIS	R F MUSHOTZKY	GSFC	S A STANFORD	NAG 5 9897	81
11	UNIV OF CALIFORNIA - DAVIS	R J OLIVERSEN	GSFC	N ARAV	NAG 5 9540	81
11	UNIV OF CALIFORNIA - DAVIS	R OLIVERSEN	GSFC	L KNOX	NAG 5 11098	81
11	UNIV OF CALIFORNIA - IRVINE	R MUSHOTZKY	GSFC	D BUOTE	NAG 5 10748	85
11	UNIV OF CALIFORNIA - IRVINE	R MUSHOTZKY	GSFC	D BUOTE	NAG 5 10758	85
11	UNIV OF CALIFORNIA - LOS ANGELES	C BENNET	GSFC	E L WRIGHT	NAG 5 8540	91
11	UNIV OF CALIFORNIA - LOS ANGELES	D EVANS	GSFC	D SCHRIVER	NAG 5 8085	91
11	UNIV OF CALIFORNIA - LOS ANGELES	D EVANS	GSFC	R J STRANGEWAY	NAG 5 6965	89
11	UNIV OF CALIFORNIA - LOS ANGELES	D K WEST	GSFC	M A JURA	NAG 5 7924	90
11	UNIV OF CALIFORNIA - LOS ANGELES	D K WEST	GSFC	R A EDELSON	NAG 5 7899	90
11	UNIV OF CALIFORNIA - LOS ANGELES	D NAVA	GSFC	D E RUBIN	NAG 5 4766	89
11	UNIV OF CALIFORNIA - LOS ANGELES	D NAVA	GSFC	F T KYTE	NAG 5 9441	92
11	UNIV OF CALIFORNIA - LOS ANGELES	D WEST	GSFC	L FERRARESE	NAG 5 8693	91
11	UNIV OF CALIFORNIA - LOS ANGELES	G SONNEBORN	GSFC	M A JURA	NAG 5 10351	93
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	D M ZUCKERMAN	NAG 5 4688	89
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	G SCHUBERT	NAG 5 8530	91
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	K D MCKEEGAN	NAG 5 9789	93
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	P H WARREN	NAG 5 9027	91
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	HQ	A GHEZ	NAG 5 6975	89
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	HQ	D JURA	NAG 5 8335	91
11	UNIV OF CALIFORNIA - LOS ANGELES	J F BOYCE	HQ	D D MCKEEGAN	NAG 5 4704	89
11	UNIV OF CALIFORNIA - LOS ANGELES	J M BOYCE	GSFC	B ZUCKERMAN	NAG 5 10663	93
11	UNIV OF CALIFORNIA - LOS ANGELES	J M BOYCE	GSFC	D PAIGE	NAG 5 10973	94
11	UNIV OF CALIFORNIA - LOS ANGELES	J M BOYCE	GSFC	W MOORE	NAG 5 10615	93
11	UNIV OF CALIFORNIA - LOS ANGELES	K BLANDING	GSFC	B ZUCKERMAN	NGT 5 50187	95
11	UNIV OF CALIFORNIA - LOS ANGELES	L ZANETTI	GSFC	L R LYONS	NAG 5 7962	90
11	UNIV OF CALIFORNIA - LOS ANGELES	R BEEBE	GSFC	C T RUSSELL	NAG 5 8064	90
11	UNIV OF CALIFORNIA - LOS ANGELES	R BEEBE	GSFC	D G KIVELSON	NAG 5 7959	90
11	UNIV OF CALIFORNIA - LOS ANGELES	R BEEBE	GSFC	D K KHURANA	NAG 5 8050	90
11	UNIV OF CALIFORNIA - LOS ANGELES	R BEEBE	GSFC	D M THORNE	NAG 5 8065	90
11	UNIV OF CALIFORNIA - LOS ANGELES	R BEEBE	GSFC	D SCHUBERT	NAG 5 8066	91
11	UNIV OF CALIFORNIA - LOS ANGELES	R BEEBE	GSFC	R J WALKER	NAG 5 8055	90
11	UNIV OF CALIFORNIA - LOS ANGELES	R J OLIVERSEN	GSFC	R A EDELSON	NAG 5 9023	91
11	UNIV OF CALIFORNIA - LOS ANGELES	R J OLIVERSEN	GSFC	S SAKAI	NAG 5 9826	93
11	UNIV OF CALIFORNIA - LOS ANGELES	R MUSHOTZKY	GSFC	R EDELSON	NAG 5 10032	93
11	UNIV OF CALIFORNIA - LOS ANGELES	W J WAGNER	GSFC	D K ULRICH	NAG 5 6332	89
11	UNIV OF CALIFORNIA - LOS ANGELES	W J WAGNER	GSFC	R K ULRICH	NAG 5 10905	94
11	UNIV OF CALIFORNIA - LOS ANGELES	W WAGNER	GSFC	J M PAP	NAG 5 8507	91
11	UNIV OF CALIFORNIA - RIVERSIDE	A B MERRITT	WFF	A D ZYCHE	NAG 5 5211	96
11	UNIV OF CALIFORNIA - RIVERSIDE	M MEYER	GSFC	C Y SWITZER	NAG 5 9812	96

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF CALIFORNIA - SAN DIEGO	B BETTS	GSFC	J L BADA	NAG 5 9659	101
11	UNIV OF CALIFORNIA - SAN DIEGO	B MERRITT	WFF	D LINGENFELTER	NAG 5 5332	97
11	UNIV OF CALIFORNIA - SAN DIEGO	D EVANS	GSFC	K QUEST	NAG 5 6947	98
11	UNIV OF CALIFORNIA - SAN DIEGO	D EVANS	HQ	W WHITE	NAG 5 7653	99
11	UNIV OF CALIFORNIA - SAN DIEGO	D K WEST	GSFC	R E LINGENFELTER	NAG 5 7045	98
11	UNIV OF CALIFORNIA - SAN DIEGO	D NAVA	GSFC	D MARTI	NAG 5 4284	97
11	UNIV OF CALIFORNIA - SAN DIEGO	F A HERRERO	GSFC	J L MATTESON	NAG 5 8731	100
11	UNIV OF CALIFORNIA - SAN DIEGO	F HERRERO	GSFC	R E ROTHSCCHILD	NAG 5 10968	102
11	UNIV OF CALIFORNIA - SAN DIEGO	J BOYCE	GSFC	D GUIRRENBAC	NAG 5 8272	99
11	UNIV OF CALIFORNIA - SAN DIEGO	J BOYCE	GSFC	D H THIEMENS	NAG 5 4574	97
11	UNIV OF CALIFORNIA - SAN DIEGO	J BOYCE	GSFC	D MARTI	NAG 5 8167	99
11	UNIV OF CALIFORNIA - SAN DIEGO	J BOYCE	GSFC	G W LUNGMAIR	NAG 5 8172	99
11	UNIV OF CALIFORNIA - SAN DIEGO	J BOYCE	GSFC	J R ARNOLD	NAG 5 8610	100
11	UNIV OF CALIFORNIA - SAN DIEGO	J BOYCE	GSFC	J SISTERTSON	NAG 5 7887	99
11	UNIV OF CALIFORNIA - SAN DIEGO	J BOYCE	GSFC	M H THIEMENS	NAG 5 9679	101
11	UNIV OF CALIFORNIA - SAN DIEGO	J BOYCE	GSFC	M H THIEMENS	NAG 5 10487	101
11	UNIV OF CALIFORNIA - SAN DIEGO	J P MURPHY	GSFC	J L MATTESON	NAS 5 97121	103
11	UNIV OF CALIFORNIA - SAN DIEGO	J SHARBER	GSFC	C MCILWAIN	NAG 5 9036	100
11	UNIV OF CALIFORNIA - SAN DIEGO	J SWANK	GSFC	D GRUBER	NAG 5 7000	98
11	UNIV OF CALIFORNIA - SAN DIEGO	K SWANK	GSFC	D E GRIBER	NAG 5 7119	98
11	UNIV OF CALIFORNIA - SAN DIEGO	M MEYER	GSFC	G ARRHENIUS	NAG 5 10667	101
11	UNIV OF CALIFORNIA - SAN DIEGO	M MEYER	GSFC	M N FOMENKOVA	NAG 5 8551	100
11	UNIV OF CALIFORNIA - SAN DIEGO	N WHITE	GSFC	R D COHEN	NAG 5 7362	99
11	UNIV OF CALIFORNIA - SAN DIEGO	R J OLIVERSEN	GSFC	J TOMSICK	NAG 5 10886	102
11	UNIV OF CALIFORNIA - SAN DIEGO	R J OLIVERSEN	GSFC	P R BLANCO	NAG 5 9825	101
11	UNIV OF CALIFORNIA - SAN DIEGO	R J OLIVERSEN	GSFC	R ROTHSCCHILD	NAG 5 9122	100
11	UNIV OF CALIFORNIA - SAN DIEGO	R OLIVERSEN	GSFC	D TYTLER	NAG 5 9224	100
11	UNIV OF CALIFORNIA - SAN DIEGO	R OLIVERSEN	GSFC	W HEINDL	NAG 5 10691	101
11	UNIV OF CALIFORNIA - SAN DIEGO	R OLIVERSEN	GSFC	Y REPHAELI	NAG 5 9247	100
11	UNIV OF CALIFORNIA - SAN DIEGO	R OLIVERSON	GSFC	Y REPHAELI	NAG 5 10871	102
11	UNIV OF CALIFORNIA - SAN DIEGO	T MORGAN	GSFC	J R ARNOLD	NAG 5 9005	100
11	UNIV OF CALIFORNIA - SAN DIEGO	W D DAVIS	GSFC	R E ROTHSCCHILD	NAS 5 30720	102
11	UNIV OF CALIFORNIA - SAN DIEGO	W WAGNER	GSFC	B V JACKSON	NAG 5 8504	100
11	UNIV OF CALIFORNIA - SAN DIEGO	W WAGNER	GSFC	P HICK	NAG 5 7295	98
11	UNIV OF CALIFORNIA - SANTA BARBARA	D K WEST	GSFC	O M BLAES	NAG 5 7075	107
11	UNIV OF CALIFORNIA - SANTA BARBARA	G STRINGFELLOW	GSFC	J E RUHL	NAG 5 9251	108
11	UNIV OF CALIFORNIA - SANTA BARBARA	G STRINGFELLOW	GSFC	P LUBIN	NAG 5 9073	108
11	UNIV OF CALIFORNIA - SANTA BARBARA	J A GRANT	GSFC	D TANIMOTO	NAG 5 7981	107
11	UNIV OF CALIFORNIA - SANTA BARBARA	J BOYCE	GSFC	S J PEALE	NAG 5 7177	107
11	UNIV OF CALIFORNIA - SANTA BARBARA	N E WHITE	GSFC	D A CORDOVA	NAG 5 7714	107
11	UNIV OF CALIFORNIA - SANTA BARBARA	N E WHITE	GSFC	D FOSTER	NAG 5 7940	107
11	UNIV OF CALIFORNIA - SANTA BARBARA	R DONNELLY	GSFC	D CORDOVA	NAG 5 6911	107
11	UNIV OF CALIFORNIA - SANTA BARBARA	R J OLIVERSEN	GSFC	L BILDSTEN	NAG 5 8658	107
11	UNIV OF CALIFORNIA - SANTA BARBARA	R MUSHOTZKY	GSFC	R E SHIREY	NAG 5 9971	108
11	UNIV OF CALIFORNIA - SANTA CRUZ	D J HOLLENBACH	ARC	P BODENHEIMER	NCC 2 5418	114
11	UNIV OF CALIFORNIA - SANTA CRUZ	D J HOLLENBACH	ARC	P H BODENHEIMER	NCC 2 1081	113
11	UNIV OF CALIFORNIA - SANTA CRUZ	D K WEST	GSFC	D C KOO	NAG 5 3507	111
11	UNIV OF CALIFORNIA - SANTA CRUZ	D K WEST	GSFC	J R PRIMACK	NAG 5 8218	112
11	UNIV OF CALIFORNIA - SANTA CRUZ	D K WEST	GSFC	P GUHATHAKURTA	NAG 5 8348	112
11	UNIV OF CALIFORNIA - SANTA CRUZ	D K WEST	GSFC	S E WOOSLEY	NAG 5 8128	112
11	UNIV OF CALIFORNIA - SANTA CRUZ	D K WEST	GSFC	W G MATHEWS	NAG 5 8409	112
11	UNIV OF CALIFORNIA - SANTA CRUZ	D WEST	GSFC	P GUHATHAKURTA	NAG 5 3232	111
11	UNIV OF CALIFORNIA - SANTA CRUZ	G SONNEBORN	GSFC	B J WEINER	NAG 5 10683	113
11	UNIV OF CALIFORNIA - SANTA CRUZ	J A GRANT	GSFC	E ASPHAUG	NAG 5 8914	112
11	UNIV OF CALIFORNIA - SANTA CRUZ	J BOYCE	GSFC	D H BODENHEIMER	NAG 5 4494	111
11	UNIV OF CALIFORNIA - SANTA CRUZ	J BOYCE	GSFC	D H BODENHEIMER	NAG 5 4610	111
11	UNIV OF CALIFORNIA - SANTA CRUZ	J BOYCE	GSFC	D LIN	NAG 5 10727	113
11	UNIV OF CALIFORNIA - SANTA CRUZ	J BOYCE	GSFC	P BODENHEIMER	NAG 5 9526	112
11	UNIV OF CALIFORNIA - SANTA CRUZ	J BOYCE	GSFC	P BODENHEIMER	NAG 5 9661	112
11	UNIV OF CALIFORNIA - SANTA CRUZ	J BOYCE	HQ	D LIN	NAG 5 7515	112
11	UNIV OF CALIFORNIA - SANTA CRUZ	J BOYCE	HQ	D N LIN	NAG 5 8196	112
11	UNIV OF CALIFORNIA - SANTA CRUZ	J M BOYCE	GSFC	D LIN	NAG 5 10612	113
11	UNIV OF CALIFORNIA - SANTA CRUZ	J N CUZZI	ARC	N ROSENBERG	NCC 2 5297	113
11	UNIV OF CALIFORNIA - SANTA CRUZ	J N CUZZI	ARC	P BODENHEIMER	NCC 2 5254	113
11	UNIV OF CALIFORNIA - SANTA CRUZ	J N CUZZI	ARC	P BODENHEIMER	NCC 2 5436	114
11	UNIV OF CALIFORNIA - SANTA CRUZ	K J ZAHNLE	ARC	E I ASPHAUGH	NCC 2 5428	114

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF CALIFORNIA - SANTA CRUZ	K J ZAHNLE	ARC	P H	NGT 2 52260	114
11	UNIV OF CALIFORNIA - SANTA CRUZ	M MEYER	GSFC	D DEAMER	NAG 5 9403	112
11	UNIV OF CALIFORNIA - SANTA CRUZ	M MEYER	GSFC	E ASPHAUG	NAG 5 7245	111
11	UNIV OF CALIFORNIA - SANTA CRUZ	M S BURRELL	GSFC	P GUHATHAKURTA	NGT 5 43	114
11	UNIV OF CALIFORNIA - SANTA CRUZ	R F MUSHOTZKY	GSFC	B J WEINER	NAG 5 10053	113
11	UNIV OF CALIFORNIA - SANTA CRUZ	R MUSHOTZKY	GSFC	D BUOTE	NAG 5 9966	112
11	UNIV OF CALIFORNIA - SANTA CRUZ	R MUSHOTZKY	GSFC	D BUOTE	NAG 5 10039	113
11	UNIV OF CALIFORNIA - SANTA CRUZ	R MUSHOTZKY	GSFC	W G MATHEWS	NAG 5 9956	112
11	UNIV OF CALIFORNIA - SANTA CRUZ	R OLIVERSEN	GSFC	P MADAU	NAG 5 10232	113
11	UNIV OF CALIFORNIA - SANTA CRUZ	S LAMBROS	GSFC	D E THORSETT	NAG 5 9711	112
11	UNIV OF CHICAGO	A NURRIDIN	HQ	J E CARLSTROM	NGT 5 50173	207
11	UNIV OF CHICAGO	B F SMITH	ARC	R N MILLER	NCC 2 1103	207
11	UNIV OF CHICAGO	C BENNETT	GSFC	S MEYER	NAG 5 8539	206
11	UNIV OF CHICAGO	D K WEST	GSFC	J E CARLSTROM	NAG 5 7986	205
11	UNIV OF CHICAGO	D K WEST	GSFC	M MILLER	NAG 5 8571	206
11	UNIV OF CHICAGO	D WEST	GSFC	P FRISCH	NAG 5 6405	205
11	UNIV OF CHICAGO	G SONNEBORN	GSFC	D E WELTY	NAG 5 10370	206
11	UNIV OF CHICAGO	H THRONSON	GSFC	D MEYER	NAG 5 6489	205
11	UNIV OF CHICAGO	H THRONSON	GSFC	P D FRISCH	NAG 5 6625	205
11	UNIV OF CHICAGO	J BOYCE	GSFC	A M DAVIS	NAG 5 9362	206
11	UNIV OF CHICAGO	J BOYCE	GSFC	D E CARLSTROM	NAG 5 4462	204
11	UNIV OF CHICAGO	J BOYCE	GSFC	D GROSSMAN	NAG 5 4476	204
11	UNIV OF CHICAGO	J BOYCE	GSFC	F RICHTER	NAG 5 9378	206
11	UNIV OF CHICAGO	J BOYCE	GSFC	T ECONOMOU	NAG 5 9767	206
11	UNIV OF CHICAGO	J BOYCE	HQ	F M RICHTER	NAG 5 6972	205
11	UNIV OF CHICAGO	J BOYCE	HQ	L GROSSMAN	NAG 5 7307	205
11	UNIV OF CHICAGO	J BOYCE	HQ	R CLAYTON	NAG 5 7212	205
11	UNIV OF CHICAGO	J KING	GSFC	C LOPATE	NAG 5 8032	205
11	UNIV OF CHICAGO	J LING	GSFC	P C FRISCH	NAG 5 7077	205
11	UNIV OF CHICAGO	J M BOYCE	GSFC	T ECONOMOU	NAG 5 11043	207
11	UNIV OF CHICAGO	P CRANE	GSFC	T OKA	NAG 5 9583	206
11	UNIV OF CHICAGO	P HUNTER	GSFC	P C FRISCH	NAG 5 8163	205
11	UNIV OF CHICAGO	R BEEBE	GSFC	R PIERREHUMBERT	NAG 5 7731	205
11	UNIV OF CHICAGO	R J OLIVERSEN	GSFC	A KONIGL	NAG 5 9063	206
11	UNIV OF CHICAGO	R J OLIVERSEN	GSFC	D Q LAMB	NAG 5 10759	206
11	UNIV OF CHICAGO	R J OLIVERSEN	GSFC	J J CONNELL	NAG 5 10878	207
11	UNIV OF CHICAGO	R OLIVERSEN	GSFC	A KONIGL	NAG 5 3687	204
11	UNIV OF CHICAGO	R OLIVERSEN	GSFC	D E WELTY	NAG 5 3228	204
11	UNIV OF CHICAGO	S NASH-STEVENSON	MSFC	J CARLSTROM	NGT 8 52906	207
11	UNIV OF CHICAGO	T MORGAN	GSFC	P PALMER	NAG 5 8708	206
11	UNIV OF CHICAGO	W J WAGNER	GSFC	W HU	NAG 5 10840	207
11	UNIV OF CHICAGO	W WAGNER	GSFC	R MCKIBBEN	NAG 5 7163	205
11	UNIV OF CINCINNATI	G SONNEBORN	GSFC	M L SITKO	NAG 5 8986	423
11	UNIV OF CINCINNATI	M MEYER	GSFC	A I MILLER	NAG 5 6946	423
11	UNIV OF CINCINNATI	M MEYER	GSFC	A I MILLER	NAG 5 9418	423
11	UNIV OF COLORADO - BOULDER	A NURRIDIN	HQ	F BAGENAL	NGT 5 50197	142
11	UNIV OF COLORADO - BOULDER	A NURRIDIN	HQ	J C GREEN	NGT 5 50176	142
11	UNIV OF COLORADO - BOULDER	A NURRIDIN	HQ	P S CONTI	NGT 5 50194	142
11	UNIV OF COLORADO - BOULDER	A SMITH	GSFC	J C BRANDT	NAG 5 1853	124
11	UNIV OF COLORADO - BOULDER	D BOGAN	GSFC	D R PRYOR	NAG 5 8096	130
11	UNIV OF COLORADO - BOULDER	D BOGAN	GSFC	L W ESPOSITO	NAG 5 8338	131
11	UNIV OF COLORADO - BOULDER	D BOGAN	GSFC	W PRYOR	NAG 5 8256	131
11	UNIV OF COLORADO - BOULDER	D EVANS	GSFC	D RUSCH	NAG 5 7725	130
11	UNIV OF COLORADO - BOULDER	D EVANS	GSFC	F BAGENAL	NAG 5 7088	129
11	UNIV OF COLORADO - BOULDER	D K WEST	GSFC	A J HAMILTON	NAG 5 7128	129
11	UNIV OF COLORADO - BOULDER	D K WEST	GSFC	J BALLY	NAG 5 8108	130
11	UNIV OF COLORADO - BOULDER	D K WEST	GSFC	J T STOCKE	NAG 5 6936	128
11	UNIV OF COLORADO - BOULDER	D K WEST	GSFC	M BEGELMAN	NAG 5 6337	127
11	UNIV OF COLORADO - BOULDER	D K WEST	GSFC	M C BEGELMAN	NAG 5 4061	125
11	UNIV OF COLORADO - BOULDER	D K WEST	GSFC	M C BEGELMAN	NAG 5 7723	130
11	UNIV OF COLORADO - BOULDER	D K WEST	GSFC	M J SHULL	NAG 5 4063	125
11	UNIV OF COLORADO - BOULDER	D K WEST	GSFC	P BENNETT	NAG 5 6901	128
11	UNIV OF COLORADO - BOULDER	D K WEST	GSFC	R A MCCRAY	NAG 5 8236	131
11	UNIV OF COLORADO - BOULDER	D SENSKE	GSFC	R E GRIMM	NAG 5 10461	135
11	UNIV OF COLORADO - BOULDER	D WEST	GSFC	G HARPER	NAG 5 4804	126
11	UNIV OF COLORADO - BOULDER	D WEST	GSFC	G S STRINGFELLOW	NAG 5 3394	125

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF COLORADO - BOULDER	D WEST	GSFC	M A NOWAK	NAG 5 3225	125
11	UNIV OF COLORADO - BOULDER	D WEST	GSFC	S L SKINNER	NAG 5 3224	125
11	UNIV OF COLORADO - BOULDER	D WEST	GSFC	T A AYRES	NAG 5 3226	125
11	UNIV OF COLORADO - BOULDER	E T ENGMAN	GSFC	A FREI	NAG 5 7496	129
11	UNIV OF COLORADO - BOULDER	F HERRERO	GSFC	A L BETZ	NAG 5 8538	131
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	G HARPER	NAG 5 9010	132
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	G HARPER	NAG 5 10339	135
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	J A MORSE	NAG 5 10319	135
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	J SHULL	NAG 5 9018	132
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	J SHULL	NAG 5 10948	136
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	M GIROUX	NAG 5 10950	136
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	T R AYRES	NAG 5 10340	135
11	UNIV OF COLORADO - BOULDER	H HASAN	GSFC	D L BENDER	NAG 5 4095	126
11	UNIV OF COLORADO - BOULDER	H HASAN	GSFC	D T STEBBINS	NAG 5 7638	129
11	UNIV OF COLORADO - BOULDER	H HASAN	GSFC	D WILKINSON	NAG 5 7465	129
11	UNIV OF COLORADO - BOULDER	H HASAN	GSFC	D WILKINSON	NAG 5 7851	130
11	UNIV OF COLORADO - BOULDER	H HASAN	GSFC	P T STOCKE	NAG 5 3794	125
11	UNIV OF COLORADO - BOULDER	H HASAN	GSFC	T P SNOW	NAG 5 6758	128
11	UNIV OF COLORADO - BOULDER	H THRONSON	GSFC	D M SHULL	NAG 5 4312	126
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	G R STEWART	NAG 5 10508	135
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	G STEWART	NAG 5 10000	134
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	J M FORBES	NAG 5 8755	132
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	M MELON	NAG 5 10581	136
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	S W LEE	NAG 5 9631	134
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	T SNOW	NAG 5 10601	136
11	UNIV OF COLORADO - BOULDER	J BOYCE	HQ	A W NOLIN	NAG 5 8259	131
11	UNIV OF COLORADO - BOULDER	J BOYCE	HQ	D STEWART	NAG 5 6048	127
11	UNIV OF COLORADO - BOULDER	J BOYCE	HQ	J M FORBES	NAG 5 8266	131
11	UNIV OF COLORADO - BOULDER	J BOYCE	HQ	T P SNOW	NAG 5 7449	129
11	UNIV OF COLORADO - BOULDER	J M BOYCE	GSFC	B JAKOSKY	NAG 5 10616	136
11	UNIV OF COLORADO - BOULDER	J M BOYCE	GSFC	F BAGENAL	NAG 5 11177	137
11	UNIV OF COLORADO - BOULDER	J M GREBOWSKY	GSFC	J TOOMRE	NAG 5 8133	130
11	UNIV OF COLORADO - BOULDER	J R BYRD	GSFC	D M SCHNEIDER	NAG 5 10797	136
11	UNIV OF COLORADO - BOULDER	J SHARBER	HQ	D W RUSCH	NAG 5 7652	130
11	UNIV OF COLORADO - BOULDER	J SWANK	GSFC	A BROWN	NAG 5 7398	129
11	UNIV OF COLORADO - BOULDER	J SWANK	GSFC	C REYNOLDS	NAG 5 7329	129
11	UNIV OF COLORADO - BOULDER	L D DEMING	GSFC	L W ESPOSITO	NAG 5 9694	134
11	UNIV OF COLORADO - BOULDER	L FEINBERG	GSFC	J GREEN	NAG 5 98043	138
11	UNIV OF COLORADO - BOULDER	L LING	GSFC	D PRYOR	NAG 5 6474	127
11	UNIV OF COLORADO - BOULDER	M L KAISER	GSFC	R ERGUN	NAG 5 9114	132
11	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	M CODRESCU	NAG 5 6984	128
11	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	M V GOLDMAN	NAG 5 9026	132
11	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	S PALO	NAG 5 6791	128
11	UNIV OF COLORADO - BOULDER	M S BURRELL	GSFC	D N BAKER	NGT 5 49	140
11	UNIV OF COLORADO - BOULDER	N R HALL	GRC	D R OHLSEN	NAG 3 1848	124
11	UNIV OF COLORADO - BOULDER	N WHITE	GSFC	A BROWN	NAG 5 4783	126
11	UNIV OF COLORADO - BOULDER	P CRANE	GSFC	J GREEN	NAG 5 9092	132
11	UNIV OF COLORADO - BOULDER	P CRANE	GSFC	R T STEBBINS	NAG 5 6880	128
11	UNIV OF COLORADO - BOULDER	P CRANE	GSFC	T AYRES	NAG 5 11241	138
11	UNIV OF COLORADO - BOULDER	R BEEBE	GSFC	A HENDRIX	NAG 5 8178	131
11	UNIV OF COLORADO - BOULDER	R BEEBE	GSFC	N M SCHNEIDER	NAG 5 8047	130
11	UNIV OF COLORADO - BOULDER	R BEEBE	GSFC	O TOON	NAG 5 6900	128
11	UNIV OF COLORADO - BOULDER	R J OLIVERSEN	GSFC	A J HAMILTON	NAG 5 10763	136
11	UNIV OF COLORADO - BOULDER	R J OLIVERSEN	GSFC	B WOOD	NAG 5 9041	132
11	UNIV OF COLORADO - BOULDER	R J OLIVERSEN	GSFC	G S STRINGFELLOW	NAG 5 7223	129
11	UNIV OF COLORADO - BOULDER	R J OLIVERSEN	GSFC	J SHULL	NAG 5 7262	129
11	UNIV OF COLORADO - BOULDER	R MUSHOTZKY	GSFC	C S REYNOLDS	NAG 5 10083	134
11	UNIV OF COLORADO - BOULDER	R MUSHOTZKY	GSFC	S L SKINNER	NAG 5 10325	135
11	UNIV OF COLORADO - BOULDER	R MUSHOTZKY	GSFC	S L SKINNER	NAG 5 10326	135
11	UNIV OF COLORADO - BOULDER	R MUSHOTZKY	GSFC	S L SKINNER	NAG 5 10362	135
11	UNIV OF COLORADO - BOULDER	R OLIVERSEN	GSFC	A BROWN	NAG 5 2259	125
11	UNIV OF COLORADO - BOULDER	T H MORGAN	GSFC	N M SCHNEIDER	NAG 5 9007	132
11	UNIV OF CONNECTICUT	J I TROMBKA	GSFC	J S SCHWEITZER	NAG 5 8602	145
11	UNIV OF CONNECTICUT	M MEYER	GSFC	P J GOGARTEN	NAG 5 7915	145
11	UNIV OF DAYTON	J BOYCE	GSFC	A M KOZIOL	NAG 5 9808	424
11	UNIV OF DAYTON	J BOYCE	GSFC	A PHELPS	NAG 5 9804	424

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF DAYTON	J BOYCE	HQ	A W PHELPS	NAG 5 8451	424
11	UNIV OF DELAWARE - BARTOL RES. INST	D C LING	GSFC	G P ZANK	NAG 5 7796	151
11	UNIV OF DELAWARE - BARTOL RES. INST	D K WEST	GSFC	S P OWOCKI	NAG 5 3530	150
11	UNIV OF DELAWARE - BARTOL RES. INST	D WEST	HQ	D MULLAN	NAG 5 6905	151
11	UNIV OF DELAWARE - BARTOL RES. INST	J H BREDEKAMP	GSFC	R PYLE	NAG 5 8014	151
11	UNIV OF DELAWARE - BARTOL RES. INST	J LING	GSFC	G ZANK	NAG 5 6469	151
11	UNIV OF DELAWARE - BARTOL RES. INST	J LING	GSFC	J A LE ROUX	NAG 5 6969	151
11	UNIV OF DELAWARE - BARTOL RES. INST	J LING	HQ	C SMITH	NAG 5 6570	151
11	UNIV OF DELAWARE - BARTOL RES. INST	J LING	HQ	J BIEBER	NAG 5 7142	151
11	UNIV OF DELAWARE - BARTOL RES. INST	J LING	HQ	S OWOCKI	NAG 5 6470	151
11	UNIV OF DELAWARE - BARTOL RES. INST	R K OLIVERSEN	GSFC	K GAYLEY	NAG 5 4065	150
11	UNIV OF DELAWARE - BARTOL RES. INST	R SILVERBERG	GSFC	PICCIRILLO	NAG 5 6061	150
11	UNIV OF DELAWARE - BARTOL RES. INST	W WAGNER	GSFC	W H MATTHAEUS	NAG 5 7164	151
11	UNIV OF DELAWARE	D K WEST	GSFC	T STANOV	NAG 5 7009	149
11	UNIV OF DELAWARE	E T ENGMAN	GSFC	D R WEBSTER	NAG 5 8696	149
11	UNIV OF DELAWARE	G SONNEBORN	GSFC	S P OWOCKI	NAG 5 11095	150
11	UNIV OF DELAWARE	R J OLIVERSEN	GSFC	D MULLAN	NAG 5 11228	150
11	UNIV OF DELAWARE	R J OLIVERSEN	GSFC	T STANLEV	NAG 5 10919	150
11	UNIV OF DELAWARE	R MUSHOTZKY	GSFC	J MCDONALD	NAG 5 10416	149
11	UNIV OF DELAWARE	W WAGNER	GSFC	W H MATTHAEUS	NAG 5 11006	150
11	UNIV OF DENVER	M SMITH	GSFC	T A STEPHEN	NAG 5 3386	143
11	UNIV OF DENVER	S NASH-STEVENSON	MSFC	R AMME	NGT 8 52894	144
11	UNIV OF DENVER	T MOORE	GSFC	T M STEPHEN	NCC 5 506	144
11	UNIV OF FLORIDA	D WEST	GSFC	E LADA	NAG 5 6751	173
11	UNIV OF FLORIDA	E F ERICKSON	ARC	C M TELESCO	NCC 2 5246	175
11	UNIV OF FLORIDA	E F ERICKSON	ARC	R K PINA	NCC 2 5424	175
11	UNIV OF FLORIDA	H THRONSON	GSFC	D T VALA	NAG 5 4287	172
11	UNIV OF FLORIDA	K BLANDING	HQ	C TELESCO	NGT 5 50177	175
11	UNIV OF FLORIDA	R J OLIVERSEN	GSFC	K GROGAN	NAG 5 9280	173
11	UNIV OF FLORIDA	R K OLIVERSEN	GSFC	F W HAMANN	NAG 5 8522	173
11	UNIV OF GEORGIA	D K WEST	GSFC	L MAGNANI	NAG 5 8376	190
11	UNIV OF GEORGIA	D K WEST	GSFC	P H HAUSCHILDT	NAG 5 8425	190
11	UNIV OF GEORGIA	D WEST	GSFC	P HAUSCHILDT	NAG 5 3619	190
11	UNIV OF GEORGIA	G SONNEBORN	GSFC	P H HAUSCHILDT	NAG 5 9396	191
11	UNIV OF GEORGIA	J BOYCE	GSFC	P C STANCIL	NAG 5 10551	191
11	UNIV OF GEORGIA	P CRANE	GSFC	P C STANCIL	NAG 5 9088	190
11	UNIV OF GEORGIA	R J OLIVERSEN	GSFC	P H HAUSCHILDT	NAG 5 9222	191
11	UNIV OF HAWAII AT MANOA - HONOLULU	A NURRIDIN	HQ	J HENRY	NGT 5 50175	199
11	UNIV OF HAWAII AT MANOA - HONOLULU	B BETTS	GSFC	P LUCEY	NAG 5 10704	197
11	UNIV OF HAWAII AT MANOA - HONOLULU	B BETTS	GSFC	P LUCEY	NAG 5 20704	198
11	UNIV OF HAWAII AT MANOA - HONOLULU	B CAMPBELL	GSFC	S K SHARMA	NAG 5 7139	193
11	UNIV OF HAWAII AT MANOA - HONOLULU	D K WEST	GSFC	T SIMON	NAG 5 8216	194
11	UNIV OF HAWAII AT MANOA - HONOLULU	D NAVA	GSFC	D C JEWITT	NAG 5 4669	192
11	UNIV OF HAWAII AT MANOA - HONOLULU	D SENSKE	GSFC	B R HAWKE	NAG 5 10237	197
11	UNIV OF HAWAII AT MANOA - HONOLULU	D SENSKE	GSFC	S K ROWLAND	NAG 5 10228	197
11	UNIV OF HAWAII AT MANOA - HONOLULU	D WEST	GSFC	T SIMON	NAG 5 6753	193
11	UNIV OF HAWAII AT MANOA - HONOLULU	E BARKER	HQ	D N HALL	NASW 5062	198
11	UNIV OF HAWAII AT MANOA - HONOLULU	E SMITH	GSFC	D N HALL	NAG 5 8421	194
11	UNIV OF HAWAII AT MANOA - HONOLULU	G L BJORAKER	GSFC	T C OWEN	NCC 5 373	198
11	UNIV OF HAWAII AT MANOA - HONOLULU	G SONNEBORN	GSFC	T SIMON	NAG 5 8979	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	G SONNEBORN	GSFC	T SIMON	NAG 5 10646	197
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BERGSTRALH	GSFC	D J MEECH	NAG 5 4495	192
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BERGSTRALH	GSFC	D J RODDIER	NAG 5 3731	192
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BERGSTRALH	GSFC	D OWEN	NAG 5 6561	193
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	B HAWKE	NAG 5 9765	196
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	D JEWITT	NAG 5 10427	197
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	G TAYLOR	NAG 5 9190	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	K KEIL	NAG 5 8713	194
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	K KEIL	NAG 5 9354	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	P MOUGINIS-MARK	NAG 5 9576	196
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	HQ	D J RODDIER	NAG 5 8298	194
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	HQ	T MCCORD	NAG 5 8300	194
11	UNIV OF HAWAII AT MANOA - HONOLULU	J GRANT	GSFC	S K ROWLAND	NAG 5 8921	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	J GURMAN	GSFC	J R KUHN	NAG 5 8002	194
11	UNIV OF HAWAII AT MANOA - HONOLULU	J M BOYCE	GSFC	A KROT	NAG 5 10610	197
11	UNIV OF HAWAII AT MANOA - HONOLULU	J SWANK	GSFC	H EBELING	NAG 5 6336	192

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF HAWAII AT MANOA - HONOLULU	K W HODAPP	ARC	D N HALL	NAS 2 98077	198
11	UNIV OF HAWAII AT MANOA - HONOLULU	M MEYER	GSFC	T C OWEN	NAG 5 8593	194
11	UNIV OF HAWAII AT MANOA - HONOLULU	M MEYER	GSFC	T C OWEN	NAG 5 8863	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	P SAKIMOTO	HQ	R A CROWE	NAG 5 10141	197
11	UNIV OF HAWAII AT MANOA - HONOLULU	R BEEBE	GSFC	D P FANALE	NAG 5 7868	193
11	UNIV OF HAWAII AT MANOA - HONOLULU	R BEEBE	GSFC	T B MCCORD	NAG 5 8275	194
11	UNIV OF HAWAII AT MANOA - HONOLULU	R F MUSHOTZKY	GSFC	T SIMON	NAG 5 9896	196
11	UNIV OF HAWAII AT MANOA - HONOLULU	R F MUSHOTZKY	GSFC	W BRANDNER	NAG 5 9921	196
11	UNIV OF HAWAII AT MANOA - HONOLULU	R J OLIVERSEN	GSFC	H EBELING	NAG 5 8253	194
11	UNIV OF HAWAII AT MANOA - HONOLULU	R J OLIVERSEN	GSFC	H EBELING	NAG 5 10773	197
11	UNIV OF HAWAII AT MANOA - HONOLULU	R J OLIVERSEN	GSFC	N KAISER	NAG 5 7038	193
11	UNIV OF HAWAII AT MANOA - HONOLULU	R J OLIVERSEN	GSFC	W D HEACOX	NAG 5 9042	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	R MUSHOTZKY	GSFC	D B SANDERS	NAG 5 10025	196
11	UNIV OF HAWAII AT MANOA - HONOLULU	R MUSHOTZKY	GSFC	E MARTIN	NAG 5 9992	196
11	UNIV OF HAWAII AT MANOA - HONOLULU	R MUSHOTZKY	GSFC	H EBELING	NAG 5 10041	196
11	UNIV OF HAWAII AT MANOA - HONOLULU	R MUSHOTZKY	GSFC	H EBELING	NAG 5 10085	196
11	UNIV OF HAWAII AT MANOA - HONOLULU	R MUSHOTZKY	GSFC	I M GIOIA	NAG 5 9994	196
11	UNIV OF HAWAII AT MANOA - HONOLULU	R MUSHOTZKY	GSFC	T SIMON	NAG 5 10128	196
11	UNIV OF HAWAII AT MANOA - HONOLULU	R MUSHOTZKY	GSFC	T SIMON	NAG 5 10564	197
11	UNIV OF HAWAII AT MANOA - HONOLULU	R OLIVERSEN	GSFC	J HENRY	NAG 5 9166	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	R OLIVERSON	GSFC	H EBELING	NAG 5 9238	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	T H MORGAN	GSFC	D J THOLEN	NAG 5 8989	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	T MORGAN	GSFC	D G LUCEY	NAG 5 7855	193
11	UNIV OF HAWAII AT MANOA - HONOLULU	T MORGAN	GSFC	D J THOLEN	NAG 5 4524	192
11	UNIV OF HAWAII AT MANOA - HONOLULU	T MORGAN	GSFC	D JEWITT	NAG 5 7056	193
11	UNIV OF HAWAII AT MANOA - HONOLULU	T MORGAN	GSFC	D JEWITT	NAG 5 10437	197
11	UNIV OF HAWAII AT MANOA - HONOLULU	T MORGAN	GSFC	P G LUCEY	NAG 5 8991	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	V KUNDE	GSFC	T OWEN	NAG 5 2663	191
11	UNIV OF HAWAII AT MANOA - HONOLULU	W HUEBNER	GSFC	D J THOLEN	NAG 5 4223	192
11	UNIV OF HAWAII AT MANOA - HONOLULU	W WAGNER	GSFC	J R KUHN	NAG 5 8330	194
11	UNIV OF HAWAII SYSTEM	K E BLANDING	GSFC	J HENRY	NAG 5 4828	199
11	UNIV OF ILLINOIS - CHICAGO CIRCLE	E CHENG	GSFC	S MEYER	NAG 5 9209	208
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	A BARNES	ARC	T MOUSCHOVIAS	NGT 2 52244	213
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D K WEST	GSFC	F K LAMB	NAG 5 8424	211
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D K WEST	GSFC	M L NORMAN	NAG 5 3923	210
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D K WEST	GSFC	M L NORMAN	NAG 5 7404	211
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D K WEST	GSFC	U CHU	NAG 5 8104	211
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D K WEST	GSFC	Y CHU	NAG 5 7003	210
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D K WEST	GSFC	Y CHU	NAG 5 8103	211
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	G SONNEBORN	GSFC	R A GRUENDL	NAG 5 10182	212
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	G SONNEBORN	GSFC	Y CHU	NAG 5 9020	211
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	G SONNEBORN	GSFC	Y CHU	NAG 5 10303	212
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	J BOYCE	GSFC	F LAMB	NAG 5 8740	211
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	J BREDEKAMP	GSFC	R PLANTE	NAG 5 8514	211
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	M MEYER	GSFC	G OLSEN	NAG 5 8479	211
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R D KOSTER	GSFC	P KUMAR	NAG 5 3661	210
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R J OLIVERSEN	GSFC	C F GAMMIE	NAG 5 9180	212
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R J OLIVERSEN	GSFC	R F WEBBINK	NAG 5 11016	212
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R J OLIVERSEN	GSFC	S L SHAPIRO	NAG 5 7152	210
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R J OLIVERSEN	GSFC	S L SHAPIRO	NAG 5 8418	211
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R J OLIVERSON	GSFC	S L SHAPIRO	NAG 5 10781	212
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R MUSHOTZKY	GSFC	Y CHU	NAG 5 10011	212
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R MUSHOTZKY	GSFC	Y CHU	NAG 5 10037	212
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R MUSHOTZKY	GSFC	Y CHU	NAG 5 10042	212
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R MUTSHOTZKY	GSFC	J R DICKEL	NAG 5 11159	212
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R PFAFF	GSFC	E KUDEKI	NAG 5 11011	212
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	T MORGAN	GSFC	L SNYDER	NAG 5 10491	212
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	T MORGAN	GSFC	L SYNDER	NAG 5 8521	211
11	UNIV OF IOWA	J BREDEKAMP	GSFC	D ANDERSON	NAG 5 7187	225
11	UNIV OF IOWA	J LING	GSFC	I H CAIRNS	NAG 5 7390	225
11	UNIV OF IOWA	L E LASHER	ARC	J A VAN ALLEN	NAG 2 571	224
11	UNIV OF IOWA	R MUSHOTZKY	GSFC	R IGNACE	NAG 5 9964	226
11	UNIV OF IOWA	W WAGNER	GSFC	D CAIRNS	NAG 5 6127	225
11	UNIV OF KANSAS MEDICAL CTR	D J BOGAN	GSFC	T E CRAVENS	NAG 5 11038	230
11	UNIV OF KENTUCKY	D GOORITCH	ARC	D J FERLAND	NCC 2 5193	232
11	UNIV OF KENTUCKY	D GOORTVITCH	ARC	G J FERLAND	NCC 2 5405	232

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF KENTUCKY	D K WEST	GSFC	D A VERNER	NAG 5 4235	231
11	UNIV OF KENTUCKY	D K WEST	GSFC	G FERLAND	NAG 5 6937	231
11	UNIV OF KENTUCKY	D K WEST	GSFC	G J FERLAND	NAG 5 8212	231
11	UNIV OF KENTUCKY	D K WEST	GSFC	I SHLOSMAN	NAG 5 3841	231
11	UNIV OF KENTUCKY	D K WEST	GSFC	M ELITZUR	NAG 5 7031	231
11	UNIV OF KENTUCKY	E DWEK	GSFC	M ELITZUR	NAG 5 10518	231
11	UNIV OF KENTUCKY	J BREDEKAMP	GSFC	G J FERLAND	NAG 5 8165	231
11	UNIV OF KENTUCKY	R J OLIVERSEN	GSFC	I SHLOSMAN	NAG 5 10823	231
11	UNIV OF LOUISVILLE	D J BOGAN	GSFC	T DOWLING	NAG 5 11040	232
11	UNIV OF MARYLAND - COLLEGE PARK	A HARDING	GSFC	J D TRASCO	NCC 5 180	270
11	UNIV OF MARYLAND - COLLEGE PARK	A POLAND	GSFC	F IPAVICH	NAG 5 2754	256
11	UNIV OF MARYLAND - COLLEGE PARK	B DENNIS	GSFC	E J SCHUMAH	NAG 5 10180	265
11	UNIV OF MARYLAND - COLLEGE PARK	B R DENNIS	GSFC	E J SCHMAHL	NAG 5 8849	262
11	UNIV OF MARYLAND - COLLEGE PARK	C CHEUNG	GSFC	N ROUSSOPOULOS	NAG 5 9621	264
11	UNIV OF MARYLAND - COLLEGE PARK	D C LING	GSFC	D LUKASIAK	NAG 5 8079	260
11	UNIV OF MARYLAND - COLLEGE PARK	D J HOLLENBACH	ARC	M G WOLFIRE	NCC 2 5348	269
11	UNIV OF MARYLAND - COLLEGE PARK	D JARRETT	JPL	M F A	NASW 00004	269
11	UNIV OF MARYLAND - COLLEGE PARK	D K WEST	GSFC	A LUKASIAK	NAG 5 7069	259
11	UNIV OF MARYLAND - COLLEGE PARK	D K WEST	GSFC	E C OSTRIKER	NAG 5 3840	257
11	UNIV OF MARYLAND - COLLEGE PARK	D K WEST	GSFC	J L WANG	NAG 5 3836	257
11	UNIV OF MARYLAND - COLLEGE PARK	D LAVERY	GSFC	D L AKIN	NCC 5 417	270
11	UNIV OF MARYLAND - COLLEGE PARK	D LAVERY	HQ	D SANNER	NAG 5 7628	260
11	UNIV OF MARYLAND - COLLEGE PARK	D NAVA	GSFC	D G MUNDY	NAG 5 4429	257
11	UNIV OF MARYLAND - COLLEGE PARK	D NORTON	GSFC	J D TRASCO	NAG 5 8842	262
11	UNIV OF MARYLAND - COLLEGE PARK	D TOLL	GSFC	J TOWNSHEND	NAG 5 96060	269
11	UNIV OF MARYLAND - COLLEGE PARK	D WEST	GSFC	D G CURRLA	NAG 5 3361	256
11	UNIV OF MARYLAND - COLLEGE PARK	D WEST	GSFC	M WOLFIRE	NAG 5 6750	259
11	UNIV OF MARYLAND - COLLEGE PARK	D WEST	GSFC	S VEILLEUX	NAG 5 6547	259
11	UNIV OF MARYLAND - COLLEGE PARK	F C JONES	GSFC	F B MCDONALD	NAG 5 11091	267
11	UNIV OF MARYLAND - COLLEGE PARK	F EINAUDI	GSFC	R D HUDSON	NCC 5 55	269
11	UNIV OF MARYLAND - COLLEGE PARK	G SONNEBORN	GSFC	T LANZ	NAG 5 10895	266
11	UNIV OF MARYLAND - COLLEGE PARK	G SONNEBORN	GSFC	T LANZ	NAG 5 10929	267
11	UNIV OF MARYLAND - COLLEGE PARK	H HASAN	GSFC	D C BALACHANDRAN	NAG 5 4092	257
11	UNIV OF MARYLAND - COLLEGE PARK	J BERGSTRALH	GSFC	D F A	NAG 5 4080	257
11	UNIV OF MARYLAND - COLLEGE PARK	J BOYCE	GSFC	P M STONE	NAG 5 4278	257
11	UNIV OF MARYLAND - COLLEGE PARK	J BOYCE	HQ	R J WALKER	NAG 5 7634	260
11	UNIV OF MARYLAND - COLLEGE PARK	J GURMAN	GSFC	D P HAMILTON	NAG 5 7958	260
11	UNIV OF MARYLAND - COLLEGE PARK	J KING	GSFC	F IPAVICH	NAG 5 8033	260
11	UNIV OF MARYLAND - COLLEGE PARK	J LING	GSFC	F B MCDONALD	NAG 5 7141	259
11	UNIV OF MARYLAND - COLLEGE PARK	J M BOYCE	GSFC	L MUNDY	NAG 5 10611	266
11	UNIV OF MARYLAND - COLLEGE PARK	J PARRISH	GSFC	D AKIN	NCC 5 243	270
11	UNIV OF MARYLAND - COLLEGE PARK	M GUHATHAKURTA	GSFC	F B MCDONALD	NAG 5 7762	260
11	UNIV OF MARYLAND - COLLEGE PARK	M M FREUND	GSFC	L G MUNDY	NAG 5 10502	265
11	UNIV OF MARYLAND - COLLEGE PARK	M SMITH	MSFC	A S WILSON	NAG 8 1755	268
11	UNIV OF MARYLAND - COLLEGE PARK	ME ROSENTHAL	MSFC	A S WILSON	NAG 8 1027	268
11	UNIV OF MARYLAND - COLLEGE PARK	R BINDSCHADLER	GSFC	L G MUNDY	NAG 5 9750	264
11	UNIV OF MARYLAND - COLLEGE PARK	R HARTLE	GSFC	M BROWN	NCC 5 374	270
11	UNIV OF MARYLAND - COLLEGE PARK	R J OLIVERSEN	GSFC	M MILLER	NAG 5 9756	264
11	UNIV OF MARYLAND - COLLEGE PARK	R MUSHOTZKY	GSFC	A J YOUNG	NAG 5 9935	265
11	UNIV OF MARYLAND - COLLEGE PARK	R OLIVERSEN	GSFC	E OSTRIKER	NAG 5 9167	263
11	UNIV OF MARYLAND - COLLEGE PARK	R OLIVERSEN	GSFC	M WOLFIRE	NAG 5 9271	263
11	UNIV OF MARYLAND - COLLEGE PARK	R OLIVERSEN	GSFC	P J TEUBEN	NAG 5 8833	262
11	UNIV OF MARYLAND - COLLEGE PARK	S CURTIS	GSFC	K PAPADOPOULOS	NAG 5 8411	261
11	UNIV OF MARYLAND - COLLEGE PARK	T KOSTIUK	GSFC	J D TRASCO	NCC 5 372	270
11	UNIV OF MARYLAND - COLLEGE PARK	T MORGAN	GSFC	M F A	NAG 5 8189	261
11	UNIV OF MARYLAND - COLLEGE PARK	T VON ROSENVINGE	GSFC	G MASON	NAG 5 8877	262
11	UNIV OF MARYLAND - COLLEGE PARK	T VONROSENVINGE	GSFC	G M MASON	NAG 5 9793	264
11	UNIV OF MARYLAND - COLLEGE PARK	W HUEBNER	GSFC	D F A	NAG 5 4740	257
11	UNIV OF MARYLAND - COLLEGE PARK	W J WAGNER	GSFC	T GOLLA	NAG 5 10810	266
11	UNIV OF MARYLAND - COLLEGE PARK	W WAGNER	GSFC	D KUNDU	NAG 5 6257	258
11	UNIV OF MARYLAND - COLLEGE PARK	W WAGNER	GSFC	D THEJAPPA	NAG 5 6059	258
11	UNIV OF MARYLAND - COLLEGE PARK	W WAGNER	GSFC	T GOLLA	NAG 5 7145	259
11	UNIV OF MARYLAND BALTIMORE COUNTY	D K WEST	GSFC	T J TURNER	NAG 5 7385	272
11	UNIV OF MARYLAND BALTIMORE COUNTY	J M BOYCE	GSFC	S SAKIMOTO	NAG 5 11150	274
11	UNIV OF MARYLAND BALTIMORE COUNTY	J M BOYCE	GSFC	S SAKIMOTO	NAG 5 11174	274
11	UNIV OF MARYLAND BALTIMORE COUNTY	J SWANK	GSFC	E PERLMAN	NAG 5 9996	274

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF MARYLAND BALTIMORE COUNTY	N E WHITE	GSFC	M J HENRIKSEN	NCC 5 367	275
11	UNIV OF MARYLAND BALTIMORE COUNTY	R J OLIVERSEN	GSFC	E S PERLMAN	NAG 5 9995	273
11	UNIV OF MARYLAND BALTIMORE COUNTY	R J OLIVERSEN	GSFC	E S PERLMAN	NAG 5 9997	274
11	UNIV OF MARYLAND BALTIMORE COUNTY	R J OLIVERSEN	GSFC	T J TURNER	NAG 5 9346	273
11	UNIV OF MARYLAND BALTIMORE COUNTY	R J OLIVERSEN	GSFC	T J TURNER	NAG 5 11092	274
11	UNIV OF MARYLAND BALTIMORE COUNTY	R MUSHOTZKY	GSFC	E S PERLMAN	NAG 5 10024	274
11	UNIV OF MARYLAND BALTIMORE COUNTY	R MUSHOTZKY	GSFC	E S PERLMAN	NAG 5 10086	274
11	UNIV OF MARYLAND BALTIMORE COUNTY	R MUSHOTZKY	GSFC	E S PERLMAN	NAG 5 10109	274
11	UNIV OF MASSACHUSETTS - AMHERST	D K WEST	GSFC	N KATZ	NAG 5 3922	302
11	UNIV OF MASSACHUSETTS - AMHERST	D K WEST	GSFC	N KATZ	NAG 5 4064	302
11	UNIV OF MASSACHUSETTS - AMHERST	D NAVA	GSFC	D I GOLDSTEIN	NAG 5 4652	302
11	UNIV OF MASSACHUSETTS - AMHERST	H THRONSON	GSFC	D R ERICKSON	NAG 5 4272	302
11	UNIV OF MASSACHUSETTS - AMHERST	J BOYCE	HQ	G E MCGILL	NAG 5 8184	302
11	UNIV OF MASSACHUSETTS - AMHERST	J BREDEKAMP	GSFC	M WEIENBERG	NAG 5 8197	302
11	UNIV OF MASSACHUSETTS - AMHERST	J GRANT	GSFC	G E MCGILL	NAG 5 8909	303
11	UNIV OF MASSACHUSETTS - AMHERST	M MEYER	GSFC	L MARGULIS	NAG 5 10681	303
11	UNIV OF MASSACHUSETTS - AMHERST	M MEYER	GSFC	W M IRVINE	NAG 5 8718	303
11	UNIV OF MASSACHUSETTS - AMHERST	R J OLIVERSEN	GSFC	Q WANG	NAG 5 8999	303
11	UNIV OF MASSACHUSETTS - AMHERST	R OLIVERSEN	GSFC	Q WANG	NAG 5 9429	303
11	UNIV OF MASSACHUSETTS - AMHERST	R OLIVERSEN	GSFC	Q WANG	NAG 5 10783	303
11	UNIV OF MASSACHUSETTS - AMHERST	T MORGAN	GSFC	P SCHOERB	NAG 5 10677	303
11	UNIV OF MEMPHIS	W WAGNER	GSFC	J T SCHMELZ	NAG 5 7197	469
11	UNIV OF MIAMI	J W CAMPBELL	GSFC	E SALTZMAN	NAG 5 6659	176
11	UNIV OF MICHIGAN - ANN ARBOR	A F HASLER	GSFC	R M JOHNSON	NAG 5 8494	313
11	UNIV OF MICHIGAN - ANN ARBOR	D BOGAN	GSFC	A NAGY	NAG 5 8946	314
11	UNIV OF MICHIGAN - ANN ARBOR	D BOGAN	GSFC	J T CLARKE	NAG 5 6883	312
11	UNIV OF MICHIGAN - ANN ARBOR	D BOGAN	GSFC	M R COMBI	NAG 5 8942	314
11	UNIV OF MICHIGAN - ANN ARBOR	D GOLOMBEK	GSFC	K FREESE	NAG 5 10907	315
11	UNIV OF MICHIGAN - ANN ARBOR	D J BOGAN	GSFC	T I GOMBOSI	NAG 5 11041	316
11	UNIV OF MICHIGAN - ANN ARBOR	D K WEST	GSFC	D O RICHSTONE	NAG 5 8238	313
11	UNIV OF MICHIGAN - ANN ARBOR	D K WEST	GSFC	P A HUGHES	NAG 5 7032	313
11	UNIV OF MICHIGAN - ANN ARBOR	D WEST	GSFC	F C ADAMS	NAG 5 2869	311
11	UNIV OF MICHIGAN - ANN ARBOR	D WEST	GSFC	J N BREGMAN	NAG 5 3247	311
11	UNIV OF MICHIGAN - ANN ARBOR	E G STANSBERY	JSC	P O SEITZER	NAG 9 1251	316
11	UNIV OF MICHIGAN - ANN ARBOR	G P LAUGHIN	ARC	F C ADAMS	NCC 2 5442	317
11	UNIV OF MICHIGAN - ANN ARBOR	G SONNEBORN	GSFC	J N BREGMAN	NAG 5 8996	314
11	UNIV OF MICHIGAN - ANN ARBOR	G SONNEBORN	GSFC	J N BREGMAN	NAG 5 9021	314
11	UNIV OF MICHIGAN - ANN ARBOR	G SONNEBORN	GSFC	J T CLARKE	NAG 5 8963	314
11	UNIV OF MICHIGAN - ANN ARBOR	J BERGSTRAHL	GSFC	D R COMBI	NAG 5 6203	312
11	UNIV OF MICHIGAN - ANN ARBOR	J BOYCE	GSFC	D J SCHEERES	NAG 5 8715	313
11	UNIV OF MICHIGAN - ANN ARBOR	J BOYCE	HQ	A N HALLIDAY	NAG 5 7553	313
11	UNIV OF MICHIGAN - ANN ARBOR	J GRANT	GSFC	D J SCHEERES	NAG 5 9017	314
11	UNIV OF MICHIGAN - ANN ARBOR	J J LISSAUER	ARC	F C ADAMS	NGT 2 52257	318
11	UNIV OF MICHIGAN - ANN ARBOR	J LING	GSFC	T ZURBUCHEN	NAG 5 6471	312
11	UNIV OF MICHIGAN - ANN ARBOR	J R BYRD	GSFC	D TARLE	NAG 5 10805	315
11	UNIV OF MICHIGAN - ANN ARBOR	M MELLOTT	GSFC	D R BARKER	NAG 5 8080	313
11	UNIV OF MICHIGAN - ANN ARBOR	R BEEBE	GSFC	D SHYN	NAG 5 7858	313
11	UNIV OF MICHIGAN - ANN ARBOR	R BEEBE	GSFC	T GOMBOSI	NAG 5 6827	312
11	UNIV OF MICHIGAN - ANN ARBOR	R J OLIVERSEN	GSFC	A E EVRARD	NAG 5 8458	313
11	UNIV OF MICHIGAN - ANN ARBOR	R J OLIVERSEN	GSFC	J N BREGMAN	NAG 5 10765	315
11	UNIV OF MICHIGAN - ANN ARBOR	R J OLIVERSEN	GSFC	J N BREGMAN	NAG 5 10806	315
11	UNIV OF MICHIGAN - ANN ARBOR	R MUSHOTZKY	GSFC	J N BREGMAN	NAG 5 9980	315
11	UNIV OF MICHIGAN - ANN ARBOR	R MUSHOTZKY	GSFC	J N BREGMAN	NAG 5 9981	315
11	UNIV OF MICHIGAN - ANN ARBOR	R OLIVERSEN	GSFC	M ALLER	NAG 5 9162	314
11	UNIV OF MICHIGAN - ANN ARBOR	T MORGAN	GSFC	D J SCHEERES	NAG 5 8993	314
11	UNIV OF MICHIGAN - ANN ARBOR	T MORGAN	GSFC	D M BERNSTEIN	NAG 5 7860	313
11	UNIV OF MISSOURI - COLUMBIA	D WEST	GSFC	J BURNS	NAG 5 6772	330
11	UNIV OF NEBRASKA - LINCOLN	N WHITE	GSFC	M GASKELL	NAG 5 6506	340
11	UNIV OF NEVADA - LAS VEGAS	D VITAGLIANO	GSFC	D WEISTROP	NAS 5 31231	342
11	UNIV OF NEVADA - LAS VEGAS	H HASAN	GSFC	V H KWONG	NAG 5 6727	342
11	UNIV OF NEVADA - RENO	J BOYCE	GSFC	R SCHULTZ	NAG 5 8267	342
11	UNIV OF NEVADA - RENO	P ROGERS	GSFC	R SCHULTZ	NAG 5 6881	342
11	UNIV OF NEW HAMPSHIRE - DURHAM	B A MERRITT	WFF	J M RYAN	NAG 5 5212	345
11	UNIV OF NEW HAMPSHIRE - DURHAM	D C LING	GSFC	D A LEE	NAG 5 7792	347
11	UNIV OF NEW HAMPSHIRE - DURHAM	D EVANS	GSFC	V K JORDANOVA	NAG 5 7368	346
11	UNIV OF NEW HAMPSHIRE - DURHAM	G MUCKLOW	GSFC	J QUINN	NAG 5 8733	347



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF NEW HAMPSHIRE - DURHAM	J LING	GSFC	P A ISENBERG	NAG 5 7097	346
11	UNIV OF NEW HAMPSHIRE - DURHAM	J NORRIS	GSFC	J RYAN	NAS 5 26645	349
11	UNIV OF NEW HAMPSHIRE - DURHAM	J P NORRIS	GSFC	J RYAN	NAG 5 9685	348
11	UNIV OF NEW HAMPSHIRE - DURHAM	J P NORRIS	GSFC	M L MCCONNELL	NAG 5 9689	348
11	UNIV OF NEW HAMPSHIRE - DURHAM	J P NORRIS	GSFC	M MCCONNELL	NAG 5 8656	347
11	UNIV OF NEW HAMPSHIRE - DURHAM	J P NORRIS	GSFC	W VESTRAND	NAG 5 3671	345
11	UNIV OF NEW HAMPSHIRE - DURHAM	L ZANETTI	GSFC	D A LYNCH	NAG 5 7798	347
11	UNIV OF NEW HAMPSHIRE - DURHAM	T E MOORE	GSFC	J M QUINN	NCC 5 499	349
11	UNIV OF NEW HAMPSHIRE - DURHAM	W J WAGNER	GSFC	D G FORBES	NAG 5 4856	345
11	UNIV OF NEW HAMPSHIRE - DURHAM	W WAGNER	GSFC	J M RYAN	NAG 5 8486	347
11	UNIV OF NEW MEXICO-ALBUQUERQUE	J BOYCE	GSFC	A BREARLEY	NAG 5 9798	365
11	UNIV OF NEW MEXICO-ALBUQUERQUE	J BOYCE	GSFC	D J BREARLEY	NAG 5 4619	364
11	UNIV OF NEW MEXICO-ALBUQUERQUE	J BOYCE	GSFC	J J PAPIKE	NAG 5 9463	365
11	UNIV OF NEW MEXICO-ALBUQUERQUE	J M BOYCE	GSFC	A J BREARLEY	NAG 5 4935	364
11	UNIV OF NEW MEXICO-ALBUQUERQUE	J M BOYCE	GSFC	D J RIETMEIJER	NAG 5 4441	364
11	UNIV OF NEW MEXICO-ALBUQUERQUE	L ARMENDARIZ	JSC	J D TORRES	NAG 9 1042	366
11	UNIV OF NEW MEXICO-ALBUQUERQUE	R J OLIVERSEN	GSFC	M LEDLOW	NAG 5 6739	364
11	UNIV OF NOTRE DAME	J BOYCE	HQ	D BENNETT	NAG 5 4573	221
11	UNIV OF NOTRE DAME	JBOYCE	HQ	D R NEAL	NAG 5 8099	221
11	UNIV OF NOTRE DAME	R J OLIVERSEN	GSFC	P GARNAVICH	NAG 5 9364	221
11	UNIV OF OKLAHOMA - NORMAN	D K WEST	GSFC	E A BARON	NAG 5 3505	429
11	UNIV OF OKLAHOMA - NORMAN	G SONNEBORN	GSFC	K M LEIGHLY	NAG 5 10366	430
11	UNIV OF OKLAHOMA - NORMAN	R J OLIVERSEN	GSFC	D BRANCH	NAG 5 9165	429
11	UNIV OF OKLAHOMA - NORMAN	R J OLIVERSEN	GSFC	K M LEIGHLY	NAG 5 9745	429
11	UNIV OF OKLAHOMA - NORMAN	R J OLIVERSEN	GSFC	K M LEIGHLY	NAG 5 10171	430
11	UNIV OF OKLAHOMA - NORMAN	R MUSHOTZKY	GSFC	K M LEIGHLY	NAG 5 9991	429
11	UNIV OF OREGON - EUGENE	D GOLOMBEK	GSFC	D SCHOMBERT	NAG 5 6109	435
11	UNIV OF OREGON - EUGENE	R J OLIVERSEN	GSFC	J IMAMURA	NAG 5 10709	435
11	UNIV OF OREGON - EUGENE	R K OLIVERSEN	GSFC	J IMAMURA	NAG 5 8505	435
11	UNIV OF PENNSYLVANIA	G STRINGFELLOW	GSFC	M DEVLIN	NAG 5 9229	453
11	UNIV OF PENNSYLVANIA	J BOYCE	GSFC	C ALCOCK	NAG 5 10731	453
11	UNIV OF PENNSYLVANIA	R J OLIVERSEN	GSFC	B JAIN	NAG 5 10923	453
11	UNIV OF PENNSYLVANIA	R J OLIVERSEN	GSFC	B JAIN	NAG 5 10924	453
11	UNIV OF PENNSYLVANIA	R J OLIVERSEN	GSFC	M TEGMARK	NAG 5 11099	453
11	UNIV OF PENNSYLVANIA	R OLIVERSEN	GSFC	M TEGMARK	NAG 5 9194	453
11	UNIV OF PITTSBURGH	A NURRIDIN	HQ	R SCHULTE-LADBECK	NGT 5 50174	456
11	UNIV OF PITTSBURGH	B BETTS	GSFC	A CONNOLLY	NAG 5 8546	455
11	UNIV OF PITTSBURGH	B BETTS	GSFC	B W STEWART	NAG 5 8531	455
11	UNIV OF PITTSBURGH	D K WEST	GSFC	D A TURNSHEK	NAG 5 7930	454
11	UNIV OF PITTSBURGH	D K WEST	GSFC	J D HILLIER	NAG 5 8211	454
11	UNIV OF PITTSBURGH	G SONNEBORN	GSFC	J D HILLIER	NAG 5 10377	455
11	UNIV OF PITTSBURGH	G SONNEBORN	GSFC	J D HILLIER	NAG 5 10378	455
11	UNIV OF PITTSBURGH	J BREDEKAMP	GSFC	A CONNOLLY	NAG 5 9399	455
11	UNIV OF PITTSBURGH	J M BOYCE	GSFC	G GATEWOOD	NAG 5 10628	455
11	UNIV OF PITTSBURGH	S HEAP	GSFC	D HILLIER	NAG 5 9836	455
11	UNIV OF ROCHESTER	C R MCCREIGHT	ARC	W J FORREST	NAG 2 1452	393
11	UNIV OF ROCHESTER	G MUCKLOW	GSFC	J L PIPHER	NAG 5 8642	393
11	UNIV OF ROCHESTER	G STRINGFELLOW	GSFC	D M WATSON	NAG 5 4976	393
11	UNIV OF ROCHESTER	G STRINGFELLOW	GSFC	J L PIPHER	NAG 5 6267	393
11	UNIV OF ROCHESTER	M GREENHOUSE	GSFC	D J FORREST	NAG 5 10429	394
11	UNIV OF ROCHESTER	R K OLIVERSEN	GSFC	A FRANK	NAG 5 8428	393
11	UNIV OF ROCHESTER	W J WAGNER	GSFC	D H THOMAS	NAG 5 6119	393
11	UNIV OF SOUTHERN CALIFORNIA	D BOGAN	GSFC	D SHEMANSKY	NAG 5 8939	117
11	UNIV OF SOUTHERN CALIFORNIA	D K WEST	GSFC	G J PETERS	NAG 5 3429	116
11	UNIV OF SOUTHERN CALIFORNIA	D K WEST	GSFC	G PETERS	NAG 5 7222	116
11	UNIV OF SOUTHERN CALIFORNIA	D K WEST	GSFC	G PETERS	NAG 5 8367	117
11	UNIV OF SOUTHERN CALIFORNIA	G SONNEBORN	GSFC	D E SHEMANSKY	NAG 5 10930	117
11	UNIV OF SOUTHERN CALIFORNIA	G SONNEBORN	GSFC	G J PETERS	NAG 5 8978	117
11	UNIV OF SOUTHERN CALIFORNIA	J GURMAN	GSFC	E J RHODES	NAG 5 8021	116
11	UNIV OF SOUTHERN CALIFORNIA	J LING	GSFC	M A GRUNTMAN	NAG 5 6966	116
11	UNIV OF SOUTHERN CALIFORNIA	R BEEBE	GSFC	D JUDGE	NAG 5 8274	116
11	UNIV OF SOUTHERN CALIFORNIA	R J OLIVERSEN	GSFC	G J PETERS	NAG 5 4488	116
11	UNIV OF SOUTHERN CALIFORNIA	R J OLIVERSEN	GSFC	G J PETERS	NAG 5 7117	116
11	UNIV OF SOUTHERN CALIFORNIA	R J OLIVERSEN	GSFC	G PETERS	NAG 5 9124	117
11	UNIV OF SOUTHERN CALIFORNIA	R OLIVERSEN	GSFC	G J PETERS	NAG 5 2313	115
11	UNIV OF SOUTHERN CALIFORNIA	R POLIDAN	GSFC	G J PETERS	NAG 5 6696	116

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF SOUTHERN CALIFORNIA	W WAGNER	GSFC	D L JUDGE	NAG 5 7147	116
11	UNIV OF SOUTHERN CALIFORNIA	W WAGNER	GSFC	E J RHODES	NAG 5 8545	117
11	UNIV OF SOUTHERN MISSISSIPPI	M MEYER	GSFC	F HUANG	NAG 5 10668	329
11	UNIV OF TENNESSEE - KNOXVILLE	J BOYCE	GSFC	D V MCSWEEN	NAG 5 4541	470
11	UNIV OF TENNESSEE - KNOXVILLE	J BOYCE	GSFC	H MCSWEEN	NAG 5 10525	470
11	UNIV OF TENNESSEE - KNOXVILLE	J BOYCE	GSFC	J MOERSCH	NAG 5 10635	470
11	UNIV OF TENNESSEE - KNOXVILLE	J BOYCE	GSFC	L A TAYLOR	NAG 5 9158	470
11	UNIV OF TENNESSEE - KNOXVILLE	J BOYCE	GSFC	L A TAYLOR	NAG 5 10414	470
11	UNIV OF TENNESSEE - KNOXVILLE	J BOYCE	GSFC	L TAYLOR	NAG 5 10794	470
11	UNIV OF TENNESSEE - KNOXVILLE	J BOYCE	GSFC	N THONNARD	NAG 5 10582	470
11	UNIV OF TENNESSEE - KNOXVILLE	J BOYCE	HQ	D A TAYLOR	NAG 5 4842	470
11	UNIV OF TENNESSEE - KNOXVILLE	J GRANT	GSFC	D BRITT	NAG 5 8926	470
11	UNIV OF TENNESSEE - KNOXVILLE	J M BOYCE	GSFC	J E MOERSCH	NAG 5 11201	471
11	UNIV OF TENNESSEE - KNOXVILLE	M MEYER	GSFC	J E MOERSH	NAG 5 10788	470
11	UNIV OF TENNESSEE - KNOXVILLE	M MEYER	GSFC	L KAH	NAG 5 10666	470
11	UNIV OF TENNESSEE - KNOXVILLE	R J OLIVERSEN	GSFC	A MEZZACAPPA	NAG 5 8405	470
11	UNIV OF TENNESSEE - KNOXVILLE	R J OLIVERSEN	GSFC	L A TAYLOR	NAG 5 8726	470
11	UNIV OF TENNESSEE - KNOXVILLE	T MORGAN	GSFC	D T BRITT	NAG 5 9061	470
11	UNIV OF TENN SPACE INST - TULLAHOMA	J BOYCE	HQ	D Y MCSWEEN	NAG 5 4387	472
11	UNIV OF TEXAS - AUSTIN	D BOGAN	GSFC	D GOLDSTEIN	NAG 5 8143	494
11	UNIV OF TEXAS - AUSTIN	D GOLOMBEK	GSFC	C WHEELER	NAG 5 9302	495
11	UNIV OF TEXAS - AUSTIN	D K WEST	GSFC	B J WILLS	NAG 5 3431	492
11	UNIV OF TEXAS - AUSTIN	D K WEST	GSFC	C J WHEELER	NAG 5 3930	492
11	UNIV OF TEXAS - AUSTIN	D K WEST	GSFC	E ROBINSON	NAG 5 7002	493
11	UNIV OF TEXAS - AUSTIN	D K WEST	GSFC	P HOEFELICH	NAG 5 7937	494
11	UNIV OF TEXAS - AUSTIN	D K WEST	GSFC	P R SHAPIRO	NAG 5 7363	493
11	UNIV OF TEXAS - AUSTIN	D K WEST	GSFC	P R SHAPIRO	NAG 5 7821	493
11	UNIV OF TEXAS - AUSTIN	D K WEST	GSFC	R C DUNCAN	NAG 5 8381	494
11	UNIV OF TEXAS - AUSTIN	D WEST	GSFC	D L LAMBERT	NAG 5 3348	492
11	UNIV OF TEXAS - AUSTIN	E RUITBERG	GSFC	D L LAMBERT	NAG 5 1616	492
11	UNIV OF TEXAS - AUSTIN	G STRINGFELLOW	GSFC	D JAFFE	NAG 5 4209	492
11	UNIV OF TEXAS - AUSTIN	G STRINGFELLOW	GSFC	D JAFFE	NAG 5 9230	494
11	UNIV OF TEXAS - AUSTIN	H DINERSTEIN	GSFC	G SONNEBORN	NAG 5 9239	494
11	UNIV OF TEXAS - AUSTIN	H HASAN	GSFC	D J SHELLLUS	NAG 5 3649	492
11	UNIV OF TEXAS - AUSTIN	H HASAN	GSFC	P J SHELUS	NAG 5 6728	493
11	UNIV OF TEXAS - AUSTIN	H V FREY	GSFC	D P CHAMBERS	NAG 5 9144	494
11	UNIV OF TEXAS - AUSTIN	J BERGSTRALH	GSFC	D L COCHRAN	NAG 5 4208	492
11	UNIV OF TEXAS - AUSTIN	J BERGSTRALH	GSFC	D N BASH	NAG 5 3786	492
11	UNIV OF TEXAS - AUSTIN	J BOYCE	GSFC	D B GOLDSTEIN	NAG 5 8704	494
11	UNIV OF TEXAS - AUSTIN	J BOYCE	GSFC	D D COCHRAN	NAG 5 4384	493
11	UNIV OF TEXAS - AUSTIN	J BOYCE	GSFC	N J EVANS	NAG 5 10488	495
11	UNIV OF TEXAS - AUSTIN	J BOYCE	GSFC	P HARVEY	NAG 5 10458	495
11	UNIV OF TEXAS - AUSTIN	J BOYCE	GSFC	W COCHRAN	NAG 5 9227	494
11	UNIV OF TEXAS - AUSTIN	J BOYCE	GSFC	W P COCHRAN	NAG 5 8301	494
11	UNIV OF TEXAS - AUSTIN	J BOYCE	HQ	N J EVANS	NAG 5 7203	493
11	UNIV OF TEXAS - AUSTIN	J BREDEKAMP	GSFC	D E WINGET	NAG 5 9321	495
11	UNIV OF TEXAS - AUSTIN	J JELETIC	GSFC	W H JEFFERYS	NAG 5 1603	492
11	UNIV OF TEXAS - AUSTIN	L KALUZIENSKI	GSFC	J C WHEELER	NAG 5 10121	495
11	UNIV OF TEXAS - AUSTIN	L QUAIFE	ARC	H L DINERSTEIN	NAG 2 1053	491
11	UNIV OF TEXAS - AUSTIN	R J OLIVERSEN	GSFC	H MARTEL	NAG 5 10826	495
11	UNIV OF TEXAS - AUSTIN	R J OLIVERSEN	GSFC	J WHEELER	NAG 5 10766	495
11	UNIV OF TEXAS - AUSTIN	R J OLIVERSEN	GSFC	J WHEELER	NAG 5 10767	495
11	UNIV OF TEXAS - AUSTIN	R J OLIVERSEN	GSFC	P R SHAPIRO	NAG 5 10825	495
11	UNIV OF TEXAS - AUSTIN	T H MORGAN	GSFC	A L COCHRAN	NAG 5 9003	494
11	UNIV OF TEXAS - AUSTIN	T MORGAN	GSFC	D S BARKER	NAG 5 6368	493
11	UNIV OF TEXAS - AUSTIN	T MORGAN	GSFC	D S BARKER	NAG 5 7791	493
11	UNIV OF TEXAS - AUSTIN	T MORGAN	GSFC	L TRAFTON	NAG 5 10435	495
11	UNIV OF TEXAS - DALLAS	J BYRD	GSFC	R A HEELIS	NAG 5 01068	499
11	UNIV OF TEXAS - EL PASO	J N CUZZI	ARC	S M ROACH	NCC 2 5441	500
11	UNIV OF TEXAS - EL PASO	P SAKIMOTO	GSFC	R LOPEZ	NAG 5 10151	499
11	UNIV OF TEXAS - EL PASO	R J OLIVERSEN	GSFC	V E SMITH	NAG 5 9213	499
11	UNIV OF TOLEDO	D K WEST	GSFC	J E BJORKMAN	NAG 5 8794	426
11	UNIV OF TOLEDO	D K WEST	GSFC	K BJORKMAN	NAG 5 3447	425
11	UNIV OF TOLEDO	D K WEST	GSFC	K S BJORKMAN	NAG 5 8054	426
11	UNIV OF TOLEDO	D K WEST	GSFC	S R FEDERMAN	NAG 5 4957	426
11	UNIV OF TOLEDO	D WEST	GSFC	J E BJORKMAN	NAG 5 3248	425

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF TOLEDO	G SONNEBORN	GSFC	A N WITT	NAG 5 8982	426
11	UNIV OF TOLEDO	G SONNEBORN	GSFC	S R FEDERMAN	NAG 5 8961	426
11	UNIV OF TOLEDO	G SONNEBORN	GSFC	S R FEDERMAN	NAG 5 10305	426
11	UNIV OF TOLEDO	H HASAN	GSFC	D N WITT	NAG 5 3790	425
11	UNIV OF TOLEDO	H HASAN	GSFC	S R FEDERMAN	NAG 5 7754	426
11	UNIV OF TOLEDO	H THRONSON	GSFC	D N WITT	NAG 5 4338	426
11	UNIV OF TOLEDO	J BOYCE	HQ	P B JAMES	NAG 5 8183	426
11	UNIV OF TOLEDO	J LING	GSFC	A WITT	NAG 5 6624	426
11	UNIV OF TOLEDO	R J OLIVERSEN	GSFC	A N WITT	NAG 5 9376	426
11	UNIV OF TOLEDO	R OLIVERSEN	GSFC	A WITT	NAG 5 9202	426
11	UNIV OF UTAH	D K WEST	GSFC	B C BROMLEY	NAG 5 8277	503
11	UNIV OF UTAH	J P NORRIS	GSFC	B J DINGUS	NAG 5 7828	502
11	UNIV OF UTAH	L BARBIER	GSFC	E LOHBER	NAG 5 00120	503
11	UNIV OF UTAH	L M BARBIER	GSFC	E C LOH	NAG 5 3902	502
11	UNIV OF VERMONT	J BOYCE	HQ	T RUSHMER	NAG 5 7247	506
11	UNIV OF VIRGINIA	D BOYCE	GSFC	D E JOHNSON	NAG 5 4283	523
11	UNIV OF VIRGINIA	D K WEST	GSFC	R T ROOD	NAG 5 7104	524
11	UNIV OF VIRGINIA	D SENSKE	GSFC	R A BARAGIOLA	NAG 5 10436	526
11	UNIV OF VIRGINIA	G SONNEBORN	GSFC	E M MURPHY	NAG 5 10250	526
11	UNIV OF VIRGINIA	G SONNEBORN	GSFC	T X THUAN	NAG 5 8954	525
11	UNIV OF VIRGINIA	G SONNEBORN	GSFC	T X THUAN	NAG 5 10341	526
11	UNIV OF VIRGINIA	J BOYCE	HQ	D A CHEVALIER	NAG 5 8088	524
11	UNIV OF VIRGINIA	J BOYCE	HQ	R A BARAGIOLA	NAG 5 8444	524
11	UNIV OF VIRGINIA	J BOYCE	HQ	S BALBUS	NAG 5 7500	524
11	UNIV OF VIRGINIA	J M BOYCE	GSFC	S BALBUS	NAG 5 10655	526
11	UNIV OF VIRGINIA	R BEEBE	GSFC	R BARAGIOLA	NAG 5 6828	523
11	UNIV OF VIRGINIA	R BEEBE	GSFC	R E JOHNSON	NAG 5 7749	524
11	UNIV OF VIRGINIA	R F MUSHOTZKY	GSFC	T X THUAN	NAG 5 9900	525
11	UNIV OF VIRGINIA	R J OLIVERSEN	GSFC	R A CHEVALIER	NAG 5 8130	524
11	UNIV OF VIRGINIA	R J OLIVERSEN	GSFC	R A CHEVALIER	NAG 5 8232	524
11	UNIV OF VIRGINIA	R K OLIVERSEN	GSFC	R O	NAG 5 6403	523
11	UNIV OF VIRGINIA	R MUSHOTZKY	GSFC	C L SARAZIN	NAG 5 10074	525
11	UNIV OF VIRGINIA	R MUSHOTZKY	GSFC	C L SARAZIN	NAG 5 10075	525
11	UNIV OF VIRGINIA	R OLIVERSEN	GSFC	J HAWLEY	NAG 5 9266	525
11	UNIV OF WASHINGTON	D H WOODEN	ARC	D BROWNLEE	NGT 2 52219	542
11	UNIV OF WASHINGTON	D K WEST	GSFC	P SZKODY	NAG 5 8374	538
11	UNIV OF WASHINGTON	D K WEST	GSFC	S F ANDERSON	NAG 5 7932	537
11	UNIV OF WASHINGTON	D K WEST	GSFC	T QUIN	NAG 5 4242	535
11	UNIV OF WASHINGTON	D WEST	GSFC	G R LAKE	NAG 5 3023	535
11	UNIV OF WASHINGTON	D WEST	GSFC	P SZKODY	NAG 5 3345	535
11	UNIV OF WASHINGTON	G SONNEBORN	GSFC	E H BOHM-VITENSE	NAG 5 8966	538
11	UNIV OF WASHINGTON	G SONNEBORN	GSFC	P SZKODY	NAG 5 8981	538
11	UNIV OF WASHINGTON	G SONNEBORN	GSFC	P SZKODY	NAG 5 10246	539
11	UNIV OF WASHINGTON	G SONNEBORN	GSFC	P SZKODY	NAG 5 10343	539
11	UNIV OF WASHINGTON	G SONNEBORN	GSFC	P SZKODY	NAG 5 10400	539
11	UNIV OF WASHINGTON	J BOYCE	GSFC	D E BROWNLEE	NAG 5 4473	535
11	UNIV OF WASHINGTON	J BOYCE	GSFC	D S MCCALLUM	NAG 5 4540	535
11	UNIV OF WASHINGTON	J FISCHER	GSFC	G LAKE	NAG 5 6626	536
11	UNIV OF WASHINGTON	J SHARBER	GSFC	R M WINGLEE	NAG 5 8089	537
11	UNIV OF WASHINGTON	J SPANN	GSFC	R M WINGLEE	NAG 5 10962	540
11	UNIV OF WASHINGTON	J SWANK	GSFC	P SZKODY	NAG 5 4791	535
11	UNIV OF WASHINGTON	J SWANK	GSFC	P SZKODY	NAG 5 7278	536
11	UNIV OF WASHINGTON	L KALUZIENSKI	GSFC	B MARGON	NAG 5 7330	537
11	UNIV OF WASHINGTON	M DAHL	HQ	D E BROWNLEE	NAG 7 99001	540
11	UNIV OF WASHINGTON	N WHITE	GSFC	P SZKODY	NAG 5 2767	534
11	UNIV OF WASHINGTON	P CRANE	GSFC	J GUNDLACH	NAG 5 9086	538
11	UNIV OF WASHINGTON	P HUNTER	GSFC	G LAKE	NAG 5 8164	537
11	UNIV OF WASHINGTON	R J LAWRENCE	GSFC	R A HOUZE	NAG 5 9668	538
11	UNIV OF WASHINGTON	R J OLIVERSEN	GSFC	P SZKODY	NAG 5 6688	536
11	UNIV OF WASHINGTON	R OLIVERSEN	GSFC	P SZKODY	NAG 5 3121	535
11	UNIV OF WISCONSIN - MADISON	B BETTS	GSFC	L SROMOVSKY	NAG 5 10729	552
11	UNIV OF WISCONSIN - MADISON	D F MUSHOTZKY	GSFC	H A KOBULNICKY	NAG 5 9931	551
11	UNIV OF WISCONSIN - MADISON	D K WEST	GSFC	B P WAKKER	NAG 5 7444	549
11	UNIV OF WISCONSIN - MADISON	D K WEST	GSFC	D P COX	NAG 5 8417	550
11	UNIV OF WISCONSIN - MADISON	D K WEST	GSFC	H B OGELMAN	NAG 5 8333	550
11	UNIV OF WISCONSIN - MADISON	D K WEST	GSFC	K H NORDSIECK	NAG 5 7931	549

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	UNIV OF WISCONSIN - MADISON	D K WEST	GSFC	R D MATHIEU	NAG 5 8280	550
11	UNIV OF WISCONSIN - MADISON	D K WEST	GSFC	W T SANDERS	NAG 5 3524	548
11	UNIV OF WISCONSIN - MADISON	D WEST	GSFC	J P CASSINELLI	NAG 5 2854	548
11	UNIV OF WISCONSIN - MADISON	D WEST	GSFC	M BERSHADY	NAG 5 6032	548
11	UNIV OF WISCONSIN - MADISON	E S CHENG	GSFC	P TIMBE	NAG 5 9567	551
11	UNIV OF WISCONSIN - MADISON	G SONNEBORN	GSFC	B P WAKKER	NAG 5 9024	550
11	UNIV OF WISCONSIN - MADISON	G SONNEBORN	GSFC	R BENJAMIN	NAG 5 8967	550
11	UNIV OF WISCONSIN - MADISON	H D VITAGLIANO	GSFC	F ROESLER	NAS 5 30131	553
11	UNIV OF WISCONSIN - MADISON	H HASAN	GSFC	J LAWLER	NAG 5 6833	549
11	UNIV OF WISCONSIN - MADISON	J SHARBER	GSFC	P WANG	NAG 5 7605	549
11	UNIV OF WISCONSIN - MADISON	M S BURRELL	GSFC	K H NORDSIECK	NGT 5 115	554
11	UNIV OF WISCONSIN - MADISON	M S BURRELL	GSFC	P TIMBIE	NGT 5 46	554
11	UNIV OF WISCONSIN - MADISON	P CRANE	GSFC	J E LAWLER	NAG 5 10196	551
11	UNIV OF WISCONSIN - MADISON	R BEEBE	GSFC	D M HARRIS	NAG 5 7952	549
11	UNIV OF WISCONSIN - MADISON	R BEEBE	GSFC	L A SROMOVSKY	NAG 5 8057	549
11	UNIV OF WISCONSIN - MADISON	R J OLIVERSEN	GSFC	B P WAKKER	NAG 5 9179	550
11	UNIV OF WISCONSIN - MADISON	R J OLIVERSEN	GSFC	H A KOBULNICKY	NAG 5 10770	552
11	UNIV OF WISCONSIN - MADISON	R J OLIVERSEN	GSFC	J P CASSINELLI	NAG 5 11221	552
11	UNIV OF WISCONSIN - MADISON	R L KELLEY	GSFC	D MCCAMMON	NAG 5 8652	550
11	UNIV OF WISCONSIN - MADISON	R MUSHOTZKY	GSFC	M ORIO	NAG 5 10415	552
11	UNIV OF WISCONSIN - MADISON	R OLIVERSEN	GSFC	F SCHERB	NAG 5 6546	548
11	UNIV OF WISCONSIN - MADISON	R OLIVERSEN	GSFC	J CASSINELLI	NAG 5 9226	551
11	UNIV OF WISCONSIN - MADISON	T MORGAN	GSFC	F SCHERB	NAG 5 6787	549
11	UNIV OF WISCONSIN - MADISON	T MORGAN	GSFC	L A SROMOVSKY	NAG 5 6788	549
11	UNIV OF WYOMING	J P NORRIS	GSFC	R CANTERNA	NAG 5 11191	556
11	UNIV OF WYOMING	T MORGAN	GSFC	D R HOWELL	NAG 5 3935	555
11	UTAH STATE UNIV	G SCHWEMMER	GSFC	T D WILKERSON	NCC 5 219	505
11	UTAH STATE UNIV	J BOYCE	GSFC	B G FEJER	NAG 5 8638	504
11	UTAH STATE UNIV	J M GREBOWSKY	GSFC	R W SCHUNK	NAG 5 8227	504
11	VA POLYTECH INST & ST UNIV	J BOYCE	GSFC	R BODNAR	NAG 5 10733	531
11	VA POLYTECH INST & ST UNIV	J BOYCE	HQ	R J BODNAR	NAG 5 8343	530
11	VANDERBILT UNIV	J BOYCE	HQ	D A WEINTRAUB	NAG 5 8295	472
11	VANDERBILT UNIV	J M BOYCE	GSFC	D WEINTRAUB	NAG 5 10572	472
11	VANDERBILT UNIV	R HOFFMAN	GSFC	R CHAPPELL	NAG 5 8618	472
11	VILLANOVA UNIV	D K WEST	GSFC	E FITZPATRICK	NAG 5 7113	456
11	VILLANOVA UNIV	D K WEST	GSFC	E M SION	NAG 5 8388	456
11	VILLANOVA UNIV	G SONNEBORN	GSFC	E F GUINAN	NAG 5 8985	456
11	VILLANOVA UNIV	G SONNEBORN	GSFC	E F GUINAN	NAG 5 10369	456
11	VILLANOVA UNIV	G SONNEBORN	GSFC	E F GUINAN	NAG 5 10387	457
11	VILLANOVA UNIV	G SONNEBORN	GSFC	E L FITPATRICK	NAG 5 10686	457
11	VILLANOVA UNIV	G SONNEBORN	GSFC	E L FITPATRICK	NAG 5 10385	456
11	VILLANOVA UNIV	G SONNEBORN	GSFC	E M SION	NAG 5 10386	456
11	VILLANOVA UNIV	R OLIVERSEN	GSFC	E F GUINAN	NAG 5 3136	456
11	WASHINGTON STATE UNIV	J BOYCE	GSFC	E BROOK	NAG 5 9345	543
11	WASHINGTON UNIV - ST	A NURRIDDI	GSFC	K KELTON	NGT 5 50030	336
11	WASHINGTON UNIV - ST	B BETTS	GSFC	L HASKIN	NAG 5 10703	335
11	WASHINGTON UNIV - ST	B CAMPBELL	GSFC	L HASKIN	NAG 5 7140	334
11	WASHINGTON UNIV - ST	D BOGAN	GSFC	W MCKINNON	NAG 5 8899	334
11	WASHINGTON UNIV - ST	J BOYCE	GSFC	B FEGLEY	NAG 5 10553	335
11	WASHINGTON UNIV - ST	J BOYCE	GSFC	C M HOHENBERG	NAG 5 9442	334
11	WASHINGTON UNIV - ST	J BOYCE	GSFC	D FEGLEY	NAG 5 4323	333
11	WASHINGTON UNIV - ST	J BOYCE	GSFC	F PODOSEK	NAG 5 9449	334
11	WASHINGTON UNIV - ST	J BOYCE	GSFC	J T GLEAVES	NAG 5 8717	334
11	WASHINGTON UNIV - ST	J BOYCE	GSFC	R L KOROTEV	NAG 5 8609	334
11	WASHINGTON UNIV - ST	J BOYCE	GSFC	R M WALKER	NAG 5 8729	334
11	WASHINGTON UNIV - ST	J BOYCE	GSFC	R M WALKER	NAG 5 9801	335
11	WASHINGTON UNIV - ST	J BOYCE	HQ	D A PODOSEK	NAG 5 4098	332
11	WASHINGTON UNIV - ST	J BOYCE	HQ	F PODOSEK	NAG 5 7149	334
11	WASHINGTON UNIV - ST	J BOYCE	HQ	T J BFRNATOWICZ	NAG 5 8336	334
11	WASHINGTON UNIV - ST	J M BOYCE	GSFC	R J PHILLIPS	NAG 5 11202	335
11	WASHINGTON UNIV - ST	J R BYRD	GSFC	W BINNS	NAG 5 10802	335
11	WASHINGTON UNIV - ST	M CHRISTI	MSFC	P L HINK	NCC 8 154	336
11	WASHINGTON UNIV - ST	M MEYER	GSFC	E L SHOCK	NAG 5 7696	334
11	WASHINGTON UNIV - ST	R BEEBE	GSFC	W B MCKINNON	NAG 5 8056	334
11	WELLESLEY COLLEGE	D SENSKE	GSFC	R G FRENCH	NAG 5 10197	304
11	WESLEYAN UNIV	D NAVA	GSFC	D HERBST	NAG 5 4821	146

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	WEST VIRGINIA UNIV	J LING	GSFC	E SCIME	NAG 5 6468	545
11	WESTERN KENTUCKY UNIV	JD ROSENDHAL	GSFC	C H MCGRUDER	NAG 5 8762	232
11	WHITMAN COLLEGE	D WEST	GSFC	U SOFIA	NAG 5 8249	544
11	WHITMAN COLLEGE	G SONNEBORN	GSFC	U SOFIA	NAG 5 9249	544
11	WHITMAN COLLEGE	R POLIDAN	GSFC	U J SOFIA	NAG 5 8248	544
11	WICHITA STATE UNIV	D K WEST	GSFC	D ALEXANDER	NAG 5 3435	230
11	YALE UNIV	D K WEST	GSFC	P COPPI	NAG 5 7074	147
11	YALE UNIV	D K WEST	GSFC	P F DEMARQUE	NAG 5 8406	147
11	YALE UNIV	G MUCKLOW	GSFC	R J SCHOELKOPF	NAG 5 8589	147
11	YALE UNIV	M MEYER	GSFC	R L DORIT	NAG 5 8813	147
11	YALE UNIV	R J OLIVERSEN	GSFC	C BAILYN	NAG 5 6404	147
11	YALE UNIV	R J OLIVERSEN	GSFC	P COPPI	NAG 5 9123	147
11	YALE UNIV	R J OLIVERSEN	GSFC	S ZEPF	NAG 5 9168	147
11	YALE UNIV	R J OLIVERSEN	GSFC	S ZEPF	NAG 5 9651	147
12	ARIZONA STATE UNIV	J BOYCE	GSFC	D LAURETTA	NAG 5 10524	22
12	ARIZONA STATE UNIV	J BOYCE	GSFC	L A LESHIN	NAG 5 10523	22
12	ARIZONA STATE UNIV	M MEYER	GSFC	S PIZZARELLO	NAG 5 9451	21
12	BROWN UNIV	J BOYCE	GSFC	C PIETERS	NAG 5 10469	459
12	CALIFORNIA INST OF TECH	A NURRIDIN	HQ	M OKUMURA	NGT 5 50200	49
12	CALIFORNIA INST OF TECH	D HOLLAND	GSFC	R A MEWALDT	NAG 5 3466	42
12	CALIFORNIA INST OF TECH	J BOYCE	GSFC	D J WASSERBURG	NAG 5 4076	42
12	CALIFORNIA INST OF TECH	J BOYCE	GSFC	E STOLPER	NAG 5 10423	47
12	CALIFORNIA INST OF TECH	J BOYCE	HQ	D J WASSERBURG	NAG 5 4083	42
12	CARNEGIE - MELLON UNIV	B GUYNES	MSFC	R D TILTON	NAG 8 1842	438
12	CARNEGIE - MELLON UNIV	P DOTY	MSFC	G S ROHRER	NAG 8 1674	437
12	CASE WESTERN RESERVE UNIV	D L BRITTON	GRC	D A SCHERSON	NAG 3 2644	407
12	CHARLES COUNTY COMM COLLEGE	J A NUTH	GSFC	G KRAUSE	NCC 5 400	240
12	CLARK ATLANTA UNIV	M A MEADOR	GRC	D PANG	NCC 3 911	181
12	CLARK ATLANTA UNIV	M A MEADOR	GRC	D R BU	NCC 3 910	181
12	CLARK ATLANTA UNIV	M A MEADOR	GRC	E A MINTZ	NAS 3 01201	181
12	CLARKSON UNIV	P DOTY	MSFC	W R WILCOX	NAG 8 1703	369
12	CLEMSON UNIV - CLEMSON	J BOYCE	GSFC	B MEYER	NAG 5 10454	463
12	CLEMSON UNIV - CLEMSON	J W CONNELL	LARC	Y P SUN	NGT 1 01036	463
12	CLEMSON UNIV - CLEMSON	J W CONNELL	LARC	Y P SUN	NGT 1 52238	464
12	CLEMSON UNIV - CLEMSON	J W CONWELL	LARC	Y SUN	NCC 1 01036	463
12	CLEVELAND STATE UNIV	A E HEPP	GRC	D G HEHEMANN	NCC 3 817	411
12	CLEVELAND STATE UNIV	K KUNDU	GRC	D G NEHEMANN	NAG 3 2631	410
12	CLEVELAND STATE UNIV	M J ZEHE	GRC	D W BALL	NAG 3 2607	410
12	CLEVELAND STATE UNIV	S G BAILEY	GRC	J D HARRIS	NCC 3 869	411
12	COLLEGE OF WILLIAM AND MARY	J W CONNELL	LARC	R A ORWOLL	NAG 1 2314	507
12	COLLEGE OF WILLIAM AND MARY	J W CONNELL	LARC	R A ORWOLL	NAG 1 01107	508
12	COLLEGE OF WILLIAM AND MARY	S A THIBEAULT	LARC	R L KIEFER	NCC 1 239	508
12	COLUMBIA UNIV	D J BOGAN	GSFC	R BERSOHN	NAG 5 11049	373
12	ECKERD COLLEGE	M H MOORE	GSFC	R L HUDSON	NAG 5 11097	162
12	GEORGIA SOUTHERN UNIV	J ALLEN	GSFC	R NELSON	NCC 5 254	188
12	HAMPTON UNIV	F SCHMIDLIN	GSFC	D P MCCORMICK	NAG 5 5299	512
12	HAMPTON UNIV	T L ST. CLAIR	LARC	J C WILLIAMS	NAG 1 1941	510
12	HARVARD UNIV	J BOYCE	GSFC	S JACOBSEN	NAG 5 10484	285
12	INDIANA STATE UNIV	D BRITTON	GRC	D W ZWANZIGER	NAG 3 2588	214
12	INDIANA UNIV - BLOOMINGTON	J BOYCE	GSFC	A BASU	NAG 5 10459	215
12	IOWA STATE UNIV	N H HAGEDORN	GRC	S W MARTIN	NAG 3 2540	222
12	IOWA STATE UNIV	P J HALEY	LARC	M S GORDON	NCC 2 5349	224
12	JACKSON STATE UNIV	A POHORILLE	ARC	J LESZCZYNSKI	NCC 2 5398	327
12	KENT STATE UNIV	A F HEPP	GRC	C VARCAS ABURTO	NCC 3 563	413
12	KNOX COLLEGE	J FISHMAN	LARC	L C BUSH	NAG 1 2269	201
12	MICHIGAN STATE UNIV	S G CAMPBELL	GRC	T J PINNAVAIA	NAG 3 2472	307
12	MICHIGAN TECHNOLOGICAL UNIV	J HINKLEY	LARC	L DRZAL	NAG 1 01004	308
12	MONTANA STATE UNIV	M MEYER	GSFC	M G WARD	NAG 5 3652	337
12	MT HOLYOKE COLLEGE	J BOYCE	GSFC	D DYAR	NAG 5 10424	300
12	NY UNIV	S NASH-STEVEN	MSFC	S WILSON	NGT 8 52893	383
12	NORFOLK STATE UNIV	A F HEPP	GRC	S SUN	NAG 3 2289	514
12	NORTHWESTERN UNIV	R S BALDWIN	GRC	D F SHRIVER	NAG 3 2628	202
12	OAKWOOD COLLEGE	W BRANTLEY	MSFC	A VOLKOV	NAG 8 1734	4
12	OLD DOMINION UNIV	B J JENSEN	LARC	K L WISE	NGT 1 52124	520
12	OLD DOMINION UNIV	H NEEDLEMAN	GSFC	A PIERCE	NAG 5 5131	518
12	PRAIRIE VIEW A&M UNIV	M A MEADOR	GRC	L E CARSON-ISABELLE	NCC 3 577	476

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
12	PRINCETON UNIV	D NOENER	MSFC	D SAVILLE	NAG 8 1368	354
12	PRINCETON UNIV	E J SIOCHI	LARC	I A AKSAY	NCC 1 01010	355
12	PRINCETON UNIV	T L STCLAIR	WFF	A AKSAY	NAG 1 01010	352
12	RENSSELAER POLYTECH INST	D LARKIN	GRC	D INTERRANTE	NAG 3 2525	384
12	RENSSELAER POLYTECH INST	D LARKIN	GRC	L V INTERRANTE	NAG 3 2304	384
12	RICE UNIV	G K HORIUCHI	JSC	R C SMALLLEY	NCC 9 77	479
12	RICE UNIV	K C CHUANG	GRC	A BARRON	NAG 3 2365	477
12	ROCHESTER INST OF TECH	N HAGEDORN	GRC	D P RAFFAELLE	NAG 3 2484	385
12	RUTGERS ST UNIV N	J BOYCE	GSFC	R HEWINS	NAG 5 10494	358
12	RUTGERS ST UNIV N	N J JOHNSON	LARC	M JAFFE	NAG 1 2182	356
12	SAN FRANCISCO STATE UNIV	T L ROUSH	ARC	J B ORENBERG	NCC 2 5324	55
12	SAN JOSE STATE UNIV	L T IRACI	ARC	P J HAMILL	NCC 2 5452	58
12	SOUTHWEST TEXAS STATE UNIV	A K ST. CLAIR	LARC	P E CASSIDY	NCC 1 324	480
12	SOUTHWEST TEXAS STATE UNIV	D M STOAKLEY	LARC	P E CASSIDY	NCC 1 376	480
12	SOUTHWEST TEXAS STATE UNIV	D M STOAKLEY	LARC	P E CASSIDY	NCC 1 01033	480
12	STANFORD UNIV	H PARTIDGE	ARC	K J CHO	NCC 2 5400	65
12	STANFORD UNIV	H PATRIDGE	ARC	Z X SHEN	NCC 2 5446	66
12	STANFORD UNIV	J M BOYCE	GSFC	R ZARE	NAG 5 10544	63
12	STANFORD UNIV	P DOTY	MSFC	G M HOMSY	NAG 8 1692	63
12	STANFORD UNIV	T R GOVINDAN	ARC	H DAI	NCC 2 5270	65
12	STATE UNIV OF NY - STONY BROOK	J BOYCE	GSFC	S MCLENNAN	NAG 5 10506	390
12	STATE UNIV OF NY - STONY BROOK	P DOTY	MSFC	M RAFAILOVICH	NAG 8 1698	391
12	TEXAS A&M UNIV	R BALDWIN	GRC	D APPLEBY	NAG 3 2617	480
12	TEXAS SOUTHERN UNIV	C B AGEE	JSC	B L WILSON	NCC 9 80	485
12	THE CATHOLIC UNIV OF AMERICA	J E ALLEN	GSFC	T THORN	NCC 5 452	161
12	THE CATHOLIC UNIV OF AMERICA	L J STIEF	GSFC	F L NESBITT	NCC 5 68	160
12	TUFTS UNIV	N HAGEDORN	GRC	D B GOLDNER	NAG 3 2563	300
12	UNIV HOUSTON-HOUSTON	A NURRIDIN	HQ	G E FOX	NGT 5 50182	488
12	UNIV HOUSTON-HOUSTON	D F BLAKE	ARC	A D HAYMET	NCC 2 5396	487
12	UNIV OF MINN	H C NEDDLEMAN	GSFC	C J WADDINGTON	NAG 5 5113	321
12	UNIV OF MINN	NH HAGEDORN	GRC	W H SMYRL	NAG 3 2600	321
12	UNIV OF AKRON	F J MONTEGANI	GRC	D PERRY	NGT 3 52364	422
12	UNIV OF AKRON	M A MEADOR	GRC	F W HARRIS	NAG 3 2572	421
12	UNIV OF AKRON	M MEADOR	GRC	C PUGH	NCC 3 794	422
12	UNIV OF AKRON	M MEADOR	GRC	F W HARRIS	NCC 3 802	422
12	UNIV OF ALABAMA - HUNTSVILLE	J CAMPBELL	MSFC	L SMALLLEY	NAG 8 1403	11
12	UNIV OF ALABAMA - UNIV	D E LUECK	KSC	R D ROGERS	NAG10 305	16
12	UNIV OF ARIZONA	J BOYCE	GSFC	D LAURETTA	NAG 5 11355	36
12	UNIV OF ARIZONA	J BOYCE	GSFC	J GANGULY	NAG 5 10486	34
12	UNIV OF ARIZONA	J BOYCE	HQ	D J DRAKE	NAG 5 4084	26
12	UNIV OF ARK MAIN CAMP - FAYETTEVILLE	J BOYCE	GSFC	P BENOIT	NAG 5 10736	41
12	UNIV OF CALIFORNIA - BERKELEY	J F BOYCE	GSFC	D NISHIIZUMI	NAG 5 4992	69
12	UNIV OF CALIFORNIA - BERKELEY	M MEYER	GSFC	J BLANK	NAG 5 9260	73
12	UNIV OF CALIFORNIA - BERKELEY	R F PFAFF, JR.	GSFC	C W CARLSON	NAG 5 3596	69
12	UNIV OF CALIFORNIA - IRVINE	D HUBBARD	MSFC	P TABOREK	NAG 8 1437	85
12	UNIV OF CALIFORNIA - LOS ANGELES	D F NAVA	GSFC	D T WASSON	NAG 5 4331	89
12	UNIV OF CALIFORNIA - LOS ANGELES	D NAVA	GSFC	J WASSON	NAG 5 10421	93
12	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	D H WARREN	NAG 5 4215	89
12	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	P WARREN	NAG 5 10490	93
12	UNIV OF CALIFORNIA - SAN FRANCISCO	M H NEW	ARC	M A WILSON	NCC 2 1126	105
12	UNIV OF CALIFORNIA - SAN FRANCISCO	R L JAFFE	ARC	M A WILSON	NCC 2 5294	105
12	UNIV OF CALIFORNIA - SANTA BARBARA	E J SIOCHI	LARC	D E MORSE	NAG 1 01003	105
12	UNIV OF CALIFORNIA - SANTA CRUZ	A POHORILLE	ARC	A KANAVARIOTI	NCC 2 5309	113
12	UNIV OF CHICAGO	J BOYCE	GSFC	D N CLAYTON	NAG 5 3986	204
12	UNIV OF CHICAGO	J BOYCE	GSFC	R CLAYTON	NAG 5 10634	206
12	UNIV OF COLORADO - BOULDER	P L LOYSELLE	GRC	J MICHL	NAG 3 2651	124
12	UNIV OF DELAWARE	M A MEADOR	GRC	G R PALMESE	NCC 3 784	150
12	UNIV OF FLORIDA	B T UPCHURCH	LARC	K S SCHANZE	NAG 1 1809	171
12	UNIV OF FLORIDA	F ADAMS	KSC	R A YOST	NGT10 52626	176
12	UNIV OF FLORIDA	R R ANTELIFF	LARC	K S SCHANZE	NAG 1 2161	171
12	UNIV OF HAWAII AT MANOA - HONOLULU	D NAVA	GSFC	D KEIL	NAG 5 4212	192
12	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	T MCCORD	NAG 5 10514	197
12	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R S OKQJIE	GRC	I ADESIDA	NAG 3 2599	210
12	UNIV OF IOWA	B GUYNES	MSFC	J M WIENCEK	NAG 8 1386	227
12	UNIV OF MASSACHUSETTS - AMHERST	J BOYCE	GSFC	J GOLDSTEIN	NAG 5 10515	303
12	UNIV OF MICHIGAN - ANN ARBOR	J BOYCE	GSFC	J BLUM	NAG 5 10552	315

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
12	UNIV OF MISSOURI - SAINT LOUIS	M J ZEHE	GRC	J CHICKOS	NAG 3 2592	332
12	UNIV OF NEW ORLEANS	W B ALSTON	GRC	J P DROSKE	NAG 3 1906	237
12	UNIV OF NORTH CAROLINA - CHAPEL HILL	E J SIOCHI	LARC	E T SAMULSKI	NAG 1 2301	402
12	UNIV OF NOTRE DAME	J BOYCE	GSFC	C NEAL	NAG 5 10638	221
12	UNIV OF PUERTO RICO-RIO PIEDRAS	F J MONTEGANI	GRC	C R CABRERA	NGT 3 52376	558
12	UNIV OF TOLEDO	K P KUNDU	GRC	K J DEWITT	NCC 3 513	427
12	UNIV OF UTAH	J A HINKLEY	LARC	G D SMITH	NAG 1 2319	502
12	UNIV OF VERMONT	J BOYCE	GSFC	T RUCHMER	NAG 5 10463	506
12	UNIV OF VIRGINIA	H PARTRIDGE	ARC	L S ANDREWS	NCC 2 5415	527
12	UNIV OF WASHINGTON	J H BELL	ARC	M P GOUTERMAN	NAG 2 1157	534
12	UNIV OF WASHINGTON	J M BOYCE	GSFC	D E BROWNLEE	NAG 5 10499	539
12	UNIV OF WASHINGTON	T BENCIC	GRC	D GOUTERMAN	NAG 3 2455	534
12	VA POLYTECH INST & ST UNIV	E J SIOCHI	LARC	T C WARD	NAG 1 2310	529
12	VA POLYTECH INST & ST UNIV	E J SIOCHI	LARC	T C WARD	NGT 1 01003	532
12	VA POLYTECH INST & ST UNIV	M B MEADOR	GRC	J E MCGRATH	NCC 3 866	531
12	VA POLYTECH INST & ST UNIV	S H CHOI	LARC	H C DORN	NCC 1 01044	531
12	VA POLYTECH INST & ST UNIV	T L ST.CLAIR	LARC	L T TAYLOR	NAG 1 2324	529
12	VIRGINIA COMMONWEALTH UNIV	P M DOTY	MSFC	M S EL-SHALL	NAG 8 1484	533
12	WASHINGTON UNIV - ST	G MUCKLOW	GSFC	D LEOPOLD	NAG 5 8536	334
12	WASHINGTON UNIV - ST	J BOYCE	GSFC	D A HASKIN	NAG 5 4172	332
12	WASHINGTON UNIV - ST	J BOYCE	GSFC	D HOHENBERG	NAG 5 4173	332
12	WASHINGTON UNIV - ST	J BOYCE	GSFC	F PODOSEK	NAG 5 10513	335
12	WASHINGTON UNIV - ST	J BOYCE	GSFC	L HASKIN	NAG 5 10485	335
12	WASHINGTON UNIV - ST	J BOYCE	GSFC	L HASKIN	NAG 5 10533	335
12	WASHINGTON UNIV - ST	J BOYCE	GSFC	T BERNATOWICZ	NAG 5 10426	335
12	WESTERN KENTUCKY UNIV	F J MONTEGANI	GRC	W PAN	NGT 3 52353	233
12	WHEELING JESUIT UNIV	A F HEPP	GRC	N N DUFFY	NCC 3 858	546
13	ALABAMA A&M UNIV	A CHOW	MSFC	K HE	NAG 8 1335	1
13	ALABAMA A&M UNIV	B G PENN	MSFC	N KUKHATAREV	NAG 8 1620	1
13	ALABAMA A&M UNIV	B PENN	MSFC	S SARKISOV	NAG 8 1498	1
13	ALABAMA A&M UNIV	D FRAZIER	MSFC	M D AGGARWAL	NAG 8 1390	1
13	ALABAMA A&M UNIV	D PIERSON	JSC	M TADROS	NAG 9 1095	2
13	ALABAMA A&M UNIV	G ADAMOVSKY	GRC	D CURLEY	NCC 3 736	2
13	ALABAMA A&M UNIV	G ADAWOVSKY	GRC	P VENKATESWARLY	NAG 3 1956	1
13	ALABAMA A&M UNIV	S NASH-STEVENSON	MSFC	J C WANG	NGT 8 52902	2
13	ARIZONA STATE UNIV	I KRAINSKY	GRC	N NEWMAN	NAG 3 2591	20
13	ARIZONA STATE UNIV	M MEYYAPPAN	ARC	Y H ZHANG	NCC 2 5331	23
13	ARIZONA STATE UNIV	M MEYYAPPAN	ARC	Y ZHANG	NCC 2 5362	23
13	AUBURN UNIV	G E SCHWARZE	GRC	J R WILLIAMS	NAG 3 2639	3
13	AUBURN UNIV	R REED	GSFC	J D CRESSLER	NAG 5 11121	3
13	BETHUNE - COOKMAN COLLEGE	S E HETHERINGTON	GSFC	E F EKPO	NCC 5 426	162
13	BIRMINGHAM SOUTHERN COLLEGE	J F DOWDY	MSFC	K B BACHMANN	NAG 8 1280	4
13	BOSTON COLLEGE	N P BARNES	LARC	B DIBARTOIO	NAG 1 2057	276
13	BOSTON COLLEGE	N P BARNES	LARC	B DIBARTOLO	NAG 1 01019	276
13	BOSTON UNIV	J C BARNES	LARC	K P HARLING	NGT 1 52199	280
13	BOSTON UNIV	J GREBOWSKY	GSFC	D MENDILLO	NAG 5 4246	277
13	BOSTON UNIV	J GREBOWSKY	GSFC	G L SISCOE	NAG 5 8135	278
13	BOSTON UNIV	M GOLDSTEIN	GSFC	T FRITZ	NAG 5 10108	279
13	BOSTON UNIV	M H ACUNA	GSFC	H E SPENCE	NAG 5 8039	278
13	BOSTON UNIV	M M MELLOTT	GSFC	D E SPENCE	NAG 5 4273	277
13	BOSTON UNIV	M M MELLOTT	GSFC	D MENDILLO	NAG 5 4707	277
13	BOSTON UNIV	M MELLOTT	GSFC	M OPPENHEIM	NAG 5 7452	278
13	BOSTON UNIV	N R HALL	GRC	R G HOLT	NAG 3 2143	276
13	BOSTON UNIV	P CRANE	GSFC	S CHAKRABARTI	NAG 5 9582	279
13	BOSTON UNIV	R B ROGERS	GRC	R G HOLT	NAG 3 2121	276
13	BOSTON UNIV	R H PLESS	GSFC	S CHAKRABARTI	NAG 5 690	276
13	BOSTON UNIV	R HOWARD	GSFC	D E SPENCE	NAG 5 3748	276
13	BOSTON UNIV	W B JOHNSON	WFF	S CHAKRABARTI	NAG 5 5251	277
13	BOSTON UNIV	W J WAGNER	GSFC	N U CROOKER	NAG 5 10856	279
13	BOSTON UNIV	W JOHNSON	GSFC	S CHAKRABARTI	NAG 5 5137	277
13	BROWN UNIV	B FLOWERS	GSFC	G SEIDEL	NAG 5 5133	457
13	BROWN UNIV	B S SINGH	GRC	D ELBAUM	NAG 3 1929	457
13	BROWN UNIV	B S SINGH	GRC	G M SEIDEL	NAG 3 1927	457
13	BROWN UNIV	D HUBBARD	MSFC	H J MARIS	NAG 8 1774	459
13	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	E C STONE	NAG 5 5216	43
13	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	E C STONE	NAG 5 5227	43

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
13	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	E C STONE	NAG 5 5228	43
13	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	F HARRISON	NAG 5 5289	43
13	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	R A MEWALDT	NAG 5 5166	43
13	CALIFORNIA INST OF TECH	B A MERRITT	WFF	F HARRISON	NAG 5 5322	44
13	CALIFORNIA INST OF TECH	C D ARMSTRONG	LARC	H A ATWATER	NAG 1 01038	41
13	CALIFORNIA INST OF TECH	C STAHL	GSFC	J ZMUIZINAS	NAG 5 10358	47
13	CALIFORNIA INST OF TECH	G MUCKLOW	GSFC	F A HARRISON	NAG 5 8535	45
13	CALIFORNIA INST OF TECH	J C BRINTON	WFF	C MARTIN	NAG 5 5303	43
13	CALIFORNIA STATE UNIV - LONG BEACH	K HSIEH	GRC	J LIU	NAG 3 1830	51
13	CARNEGIE - MELLON UNIV	B S SINGH	GRC	S GAROFF	NAG 3 2449	436
13	CARNEGIE - MELLON UNIV	R B ROGERS	GRC	P J SIDES	NAG 3 2159	436
13	CASE WESTERN RESERVE UNIV	A CHIT	GRC	P L TAYLOR	NCC 3 587	407
13	CASE WESTERN RESERVE UNIV	C R TALLEY	MSFC	C ROSENBLATT	NAG 8 1270	407
13	CASE WESTERN RESERVE UNIV	J BRUNSON	MSFC	D H MATTHIESEN	NCC 8 152	409
13	CASE WESTERN RESERVE UNIV	R OKOJIE	GRC	P PIROUZ	NCC 3 895	408
13	CHRISTOPHER NEWPORT UNIV	R C SINGLETERRY, JR.	LARC	C K CHANG	NCC 1 277	507
13	CITY UNIV OF NY CITY COLLEGE	B S SINGH	GRC	C MALDARELLI	NAG 3 2167	367
13	CITY UNIV OF NY CITY COLLEGE	B SINGH	GRC	J KOPLIK	NAG 3 1836	367
13	CITY UNIV OF NY CITY COLLEGE	N P BARNES	LARC	R A ALFANO	NAG 1 2259	367
13	CLARK ATLANTA UNIV	A TEMKIN	GSFC	A MSEZANE	NAG 5 8792	181
13	CLEMSON UNIV - CLEMSON	B A MERRITT	WFF	D H HARTMANN	NAG 5 5325	462
13	CLEMSON UNIV - CLEMSON	H SHAW	GSFC	D L CARROLL	NAG 5 11293	463
13	CLEMSON UNIV - CLEMSON	J BRINTON	GSFC	M LARSON	NAG 5 5320	462
13	CLEMSON UNIV - CLEMSON	J C BRINTON	GSFC	M F LARSEN	NAG 5 5317	462
13	CLEMSON UNIV - CLEMSON	M MELLOTT	GSFC	M P HICKEY	NAG 5 7592	462
13	CLEMSON UNIV - CLEMSON	M MEYYAPPAN	ARC	A M RAO	NCC 2 5421	463
13	CLEMSON UNIV - CLEMSON	W B JOHNSON	GSFC	M F LARSEN	NAG 5 5186	462
13	CLEMSON UNIV - CLEMSON	W B JOHNSON	GSFC	M F LARSEN	NAG 5 5242	462
13	CLEMSON UNIV - CLEMSON	W B JOHNSON	GSFC	M F LARSEN	NAG 5 5259	462
13	CLEVELAND STATE UNIV	A CHAIT	GRC	J A LOCK	NCC 3 521	410
13	CLEVELAND STATE UNIV	C R MERCER	GRC	J LOCK	NAG 3 2232	409
13	CLEVELAND STATE UNIV	G ADAMOVSKY	GRC	J A LOCK	NCC 3 909	412
13	CLEVELAND STATE UNIV	S K RUTLEDGE	GRC	P HAMBOURGER	NCC 3 740	411
13	COLLEGE OF WILLIAM AND MARY	M H SMITH	LARC	D C BENNER	NCC 1 390	508
13	COLLEGE OF WILLIAM AND MARY	P H JOHNSTON	LARC	J S BOGHOSIAN	NGT 1 52180	508
13	COLLEGE OF WOOSTER	J W POE	MSFC	D T JACOBS	NAG 8 1433	412
13	COLORADO STATE UNIV	V K RAWLIN	GRC	P J WILBUR	NAG 3 1801	120
13	COLORADO STATE UNIV	V K RAWLIN	GRC	P J WILBUR	NAG 8 1801	122
13	COLUMBIA UNIV	F BLIVEN	GSFC	P SCHOSSER	NAG 5 5247	370
13	COLUMBIA UNIV	H C NEEDLEMAN	GSFC	E APRILE	NAG 5 5108	370
13	COLUMBIA UNIV	L J EARLY	GSFC	R NOVICK	NAG 5 618	369
13	COLUMBIA UNIV	W B JOHNSON	GSFC	D L WINDT	NAG 5 5254	370
13	COLUMBIA UNIV	W B JOHNSON	GSFC	D W SAVIN	NAG 5 5261	370
13	COLUMBIA UNIV	W B JOHNSON	GSFC	S M KAHN	NAG 5 5123	370
13	COLUMBIA UNIV	W J WAGNER	GSFC	D W SAVIN	NAG 5 9581	372
13	COLUMBIA UNIV	W J WAGNER	GSFC	D WINDT	NAG 5 9615	372
13	CORNELL UNIV	J W POE	MSFC	D M LEE	NAG 8 1445	380
13	CORNELL UNIV	S K KAHNG	LARC	P L MCEJEN	NAG 1 01034	375
13	CORNELL UNIV	W B JOHNSON	GSFC	M C KELLEY	NAG 5 5244	377
13	CORNELL UNIV	W B JOHNSON	MSFC	P M KINTNER	NAG 5 5233	376
13	CORNELL UNIV	W JOHNSON	GSFC	P KINTNER	NAG 5 5134	376
13	CORNELL UNIV	W M SATTMAN	JSC	W M SALTZMAN	NAG 8 1372	380
13	DARTMOUTH COLLEGE	J BOHLIN	GSFC	D O SONNERUP	NAG 5 6268	344
13	DARTMOUTH COLLEGE	J C BRINTON	GSFC	J W LABELLE	NAG 5 5318	343
13	DARTMOUTH COLLEGE	J M GREBOWSKY	GSFC	W LOTKO	NAG 5 8441	344
13	DARTMOUTH COLLEGE	M H ACUNA	GSFC	W LOTKO	NAG 5 7803	344
13	DARTMOUTH COLLEGE	M M MELLOTT	GSFC	D LOTKO	NAG 5 4529	343
13	DARTMOUTH COLLEGE	W B JOHNSON	GSFC	J W LABELLE	NAG 5 5238	343
13	DARTMOUTH COLLEGE	W B JOHNSON	GSFC	J W LABELLE	NAG 5 5239	343
13	DELAWARE STATE UNIV	W C EDWARDS	LARC	N MELIKECHI	NAG 1 2030	149
13	DUKE UNIV	B S SINGH	GRC	H MEYER	NAG 3 1838	394
13	EMBRY-RIDDLE AERONAUTICAL UNIV	W B JOHNSON	GSFC	P J ESPY	NAG 5 5199	162
13	EMBRY-RIDDLE AERONAUTICAL UNIV	W B JOHNSON	GSFC	P W ERDMAN	NAG 5 5265	162
13	FISK UNIV	D O FRAZIER	MSFC	E SILHERMAN	NCC 8 133	467
13	FISK UNIV	E CLARK	GRC	D O HENDERSON	NAG 3 2308	467
13	FISK UNIV	N GEHRELS	GSFC	A BURGER	NAG 5 8876	467



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
13	FLA INTERNATIONAL UNIV	R HARTLE	GSFC	K HARDY	NAG 5 8791	162
13	FLORIDA STATE UNIV	B S SINGH	GRC	E MANOUSAKIS	NAG 3 1841	166
13	GEORGE WASHINGTON UNIV	B A MERRITT	WFF	F BAGINSKI	NAG 5 5292	152
13	GEORGIA INST OF TECH	S NASH-STEVENSON	MSFC	J OLDS	NGT 8 52898	188
13	HAMPTON UNIV	F J MONTEGANI	GRC	D R LYONS	NGT 3 52354	513
13	HAMPTON UNIV	R HATHAWAY	LARC	D A TEMPLE	NCC 1 251	513
13	HARVARD UNIV	B A MERRITT	GSFC	G GRINDLAY	NAG 5 5279	283
13	HARVARD UNIV	B S SINGH	GRC	D WEITZ	NAG 3 2284	282
13	HARVARD UNIV	H C NEEDLEMAN	GSFC	J E GRINDLAY	NAG 5 5103	283
13	HOWARD UNIV	J TUTTLE	GSFC	T HUBER	NAG 5 10371	155
13	HOWARD UNIV	W R HOEGY	GSFC	S T SMITH	NCC 5 387	155
13	JOHN CARROLL UNIV	S WRBANEK	GRC	R L HANSLER	NAG 3 2564	412
13	JOHNS HOPKINS UNIV	B J FLOWERS	GSFC	P D FELDMAN	NAG 5 5122	242
13	JOHNS HOPKINS UNIV	C P HOLMES	GSFC	D M KRIMIGIS	NAG 5 4365	242
13	JOHNS HOPKINS UNIV	D EVANS	GSFC	D OHTANI	NAG 5 6178	243
13	JOHNS HOPKINS UNIV	F HERRERO	GSFC	J L CHAMPION	NAG 5 10084	247
13	JOHNS HOPKINS UNIV	J BARTH	GSFC	A GARRISON-DARRIN	NAG 5 9968	247
13	JOHNS HOPKINS UNIV	J BOHLIN	GSFC	D E ERLANDSON	NAG 5 4549	242
13	JOHNS HOPKINS UNIV	J BOHLIN	GSFC	D H MAUK	NAG 5 6182	243
13	JOHNS HOPKINS UNIV	J BREDEKAMP	GSFC	D MORRISON	NAG 5 9432	246
13	JOHNS HOPKINS UNIV	J C BRINTON	GSFC	P D FELDMAN	NAG 5 5315	242
13	JOHNS HOPKINS UNIV	J G GREBOWSKY	GSFC	D J ANDERSON	NAG 5 4664	242
13	JOHNS HOPKINS UNIV	M H ACUNA	GSFC	N J FOX	NAG 5 8019	244
13	JOHNS HOPKINS UNIV	M H ACUNA	GSFC	R A GREENWALD	NAG 5 8037	244
13	JOHNS HOPKINS UNIV	M M MELLOTT	GSFC	J J YEE	NAG 5 8122	244
13	JOHNS HOPKINS UNIV	M MELLOTT	GSFC	D MORRISON	NAG 5 8062	244
13	JOHNS HOPKINS UNIV	M MELLOTT	GSFC	F MORGAN	NAG 5 8061	244
13	JOHNS HOPKINS UNIV	R REED	GSFC	J KINNISON	NAG 5 11116	251
13	JOHNS HOPKINS UNIV	V JONESS	GSFC	R E GOLD	NAG 5 6113	243
13	JOHNS HOPKINS UNIV	W B JOHNSON	GSFC	J H YEE	NAG 5 5198	242
13	JOHNS HOPKINS UNIV	W J WAGNER	GSFC	D M RUST	NAG 5 10998	250
13	KANSAS STATE UNIV	F P CHIARAMONTE	GRC	C SORENSEN	NAG 3 2360	228
13	KENT STATE UNIV	J POUCH	GRC	P BROS	NAG 3 2539	413
13	KETTERING UNIV	M MANTENIEKS	GRC	S ROY	NAG 3 2520	306
13	LE TOURNEAU UNIV	B S FILES	JSC	G D DEBOER	NAG 9 1174	475
13	LOMA LINDA UNIV	F A CUCINOTTA	JSC	G A NELSON	NCC 9 79	53
13	LOMA LINDA UNIV	F CUCINOTTA	JSC	G NELSON	NCC 9 118	53
13	LOUISIANA STATE UNIV - BATON ROUGE	B A MERRITT	GSFC	J P WEFEL	NAG 5 5306	234
13	LOUISIANA STATE UNIV - BATON ROUGE	B A MERRITT	GSFC	M L CHERRY	NAG 5 5177	233
13	LOUISIANA STATE UNIV - BATON ROUGE	B A MERRITT	GSFC	M L CHERRY	NAG 5 5323	234
13	LOUISIANA STATE UNIV - BATON ROUGE	B A MERRITT	WFF	M L CHERRY	NAG 5 5297	233
13	LOUISIANA STATE UNIV - BATON ROUGE	B MERRITT	WFF	D FAZELY	NAG 5 5307	234
13	LOUISIANA STATE UNIV - BATON ROUGE	H NEEDLEMAN	GSFC	M CHERRY	NAG 5 5127	233
13	LOUISIANA STATE UNIV - BATON ROUGE	T ROBERTSON	MSFC	R G GOODRICH	NAG 8 1731	234
13	MASSACHUSETTS INST OF TECH	B FLOWERS	GSFC	C R CANIZARES	NAG 5 5105	290
13	MASSACHUSETTS INST OF TECH	D GILMAN	HQ	G RICKER	NASW 4690	297
13	MASSACHUSETTS INST OF TECH	D HUBBARD	MSFC	W KETTERLE	NAG 8 1435	296
13	MASSACHUSETTS INST OF TECH	D HUBBARD	MSFC	W KETTERLE	NAG 8 1768	296
13	MASSACHUSETTS INST OF TECH	F R CHANG-DIAZ	JSC	K MOLVIG	NAG 9 1224	297
13	MASSACHUSETTS INST OF TECH	J BRINTON	GSFC	A LEVINE	NAG 5 5329	291
13	MASSACHUSETTS INST OF TECH	J C BRINTON	GSFC	M SCHATTEBURG	NAG 5 5271	290
13	MASSACHUSETTS INST OF TECH	M H ACUNA	GSFC	A J LAZARUS	NAG 5 8045	292
13	MASSACHUSETTS INST OF TECH	M M HASAN	GRC	A A SONIN	NAG 3 1845	288
13	MASSACHUSETTS INST OF TECH	P DOTY	MSFC	M C FLEMING	NAG 8 1685	296
13	MASSACHUSETTS INST OF TECH	W J WAGNER	GSFC	T CHANG	NAG 5 9616	294
13	MICHIGAN STATE UNIV	E CHENG	GSFC	E D LOH	NAG 5 3218	307
13	MICHIGAN STATE UNIV	H SHAW	GSFC	D TOMANEK	NAG 5 9276	307
13	MICHIGAN TECHNOLOGICAL UNIV	B A MERRITT	WFF	R NEMIROFF	NAG 5 5278	309
13	MIDDLEBURY COLLEGE	W J WAGNER	GSFC	R WOLFSON	NAG 5 9733	506
13	MONTANA STATE UNIV	W J WAGNER	GSFC	C C KANKELBORG	NAG 5 10997	337
13	MORGAN STATE UNIV	J CHITWOOD	GSFC	C WILLIAMS	NAG 5 8857	253
13	MORGAN STATE UNIV	J S CHITWOOD	GSFC	C WILLIAMS	NCC 5 204	254
13	NEW JERSEY INST OF TECH	W J WAGNER	GSFC	H WANG	NAG 5 9501	351
13	NEW JERSEY INST OF TECH	W J WAGNER	GSFC	M F WOODARD	NAG 5 9519	351
13	NEW JERSEY INST OF TECH	W J WAGNER	GSFC	P R GOODE	NAG 5 9682	351
13	NEW JERSEY INST OF TECH	W WAGNER	GSFC	D GARY	NAG 5 6381	350

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
13	NEW MEXICO HIGHLANDS UNIV	B G PENN	MSFC	R D CLARK	NAG 8 1639	361
13	NEW MEXICO STATE UNIV - LAS CRUCES	B A MERRITT	WSTF	S J STOCHAJ	NAG 5 5226	362
13	NEW MEXICO STATE UNIV - LAS CRUCES	H C NEEDLEMAN	GSFC	S J STOCHAJ	NAG 5 5060	362
13	NEW MEXICO STATE UNIV - LAS CRUCES	H C NEEDLEMAN	GSFC	S J STOCHAJ	NAG 5 5068	362
13	NEW MEXICO STATE UNIV - LAS CRUCES	J GRANT	GSFC	V SOLOMATOV	NAG 5 8803	363
13	NORFOLK STATE UNIV	N P BARNES	LARC	M NOGINOV	NAG 1 2172	514
13	NORFOLK STATE UNIV	R E STREITMATTER	GSFC	C W SALGADO	NAG 5 8653	514
13	NORTH CAROLINA A&T STATE UNIV	J A JACKSON	GSFC	E WILLIAMS	NAG 5 9170	398
13	NORTH CAROLINA STATE UNIV	J M GREBOWSKY	GSFC	D C ELLISON	NAG 5 8215	400
13	NORTH CAROLINA STATE UNIV	M S BURRELL	GSFC	S O REYNOLDS	NGT 5 65	402
13	NORTHWESTERN UNIV	A NURRIDIN	HQ	MILLER	NGT 5 50172	203
13	NORTHWESTERN UNIV	L W GURKIN	GSFC	M P ULMER	NAG 5 5094	202
13	NORTHWESTERN UNIV	M S BURRELL	GSFC	G NOVAK	NGT 5 88	203
13	NORTHWESTERN UNIV	M WEISLOGEL	GRC	S LICHTER	NAG 3 1892	201
13	OHIO STATE UNIV	D HUBBARD	MSFC	T HO	NAG 8 1441	417
13	OHIO STATE UNIV	D HUBBARD	MSFC	T L HO	NAG 8 1765	417
13	OHIO STATE UNIV	E J PENCIL	GRC	D Y YORK	NAG 3 2438	414
13	OHIO STATE UNIV	P DOTY	MSFC	P K DUTTA	NAG 8 1267	417
13	OKLAHOMA STATE UNIV	B SINGH	GRC	O TONG	NAG 3 1852	428
13	OLD DOMINION UNIV	R C SINGLETERRY	LARC	J H HEINBOCKEL	NCC 1 320	518
13	OLD DOMINION UNIV	R C SINGLETERRY	LARC	J TWEED	NCC 1 396	519
13	OLD DOMINION UNIV	T H HOU	LARC	R PRABHAKARAN	NCC 1 01052	519
13	PENN STATE UNIV	B A MERRITT	GSFC	J J BEATTY	NAG 5 5220	444
13	PENN STATE UNIV	B A MERRITT	GSFC	S COUTU	NAG 5 5174	444
13	PENN STATE UNIV	B A MERRITT	WFF	S E COUTU	NAG 5 5250	444
13	PENN STATE UNIV	B MERRITT	GSFC	BEATTY	NAG 5 5248	444
13	PENN STATE UNIV	D HUBBARD	MSFC	M CHAN	NAG 8 1761	449
13	PENN STATE UNIV	J C BRINTON	GSFC	C L CROSKEY	NAG 5 5313	445
13	PENN STATE UNIV	J C BRINTON	GSFC	D N BURROWS	NAG 5 5277	445
13	PENN STATE UNIV	J S LING	GRC	J M TAZBELL	NAG 3 1871	443
13	PENN STATE UNIV	M S BURRELL	GSFC	P LAGUNA	NGT 5 127	451
13	PENN STATE UNIV	W B JOHNSON	GSFC	C L CROSKEY	NAG 5 5256	444
13	PENN STATE UNIV	W B JOHNSON	GSFC	J D MITCHELL	NAG 5 5136	444
13	PENN STATE UNIV	W B JOHNSON	GSFC	J D MITCHELL	NAG 5 5169	444
13	PENN STATE UNIV	W GURKIN	GSFC	D BURROWS	NAG 5 5093	444
13	PRAIRIE VIEW A&M UNIV	H NEEDLEMAN	GSFC	R WILKINS	NAG 5 5130	475
13	PRESCOTT COLLEGE	E P CONDON	ARC	W W ORR	NAG 2 1409	25
13	PRINCETON UNIV	W B JOHNSON	GSFC	E B JENKINS	NAG 5 616	352
13	RICE UNIV	D EVANS	GSFC	D R TOFFOLETTO	NAG 5 4726	477
13	RICE UNIV	D HUBBARD	MSFC	R G HULET	NAG 8 1444	478
13	RICE UNIV	D S HUBBARD	MSFC	R G HULET	NAG 8 1766	478
13	RICE UNIV	F CHANG-DIAZ	JSC	A A CHAN	NAG 9 978	478
13	RICE UNIV	J BOHLIN	GSFC	D A WOLF	NAG 5 4267	477
13	RICE UNIV	J GREBOWSKY	GSFC	D W HILL	NAG 5 4822	477
13	RICE UNIV	J GREBOWSKY	GSFC	R A WOLF	NAG 5 8136	477
13	RICE UNIV	M H ACUNA	GSFC	P A CLOUTIER	NAG 5 7037	477
13	RICE UNIV	M MEYAPPAN	ARC	B YAKOBSON	NAG 2 1401	476
13	ROANOKE COLLEGE	B A MERRITT	GSFC	C H TSAO	NAG 5 5165	522
13	ROCHESTER INST OF TECH	A F HEPP	GRC	D P RAFAELLE	NCC 3 786	386
13	ROCHESTER INST OF TECH	A HEPP	GRC	D P RAFAELLE	NCC 3 807	386
13	ROCHESTER INST OF TECH	S BAILEY	GRC	D P RAFAELLE	NAG 3 2595	385
13	ROCHESTER INST OF TECH	S BAILEY	GRC	D RAFAELLE	NAG 3 2593	385
13	ROCHESTER INST OF TECH	S BAILEY	GRC	D RAFAELLE	NAG 3 2596	386
13	ROWAN UNIV	M J MUMMA	GSFC	K MAGEE-SAUER	NAG 5 9593	356
13	RUTGERS ST UNIV N	C STAHL	GSFC	M GERSHENSON	NAG 5 10357	358
13	RUTGERS ST UNIV N	N HAGEDORN	GRC	D H GAROFALINI	NAG 3 2589	356
13	RUTGERS ST UNIV N	W J WAGNER	GSFC	C L JOSEPH	NAG 5 10809	358
13	SOUTH DAKOTA SCH OF MINES & TECH	I L KRAINSKY	GRC	A PETUKHOV	NAG 3 1680	466
13	SOUTHERN UNIV & A&M COLLEGE	D SCHMIDT	MSFC	H L LAWRENCE	NAG 8 1495	236
13	SOUTHERN UNIV & A&M COLLEGE	H C NEEDLEMAN	GSFC	A R FAZELY	NAG 5 5066	235
13	SOUTHERN UNIV & A&M COLLEGE	J TUELLER	GSFC	J STACY	NAG 5 7157	235
13	STANFORD UNIV	B S SINGH	GRC	E G SHAQTEH	NAG 3 1843	59
13	STANFORD UNIV	D EVANS	GSFC	D S INAN	NAG 5 4554	60
13	STANFORD UNIV	D HUBBARD	MSFC	J A LIPA	NAG 8 1431	63
13	STANFORD UNIV	D HUBBARD	MSFC	J A LIPA	NAG 8 1436	63
13	STANFORD UNIV	D MENCHAN	GSFC	B CABRERA	NAG 5 10519	62

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
13	STANFORD UNIV	G A SOFFEN	GSFC	A B WALKER	NGT 5 103	66
13	STANFORD UNIV	H PATRIDGE	ARC	K CHO	NCC 2 5439	65
13	STANFORD UNIV	J C BRINTON	HQ	B C WALKER	NAG 5 5300	61
13	STANFORD UNIV	J W POE	MSFC	J A LIPA	NAG 8 1439	63
13	STANFORD UNIV	M H ACUNA	GSFC	U S INAN	NAG 5 8040	61
13	STANFORD UNIV	M L FONDA	ARC	R B LAUGHLIN	NCC 2 5359	65
13	STANFORD UNIV	M MEYYPAPPAN	ARC	Z SHEN	NCC 2 5371	65
13	STANFORD UNIV	R S GEVEDEN	MSFC	C W EVERITT	NAS 8 39225	64
13	STANFORD UNIV	T R GOVINDAN	ARC	K CHO	NCC 2 5350	65
13	STANFORD UNIV	W B JOHNSON	GSFC	A B WALKER	NAG 5 5200	60
13	STANFORD UNIV	W J WAGNER	GSFC	P T SCHERER	NAG 5 9784	62
13	STANFORD UNIV	W J WAGNER	GSFC	V PETROSIAN	NAG 5 10976	63
13	STANFORD UNIV	W M HUO	ARC	C H KRUGER	NAG 2 1079	59
13	STANFORD UNIV	W WAGNER	GSFC	D A STURROCK	NAG 5 4038	60
13	STATE UNIV OF NY - STONY BROOK	C TALLEY	MSFC	M DUDLEY	NCC 8 93	391
13	STATE UNIV OF NY - STONY BROOK	P M DOTY	MSFC	D LARSON	NAG 8 1700	391
13	STATE UNIV OF NY - STONY BROOK	W WAGNER	GSFC	M A FORMAN	NAG 5 10995	390
13	STATE UNIV OF NY COL - PLATTSBURGH	E K GIBSON	JSC	G J FLYNN	NAG 9 1109	391
13	TAYLOR UNIV	W B JOHNSON	GSFC	H D VOSS	NAG 5 5184	220
13	TEXAS A&M UNIV	S D GLEN	JSC	R WILLIAMS	NAG 9 1070	482
13	TEXAS A&M UNIV-KINGSVILLE	N KHAZENIE	GSFC	D SUSON	NAG 5 7159	484
13	TEXAS TECH UNIV	B A MERRITT	GSFC	R WIGMANS	NAG 5 5156	485
13	THE AMERICAN UNIV	J L BUFTON	GSFC	R B KAY	NCC 5 269	156
13	THE AMERICAN UNIV	J L BUFTON	GSFC	R B KAY	NCC 5 482	156
13	THE CATHOLIC UNIV OF AMERICA	B DENNIS	GSFC	D GOPALSWAMY	NCC 5 548	161
13	THE CATHOLIC UNIV OF AMERICA	K W OGIHVIE	GSFC	Y WHANG	NAG 5 10130	159
13	THE CATHOLIC UNIV OF AMERICA	M J MUMMA	GSFC	M A DISANTI	NCC 5 504	161
13	THE CATHOLIC UNIV OF AMERICA	M J MUMMA	GSFC	N DELLO RUSSO	NCC 5 445	161
13	THE CATHOLIC UNIV OF AMERICA	W J WAGNER	GSFC	D GUHATHAKURTA	NAG 5 4940	156
13	THE CATHOLIC UNIV OF AMERICA	W J WAGNER	GSFC	N GOPALSWAMY	NAG 5 9600	158
13	THE CATHOLIC UNIV OF AMERICA	W J WAGNER	GSFC	O ST	NAG 5 9502	158
13	THE UNIV OF CENTRAL FLORIDA	A F HEPP	GRC	N G DHERE	NCC 3 712	170
13	THE UNIV OF CENTRAL FLORIDA	C DAVIS	KSC	R SELLAR	NAG10 290	170
13	THE UNIV OF CENTRAL FLORIDA	C STAHL	GSFC	G D BOREMAN	NAG 5 10308	169
13	THE UNIV OF CENTRAL FLORIDA	R YOUNGQUIST	KSC	D LUO	NGT10 52627	171
13	TUSKEGEE UNIV	M A MANTENIEKS	GRC	D K RAY	NAG 3 2347	4
13	UNIV HOUSTON-HOUSTON	G BADHWAR	JSC	L S PINSKY	NAG 9 1347	487
13	UNIV OF MINN	A NURRIDIN	HQ	R L LYSAK	NGT 5 50186	325
13	UNIV OF MINN	B A MERRITT	GSFC	T W JONES	NAG 5 5182	321
13	UNIV OF MINN	C TALLEY	MSFC	J J DERBY	NAG 8 1474	323
13	UNIV OF MINN	D PIERCE	GSFC	J WYGANT	NAG 5 5214	321
13	UNIV OF MINN	L J EARLY	GSFC	J R WINCKLER	NSG 5088	326
13	UNIV OF MINN	L J SALERNO	ARC	J MAPS	NAG 2 1474	321
13	UNIV OF MINN	M H ACUNA	GSFC	C A CATTELL	NAG 5 8073	322
13	UNIV OF MINN	M M MELLOTT	GSFC	D L LYSAK	NAG 5 4466	321
13	UNIV OF MINN	R HOWARD	GSFC	D A CATTELL	NAG 5 3735	321
13	UNIV OF MINN	R J MACDOWALL	GSFC	P J KELLOGG	NAG 5 10274	323
13	UNIV OF MINN	W B JOHNSON	GSFC	J R WYGANT	NAG 5 5172	321
13	UNIV	F THIO	MSFC	F WINTERBERG	NAG 8 1718	342
13	UNIV OF ALABAMA - BIRMINGHAM	J F DOWDY	MSFC	C M LAWSON	NGT 8 52845	7
13	UNIV OF ALABAMA - BIRMINGHAM	R KING	MSFC	J B ANDREWS	NAS 8 99059	6
13	UNIV OF ALABAMA - HUNTSVILLE	A NURRIDIN	HQ	E EMSLIE	NGT 5 50163	14
13	UNIV OF ALABAMA - HUNTSVILLE	B A MERRITT	WFF	PENDLETON	NAG 5 5298	7
13	UNIV OF ALABAMA - HUNTSVILLE	H C NEEDLEMAN	GSFC	G N PENDLETON	NAG 5 5112	7
13	UNIV OF ALABAMA - HUNTSVILLE	J BOHLIN	GSFC	D H COMFORT	NAG 5 4268	7
13	UNIV OF ALABAMA - HUNTSVILLE	J BOHLIN	GSFC	N SINGH	NAG 5 4893	7
13	UNIV OF ALABAMA - HUNTSVILLE	J BREDEKAMP	GSFC	D EMSLIE	NAG 5 4027	7
13	UNIV OF ALABAMA - HUNTSVILLE	J F DOWDY	MSFC	J V PARADIJS	NGT 8 52863	14
13	UNIV OF ALABAMA - HUNTSVILLE	M H ACUNA	GSFC	R SHELDON	NAG 5 7979	8
13	UNIV OF ALABAMA - HUNTSVILLE	U URBAN	MSFC	S T WU	NCC 8 65	13
13	UNIV OF ALABAMA - HUNTSVILLE	W B ROSSOW	GSFC	Q HAN	NAG 5 8646	9
13	UNIV OF ALABAMA - HUNTSVILLE	W J WAGNER	GSFC	J A MILLER	NAG 5 4951	7
13	UNIV OF ALABAMA - HUNTSVILLE	W J WAGNER	GSFC	J K MILLER	NAG 5 9598	10
13	UNIV OF ALABAMA - HUNTSVILLE	W J WAGNER	GSFC	S WU	NAG 5 9508	10
13	UNIV OF ALABAMA - UNIV	W J WAGNER	GSFC	D WU	NAG 5 6174	15
13	UNIV OF ALASKA - FAIRBANKS	A NURRIDIN	HQ	D LUMMERZHEIM	NGT 5 50191	19

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
13	UNIV OF ALASKA - FAIRBANKS	D EVANS	GSFC	D D CRAVEN	NAG 5 4269	17
13	UNIV OF ALASKA - FAIRBANKS	H NEEDLEMAN	GSFC	E WESTCOTT	NAG 5 5125	17
13	UNIV OF ALASKA - FAIRBANKS	J C BRINTON	GSFC	M CONDE	NAG 5 5316	17
13	UNIV OF ALASKA - FAIRBANKS	M H ACUNA	GSFC	J D CRAVEN	NAG 5 8042	18
13	UNIV OF ALASKA - FAIRBANKS	S A CURTIS	GSFC	M H REES	NAG 5 7683	17
13	UNIV OF ALASKA - FAIRBANKS	W B JOHNSON	GSFC	R COLLINS	NAG 5 5243	17
13	UNIV OF ALASKA - FAIRBANKS	W JOHNSON	GSFC	COLLINS	NAG 5 5218	17
13	UNIV OF ALASKA - FAIRBANKS	W JOHNSON	GSFC	H NIELSEN	NAG 5 5153	17
13	UNIV OF ARIZONA	B A MERRITT	GSFC	G M WEBB	NAG 5 5180	27
13	UNIV OF ARIZONA	B MERRITT	WFF	G WILLIAMS	NAG 5 5336	27
13	UNIV OF ARIZONA	C R TALLEY	MSFC	K A JACKSON	NAG 8 1234	36
13	UNIV OF ARIZONA	G A SOFFEN	GSFC	J A REAGAN	NGT 5 111	39
13	UNIV OF ARIZONA	J S LING	GRC	K R SRIDHAR	NAG 3 2154	25
13	UNIV OF ARIZONA	L C SHACKELFORD	JSC	H B	NAG 9 1212	37
13	UNIV OF ARIZONA	L J EARLY	GSFC	A L BROADFOOT	NAG 5 637	26
13	UNIV OF ARIZONA	PROGERS	GSFC	J JOKIPII	NAG 5 4559	27
13	UNIV OF ARIZONA	W JOHNSON	GSFC	J HOLBERG	NAG 5 5143	27
13	UNIV OF CALIFORNIA - BERKELEY	A HARPER	GSFC	J LUHMAN	NAS 5 00133	76
13	UNIV OF CALIFORNIA - BERKELEY	A NURRIDIN	HQ	C F MCKEE	NGT 5 50196	79
13	UNIV OF CALIFORNIA - BERKELEY	A NURRIDIN	HQ	G SMOOT	NGT 5 50189	79
13	UNIV OF CALIFORNIA - BERKELEY	A NURRIDIN	HQ	P L RICHARDS	NGT 5 50195	79
13	UNIV OF CALIFORNIA - BERKELEY	A NURRIDIN	HQ	R JEANLOZ	NGT 5 50188	78
13	UNIV OF CALIFORNIA - BERKELEY	B A MERRITT	GSFC	A J WESTPHAL	NAG 5 5231	70
13	UNIV OF CALIFORNIA - BERKELEY	B J MOTIL	GRC	V P CAREY	NAG 3 2105	68
13	UNIV OF CALIFORNIA - BERKELEY	B MERRITT	WFF	R P LIN	NAG 5 5285	70
13	UNIV OF CALIFORNIA - BERKELEY	C MCCREIGHT	ARC	P L RICHARDS	NAG 2 1398	68
13	UNIV OF CALIFORNIA - BERKELEY	D EVANS	GSFC	D E ERGUN	NAG 5 4898	69
13	UNIV OF CALIFORNIA - BERKELEY	D HUBBARD	MSFC	R E PACKARD	NAG 8 1432	75
13	UNIV OF CALIFORNIA - BERKELEY	D MENCHAN	GSFC	G BASRI	NAG 5 8410	72
13	UNIV OF CALIFORNIA - BERKELEY	D PIERCE	GSFC	M HURWITZ	NAG 5 5213	70
13	UNIV OF CALIFORNIA - BERKELEY	G STRINGFELLOW	GSFC	R J SAYKALLY	NAG 5 9384	73
13	UNIV OF CALIFORNIA - BERKELEY	H C NEEDLEMAN	GSFC	R W LIN	NAG 5 5102	69
13	UNIV OF CALIFORNIA - BERKELEY	H NEEDLEMAN	GSFC	C HAILEY	NAG 5 5146	70
13	UNIV OF CALIFORNIA - BERKELEY	J C BRINTON	GSFC	G T DELORY	NAG 5 5312	70
13	UNIV OF CALIFORNIA - BERKELEY	J R SKARDA	GRC	E KNOBLOCK	NAG 3 2152	68
13	UNIV OF CALIFORNIA - BERKELEY	J THIEMAN	GSFC	I HAWKINS	NCC 5 253	77
13	UNIV OF CALIFORNIA - BERKELEY	K OBIHVIE	GSFC	R P LIN	NAG 5 6928	70
13	UNIV OF CALIFORNIA - BERKELEY	M H ACUNA	GSFC	R P LIN	NAG 5 959	68
13	UNIV OF CALIFORNIA - BERKELEY	M S BURRELL	GSFC	J C DAVIS	NGT 5 83	77
13	UNIV OF CALIFORNIA - BERKELEY	R HOWARD	GSFC	F S MOZER	NAG 5 3916	69
13	UNIV OF CALIFORNIA - BERKELEY	W B JOHNSN	GSFC	M V HURWITZ	NAG 5 696	68
13	UNIV OF CALIFORNIA - BERKELEY	W B JOHNSON	GSFC	M V HURWITZ	NAG 5 5197	70
13	UNIV OF CALIFORNIA - BERKELEY	W M FARREL	GSFC	D T DELORY	NAG 5 10715	75
13	UNIV OF CALIFORNIA - DAVIS	D DIETRICH	GRC	B SHAW	NCC 3 477	82
13	UNIV OF CALIFORNIA - IRVINE	H C NEEDLEMAN	WFF	S W BARWICK	NAG 5 5069	85
13	UNIV OF CALIFORNIA - IRVINE	S LA SHERAS	GRC	S ELGHOBASHI	NAG 3 1831	84
13	UNIV OF CALIFORNIA - LOS ANGELES	B S SINGH	GRC	J RUDNICK	NAG 3 1862	88
13	UNIV OF CALIFORNIA - LOS ANGELES	B SINGH	GRC	D J DURIAN	NAG 3 1849	88
13	UNIV OF CALIFORNIA - LOS ANGELES	J BOHLIN	GSFC	D PELLAT	NAG 5 6377	89
13	UNIV OF CALIFORNIA - LOS ANGELES	J BOHLIN	GSFC	R J STRANGEWAY	NAG 5 3764	88
13	UNIV OF CALIFORNIA - LOS ANGELES	J D BOHLIN	GSFC	D L PRITCHETT	NAG 5 4339	89
13	UNIV OF CALIFORNIA - LOS ANGELES	J GREBOWSKY	GSFC	F CORONITE	NAG 5 8132	91
13	UNIV OF CALIFORNIA - LOS ANGELES	J J GREBOWSKY	GSFC	F V CORONITI	NAG 5 3235	88
13	UNIV OF CALIFORNIA - LOS ANGELES	J M BOYCE	HQ	B ZUCKERMAN	NAG 5 9573	92
13	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	J P BERCHEM	NAG 5 9071	92
13	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	K K KHURANA	NAG 5 9546	92
13	UNIV OF CALIFORNIA - LOS ANGELES	M M MELLOTT	GSFC	D M THORNE	NAG 5 4270	89
13	UNIV OF CALIFORNIA - LOS ANGELES	M MELLOTT	GSFC	F V CORONITI	NAG 5 8059	90
13	UNIV OF CALIFORNIA - LOS ANGELES	M S BURRELL	GSFC	M MOLDWIN	NGT 5 117	95
13	UNIV OF CALIFORNIA - LOS ANGELES	W M DUVAL	GRC	S J PUTTERMAN	NAG 3 2108	88
13	UNIV OF CALIFORNIA - RIVERSIDE	B A MERRITT	GSFC	T O TUMER	NAG 5 5288	96
13	UNIV OF CALIFORNIA - RIVERSIDE	H C NEEDLEMAN	GSFC	A D ZYCH	NAG 5 5116	96
13	UNIV OF CALIFORNIA - RIVERSIDE	H C NEEDLEMAN	GSFC	O T TUMER	NAG 5 5118	96
13	UNIV OF CALIFORNIA - SAN DIEGO	A NURRIDIN	HQ	G M FULLER	NGT 5 50183	105
13	UNIV OF CALIFORNIA - SAN DIEGO	B A MERRITT	GSFC	J L MATTESON	NAG 5 5287	97
13	UNIV OF CALIFORNIA - SAN DIEGO	H C NEEDLEMAN	GSFC	J L MATTESON	NAG 5 5111	97

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
13	UNIV OF CALIFORNIA - SAN DIEGO	J BOHLIN	GSFC	D B QUEST	NAG 5 4658	97
13	UNIV OF CALIFORNIA - SAN DIEGO	J C BRINTON	GSFC	M H THIEMENS	NAG 5 5266	97
13	UNIV OF CALIFORNIA - SAN DIEGO	J R SKARDA	GRC	C POZRIKIDIS	NAG 3 2117	96
13	UNIV OF CALIFORNIA - SANTA BARBARA	A J KOGUT	GSFC	P M LUBIN	NAG 5 9941	108
13	UNIV OF CALIFORNIA - SANTA BARBARA	A NURRIDIN	HQ	P LUBIN	NGT 5 50192	111
13	UNIV OF CALIFORNIA - SANTA BARBARA	B S SINGH	GRC	P AHLERS	NAG 3 1847	106
13	UNIV OF CALIFORNIA - SANTA BARBARA	D HUBBARD	GSFC	G AHLERS	NAG 8 1757	109
13	UNIV OF CALIFORNIA - SANTA BARBARA	G MUCKLOW	GSFC	A CLELAND	NAG 5 8669	107
13	UNIV OF CALIFORNIA - SANTA BARBARA	J POE	MSFC	G AHLERS	NAG 8 1429	109
13	UNIV OF CALIFORNIA - SANTA CRUZ	G A SOFFEN	GSFC	D A WILLIAMS	NGT 5 108	114
13	UNIV OF CHICAGO	B A MERRITT	GSFC	D MULLER	NAG 5 5223	205
13	UNIV OF CHICAGO	B A MERRITT	GSFC	D MULLER	NAG 5 5305	205
13	UNIV OF CHICAGO	B A MERRITT	GSFC	J A SIMPSON	NAG 5 5179	204
13	UNIV OF CHICAGO	B A MERRITT	GSFC	S P SWORDY	NAG 5 5178	204
13	UNIV OF CHICAGO	B MERRITT	GSFC	SWORDY	NAG 5 5229	205
13	UNIV OF CHICAGO	H C NEEDLEMAN	GSFC	D MULLER	NAG 5 5072	204
13	UNIV OF CHICAGO	M S BURRELL	GSFC	R H HILDERBRAND	NGT 5 63	207
13	UNIV OF CHICAGO	M S BURRELL	GSFC	S MEYER	NGT 5 86	207
13	UNIV OF CHICAGO	W J WAGNER	GSFC	D CATTANEO	NAG 5 4953	204
13	UNIV OF CINCINNATI	J BOYCE	GSFC	M SITKO	NAG 5 9475	423
13	UNIV OF COLORADO - BOULDER	A J KLIMAS	GSFC	D N BAKER	NAG 5 8442	131
13	UNIV OF COLORADO - BOULDER	D HUBBARD	MSFC	J HALL	NAG 8 1446	138
13	UNIV OF COLORADO - BOULDER	D T NGUYEN	GSFC	D CASH	NAG 5 11299	138
13	UNIV OF COLORADO - BOULDER	H K NAHRA	GRC	J E COLWELL	NAG 3 2136	124
13	UNIV OF COLORADO - BOULDER	J BOHLIN	GSFC	D DOXAS	NAG 5 6198	127
13	UNIV OF COLORADO - BOULDER	J BOHLIN	GSFC	D HORANYI	NAG 5 4343	126
13	UNIV OF COLORADO - BOULDER	J BRINTON	GSFC	D CASH	NAG 5 5331	127
13	UNIV OF COLORADO - BOULDER	J S LING	GRC	N A CLARK	NAG 3 1846	124
13	UNIV OF COLORADO - BOULDER	J S LING	GRC	R H DAVIS	NAG 3 1850	124
13	UNIV OF COLORADO - BOULDER	L EARLY	GSFC	S SOLOMON	NAG 5 5027	127
13	UNIV OF COLORADO - BOULDER	L J EARLY	GSFC	J FORBES	NAG 5 5028	127
13	UNIV OF COLORADO - BOULDER	L J EARLY	GSFC	W C CASH	NAG 5 5020	127
13	UNIV OF COLORADO - BOULDER	M M MELLOTT	GSFC	D ROBERTSON	NAG 5 4526	126
13	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	P FORBES	NAG 5 4467	126
13	UNIV OF COLORADO - BOULDER	M S BURRELL	GSFC	R MCCRAY	NGT 5 80	140
13	UNIV OF COLORADO - BOULDER	P CRANE	GSFC	P L BENDER	NAG 5 10259	135
13	UNIV OF COLORADO - BOULDER	P M DOTY	MSFC	A GREENBERG	NAG 8 1475	138
13	UNIV OF COLORADO - BOULDER	R HOWARD	GSFC	D C SOLOMON	NAG 5 3949	125
13	UNIV OF COLORADO - BOULDER	T J BIRMINGHAM	GSFC	J TOOMRE	NAG 5 2256	124
13	UNIV OF COLORADO - BOULDER	W G WAGNER	GSFC	D JULIEN	NAG 5 4918	126
13	UNIV OF COLORADO - BOULDER	W J WAGNER	GSFC	N H BRUMMELL	NAG 5 9537	133
13	UNIV OF COLORADO - BOULDER	W JOHNSON	GSFC	E WILKINSON	NAG 5 5096	127
13	UNIV OF CONNECTICUT	D HUBBARD	MSFC	J JAVANAINEN	NAG 8 1428	145
13	UNIV OF DELAWARE - BARTOL RES. INST	H NEEDLEMAN	GSFC	P EVENSON	NAG 5 5063	150
13	UNIV OF DELAWARE - BARTOL RES. INST	J GREBOWSKY	GSFC	W H MATTAEUS	NAG 5 8134	151
13	UNIV OF DELAWARE - BARTOL RES. INST	M H ACUNA	GSFC	N F NESS	NAG 5 8827	151
13	UNIV OF DELAWARE	B A MERRITT	GSFC	P A EVENSON	NAG 5 5221	149
13	UNIV OF DELAWARE	B A MERRITT	GSFC	T K GAISSER	NAG 5 5181	149
13	UNIV OF DELAWARE	J BOHLIN	GSFC	D PONTIUS	NAG 5 6553	149
13	UNIV OF DELAWARE	J W POE	MSFC	S T CHUI	NAG 8 1427	150
13	UNIV OF DELAWARE	M H ACUNA	GSFC	N F NESS	NAG 5 9116	149
13	UNIV OF FLORIDA	C DEGON	GRC	R ABBASCHIAN	NCC 3 476	175
13	UNIV OF HAWAII AT MANOA - HONOLULU	E CHENG	GSFC	G LUPPINO	NAG 5 8751	194
13	UNIV OF HAWAII AT MANOA - HONOLULU	W WAGNER	GSFC	B J LABONTE	NAG 5 4941	192
13	UNIV OF ILLINOIS - CHICAGO CIRCLE	R MARTINEAU	GSFC	C GREIN	NAG 5 10334	208
13	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	B S SINGH	GRC	D M CEPERLEY	NAG 3 1926	209
13	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	C TALLEY	MSFC	J S WALKER	NAG 8 1453	213
13	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D HUBBARD	MSFC	D M CEPERLEY	NAG 8 1760	213
13	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	K SORENSON	MSFC	V L COVERSTON	NAG 8 1803	213
13	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	P M DOTY	MSFC	J A LEWIS	NAG 8 1471	213
13	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	W JOHNSON	GSFC	C GARDNER	NAG 5 5241	210
13	UNIV OF IOWA	D EVANS	GSFC	D F OTANI	NAG 5 4266	225
13	UNIV OF IOWA	D H FAIRFIELD	GSFC	L A FRANK	NAG 5 7684	226
13	UNIV OF IOWA	D H FAIRFIELD	GSFC	R R ANDERSON	NAG 5 7710	226
13	UNIV OF IOWA	H C NEEDLEMAN	GSFC	S R SPANGLER	NAG 5 5051	225
13	UNIV OF IOWA	J BOHLIN	GSFC	D H CAIRNS	NAG 5 6369	225

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
13	UNIV OF IOWA	J BOHLINE	GSFC	A BHATTACHARJEE	NAG 5 3716	225
13	UNIV OF IOWA	J C BRINTON	GSFC	C A KLETZING	NAG 5 5319	225
13	UNIV OF IOWA	M M MELLOTT	GSFC	D MENIETTI	NAG 5 4497	225
13	UNIV OF IOWA	M M MELLOTT	GSFC	D A KLETZING	NAG 5 6525	225
13	UNIV OF IOWA	R B ROGERS	GRC	J A GOREE	NAG 3 2128	225
13	UNIV OF IOWA	R HOFFMAN	GSFC	L A FRANK	NAG 5 7712	226
13	UNIV OF IOWA	W B JOHNSON	GSFC	C A KLETZING	NAG 5 5232	225
13	UNIV OF MARYLAND - COLLEGE PARK	B A MERRITT	GSFC	E S SEO	NAG 5 5155	258
13	UNIV OF MARYLAND - COLLEGE PARK	B A MERRITT	GSFC	E S SEO	NAG 5 5204	258
13	UNIV OF MARYLAND - COLLEGE PARK	B A MERRITT	GSFC	E S SEO	NAG 5 5225	258
13	UNIV OF MARYLAND - COLLEGE PARK	B A MERRITT	GSFC	E S SEO	NAG 5 5308	258
13	UNIV OF MARYLAND - COLLEGE PARK	B MERRITT	GSFC	E SEO	NAG 5 5249	258
13	UNIV OF MARYLAND - COLLEGE PARK	B S SINGH	GRC	R A FERRELL	NAG 3 1867	256
13	UNIV OF MARYLAND - COLLEGE PARK	C J CRANNELL	GSFC	E J SCHMAHL	NAG 5 8029	260
13	UNIV OF MARYLAND - COLLEGE PARK	D EVANS	GSFC	D A COPLAN	NAG 5 4152	257
13	UNIV OF MARYLAND - COLLEGE PARK	E C SITTLER	GSFC	M A COPLAN	NAG 5 4638	257
13	UNIV OF MARYLAND - COLLEGE PARK	F R CHANG-DIAZ	JSC	R SAGDEEV	NAG 9 1920	268
13	UNIV OF MARYLAND - COLLEGE PARK	H C NEEDLEMAN	GSFC	E S SEO	NAG 5 5062	258
13	UNIV OF MARYLAND - COLLEGE PARK	J BOHLIN	GSFC	D F DRAKE	NAG 5 6190	258
13	UNIV OF MARYLAND - COLLEGE PARK	J BOYCE	GSFC	L MUNDY	NAG 5 9575	263
13	UNIV OF MARYLAND - COLLEGE PARK	J W POE	MSFC	H J PAIK	NAG 8 1440	268
13	UNIV OF MARYLAND - COLLEGE PARK	K OGILVIE	GSFC	M COPLAN	NAG 5 10958	267
13	UNIV OF MARYLAND - COLLEGE PARK	L W CURKIN	GSFC	M A COPLAN	NAG 5 5083	258
13	UNIV OF MARYLAND - COLLEGE PARK	M HESSE	GSFC	J DRAKE	NAG 5 8459	261
13	UNIV OF MARYLAND - COLLEGE PARK	W B JOHNSON	GSFC	M A COPLAN	NAG 5 5263	258
13	UNIV OF MEMPHIS	W J WAGNER	GSFC	J T SCHMELZ	NAG 5 9783	469
13	UNIV OF MICHIGAN - ANN ARBOR	B A MERRITT	GSFC	G TARLE	NAG 5 5173	312
13	UNIV OF MICHIGAN - ANN ARBOR	B A MERRITT	GSFC	G TARLE	NAG 5 5230	312
13	UNIV OF MICHIGAN - ANN ARBOR	B A MERRITT	WFF	C W AKERLOFF	NAG 5 5281	312
13	UNIV OF MICHIGAN - ANN ARBOR	J M SHARBER	GSFC	D U KOZYRA	NAG 5 4771	312
13	UNIV OF MICHIGAN - ANN ARBOR	K SACKSTEADER	GRC	A ATREYA	NCC 3 482	317
13	UNIV OF MICHIGAN - ANN ARBOR	M H ACUNA	GSFC	L FISK	NCC 5 383	318
13	UNIV OF MICHIGAN - ANN ARBOR	M M MELLOTT	GSFC	D BURNS	NAG 5 4271	311
13	UNIV OF MICHIGAN - ANN ARBOR	M M MELLOTT	GSFC	D D SKINNER	NAG 5 4007	311
13	UNIV OF MICHIGAN - ANN ARBOR	M M MELLOTT	GSFC	D L KILLEEN	NAG 5 4264	311
13	UNIV OF MICHIGAN - ANN ARBOR	M MELLOTT	GSFC	A BURNS	NAG 5 9355	314
13	UNIV OF MICHIGAN - ANN ARBOR	M WEISLOGEL	GRC	M PERLIN	NAG 3 1861	310
13	UNIV OF MICHIGAN - ANN ARBOR	R PLESS	GSFC	J KOZYRA	NAG 5 5030	312
13	UNIV OF MICHIGAN - ANN ARBOR	W B JOHNSON	GSFC	J T CLARK	NAG 5 5262	312
13	UNIV OF MICHIGAN - ANN ARBOR	W B JOHNSON	GSFC	T L KILLEN	NAG 5 5049	312
13	UNIV OF MICHIGAN - ANN ARBOR	W J WAGNER	GSFC	D R COMBI	NAG 5 6122	312
13	UNIV OF MISSOURI - ROLLA	M PURVEY	MSFC	D E DAY	NAG 8 1465	331
13	UNIV OF NEBRASKA - LINCOLN	D A JAWORSKE	GRC	J A WOOLLAM	NAG 3 2219	340
13	UNIV OF NEBRASKA - LINCOLN	M MEYAPPAN	ARC	S BANDYOPADHYAY	NCC 2 5304	340
13	UNIV OF NEW HAMPSHIRE - DURHAM	A HARPER	GSFC	A GALVIN	NAG 5 00132	349
13	UNIV OF NEW HAMPSHIRE - DURHAM	B A MERRITT	GSFC	J M RYAN	NAG 5 5326	346
13	UNIV OF NEW HAMPSHIRE - DURHAM	B A MERRITT	GSFC	M L MCCONNELL	NAG 5 5324	346
13	UNIV OF NEW HAMPSHIRE - DURHAM	B FLOWERS	GSFC	K LYNCH	NAG 5 5124	345
13	UNIV OF NEW HAMPSHIRE - DURHAM	B MERRITT	WFF	J RYAN	NAG 5 5327	346
13	UNIV OF NEW HAMPSHIRE - DURHAM	D EVANS	GSFC	D M KISTLER	NAG 5 4695	345
13	UNIV OF NEW HAMPSHIRE - DURHAM	F HERRERO	GSFC	M L MCCONNELL	NAG 5 8641	347
13	UNIV OF NEW HAMPSHIRE - DURHAM	H NEEDLEMAN	GSFC	J RYAN	NAG 5 5117	345
13	UNIV OF NEW HAMPSHIRE - DURHAM	H NEEDLEMAN	GSFC	J RYAN	NAG 5 5147	345
13	UNIV OF NEW HAMPSHIRE - DURHAM	J BOHLIN	GSFC	D L KAUFMANN	NAG 5 4458	345
13	UNIV OF NEW HAMPSHIRE - DURHAM	J M GREBOWSKY	GSFC	J V HOLLWEG	NAG 5 8228	347
13	UNIV OF NEW HAMPSHIRE - DURHAM	K OGILVIE	GSFC	R TORBERT	NAG 5 6860	346
13	UNIV OF NEW HAMPSHIRE - DURHAM	L CHRISTENSEN	GSFC	R TORBERT	NAG 5 30744	349
13	UNIV OF NEW HAMPSHIRE - DURHAM	L W GURKIN	GSFC	R ARNOLDY	NAG 5 5057	345
13	UNIV OF NEW HAMPSHIRE - DURHAM	M H ACUNA	GSFC	A B GALVIN	NAG 5 8044	347
13	UNIV OF NEW HAMPSHIRE - DURHAM	M H ACUNA	GSFC	R B TOBBERT	NAG 5 8041	347
13	UNIV OF NEW HAMPSHIRE - DURHAM	M H ACUNA	GSFC	V K JORDANOVA	NAG 5 7804	347
13	UNIV OF NEW HAMPSHIRE - DURHAM	M HESSE	GSFC	L M KISTLER	NAG 5 6925	346
13	UNIV OF NEW HAMPSHIRE - DURHAM	M HESSE	GSFC	R B TORBERT	NAG 5 6935	346
13	UNIV OF NEW HAMPSHIRE - DURHAM	T J BIRMINGHAM	GSFC	J V HOLLWEG	NAG 5 1479	345
13	UNIV OF NEW HAMPSHIRE - DURHAM	W B JOHNSON	GSFC	R L ARNOLDY	NAG 5 5237	346
13	UNIV OF NEW HAMPSHIRE - DURHAM	W J WAGNER	GSFC	T G FORBES	NAG 5 9614	348

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
13	UNIV OF NEW HAMPSHIRE - DURHAM	W JOHNSON	GSFC	K LYNCH	NAG 5 5234	345
13	UNIV OF NEW MEXICO-ALBUQUERQUE	B S SINGH	GRC	S T BOYD	NAG 3 1976	364
13	UNIV OF NEW MEXICO-ALBUQUERQUE	C STAHL	GSFC	S BOYD	NAG 5 10359	365
13	UNIV OF NEW MEXICO-ALBUQUERQUE	E R CANAVAN	GSFC	R I EPSTEIN	NAG 5 10373	365
13	UNIV OF NEW MEXICO-ALBUQUERQUE	M G MILLIS	GRC	K J MALLOY	NAS 3 00103	366
13	UNIV OF NORTH CAROLINA - CHAPEL HILL	M MEYYAPPAN	ARC	J LU	NCC 2 5372	403
13	UNIV OF NOTRE DAME	J BOYCE	GSFC	D BENNET	NAG 5 9731	221
13	UNIV OF NOTRE DAME	K D WRIGHT	LARC	T C CORKE	NAG 1 2264	221
13	UNIV OF OREGON - EUGENE	B S SINGH	GRC	D J DONNELLY	NAG 3 1934	435
13	UNIV OF PENNSYLVANIA	R A WILKINSEN	GRC	A G YODH	NAG 3 2172	452
13	UNIV OF PITTSBURGH	A NURRIDIN	HQ	X WU	NGT 5 50207	456
13	UNIV OF PITTSBURGH	D J LARKIN	GRC	W J CHOYKE	NAG 3 2538	454
13	UNIV OF PITTSBURGH	J A POWELL	GRC	W J CHOYKE	NAG 3 2149	454
13	UNIV OF PITTSBURGH	J C BINTON	GSFC	E ZIPF	NAG 5 5267	454
13	UNIV OF PITTSBURGH	R A WILKINSON	GRC	J V MAHER	NAG 3 1833	454
13	UNIV OF PITTSBURGH	R SKARCH	GRC	W GOLDBURG	NAG 3 2132	454
13	UNIV OF PITTSBURGH	W B JOHNSON	GSFC	E C ZIPF	NAG 5 661	454
13	UNIV OF PUERTO RICO - MAYAGUEZ	B PENN	MSFC	A LYDERMAN	NAG 8 1344	557
13	UNIV OF PUERTO RICO - MAYAGUEZ	M VLASSE	MSFC	A BARRIENTOS	NAG 8 1389	557
13	UNIV OF ROCHESTER	C R MCCREIGHT	ARC	W J FORREST	NAG 2 1142	393
13	UNIV OF ROCHESTER	G STRINGFELLOW	GSFC	D M WATSON	NAG 5 9351	393
13	UNIV OF ROCHESTER	M L TUMA	GRC	T G BROWN	NCC 3 660	394
13	UNIV OF SOUTHERN CALIFORNIA	J BRINTON	WFF	D JUDGE	NAG 5 5333	116
13	UNIV OF SOUTHERN CALIFORNIA	L J EARLY	GSFC	D L JUDGE	NSG 5108	119
13	UNIV OF SOUTHERN CALIFORNIA	M MEYYAPPAN	ARC	C ZHOU	NCC 2 5420	118
13	UNIV OF SOUTHERN CALIFORNIA	W B JOHNSON	GSFC	D J JUDGE	NAG 5 5018	116
13	UNIV OF SOUTHERN MISSISSIPPI	W S SPEARMAN	MSFC	J A POJMAN	NAG 8 1466	329
13	UNIV OF TENNESSEE - KNOXVILLE	J POE	MSFC	A J SANDERS	NAG 8 1442	471
13	UNIV OF TENNESSEE - KNOXVILLE	P DOTY	MSFC	L W TOWNSEND	NAG 8 1669	471
13	UNIV OF TENN SPACE INST - TULLAHOMA	J COLE	MSFC	J W MUELHAUSER	NAS 8 97301	472
13	UNIV OF TEXAS - AUSTIN	B S SINGH	GRC	D J HEINZEN	NAG 3 1901	492
13	UNIV OF TEXAS - AUSTIN	F HERRERO	GSFC	D T JAFFE	NAG 5 8858	494
13	UNIV OF TEXAS - AUSTIN	G SCHWARZE	GRC	D D DUPUIS	NAG 3 2633	492
13	UNIV OF TEXAS - DALLAS	C STAHL	GSFC	G D EARLE	NAG 5 10335	499
13	UNIV OF TEXAS - DALLAS	M M MELLOTT	GSFC	D A HEELIS	NAG 5 4465	498
13	UNIV OF TEXAS - DALLAS	M M MELLOTT	GSFC	D D EARLE	NAG 5 4187	498
13	UNIV OF TEXAS - DALLAS	W B JOHNSON	GSFC	G D EARLE	NAG 5 5257	498
13	UNIV OF TEXAS - EL PASO	B PENN	MSFC	C DIRK	NAG 8 1393	500
13	UNIV OF TEXAS - EL PASO	D EVANS	GSFC	D E LOPEZ	NAG 5 8881	499
13	UNIV OF TEXAS - EL PASO	M H ACUNA	GSFC	R E LOPEZ	NAG 5 8882	499
13	UNIV OF TEXAS - EL PASO	M H ACUNA	GSFC	R E LOPEZ	NAG 5 8883	499
13	UNIV OF TOLEDO	D REDDY	GRC	T G KEITH	NCC 3 855	427
13	UNIV OF VERMONT	W JOHNSON	GSFC	T KELLER	NAG 5 5135	506
13	UNIV OF VIRGINIA	B GUYNES	MSFC	M C WIENER	NAG 8 1567	526
13	UNIV OF VIRGINIA	J H STORRIES	LARC	D A STAACK	NGT 1 52212	527
13	UNIV OF VIRGINIA	T L PARROTT	LARC	W E ZORUMSKI	NCC 1 361	526
13	UNIV OF WASHINGTON	B S SINGH	GRC	W NAGOURNEY	NAG 3 1865	534
13	UNIV OF WASHINGTON	J C BRINTON	GSFC	J D SAHR	NAG 5 5294	536
13	UNIV OF WASHINGTON	J GREBOWSKY	GSFC	D MCCARTHY	NAG 5 4681	535
13	UNIV OF WASHINGTON	J L CHRISTENSEN	GSFC	G K PARKS	NAS 5 30613	541
13	UNIV OF WASHINGTON	J S LING	GRC	E J DAVIS	NAG 3 1837	534
13	UNIV OF WASHINGTON	M HESSE	GSFC	G PARKS	NAG 5 6924	536
13	UNIV OF WASHINGTON	R HOFFMAN	GSFC	G K PARKS	NAG 5 7732	537
13	UNIV OF WASHINGTON	W B JOHNSON	GSFC	M MCCARTHY	NAG 5 5190	535
13	UNIV OF WASHINGTON	W B JOHNSON	GSFC	R H HOLZWORTH	NAG 5 5183	535
13	UNIV OF WISCONSIN - MADISON	A NURRIDIN	HQ	P TIMBIE	NGT 5 50185	555
13	UNIV OF WISCONSIN - MADISON	C TALLEY	MSFC	R F COOPER	NAG 8 1460	552
13	UNIV OF WISCONSIN - MADISON	G MUCKLOW	GSFC	D MCCAMMON	NAG 5 8537	550
13	UNIV OF WISCONSIN - MADISON	J BRINTON	GSFC	D MCCAMMON	NAG 5 5270	548
13	UNIV OF WISCONSIN - MADISON	J CHERVENAK	GSFC	P TIMBIE	NAG 5 10258	552
13	UNIV OF WISCONSIN - MADISON	L J EARLY	GSFC	D MCCAMMON	NAG 5 679	547
13	UNIV OF WISCONSIN - MADISON	L J EARLY	GSFC	K H NORDSIECK	NAG 5 647	547
13	UNIV OF WISCONSIN - MADISON	L J EARLY	GSFC	R J REYNOLDS	NAG 5 674	547
13	UNIV OF WISCONSIN - MADISON	R SILVERBERG	GSFC	P TIMBIE	NAG 5 4484	548
13	UNIV OF WISCONSIN - MADISON	S LAMBROS	GSFC	P DINGUS	NAG 5 9712	551
13	UNIV OF WISCONSIN - MADISON	W B JOHNSON	GSFC	K H NORDSIECK	NAG 5 5252	548

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
13	UNIV OF WISCONSIN - MADISON	W B JOHNSON	GSFC	W HARIS	NAG 5 5253	548
13	UNIV OF WISCONSIN - MILWAUKEE	R C SINGLETERRY, JR.	LARC	J W NORBURY	NCC 1 354	555
13	UNIV OF WISCONSIN - MILWAUKEE	R C SINGLETERRY, JR.	LARC	S R BLATTNING	NGT 1 52217	555
13	UTAH STATE UNIV	J C BRINTON	GSFC	B G FEJER	NAG 5 5293	504
13	UTAH STATE UNIV	M M MELLOTT	GSFC	D G FEJER	NAG 5 4469	504
13	UTAH STATE UNIV	P H PLESS	GSFC	J C ULWICK	NAG 5 5046	504
13	UTAH STATE UNIV	S NASH-STEVENSON	MSFC	J DENNISON	NGT 8 52885	506
13	UTAH STATE UNIV	T J BIRMINGHAM	GSFC	R W SCHUNK	NAG 5 1484	504
13	UTAH STATE UNIV	W B JOHNSON	GSFC	C M SWENSON	NAG 5 5187	504
13	UTAH STATE UNIV	W B JOHNSON	GSFC	C M SWENSON	NAG 5 5258	504
13	UTAH STATE UNIV	W B JOHNSON	GSFC	J C ULWICK	NAG 5 5189	504
13	UTAH STATE UNIV	W B JOHNSON	GSFC	J C ULWICK	NAG 5 5245	504
13	VA POLYTECH INST & ST UNIV	J C BRINTON	GSFC	W SCALES	NAG 5 5295	530
13	VANDERBILT UNIV	J GRANT	GSFC	D SAUMON	NAG 5 8906	472
13	WASHINGTON STATE UNIV	F J MONTEGANI	GRC	P MARSTON	NGT 3 52330	544
13	WASHINGTON STATE UNIV	N HALL	ARC	M A OSMAN	NCC 2 5407	544
13	WASHINGTON STATE UNIV	N R HALL	GRC	P L MARSTON	NAG 3 2114	543
13	WASHINGTON UNIV - ST	B A MERRITT	WFF	W R BINNS	NAG 5 5296	333
13	WASHINGTON UNIV - ST	H C NEDDLEMAN	GSFC	R W BINNS	NAG 5 5078	333
13	WASHINGTON UNIV - ST	H C NEEDLEMAN	GSFC	P L HINK	NAG 5 5114	333
13	WASHINGTON UNIV - ST	H NEEDLEMAN	GSFC	R BINNS	NAG 5 5110	333
13	WASHINGTON UNIV - ST	H NEEDLEMAN	GSFC	W R BINNS	NAG 5 5154	333
13	WASHINGTON UNIV - ST	K E BLANDING	GSFC	P L HINK	NGT 5 50170	336
13	WASHINGTON UNIV - ST	M CHRISTI	MSFC	K R WATERS	NGT 1 52197	336
13	WASHINGTON UNIV - ST	M MILLIS	GRC	M S CONRAD	NAG 3 00094	336
13	WESTERN MICHIGAN UNIV	P CRANE	GSFC	T GORCZYCA	NAG 5 10448	320
13	WHITWORTH COLLEGE	D DOMOMKOS	GRC	D STEVENS	NAG 3 2510	544
13	WORCESTER POLYTECH INST	E J PENCIL	GRC	D GATSONIS	NAG 3 2405	305
13	WRIGHT STATE UNIV	M M MELLOTT, SR.	GSFC	D L FOX	NAG 5 4188	426
13	YALE UNIV	C TALLEY	MSFC	R E APFEL	NAG 8 1461	148
13	YALE UNIV	D HUBBARD	MSFC	K GIBBLE	NAG 8 1449	148
13	YALE UNIV	D HUBBARD	MSFC	M A KASEVICH	NAG 8 1443	148
13	YALE UNIV	D HUBBARD	MSFC	M A KASEVICH	NAG 8 1767	148
13	YALE UNIV	F HERRERO	GSFC	R J SCHOELKOPF	NAG 5 10755	148
13	YALE UNIV	M S BURRELL	GSFC	D SCHOELKOPF	NGT 5 121	148
13	YALE UNIV	N J DENNEHY	GSFC	P KASEVICH	NAG 5 10439	148
13	YALE UNIV	W B JOHNSON	GSFC	D E PROBER	NAG 5 5255	147
19	ALABAMA A&M UNIV	B PENN	MSFC	B PENN	NAG 8 1400	1
19	ALABAMA A&M UNIV	R C ANDERSON	GRC	E W ROTHE	NAG 8 1800	2
19	AUBURN UNIV	P J GEORGE	GRC	H W BRANDHORST	NAG 3 99200	3
19	BAYLOR COLLEGE OF MED	B GUYBES	MSFC	T G WENSEL	NAG 8 1387	474
19	BAYLOR COLLEGE OF MED	S SCHNEIDER	JSC	A BEBLANC	NCC 9 88	475
19	BOSTON COLLEGE	J C BARNES	LARC	B DIBARTOLOL	NAG 1 01067	276
19	BOSTON UNIV	J GURMAN	GSFC	N U CROOKER	NAG 5 10881	279
19	BOSTON UNIV	L CHRISTENSEN	GSFC	T FRITZ	NAG 5 9191	278
19	BOSTON UNIV	P BUCHANAN	GSFC	D SPENCE	NAG 5 10419	279
19	BOSTON UNIV	R HOFFMAN	GSFC	H E SPENCER	NAG 5 7706	278
19	BOSTON UNIV	R HOFFMAN	GSFC	H SPENCE	NAG 5 9557	279
19	BOSTON UNIV	R HOFFMAN	GSFC	J CHEN	NAG 5 9562	279
19	BOSTON UNIV	R HOFFMAN	GSFC	T FRITZ	NAG 5 7677	278
19	CALIFORNIA INST OF TECH	D HUBBARD	MSFC	D GOODSTEIN	NAG 8 1763	49
19	CALIFORNIA INST OF TECH	D S HUBBARD	MSFC	A PONCE	NAG 8 1785	49
19	CALIFORNIA INST OF TECH	E K STANSBERY	JSC	D S BURNETT	NAG 9 1013	49
19	CALIFORNIA INST OF TECH	P DOTY	MSFC	J BRADY	NAG 8 1661	48
19	CALIFORNIA STATE UNIV - FULLERTON	E K STANSBERY	JSC	D S WOOLUM	NAG 9 1009	51
19	CALIFORNIA STATE UNIV - NORTHRIDGE	J GURMAN	GSFC	A CADAVID	NAG 5 10880	52
19	CALIFORNIA STATE UNIV - NORTHRIDGE	J GURMAN	GSFC	G A CHAPMAN	NAG 5 7878	52
19	CARNEGIE - MELLON UNIV	K BLANDING	HQ	S SINGH	NGT 5 50347	439
19	CARNEGIE - MELLON UNIV	P DOTY	MSFC	R F SEKERKA	NAG 8 1704	437
19	CARNEGIE - MELLON UNIV	P DOTY	MSFC	R F SEKERKA	NCC 8 1704	439
19	CASE WESTERN RESERVE UNIV	D F CHAO	GRC	Y KAMOTANI	NAG 3 1913	406
19	CASE WESTERN RESERVE UNIV	D HUBBARD	MSFC	C ROSENBLATT	NAG 8 1779	407
19	CLARKSON UNIV	C TALLEY	MSFC	L L REGEL	NAG 8 1482	369
19	CLARKSON UNIV	M E HILL	GRC	S P LIN	NAG 3 1891	369
19	CLARKSON UNIV	P DOTY	MSFC	W R WILCOX	NAG 8 1266	369
19	CLEVELAND STATE UNIV	D ADAMOVSKY	GRC	D FLANAGAN	NCC 3 914	412



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
19	COLLEGE OF THE HOLY CROSS	A JACKSON	MSFC	M KOSS	NAG 8 1796	282
19	COLLEGE OF WILLIAM AND MARY	S A THIBEAULT	LARC	R L KIEFER	NCC 1 327	508
19	COLORADO STATE UNIV	D STARR	GSFC	G L STEPHENS	NAG 5 11109	121
19	COLUMBIA UNIV	W B JOHNSON	GSFC	C J HAILEY	NAG 5 5260	370
19	CORNELL UNIV	B GUYNES	MSFC	R THORNE	NAG 8 1357	380
19	CORNELL UNIV	D HUBBARD	MSFC	L POLLACK	NAG 8 1778	380
19	CORNELL UNIV	D SHUBBARD	MSFC	C A BATT	NAG 8 1759	380
19	CORNELL UNIV	G GUYNES	MSFC	R E THORNE	NAG 8 1831	380
19	DARTMOUTH COLLEGE	S CURTIS	GSFC	M HUDSON	NAG 5 7442	344
19	DUKE UNIV	D HUBBARD	MSFC	J E THOMAS	NAG 8 1781	395
19	FISK UNIV	U	MSFC	D O HENDERSON	NAG 8 1604	467
19	FLORIDA ATLANTIC UNIV	R J GUNDERMAN	GRC	H F HELMKEN	NAS 3 26956	165
19	FLORIDA STATE UNIV	D HUBBARD	MSFC	E MANOUSAKIS	NAG 8 1773	168
19	GEORGETOWN UNIV	S M SMITH	JSC	E WASTNEY	NAG 9 1058	154
19	HAHNEMANN UNIV	B GUYNES	MSFC	P J LOLL	NAG 8 1840	441
19	HAMPTON UNIV	D DESMARAIS	ARC	B FAISON	NGT 2 52261	513
19	HARVARD UNIV	G MADDREA	LARC	S C WOFSY	NAS 1 18946	285
19	HARVARD UNIV	P DOTY	MSFC	M J AZIZ	NAG 8 1256	285
19	INDIANA UNIV - BLOOMINGTON	D HUBBARD	MSFC	V A KOSTELECKY	NAG 8 1770	216
19	INDIANA UNIV - BLOOMINGTON	W CULPEPPER	JSC	C FOSTER	NAS 9 98121	216
19	IOWA STATE UNIV	M HAMMOND	MSFC	R K TRIVEDI	NCC 8 98	224
19	IOWA STATE UNIV	W P WINFREE	LARC	J GRAY	NAG 1 1933	222
19	JOHNS HOPKINS UNIV	B GUYNES	MSFC	D WIRTZ	NAG 8 1377	251
19	JOHNS HOPKINS UNIV	D FAIRFIELD	GSFC	D WILLIAMS	NAG 5 8800	245
19	JOHNS HOPKINS UNIV	H K NAHRA	GRC	H N OGUZ	NAG 3 2118	241
19	JOHNS HOPKINS UNIV	M ACUNA	GSFC	R MCENTIRE	NAG 5 10242	248
19	JOHNS HOPKINS UNIV	M DESCH	GSFC	D G SIBECK	NAG 5 9569	247
19	JOHNS HOPKINS UNIV	P DOTY	MSFC	R MAUER	NAG 8 1695	251
19	JOHNS HOPKINS UNIV	P DOWNEY	MSFC	J L KATZ	NAG 8 1257	251
19	JOHNS HOPKINS UNIV	R HOFFMAN	GSFC	C I MENG	NAG 5 7724	243
19	JOHNS HOPKINS UNIV	R HOFFMAN	GSFC	P NEWELL	NAG 5 9558	247
19	JOHNS HOPKINS UNIV	S CURTIS	GSFC	R GREENWALD	NAG 5 10597	249
19	JOHNS HOPKINS UNIV	S M SMITH	SSC	K O O	NAG 9 1146	251
19	JOHNS HOPKINS UNIV	W P WINFREE	LARC	J M GREEN	NAG 1 2304	241
19	KANSAS STATE UNIV	B BILLS	GSFC	A ARCHER	NCC 5 234	228
19	KANSAS STATE UNIV	P DOTY	MSFC	C M KLABUNDE	NAG 8 1687	228
19	KANSAS STATE UNIV	P DOTY	MSFC	M D HOLLINGSWORTH	NAG 8 1702	228
19	KENT STATE UNIV	A HEPP	GRC	D CHOWDHURY	NCC 3 734	413
19	LAMAR UNIV	G A MCKAY	SSC	S L JORDAN	NCC 9 126	475
19	LOUISIANA STATE UNIV - BATON ROUGE	B A MERRITT	WFF	M CHERRY	NAG 5 5208	233
19	LOUISIANA STATE UNIV - BATON ROUGE	B GUYNES	MSFC	K ALSHIBLI	NAS 8 01042	234
19	MASSACHUSETTS INST OF TECH	J KING	GSFC	K PAULARENA	NAG 5 9622	294
19	MASSACHUSETTS INST OF TECH	K OGILVIE	GSFC	A LAZARUS	NAG 5 10915	295
19	MASSACHUSETTS INST OF TECH	K W OGILVIE	GSFC	A J LAZARUS	NAS 5 99181	297
19	MASSACHUSETTS INST OF TECH	N R HALL	GRC	G H MCKINLEY	NAG 3 2155	288
19	MASSACHUSETTS INST OF TECH	N R HALL	GRC	G H MCKINLEY	NCC 3 610	298
19	MASSACHUSETTS INST OF TECH	P DOTY	MSFC	G BENEDEK	NAG 8 1659	296
19	MASSACHUSETTS INST OF TECH	P DOTY	MSFC	M CIMA	NAG 8 1688	296
19	MASSACHUSETTS INST OF TECH	P DOTY	MSFC	R A BROWN	NAG 8 1253	296
19	MASSACHUSETTS INST OF TECH	S OLESON	GRC	D MARTINEZ-SANCHEZ	NCC 3 875	298
19	MICHIGAN STATE UNIV	J GURMAN	GSFC	R F STEIN	NAG 5 8053	307
19	MICHIGAN TECHNOLOGICAL UNIV	C TALLEY	MSFC	T H COURTNEY	NAG 8 1478	309
19	MIDDLE TENNESSEE STATE UNIV	C TALLEY	MSFC	A C FRIEDLI	NAG 8 1486	468
19	NEW JERSEY INST OF TECH	J GURMAN	GSFC	H WANG	NAG 5 7837	350
19	NEW JERSEY INST OF TECH	J GURMAN	GSFC	H WANG	NAG 5 9738	351
19	NEW JERSEY INST OF TECH	J GURMAN	GSFC	H WANG	NAG 5 10910	351
19	NEW JERSEY INST OF TECH	J GURMAN	GSFC	J CHAE	NAG 5 10894	351
19	NEW JERSEY INST OF TECH	J GURMAN	GSFC	J LEE	NAG 5 10891	351
19	NEW JERSEY INST OF TECH	J GURMAN	GSFC	P GOODE	NAG 5 9730	351
19	NEW MEXICO STATE UNIV - LAS CRUCES	W LOVE	MSFC	C YING	NAG 8 1710	363
19	NORTH CAROLINA STATE UNIV	C TALLEY	MSFC	J BERNHOLC	NAG 8 1479	401
19	NORTH CAROLINA STATE UNIV	G MADDREA	LARC	V SAXENA	NAS 1 18944	401
19	NORTH CAROLINA STATE UNIV	P DOTY	MSFC	N DIETZ	NAG 8 1686	401
19	NORTHEASTERN UNIV	C TALLEY	MSFC	A SACCO	NAG 8 1485	300
19	NORTHEASTERN UNIV	P DOTY	MSFC	A KARMA	NAG 8 1254	300
19	NORTHWESTERN UNIV	P DOTY	MSFC	J ALKEMPER	NAG 8 1660	202

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
19	NORTHWESTERN UNIV	R A WILKINSON	GRC	S G BANKOFF	NAG 3 1855	201
19	OHIO STATE UNIV	C TALLEY	MSFC	P K GUPTA	NAG 8 1470	417
19	OHIO STATE UNIV	D W GRIFFIN	GRC	C D ANDERECK	NAG 3 2138	413
19	OLD DOMINION UNIV	M A TALLEY	LARC	G R HOY	NAG 1 2211	516
19	OREGON STATE UNIV	B BILLS	GSFC	G D EGBERT	NAG 5 6156	431
19	OREGON STATE UNIV	D STARR	GSFC	M H FREILICH	NAG 5 11105	433
19	PENN STATE UNIV	C TALLEY	MSFC	R M GERMAN	NAG 8 1452	448
19	PENN STATE UNIV	D L UBRAN	GRC	R A YETTER	NCC 3 718	450
19	PENN STATE UNIV	P DOTY	MSFC	J SINGH	NAG 8 1272	448
19	POLYTECH UNIV - BROOKLYN	B GUYNES	MSFC	A MYERSON	NAG 8 1370	384
19	PRAIRIE VIEW A&M UNIV	F A CUCINOTTA	JSC	R WILKINS	NCC 9 114	476
19	PRAIRIE VIEW A&M UNIV	J D ATKINSON	JSC	T N FOGARTY	NCC 9 50	476
19	PRINCETON UNIV	D STARR	GSFC	E F WOOD	NAG 5 11111	354
19	PRINCETON UNIV	F P CHIARAMONTE	GRC	D A SAVILLE	NAG 3 2380	352
19	PURDUE UNIV	B V GUYNES	MSFC	B L GOLDEN	NAG 8 1833	219
19	PURDUE UNIV	P DOTY	MSFC	D JOHNSON	NAG 8 1691	219
19	RENSELAER POLYTECH INST	A JACKMAN	MSFC	M B KOSS	NAG 8 1488	385
19	RENSELAER POLYTECH INST	J C DUH	GRC	P C WAYNER	NAG 3 1834	384
19	RENSELAER POLYTECH INST	L B JETER	MSFC	M E GLICKSMAN	NAG 8 1468	385
19	RICE UNIV	C L TALLEY	MSFC	N J HALAS	NAG 8 1467	478
19	RICE UNIV	R HOFFMAN	GSFC	P REIFF	NAG 5 8380	477
19	ROCHESTER INST OF TECH	A F HEPP	GRC	D P RAFFAELLE	NCC 3 806	386
19	RUTGERS ST UNIV N	B MOTT	GSFC	D JOSEPH	NAG 5 9813	358
19	RUTGERS ST UNIV N	D HUBBARD	MSFC	H KOJIMA	NAG 8 1769	358
19	RUTGERS STATE UNIV OF NJ NEW BRUNS	B MOTT	GSFC	D JOSEPH	NAG 5 9833	359
19	SAINT LOUIS UNIV	L SMITH	HQ	N C PARTRIDGE	NGT 5 50201	329
19	SAN JOSE STATE UNIV	A BARNES	ARC	P J HAMILL	NCC 2 1060	56
19	SOUTHEASTERN LOUISIANA UNIV	J F DOWDY	MSFC	W A PARKISON	NAG 8 1206	235
19	SOUTHWEST TEXAS STATE UNIV	J F DOWDY	MSFC	S F TARSITANO	NAG 8 1367	480
19	SPELMAN COLLEGE	C MOORE	MSFC	B CARDELINO	NCC 8 144	190
19	STANFORD UNIV	C TALLEY	MSFC	R S FEIGELSON	NAG 8 1457	63
19	STANFORD UNIV	D A REISS	MSFC	R S FEIGELSON	NAG 8 1151	63
19	STANFORD UNIV	D HUBBARD	MSFC	D D OSHEROFF	NAG 8 1777	63
19	STANFORD UNIV	D HUBBARD	MSFC	J A LIPA	NAG 8 1772	63
19	STANFORD UNIV	J C DUH	GRC	G M HOMSY	NAG 3 1943	60
19	STANFORD UNIV	J GURMAN	GSFC	D B GALARCE	NAG 5 7835	61
19	STANFORD UNIV	J GURMAN	GSFC	P H SCHERRER	NAG 5 10483	62
19	STANFORD UNIV	J GURMAN	GSFC	P SCHERRER	NAG 5 8878	62
19	STANFORD UNIV	R HOFFMAN	GSFC	M WALT	NAG 5 8025	61
19	TAYLOR UNIV	R HOFFMAN	GSFC	H D VOSS	NAG 5 8077	220
19	THE CATHOLIC UNIV OF AMERICA	J A SLAVIN	GSFC	Y C WHANG	NAG 5 8619	157
19	THE CATHOLIC UNIV OF AMERICA	J GURMAN	GSFC	M GUATHAKURTA	NAG 5 8018	157
19	THE CATHOLIC UNIV OF AMERICA	J GURMAN	GSFC	N GOPALSWAMY	NCC 5 418	161
19	THE CATHOLIC UNIV OF AMERICA	J GURMAN	GSFC	N GOPALSWAMY	NCC 5 512	161
19	THE CATHOLIC UNIV OF AMERICA	L F BURLAGA	GSFC	Y C WHANG	NAG 5 11131	160
19	THE CATHOLIC UNIV OF AMERICA	M ACUNA	GSFC	N GOPALSWAMMY	NAG 5 11162	160
19	THE SCRIPPS REASERCH INST	B GUYNES	MSFC	G A CHANG	NAG 8 1834	67
19	TUFTS UNIV	J GURMAN	GSFC	K R LANG	NAG 5 8115	300
19	TUFTS UNIV	P M DOTY	MSFC	P CEBE	NAG 8 1480	301
19	UNIV HOUSTON-HOUSTON	B GUYNES	MSFC	J M FRIEDMAN	NAG 8 1363	486
19	UNIV HOUSTON-HOUSTON	F CHANG-DIAZ	JSC	D BERING	NAG 9 904	486
19	UNIV HOUSTON-HOUSTON	P DOTY	MSFC	L S PINSKY	NAG 8 1658	486
19	UNIV HOUSTON-HOUSTON	P J SHIRRON	GSFC	P W CHU	NAG 5 10714	486
19	UNIV OF MINN	E K STANSBERY	JSC	R O PEPIN	NAG 9 1007	324
19	UNIV OF MINN	P DOTY	MSFC	J DERBY	NAG 8 1258	323
19	UNIV OF MINN	R HOFFMAN	GSFC	C CATELL	NAG 5 7885	322
19	UNIV OF MINN	R J MACDOWELL	GSFC	K GOETZ	NAS 5 32994	324
19	UNIV OF TEXAS-PAN AMERICAN	A BEAM	MSFC	A LUMSDAINE	NAG 8 1634	488
19	UNIV OF AKRON	D NG	GRC	G C GIAKOS	NAG 3 2632	421
19	UNIV OF ALABAMA - BIRMINGHAM	C HUA SU	MSFC	R SCRIPA	NCC 8 204	6
19	UNIV OF ALABAMA - BIRMINGHAM	P DOTY	MSFC	J B ANDREWS	NAG 8 1228	6
19	UNIV OF ALABAMA - BIRMINGHAM	P M DOTY	MSFC	J W MAYS	NAG 8 1678	6
19	UNIV OF ALABAMA - HUNTSVILLE	C H SU	MSFC	J BAIRD	NAG 8 1850	12
19	UNIV OF ALABAMA - HUNTSVILLE	D STARR	GSFC	M J NEWCHURCH	NAG 5 11100	11
19	UNIV OF ALABAMA - HUNTSVILLE	E ETHRIDGE	MSFC	W KINKLER	NCC 8 207	13
19	UNIV OF ALABAMA - HUNTSVILLE	H K HIGGINBOTHAM	MSFC	R JUDGE	NAG 8 1816	12

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
19	UNIV OF ALABAMA - HUNTSVILLE	J GURMAN	GSFC	G EMSLIE	NAG 5 7991	8
19	UNIV OF ALABAMA - HUNTSVILLE	P DOTY	MSFC	A FEDOSEYER	NAG 8 1229	11
19	UNIV OF ALABAMA - HUNTSVILLE	P DOTY	MSFC	S FETH	NCC 8 205	13
19	UNIV OF ALABAMA - HUNTSVILLE	R HOFFMAN	GSFC	R SHELDON	NAG 5 9741	10
19	UNIV OF ALABAMA - HUNTSVILLE	R N GRUGEL	MSFC	A FEDOSEYEV	NCC 8 209	14
19	UNIV OF ALABAMA - HUNTSVILLE	S NASH-STEVENSON	MSFC	W PACIESAS	NGT 8 52886	14
19	UNIV OF ALABAMA - UNIV	M PURVEY	MSFC	D M STEFANESCU	NAS 8 00207	16
19	UNIV OF ALABAMA - UNIV	T DE LOACH	MSFC	D M STEFANESCU	NAS 8 39715	16
19	UNIV OF ALASKA - FAIRBANKS	D O STARR	GSFC	S LI	NAG 5 6338	17
19	UNIV OF ALASKA - FAIRBANKS	R J GUNDERMAN	GRC	C E MAYER	NAS 3 26401	18
19	UNIV OF ARIZONA	A T CHAI	GRC	J JACOBS	NAG 3 1869	25
19	UNIV OF ARIZONA	D HUBBARD	MSFC	P MEYSTRE	NAG 8 1775	37
19	UNIV OF ARIZONA	D O STARR	GSFC	P KRIDER	NAG 5 6461	27
19	UNIV OF ARIZONA	D O STARR	GSFC	P KRIDER	NAG 5 9208	32
19	UNIV OF ARIZONA	D O STARR	GSFC	R SCHOWENGERDT	NAG 5 6339	27
19	UNIV OF ARIZONA	J GURMAN	GSFC	J JOKIPII	NAG 5 10893	35
19	UNIV OF ARIZONA	P DOTY	MSFC	K J JACKSON	NAG 8 1667	37
19	UNIV OF ARKANSAS - LITTLE ROCK	C J BRYAN	KSC	T VISWANATHAN	NAG10 277	40
19	UNIV OF CALIFORNIA - BERKELEY	D FAIRFIELD	GSFC	F MOZER	NAG 5 9626	73
19	UNIV OF CALIFORNIA - BERKELEY	D STARR	GSFC	D BALDOCCHI	NAG 5 8753	72
19	UNIV OF CALIFORNIA - BERKELEY	J GURMAN	GSFC	D T WOODS	NAG 5 7929	71
19	UNIV OF CALIFORNIA - BERKELEY	K E CYR	JSC	K NISHIZUMI	NAG 9 1051	75
19	UNIV OF CALIFORNIA - BERKELEY	K OGILVIE	GSFC	R P LIN	NAG 5 10428	74
19	UNIV OF CALIFORNIA - BERKELEY	M ACUNA	GSFC	C CARLSON	NAG 5 9650	73
19	UNIV OF CALIFORNIA - BERKELEY	M GOLDSTEIN	GSFC	F MOZER	NAG 5 9975	74
19	UNIV OF CALIFORNIA - BERKELEY	M GOLDSTEIN	GSFC	G K PARKS	NAG 5 10131	74
19	UNIV OF CALIFORNIA - BERKELEY	P J SHIRRON	GSFC	P L RICHARDS	NAG 5 10713	75
19	UNIV OF CALIFORNIA - BERKELEY	P M DOTY	MSFC	J W EVANS	NAG 8 1458	75
19	UNIV OF CALIFORNIA - BERKELEY	R HOFFMAN	GSFC	F MOZER	NAG 5 8078	71
19	UNIV OF CALIFORNIA - BERKELEY	R HOFFMAN	GSFC	G PARKS	NAG 5 10466	74
19	UNIV OF CALIFORNIA - BERKELEY	W B JOHNSON	GSFC	C W CARLSON	NAG 6 10	75
19	UNIV OF CALIFORNIA - IRVINE	J DORBAND	GSFC	I SCHERSON	NAG 5 9695	85
19	UNIV OF CALIFORNIA - LOS ANGELES	D F SHAO	GRC	V K DHIR	NAG 3 1832	88
19	UNIV OF CALIFORNIA - LOS ANGELES	E K STANSBERY	JSC	K D MCKEEGAN	NAG 9 1020	94
19	UNIV OF CALIFORNIA - LOS ANGELES	J GURMAN	GSFC	J M PAP	NAG 5 7907	90
19	UNIV OF CALIFORNIA - LOS ANGELES	J GURMAN	GSFC	R K ULRICH	NAG 5 7995	90
19	UNIV OF CALIFORNIA - LOS ANGELES	M MELLOTT	GSFC	P L PRITCHETT	NAG 5 8060	90
19	UNIV OF CALIFORNIA - LOS ANGELES	R HOFFMAN	GSFC	C RUSSEL	NAG 5 9299	92
19	UNIV OF CALIFORNIA - LOS ANGELES	R HOFFMAN	GSFC	C T RUSSELL	NAG 5 7721	90
19	UNIV OF CALIFORNIA - LOS ANGELES	S CURTIS	GSFC	M ASHOUR-ABDALLA	NAG 5 9693	92
19	UNIV OF CALIFORNIA - LOS ANGELES	S CURTIS	GSFC	M ASHOUR-ABDOLLA	NAG 5 9772	92
19	UNIV OF CALIFORNIA - RIVERSIDE	J GURMAN	GSFC	G ZANK	NAG 5 10932	96
19	UNIV OF CALIFORNIA - SAN DIEGO	D STARR	GSFC	D STRAMSKI	NAG 5 6466	98
19	UNIV OF CALIFORNIA - SAN DIEGO	E K STANSBERY	JSC	M H THIEMENS	NAG 9 1002	102
19	UNIV OF CALIFORNIA - SAN DIEGO	J GURMAN	GSFC	B V JACKSON	NAG 5 7836	99
19	UNIV OF CALIFORNIA - SAN DIEGO	J GURMAN	GSFC	P HICK	NAG 5 10874	102
19	UNIV OF CALIFORNIA - SAN DIEGO	K R SACKSTEDER	GRC	F A WILLIAMS	NCC 3 506	103
19	UNIV OF CALIFORNIA - SAN DIEGO	M E HILL	GRC	J D GODDARD	NAG 3 1888	96
19	UNIV OF CALIFORNIA - SAN FRANCISCO	M H NEW	ARC	M A WILSON	NCC 2 993	105
19	UNIV OF CALIFORNIA - SAN FRANCISCO	M H NEW	ARC	M A WILSON	NCC 2 5389	105
19	UNIV OF CALIFORNIA - SAN FRANCISCO	M NEW	ARC	M A WILSON	NCC 2 5453	105
19	UNIV OF CALIFORNIA - SANTA BARBARA	D STARR	GSFC	J SHI	NAG 5 6465	107
19	UNIV OF CALIFORNIA - SANTA BARBARA	J C DUH	GRC	S BAMERJEE	NAG 3 1857	106
19	UNIV OF CHICAGO	K CYR	JSC	M HUMAYYO	NAG 9 1096	207
19	UNIV OF COLORADO - BOULDER	C P MCKAY	ARC	M A TOLBERT	NGT 2 52270	140
19	UNIV OF COLORADO - BOULDER	D STARR	GSFC	A NOLIN	NAG 5 6462	127
19	UNIV OF COLORADO - BOULDER	D STARR	GSFC	H W VOEMEL	NAG 5 11110	137
19	UNIV OF COLORADO - BOULDER	D STARR	GSFC	R L ARMSTRONG	NAG 5 11107	137
19	UNIV OF COLORADO - BOULDER	J GURMAN	GSFC	A KIPLINGER	NAG 5 10892	136
19	UNIV OF COLORADO - BOULDER	J GURMAN	GSFC	B HINDMAN	NAG 5 10917	136
19	UNIV OF COLORADO - BOULDER	J GURMAN	GSFC	G DE TOMA	NAG 5 7838	130
19	UNIV OF COLORADO - BOULDER	J GURMAN	GSFC	J TOOMRE	NAG 5 7996	130
19	UNIV OF COLORADO - BOULDER	R BINDSCHADLER	GSFC	T SCAMBOS	NAG 5 9477	133
19	UNIV OF COLORADO - BOULDER	R HOFFMAN	GSFC	D BAKER	NAG 5 8247	131
19	UNIV OF COLORADO - BOULDER	R HOFFMAN	GSFC	W K PETERSON	NAG 5 10967	137
19	UNIV OF DELAWARE	D SMITH	MSFC	E W KALER	NAG 8 1346	150

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
19	UNIV OF DELAWARE	J GURMAN	GSFC	C W SMITH	NAG 5 10911	150
19	UNIV OF DENVER	D O STARR	GSFC	F J MURCRAY	NAG 5 6467	144
19	UNIV OF DENVER	D O STARR	GSFC	F J MURCRAY	NAG 5 6679	144
19	UNIV OF FLORIDA	A E WASHBURN	LARC	L N CATTAFESTA	NCC 1 01023	174
19	UNIV OF FLORIDA	P DOTY	MSFC	D R TALHAM	NAG 8 1244	173
19	UNIV OF FLORIDA	P DOTY	MSFC	D TALHAM	NAG 8 1675	173
19	UNIV OF FLORIDA	P DOTY	MSFC	R ABBASCHIAM	NAG 8 1673	173
19	UNIV OF FLORIDA	P DOTY	MSFC	T J ANDERSON	NAG 8 1679	173
19	UNIV OF GEORGIA	D HUBBARD	MSFC	D P LANDAU	NAG 8 1771	191
19	UNIV OF HAWAII AT MANOA - HONOLULU	D O STARR	GSFC	J N PORTER	NAG 5 6340	193
19	UNIV OF HAWAII AT MANOA - HONOLULU	J MCGARRY	GSFC	D O	NAS 5 99180	198
19	UNIV OF IDAHO - MOSCOW	D STARR	GSFC	V P WALDEN	NAG 5 11112	200
19	UNIV OF ILLINOIS - CHICAGO CIRCLE	P DOTY	MSFC	K BREZINSKY	NAG 8 1261	208
19	UNIV OF ILLINOIS - CHICAGO CIRCLE	P DOTY	MSFC	S S CHA	NAG 8 1248	208
19	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	P DOTY	MSFC	J A DANTZIG	NAG 8 1249	212
19	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	P DOTY	MSFC	J A DANTZIG	NAG 8 1657	213
19	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	P DOTY	MSFC	J S WALKER	NAG 8 1705	213
19	UNIV OF IOWA	B GUYNES	MSFC	M A ARNOLD	NAG 8 1352	226
19	UNIV OF IOWA	B GUYNES	MSFC	M A ARNOLD	NAG 8 1835	227
19	UNIV OF IOWA	DFAIRFIELD	GSFC	L FRANK	NAG 5 11117	226
19	UNIV OF IOWA	M GOLDSTEIN	GSFC	D GURNETT	NAG 5 9974	226
19	UNIV OF IOWA	R HOFFMAN	GSFC	D GURNATT	NAG 5 7943	226
19	UNIV OF IOWA	R HOFFMAN	GSFC	D GURNETT	NAG 5 9561	226
19	UNIV OF IOWA	R HOFFMAN	GSFC	J SCUDDER	NAG 5 8119	226
19	UNIV OF IOWA	R HOFFMAN	GSFC	J SCUDDER	NAG 5 9499	226
19	UNIV OF KANSAS	A J TUYAHOV	GSFC	K P PRICE	NAG 5 4990	228
19	UNIV OF KANSAS	A J TUYAHOV	GSFC	K P PRICE	NAG 5 9841	229
19	UNIV OF KANSAS	D STARR	GSFC	R BENNARTZ	NAG 5 11106	229
19	UNIV OF KANSAS	W ABDALATI	GSFC	J GAUCH	NAG 5 7516	229
19	UNIV OF MARYLAND - COLLEGE PARK	A CHAIT	GRC	A DEANE	NAG 3 2139	256
19	UNIV OF MARYLAND - COLLEGE PARK	D GOLDSTEIN	GSFC	A DEANE	NAG 5 10626	266
19	UNIV OF MARYLAND - COLLEGE PARK	D HUBBARD	MSFC	R FERRELL	NAG 8 1762	268
19	UNIV OF MARYLAND - COLLEGE PARK	D STARR	GSFC	R PINKER	NAG 5 6464	259
19	UNIV OF MARYLAND - COLLEGE PARK	D STARR	GSFC	S LIANG	NAG 5 6459	258
19	UNIV OF MARYLAND - COLLEGE PARK	J GURMAN	GSFC	F IPAVICH	NAG 5 7678	260
19	UNIV OF MARYLAND - COLLEGE PARK	J GURMAN	GSFC	F IPAVICH	NAG 5 9282	263
19	UNIV OF MARYLAND - COLLEGE PARK	J GURMAN	GSFC	M R KUNDU	NAG 5 7901	260
19	UNIV OF MARYLAND - COLLEGE PARK	J R FISCHER	GSFC	A DEANE	NAG 5 8596	261
19	UNIV OF MARYLAND - COLLEGE PARK	K OGILVIE	GSFC	M COPLAN	NAG 5 8621	262
19	UNIV OF MARYLAND - COLLEGE PARK	M ACUNA	GSFC	G GLOEKLER	NAG 5 10540	266
19	UNIV OF MARYLAND - COLLEGE PARK	M HESSE	GSFC	A DEANE	NAG 5 9761	264
19	UNIV OF MARYLAND - COLLEGE PARK	R BINDSCHADLER	GSFC	M FAHNESTOCK	NAG 5 9674	264
19	UNIV OF MARYLAND - COLLEGE PARK	S CURTIS	GSFC	K PAPADOPOULIS	NAG 5 10596	266
19	UNIV OF MARYLAND - COLLEGE PARK	S CURTIS	GSFC	K PAPADOPOULOS	NAG 5 9755	264
19	UNIV OF MARYLAND - COLLEGE PARK	T T VON ROSENVINGE	GSFC	G M MASON	NAG 5 2963	256
19	UNIV OF MARYLAND - EASTERN SHORE	W B KRABILL	GSFC	D R LEVIN	NAG 5 5328	272
19	UNIV OF MARYLAND BALTIMORE COUNTY	D O STARR	GSFC	A MARSHAK	NAG 5 6675	272
19	UNIV OF MARYLAND BALTIMORE COUNTY	D O STARR	GSFC	W MCMILLAN	NAG 5 6460	272
19	UNIV OF MARYLAND BALTIMORE COUNTY	D STARR	GSFC	W MCMILLAN	NAG 5 11156	274
19	UNIV OF MARYLAND BALTIMORE COUNTY	J GURMAN	GSFC	J M PAP	NAG 5 10876	274
19	UNIV OF MARYLAND BALTIMORE	J P GALLOWAY	GSFC	D BLAISDELL	NCC 5 544	272
19	UNIV OF MASSACHUSETTS - AMHERST	D G SICKOREZ	JSC	R E VAN EMMERIK	NGT 9 32	304
19	UNIV OF MASSACHUSETTS	D STARR	GSFC	R R GAMACHE	NAG 5 11064	302
19	UNIV OF MIAMI	D Q STARR	GSFC	P J MINNETT	NAG 5 11104	177
19	UNIV OF MICHIGAN - ANN ARBOR	A T CHAI	GRC	V S ARPACI	NAG 3 1952	310
19	UNIV OF MICHIGAN - ANN ARBOR	D F CHAO	GRC	G TRYGGVASON	NAG 3 2162	310
19	UNIV OF MICHIGAN - ANN ARBOR	D F CHAO	GRC	J B GROTBORG	NAG 3 2196	310
19	UNIV OF MICHIGAN - ANN ARBOR	D GALLAGHER	MSFC	M LIEMOHN	NCC 8 181	318
19	UNIV OF MICHIGAN - ANN ARBOR	J S SOVEY	GRC	A D GALLIMORE	NAG 3 2216	310
19	UNIV OF MICHIGAN - ANN ARBOR	R HOFFMAN	GSFC	A NAGY	NAG 5 10887	315
19	UNIV OF MICHIGAN - ANN ARBOR	R HOFFMAN	GSFC	C CLAUER	NAG 5 9536	314
19	UNIV OF MISSISSIPPI - UNIV	D P POWE	SSC	J JOHNSON	NAG13 01004	328
19	UNIV OF MISSOURI - ROLLA	P DOTY	MSFC	N MA	NAG 8 1656	331
19	UNIV OF NEW HAMPSHIRE - DURHAM	K OGILVIE	GSFC	R TORBERT	NAG 5 10360	348
19	UNIV OF NEW HAMPSHIRE - DURHAM	M GOLDSTEIN	GSFC	J M QUINN	NAG 5 9960	348
19	UNIV OF NEW HAMPSHIRE - DURHAM	P BUCHANAN	GSFC	D LYNCH	NAG 5 10420	348

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
19	UNIV OF NEW HAMPSHIRE - DURHAM	W WAGNER	GSFC	E MOEBIUS	NAG 5 10890	348
19	UNIV OF NEW MEXICO-ALBUQUERQUE	D HUBBARD	MSFC	A V BABKIN	NAG 8 1758	366
19	UNIV OF NEW MEXICO-ALBUQUERQUE	J GURMAN	GSFC	S JEFFERIES	NAG 5 10918	365
19	UNIV OF OKLAHOMA - NORMAN	D R WOODARD	MSFC	M C ALTAN	NAG 8 1271	430
19	UNIV OF OKLAHOMA - NORMAN	G SONNEBORN	GSFC	K LEIGHLY	NAG 5 10048	430
19	UNIV OF PENNSYLVANIA	P M DOTY	MSFC	P DUCHEYNE	NAG 8 1483	453
19	UNIV OF PENNSYLVANIA	R CROMISE	MSFC	P LOLL	NAG 8 1350	453
19	UNIV OF PUERTO RICO - MAYAGUEZ	G COLON	GSFC	J G GONZALEZ LAGOA	NAG 5 10255	557
19	UNIV OF PUERTO RICO-RIO PIEDRAS	B MOTT	GSFC	D MORELL	NAG 5 10321	558
19	UNIV OF SOUTH CAROLINA-COLUMBIA	B MOTT	GSFC	D KHAN	NAG 5 10322	465
19	UNIV OF SOUTH CAROLINA-COLUMBIA	D STARR	GSFC	V LAKSHMI	NAG 5 11128	465
19	UNIV OF SOUTH FLORIDA	B GUYNES	MSFC	D CAMERON	NAG 8 1381	178
19	UNIV OF SOUTH FLORIDA	G J GUNDERMAN	GRC	R E HENNING	NAS 3 26412	179
19	UNIV OF SOUTHERN CALIFORNIA	D O STARR	GSFC	M STRAMSKA	NAG 5 6512	116
19	UNIV OF SOUTHERN CALIFORNIA	J GURMAN	GSFC	W DAPPEN	NAG 5 7816	116
19	UNIV OF SOUTHERN CALIFORNIA	J GURMAN	GSFC	W DAPPEN	NAG 5 7902	116
19	UNIV OF SOUTHERN CALIFORNIA	P DOTY	MSFC	T MAXWORTHY	NAG 8 1240	118
19	UNIV OF TENNESSEE - KNOXVILLE	B GUYNES	MSFC	G J BUNICK	NAG 8 1826	471
19	UNIV OF TEXAS - AUSTIN	A T CHAI	GRC	H L SWINNEY	NAG 3 1839	492
19	UNIV OF TEXAS - AUSTIN	C LIN	JSC	B D TAPLEY	NAG 9 994	496
19	UNIV OF TEXAS - AUSTIN	D HUBBARD	MSFC	D J HEINZMAN	NAG 8 1764	496
19	UNIV OF TEXAS - AUSTIN	D SICKOREZ	JSC	B D TAPLEY	NAG 9 1286	496
19	UNIV OF TOLEDO	B GUYNES	MSFC	G BORGOTAH	NAG 8 1380	426
19	UNIV OF TOLEDO	B GUYNES	MSFC	G E BORGSTAHL	NAG 8 1825	427
19	UNIV OF TOLEDO	M PUSEY	MSFC	A NADARAJAH	NCC 8 196	428
19	UNIV OF UTAH	D STARR	GSFC	G MACE	NAG 5 6458	502
19	UNIV OF UTAH	P DOTY	MSFC	J J MAGDA	NAG 8 1665	503
19	UNIV OF VIRGINIA	J M MOORE	ARC	A D HOWARD	NCC 2 1192	527
19	UNIV OF WASHINGTON	D HUBBARD	MSFC	E G ADELBERGER	NAG 8 1756	540
19	UNIV OF WASHINGTON	D HUBBARD	MSFC	W NAGOURNEY	NAG 8 1776	540
19	UNIV OF WASHINGTON	D O STARR	GSFC	A T JESSUP	NAG 5 6463	536
19	UNIV OF WASHINGTON	G MADDREA	LARC	P V HOBBS	NAS 1 18940	541
19	UNIV OF WISCONSIN - MADISON	D O STARR	GSFC	S T GOWER	NAG 5 6457	548
19	UNIV OF WISCONSIN - MADISON	D S HUBBARD	MSFC	T G WALKER	NAG 8 1783	553
19	UNIV OF WISCONSIN - MADISON	D STARR	GSFC	D C TOBIN	NAG 5 11155	552
19	UNIV OF WISCONSIN - MADISON	P DOTY	MSFC	J N PEREPEZKO	NAG 8 1672	552
19	UNIV OF WISCONSIN - MADISON	R L KELLEY	GSFC	D MCCAMMON	NAG 5 2720	547
19	VANDERBILT UNIV	R HOFFMAN	GSFC	C CHAPPELL	NAG 5 9565	472
19	VIRGINIA COMMONWEALTH UNIV	D R WOODARD	MSFC	S EL-SHALL	NAG 8 1276	533
19	WASHINGTON STATE UNIV	C R TALLEY	MSFC	B Q LI	NCC 8 92	544
19	WASHINGTON STATE UNIV	C TALLEY	MSFC	B Q LI	NAG 8 1477	544
19	WASHINGTON STATE UNIV	P M DOTY	MSFC	B Q LI	NAG 8 1693	544
19	WASHINGTON UNIV - ST	E K STANSBERY	JSC	F A PODOSEK	NAG 9 1010	336
19	WASHINGTON UNIV - ST	K E CYR	JSC	C M HOHENBERG	NAG 9 1006	336
19	WASHINGTON UNIV - ST	P DOTY	MSFC	K F KELTON	NCC 8 85	336
19	WORCESTER POLYTECH INST	K E CYR	JSC	K M RUTLEDGE	NAG 9 1014	306
19	YALE UNIV	C STAHLE	GSFC	D E PROBER	NAG 5 9595	147
19	YALE UNIV	J GURMAN	GSFC	S BASU	NAG 5 10912	148
21	ALABAMA A&M UNIV	D O FRAZIER	MSFC	M A ELSHAMY	NAG 8 1560	1
21	ALABAMA A&M UNIV	J DOWDY	MSFC	E TEMPLE	NAG 8 1643	2
21	ALABAMA A&M UNIV	W LOVE	MSFC	B CADY	NAG 8 1642	2
21	CALIFORNIA POLYTECH STATE U-SAN LUIS	S YEE	DFRC	R A WARD	NAG 4 202	50
21	CLARK ATLANTA UNIV	E ORDONEZ	MSFC	E MCDONALD	NAG 8 1814	181
21	CLARK ATLANTA UNIV	W LOVE	MSFC	A MSEZANE	NAG 8 1493	181
21	CORNELL UNIV	R J OLIVERSEN	GSFC	S S EIKENBERRY	NAG 5 9178	378
21	ELIZABETH CITY STATE UNIV	M ANDRO	GRC	D SENGUPTA	NAG 3 2150	396
21	GEORGE WASHINGTON UNIV	H C NEEDLEMAN	GSFC	F BAGINSKI	NAG 5 697	152
21	HOWARD UNIV	S FUNG	GSFC	R BOURGIN	NAG 5 6066	154
21	IOWA STATE UNIV	P J HALEY	LARC	A G KELKAR	NCC 1 01047	223
21	KANSAS STATE UNIV	P J HALEY	LARC	A G KELKAR	NAG 1 2234	228
21	KANSAS STATE UNIV	P J HALEY	LARC	A G KELKAR	NCC 1 225	228
21	KANSAS STATE UNIV	P J HALEY	LARC	A G KELKAR	NCC 1 400	228
21	MOREHOUSE COLLEGE	A BEAM	MSFC	E MCDONALD	NAG 8 1492	188
21	MORGAN STATE UNIV	B MARKHAMR	GSFC	J SMID	NAG 5 4401	253
21	NY UNIV	D S SPICER	GSFC	M BERGER	NAG 5 7583	383
21	NORTH CAROLINA STATE UNIV	J S HARRISON	LARC	R C SMITH	NAG 1 01041	399

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
21	NORTH CAROLINA STATE UNIV	W P WINFREE	LARC	G P	NGT 1 52242	402
21	NORTH CAROLINA STATE UNIV	W P WINFREE	LARC	M L JOYNER	NGT 1 52196	402
21	NORTH CAROLINA STATE UNIV	W P WINIFREE	LARC	H T BANKS	NGT 1 01032	401
21	OHIO STATE UNIV	R OLIVERSEN	GSFC	S MATHUR	NAG 5 8913	416
21	OLD DOMINION UNIV	K S BEY	LARC	H KANEKO	NAG 1 01092	517
21	SALISH KOOTENAI COLLEGE	B MEESON	GSFC	T OLSON	NAG 5 9541	339
21	SOUTH DAKOTA SCH OF MINES & TECH	N KHAZENIE	GSFC	F CAMPONE	NAG 5 7746	466
21	SOUTHERN UNIV & A&M COLLEGE	A BEAM	MSFC	M C DUNN	NAG 8 1633	236
21	SOUTHERN UNIV & A&M COLLEGE	A JOYCE	SSC	M SUBBLEFIELD	NAG13 98013	236
21	SOUTHERN UNIV - NEW ORLEANS	N SULLIVAN	JSC	P HEATH	NAG13 52	236
21	TRENHOLM STATE TECH COLLEGE	W LOVE	MSFC	C THOMPSON	NAG 8 1610	4
21	UNIV OF AKRON	M BRIGHT	GRC	H K QAMMAR	NAG 3 2494	420
21	UNIV OF CALIFORNIA - DAVIS	D KWAK	ARC	M HAFEZ	NCC 2 5447	82
21	UNIV OF COLORADO - BOULDER	E A PALMER	ARC	P POISON	NCC 2 1104	139
21	UNIV OF NEW MEXICO-ALBUQUERQUE	J GOODRICH	GRC	D HAGSTROM	NAG 3 2322	364
21	UNIV OF NEW ORLEANS	R TRAVIS	SSC	K M AKYUZLU	NGT13 52721	237
21	UNIV OF TEXAS - EL PASO	R LEE	KSC	D ROJO	NAG10 287	500
21	UNIV OF TEXAS AT SAN ANTONIO	F SAFIE	MSFC	M P BERRIOZABAL	NAG 9 950	501
21	UNIV OF TEXAS AT SAN ANTONIO	L M ARMENDARIZ	JSC	M P BERRIOZABAL	NAG 9 1301	501
21	UNIV OF WASHINGTON	G SOFFEN	GSFC	J BURKE	NGT 5 66	542
21	WESLEYAN UNIV	R J OLIVERSEN	GSFC	K V JOHNSTON	NAG 5 9064	146
21	XAVIER UNIV - LOUISIANA	W LOVE	MSFC	R P HALE	NAG 8 1609	238
22	ADAMS STATE COLLEGE	M R LOWRY	ARC	S ROACH	NCC 2 5337	119
22	ARIZONA STATE UNIV	B L DI VITO	LARC	G C GANNOD	NAG 1 2241	19
22	ARIZONA STATE UNIV	R A MORRIS	ARC	S KAMBHAMPATI	NAG 2 1461	19
22	ARIZONA STATE UNIV	R MORRIS	ARC	C BARAL	NCC 2 1232	23
22	ARIZONA STATE UNIV	R MORRIS	ARC	S KAMBHAMPATI	NCC 2 1225	23
22	BOSTON UNIV	J C OUGHLAN	ARC	R B MYNENI	NCC 2 1233	280
22	BOWIE STATE UNIV	D MENCHAN	GSFC	J LANGDON	NAG 5 7225	239
22	BOWIE STATE UNIV	H PARK	GSFC	D CARVALO	NCC 5 446	240
22	BOWIE STATE UNIV	P L CROUSE	GSFC	N T WAKIM	NAG 5 11361	240
22	BOWIE STATE UNIV	W TRUSZKOWSKI	GSFC	S SRIVASTAVA	NCC 5 235	240
22	BROWN UNIV	M SHAFTO	ARC	S A SLOMAN	NCC 2 1217	459
22	CALIFORNIA INST OF TECH	J FISCHER	GSFC	T STERLING	NAG 5 8576	45
22	CARNEGIE - MELLON UNIV	C L FARMER	JSC	R SIMMONS	NAG 9 1326	438
22	CARNEGIE - MELLON UNIV	D CLANCY	ARC	R SIMMONS	NCC 2 5438	439
22	CARNEGIE - MELLON UNIV	J COUGHLAN	ARC	C GLYMOUR	NCC 2 1227	439
22	CARNEGIE - MELLON UNIV	M E DUENAS	ARC	J H MORRIS	NCC 2 1188	438
22	CARNEGIE - MELLON UNIV	M H SIMS	ARC	W L WHITTAKER	NGT 2 52277	439
22	CARNEGIE - MELLON UNIV	M LOWRY	ARC	R G SIMMONS	NAG 2 1402	436
22	CARNEGIE - MELLON UNIV	M MATESSA	ARC	J R ANDERSON	NCC 2 1226	439
22	CARNEGIE - MELLON UNIV	M P MATESSA	ARC	B JOHN	NAG 2 1472	436
22	CARNEGIE - MELLON UNIV	M SHIRLEY	ARC	R SIMMONS	NAG 2 1393	436
22	CARNEGIE - MELLON UNIV	N MUSCETTOLA	ARC	J SCHNEIDER	NAG 2 1408	436
22	CARNEGIE - MELLON UNIV	P E HUNTER	GSFC	J SCHNEIDER	NAG 5 10739	437
22	CARNEGIE - MELLON UNIV	R MORRIS	ARC	J WING	NCC 2 1241	439
22	CARNEGIE - MELLON UNIV	R MORRIS	ARC	R SIMMONS	NCC 2 1243	439
22	CARNEGIE - MELLON UNIV	TL ROUGH	ARC	C GLYMOUR	NCC 2 1026	438
22	CAYUGA COUNTY COMM COLLEGE	W CAMPBELL	GSFC	R BROWN	NAG 5 7473	367
22	CENTRAL WASHINGTON UNIV	H V FREY	GSFC	C RUBIN	NAG 5 10501	533
22	CITY UNIV OF NY CITY COLLEGE	J HARRINGTON	GSFC	S AUSTIN	NCC 5 98	368
22	CITY UNIV OF NY CITY COLLEGE	J TILTON	GSFC	G WOLBERG	NAG 5 7129	368
22	CLEMSON UNIV - CLEMSON	G A SOFFEN	GSFC	LIGON	NGT 5 78	464
22	CLEMSON UNIV - CLEMSON	G A SOFFEN	GSFC	W LIGON	NGT 5 85	464
22	CLEMSON UNIV - CLEMSON	G SOFFEN	GSFC	W B LIGON	NGT 5 109	464
22	CLEMSON UNIV - CLEMSON	J DORBAND	GSFC	D LIGON III	NAG 5 10018	463
22	CLEMSON UNIV - CLEMSON	K MOE	GSFC	W LIGON	NAG 5 8605	462
22	CLEMSON UNIV - CLEMSON	P CORONADO	GSFC	D SASS	NAG 5 11329	463
22	CLEVELAND STATE UNIV	C Kim	GRC	J SANG	NAG 3 2509	410
22	COLLEGE OF WILLIAM AND MARY	P W GOODE	LARC	A S MINER	NGT 1 52195	508
22	COLLEGE OF WILLIAM AND MARY	P W GOODE	LARC	G CIARDO	NAG 1 2168	507
22	COLLEGE OF WILLIAM AND MARY	R HATHAWAY	LARC	N M ALEXANDROV	NGT 1 01008	508
22	DEPAUL UNIV	R W REMINGTON	ARC	C S MILLER	NCC 2 5414	200
22	DINE COLLEGE	L K ALDERETE	ARC	A SAM	NAG 2 6012	24
22	DREXEL UNIV	J FISCHER	GSFC	D VALLIERES	NAG 5 10026	440
22	EAST CAROLINA UNIV	J P ZIEBARTH	ARC	J C HUSKAMP	NAG 2 6045	396

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
22	ELIZABETH CITY STATE UNIV	G D REESE	LARC	E LAWRENCE	NAG 1 2229	396
22	ELIZABETH CITY STATE UNIV	J HARRINGTON	GSFC	L HAYDEN	NCC 5 121	396
22	FLA INTERNATIONAL UNIV	M GROH-HAMMOND	KSC	M CENTENO	NAG10 292	163
22	FLA INTERNATIONAL UNIV	O MELENDEZ	KSC	I BECERRA-FERNANDEZ	NAG10 307	163
22	FLA INTERNATIONAL UNIV	S ROBERTS	KSC	I BECCERA-FERNANDEZ	NAG10 259	163
22	FLORIDA ATLANTIC UNIV	S YASSINI	ARC	T G KHOSGOFTAR	NCC 2 1141	165
22	GEORGE MASON UNIV	J DORBAND	GSFC	P Y WANG	NAG 5 9781	509
22	GEORGE MASON UNIV	J J REHDER	LARC	T ARCISZEWSKI	NAG 1 2258	509
22	GEORGE MASON UNIV	K L MOE	GSFC	D KAFATOS	NAG 5 10177	509
22	GEORGE WASHINGTON UNIV	E TORREZ-MARTINEZ	GSFC	D A WILLIAMSON	NAG 5 10539	152
22	GEORGE WASHINGTON UNIV	G A SOFFEN	GSFC	M H LOEW	NGT 5 30	154
22	GEORGE WASHINGTON UNIV	J LE MOIGNE	GSFC	T EL-GHAZAWI	NAG 5 11101	152
22	GEORGE WASHINGTON UNIV	R BISWAS	ARC	M MYERS	NAG 2 1456	152
22	GEORGIA INST OF TECH	C M FALSETTI	ARC	I F AKYILDIZ	NAG 2 1262	182
22	GEORGIA INST OF TECH	F J MONTEGANI	GRC	E W ZEGURA	NGT 3 52329	187
22	GEORGIA INST OF TECH	J CATENA	GSFC	C MITCHELL	NAG 5 7519	184
22	GEORGIA INST OF TECH	P C SCHUTTE	LARC	A R PRITCHETT	NAG 1 2175	182
22	GEORGIA INST OF TECH	W TRUSZKOWSKI	GSFC	C MITCHELL	NAG 5 7420	184
22	HARVARD UNIV	R A MORRIS	ARC	A J PFEFFER	NCC 2 1236	285
22	HOWARD UNIV	J STEPHENS	GSFC	C GLOTZER	NAS 5 00214	155
22	HOWARD UNIV	W TRUSZKOWSKI	GSFC	J TRIMBLE	NAG 5 8790	155
22	INDIANA UNIV	T BABRAUCKAS	GRC	A ECER	NAG 3 2260	214
22	INDIANA UNIV - BLOOMINGTON	M E LIVINGSTON	ARC	D B LEAKE	NCC 2 1035	216
22	INDIANA UNIV - BLOOMINGTON	M G SHAFTO	ARC	D B LEAKE	NCC 2 1216	216
22	INDIANA UNIV - BLOOMINGTON	P S MINER	LARC	S D JOHNSON	NGT 1 01009	216
22	IOWA STATE UNIV	M R LOWRY	ARC	A KELKAR	NAG 2 1471	222
22	JACKSON STATE UNIV	B A BIEGEL	ARC	Q MALLUHI	NAG 2 1485	326
22	JOHNS HOPKINS UNIV	G H MUCKLOW	GSFC	S HAWKINS	NAG 5 8688	245
22	JOHNS HOPKINS UNIV	H STEWART	ARC	K J HEERES	NAG 2 1476	241
22	JOHNS HOPKINS UNIV	M SHIRLEY	ARC	K J HEERES	NAG 2 1477	241
22	JOHNS HOPKINS UNIV	P E HUNTER	GSFC	P Z KUNSZT	NAG 5 10742	249
22	KANSAS STATE UNIV	M R LOWRY	ARC	D A SCHMIDT	NAG 2 1209	228
22	LA SALLE UNIV	D G SICKOREZ	JSC	M TAVANA	NAG 9 1196	441
22	LOUISIANA STATE UNIV - BATON ROUGE	S SAINI	ARC	A NAKANO	NCC 2 5320	234
22	LOYOLA COLLEGE	J LE MOIGNE	GSFC	P EASTMAN	NAG 5 10230	253
22	MASSACHUSETTS INST OF TECH	D E ECKMARDT	LARC	N LEVESON	NAG 1 2239	287
22	MASSACHUSETTS INST OF TECH	D L KAO	ARC	R HAIMES	NCC 2 985	298
22	MASSACHUSETTS INST OF TECH	J REUTHER	ARC	R HAIMES	NCC 2 1269	298
22	MASSACHUSETTS INST OF TECH	M J AFTOSMIS	ARC	R HAIMES	NAG 2 1458	288
22	MASSACHUSETTS INST OF TECH	M M ESHOW	ARC	D N JACKSON	NAG 2 1338	287
22	MASSACHUSETTS INST OF TECH	P M JONES	ARC	N G LEVESON	NCC 2 1223	298
22	MASSACHUSETTS INST OF TECH	R A MORRIS	ARC	S ZILBERSTEIN	NAG 2 1463	288
22	MASSACHUSETTS INST OF TECH	R MORRIS	ARC	B C WILLIAMS	NCC 2 1235	298
22	MASSACHUSETTS INST OF TECH	R MORRIS	ARC	B WILLIAMS	NAG 2 1466	288
22	MASSACHUSETTS INST OF TECH	R MORRIS	ARC	L KAEHLING	NCC 2 1237	298
22	MASSACHUSETTS INST OF TECH	S LAU	ARC	B C WILLIAMS	NAG 2 1388	288
22	MASSACHUSETTS INST OF TECH	S LAU	ARC	L R YOUNG	NCC 2 570	298
22	MASSACHUSETTS INST OF TECH	S YASSINI	ARC	N LEVESON	NCC 2 1150	298
22	MASSACHUSETTS INST OF TECH	Y K LIU	ARC	R L RIVEST	NAG 2 1136	287
22	MICHIGAN TECHNOLOGICAL UNIV	J R FISCHER	GSFC	D MERKEY	NAG 5 8796	309
22	MORGAN STATE UNIV	J BENNETT	GSFC	W LUPTON	NCC 5 122	254
22	MORGAN STATE UNIV	J MOIGNE	GSFC	D COLE-RHODES	NAG 5 10934	254
22	NEW MEXICO STATE UNIV - LAS CRUCES	R E STREITMATTER	GSFC	S STOCHAJ	NCC 5 422	363
22	NORTH CAROLINA A&T STATE UNIV	M G SHATTO	ARC	A C ESTERLINE	NAG 2 1413	397
22	NORTH CAROLINA A&T STATE UNIV	W TRUSZKOWSKI	GSFC	A ESTERLINE	NAG 5 4102	398
22	NORTH CAROLINA STATE UNIV	P S GHUMAN	GSFC	C GLOSTER	NAG 5 7942	400
22	NORTHWESTERN UNIV	A GRADY	ARC	V E TAYLOR	NCC 2 1013	203
22	NORTHWESTERN UNIV	M H SHIRLEY	ARC	K D FORBUS	NCC 2 1017	203
22	OHIO STATE UNIV	D L KAO	ARC	H SHEN	NCC 2 1261	418
22	OHIO UNIV	B B PFARR	GSFC	L WELCH	NAG 5 10349	419
22	OHIO UNIV	B PFAR	GSFC	L WELCH	NAS 5 00185	419
22	OHIO UNIV	J M SEATON	LARC	R L WILLIAMS	NAG 1 2099	419
22	OLD DOMINION UNIV	E SIMAN-TOV	LARC	R MUKKAMALA	NAG 1 2143	515
22	OLD DOMINION UNIV	J N MOSS	LARC	D E KEYES	NAG 1 01076	517
22	OLD DOMINION UNIV	M M LITTLE	LARC	K MALY	NAS 1 99160	518
22	OLD DOMINION UNIV	R SAVELY	JSC	R LOFTIN	NAG 9 1270	518

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
22	OLD DOMINION UNIV	S L VAZQUEZ	LARC	R MUKKAMALA	NAG 1 2279	516
22	OLD DOMINION UNIV	W H BRYANT	LARC	I B LEVINSTEIN	NAG 1 2323	516
22	OREGON GRADUATE INST OF SCI & TECH	I TUMER	ARC	T LEEN	NCC 2 1264	431
22	OREGON GRADUATE INST OF SCI & TECH	J SKILES	ARC	M PAVEL	NCC 2 1218	431
22	OREGON GRADUATE INST OF SCI & TECH	T R GOVINDAN	ARC	M A JABRI	NCC 2 1253	431
22	OREGON STATE UNIV	K MOE	GSFC	M S ABBOTT	NAG 5 8400	432
22	PENN	R OLIVERSEN	GSFC	R F KNACKE	NAG 5 3368	442
22	PENN STATE UNIV	A J AHUMADA	ARC	R KASTURI	NAG 2 1410	443
22	PENN STATE UNIV	A J AHUMADA	ARC	R KASTURI	NAG 2 1487	443
22	PENN STATE UNIV	J C NEWMAN	LARC	P RAGHAVAN	NAG 1 01085	442
22	PENN STATE UNIV	J E PALLIX	ARC	J L WISE	NCC 2 1211	450
22	PRAIRIE VIEW A&M UNIV	J HARRINGTON	GSFC	J R WILLIAMS	NCC 5 115	476
22	PRINCETON UNIV	M MEYYPAPPAN	ARC	I AKSAY	NAG 2 1475	352
22	PURDUE UNIV	A NURRIDOIN	HQ	L H JAMIESON	NGT 5 50222	220
22	PURDUE UNIV	C A HLAVKA	ARC	C BRODLEY	NCC 2 1245	219
22	RICE UNIV	D FOLTZ	GRC	D B JOHNSON	NAG 3 2534	477
22	RICE UNIV	J R FISCHER	GSFC	K KENNEDY	NAG 5 2736	477
22	RUTGERS ST UNIV N	M R LOWRY	ARC	S AMAREL	NAG 2 1234	356
22	RUTGERS ST UNIV N	R PETRE	GSFC	J HUGHES	NAG 5 6420	357
22	RUTGERS STATE UNIV OF NJ NEW BRUNS	M SCHWABACHER	ARC	H HIRSCH	NCC 2 1259	360
22	SAN FRANCISCO STATE UNIV	P R GRAMS	ARC	H SHAHNASSER	NCC 2 5301	55
22	SAN JOSE STATE UNIV	D KOZARSKY	ARC	G POUR	NAG 2 1421	55
22	SAN JOSE STATE UNIV	M E LIVINGSTON	ARC	R FATOOHI	NCC 2 1015	56
22	SAN JOSE STATE UNIV	T A LASINSKI	ARC	R FATOOHI	NCC 2 1071	56
22	SOUTH CAROLINA STATE UNIV	J BENNETT	GSFC	D K WALTER	NCC 5 116	465
22	SOUTHERN UNIV & A&M COLLEGE	D F NOGA	GRC	D MOREMAN	NAG 3 2076	235
22	SOUTHERN UNIV & A&M COLLEGE	G S LEE	ARC	S K TRIVEDI	NAG 2 1159	235
22	SOUTHERN UNIV & A&M COLLEGE	P NORVIG	ARC	C DEBESSONET	NAG 2 1273	235
22	SOUTHERN UNIV & A&M COLLEGE	R MORRIS	ARC	C DEBESSONER	NAG 2 1468	235
22	STANFORD UNIV	J A KURIEN	ARC	R E FIKES	NAG 2 1337	59
22	STANFORD UNIV	M G BUALAT	ARC	S ROCK	NCC 2 1154	64
22	STANFORD UNIV	M GERALD-YAMASAKI	ARC	H GARCIA-MOLINA	NCC 2 5278	65
22	STANFORD UNIV	N N MANSOUR	ARC	E F DARVE	NCC 2 5467	66
22	STANFORD UNIV	P S MINER	LARC	D L DILL	NAS 1 98139	64
22	STANFORD UNIV	R MORRIS	ARC	S M ROCK	NAG 2 1464	59
22	STANFORD UNIV	W J CLANCY	ARC	L J LEIFFER	NAG 2 1257	59
22	STATE UNIV OF NY - STONY BROOK	D WEST	GSFC	F SWETSY	NAG 5 8377	390
22	SYRACUSE UNIV	C COLES-HAMILTON	GRC	N AVAILABLE	NAS 3 00172	393
22	SYRACUSE UNIV	E J MASUOKA	GSFC	P K VARSHNEY	NAG 5 11227	393
22	TENNESSEE STATE UNIV	J HARRINGTON	GSFC	W A SMITH	NCC 5 96	468
22	TENNESSEE STATE UNIV	K A FREEMAN	ARC	W A SMITH	NAG 2 1419	468
22	TENNESSEE STATE UNIV	K BALLARD	KSC	S SINGH DEVGAN	NAG10 217	468
22	TENNESSEE STATE UNIV	M E DUENAS	ARC	W A SMITH	NCC 2 1205	468
22	TENNESSEE STATE UNIV	S P COLOMBANO	ARC	M S ZEIN-SABATTO	NAG 2 1473	468
22	TEXAS A&M UNIV-KINGSVILLE	W LOVE	MSFC	B SCHREUR	NAG 8 1650	485
22	TEXAS SOUTHERN UNIV	Y O GAWDIAK	ARC	O H CRINER	NAG 2 1447	485
22	THE UNIV OF CENTRAL FLORIDA	C G STEVENSON	KSC	F J GOMEZ	NAG10 273	170
22	THE UNIV OF CENTRAL FLORIDA	J PENIX	ARC	G H WALTON	NAG 2 1465	169
22	TOWSON STATE UNIV	W TRUSZKOWSKI	GSFC	B N NAG	NCC 5 488	254
22	TUFTS UNIV	J F DOWDY	MSFC	K P LENTL	NAG 8 1311	301
22	UNIV HOUSTON-HOUSTON	J YAN	ARC	B CHAPMAN	NCC 2 5394	487
22	UNIV HOUSTON-HOUSTON	R P KEHOE	JSC	G VALIAS	NAG 9 1223	487
22	UNIV HOUSTON-HOUSTON	R SAVELY	JSC	B LOFTIN	NAG 9 985	486
22	UNIV OF MINN	C S POTTER	ARC	V KUMAR	NCC 2 1231	324
22	UNIV OF MINN	J BREDEKAMP	GSFC	P M HUMPHREYS	NAG 5 3998	321
22	UNIV OF MINN	R MORRIS	ARC	M HEIMDAHL	NCC 2 1240	324
22	UNIV OF MINN	R W BUTLER	LARC	M E HEMDAHL	NAG 1 2242	320
22	UNIV	P M JONES	ARC	J ZHANG	NCC 2 1234	490
22	UNIV	R T SAVELY	JSC	H WANG	NAG 9 1247	490
22	UNIV OF ALABAMA - HUNTSVILLE	J BEHNKE	GSFC	D GRAVES	NAG 5 9585	10
22	UNIV OF ALABAMA - HUNTSVILLE	J BREDEKAMP	GSFC	D G RICHARDS	NAG 5 4003	7
22	UNIV OF ALABAMA - HUNTSVILLE	K L MOE	GSFC	D GRAVES	NAG 5 10407	10
22	UNIV OF ALABAMA - HUNTSVILLE	S LAU	ARC	M BOTTS	NAS 2 00102	12
22	UNIV OF ALABAMA - HUNTSVILLE	S LAU	ARC	S GRAVES	NAS 2 01003	12
22	UNIV OF ARIZONA	P E HUNTER	GSFC	M V SYKES	NAG 5 10749	35
22	UNIV OF ARIZONA	S LAU	ARC	T MILSTER	NAS 2 00117	38



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
22	UNIV OF CALIFORNIA - BERKELEY	J BREDEKAMP	GSFC	G SMOOT	NAG 5 3941	69
22	UNIV OF CALIFORNIA - BERKELEY	J D SMITH	ARC	S S SASTRY	NGT 2 52259	77
22	UNIV OF CALIFORNIA - BERKELEY	M M SIMS	ARC	L W STARK	NAG 2 1135	67
22	UNIV OF CALIFORNIA - BERKELEY	M R LOWREY	ARC	T A HENZINGER	NAG 2 1214	68
22	UNIV OF CALIFORNIA - BERKELEY	M R LOWRY	ARC	A AOLEM	NAG 2 1210	67
22	UNIV OF CALIFORNIA - DAVIS	A VAZIRI	ARC	B HAMANN	NAG 2 1216	80
22	UNIV OF CALIFORNIA - DAVIS	C M FALSETTI	ARC	M BISHOP	NAG 2 1251	80
22	UNIV OF CALIFORNIA - DAVIS	D KWAK	ARC	M HAFEZ	NCC 2 5387	82
22	UNIV OF CALIFORNIA - DAVIS	S DAINI	ARC	J DONGARRA	NCC 2 5313	82
22	UNIV OF CALIFORNIA - DAVIS	W R VAN DALSEM	ARC	J J CHATTOT	NAG 2 1459	80
22	UNIV OF CALIFORNIA - LOS ANGELES	B H WHITAKER	ARC	M GERLA	NAG 2 1249	87
22	UNIV OF CALIFORNIA - LOS ANGELES	T J BARTH	ARC	T F CHAN	NAG 2 1238	87
22	UNIV OF CALIFORNIA - SAN DIEGO	C H SCHULBACK	ARC	F BERMAN	NGT 2 52251	104
22	UNIV OF CALIFORNIA - SAN DIEGO	J BREDEKAMP	GSFC	D C PUETTER	NAG 5 3944	97
22	UNIV OF CALIFORNIA - SANTA BARBARA	K MOE	GSFC	L L HILL	NAG 5 8542	107
22	UNIV OF CALIFORNIA - SANTA CRUZ	A VAZIRI	ARC	A PANG	NCC 2 5281	113
22	UNIV OF CALIFORNIA - SANTA CRUZ	A VAZIRI	ARC	A VANGELDER	NAG 2 1239	111
22	UNIV OF CALIFORNIA - SANTA CRUZ	D L KAO	ARC	A PANG	NCC 2 1260	113
22	UNIV OF CHICAGO	D SPICER	GSFC	D OLSON	NAG 5 9016	206
22	UNIV OF COLORADO - BOULDER	D CAREK	GRC	E HANSEN	NAG 3 2643	124
22	UNIV OF COLORADO - BOULDER	G MUCKLOW	GSFC	E R HANSEN	NAG 5 8643	131
22	UNIV OF COLORADO - BOULDER	J BREDEKAMP	GSFC	M M LIGHTNER	NAG 5 3997	125
22	UNIV OF COLORADO - BOULDER	K L MOE	GSFC	R L WEAVER	NAG 5 11292	138
22	UNIV OF COLORADO - BOULDER	K MOE	GSFC	R L WEAVER	NAG 5 8399	131
22	UNIV OF CONNECTICUT	F MARTIN	JSC	M MOREAU	NAG 9 1243	145
22	UNIV OF DAYTON	W D IVANCIC	GRC	M ATIQUZZAMAN	NAG 3 2318	424
22	UNIV OF DELAWARE	J RASH	GSFC	C SHEN	NAG 5 11232	150
22	UNIV OF FLORIDA	A T LEE	JSC	Y H LEE	NCC 9 84	175
22	UNIV OF FLORIDA	H PARTRIDGE	ARC	S SINNOTT	NCC 2 5403	175
22	UNIV OF GREENWICH	S SAINI	ARC	M CROSS	NAG 2 1339	558
22	UNIV OF HAWAII AT MANOA - HONOLULU	R OLIVERSEN	GSFC	R D JOSEPH	NAG 5 3370	191
22	UNIV OF HOUSTON - CLEAR LAKE	R T SAVELY	JSC	E T DICKERSON	NCC 9 30	490
22	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	C CARLISLE	GSFC	M FOLK	NAG 5 2040	210
22	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	G A SOFFEN	GSFC	P SAYLOR	NGT 5 84	214
22	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	K A FREEMAN	ARC	K NAHRSTEDT	NAG 2 1250	209
22	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	K A FREEMAN	ARC	K NAHRSTEDT	NAG 2 1406	209
22	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R MORRIS	ARC	B J WAH	NCC 2 1230	213
22	UNIV OF IOWA	M H SIMS	ARC	G W THOMAS	NAG 2 1167	225
22	UNIV OF MARYLAND - COLLEGE PARK	H PARK	GSFC	C F MARTIN	NCC 5 353	270
22	UNIV OF MARYLAND - COLLEGE PARK	J BREDEKAMP	GSFC	D C GOODRICH	NAG 5 4313	257
22	UNIV OF MARYLAND - COLLEGE PARK	J LEMONIGNE	GSFC	J JAJA	NAG 5 6699	259
22	UNIV OF MARYLAND - COLLEGE PARK	P E HUNTER	GSFC	M G WOLFIRE	NAG 5 10751	266
22	UNIV OF MARYLAND BALTIMORE COUNTY	A ROBERTS	GSFC	D S EBERT	NCC 5 361	275
22	UNIV OF MARYLAND BALTIMORE COUNTY	J SKILES	ARC	H KARGUPTA	NCC 2 1252	275
22	UNIV OF MASSACHUSETTS - AMHERST	J BRESINA	ARC	S ZILBERSTEIN	NAG 2 1394	302
22	UNIV OF MASSACHUSETTS - AMHERST	J BRESINA	ARC	S ZILBERSTEIN	NGT 2 52276	304
22	UNIV OF MASSACHUSETTS - AMHERST	M LIVINGSTON	ARC	A DESHMUKH	NCC 2 1265	304
22	UNIV OF MEMPHIS	T R GOVINDAN	ARC	R KOZMA	NCC 2 1244	469
22	UNIV OF MICHIGAN - ANN ARBOR	A NURRIDIN	HQ	M WELLMAN	NGT 5 50199	319
22	UNIV OF MONTANA	A PATTERSON-HINE	ARC	J HENRY	NCC 2 5397	339
22	UNIV OF MONTANA	K P GOODEN	ARC	R NEMANI	NCC 2 1263	339
22	UNIV OF NEVADA - LAS VEGAS	J BREDEKAMP	GSFC	D LATIFI	NAG 5 3994	342
22	UNIV OF NEW ORLEANS	A JOYCE	SSC	E RUSSO	NGT13 52714	237
22	UNIV OF NORTH CAROLINA - CHAPEL HILL	H THOMAS	ARC	G BISHOP	NGT 2 52254	403
22	UNIV OF NORTH CAROLINA - CHAPEL HILL	R OLIVERSEN	GSFC	C EVANS	NAG 5 3100	402
22	UNIV OF NORTH DAKOTA	D R PLUMER	GRC	M S ALI	NAG 3 1911	404
22	UNIV OF OKLAHOMA - NORMAN	W D IVANCIC	GRC	D ATIQUZZAMAN	NAG 3 2528	429
22	UNIV OF PUERTO RICO - MAYAGUEZ	R TRAVIS	SSC	M ROSADO	NGT13 52746	558
22	UNIV OF SOUTH CAROLINA-COLUMBIA	R TRAVIS	SSC	J JENSEN	NGT13 52723	466
22	UNIV OF SOUTHERN CALIFORNIA	C J PLAUNT	ARC	M TAMBE	NAG 2 1489	115
22	UNIV OF SOUTHERN CALIFORNIA	L STONE	ARC	T W BERGER	NCC 2 1242	118
22	UNIV OF SOUTHERN CALIFORNIA	T R GOVINDAN	ARC	L ADLEMAN	NCC 2 1224	118
22	UNIV OF TENNESSEE - KNOXVILLE	J R FISCHER	GSFC	J DONGARRA	NAG 5 8773	470
22	UNIV OF TENNESSEE - KNOXVILLE	S SAINI	ARC	J DONGARRA	NCC 2 5310	471
22	UNIV OF TENNESSEE - KNOXVILLE	SSAINI	ARC	J DONGARRA	NCC 2 5312	471
22	UNIV OF TEXAS - ARLINGTON	R BISWAS	ARC	S K DAS	NCC 2 5395	491

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
22	UNIV OF TEXAS - AUSTIN	B COCKRELL	JSC	R H BISHOP	NGT 9 35	498
22	UNIV OF TEXAS - EL PASO	J BENNETT	GSFC	M KOLITSKY	NCC 5 97	500
22	UNIV OF TEXAS - EL PASO	M R LOWRY	ARC	A Q GATES	NAG 2 1012	499
22	UNIV OF TOLEDO	W K GERDES	LARC	A AETEH	NAG 1 2244	424
22	UNIV OF VIRGINIA	K J HAYHURST	LARC	J C KNIGHT	NAG 1 2290	522
22	UNIV OF VIRGINIA	K MOE	GSFC	J C FRENCH	NAG 5 8585	524
22	UNIV OF VIRGINIA	K MOE	GSFC	J FRENCH	NAG 5 9747	525
22	UNIV OF WASHINGTON	A ROBERTS	GSFC	T FURNESS	NCC 5 363	541
22	UNIV OF WASHINGTON	J STEPHENS	GSFC	S HAUCK	NAS 5 00212	541
22	UNIV OF WASHINGTON	J STEPHENS	GSFC	S HAUCK	NAS 5 00213	541
22	UNIV OF WEST FLORIDA	D CLANCY	ARC	J M BRADSHAW	NCC 2 1283	180
22	UNIV OF WEST FLORIDA	J SKILES	ARC	C M TENG	NCC 2 1239	180
22	UNIV OF WEST FLORIDA	M E DUENAS	ARC	K M FORD	NCC 2 1191	180
22	UNIV OF WEST FLORIDA	R L ALENA	ARC	J M BRADSHAW	NCC 2 1254	180
22	UNIV OF WISCONSIN - MADISON	F THEO	MSFC	J SANTARIUS	NAG 8 1719	553
22	UNIV OF WISCONSIN - MADISON	M GERALD-YAMASAKI	ARC	P CAO	NCC 2 5260	554
22	UNIV OF WISCONSIN - MADISON	W E JOHNSTON	ARC	M LIVNY	NCC 2 5323	554
22	UNIV OF WYOMING	D G SICKOREZ	JSC	R	NGT 9 36	556
22	UTAH STATE UNIV	P E HUNTER	GSFC	T BOSE	NAG 5 10716	505
22	VA POLYTECH INST & ST UNIV	J M SEATON	LARC	G J OGLE	NGT 1 52224	532
22	VA POLYTECH INST & ST UNIV	T L HOLST	ARC	R K KAPANIA	NCC 2 5433	531
22	VALENCIA COMM COLLEGE	G BUCKINGHAM	KSC	K WOODBERRY	NAG10 165	180
22	VANDERBILT UNIV	R ARONOFF	JSC	C HACHEY	NAG 9 1273	472
22	VANDERBILT UNIV	R MORRIS	ARC	G BISWAS	NCC 2 1238	473
22	WESTERN MICHIGAN UNIV	J L DUNGAN	ARC	C W EMERSON	NCC 2 1246	320
22	WINSTON-SALEM STATE UNIV	G FOLLEN	GRC	A RADENSKI	NAG 3 2011	404
22	WINSTON-SALEM STATE UNIV	G J FOLLEN	GRC	D RADENSKI	NAG 3 2515	404
22	WRIGHT STATE UNIV	W J CLANCEY	ARC	V L SHALIN	NAG 2 1237	428
22	WRIGHT STATE UNIV	W J CLANCEY	ARC	V L SHALIN	NCC 2 1203	428
22	YALE UNIV	R MORRIS	ARC	P HUDAK	NCC 2 1229	148
29	ALABAMA A&M UNIV	R TILLEY	KSC	M ELSHAMY	NAG10 245	2
29	ARIZONA STATE UNIV	P W GOODE	LARC	M P MIGNOLET	NAG 1 2233	19
29	BROWN UNIV	H L ATKINS	LARC	C SHA	NGT 1 01037	460
29	BROWN UNIV	H L ATKINS	LARC	C W SHU	NCC 1 01035	459
29	BROWN UNIV	H L ATKINS	LARC	J RYAN	NGT 1 52243	460
29	BROWN UNIV	M H CARPENTER	LARC	A KANESKY	NGT 1 01024	460
29	CALIFORNIA INST OF TECH	J J RENTHER	ARC	N A PIERRE	NCC 2 5431	49
29	CARNEGIE - MELLON UNIV	C H SCHULBACH	ARC	T C MOWRY	NAG 2 1230	436
29	CASE WESTERN RESERVE UNIV	C R MERCER	GRC	S H IZEN	NAG 3 2210	406
29	CITY UNIV	D CENTENO-GOMEZ	GRC	G MELENDEZ-DELANEY	NAG 3 2057	367
29	COLLEGE OF WILLIAM AND MARY	P C SCHUTTE	LARC	S FEYOCK	NAG 1 2271	507
29	DINE COLLEGE	L ARMENDARIZ	JSC	M C BAUER	NAG 9 968	24
29	DREXEL UNIV	J R FISCHER	GSFC	B FRYXELL	NAG 5 6029	440
29	ELIZABETH CITY STATE UNIV	D C ROBINSON	GRC	D PENDHARKAR	NAG 3 2556	396
29	FAYETTEVILLE STATE UNIV	R F LAWRENCE	GRC	L EDWARDS	NAG 3 2072	397
29	FLA INTERNATIONAL UNIV	R J MCKINNEY	KSC	G A ROIG	NAG10 268	163
29	FLORIDA A&M UNIV	T GUO	GRC	E G COLLINS	NAG 3 2193	163
29	FLORIDA MEMORIAL COLLEGE	R MC KINNEY	KSC	H HUISSO	NAG10 247	166
29	GEORGE MASON UNIV	J J RENDER	LARC	T ARCISZEWSKI	NAG 1 01030	509
29	GEORGE WASHINGTON UNIV	G D BLANEY	ARC	M KRUPSAW	NGT 2 52223	153
29	GEORGE WASHINGTON UNIV	G D BLANEY	ARC	M KRUPSAW	NGT 2 52263	154
29	GEORGIA INST OF TECH	C T RAMOS	GRC	I F AKYILDIZ	NAG 3 2580	183
29	GEORGIA INST OF TECH	P W GOODE	LARC	A J CALISE	NAG 1 2243	182
29	HOWARD UNIV	R M BUTTON	GRC	D A MOMOH	NAG 3 2429	154
29	JOHNS HOPKINS UNIV	J BREDEKAMP	GSFC	G MURPHY	NAG 5 8548	244
29	KENT STATE UNIV	L SHAW	GRC	S RYAN	NGT 3 52309	413
29	MASSACHUSETTS INST OF TECH	D R ISSACSON	ARC	A R ODoni	NAG 2 1128	287
29	MASSACHUSETTS INST OF TECH	G FOLLEN	GRC	R HAIMES	NAG 3 2523	289
29	MT HOLYOKE COLLEGE	CHOLLINGSWORTH	GSFC	J MORROW	NAG 5 10238	300
29	NEW JERSEY INST OF TECH	J LITT	GRC	D P DHAWAN	NAG 3 2475	350
29	NORTHEASTERN UNIV	M S BURRELL	GSFC	M LEESER	NGT 5 122	300
29	OHIO UNIV	J M SEATON	LARC	R L WILLIAMS	NAG 1 2299	419
29	OHIO UNIV	J M SEATON	LARC	R L WILLIAMS	NAG 1 01094	419
29	OLD DOMINION UNIV	D P GARBER	LARC	M H DUNN	NAG 1 01068	517
29	OLD DOMINION UNIV	D R JONES	LARC	D A DRYER	NAG 1 2330	516
29	OLD DOMINION UNIV	J J REHDER	LARC	A K NOOR	NCC 1 01040	519

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
29	OLD DOMINION UNIV	R C SINGLETERRY JR	LARC	J H HEINBOCKEL	NCC 1 404	519
29	OLD DOMINION UNIV	S D YOUNG	LARC	D A JACOBS	NGT 1 01011	520
29	SOUTHERN UNIV & A&M COLLEGE	G JERMAN	MSFC	J DYER	NCC 8 156	236
29	TEMPLE UNIV	B C DRAKE	GSFC	S K BISWAS	NAG 5 8649	452
29	THE UNIV OF CENTRAL FLORIDA	C M CLESKEY	KSC	R HOFER	NCA10 35	170
29	UNIV OF MINN	A NURRIDIN	HQ	L RUDNICK	NGT 5 50123	325
29	UNIV OF AKRON	J R SCOTT	GRC	D I HAIHARAN	NAG 3 2182	420
29	UNIV OF ALABAMA - HUNTSVILLE	F MAYHALL	MSFC	W MORSE	NCC 8 178	13
29	UNIV OF CALIFORNIA - BERKELEY	J BREDEKAMP	GSFC	D L BUZASI	NAG 5 8489	72
29	UNIV OF CALIFORNIA - DAVIS	D KWAK	ARC	M HAFEZ	NCC 2 5426	82
29	UNIV OF CALIFORNIA - LOS ANGELES	J R FISCHER	GSFC	C MECHOSO	NCC 5 149	94
29	UNIV OF CALIFORNIA - SAN DIEGO	A POHORILLE	ARC	V GALINSKY	NCC 2 5302	103
29	UNIV OF CALIFORNIA - SAN DIEGO	M H NEW	ARC	V GALLINSKY	NCC 2 5448	103
29	UNIV OF DAYTON	W D MORRIS	LARC	C E EBELING	NAS 1 99148	424
29	UNIV OF HOUSTON - CLEAR LAKE	D OVERLAND	JSC	T FEAGIN	NAG 9 1295	490
29	UNIV OF HOUSTON - CLEAR LAKE	JARRELL	JSC	R S CHHIKARA	NCC 9 76	490
29	UNIV OF MARYLAND - COLLEGE PARK	J R FISCHER	GSFC	P LYSTER	NCC 5 150	270
29	UNIV OF MICHIGAN - ANN ARBOR	J R FISCHER	GSFC	T GOMBOSI	NCC 5 146	317
29	UNIV OF NEW HAMPSHIRE - DURHAM	M MAIDEN	GSFC	B MOORE	NCC 5 304	349
29	UNIV OF TEXAS - AUSTIN	E L CHRISTIANSEN	JSC	E P FAHRENTHOLD	NCC 9 73	497
29	UNIV OF TEXAS - AUSTIN	J R FISCHER	GSFC	G CAREY	NCC 5 154	497
29	UNIV OF TOLEDO	J D STEGEMAN	GRC	D D JOHNSON	NAG 3 2594	425
29	UNIV OF TOLEDO	J LITT	GRC	A P DHAWAN	NAG 3 2282	425
29	UNIV OF VIRGINIA	B MERRITT	WFF	G WILLIAMS	NAG 5 10956	526
29	UNIV OF VIRGINIA	P M GOODE	LARC	B W JOHNSON	NGT 1 01016	527
29	UNIV OF VIRGINIA	P W GOODE	LARC	C R ELKS	NGT 1 52237	527
29	UNIV OF WASHINGTON	M WEI	GSFC	T QUINN	NGT 5 126	542
29	UNIV OF WASHINGTON	S LIANG	ARC	H QIAN	NCC 2 5463	541
29	WASHINGTON STATE UNIV	B A BIEGEL	ARC	M A OSMAN	NCC 2 5346	544
29	WEST VIRGINIA UNIV	D S OSBURN	ARC	A C COGLEY	NCC 2 979	545
29	WINSTON-SALEM STATE UNIV	F SIX	MSFC	F LEE	NAG 8 1099	404
31	ALABAMA A&M UNIV	P SAKIMOTO	GSFC	A TAN	NAG 5 10202	1
31	ALABAMA A&M UNIV	R ARNOLD	MSFC	T L COLEMAN	NCC 8 140	2
31	ALMA COLLEGE	M J MCGILL	GSFC	J H GIBSON	NAG 5 10118	306
31	ARIZONA STATE UNIV	R LAWRENCE	GSFC	P R BUSECK	NAG 5 9838	22
31	BOSTON UNIV	B SINGH	GRC	A NADIM	NAG 3 1844	276
31	BOSTON UNIV	C S POTTER	ARC	R B MYNENI	NAG 2 1432	276
31	BOSTON UNIV	D TOLL	GSFC	R B MYNENI	NAS 5 96061	280
31	BOSTON UNIV	H OSEROFF	GSFC	W STRAHLER	NAS 5 31369	280
31	BOSTON UNIV	J ARNOLD	MSFC	G D SALVUCCI	NAG 8 1522	280
31	BRIGHAM YOUNG UNIV	R J LAWRENCE	GSFC	D G LONG	NAG 5 9638	502
31	BROWN UNIV	R MCKELLIP	SSC	MUSTARD	NAG13 39	459
31	CALIFORNIA INST OF TECH	E HILSENATH	GSFC	Y L YUNG	NAG 5 7230	45
31	CALIFORNIA INST OF TECH	G L MADDREA	LARC	Y L YUNG	NAG 1 2151	41
31	CALIFORNIA INST OF TECH	H HASAN	GSFC	D P INGERSOLL	NAG 5 4191	42
31	CALIFORNIA INST OF TECH	J BERGSTRALH	GSFC	D L YUNG	NAG 5 6263	44
31	CALIFORNIA INST OF TECH	M CHOU	GSFC	Y L YUNG	NAG 5 7680	45
31	CALIFORNIA INST OF TECH	M J KURYLO	GSFC	D OKUMURA	NAG 5 3911	42
31	CALIFORNIA INST OF TECH	R J LAWRENCE	GSFC	P O WENNBERG	NAG 5 11157	48
31	CALIFORNIA INST OF TECH	R LAWRENCE	GSFC	D O WENNBERG	NAG 5 9307	45
31	CARNEGIE - MELLON UNIV	P HUNTER	GSFC	A F PTAK	NAG 5 8093	437
31	CHRISTOPHER NEWPORT UNIV	G W SOCHSE	LARC	N POUGATCHER	NCC 1 318	507
31	CITY UNIV OF NY CITY COLLEGE	L TRAVIS	GSFC	N A PARKER	NCC 5 343	368
31	CITY UNIV OF NY CITY COLLEGE	L TRAVIS	GSFC	N A PARKER	NCC 5 520	368
31	CITY UNIV OF NY CITY COLLEGE	O W THIELE	GSFC	S GEDZELMAN	NAG 5 7827	368
31	CITY UNIV OF NY CITY COLLEGE	S GLICKER	GSFC	D AKINS	NAG 5 4019	368
31	CITY UNIV OF NY SYSTEM	J SIMMONDS	MSFC	W J PIERSON	NAG 8 1423	368
31	CLEMSON UNIV - CLEMSON	J BOYCE	GSFC	D CLAYTON	NAG 5 8304	462
31	CLEMSON UNIV - CLEMSON	O W THIELE	GSFC	C W ULBRICH	NAG 5 7782	462
31	COLLEGE OF CHARLESTON	P HUNTER	GSFC	J HAKKILA	NAG 5 10625	464
31	COLLEGE OF WILLIAM AND MARY	W CHU	LARC	D BRENNER	NAS 1 00146	508
31	COLORADO STATE UNIV	A J NEGRI	GSFC	G L STEPHENS	NCC 5 288	122
31	COLORADO STATE UNIV	A J NEGRI	GSFC	M T MONTGOMERY	NAG 5 11140	121
31	COLORADO STATE UNIV	B A WIELICKI	LARC	D A	NAS 1 98125	122
31	COLORADO STATE UNIV	D LEWIS	GSFC	G STEPHENS	NAS 5 99237	122
31	COLORADO STATE UNIV	D S MCDUGAL	LARC	D A RANDALL	NAG 1 2081	119

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
31	COLORADO STATE UNIV	D S MCDUGAL	LARC	D C ROGERS	NAG 1 2063	119
31	COLORADO STATE UNIV	D S MCDUGAL	LARC	W COTTON	NAG 1 2045	119
31	COLORADO STATE UNIV	G GIBSON	LARC	G L STEPHENS	NAS 1 99103	122
31	COLORADO STATE UNIV	J ARNOLD	MSFC	R A PIELKE	NAG 8 1511	121
31	COLORADO STATE UNIV	J R HERMAN	GSFC	J SLUSSER	NAG 5 11018	121
31	COLORADO STATE UNIV	M MISHCHENKO	GSFC	S M KREIDENWEIS	NAG 5 7783	120
31	COLORADO STATE UNIV	O THIELE	GSFC	D RANDALL	NAG 5 4749	120
31	COLORADO STATE UNIV	O W THIELE	GSFC	G L STEPHENS	NAG 5 7719	120
31	COLORADO STATE UNIV	O W THIELE	GSFC	V CHANDRASEKAR	NAG 5 7876	120
31	COLORADO STATE UNIV	O W THIELE	GSFC	V N BRINGI	NAG 5 7717	120
31	COLORADO STATE UNIV	R A ALDER	GSFC	S A RUTLEDGE	NAG 5 4754	120
31	COLORADO STATE UNIV	R J LAWRENCE	GSFC	D A RANDALL	NAG 5 9647	121
31	COLORADO STATE UNIV	R J LAWRENCE	GSFC	R H JOHNSON	NAG 5 9665	121
31	COLORADO STATE UNIV	R J LAWRENCE	GSFC	S A RUTLEDGE	NAG 5 9642	121
31	COLORADO STATE UNIV	R J LAWRENCE	GSFC	V CHANDRASEKAR	NAG 5 9655	121
31	COLORADO STATE UNIV	R J LAWRENCE	GSFC	W H SCHUBERT	NAG 5 11010	121
31	COLORADO STATE UNIV	R J LAWRENCE	GSFC	W K BERG	NAG 5 10482	121
31	COLORADO STATE UNIV	R L LAWRENCE	GSFC	C D KUMMEROW	NAG 5 11189	121
31	COLORADO STATE UNIV	R LAWRENCE	GSFC	D J DEMOTT	NAG 5 9308	121
31	COLORADO STATE UNIV	T MILLER	MSFC	S O KIDDER	NAS 8 97082	122
31	COLORADO STATE UNIV	V DELNORE	LARC	G STEPHENS	NAG 1 2247	119
31	COLUMBIA UNIV	A LACIS	GSFC	L DRUYAN	NCC 5 473	374
31	COLUMBIA UNIV	A LACIS	GSFC	L M DRUYAN	NCC 5 270	373
31	COLUMBIA UNIV	A LACIS	GSFC	L M DRUYAN	NCC 5 546	374
31	COLUMBIA UNIV	B CARLSON	GSFC	C HARRIS	NCC 5 470	374
31	COLUMBIA UNIV	B CARLSON	GSFC	C HARRIS	NCC 5 549	374
31	COLUMBIA UNIV	D RIND	GSFC	M A CHANDLER	NCC 5 328	374
31	COLUMBIA UNIV	D RIND	GSFC	M CHANDLER	NCC 5 505	374
31	COLUMBIA UNIV	M I MISHCHENKO	GSFC	G KUKLA	NAG 5 7687	371
31	COLUMBIA UNIV	M KHAZENIE	GSFC	W BROECKER	NAG 5 6294	370
31	COLUMBIA UNIV	M S BURRELL	GSFC	A D DELGENIO	NGT 5 44	374
31	COLUMBIA UNIV	R B STOTHERS	GSFC	C K CHU	NCC 5 485	374
31	COLUMBIA UNIV	R B STOTHERS	GSFC	C K CHU	NCC 5 547	374
31	COLUMBIA UNIV	R STOTHERS	GSFC	L M POLVANI	NCC 5 558	374
31	COLUMBIA UNIV	R STOTHERS	GSFC	L POLVANI	NCC 5 278	374
31	COLUMBIA UNIV	R STOTHERS	GSFC	L POLVANI	NCC 5 469	374
31	COLUMBIA UNIV	R W STEWART	GSFC	T HALL	NAG 5 7138	371
31	CONCORDIA COLLEGE IN MOORHEAD	P R MAHAFFY	GSFC	H L MANNING	NAG 5 8626	320
31	CORNELL UNIV	G ASRAR	GSFC	L O HEDIN	NGT 5 30038	381
31	CORNELL UNIV	J ARNOLD	MSFC	W BRUTSAERT	NAG 8 1518	380
31	CORNELL UNIV	S NASH-STEVENSON	MSFC	K H COOK	NGT 8 52897	382
31	DENISON UNIV	R BEEBE	GSFC	D E MICKELSON	NAG 5 4341	412
31	DREXEL UNIV	E HILSEN RATH	GSFC	D R BROOKS	NAG 5 8929	440
31	DREXEL UNIV	J L RAPER, SR.	LARC	A R BANDY	NCC 1 409	441
31	DREXEL UNIV	J L ROPER	LARC	A R BANDY	NCC 1 297	441
31	DUKE UNIV	R ROOD	GSFC	P KABIBHATLA	NAG 5 3665	394
31	FLORIDA A&M UNIV	R LEE	KSC	F B GROSS	NAG10 264	164
31	FLORIDA STATE UNIV	A J KRUEGER	GSFC	X ZOU	NAG 5 9410	168
31	FLORIDA STATE UNIV	A J NEGRI	GSFC	E A SMITH	NAG 5 4752	166
31	FLORIDA STATE UNIV	J ARNOLD	MSFC	J J O	NCC 8 158	169
31	FLORIDA STATE UNIV	J ARNOLD	MSFC	T N KRISHNAMURTI	NAG 8 1537	168
31	FLORIDA STATE UNIV	J E ARNOLD	MSFC	T N KRISHNAMURTI	NAG 8 1848	168
31	FLORIDA STATE UNIV	J L RAPER, SR.	LARC	H E FUELBERG	NCC 1 412	168
31	FLORIDA STATE UNIV	J M HOELL, JR.	LARC	H E FUELBERG	NCC 1 308	168
31	FLORIDA STATE UNIV	J R RAPER	LARC	T N KRISHNAURTI	NAG 1 2127	166
31	FLORIDA STATE UNIV	M HALL	GSFC	I NAVON	NAG 5 4873	167
31	FLORIDA STATE UNIV	O W THIELE	GSFC	S E NICHOLSON	NAG 5 7718	167
31	FLORIDA STATE UNIV	O W THIELE	GSFC	T N KRISHNAMURTI	NAG 5 4729	166
31	FLORIDA STATE UNIV	P K BHARTA	GSFC	X ZOU	NAG 5 11067	168
31	FLORIDA STATE UNIV	R J LAWRENCE	GSFC	H A COOPER	NAG 5 10001	168
31	FLORIDA STATE UNIV	R J LAWRENCE	GSFC	T N KRISHNAMURTI	NAG 5 9662	168
31	FLORIDA STATE UNIV	W B ROSSOW	GSFC	G LIU	NAG 5 8647	167
31	GEORGE MASON UNIV	G MADDREA	LARC	M SUMMERS	NAG 1 2316	509
31	GEORGE WASHINGTON UNIV	R J LAWRENCE	GSFC	R H LANG	NAG 5 9550	152
31	GEORGE WASHINGTON UNIV	S HOWARD	GSFC	D M KEATING	NAG 5 6081	152
31	GEORGIA INST OF TECH	A DOUGLASS	GSFC	D FU	NAG 5 8895	184

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
31	GEORGIA INST OF TECH	A THOMPSON	GSFC	M CHIN	NAG 5 6022	183
31	GEORGIA INST OF TECH	G L MADDREA	LARC	D M CUNNOLD	NAG 1 2202	182
31	GEORGIA INST OF TECH	G L MADDREA	LARC	D M CUNNOLD	NAS 1 18938	185
31	GEORGIA INST OF TECH	J BERGSTRALH	GSFC	D G STEFFES	NAG 5 4190	183
31	GEORGIA INST OF TECH	J C RIVERA	GSFC	D M CUNNOLD	NAS 5 00171	185
31	GEORGIA INST OF TECH	J L RAPER	LARC	H W GUAN	NCC 1 375	185
31	GEORGIA INST OF TECH	J L RAPER, SR.	LARC	F L EISELE	NCC 1 421	186
31	GEORGIA INST OF TECH	J L RAPER, SR.	LARC	R J WEBER	NCC 1 411	186
31	GEORGIA INST OF TECH	J L RAPER, SR.	LARC	S T SANDHOLM	NCC 1 417	186
31	GEORGIA INST OF TECH	J L RAPER	LARC	D D DAVIS	NCC 1 01024	186
31	GEORGIA INST OF TECH	J L ROPER	LARC	F L EISELE	NCC 1 301	185
31	GEORGIA INST OF TECH	J M HOELL, JR.	LARC	D D DAVIS	NCC 1 306	185
31	GEORGIA INST OF TECH	J M HOELL	LARC	S C LIU	NCC 1 317	185
31	GEORGIA INST OF TECH	J M HOELL, JR.	LARC	S T SANDHOLM	NCC 1 296	185
31	GEORGIA INST OF TECH	M I MISHCHENKO	GSFC	M CHIN	NAG 5 7682	184
31	GEORGIA INST OF TECH	R MCPETERS	GSFC	P GINOX	NAG 5 11063	184
31	GEORGIA INST OF TECH	S SCHUBERG	GSFC	R X BLACK	NAG 5 7471	184
31	GEORGIA INST OF TECH	S SCHUBERT	GSFC	R X BLACK	NAG 5 10374	184
31	GEORGIA INST OF TECH	Y SUD	GSFC	R DICKINSON	NAG 5 10209	184
31	HAMPTON UNIV	B A WIENCKI	LARC	B LIN	NAG 1 1963	511
31	HAMPTON UNIV	C JACKMAN	GSFC	D M RUSSELL	NAG 5 7001	512
31	HAMPTON UNIV	C JACKMAN	GSFC	J M RUSSELL	NAG 5 11065	512
31	HAMPTON UNIV	G G GIBSON	LARC	M P MCCORMICK	NAS 1 99108	513
31	HAMPTON UNIV	G G GIBSON	LARC	N G LOEB	NAG 1 2318	511
31	HAMPTON UNIV	G L MADDREA	LARC	M P MCCORMICK	NAG 1 2170	511
31	HAMPTON UNIV	J FISHMAN	LARC	T H CHYBA	NAG 1 2224	511
31	HAMPTON UNIV	L R POOLE	LARC	M P MCCORMICK	NAG 1 1947	510
31	HAMPTON UNIV	M I MISHCHENKO	GSFC	M MCCORMICK	NAG 5 8648	512
31	HAMPTON UNIV	P MINNIS	LARC	M P MCCORMICK	NAG 1 2135	511
31	HAMPTON UNIV	R A HATHAWAY	LARC	D A TEMPLE	NCC 1 01059	513
31	HAMPTON UNIV	R L DUNCAN	LARC	P MCCORMICK	NAS 1 97042	513
31	HAMPTON UNIV	V E DELNORE	LARC	N G LOEB	NAG 1 2206	511
31	HAMPTON UNIV	V E DELNORE	LARC	N G LOEB	NAG 1 01096	511
31	HARVARD UNIV	E P CONDON	ARC	J G ANDERSON	NAG 2 1300	282
31	HARVARD UNIV	E P CONDON	ARC	S C WOFYSY	NAG 2 1304	282
31	HARVARD UNIV	E P CONDON	ARC	S C WOFYSY	NAG 2 1310	282
31	HARVARD UNIV	G L MADDREA	LARC	D J JACOB	NAG 1 2307	282
31	HARVARD UNIV	G L MADDREA	LARC	J G ANDERSON	NAG 1 2007	282
31	HARVARD UNIV	G L MADDREA	LARC	S C WOFYSY	NAG 1 2025	282
31	HARVARD UNIV	J L RAPER, SR.	LARC	D J JACOB	NAG 1 2328	282
31	HARVARD UNIV	J RAPER	LARC	D J JACOB	NAG 1 2126	282
31	HARVARD UNIV	L R POOLE	LARC	J G ANDERSON	NAG 1 01095	282
31	HARVARD UNIV	R J LAWRENCE	GSFC	A P BARROS	NAG 5 9823	284
31	HARVARD UNIV	R LAWRENCE	GSFC	A P BARROS	NAG 5 9521	284
31	HARVARD UNIV	R W STEWART	GSFC	D JACOB	NAG 5 7201	284
31	HARVARD UNIV	S S WEGENER	ARC	S C WOFYSY	NCC 2 897	285
31	HOWARD UNIV	W HOEGY	GSFC	A THORPE	NCC 5 420	155
31	HOWARD UNIV	W HOEGY	GSFC	S T SMITH	NCC 5 424	155
31	HOWARD UNIV	W R HOEGY	GSFC	A N THORPE	NCC 5 197	155
31	HOWARD UNIV	W R HOEGY	GSFC	S T SMITH	NCC 5 556	155
31	IOWA STATE UNIV	A DOUGLASS	GSFC	D L STANFORD	NAG 5 7133	222
31	IOWA STATE UNIV	M RIENECKER	GSFC	T C CHEN	NAG 5 8293	223
31	IOWA STATE UNIV	S CHANDRA	GSFC	S L STANFORD	NAG 5 7271	222
31	IOWA STATE UNIV	S SCHUBERT	GSFC	T CHEN	NAG 5 7530	223
31	JACKSON STATE UNIV	J JENNER	JSC	P CROFT	NAG13 99013	327
31	JACKSON STATE UNIV	R ADLER	GSFC	P FITZPATRICK	NAG 5 6209	326
31	JACKSON STATE UNIV	R MILLER	JSC	R REDDY	NAG13 99012	327
31	JOHNS HOPKINS UNIV	A C AIKIN	GSFC	J YEE	NAG 5 9988	247
31	JOHNS HOPKINS UNIV	A R DOUGLASS	GSFC	D WAUGH	NCC 5 500	252
31	JOHNS HOPKINS UNIV	D BOGAN	GSFC	B MAUK	NAG 5 11034	250
31	JOHNS HOPKINS UNIV	D BOGAN	GSFC	D F STROBEL	NAG 5 4168	242
31	JOHNS HOPKINS UNIV	D J BOGAN	GSFC	R J VERVACK	NAG 5 11051	250
31	JOHNS HOPKINS UNIV	E HILSENATH	GSFC	S A LLOYD	NAG 5 7227	243
31	JOHNS HOPKINS UNIV	G L MADDREA	LARC	D W WAUGH	NAG 1 2043	240
31	JOHNS HOPKINS UNIV	G L MADDREA	LARC	D W WAUGH	NAG 1 2194	240
31	JOHNS HOPKINS UNIV	H BLODGET	GSFC	J SALISBURY	NAS 5 31373	252

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
31	JOHNS HOPKINS UNIV	J F SPANN	GSFC	B J ANDERSON	NAG 5 10849	250
31	JOHNS HOPKINS UNIV	J F SPANN	GSFC	R B DECKER	NAG 5 10900	250
31	JOHNS HOPKINS UNIV	J SHARBER	GSFC	H KU	NAG 5 9109	246
31	JOHNS HOPKINS UNIV	J SHARBER	GSFC	K LIU	NAG 5 9078	246
31	JOHNS HOPKINS UNIV	L R POOLE	LARC	S A LLOYD	NAG 1 2270	240
31	JOHNS HOPKINS UNIV	P E HUNTER	GSFC	A F PTAK	NAG 5 11193	251
31	JOHNS HOPKINS UNIV	R MCPETERS	GSFC	S A LLOYD	NAG 5 11029	250
31	JOHNS HOPKINS UNIV	R W STEWART	GSFC	D W WAUGH	NAG 5 7361	243
31	JOHNS HOPKINS UNIV	T A SULLIVAN	JSC	R H MAURER	NAG 9 1220	251
31	JOHNS HOPKINS UNIV	W LAU	GSFC	A ARKING	NAG 5 8572	245
31	MANKATO STATE UNIV	P HUNTER	GSFC	J HAKKILA	NAG 5 8142	320
31	MASSACHUSETTS INST OF TECH	A DOUGLASS	GSFC	D NEWELL	NAG 5 6710	291
31	MASSACHUSETTS INST OF TECH	A HOU	GSFC	P H STONE	NAG 5 4880	290
31	MASSACHUSETTS INST OF TECH	D BOGAN	GSFC	J D RICHARDSON	NAG 5 8947	293
31	MASSACHUSETTS INST OF TECH	D K WEST	GSFC	R L BRAS	NAG 5 3726	289
31	MASSACHUSETTS INST OF TECH	D L MODDREA	LARC	R E NEWELL	NAG 1 2306	287
31	MASSACHUSETTS INST OF TECH	E LINDSTROM	GSFC	P H STONE	NAG 5 7204	291
31	MASSACHUSETTS INST OF TECH	G L MADDREA	LARC	R A PLUMB	NAG 1 1900	286
31	MASSACHUSETTS INST OF TECH	G L MADDREA	LARC	R A PLUMB	NAG 1 2027	286
31	MASSACHUSETTS INST OF TECH	G L MADDREA	LARC	R G PRINN	NAG 1 2152	286
31	MASSACHUSETTS INST OF TECH	G MADDREA	LARC	R PLUMB	NAG 1 2203	287
31	MASSACHUSETTS INST OF TECH	G SMITH	GSFC	T A HERRING	NAG 5 99007	297
31	MASSACHUSETTS INST OF TECH	G STRINGFELLOW	GSFC	Q HU	NAG 5 9080	293
31	MASSACHUSETTS INST OF TECH	J ARNOLD	MSFC	D ENTEKHABI	NAG 8 1524	296
31	MASSACHUSETTS INST OF TECH	J BERGSTRALH	GSFC	D RICHARDSON	NAG 5 6129	291
31	MASSACHUSETTS INST OF TECH	J C SHIUE	GSFC	D STAELIN	NAG 5 7487	292
31	MASSACHUSETTS INST OF TECH	J L RAPER	LARC	R E NEWELL	NAG 1 2173	287
31	MASSACHUSETTS INST OF TECH	J L RAPER, SR.	LARC	R E NEWELL	NCC 1 415	298
31	MASSACHUSETTS INST OF TECH	J SHARBER	GSFC	T CHANG	NAG 5 9117	293
31	MASSACHUSETTS INST OF TECH	K H BERGMAN	GSFC	D S LINDZEN	NAG 5 6304	291
31	MASSACHUSETTS INST OF TECH	M J KURYLO	GSFC	R G PRINN	NAG 5 3974	289
31	MASSACHUSETTS INST OF TECH	N LIU	GRC	D A WAITZ	NAG 3 2503	289
31	MASSACHUSETTS INST OF TECH	P L DECOLA	GSFC	P STEINFELD	NAG 5 3977	290
31	MASSACHUSETTS INST OF TECH	R J LAWRENCE	GSFC	E R WILLIAMS	NAG 5 9637	294
31	MASSACHUSETTS INST OF TECH	R J LAWRENCE	GSFC	R L BRAS	NAG 5 9640	294
31	MASSACHUSETTS INST OF TECH	R W LAWRENCE	GSFC	E R WILLIAMS	NAG 5 4778	290
31	MASSACHUSETTS INST OF TECH	R W STEWART	GSFC	R PLUMB	NAG 5 8224	292
31	MASSACHUSETTS INST OF TECH	W WILDES	GSFC	G CARRIGAN	NAG 5 99198	297
31	MICHIGAN TECHNOLOGICAL UNIV	A J KRUEGER	GSFC	W ROSE	NAG 5 7272	309
31	MICHIGAN TECHNOLOGICAL UNIV	R MVPETERS	GSFC	G BLUTH	NAG 5 11062	309
31	MOSCOW INST OF PHYSICS & TECH	W L GROSS	LARC	M L KOGAN	NCC 1 01005	559
31	NEW MEXICO HIGHLANDS UNIV	L ARMENDARIZ	JSC	J R JUAREZ	NAG 9 1375	361
31	NEW MEXICO HIGHLANDS UNIV	L ARMENDARIZ	JSC	J R JUAREZ	NAG 9 1922	361
31	NEW MEXICO INST OF MINING & TECH	J HERMAN	GSFC	D R MINSCHWANER	NAG 5 7109	361
31	NEW MEXICO INST OF MINING & TECH	M J KURYLO	GSFC	K MINSCHWANNER	NAG 5 4139	361
31	NEW MEXICO STATE UNIV - LAS CRUCES	J BERGSTRALH	GSFC	D MARLEY	NAG 5 4987	362
31	NIAGARA UNIV	R BLAKESLEE	MSFC	W BOECK	NCC 8 182	383
31	NORFOLK STATE UNIV	J C BARNES	LARC	E S GILLMAN	NAG 1 2228	514
31	NORFOLK STATE UNIV	N P BARNES	LARC	C COLEMAN	NAG 1 2226	514
31	NORFOLK STATE UNIV	W P CHU	LARC	M KUNG	NAG 1 1944	514
31	NORTH CAROLINA STATE UNIV	B E ANDERSON	LARC	M SMITH	NGT 1 52183	402
31	NORTH CAROLINA STATE UNIV	F H PROCTOR	LARC	Y L LIN	NAG 1 99097	401
31	NORTH CAROLINA STATE UNIV	J ARNOLD	MSFC	R ABT	NCC 8 159	401
31	OHIO STATE UNIV	M J KURYLO	GSFC	F C DEELUCIA	NAG 5 3983	414
31	OLD DOMINION UNIV	G W SACHSE	LARC	D LOCKWOOD	NGT 1 52241	521
31	OLD DOMINION UNIV	M N ABEDIN	GSFC	R P JOSHI	NAG 1 01077	517
31	OLD DOMINION UNIV	R DEYOUNG	LARC	D H ELSAYED-ALI	NGT 1 01014	520
31	OREGON STATE UNIV	B A WIELICKI	LARC	J COAKLEY	NAG 1 98140	433
31	OREGON STATE UNIV	C RABER	GSFC	D H FREILICH	NAG 5 32965	433
31	OREGON STATE UNIV	G GIBSON	LARC	J M COAKLEY	NAG 1 99104	433
31	OREGON STATE UNIV	J BERGSTRALH	GSFC	D BARNES	NAG 5 6189	431
31	OREGON STATE UNIV	J MARRA	GSFC	J BARNES	NAG 5 11046	433
31	OREGON STATE UNIV	M I MISHCHENKO	GSFC	J A COAKLEY	NAG 5 7686	432
31	OREGON STATE UNIV	M MEYER	GSFC	B T SIMONEIT	NAG 5 9428	432
31	OREGON STATE UNIV	R A SCHIFFER	GSFC	G DALRYMPLE	NAG 5 8261	432
31	OREGON STATE UNIV	R M HABERLE	ARC	J R BARNES	NCC 2 1102	433

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
31	OREGON STATE UNIV	R M HABERLE	ARC	J R BARNES	NGT 2 52245	434
31	PENN STATE UNIV	C D KUMMEROW	GSFC	C S RUF	NAG 5 8005	446
31	PENN STATE UNIV	E P CONDON	ARC	G S FORBES	NAG 2 1295	442
31	PENN STATE UNIV	E P CONDON	ARC	W H BRUNE	NAG 2 1302	442
31	PENN STATE UNIV	E P CONDON	ARC	W H BRUNE	NAG 2 1309	442
31	PENN STATE UNIV	E P CONDON	ARC	W H BRUNE	NAG 2 1453	443
31	PENN STATE UNIV	J ARNOLD	MSFC	N L SEAMAN	NAG 8 1530	448
31	PENN STATE UNIV	J F GLEASON	GSFC	W H BRUNE	NAS 5 00024	449
31	PENN STATE UNIV	J L RAPER, SR.	LARC	W H BRUNE	NCC 1 414	450
31	PENN STATE UNIV	J M HOELL, JR.	LARC	W H BRUNE	NCC 1 300	449
31	PENN STATE UNIV	R E YOUNG	ARC	J F KASTING	NCC 2 5307	450
31	PENN STATE UNIV	R E YOUNG	ARC	J F KASTINGS	NCC 2 5410	450
31	PENN STATE UNIV	R J LAWRENCE	GSFC	A P BARROS	NAG 5 7781	446
31	PENN STATE UNIV	R W LAWRENCE	GSFC	G JENKINS	NAG 5 7443	445
31	PRAIRIE VIEW A&M UNIV	A LEE	JSC	R WILKINS	NAG 9 1370	476
31	PRINCETON UNIV	J ARNOLD	MSFC	E F WOOD	NAG 8 1517	354
31	PRINCETON UNIV	J ARNOLD	MSFC	J A SMITH	NAG 8 1521	354
31	PRINCETON UNIV	O W THIELE	GSFC	J A SMITH	NAG 5 7744	353
31	PRINCETON UNIV	R J LAWRENCE	GSFC	E F WOOD	NAG 5 9891	354
31	PURDUE UNIV	B L APENTA	MSFC	G W PETTY	NAG 8 1233	219
31	PURDUE UNIV	G ASRAR	GSFC	D HARSHVARDHAN	NGT 5 30040	220
31	PURDUE UNIV	K H BERGMAN	GSFC	D HARSHVARDHAN	NAG 5 3992	217
31	PURDUE UNIV	M I MISHCHENKO	GSFC	H HARSHVARDHAN	NAG 5 7727	218
31	PURDUE UNIV	R J LAWRENCE	GSFC	C A CLAYTON	NAG 5 9822	218
31	PURDUE UNIV	R W LAWRENCE	GSFC	G W PETTY	NAG 5 7741	218
31	RICE UNIV	J BERGSTRALH	GSFC	D HILL	NAG 5 6432	477
31	RICE UNIV	J GRAF	JSC	F K TITTEL	NAG 9 1193	478
31	RUTGERS ST UNIV N	A C JANETOS	HQ	R AVISSAR	NAGW 5226	359
31	RUTGERS ST UNIV N	D J BOGAN	GSFC	T MADEY	NAG 5 11045	358
31	RUTGERS ST UNIV N	G L MADDREA	LARC	A ROBOCK	NAG 1 2154	356
31	RUTGERS ST UNIV N	J ARNOLD	MSFC	Y LIU	NAG 8 1513	358
31	RUTGERS ST UNIV N	P MINNIS	LARC	J A FRANCIS	NAG 1 2311	356
31	RUTGERS ST UNIV N	R B STOTHERS	GSFC	A ROBOCK	NCC 5 553	359
31	RUTGERS ST UNIV N	R STOTHERS	GSFC	R AVISSAR	NCC 5 476	359
31	SAINT ANSELM COLLEGE	A J NEGRI	GSFC	D GUERRA	NCC 5 384	345
31	SAN FRANCISCO STATE UNIV	R S HIPSKIND	ARC	K L PAGAN	NCC 2 1128	55
31	SAN FRANCISCO STATE UNIV	S HIPSKIND	ARC	P FOSCHI	NCC 2 1278	55
31	SAN JOSE STATE UNIV	D BOGAN	GSFC	S RAFKIN	NAG 5 9751	56
31	SAN JOSE STATE UNIV	D QUATTROCHI	MSFC	R BORNSTEIN	NAG 8 1735	56
31	SAN JOSE STATE UNIV	G L MADDREA	LARC	P HAMILL	NAG 1 2205	55
31	SAN JOSE STATE UNIV	H B SINGH	ARC	P A HAMMILL	NCC 2 5347	57
31	SAN JOSE STATE UNIV	J M BOYCE	GSFC	S RAFKIN	NAG 5 11184	56
31	SAN JOSE STATE UNIV	P B RUSSELL	ARC	P A HAMILL	NCC 2 5450	58
31	SAN JOSE STATE UNIV	P BUI	ARC	J GOODMAN	NCC 2 1106	57
31	SAN JOSE STATE UNIV	PBUI	ARC	J GOODMAN	NCC 2 1045	56
31	SAN JOSE STATE UNIV	R B CHATFIELD	ARC	P A HAMILL	NCC 2 1091	56
31	SAN JOSE STATE UNIV	R B CHATFIELD	ARC	S C RAFKIN	NCC 2 5353	57
31	SAN JOSE STATE UNIV	R E YOUNG	ARC	A SEIFF	NCC 2 1059	56
31	SAN JOSE STATE UNIV	R E YOUNG	ARC	J L HOLLINGSWORTH	NCC 2 5451	58
31	SAN JOSE STATE UNIV	R M HABERLE	ARC	A C BRIDGER	NCC 2 5330	57
31	SAN JOSE STATE UNIV	R M HABERLE	ARC	J L HOLLINGSWORTH	NCC 2 5336	57
31	STANFORD UNIV	A NURRIDIN	HQ	U INAN	NGT 5 50227	67
31	STANFORD UNIV	E CONDON	ARC	C T BOWMAN	NAG 2 1397	59
31	STANFORD UNIV	F PERI	LARC	R L BYER	NAS 1 00104	63
31	STANFORD UNIV	P SELLERS	GSFC	H MOONEY	NAS 5 31726	64
31	STATE UNIV OF NY - ALBANY	A NEGRI	GSFC	L BOSART	NAG 5 7469	386
31	STATE UNIV OF NY - ALBANY	G L MADDREA	LARC	V MOHNEN	NAS 1 18942	387
31	STATE UNIV OF NY - ALBANY	L PFISLER	ARC	M KRITZ	NCC 2 5380	387
31	STATE UNIV OF NY - ALBANY	L PFISTER	ARC	M KRITZ	NCC 2 5212	387
31	STATE UNIV OF NY - ALBANY	R LAWRENCE	GSFC	J MOLINARI	NAG 5 11008	387
31	STATE UNIV OF NY - STONY BROOK	A DOUGLASS	GSFC	D A GELLER	NAG 5 7134	389
31	STATE UNIV OF NY - STONY BROOK	B A WIELICKI	LARC	R D CESS	NAS 1 98142	391
31	STATE UNIV OF NY - STONY BROOK	B CARLSON	GSFC	M GELLER	NCC 5 342	391
31	STATE UNIV OF NY - STONY BROOK	D S MCDUGAL	LARC	R A WALISER	NAG 1 2065	388
31	STATE UNIV OF NY - STONY BROOK	G L MADDREA	LARC	M A GELLER	NAG 1 2040	388
31	STATE UNIV OF NY - STONY BROOK	G L MADDREA	LARC	M A GELLER	NAG 1 2166	388

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
31	STATE UNIV OF NY - STONY BROOK	M J KURYLO	GSFC	D VARANABI	NAG 5 3718	389
31	STATE UNIV OF NY - STONY BROOK	M J KURYLO	GSFC	P SOLOMON	NAG 5 4043	389
31	STATE UNIV OF NY - STONY BROOK	M J KURYLO	GSFC	R L DE ZAFRA	NAG 5 4071	389
31	STATE UNIV OF NY - STONY BROOK	M Y WEI	GSFC	M GELLER	NAG 5 7439	389
31	STATE UNIV OF NY - STONY BROOK	R J LAWRENCE	GSFC	M ZHANG	NAG 5 10284	390
31	STATE UNIV OF NY - STONY BROOK	R W STEWART	GSFC	M GELLER	NAG 5 7875	389
31	STATE UNIV OF NY COL - PURCHASE	H M HELFAND	GSFC	J TENENBAUM	NAG 5 8499	392
31	STATE UNIV OF NY COL - PURCHASE	M HELFAND	GSFC	J TENENBAUM	NAG 5 9370	392
31	TEXAS A&M UNIV	J ARNOLD	MSFC	E J ZIPSER	NAG 8 1491	482
31	TEXAS A&M UNIV	O A THIELE	GSFC	T T WILHEIT	NAG 5 4746	481
31	TEXAS A&M UNIV	O THIELE	GSFC	G J NORTH	NAG 5 4796	481
31	TEXAS A&M UNIV	O W THEILE	GSFC	G R NORTH	NAG 5 4753	481
31	TEXAS A&M UNIV	O W THIELE	GSFC	M I BIGGERSTAFF	NAG 5 4776	481
31	TEXAS A&M UNIV	P HWONG	GSFC	T T WILHEIT	NAG 5 32593	483
31	TEXAS A&M UNIV	R J LAWRENCE	GSFC	G R NORTH	NAG 5 9649	481
31	TEXAS A&M UNIV	R J LAWRENCE	GSFC	M I BIGGERSTAFF	NAG 5 9697	481
31	TEXAS A&M UNIV	R LAWRENCE	GSFC	M BOGGERSTAFF	NAG 5 11013	482
31	TEXAS A&M UNIV	R LAWRENCE	GSFC	T WILHEIT	NAG 5 9729	481
31	TEXAS TECH UNIV	G L MADDREA	LARC	G I GELLENE	NAG 1 2192	485
31	THE CATHOLIC UNIV OF AMERICA	D ORWIG	GSFC	D ST	NAG 5 10307	159
31	THE CATHOLIC UNIV OF AMERICA	T GULL	GSFC	S KRAEMER	NAG 5 4103	156
31	THE CATHOLIC UNIV OF AMERICA	W J WAGNER	GSFC	L OFMAN	NAG 5 11003	160
31	THE UNIV OF CENTRAL FLORIDA	R J LAWRENCE	GSFC	W JONES	NAG 5 9548	169
31	UNIV HOUSTON-HOUSTON	R W LAWRENCE	GSFC	J R LAWRENCE	NAG 5 7840	486
31	UNIV OF MINN	O W THIELE	GSFC	E FOUFOULA-GEORGI	NAG 5 7715	322
31	UNIV OF MINN	S ISMAIL	LARC	K J DAVIS	NAG 1 1938	320
31	UNIV OF MINN	W L GROSE	LARC	D PUI	NCC 1 311	324
31	UNIV OF MINN	W R COFER	LARC	D Y PUI	NAG 1 01090	320
31	UNIV	D S MCDUGAL	LARC	J HALLETT	NAG 1 2046	341
31	UNIV	R J LAWRENCE	GSFC	J HALALETT	NAG 5 7973	341
31	UNIV	R LAWRENCE	GSFC	D KINGSMILL	NAG 5 9716	341
31	UNIV	V E DELNORE	LARC	J G HUDSON	NAG 1 2183	341
31	UNIV OF ALABAMA - HUNTSVILLE	B A WIELICKI	LARC	R WELCH	NAG 1 98131	12
31	UNIV OF ALABAMA - HUNTSVILLE	G L MADDREA	LARC	M J NEWCHURCH	NAG 1 2026	7
31	UNIV OF ALABAMA - HUNTSVILLE	G L MADDREA	LARC	M J NEWCHURCH	NAG 1 2204	7
31	UNIV OF ALABAMA - HUNTSVILLE	J R HERMAN	GSFC	S A CHRISTOPHER	NAG 5 7270	8
31	UNIV OF ALABAMA - HUNTSVILLE	R E HARBAUGH	GSFC	M SUMMERLIN	NAG 5 99179	12
31	UNIV OF ALABAMA - HUNTSVILLE	R MCPETERS	GSFC	M NEWCHURCH	NAG 5 10965	11
31	UNIV OF ALABAMA - HUNTSVILLE	R MCPETERS	GSFC	M NEWCHURCH	NAG 5 11096	11
31	UNIV OF ALABAMA - HUNTSVILLE	S CHANDRA	GSFC	M NEWCHURCH	NAG 5 7269	8
31	UNIV OF ALABAMA - HUNTSVILLE	W B ROSSOW	GSFC	Q HAN	NAG 5 10134	10
31	UNIV OF ALABAMA - UNIV	M MISHCHENKO	GSFC	Q HAN	NAG 5 7702	15
31	UNIV OF ALABAMA - UNIV	S HOWARD	GSFC	D TIPPING	NAG 5 6314	15
31	UNIV OF ALASKA - FAIRBANKS	M J FILLIS	GSFC	S SCHWATAL	NAG 5 32206	18
31	UNIV OF ALASKA - FAIRBANKS	S GOGINENI	GSFC	C S LINGLE	NAG 5 4981	17
31	UNIV OF ARIZONA	A J NEGRI	GSFC	B M HERMAN	NCC 5 355	38
31	UNIV OF ARIZONA	A J NEGRI	GSFC	S SOROOSHIAN	NAG 5 10174	33
31	UNIV OF ARIZONA	G GIBSON	LARC	J A REAGAN	NAG 1 99102	38
31	UNIV OF ARIZONA	G L MADDREA JR	LARC	B M HERMAN	NAG 1 18939	38
31	UNIV OF ARIZONA	G L MADDREA	LARC	L L HOOD	NAG 1 2023	25
31	UNIV OF ARIZONA	G STRINGFELLOW	GSFC	C K WALKER	NAG 5 9100	31
31	UNIV OF ARIZONA	H OSEROFF	GSFC	A HUETE	NAG 5 31364	38
31	UNIV OF ARIZONA	J ARNOLD	MSFC	C D WEIDMAN	NAG 8 1542	37
31	UNIV OF ARIZONA	J ARNOLD	MSFC	S SOROOSHIAN	NAG 8 1523	37
31	UNIV OF ARIZONA	J ARNOLD	MSFC	W J SHUTTLEWORTH	NAG 8 1531	37
31	UNIV OF ARIZONA	J ARNOLD	MSFC	Z YANG	NAG 8 1520	36
31	UNIV OF ARIZONA	J BERGSTRALH	GSFC	M M LARSON	NAG 5 3791	26
31	UNIV OF ARIZONA	J BERGSTRALH	GSFC	S BOUGHER	NAG 5 7994	29
31	UNIV OF ARIZONA	J D ARNOLD	MSFC	D J ROCCIPPIO	NAG 8 1754	37
31	UNIV OF ARIZONA	J E RICHARDS	GSFC	S W BOUGHER	NAG 5 8843	30
31	UNIV OF ARIZONA	J GRANT	GSFC	E PIERAZZO	NAG 5 9112	31
31	UNIV OF ARIZONA	J JOINER	GSFC	D FLITTNER	NAG 5 11188	36
31	UNIV OF ARIZONA	J JOINER	GSFC	E KURINSKI	NAG 5 11163	36
31	UNIV OF ARIZONA	J MADURA	KSC	E KRIDER	NAG10 286	37
31	UNIV OF ARIZONA	J MADURA	KSC	E KRIDER	NAG10 302	37
31	UNIV OF ARIZONA	J R HILL	LARC	B M HERMAN	NAG 1 99055	38



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
31	UNIV OF ARIZONA	J SHARBER	GSFC	F L HERBERT	NAG 5 9079	31
31	UNIV OF ARIZONA	L STUART	GSFC	P N SLATER	NAS 5 31717	38
31	UNIV OF ARIZONA	M I MISHCHENKO	GSFC	K J THOME	NAG 5 8686	30
31	UNIV OF ARIZONA	M MISHCHENKO	GSFC	J A REAGAN	NAG 5 8117	29
31	UNIV OF ARIZONA	R D MCPETERS	GSFC	B M HERMAN	NAG 5 7257	28
31	UNIV OF ARIZONA	R J LAWRENCE	GSFC	S SOROOSHIAN	NAG 5 7716	28
31	UNIV OF ARIZONA	R J LAWRENCE	GSFC	S SOROOSHIAN	NAG 5 9549	32
31	UNIV OF ARIZONA	R RIND	GSFC	L L HOOD	NAG 5 7834	29
31	UNIV OF ARIZONA	T MORGAN	GSFC	U FINK	NAG 5 10961	35
31	UNIV OF ARIZONA	T SEVER	MSFC	T P CULBERT	NCC 8 160	39
31	UNIV OF ARIZONA	V E DELNORE	LARC	B M HERMAN	NAG 1 2218	25
31	UNIV OF ARIZONA	W HOEGY	GSFC	R LOUGHMAN	NAG 5 11195	36
31	UNIV OF ARIZONA	W P CHU	LARC	B M HERMAN	NAG 1 01124	25
31	UNIV OF CALIFORNIA - BERKELEY	G L MADDREA	LARC	K A BOERING	NAG 1 2191	67
31	UNIV OF CALIFORNIA - BERKELEY	J HILL	LARC	R COHEN	NAS 1 99053	75
31	UNIV OF CALIFORNIA - BERKELEY	L CHRISTENSEN	GSFC	F MOZER	NAS 5 30801	76
31	UNIV OF CALIFORNIA - BERKELEY	M MELLOTT	GSFC	T IMMEL	NAG 5 11055	75
31	UNIV OF CALIFORNIA - BERKELEY	P SELLERS	GSFC	P MATSON	NAS 5 96092	76
31	UNIV OF CALIFORNIA - BERKELEY	R S HIPSKIN	ARC	K A BOERING	NAG 2 1483	68
31	UNIV OF CALIFORNIA - BERKELEY	S HOWARD	GSFC	D G LUHMANN	NAG 5 4979	69
31	UNIV OF CALIFORNIA - BERKELEY	W M FARRELL	GSFC	G T DELORY	NAG 5 9523	73
31	UNIV OF CALIFORNIA - DAVIS	P SELLERS	GSFC	S USTIN	NAS 5 31359	81
31	UNIV OF CALIFORNIA - DAVIS	R W LAWRENCE	GSFC	C E PUENTE	NAG 5 7441	80
31	UNIV OF CALIFORNIA - DAVIS	T L MILLER	MSFC	T R NATHAN	NAG 8 1143	81
31	UNIV OF CALIFORNIA - IRVINE	D STARR	GSFC	S C TYLER	NAG 5 9955	85
31	UNIV OF CALIFORNIA - IRVINE	G L MADDREA	LARC	M J PRATHER	NAG 1 2308	84
31	UNIV OF CALIFORNIA - IRVINE	G L MADREA	LARC	M J PRANTHER	NAG 1 1906	84
31	UNIV OF CALIFORNIA - IRVINE	J L RAPER, SR.	LARC	D R BLAKE	NCC 1 413	86
31	UNIV OF CALIFORNIA - IRVINE	J L RAPER, SR.	LARC	E S SALTZMAN	NAG 1 01006	84
31	UNIV OF CALIFORNIA - IRVINE	J L RAPER, SR.	LARC	M J PRATHER	NAG 1 01001	84
31	UNIV OF CALIFORNIA - IRVINE	J M HOELL, JR.	LARC	D R BLAKE	NCC 1 299	86
31	UNIV OF CALIFORNIA - IRVINE	M I MISHCHENKO	GSFC	M J PRATHER	NAG 5 8685	85
31	UNIV OF CALIFORNIA - IRVINE	R W STEWART	GSFC	M J PRATHER	NAG 5 7137	85
31	UNIV OF CALIFORNIA - IRVINE	R W STEWART	GSFC	M J PRATHER	NAG 5 8223	85
31	UNIV OF CALIFORNIA - LOS ANGELES	C JACKMAN	GSFC	D M PAP	NAG 5 6680	89
31	UNIV OF CALIFORNIA - LOS ANGELES	D BOGAN	GSFC	R THORNE	NAG 5 11216	94
31	UNIV OF CALIFORNIA - LOS ANGELES	D S MCDUGAL	LARC	K N LIOU	NAG 1 1966	87
31	UNIV OF CALIFORNIA - LOS ANGELES	J BERGSTRALH	GSFC	D M THORNE	NAG 5 6265	89
31	UNIV OF CALIFORNIA - LOS ANGELES	J BERGSTRALH	GSFC	P SCHUBERT	NAG 5 4117	88
31	UNIV OF CALIFORNIA - LOS ANGELES	J F SPANN	GSFC	J RAEDER	NAG 5 10986	94
31	UNIV OF CALIFORNIA - LOS ANGELES	J PFAENDTNER	GSFC	M GHIL	NAG 5 713	88
31	UNIV OF CALIFORNIA - LOS ANGELES	M ACUNA	GSFC	D G KIVELSON	NAG 5 10354	93
31	UNIV OF CALIFORNIA - LOS ANGELES	M D KING	GSFC	K N LIOU	NAG 5 7123	90
31	UNIV OF CALIFORNIA - LOS ANGELES	M I MISHCHENKO	GSFC	K LIOU	NAG 5 7738	90
31	UNIV OF CALIFORNIA - LOS ANGELES	M KING	GSFC	K N LIOU	NAG 5 9667	92
31	UNIV OF CALIFORNIA - LOS ANGELES	M SUAREZ	GSFC	A ARAKAWA	NAG 5 4420	89
31	UNIV OF CALIFORNIA - LOS ANGELES	R BEEBE	GSFC	D PAIGE	NAG 5 6272	89
31	UNIV OF CALIFORNIA - LOS ANGELES	R CAHALAN	GSFC	J PAP	NAG 5 9207	92
31	UNIV OF CALIFORNIA - LOS ANGELES	S COHN	GSFC	M GHIL	NAG 5 9294	92
31	UNIV OF CALIFORNIA - LOS ANGELES	W L GROSE	LARC	R P TURCO	NAG 1 2097	87
31	UNIV OF CALIFORNIA - LOS ANGELES	W LAU	GSFC	K N LIOU	NCC 5 385	95
31	UNIV OF CALIFORNIA - SAN DIEGO	B A WIELICKI	LARC	V RAMANATHAN	NAS 1 98141	102
31	UNIV OF CALIFORNIA - SAN DIEGO	D S MCDUGAL	LARC	F P VALERO	NAG 1 2044	96
31	UNIV OF CALIFORNIA - SAN DIEGO	G SMITH	GSFC	J B MINSTER	NAS 5 99006	103
31	UNIV OF CALIFORNIA - SAN DIEGO	J ARNOLD	MSFC	J ROADS	NAG 8 1516	102
31	UNIV OF CALIFORNIA - SAN DIEGO	J C DODGE	GSFC	J J SIMPSON	NAG 5 6135	97
31	UNIV OF CALIFORNIA - SAN DIEGO	J L MUELLER	GSFC	R FROUIN	NAS 5 97135	103
31	UNIV OF CALIFORNIA - SAN DIEGO	J R HERMAN	GSFC	D LUBIN	NAG 5 8252	99
31	UNIV OF CALIFORNIA - SAN DIEGO	J R HERMAN	GSFC	G MITCHELL	NAG 5 10644	101
31	UNIV OF CALIFORNIA - SAN DIEGO	J WATZIM	GSFC	F VALCRO	NAS 5 99120	103
31	UNIV OF CALIFORNIA - SAN DIEGO	M J KURYLO	GSFC	R F WEISS	NAG 5 4023	97
31	UNIV OF CALIFORNIA - SAN DIEGO	M REINECKER	GSFC	J O ROADS	NAG 5 8292	99
31	UNIV OF CALIFORNIA - SAN DIEGO	O W THIELE	GSFC	J O ROADS	NAG 5 4775	97
31	UNIV OF CALIFORNIA - SAN DIEGO	W J WAGNER	GSFC	B V JACKSON	NAG 5 11123	102
31	UNIV OF CALIFORNIA - SANTA BARBARA	R CAHALAN	GSFC	C GAUTHIER	NAG 5 4629	106
31	UNIV OF CALIFORNIA - SANTA BARBARA	T BRAKKE	GSFC	J M MELACK	NAS 5 31713	109

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
31	UNIV OF CALIFORNIA - SANTA CRUZ	S HOWARD	GSFC	D S VOGT	NAG 5 4445	111
31	UNIV OF CHICAGO	C JACKMAN	GSFC	D NAKAMURA	NAG 5 6693	205
31	UNIV OF CHICAGO	O W THIELE	GSFC	R C SRIVASTAVA	NAG 5 4777	204
31	UNIV OF CHICAGO	P K BHARTIA	GSFC	G C TIAO	NAG 5 9083	206
31	UNIV OF CHICAGO	R LAWRENCEQ	GSFC	D ABBATT	NAG 5 9303	206
31	UNIV OF CHICAGO	W J WAGNER	GSFC	P C FRISCH	NAG 5 11005	207
31	UNIV OF COLORADO - BOULDER	A DOUGLASS	GSFC	D AVALLONE	NAG 5 6629	128
31	UNIV OF COLORADO - BOULDER	A S ACKERMAN	ARC	O TOON	NGT 2 52264	140
31	UNIV OF COLORADO - BOULDER	B W MEESON	GSFC	B O PARKS	NAG 5 8840	132
31	UNIV OF COLORADO - BOULDER	C H JACKMAN	GSFC	G J ROTTMAN	NAS 5 97145	138
31	UNIV OF COLORADO - BOULDER	C JACKMAN	GSFC	D E THOMAS	NAG 5 6627	128
31	UNIV OF COLORADO - BOULDER	C JACKMAN	GSFC	D ROTTMAN	NAG 5 6850	128
31	UNIV OF COLORADO - BOULDER	C JACKMAN	GSFC	S BAILEY	NAG 5 6683	128
31	UNIV OF COLORADO - BOULDER	C JACKSON	GSFC	G J ROTTMAN	NAG 5 11028	137
31	UNIV OF COLORADO - BOULDER	C P SCOFIELD	ARC	G J HOLLAND	NAG 2 1506	124
31	UNIV OF COLORADO - BOULDER	D A SENSKE	GSFC	G R STEWART	NAG 5 10970	137
31	UNIV OF COLORADO - BOULDER	D BOGAN	GSFC	D R LEONE	NAG 5 4314	126
31	UNIV OF COLORADO - BOULDER	D J MCDUGAL	LARC	J A CURRY	NAG 1 2047	123
31	UNIV OF COLORADO - BOULDER	D STARR	GSFC	D PINCUS	NAG 5 11022	137
31	UNIV OF COLORADO - BOULDER	E LINDSTROM	GSFC	O PERSSON	NAG 5 10790	136
31	UNIV OF COLORADO - BOULDER	E LINDSTROM	GSFC	W EMERY	NAG 5 10791	136
31	UNIV OF COLORADO - BOULDER	E P CONDON	ARC	D W TOOHEY	NAG 2 1306	123
31	UNIV OF COLORADO - BOULDER	E P CONDON	ARC	D W TOOHEY	NAG 2 1307	123
31	UNIV OF COLORADO - BOULDER	E P CONDON	ARC	L M AVALLONE	NAG 2 1124	123
31	UNIV OF COLORADO - BOULDER	E P CONDON	ARC	O B TOON	NAG 2 1315	123
31	UNIV OF COLORADO - BOULDER	G L MADDREA	LARC	C E RANDALL	NAG 1 2187	123
31	UNIV OF COLORADO - BOULDER	G L MADDREA	LARC	O B TOON	NAG 1 2021	123
31	UNIV OF COLORADO - BOULDER	G L MADDREA	LARC	O B TOON	NAG 1 2165	123
31	UNIV OF COLORADO - BOULDER	I G NOLT	LARC	K F EVANS	NAG 1 2231	123
31	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	R E GRIMM	NAG 5 9779	134
31	UNIV OF COLORADO - BOULDER	J R CURRAN	GSFC	M L SALBY	NAG 5 8311	131
31	UNIV OF COLORADO - BOULDER	J SHARBER	GSFC	X LI	NAG 5 9421	133
31	UNIV OF COLORADO - BOULDER	J ZWALLY	GSFC	K STEFFEN	NAG 5 10966	137
31	UNIV OF COLORADO - BOULDER	M D KING	GSFC	M A TOLBERT	NAG 5 8127	130
31	UNIV OF COLORADO - BOULDER	M KAVAYA	MSFC	R FREHLICH	NAG 8 1551	138
31	UNIV OF COLORADO - BOULDER	M MISCHENKO	GSFC	O B TOON	NAG 5 8362	131
31	UNIV OF COLORADO - BOULDER	M MISHCHENKO	GSFC	C E RANDALL	NAG 5 7784	130
31	UNIV OF COLORADO - BOULDER	P K BHARTIA	GSFC	O B TOON	NAG 5 11069	137
31	UNIV OF COLORADO - BOULDER	R A SCHIFFER	GSFC	D L SALBY	NAG 5 4446	126
31	UNIV OF COLORADO - BOULDER	R B BEEBE	GSFC	D R LEONE	NAG 5 8923	132
31	UNIV OF COLORADO - BOULDER	R CAHALAN	GSFC	R PINCUS	NAG 5 11279	138
31	UNIV OF COLORADO - BOULDER	R E YOUNG	ARC	O B TOON	NCC 2 5300	139
31	UNIV OF COLORADO - BOULDER	R E YOUNG	ARC	O B TOON	NCC 2 5401	139
31	UNIV OF COLORADO - BOULDER	R J LAWRENCE	GSFC	C R WILLIAMS	NAG 5 9753	134
31	UNIV OF COLORADO - BOULDER	R J	GSFC	W K BERG	NAG 5 9666	134
31	UNIV OF COLORADO - BOULDER	R LAWRENCE	GSFC	D A TOLBERT	NAG 5 9304	133
31	UNIV OF COLORADO - BOULDER	R LAWRENCE	GSFC	O TOON	NAG 5 10698	136
31	UNIV OF COLORADO - BOULDER	R MCPETERS	GSFC	E WEATHERHEAD	NAG 5 11205	137
31	UNIV OF COLORADO - BOULDER	R P HIPSKIND	ARC	O B TOON	NAG 2 1258	123
31	UNIV OF COLORADO - BOULDER	S S WEGENER	ARC	P J WEBSTER	NAG 2 1445	123
31	UNIV OF COLORADO - BOULDER	V E DELNORE	LARC	J A CURRY	NAG 1 01053	123
31	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	K STEFFEN	NAG 5 9043	132
31	UNIV OF COLORADO - BOULDER	W WISCOMBE	GSFC	K EVANS	NAG 5 7679	130
31	UNIV OF COLORADO - BOULDER	W WISCOMBE	GSFC	R PINCUS	NAG 5 11294	138
31	UNIV OF CONNECTICUT	R J LAWRENCE	GSFC	E N ANAGNOSTOU	NAG 5 7813	145
31	UNIV OF CONNECTICUT	R J LAWRENCE	GSFC	E N ANAGNOSTOU	NAG 5 11143	145
31	UNIV OF CONNECTICUT	R J LAWRENECE	GSFC	E N ANAGNOSTOU	NAG 5 9639	145
31	UNIV OF DELAWARE	O W THIELE	GSFC	C J WILLMOTT	NAG 5 4829	149
31	UNIV OF DENVER	C P RINSLAND	LARC	A GOLDMAN	NCC 1 365	144
31	UNIV OF DENVER	C P RINSLAND	LARC	A GOLDMAN	NCC 1 01061	144
31	UNIV OF DENVER	C P RINSLAND	LARC	F J MURCRAY	NCC 1 313	144
31	UNIV OF DENVER	E CONDON	ARC	F MURCRAY	NAG 2 1391	143
31	UNIV OF DENVER	E P CONDON	ARC	J C WILSON	NAG 2 1297	143
31	UNIV OF DENVER	E P CONDON	ARC	J M REEVES	NAG 2 1301	143
31	UNIV OF DENVER	G MADDREA	LARC	J C WILSON	NAS 1 96017	144
31	UNIV OF FLORIDA	J ARNOLD	MSFC	J W JONES	NCC 8 157	175

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
31	UNIV OF FLORIDA	S HOWARD	GSFC	D GUSTAFSON	NAG 5 6378	172
31	UNIV OF GEORGIA	T MILLER	MSFC	D P LO	NAS 8 97081	191
31	UNIV OF HAWAII AT MANOA - HONOLULU	J E RICHARDS	GSFC	T C OWEN	NAG 5 10133	197
31	UNIV OF HAWAII AT MANOA - HONOLULU	J L RAPER, SR.	LARC	A D CLARKE	NCC 1 416	198
31	UNIV OF HAWAII AT MANOA - HONOLULU	J M HOELL	LARC	A D CLARKE	NCC 1 315	198
31	UNIV OF HAWAII AT MANOA - HONOLULU	J R RICHARDS	GSFC	T C OWENS	NAS 5 30951	198
31	UNIV OF HAWAII AT MANOA - HONOLULU	M MISHCHENKO	GSFC	A D CLARKE	NAG 5 8118	194
31	UNIV OF HAWAII AT MANOA - HONOLULU	W T KASPRZAK	GSFC	T C OWEN	NAG 5 11138	198
31	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	F HERREO	GSFC	G SWENSON	NAG 5 10754	212
31	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	G MADDREA	LARC	D J WUBBLES	NAG 1 2221	209
31	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	J F SPANN	GSFC	M E SCHESINGER	NAG 5 10942	212
31	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	J L RAPER	LARC	D WUEBBLER	NCC 1 309	213
31	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	M MELLOTT	GSFC	G R SWENSON	NAG 5 8569	211
31	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R W STEWART	GSFC	D J WUEBBLES	NAG 5 4414	210
31	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R W STEWART	GSFC	D J WUEBBLES	NAG 5 8221	211
31	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	S GOGINENI	GSFC	J WALSH	NAG 5 6836	210
31	UNIV OF IOWA	G L MADDREA	LARC	G R CAMICHAEL	NAG 1 1907	224
31	UNIV OF IOWA	G L MADDREA	LARC	G R CARMICHAEL	NAG 1 2305	224
31	UNIV OF IOWA	G M HEYMSFIELD	GSFC	W F KRAJEWSKI	NAG 5 4755	225
31	UNIV OF IOWA	J ARNOLD	MSFC	W F KRAJEWSKI	NAG 8 1425	227
31	UNIV OF IOWA	J L CHRISTENSEN	GSFC	D GURNETT	NAS 5 30730	227
31	UNIV OF IOWA	J L RAPER, SR.	LARC	G R CARMICHAEL	NCC 1 422	227
31	UNIV OF IOWA	R J LAWRENCE	GSFC	W F KRAJEWSKI	NAG 5 9664	226
31	UNIV OF KANSAS	D BOGAN	GSFC	D E CRAVENS	NAG 5 4358	228
31	UNIV OF KANSAS	J HILL	LARC	C ALLEN	NAS 1 99052	229
31	UNIV OF KENTUCKY	H PATRIDGE	ARC	M MENON	NCC 2 5386	232
31	UNIV OF LOUISVILLE	J SIMONDS	MSFC	M N FRENCH	NAG 8 1509	232
31	UNIV OF MARYLAND - COLLEGE PARK	A B CARLSON	LARC	R T PINKER	NAG 1 1832	255
31	UNIV OF MARYLAND - COLLEGE PARK	A DOUGLASS	GSFC	D B CONSIDINE	NAG 5 6682	259
31	UNIV OF MARYLAND - COLLEGE PARK	A F NEGRI	GSFC	D ZHANG	NAG 5 7842	260
31	UNIV OF MARYLAND - COLLEGE PARK	D TOLL	GSFC	E VERMONTE	NAS 5 96062	269
31	UNIV OF MARYLAND - COLLEGE PARK	G L MADDREA	LARC	A E DESSLER	NAG 1 1897	255
31	UNIV OF MARYLAND - COLLEGE PARK	G L MADDREA	LARC	R D HUDSON	NAG 1 2024	255
31	UNIV OF MARYLAND - COLLEGE PARK	G STRINGFELLOW	GSFC	A HARRIS	NAG 5 9075	262
31	UNIV OF MARYLAND - COLLEGE PARK	J FIORA	GSFC	D J LEWIS	NAG 5 8398	261
31	UNIV OF MARYLAND - COLLEGE PARK	J SHARBER	GSFC	J F DRAKE	NAG 5 9108	262
31	UNIV OF MARYLAND - COLLEGE PARK	M D HALL	GSFC	K E PICKERING	NAG 5 3678	257
31	UNIV OF MARYLAND - COLLEGE PARK	M RIENECKER	GSFC	S NIGAM	NAG 5 8289	261
31	UNIV OF MARYLAND - COLLEGE PARK	O A THIELE	GSFC	B KEDEM	NAG 5 6630	259
31	UNIV OF MARYLAND - COLLEGE PARK	P SELLERS	GSFC	C JUSTICE	NAS 5 31732	268
31	UNIV OF MARYLAND - COLLEGE PARK	R DEPAULA	GSFC	J BARAS	NAG 5 9150	262
31	UNIV OF MARYLAND - COLLEGE PARK	R HARTLE	GSFC	F BAER	NCC 5 497	270
31	UNIV OF MARYLAND - COLLEGE PARK	R HARTLE	GSFC	F BAER	NCC 5 552	271
31	UNIV OF MARYLAND - COLLEGE PARK	R J LAWRENCE	GSFC	B KEDEM	NAG 5 9827	264
31	UNIV OF MARYLAND - COLLEGE PARK	R J LAWRENCE	GSFC	D ZHANG	NAG 5 10959	267
31	UNIV OF MARYLAND - COLLEGE PARK	R W STEWART	GSFC	D CONSIDINE	NAG 5 7419	260
31	UNIV OF MARYLAND - COLLEGE PARK	R W STEWART	GSFC	K PICKERING	NAG 5 7263	259
31	UNIV OF MARYLAND - COLLEGE PARK	W J WAGNER	GSFC	F B MCDONALD	NAG 5 11054	267
31	UNIV OF MARYLAND BALTIMORE COUNTY	A J NEGRI	GSFC	G I MOLNAR	NAG 5 10687	274
31	UNIV OF MARYLAND BALTIMORE COUNTY	C JACKMAN	GSFC	D TANGBORN	NAG 5 6681	272
31	UNIV OF MARYLAND BALTIMORE COUNTY	C JACKSON	GSFC	J PAP	NAG 5 11326	275
31	UNIV OF MARYLAND BALTIMORE COUNTY	D STARR	GSFC	D PLATNICK	NAG 5 6996	272
31	UNIV OF MARYLAND BALTIMORE COUNTY	G G GIBSON	LARC	R M HOFF	NAS 1 99107	275
31	UNIV OF MARYLAND BALTIMORE COUNTY	G L MADDREA	LARC	W W MCMILLAN	NAG 1 2022	272
31	UNIV OF MARYLAND BALTIMORE COUNTY	J C RIVERA	GSFC	A KRUEGER	NAS 5 01110	275
31	UNIV OF MARYLAND BALTIMORE COUNTY	J C RIVERA	GSFC	O TORRES	NAS 5 00173	275
31	UNIV OF MARYLAND BALTIMORE COUNTY	J HARTLEY	GSFC	S JANZ	NAS 5 99141	275
31	UNIV OF MARYLAND BALTIMORE COUNTY	M I MISCHENKO	GSFC	O TORRES	NAG 5 7774	273
31	UNIV OF MARYLAND BALTIMORE COUNTY	O W THIELE	GSFC	B S FERRIER	NAG 5 8231	273
31	UNIV OF MARYLAND BALTIMORE COUNTY	O W THIELE	GSFC	E AMITAI	NAG 5 7909	273
31	UNIV OF MARYLAND BALTIMORE COUNTY	R AFZAL	GSFC	D CHRISTOU	NCC 5 339	275
31	UNIV OF MARYLAND BALTIMORE COUNTY	R J LAWRENCE	GSFC	G M SKOFRONICK-JACK	NAG 5 10347	274
31	UNIV OF MARYLAND BALTIMORE COUNTY	R J LAWRENCE	GSFC	G SKOFRONICK-JACK	NAG 5 10969	274
31	UNIV OF MARYLAND BALTIMORE COUNTY	R J LAWRENCE	GSFC	J B HALVERSON	NAG 5 9718	273
31	UNIV OF MARYLAND BALTIMORE COUNTY	R J LAWRENCE	GSFC	J B HALVERSON	NAG 5 11115	274
31	UNIV OF MARYLAND BALTIMORE COUNTY	R J LAWRENCE	GSFC	J WANG	NAG 5 9699	273

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
31	UNIV OF MARYLAND BALTIMORE COUNTY	R J LAWRENCE	GSFC	P YANG	NAG 5 11020	274
31	UNIV OF MARYLAND BALTIMORE COUNTY	R J LAWRENCE	GSFC	T M RICKENBACH	NAG 5 9816	273
31	UNIV OF MARYLAND BALTIMORE COUNTY	R J LAWRENCE	GSFC	W S OLSON	NAG 5 9698	273
31	UNIV OF MARYLAND BALTIMORE COUNTY	R W LAWRENCE	GSFC	W S OLSON	NAG 5 8379	273
31	UNIV OF MARYLAND BALTIMORE COUNTY	W WISCOMBE	GSFC	A MARSHAK	NAG 5 7563	273
31	UNIV OF MARYLAND BALTIMORE COUNTY	W WISCOMBE	GSFC	A MARSHAK	NAG 5 11206	275
31	UNIV OF MARYLAND BALTIMORE	F SCHMIDLIN	WFF	W MCMILLAN	NAG 5 5339	272
31	UNIV OF MASSACHUSETTS - AMHERST	L E DEEVER	LARC	A D PARRISH	NAG 1 1022	302
31	UNIV OF MASSACHUSETTS	D STARR	GSFC	R GAMACHE	NAG 5 9611	301
31	UNIV OF MASSACHUSETTS	J BREDEKAMP	GSFC	B REINISCH	NAG 5 8145	301
31	UNIV OF MIAMI	C MCLAIN	GSFC	H GORDAN	NAS 5 31734	177
31	UNIV OF MIAMI	H OSEROFF	GSFC	H GORDON	NAS 5 31363	177
31	UNIV OF MIAMI	H OSEROFF	GSFC	R EVANS	NAS 5 31362	177
31	UNIV OF MIAMI	J HERMAN	GSFC	D M PROSPERO	NAG 5 7110	176
31	UNIV OF MIAMI	J L RAPER	LARC	D D RIEMER	NCC 1 01021	177
31	UNIV OF MIAMI	J L RAPER	LARC	E S SALTZMAN	NAG 1 2002	176
31	UNIV OF MIAMI	M I MISHCHENKO	GSFC	J M PROSPERO	NAG 5 7674	176
31	UNIV OF MIAMI	R J LAWRENCE	GSFC	P J MINNETT	NAG 5 9739	177
31	UNIV OF MIAMI	R J LAWRENCE	GSFC	S S CHEN	NAG 5 10963	177
31	UNIV OF MIAMI	R W STEWART	GSFC	J RODRIGUEZ	NAG 5 8222	176
31	UNIV OF MICHIGAN - ANN ARBOR	C D KUMMEROW	GSFC	C S RUF	NAG 5 9967	315
31	UNIV OF MICHIGAN - ANN ARBOR	C H JACKMAN	GSFC	W R SKINNER	NAG 5 10812	315
31	UNIV OF MICHIGAN - ANN ARBOR	C H JACKMAN	GSFC	W SKINNER	NAG 5 7474	313
31	UNIV OF MICHIGAN - ANN ARBOR	C JACKMAN	GSFC	D SKINNER	NAG 5 6709	312
31	UNIV OF MICHIGAN - ANN ARBOR	C JACKMAN	GSFC	W R SKINNER	NAG 5 11068	316
31	UNIV OF MICHIGAN - ANN ARBOR	D BOGAN	GSFC	D R COMBI	NAG 5 4381	311
31	UNIV OF MICHIGAN - ANN ARBOR	D BOGAN	GSFC	S K ATREYA	NAG 5 11004	316
31	UNIV OF MICHIGAN - ANN ARBOR	D J BOGAN	GSFC	J H WAITE	NAG 5 11031	316
31	UNIV OF MICHIGAN - ANN ARBOR	G L MADDREA	LARC	J E PENNER	NAG 1 2042	309
31	UNIV OF MICHIGAN - ANN ARBOR	G R MADDREA	LARC	M A CARROLL	NAG 1 2181	309
31	UNIV OF MICHIGAN - ANN ARBOR	J BERGSTRALH	GSFC	D F NAGY	NAG 5 4912	312
31	UNIV OF MICHIGAN - ANN ARBOR	J E RICHARDS	GSFC	A F NAGY	NAG 5 10181	315
31	UNIV OF MICHIGAN - ANN ARBOR	J E RICHARDS	GSFC	S K ATREYA	NAG 5 8845	314
31	UNIV OF MICHIGAN - ANN ARBOR	J E RICHARDS	GSFC	S K ATREYA	NAG 5 10138	315
31	UNIV OF MICHIGAN - ANN ARBOR	J F SPANN	GSFC	M W LIEMOHN	NAG 5 10850	315
31	UNIV OF MICHIGAN - ANN ARBOR	J RICHARDS	GSFC	G ARIGNAN	NAS 5 99174	317
31	UNIV OF MICHIGAN - ANN ARBOR	M I MISHCHENKO	GSFC	J PENNER	NAG 5 7681	313
31	UNIV OF MICHIGAN - ANN ARBOR	M S BURRELL	GSFC	L A FISK	NGT 5 124	318
31	UNIV OF MICHIGAN - ANN ARBOR	M W CASTLEMANN	MSFC	B GILCHRIST	NAS 8 37108	317
31	UNIV OF MICHIGAN - ANN ARBOR	R BEEBE	GSFC	P K ATREYA	NAG 5 4589	311
31	UNIV OF MICHIGAN - ANN ARBOR	R W STEWART	GSFC	J E PENNER	NAG 5 7569	313
31	UNIV OF MICHIGAN - ANN ARBOR	R W STEWART	GSFC	M A CARROLL	NAG 5 3168	311
31	UNIV OF MICHIGAN - ANN ARBOR	S WAY	GSFC	G CARIGNAN	NAS 5 32989	317
31	UNIV OF MICHIGAN - ANN ARBOR	W J WAGNER	GSFC	T H ZURBUCHEN	NAG 5 11000	316
31	UNIV OF MISSOURI - COLUMBIA	A NEGRI	GSFC	K PALANIAPPAN	NAG 5 3900	330
31	UNIV OF MISSOURI - SAINT LOUIS	J BERGSTRALH	GSFC	D J O	NAG 5 6091	332
31	UNIV OF NEW HAMPSHIRE - DURHAM	D TOLL	GSFC	J CAMPBELL	NAS 5 96063	349
31	UNIV OF NEW HAMPSHIRE - DURHAM	J L RAPER, SR.	LARC	R W TALBOT	NCC 1 410	349
31	UNIV OF NEW HAMPSHIRE - DURHAM	J M HOELL, JR.	LARC	R W TALBOT	NCC 1 298	349
31	UNIV OF NEW HAMPSHIRE - DURHAM	O W THIELE	GSFC	C VOROSMARTY	NAG 5 4785	345
31	UNIV OF NORTH CAROLINA	J ARNOLD	MSFC	S MARSHALL	NAG 8 1514	403
31	UNIV OF NORTH DAKOTA	F J MERCERET	KSC	D GRAINGER	NAG10 283	405
31	UNIV OF NORTH DAKOTA	J GERLACH	WFF	P KUCERA	NAG 5 5340	404
31	UNIV OF NORTH DAKOTA	R J LAWRENCE	HQ	C A GRAINGER	NAG 5 9656	405
31	UNIV OF OREGON - EUGENE	I G NOLT	LARC	K PARK	NAG 1 2010	434
31	UNIV OF PITTSBURGH	J BERGSTRALH	GSFC	D JOHNSON	NAG 5 4116	454
31	UNIV OF PUERTO RICO - MAYAGUEZ	D DETROYE	GSFC	B G WEINER	NCC 5 215	557
31	UNIV OF RHODE ISLAND	J L RAPER	LARC	B HEIKES	NCC 1 302	461
31	UNIV OF RHODE ISLAND	J L RAPER, SR.	LARC	D W O	NCC 1 408	461
31	UNIV OF SOUTH FLORIDA	H OSEROFF	GSFC	K R CARTER	NAS 5 31716	179
31	UNIV OF SOUTH FLORIDA	J L MUELLER	GSFC	K CARTER	NAS 5 97137	179
31	UNIV OF SOUTHERN CALIFORNIA	D J BOGAN	GSFC	C WU	NAG 5 11042	117
31	UNIV OF TEXAS - AUSTIN	D L CARTER	GSFC	R J EANES	NAG 5 11203	495
31	UNIV OF TEXAS - AUSTIN	G SMITH	GSFC	R SCHUTZ	NAS 5 99005	497
31	UNIV OF UTAH	D S MCDUGAL	LARC	S K KRUEGER	NAG 1 2048	502
31	UNIV OF UTAH	J ARNOLD	MSFC	E J ZIPSER	NAG 8 1797	503

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
31	UNIV OF UTAH	J C DODGE	GSFC	E ZIPSER	NAG 5 8339	503
31	UNIV OF UTAH	P MINNIS	LARC	X DONG	NAG 1 2250	502
31	UNIV OF UTAH	R J LAWRENCE	GSFC	E J ZIPSER	NAG 5 9717	503
31	UNIV OF UTAH	R J LAWRENCE	GSFC	E J ZIPSER	NAG 5 10682	503
31	UNIV OF UTAH	R W LAWRENCE	GSFC	E J ZIPSER	NAG 5 8561	503
31	UNIV OF UTAH	S S WEGENER	ARC	G G MACE	NAG 2 1444	502
31	UNIV OF UTAH	V E DELNORE	LARC	K SASSON	NAG 1 2083	502
31	UNIV OF VIRGINIA	J BERGSTRALH	GSFC	D E JOHNSON	NAG 5 4192	523
31	UNIV OF VIRGINIA	J H STORRIES	LARC	C T HEROKOVICH	NGT 1 52187	527
31	UNIV OF VIRGINIA	J R WANG	GSFC	J L HESLER	NAG 5 8749	525
31	UNIV OF VIRGINIA	K H BERGMAN	GSFC	J J DORNING	NAG 5 3973	523
31	UNIV OF VIRGINIA	L HILLIARD	GSFC	J HESLER	NAG 5 6507	523
31	UNIV OF VIRGINIA	M KING	GSFC	R J SWAP	NAG 5 7939	524
31	UNIV OF VIRGINIA	R J LAWRENCE	GSFC	J D FUENTES	NAG 5 9654	525
31	UNIV OF VIRGINIA	R J LAWRENCE	GSFC	M GARSTANG	NAG 5 4779	523
31	UNIV OF WASHINGTON	A DOUGLASS	GSFC	D R HOLTON	NAG 5 7090	536
31	UNIV OF WASHINGTON	C A HOSTELER	LARC	R J CHARLSON	NAG 1 2200	534
31	UNIV OF WASHINGTON	C A HOSTETLER	LARC	T L COVERT	NCC 1 402	541
31	UNIV OF WASHINGTON	D S MCDUGAL	LARC	C S BRETHERTON	NAG 1 2072	534
31	UNIV OF WASHINGTON	D S MCDUGAL	LARC	P V HOBBS	NAG 1 2079	534
31	UNIV OF WASHINGTON	D SAMUELSON	MSFC	M B BAKER	NAG 8 1647	540
31	UNIV OF WASHINGTON	G GIBSON	LARC	R J CHARLSON	NAS 1 99105	541
31	UNIV OF WASHINGTON	H BLODGET	GSFC	A R GILLESPIE	NAS 5 31372	541
31	UNIV OF WASHINGTON	J H ADAMS	MSFC	R M WINGLEE	NCC 8 231	541
31	UNIV OF WASHINGTON	J M SIMONDS	MSFC	R A BROWN	NAG 8 1424	540
31	UNIV OF WASHINGTON	M CHOU	GSFC	M B BAKER	NAG 5 4630	535
31	UNIV OF WASHINGTON	M D KING	GSFC	P V HOBBS	NAG 5 7819	537
31	UNIV OF WASHINGTON	M D KING	GSFC	P V HOBBS	NAG 5 8801	538
31	UNIV OF WASHINGTON	M D KING	GSFC	P V HOBBS	NAG 5 9022	538
31	UNIV OF WASHINGTON	M D KING	GSFC	P V HOBBS	NAG 5 10745	540
31	UNIV OF WASHINGTON	M D KING	GSFC	P V HOBBS	NCC 5 326	541
31	UNIV OF WASHINGTON	M I MISHCHENKO	GSFC	D A HEGG	NAG 5 8684	538
31	UNIV OF WASHINGTON	M I MISHCHENKO	GSFC	D S COVERT	NAG 5 10404	539
31	UNIV OF WASHINGTON	M I MISHCHENKO	GSFC	P V HOBBS	NAG 5 7675	537
31	UNIV OF WASHINGTON	M MISHCHENKO	GSFC	D S COVERT	NAG 5 8363	538
31	UNIV OF WASHINGTON	O W THIELE	GSFC	J A NYSTUEN	NAG 5 7886	537
31	UNIV OF WASHINGTON	R J LAWRENCE	GSFC	D LETTENMAIER	NAG 5 9830	539
31	UNIV OF WASHINGTON	R J LAWRENCE	GSFC	S E YUTER	NAG 5 9720	539
31	UNIV OF WASHINGTON	R LAWRENCE	GSFC	C BRETHERTON	NAG 5 9657	538
31	UNIV OF WASHINGTON	R W LAWRENCE	GSFC	P V HOBBS	NAG 5 8109	537
31	UNIV OF WASHINGTON	R W LAWRENCE	GSFC	R A HOUZE	NAG 5 4795	535
31	UNIV OF WASHINGTON	W ABDALATI	GSFC	S MARTIN	NAG 5 11057	540
31	UNIV OF WISCONSIN - MADISON	A J NEGRI	GSFC	M H HITCHMAN	NCC 5 354	554
31	UNIV OF WISCONSIN - MADISON	A ROYAL	LARC	F A BEST	NAS 1 00070	553
31	UNIV OF WISCONSIN - MADISON	D STARR	GSFC	D PINCUS	NAG 5 7861	549
31	UNIV OF WISCONSIN - MADISON	D TOLL	GSFC	P MENZEL	NAS 5 31367	553
31	UNIV OF WISCONSIN - MADISON	E KREINS	GSFC	H REVERCOMB	NAS 5 31375	553
31	UNIV OF WISCONSIN - MADISON	F R ROBERTSON	MSFC	G DIAK	NAG 8 1320	552
31	UNIV OF WISCONSIN - MADISON	G GIBSON	LARC	S A ACKERMAN	NAS 1 99106	553
31	UNIV OF WISCONSIN - MADISON	G L MADDREA	LARC	M H HITCHMAN	NAG 1 2162	547
31	UNIV OF WISCONSIN - MADISON	G SMITH	GSFC	C BENTLEY	NAS 5 99004	553
31	UNIV OF WISCONSIN - MADISON	J A GREEN	LARC	S ACKERMAN	NAG 1 2322	547
31	UNIV OF WISCONSIN - MADISON	J D SPINHIRNE	GSFC	E W ELORANTA	NAG 5 7572	549
31	UNIV OF WISCONSIN - MADISON	J H CRAWFORD	LARC	M H HITCHMAN	NCC 1 01011	553
31	UNIV OF WISCONSIN - MADISON	K H BERGMAN	GSFC	G WAHBA	NAG 5 3769	548
31	UNIV OF WISCONSIN - MADISON	L TRAVIS	HQ	J A FOLEY	NCC 5 365	554
31	UNIV OF WISCONSIN - MADISON	P K BHARTIA	GSFC	G C REINSEL	NAG 5 9084	550
31	UNIV OF WISCONSIN - MADISON	R ATLAS	GSFC	D R JOHNSON	NAG 5 9295	551
31	UNIV OF WISCONSIN - MADISON	R BEEBE	GSFC	D M HARRIS	NAG 5 7626	549
31	UNIV OF WISCONSIN - MADISON	R C HUFFMAN, JR.	LARC	N APPLICABLE	NAS 1 96004	553
31	UNIV OF WISCONSIN - MADISON	R J LAWRENCE	GSFC	G W PETTY	NAG 5 9894	551
31	UNIV OF WISCONSIN - MADISON	R J LAWRENCE	GSFC	G W PETTY	NAG 5 9999	551
31	UNIV OF WISCONSIN - MADISON	R J LAWRENCE	GSFC	J R MECIKALSKI	NAG 5 9673	551
31	UNIV OF WISCONSIN - MADISON	V E DELNORE	LARC	D P WYLIE	NAG 1 2196	547
31	UNIV OF WISCONSIN - MADISON	V E DELNORE	LARC	S A ACKERMAN	NAG 1 2073	547
31	UNIV OF WISCONSIN - MADISON	V PARSONS	LARC	H REVERCOMB	NAS 1 00072	553

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
31	UNIV OF WISCONSIN - MADISON	W WISCOMBE	GSFC	R PINCUS	NAG 5 8639	550
31	UNIV OF WYOMING	A DOUGLASS	GSFC	D E HERVIG	NAG 5 6628	556
31	UNIV OF WYOMING	G L MADDREA	LARC	G VALJ	NAS 1 18945	556
31	UTAH STATE UNIV	D QUATTROCHI	MSFC	R GILES	NAG 8 1750	505
31	UTAH STATE UNIV	T MILLER	MSFC	R R GILLIES	NAS 8 97107	505
31	UTAH STATE UNIV	W A ROETTKER	LARC	G BINGHAM	NAS 1 00071	505
31	UTAH STATE UNIV	W LAPENTA	MSFC	R R GILLIES	NCC 8 162	505
31	VA POLYTECH INST & ST UNIV	D F YOUNG	LARC	M A HAEFFELIN	NAG 1 01112	529
31	VA POLYTECH INST & ST UNIV	D F YOUNG	LARC	M P HAEFFELIN	NAG 1 2106	528
31	VA POLYTECH INST & ST UNIV	E KIST, JR.	LARC	J R MAHAN	NAS 1 99128	531
31	VA POLYTECH INST & ST UNIV	J M SEATON	LARC	J BURTON	NGT 1 52184	532
31	VA POLYTECH INST & ST UNIV	J M SEATON	LARC	J R MOHAN	NGT 1 52202	532
31	VA POLYTECH INST & ST UNIV	R B LEE III	LARC	G L SMITH	NCC 1 405	531
31	VA POLYTECH INST & ST UNIV	R B LEE, III	LARC	G L SMITH	NAG 1 1959	528
31	VA POLYTECH INST & ST UNIV	R B LEE	LARC	J R MAHAN	NAG 1 2128	528
31	VANDERBILT UNIV	R BEEBE	GSFC	D SAUMON	NAG 5 4988	472
31	WASHINGTON STATE UNIV	J C RIVERA	GSFC	G MOUNT	NAS 5 00177	544
31	WASHINGTON UNIV - ST	D BOGAN	GSFC	B FEGLEY	NAG 5 11037	335
31	WASHINGTON UNIV - ST	D BOGAN	GSFC	B FEGLEY	NAG 5 11050	335
31	WASHINGTON UNIV - ST	D BOGAN	GSFC	D FEGLEY	NAG 5 4564	333
31	WASHINGTON UNIV - ST	D BOGAN	GSFC	D FEGLEY	NAG 5 4565	333
31	WASHINGTON UNIV - ST	D BOGAN	GSFC	D FEGLEY	NAG 5 4565	333
31	WASHINGTON UNIV - ST	J BERGSTRALH	GSFC	D FEGLEY	NAG 5 6366	333
31	WELLESLEY COLLEGE	D BOGAN	GSFC	D STARK	NAG 5 9059	304
31	WELLESLEY COLLEGE	S HOWARD	GSFC	D STARK	NAG 5 6222	304
31	WEST VIRGINIA UNIV	W L GROSE	LARC	R F TURCO	NAG 1 2096	545
31	YALE UNIV	A J TUYAHOV	GSFC	R B SMITH	NAG 5 3853	147
31	YALE UNIV	M R SCHOEBERL	GSFC	S SHERWOOD	NAG 5 9839	147
32	ARIZONA STATE UNIV	H V FREY	GSFC	J FINK	NAG 5 9070	21
32	ARIZONA STATE UNIV	P G ROGERS	GSFC	D FINK	NAG 5 3783	20
32	ARIZONA STATE UNIV	P G ROGERS	GSFC	D R CHRISTENSEN	NAG 5 3628	20
32	ARIZONA STATE UNIV	P G ROGERS	GSFC	R GREELEY	NAG 5 3909	20
32	ARIZONA STATE UNIV	P ROGERS	GSFC	D GREELEY	NAG 5 3908	20
32	ARIZONA STATE UNIV	S G EDDLEMON	ARC	R GREELEY	NCC 2 1109	23
32	AUSTIN COLLEGE-SHERMAN	H V FREY	GSFC	D R BAKER	NAG 5 10102	474
32	BRIGHAM YOUNG UNIV	H V FREY	GSFC	D V ARNOLD	NAG 5 7711	501
32	BROCK UNIV	M BEHRENFELD	GSFC	D BRUCE	NAG 5 9875	558
32	BROWN UNIV	D G SENSKE	GSFC	P H SCHULTZ	NAG 5 3877	457
32	BROWN UNIV	D MACKAY	JSC	C PIETERS	NGT 9 53	460
32	BROWN UNIV	D SENSKE	GSFC	C M PIETERS	NAG 5 10401	459
32	BROWN UNIV	J BOYCE	GSFC	J W HEAD	NAG 5 9780	458
32	BROWN UNIV	J G GRANT	GSFC	C M PIETERS	NAG 5 3871	457
32	BROWN UNIV	J G GRANTS	GSFC	E PARMENTIER	NAG 5 3659	457
32	BROWN UNIV	J GRANT	GSFC	C PIETERS	NAG 5 9287	458
32	BROWN UNIV	J GRANT	GSFC	J F MUSTARD	NAG 5 8972	458
32	BROWN UNIV	P G ROGERS	GSFC	C M PIETERS	NAG 5 4366	457
32	BROWN UNIV	P G ROGERS	GSFC	D W HEAD	NAG 5 3933	457
32	BROWN UNIV	P G ROGERS	GSFC	J W HEAD	NAG 5 4585	457
32	BROWN UNIV	P G ROGERS	GSFC	J W HEAD	NAG 5 4723	457
32	BROWN UNIV	P G ROGERS	GSFC	P H SCHULTZ	NAG 5 3872	457
32	CALIFORNIA INST OF TECH	B BETTS	GSFC	G BLAKE	NAG 5 9471	46
32	CALIFORNIA INST OF TECH	D SENSKE	GSFC	D J STEVENSON	NAG 5 10189	47
32	CALIFORNIA INST OF TECH	D SENSKE	GSFC	K A FARLEY	NAG 5 10470	47
32	CALIFORNIA INST OF TECH	H V FREY	GSFC	K E SIEH	NAG 5 10406	47
32	CALIFORNIA INST OF TECH	J G GRANT	GSFC	T J AHRENS	NAG 5 4206	42
32	CALIFORNIA INST OF TECH	P G RODGERS	GSFC	D J STEVENSON	NAG 5 3765	42
32	CALIFORNIA INST OF TECH	P ROGERS	GSFC	K A FARLEY	NAG 5 6941	44
32	CALVIN COLLEGE	H V FREY	GSFC	J A CLARK	NAG 5 10348	306
32	CENTRAL WASHINGTON UNIV	H V FREY	GSFC	M MILLER	NAG 5 7672	533
32	CLEMSON UNIV - CLEMSON	M MELLOTT	GSFC	D HYSSELL	NAG 5 9267	463
32	COLORADO STATE UNIV	E T ENGMAN	GSFC	G E LISTON	NAG 5 7560	120
32	COLORADO STATE UNIV	E T ENGMAN	GSFC	K ELDER	NAG 5 7558	120
32	COLUMBIA UNIV	H V FREY	GSFC	C P STARK	NAG 5 9056	372
32	COLUMBIA UNIV	H V FREY	GSFC	J K WEISSEL	NAG 5 8848	372
32	COLUMBIA UNIV	H V FREY	GSFC	R E BELL	NAG 5 9060	372
32	COLUMBIA UNIV	V GRIFFIN	GSFC	R C WILSON	NAS 5 97164	373
32	CORNELL UNIV	E T ENGMAN	GSFC	K H COOK	NAG 5 7497	377

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
32	CORNELL UNIV	J A GRANT	GSFC	D L TURCOTTE	NAG 5 9492	378
32	CORNELL UNIV	J G GRANT	GSFC	S W SQUIRES	NAG 5 4205	376
32	CORNELL UNIV	J GRANT	GSFC	B CAMPBELL	NAG 5 9034	378
32	CORNELL UNIV	J GRANT	GSFC	P C THOMAS	NAG 5 3627	376
32	CORNELL UNIV	M MELLOTT	GSFC	C E SEYLER	NAG 5 9199	378
32	CORNELL UNIV	P G ROGERS	GSFC	D L TURCOTTE	NAG 5 4361	376
32	CORNELL UNIV	P G ROGERS	GSFC	J VEVERKA	NAG 5 3626	376
32	CORNELL UNIV	P G ROGERS	GSFC	P D NICHOLSON	NAG 5 3795	376
32	CORNELL UNIV	P G ROGERS	GSFC	P HELFENSTEIN	NAG 5 3639	376
32	CORNELL UNIV	P ROGERS	GSFC	D A BURNS	NAG 5 3910	376
32	CORNELL UNIV	P ROGERS	GSFC	D B CAMPBELL	NAG 5 4220	376
32	CORNELL UNIV	P ROGERS	GSFC	D B CAMPBELL	NAG 5 6783	377
32	CORNELL UNIV	P ROGERS	GSFC	D F BELL	NAG 5 4333	376
32	CORNELL UNIV	P ROGERS	GSFC	D VEVERKA	NAG 5 4502	376
32	CORNELL UNIV	R OLIVERSEN	GSFC	D L TURCOTTE	NAG 5 9067	378
32	DARTMOUTH COLLEGE	H V FREY	GSFC	G BRAKENRIDGE	NAG 5 10953	344
32	DARTMOUTH COLLEGE	M BALTUCK	GSFC	R BRACKENRIDGE	NAG 5 3498	343
32	FLORIDA STATE UNIV	H V FREY	GSFC	J C CAIN	NAG 5 7577	167
32	GRAND VALLEY STATE UNIV	B BILLS	GSFC	J WEBER	NAG 5 6409	306
32	HAMPTON UNIV	M MELLOTT	GSFC	S M BAILEY	NAG 5 9171	512
32	HARVARD UNIV	H V FREY	GSFC	J BLOXHAM	NAG 5 7616	284
32	HARVARD UNIV	M MEYER	GSFC	D H KNOLL	NAG 5 3645	283
32	INDIANA UNIV - BLOOMINGTON	H V FREY	GSFC	M W HAMBURGER	NAG 5 5167	215
32	INDIANA UNIV - BLOOMINGTON	H V FREY	GSFC	M W HAMBURGER	NAG 5 7619	215
32	INDIANA UNIV - BLOOMINGTON	H V FREY	GSFC	M W HAMBURGER	NAG 5 8582	215
32	IOWA STATE UNIV	E T ENGMAN	GSFC	W J GUTOWSKI	NAG 5 7561	223
32	JOHNS HOPKINS UNIV	H V FREY	GSFC	R K RANEY	NAG 5 9296	246
32	JOHNS HOPKINS UNIV	J SPAN	GSFC	A LUI	NAG 5 10475	249
32	JOHNS HOPKINS UNIV	J SPANN	GSFC	D G SIBECK	NAG 5 10479	249
32	JOHNS HOPKINS UNIV	M MELLOTT	GSFC	J CARBARY	NAG 5 9240	246
32	LOUISIANA STATE UNIV - BATON ROUGE	H FREY	GSFC	O HUH	NAG 5 9245	234
32	MASSACHUSETTS INST OF TECH	B WILDES	GSFC	A R WHITNEY	NAG 5 31728	297
32	MASSACHUSETTS INST OF TECH	D G SENSKE	GSFC	J WISDOM	NAG 5 3915	289
32	MASSACHUSETTS INST OF TECH	E ENGMAN	GSFC	R BRASS	NAG 5 7475	292
32	MASSACHUSETTS INST OF TECH	E KREINS	GSFC	D H STAELIN	NAG 5 31376	297
32	MASSACHUSETTS INST OF TECH	H BRINTON	GSFC	D R ZUBER	NAG 5 4555	290
32	MASSACHUSETTS INST OF TECH	H FREY	GSFC	P MOLNAR	NAG 5 4807	290
32	MASSACHUSETTS INST OF TECH	H V FREY	GSFC	A E NIELL	NAG 5 6063	291
32	MASSACHUSETTS INST OF TECH	H V FREY	GSFC	B C FIELD	NAG 5 6062	291
32	MASSACHUSETTS INST OF TECH	H V FREY	GSFC	K X WHIPPLE	NAG 5 10389	295
32	MASSACHUSETTS INST OF TECH	H V FREY	GSFC	M T ZURBER	NAG 5 9143	294
32	MASSACHUSETTS INST OF TECH	H V FREY	GSFC	R E REILINGER	NAG 5 6145	291
32	MASSACHUSETTS INST OF TECH	H V FREY	GSFC	R E REILINGER	NAG 5 9057	293
32	MASSACHUSETTS INST OF TECH	H V FREY	GSFC	R L BRAS	NAG 5 10684	295
32	MASSACHUSETTS INST OF TECH	J G GRANT	GSFC	D G FORD	NAG 5 4047	290
32	MASSACHUSETTS INST OF TECH	P TAYLOR	GSFC	T A HERRING	NAG 5 3550	289
32	MICHIGAN TECHNOLOGICAL UNIV	B CAMPBELL	GSFC	D FTACLAS	NAG 5 6310	309
32	MICHIGAN TECHNOLOGICAL UNIV	H V FREY	GSFC	G J BLUTH	NAG 5 7576	309
32	MICHIGAN TECHNOLOGICAL UNIV	M S BURRELL	GSFC	W I ROSE	NGT 5 76	309
32	MORGAN STATE UNIV	P TAYLOR	GSFC	E C HAMMOND	NAG 5 11229	254
32	NEW MEXICO STATE UNIV - LAS CRUCES	P ROGERS	GSFC	V SOLOMATOV	NAG 5 6897	362
32	NORTHWESTERN UNIV	H V FREY	GSFC	S STEIN	NAG 5 10306	202
32	NORTHWESTERN UNIV	R S BALDWIN	GRC	D S ROBINSON	NAG 5 4354	202
32	OHIO STATE UNIV	B DAVIS	SSC	K BOYER	NAG13 00039	418
32	OHIO STATE UNIV	H V FREY	GSFC	C K SHUM	NAG 5 7574	415
32	OHIO STATE UNIV	P TAYLOR	GSFC	R R VON FRESE	NAG 5 9883	416
32	OHIO STATE UNIV	P TAYLOR	GSFC	R VON FRESE	NAG 5 2996	414
32	OHIO STATE UNIV	S H GOGINENI	GSFC	T J WILSON	NAG 5 4250	414
32	OHIO UNIV	H V FREY	GSFC	R R VON FRESE	NAG 5 7645	419
32	PENN STATE UNIV	E T ENGMAN	GSFC	J L EVANS	NAG 5 7547	446
32	PENN STATE UNIV	H FREY	GSFC	S FELDSTEIN	NAG 5 6207	445
32	PENN STATE UNIV	H V FREY	GSFC	D W BURBANK	NAG 5 9039	446
32	PENN STATE UNIV	M S BURRELL	GSFC	R B ALLEY	NGT 5 118	451
32	POMONA COLLEGE	J BOYCE	GSFC	E GROSFILS	NAG 5 9618	54
32	PRINCETON UNIV	E T ENGMAN	GSFC	J A SMITH	NAG 5 7544	353
32	PRINCETON UNIV	H V FREY	GSFC	E WOOD	NAG 5 6511	352

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
32	PURDUE UNIV	J ARNOLD	MSFC	R OGLESBY	NAG 8 1515	219
32	RENSSELAER POLYTECH INST	P G ROGERS	GSFC	M J GAFFEY	NAG 5 3725	384
32	RUTGERS ST UNIV N	E T ENGMAN	GSFC	D ROBINSON	NAG 5 7564	357
32	SAN JOSE STATE UNIV	H L D'ANTONI	ARC	P MESSINA	NCC 2 5402	58
32	SAN JOSE STATE UNIV	I STATLER	ARC	D A MAROUF	NAG 5 4372	55
32	SOUTHERN ILLINOIS UNIV - CARBONDALE	H V FREY	GSFC	D RAVAT	NAG 5 7662	203
32	SOUTHERN ILLINOIS UNIV - CARBONDALE	P T TAYLOR	GSFC	D RAVAT	NAG 5 7771	204
32	SOUTHERN ILLINOIS UNIV - CARBONDALE	P TAYLOR	GSFC	D RAVAT	NAG 5 9832	204
32	SOUTHERN METHODIST UNIV	D A SENSKE	GSFC	V L HANSEN	NAG 5 9142	479
32	SOUTHERN METHODIST UNIV	J GRANT	GSFC	D L HANSEN	NAG 5 4562	479
32	SOUTHERN METHODIST UNIV	P ROGERS	GSFC	D L HANSEN	NAG 5 4609	479
32	STANFORD UNIV	D J DES MARAIS	ARC	D R LOWE	NCC 2 721	64
32	STANFORD UNIV	H V FREY	GSFC	H A ZEBKER	NAG 5 6148	61
32	STANFORD UNIV	H V FREY	GSFC	H A ZEBKER	NAG 5 9040	62
32	STANFORD UNIV	H V FREY	GSFC	H ZEBKER	NAG 5 3441	60
32	STANFORD UNIV	H V FREY	GSFC	P SEGALL	NAG 5 6167	61
32	STANFORD UNIV	P G ROGERS	GSFC	G TYLER	NAG 5 3906	60
32	STATE UNIV OF NY - ALBANY	H V FREY	GSFC	H MASSONE	NAG 5 9690	387
32	STATE UNIV OF NY - BINGHAMTON	H FREY	GSFC	S DICKMAN	NAG 5 9069	387
32	STATE UNIV OF NY - BUFFALO	J A GRANT	GSFC	T GREGG	NAG 5 9390	387
32	STATE UNIV OF NY - STONY BROOK	H V FREY	GSFC	W E HOLT	NAG 5 9053	390
32	STATE UNIV OF NY COL - PURCHASE	T MORGAN	GSFC	D A GRANT	NAG 5 4157	391
32	STATE UNIV OF NY COL	H V FREY	GSFC	M BURSIK	NAG 5 7581	392
32	STATE UNIV OF NY COL	H V FREY	GSFC	M F SHERIDAN	NAG 5 7579	392
32	STATE UNIV OF NY COL	H V FREY	GSFC	M I BURSIK	NAG 5 10648	392
32	STATE UNIV OF NY COL	J G GRANT	GSFC	GREGG	NAG 5 4544	392
32	THE AMERICAN UNIV	P TAYLOR	GSFC	J KUTINA	NAG 5 10027	156
32	THE UNIV OF CENTRAL FLORIDA	J QUINN	KSC	C GEIGER	NAG10 215	169
32	UNIV OF MINN	C HILL	SSC	M E BAUER	NAG13 99002	324
32	UNIV OF MINN	D SENKE	GSFC	D L KOHLSTEDT	NAG 5 10509	323
32	UNIV OF MINN	E T ENGMAN	GSFC	M PERSON	NAG 5 7599	322
32	UNIV OF MINN	J ARNOLD	MSFC	E FOUFOULA-GEORGIU	NAG 8 1519	324
32	UNIV OF MINN	M MELLOTT	GSFC	R LYSAK	NAG 5 9254	323
32	UNIV OF MINN	P ROGERS	GSFC	D L KOHLSTEDT	NAG 5 6797	322
32	UNIV	D SENSKE	GSFC	G M MARION	NAG 5 10445	341
32	U NACIONAL DE SAN AGUSTIN - AREQUIPA	D L CARTER	GSFC	N APPLICABLE	NAS 5 99121	559
32	UNIV OF ALABAMA - HUNTSVILLE	M MELLOTT	GSFC	P RICHARDS	NAG 5 9200	9
32	UNIV OF ALASKA - FAIRBANKS	H V FREY	GSFC	J T FREYMUELLER	NAG 5 7659	17
32	UNIV OF ARIZONA	D BOGAN	GSFC	J I LUNINE	NAG 5 8949	31
32	UNIV OF ARIZONA	D SENSKE	GSFC	D KRING	NAG 5 10332	34
32	UNIV OF ARIZONA	D SENSKE	GSFC	E TURTLE	NAG 5 10166	33
32	UNIV OF ARIZONA	D SENSKE	GSFC	J I LUNINE	NAG 5 10294	34
32	UNIV OF ARIZONA	D SENSKE	GSFC	R MALHOTRA	NAG 5 10346	34
32	UNIV OF ARIZONA	D SENSKE	GSFC	R TUFTS	NAG 5 10167	33
32	UNIV OF ARIZONA	E ENGMAN	GSFC	W SHUTTLEWORTH	NAG 5 7554	28
32	UNIV OF ARIZONA	G A SOFFEN	GSFC	A S MCEWEN	NGT 5 110	39
32	UNIV OF ARIZONA	H V FREY	GSFC	V R BAKER	NAG 5 9293	32
32	UNIV OF ARIZONA	J GRANT	GSFC	L KESZTHELYI	NAG 5 9176	31
32	UNIV OF ARIZONA	M S BURRELL	GSFC	A S MCEWEN	NGT 5 114	39
32	UNIV OF ARIZONA	P G ROGERS	GSFC	R G STROM	NAG 5 3914	26
32	UNIV OF ARIZONA	P G ROGERS	GSFC	R GREENBERG	NAG 5 3631	26
32	UNIV OF ARIZONA	P ROGERS	GSFC	D H BROWN	NAG 5 3796	26
32	UNIV OF ARIZONA	P ROGERS	GSFC	H MELOSH	NAG 5 6543	27
32	UNIV OF ARIZONA	PROGERS	GSFC	D C PORCO	NAG 5 4451	27
32	UNIV OF ARIZONA	T MORGAN	GSFC	R S MCMILLAN	NAG 5 6611	27
32	UNIV OF ARIZONA	T MORGAN	GSFC	S LARSON	NAG 5 10543	34
32	UNIV OF CALIFORNIA - BERKELEY	H V FREY	GSFC	R BURGMANN	NAG 5 7580	71
32	UNIV OF CALIFORNIA - BERKELEY	H V FREY	GSFC	W E DIETRICH	NAG 5 9629	73
32	UNIV OF CALIFORNIA - BERKELEY	P TAYLOR	CSFC	M RICHARDS	NAG 5 9864	73
32	UNIV OF CALIFORNIA - DAVIS	H V FREY	GSFC	J MINSTER	NAG 5 3001	80
32	UNIV OF CALIFORNIA - DAVIS	R MCKELLIP	SSC	D W TATE	NAG13 99023	81
32	UNIV OF CALIFORNIA - LOS ANGELES	E T ENGMAN	GSFC	L C SMITH	NAG 5 7555	90
32	UNIV OF CALIFORNIA - LOS ANGELES	E T ENGMAN	GSFC	Y XUE	NAG 5 9014	91
32	UNIV OF CALIFORNIA - LOS ANGELES	H V FREY	GSFC	D E ALSDORF	NAG 5 10685	93
32	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	M EL-ALAOU	NAG 5 9255	92
32	UNIV OF CALIFORNIA - LOS ANGELES	J SPANN	GSFC	D SCHRIVER	NAG 5 10473	93



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
32	UNIV OF CALIFORNIA - LOS ANGELES	M MEYER	GSFC	D F KERRIDGE	NAG 5 8470	91
32	UNIV OF CALIFORNIA - LOS ANGELES	P G ROGERS	GSFC	G SCHUBERT	NAG 5 3863	88
32	UNIV OF CALIFORNIA - LOS ANGELES	P G ROGERS	GSFC	W M KAULA	NAG 5 3956	88
32	UNIV OF CALIFORNIA - LOS ANGELES	W ABDALATI	GSFC	G PELTZER	NAG 5 11102	94
32	UNIV OF CALIFORNIA - SAN DIEGO	B CAMPBELL	GSFC	P L BADA	NAG 5 4938	97
32	UNIV OF CALIFORNIA - SAN DIEGO	H B FREY	GSFC	R L PARKER	NAG 5 7612	99
32	UNIV OF CALIFORNIA - SAN DIEGO	H V FREY	GSFC	C G CONSTABLE	NAG 5 7614	99
32	UNIV OF CALIFORNIA - SAN DIEGO	H V FREY	GSFC	D C AGNEW	NAG 5 6149	97
32	UNIV OF CALIFORNIA - SAN DIEGO	H V FREY	GSFC	D C AGNEW	NCC 5 230	104
32	UNIV OF CALIFORNIA - SAN DIEGO	H V FREY	GSFC	D T SANDWELL	NAG 5 5176	97
32	UNIV OF CALIFORNIA - SAN DIEGO	H V FREY	GSFC	D T SANDWELL	NAG 5 9623	101
32	UNIV OF CALIFORNIA - SAN DIEGO	H V FREY	GSFC	J B RAND	NAG 5 6150	98
32	UNIV OF CALIFORNIA - SANTA BARBARA	H V FREY	GSFC	D E ALSDORF	NAG 5 9055	108
32	UNIV OF CALIFORNIA - SANTA BARBARA	H V FREY	GSFC	D W BURBANK	NAG 5 10520	108
32	UNIV OF CALIFORNIA - SANTA BARBARA	H V FREY	GSFC	L K MERTES	NAG 5 9811	108
32	UNIV OF CALIFORNIA - SANTA BARBARA	J G GRANT	GSFC	S J PEALE	NAG 5 3646	106
32	UNIV OF CALIFORNIA - SANTA BARBARA	R MCKELLIP	JSC	O CHADWICK	NAG13 99025	109
32	UNIV OF CALIFORNIA - SANTA BARBARA	T BRAKKE	GSFC	D DOZLER	NAS 5 31710	109
32	UNIV OF CALIFORNIA - SANTA CRUZ	D SENSKE	GSFC	E ASPHAUG	NAG 5 10676	113
32	UNIV OF CALIFORNIA - SANTA CRUZ	J A GRANT	GSFC	E ASPHAUG	NAG 5 9391	112
32	UNIV OF CHARLESTON -WEST VIRGINIA	D A MORRISON	JSC	C COOMBS	NGT 9 24	545
32	UNIV OF COLORADO - BOULDER	A T CHANG	GSFC	R L ARMSTRONG	NAG 5 4506	126
32	UNIV OF COLORADO - BOULDER	C P MCKAY	ARC	B TOON	NGT 2 52279	140
32	UNIV OF COLORADO - BOULDER	D SENSKE	GSFC	B JAKOSKY	NAG 5 10413	135
32	UNIV OF COLORADO - BOULDER	D SENSKE	GSFC	M T MELLON	NAG 5 10155	134
32	UNIV OF COLORADO - BOULDER	E T ENGMAN	GSFC	A FREI	NAG 5 7543	129
32	UNIV OF COLORADO - BOULDER	H V FREY	GSFC	J B RUNDLE	NAG 5 5168	127
32	UNIV OF COLORADO - BOULDER	H V FREY	GSFC	J B RUNDLE	NAG 5 9448	133
32	UNIV OF COLORADO - BOULDER	H V FREY	GSFC	J M WAHR	NAG 5 7703	130
32	UNIV OF COLORADO - BOULDER	H V FREY	GSFC	K M LARSON	NAG 5 6147	127
32	UNIV OF COLORADO - BOULDER	H V FREY	GSFC	R G BILHAM	NAG 5 10418	135
32	UNIV OF COLORADO - BOULDER	H V FREY	GSFC	S R NEREM	NAG 5 11192	137
32	UNIV OF COLORADO - BOULDER	H V FREY	GSFC	V GUPTA	NAG 5 10954	137
32	UNIV OF COLORADO - BOULDER	J A GRANT	GSFC	R E GRIMM	NAG 5 9491	133
32	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	A R HENDRIX	NAG 5 9590	133
32	UNIV OF COLORADO - BOULDER	J GRANT	GSFC	M T MELLON	NAG 5 8910	132
32	UNIV OF COLORADO - BOULDER	J SCHARBER	GSFC	S SOLOMON	NAG 5 9201	133
32	UNIV OF COLORADO - BOULDER	J SHARBER	GSFC	M HORANYI	NAG 5 9172	132
32	UNIV OF COLORADO - BOULDER	J SPANN	GSFC	X LI	NAG 5 10474	135
32	UNIV OF COLORADO - BOULDER	P G ROGERS	GSFC	B M JAKOSKY	NAG 5 3763	125
32	UNIV OF COLORADO - BOULDER	P ROGERS	GSFC	D R STEWART	NAG 5 4163	126
32	UNIV OF COLORADO - BOULDER	P T TAYLOR	GSFC	J WAHR	NAG 5 3143	125
32	UNIV OF DELAWARE - BARTOL RES. INST	E T ENGMAN	GSFC	D LEATHERS	NAG 5 7545	151
32	UNIV OF FLORIDA	P ROGERS	HQ	D F DERMOTT	NAG 5 4531	172
32	UNIV OF GEORGIA	E T ENGMAN	GSFC	T L MOTE	NAG 5 8469	190
32	UNIV OF HAWAII AT MANOA - HONOLULU	H V FREY	GSFC	P J MOUGINIS-MARK	NAG 5 7578	193
32	UNIV OF HAWAII AT MANOA - HONOLULU	H V FREY	GSFC	P J MOUGINIS-MARK	NAG 5 9038	195
32	UNIV OF HAWAII AT MANOA - HONOLULU	J GRANT	GSFC	B HAWKE	NAG 5 8903	195
32	UNIV OF HAWAII AT MANOA - HONOLULU	J GRANT	GSFC	S K ROWLAND	NAG 5 7963	194
32	UNIV OF HAWAII AT MANOA - HONOLULU	P G ROGERS	GSFC	B R HAWKE	NAG 5 3635	192
32	UNIV OF HAWAII AT MANOA - HONOLULU	P G ROGERS	GSFC	E R HAWKE	NAG 5 3875	192
32	UNIV OF HAWAII AT MANOA - HONOLULU	P G ROGERS	GSFC	J F BELL	NAG 5 3625	191
32	UNIV OF HAWAII AT MANOA - HONOLULU	P G ROGERS	GSFC	P G LUCEY	NAG 5 3766	192
32	UNIV OF HAWAII AT MANOA - HONOLULU	P ROGERS	GSFC	T OWEN	NAG 5 6829	193
32	UNIV OF HAWAII AT MANOA - HONOLULU	R H THOMAS	GSFC	P MOUGINIS-MARK	NAG 5 4257	192
32	UNIV OF HOUSTON - DOWNTOWN	E K GIBSON	JSC	P A MORRIS-SMITH	NAG 9 1113	491
32	UNIV OF HOUSTON - DOWNTOWN	E K GIBSON	JSC	P A MORRIS-SMITH	NAG 9 1114	491
32	UNIV OF ILLINOIS - CHICAGO CIRCLE	E T ENGMAN	GSFC	R D CRAGO	NAG 5 7600	208
32	UNIV OF KANSAS	R MCKALLIP	SSC	M JAKUBAUSKAS	NAG13 99019	229
32	UNIV OF MARYLAND - COLLEGE PARK	H V FREY	GSFC	G SUN	NAG 5 10388	265
32	UNIV OF MARYLAND - COLLEGE PARK	J B GARVIN	GSFC	R DUBAYAH	NAG 5 8105	260
32	UNIV OF MARYLAND BALTIMORE COUNTY	H V FREY	GSFC	E C PAVLIS	NAG 5 9054	273
32	UNIV OF MASSACHUSETTS - AMHERST	H V FREY	GSFC	C C DUNCAN	NAG 5 10649	303
32	UNIV OF MASSACHUSETTS - AMHERST	P ROGERS	GSFC	D E MCGILL	NAG 5 4373	302
32	UNIV OF MASSACHUSETTS - AMHERST	P ROGERS	GSFC	G MCGILL	NAG 5 4999	302
32	UNIV OF MASSACHUSETTS - AMHERST	T MORGAN	GSFC	F SCHOERB	NAG 5 6612	302

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
32	UNIV OF MEMPHIS	H V FREY	GSFC	M ELLIS	NAG 5 7617	469
32	UNIV OF MIAMI	H V FREY	GSFC	T H DIXON	NAG 5 9066	176
32	UNIV OF MIAMI	H V FREY	GSFC	T H DIXON	NAG 5 9068	177
32	UNIV OF MIAMI	J L RAPER	LARC	T H DIXON	NAG 5 6033	176
32	UNIV OF MICHIGAN - ANN ARBOR	H V FREY	GSFC	K SARABANDI	NAG 5 8930	314
32	UNIV OF MISSISSIPPI - MEDICAL CTR	H V FREY	GSFC	J K JOHNSON	NAG 5 7671	328
32	UNIV OF MISSISSIPPI - UNIV	N SOVIK	SSC	G EASSON	NAG13 00037	328
32	UNIV OF MISSOURI - COLUMBIA	H V FREY	GSFC	M LIU	NAG 5 9145	330
32	UNIV OF MONTANA	E K GIBSON	JSC	N C HINMAN	NAG 9 1112	339
32	UNIV OF NEBRASKA - LINCOLN	F HORZZ	JSC	D R ALEXANDER	NAG 9 1310	340
32	UNIV OF NEVADA - RENO	D A SENSKE	GSFC	R A SCHULTZ	NAG 5 10926	342
32	UNIV OF NEVADA - RENO	D SENKE	GSFC	W CALVIN	NAG 5 10290	342
32	UNIV OF NEVADA - RENO	J A GRANT	GSFC	G M MARION	NAG 5 9467	342
32	UNIV OF NEVADA - RENO	J A GRANT	GSFC	W CALVIN	NAG 5 9298	342
32	UNIV OF NEW HAMPSHIRE - DURHAM	E T ENGMAN	GSFC	L D DINGMAN	NAG 5 7601	347
32	UNIV OF NEW HAMPSHIRE - DURHAM	P BUCHANAN	GSFC	K LYNCH	NAG 5 10472	348
32	UNIV OF NEW MEXICO-ALBUQUERQUE	E K GIBSON	JSC	J P APIKE	NAG 9 1111	366
32	UNIV OF NEW MEXICO-ALBUQUERQUE	J GRANT	GSFC	H NEWSOM	NAG 5 8804	365
32	UNIV OF NEW MEXICO-ALBUQUERQUE	J H JONES	JSC	C D HERD	NGT 9 31	366
32	UNIV OF PITTSBURGH	D SENSKE	GSFC	B W HAPKE	NAG 5 10222	455
32	UNIV OF PITTSBURGH	H V FREY	GSFC	M S RAMSEY	NAG 5 9438	455
32	UNIV OF PITTSBURGH	H V FREY	GSFC	M S RAMSEY	NAG 5 9439	455
32	UNIV OF PITTSBURGH	J A GRANT	GSFC	D A CROWN	NAG 5 9466	455
32	UNIV OF PITTSBURGH	J G GRANT	GSFC	D A CROWN	NAG 5 3642	454
32	UNIV OF PITTSBURGH	M S BURRELL	GSFC	D A CROWN	NGT 5 125	456
32	UNIV OF PITTSBURGH	P G ROGERS	GSFC	S W HAPKE	NAG 5 3723	454
32	UNIV OF PUERTO RICO - MAYAGUEZ	H FREY	GSFC	G MATTIOLI	NAG 5 6031	557
32	UNIV OF TENNESSEE KNOXVILLE	T L ROUSH	ARC	J E MOERSCH	NCC 2 1187	471
32	UNIV OF TEXAS - AUSTIN	F HERBERT	GSFC	B TAPLEY	NAG 5 9163	494
32	UNIV OF TEXAS - AUSTIN	H V FREY	GSFC	C R WILSON	NAG 5 8798	494
32	UNIV OF TEXAS - AUSTIN	H V FREY	GSFC	J C CARTER	NAG 5 7693	493
32	UNIV OF TEXAS - AUSTIN	H V FREY	GSFC	J C GIBEAUT	NAG 5 7660	493
32	UNIV OF TEXAS - AUSTIN	H V FREY	GSFC	J G PAINE	NAG 5 7582	493
32	UNIV OF TEXAS - AUSTIN	H V FREY	GSFC	M CHENG	NAG 5 5170	493
32	UNIV OF TEXAS - AUSTIN	H V FREY	GSFC	R R EM	NAG 5 5171	493
32	UNIV OF TEXAS - AUSTIN	M S BURRELL	GSFC	J S FAMIGLIETTI	NGT 5 81	498
32	UNIV OF TEXAS - AUSTIN	T MORGAN	GSFC	L M TRAFTON	NAG 5 6754	493
32	UNIV OF TEXAS - EL PASO	D MENCHAN	GSFC	D SCHULZ-MAKUCH	NAG 5 9542	499
32	UNIV OF TEXAS - EL PASO	J SPANN	GSFC	R LOPEZ	NAG 5 10507	499
32	UNIV OF UTAH	R J LAWRENCE	GSFC	R L BRUHN	NAG 5 10136	503
32	UNIV OF VIRGINIA	D SENSKE	GSFC	R E JOHNSON	NAG 5 10173	525
32	UNIV OF VIRGINIA	J G GRANT	GSFC	A D HOWARD	NAG 5 3931	523
32	UNIV OF VIRGINIA	P G ROGERS	GSFC	R E JOHNSON	NAG 5 3633	523
32	UNIV OF VIRGINIA	P ROGERS	GSFC	D A BARAGIOLA	NAG 5 4332	523
32	UNIV OF WASHINGTON	E T ENGMAN	GSFC	L TSANG	NAG 5 7495	537
32	UNIV OF WASHINGTON	E T ENGMAN	GSFC	W J PLANT	NAG 5 7550	537
32	UNIV OF WASHINGTON	H FREY	GSFC	D LETTENMAIER	NAG 5 6505	536
32	UNIV OF WASHINGTON	H V FREY	GSFC	A GILLESPIE	NAG 5 6067	536
32	UNIV OF WASHINGTON	H V FREY	GSFC	D R MONTGOMERY	NAG 5 10342	539
32	UNIV OF WISCONSIN - MADISON	B CAMPBELL	GSFC	D A SROMOVSKY	NAG 5 6248	548
32	UNIV OF WISCONSIN - MADISON	H V FREY	GSFC	P MENZEL	NAG 5 9688	551
32	UTAH STATE UNIV	E T ENGMAN	GSFC	D G TARBOTON	NAG 5 7597	504
32	WASHINGTON STATE UNIV	D SENSKE	GSFC	D HUDSON	NAG 5 10462	543
32	WASHINGTON STATE UNIV	J G GRANT	GSFC	D HUDSON	NAG 5 4035	543
32	WASHINGTON UNIV - ST	B CAMPBELL	GSFC	D FEGLEY	NAG 5 6125	333
32	WASHINGTON UNIV - ST	D G SENSKE	GSFC	R E ARVIDSON	NAG 5 3870	332
32	WASHINGTON UNIV - ST	D SENSKE	GSFC	R E ARVIDSON	NAG 5 10190	335
32	WASHINGTON UNIV - ST	H V FREY	GSFC	R E ARVIDSON	NAG 5 7613	334
32	WASHINGTON UNIV - ST	J GRANT	GSFC	B L JOI LIFF	NAG 5 8905	334
32	WASHINGTON UNIV - ST	P G ROGERS	GSFC	W B MCKINNON	NAG 5 3657	332
32	WASHINGTON UNIV - ST	P ROGERS	GSFC	B L JOLLIFF	NAG 5 6784	333
32	WASHINGTON UNIV - ST	P ROGERS	GSFC	D J PHILLIPS	NAG 5 4448	333
32	WASHINGTON UNIV - ST	P ROGERS	GSFC	R ARVIDSON	NAG 5 6756	333
32	WELLESLEY COLLEGE	J G GRANT	GSFC	R G FRENCH	NAG 5 4046	304
33	CALIFORNIA INST OF TECH	S LONG	WFF	T WU	NAG 5 5338	44
33	CALIFORNIA INST OF TECH	S R LONG	GSFC	T Y WU	NAG 5 5207	43

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
33	COLUMBIA UNIV	J A MARRA	GSFC	J A BISHOP	NAG 5 6450	370
33	DARTMOUTH COLLEGE	R MILLER	SSC	D LYNCH	NAG13 00041	344
33	DUKE UNIV	J CAMPBELL	GSFC	R T BARBER	NAG 5 6988	395
33	FLORIDA STATE UNIV	E LINDSR TOM	GSFC	D NOF	NAG 5 10860	168
33	FLORIDA STATE UNIV	E LINDSTROM	GSFC	J J O	NAG 5 7254	167
33	FLORIDA STATE UNIV	M RIENECKER	GSFC	W WEWAR	NAG 5 8291	167
33	FLORIDA STATE UNIV	W ESAIAS	GSFC	R L IVERSON	NAG 5 7618	167
33	GEORGE MASON UNIV	M RIENECKER	GSFC	P S SCHOPF	NCC 5 522	510
33	GEORGE MASON UNIV	M RIENECKER	GSFC	P SCHOPF	NCC 5 245	510
33	JOHNS HOPKINS UNIV	R MILLER	SSC	D R THOMPSON	NAG13 00045	251
33	JOHNS HOPKINS UNIV	S J KATZBERG	LARC	M S ASHER	NAG 1 2257	240
33	JOHNS HOPKINS UNIV	S R LONG	GSFC	E GROSS	NAG 5 5314	242
33	JOHNS HOPKINS UNIV	S R LONG	GSFC	O PHILLIPS	NAG 5 5047	242
33	MASSACHUSETTS INST OF TECH	J A YODER	GSFC	S W CHISHOLM	NAG 5 3727	289
33	MISSISSIPPI STATE UNIV	D POWE	SSC	L RITCHIE	NAS13 98033	328
33	NORTH CAROLINA STATE UNIV	J A MARRA	GSFC	D KAMYKOWSKI	NAG 5 6586	400
33	OHIO STATE UNIV	W ABDALATI	GSFC	C V DER VEEN	NAG 5 10978	417
33	OLD DOMINION UNIV	C MCCLAIN	GSFC	G F COTA	NAS 5 97132	518
33	OLD DOMINION UNIV	J MARRA	GSFC	G F COTA	NAG 5 10528	518
33	OREGON STATE UNIV	H OSEROFF	GSFC	M R ABBOTT	NAS 5 31360	433
33	OREGON STATE UNIV	J A MARRA	GSFC	M R ABBOTT	NAG 5 4947	431
33	OREGON STATE UNIV	J MARRA	GSFC	E BOSS	NAG 5 11148	433
33	OREGON STATE UNIV	J MARRA	GSFC	K S SHIFRIN	NAG 5 10623	433
33	OREGON STATE UNIV	J R MOISAN	GSFC	R M LETELIER	NAG 5 5311	431
33	OREGON STATE UNIV	M T FLYNN	ARC	G P KLINKHAMMER	NCC 2 5427	434
33	OREGON STATE UNIV	R RAY	GSFC	G D EGBERT	NAG 5 9159	432
33	SAN DIEGO STATE UNIV	C R CRANE	GSFC	J L MUELLER	NAS 5 00199	54
33	SAN DIEGO STATE UNIV	C R MCCLAIN	GSFC	C C TREES	NAS 5 00202	54
33	SAN DIEGO STATE UNIV	C R MCCLAIN	GSFC	J L MUELLER	NAS 5 97126	54
33	STANFORD UNIV	J MARRA	GSFC	K ARRIGO	NAG 5 11264	63
33	STATE UNIV OF NY - STONY BROOK	E LINDSTROM	GSFC	D WALISER	NAG 5 11033	390
33	STEVENS INST OF TECH	C MCCLAIN	GSFC	K STAMNES	NAS 5 99238	360
33	TEXAS A&M UNIV	E LINDSTROM	GSFC	W NOWLIN	NAG 5 10829	482
33	TEXAS A&M UNIV	W ABDALATI	GSFC	S STOESSEL	NAG 5 10641	482
33	U OF MD CTR FOR ENVIR SCI-CAMBRIDGE	C R MCCLAIN	GSFC	L W HARDING	NAG 5 00195	255
33	UNIV OF MINN	M T FLYNN	ARC	W E SEYFRIED	NCC 2 5340	324
33	UNIV OF ARIZONA	C R MCCCLAIN	GSFC	J ZALEWSKI	NAS 5 00197	38
33	UNIV OF CALIFORNIA - IRVINE	S R LONG	GSFC	J N YANG	NAG 5 5149	85
33	UNIV OF CALIFORNIA - SAN DIEGO	C KOBLINSKY	GSFC	P P NIILER	NAG 5 8351	99
33	UNIV OF CALIFORNIA - SAN DIEGO	C R MCCAIN	GSFC	R FROUIN	NAS 5 00194	102
33	UNIV OF CALIFORNIA - SAN DIEGO	C R MCCLAIN	GSFC	B G MITCHELL	NAS 5 01002	102
33	UNIV OF CALIFORNIA - SAN DIEGO	C R MCCLAIN	GSFC	B G MITCHELL	NAS 5 97130	103
33	UNIV OF CALIFORNIA - SAN DIEGO	E LINDSTROM	GSFC	W WHITE	NAG 5 7096	98
33	UNIV OF CALIFORNIA - SAN DIEGO	G A SOFFEN	GSFC	B G MITCHELL	NGT 5 106	104
33	UNIV OF CALIFORNIA - SAN DIEGO	J A YODER	GSFC	R KEELING	NAG 5 6179	98
33	UNIV OF CALIFORNIA - SAN DIEGO	J MARRA	GSFC	R KEELING	NAG 5 10737	102
33	UNIV OF CALIFORNIA - SAN DIEGO	J MUELLER	GSFC	K STAMNES	NAS 5 97139	103
33	UNIV OF CALIFORNIA - SANTA BARBARA	C MCCLAIN	GSFC	D A SIEGEL	NAS 5 97125	109
33	UNIV OF CALIFORNIA - SANTA BARBARA	C MCCLAIN	GSFC	T D DICKEY	NAS 5 97127	109
33	UNIV OF CALIFORNIA - SANTA BARBARA	C R MCCLAIN	GSFC	D A SIEGEL	NAS 5 00200	109
33	UNIV OF CALIFORNIA - SANTA BARBARA	C R MCCLAIN	GSFC	D A SIEGEL	NAS 5 00201	109
33	UNIV OF CALIFORNIA - SANTA BARBARA	C R MCCLAIN	GSFC	D SIEGEL	NAS 5 99083	109
33	UNIV OF CALIFORNIA - SANTA BARBARA	C R MCCLAIN	GSFC	S MARITORENA	NAS 5 00196	109
33	UNIV OF CALIFORNIA - SANTA BARBARA	H OSEROFF	GSFC	Z WAN	NAS 5 31370	109
33	UNIV OF COLORADO - BOULDER	E LINDSTROM	GSFC	P AXELRAD	NAG 5 9727	134
33	UNIV OF COLORADO - BOULDER	E LINDSTROM	GSFC	W EMERY	NAG 5 7365	129
33	UNIV OF DELAWARE	S K RUNCO	JSC	V KLEMAS	NAG 9 989	150
33	UNIV OF GEORGIA	G ASRAR	GSFC	B BINDER	NGT 5 30017	191
33	UNIV OF HAWAII AT MANOA - HONOLULU	C MCLAIN	GSFC	J PORTER	NAS 5 97136	198
33	UNIV OF HAWAII AT MANOA - HONOLULU	P GLOERSEN	GSFC	L MAGAARD	NAG 5 7485	193
33	UNIV OF MAINE - ORONO	J MARRA	GSFC	A THOMAS	NAG 5 10620	239
33	UNIV OF MARYLAND - COLLEGE PARK	C R MCCLAIN	GSFC	A SUBRAMANUM	NAS 5 00192	268
33	UNIV OF MARYLAND - COLLEGE PARK	E LINDSTROM	GSFC	R MURTUGUDDE	NAG 5 10981	267
33	UNIV OF MARYLAND - COLLEGE PARK	E LINDSTROM	GSFC	R WAJSOWICZ	NAG 5 3960	257
33	UNIV OF MARYLAND - COLLEGE PARK	M RIENECKER	GSFC	R WAJSOWICZ	NAG 5 11291	268
33	UNIV OF MARYLAND - COLLEGE PARK	N MAYNARD	GSFC	L WANG	NAG 5 4186	257

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
33	UNIV OF MARYLAND BALTIMORE COUNTY	C R MCCLAIN	GSFC	M WANG	NAS 5 00203	275
33	UNIV OF MIAMI	H OSEROFF	GSFC	O B BROWN	NAS 5 31361	177
33	UNIV OF MIAMI	J DODGE	GSFC	R EVANS	NAG 5 10588	177
33	UNIV OF PUERTO RICO - MAYAGUEZ	C W WRIGHT	WFF	E WEIL	NAG 5 5302	556
33	UNIV OF PUERTO RICO - MAYAGUEZ	R L MILLER	SSC	R A ARMSTRONG	NAG13 54	557
33	UNIV OF RHODE ISLAND	E LINDSTROM	GSFC	D CONRILLON	NAG 5 6077	460
33	UNIV OF RHODE ISLAND	E LINDSTROM	GSFC	P CORNILLON	NAG 5 3736	460
33	UNIV OF RHODE ISLAND	J MARRA	GSFC	J YODER	NAG 5 10555	461
33	UNIV OF RHODE ISLAND	M MAIDEN	GSFC	P CORNILLON	NCC 5 307	461
33	UNIV OF SOUTH FLORIDA	C R MCCLAIN	GSFC	F E MULLER-KARGER	NAS 5 97128	179
33	UNIV OF SOUTH FLORIDA	G S HAYNE	GSFC	G T MITCHUM	NAG 5 5202	178
33	UNIV OF SOUTH FLORIDA	J MARRA	GSFC	C CHU	NAG 5 10738	178
33	UNIV OF SOUTH FLORIDA	J YODER	GSFC	P COBLE	NAG 5 6301	178
33	UNIV OF SOUTHERN CALIFORNIA	C MCCLAIN	GSFC	D G CAPONE	NAS 5 99232	118
33	UNIV OF SOUTHERN CALIFORNIA	J A YODER	GSFC	D A KIEFER	NAG 5 6360	116
33	UNIV OF SOUTHERN MISSISSIPPI	J A CAMPBELL	GSFC	S LOHRENZ	NAG 5 4570	329
33	UNIV OF SOUTHERN MISSISSIPPI	J MARRA	GSFC	S E LOHRENZ	NAG 5 9770	329
33	UNIV OF WASHINGTON	A ANDERSON	GSFC	D L HARTMANN	NAG 5 10624	540
33	UNIV OF WASHINGTON	J A CURRAN	GSFC	D HARTMANN	NAG 5 6101	536
33	UNIV OF WASHINGTON	J MARRA	GSFC	S RISER	NAG 5 11079	540
33	UNIVERSITY OF WISCONSIN-OSHKOSH	K R ARRIGO	GSFC	M P LIZOTTE	NAG 5 4108	555
33	VA POLYTECH INST & ST UNIV	G E KAYNE	GSFC	G E BROWN	NAG 5 5099	530
33	WOODS HOLE OCEANOGRAPHIC INST	C R MCCLAIN	GSFC	J R MORRISON	NAS 5 00198	305
33	WOODS HOLE OCEANOGRAPHIC INST	J A YODER	GSFC	D M GLOVER	NAG 5 6456	305
33	WOODS HOLE OCEANOGRAPHIC INST	J COMISO	GSFC	J YANG	NAG 5 7348	305
33	WOODS HOLE OCEANOGRAPHIC INST	J MARRA	GSFC	D M GLOVER	NAG 5 9858	305
33	WOODS HOLE OCEANOGRAPHIC INST	M RIENECKER	GSFC	L YU	NCC 5 441	305
39	ALABAMA A&M UNIV	R HOOVER	MSFC	M G TADROS	NAG 8 1624	2
39	ALLEGHENY COLLEGE	A J TUYAHOV	GSFC	D BENSEL	NAG 5 3617	435
39	ARIZONA STATE UNIV	H BLODGET	GSFC	P CHRISTENSEN	NAS 5 31371	23
39	ARIZONA STATE UNIV	M WEI	GSFC	J R ARROWSMITH	NGT 5 30221	23
39	AUBURN UNIV	D DEERING	GSFC	K MCNABB	NCC 5 333	3
39	AUBURN UNIV	J R ARNOLD	MSFC	U HATCH	NCC 8 151	4
39	AUGUSTANA COLLEGE	N KHAZENIE	GSFC	V K OLNESS	NAG 5 6299	466
39	BOISE STATE UNIV	E ENGMAN	GSFC	P DAWSON	NAG 5 7537	199
39	BOSTON UNIV	C TUCKER	GSFC	R MYNENI	NAG 5 7472	278
39	BOSTON UNIV	D E WICKLAND	GSFC	M FRIEDL	NAG 5 7218	277
39	BOSTON UNIV	D E WICKLAND	GSFC	X LI	NAG 5 7217	277
39	BOSTON UNIV	D L WILLIAMS	GSFC	C WOODCOCK	NAG 5 3439	276
39	BOSTON UNIV	D WICKLAND	GSFC	C SCHAAF	NAG 5 11263	280
39	BOSTON UNIV	DODGE	GSFC	R MYNENI	NAG 5 9547	279
39	BOSTON UNIV	E T ENGMAN	GSFC	M A FRIEDL	NAG 5 8584	278
39	BOSTON UNIV	G C GUTMAN	GSFC	D K KAUFMANN	NAG 5 6214	277
39	BOSTON UNIV	G GUTMAN	GSFC	G SALVUCCI	NAG 5 11338	280
39	BOSTON UNIV	J PRIVETTE	GSFC	R MYNENI	NAG 5 8659	278
39	BOSTON UNIV	M WEI	GSFC	G SALVUCCI	NAG 5 6716	277
39	BOSTON UNIV	M WEI	GSFC	R MYNENI	NGT 5 30223	280
39	BOSTON UNIV	P R HOUSER	GSFC	G D SALVUCCI	NAG 5 8666	278
39	BOWIE STATE UNIV	E MIDDLETON	GSFC	W T LAWRENCE	NCC 5 507	240
39	BOWIE STATE UNIV	M L IMHOFF	GSFC	W LAWRENCE	NAG 5 6476	239
39	BOWIE STATE UNIV	M L IMHOFF	GSFC	W LAWRENCE	NAG 5 7669	239
39	BOWIE STATE UNIV	M L IMHOFF	GSFC	W LAWRENCE	NAG 5 10034	240
39	BOWLING GREEN STATE UNIV	T M SCOTT	GRC	D K VINCENT	NAG 3 2443	405
39	BRANDEIS UNIV	C W LLOYD	JSC	J R LACKNER	NAG 9 1263	281
39	BRIGHAM YOUNG UNIV	E LINDSTROM	GSFC	D LONG	NAG 5 8746	501
39	BRIGHAM YOUNG UNIV	J DODGE	GSFC	D LONG	NAG 5 9625	501
39	BROWN UNIV	A JANETOS	GSFC	J MUSTART	NAG 5 6003	457
39	BROWN UNIV	G GUTMAN	GSFC	J F MUSTARD	NAG 5 11145	459
39	BROWN UNIV	S G UNGAR	GSFC	J F MUSTARD	NCC 5 487	459
39	BUCKNELL UNIV	E T ENGMAN	GSFC	R D CRAGO	NAG 5 8679	435
39	BUCKNELL UNIV	E T ENGMAN	GSFC	R D CRAGO	NAG 5 8699	435
39	BUCKNELL UNIV	M F JASINSKI	GSFC	R D CRAGO	NAG 5 10129	436
39	CALIFORNIA INST OF TECH	D WICKLAND	GSFC	J RANDERSON	NAG 5 9462	46
39	CALIFORNIA INST OF TECH	M Y WEI	GSFC	B C MURRAY	NGT 5 30138	49
39	CALIFORNIA INST OF TECH	P DECOLA	GSFC	P WENNBERG	NAG 5 8922	45
39	CALIFORNIA INST OF TECH	P HOUSER	GSFC	Y L YUNG	NAG 5 9487	46

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	CALIFORNIA POLYTECH STATE U-SAN LUIS	M WEI	GSFC	M A MOLINE	NAG 5 8674	50
39	CALIFORNIA STATE UNIV - LONG BEACH	A J TUYAHOV	GSFC	C T LEE	NAG 5 9310	51
39	CALIFORNIA STATE UNIV - LONG BEACH	B MEESON	GSFC	E AMBOS	NCC 5 329	51
39	CALIFORNIA STATE UNIV - LOS ANGELES	D E WICKLAND	GSFC	J A GAMON	NAG 5 7401	52
39	CALIFORNIA STATE UNIV - LOS ANGELES	H M ADELMAN	LARC	H HASEMIAN	NAG 1 2029	51
39	CALIFORNIA STATE UNIV - MONTEREY BAY	A JANETOS	GSFC	L PIERCE	NAG 5 6529	52
39	CALIFORNIA STATE UNIV - MONTEREY BAY	J C COUGHLAN	ARC	S E ALEXANDER	NCC 2 1186	52
39	CALIFORNIA STATE UNIV - MONTEREY BAY	R MCKELLIP	SSC	L F JOHNSON	NAG13 99020	52
39	CARNEGIE - MELLON UNIV	CFARMER	JSC	D HERSHBERGER	NAG 9 1242	438
39	CASE WESTERN RESERVE UNIV	W HVANCIC	GRC	J ISHAC	NAG 3 2391	406
39	CLARION UNIV OF PENNSYLVANIA	J F DOWDY	MSFC	A J VEGA	NAG 8 1312	440
39	CLARK UNIV	A JANETOS	GSFC	B TURNER	NAG 5 6046	281
39	CLARK UNIV	M WEI	GSFC	B L TURNER	NGT 5 97	281
39	CLARK UNIV	M WEI	GSFC	B L TURNER	NGT 5 30197	282
39	CLARK UNIV	M WEI	GSFC	B L TURNER	NGT 5 30217	282
39	CLARK UNIV	M Y WEI	GSFC	B L TUNNER	NGT 5 30153	281
39	CLARK UNIV	M Y WEI	GSFC	B L TURNER	NGT 5 30147	281
39	CLARK UNIV	M Y WEI	GSFC	J GEOGHEGAN	NAG 5 8559	281
39	CLARK UNIV	S S WEGENER	ARC	S HERWITZ	NCC 2 1270	281
39	COLLEGE OF SAN MATEO	N KHAZENIE	GSFC	K D KENNEDY	NAG 5 4883	53
39	COLORADO STATE UNIV	D E WICKLAND	GSFC	N HANAN	NAG 5 8705	120
39	COLORADO STATE UNIV	D W DEERING	GSFC	A DENNING	NCC 5 284	122
39	COLORADO STATE UNIV	D WICKLAND	HQ	W PARTON	NAG 5 4983	120
39	COLORADO STATE UNIV	G C GUTMAN	GSFC	D OJIMA	NAG 5 4646	120
39	COLORADO STATE UNIV	G GUTMAN	GSFC	D OJIMA	NAG 5 11073	121
39	COLORADO STATE UNIV	J C DODGE	GSFC	P L STEPHENS	NAG 5 6637	120
39	COLORADO STATE UNIV	J RANSON	GSFC	D OJIMA	NAG 5 6228	120
39	COLORADO STATE UNIV	M WEI	GSFC	R CONANT	NAG 5 10593	121
39	COLORADO STATE UNIV	M WEI	GSFC	S A RUTLEDGE	NGT 5 30218	122
39	COLORADO STATE UNIV	M WEI	GSFC	V CHANDRAEKAR	NGT 5 30421	122
39	COLORADO STATE UNIV	R H THOMAS	GSFC	D LISTON	NAG 5 4073	120
39	COLUMBIA UNIV	D E WICKLAND	GSFC	E MATTHEWS	NAG 5 6321	370
39	COLUMBIA UNIV	D KAHLE	GSFC	R MILLER	NAG 5 8808	372
39	COLUMBIA UNIV	D L PIERCE	GSFC	B CAIRNS	NAG 5 5275	370
39	COLUMBIA UNIV	D RIND	GSFC	M A CANE	NAG 5 7044	371
39	COLUMBIA UNIV	E LINDSTROM	GSFC	A L FIELD	NAG 5 6948	371
39	COLUMBIA UNIV	E LINDSTROM	GSFC	A L GORDON	NAG 5 8297	371
39	COLUMBIA UNIV	E LINDSTROM	GSFC	R SEAGER	NAG 5 6315	370
39	COLUMBIA UNIV	J MARRA	GSFC	O ANDERSON	NAG 5 11215	373
39	COLUMBIA UNIV	J MARRA	GSFC	T TAKAHASHI	NAG 5 6877	370
39	COLUMBIA UNIV	J MARRA	GSFC	T TAKAHASHI	NAG 5 11357	373
39	COLUMBIA UNIV	M WEI	GSFC	A SOBEL	NAG 5 10607	373
39	COLUMBIA UNIV	M WEI	GSFC	D L WITTER	NAG 5 8675	372
39	COLUMBIA UNIV	M WEI	GSFC	D MARTINSON	NGT 5 30391	375
39	COLUMBIA UNIV	M WEI	GSFC	M CANE	NGT 5 50323	375
39	COLUMBIA UNIV	M WEI	GSFC	W MENKE	NGT 5 30374	375
39	COLUMBIA UNIV	M WEI	GSFC	W MENKE	NGT 5 30388	375
39	COLUMBIA UNIV	M Y WEI	GSFC	T TAKAHASHI	NGT 5 30167	374
39	COLUMBIA UNIV	P R HOUSER	GSFC	M STIEGLITZ	NAG 5 9759	372
39	COLUMBIA UNIV	Q BARKER	GSFC	R S CHEN	NAG 5 98162	373
39	COLUMBIA UNIV	R H THOMAS	GSFC	D M HOLLAND	NAG 5 4028	369
39	COLUMBIA UNIV	R KOSTER	GSFC	M STIEGLITZ	NCC 5 218	373
39	COLUMBIA UNIV	R KOSTER	GSFC	M STIEGLITZ	NCC 5 510	374
39	COLUMBIA UNIV	S GOGINENI	GSFC	D G MARTINSON	NAG 5 6876	370
39	COLUMBIA UNIV	S GOGINENI	GSFC	D MARTINSON	NAG 5 7922	371
39	COLUMBIA UNIV	S GOGINENI	GSFC	S S JACOBS	NAG 5 7461	371
39	CORNELL UNIV	D DEERING	GSFC	E FERNANDES	NCC 5 298	381
39	CORNELL UNIV	J BOYCE	GSFC	R J SULLIVAN	NAG 5 9794	379
39	CORNELL UNIV	J CAMPBELL	GSFC	B MONGER	NAG 5 8188	378
39	CORNELL UNIV	J JODER	GSFC	G CHARLES	NAG 5 6273	377
39	CORNELL UNIV	J MARRA	GSFC	B MONGER	NAG 5 10848	379
39	CORNELL UNIV	M WEI	GSFC	L O HEDIN	NGT 5 30210	381
39	CORNELL UNIV	M Y WEI	GSFC	C H GREENE	NGT 5 50218	382
39	DARTMOUTH COLLEGE	P HOUSER	GSFC	R BRAKENRIDGE	NAG 5 9470	344
39	DREXEL UNIV	R MILLER	SSC	M PIASECKI	NAG13 00040	441
39	DUKE UNIV	A NURRIDIN	HQ	R T BARBER	NGT 5 50224	396

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	DUKE UNIV	E T ENGMAN	GSFC	S ROJSTACZER	NAG 5 8533	395
39	DUKE UNIV	J MARRA	GSFC	R T BARBER	NAG 5 9348	395
39	DUKE UNIV	M S BURRELL	GSFC	B SCHESINGER	NGT 5 69	395
39	DUKE UNIV	M WEI	GSFC	J REYNOLDS	NGT 5 30355	395
39	DUKE UNIV	P DECOLA	GSFC	P KASIBHATLA	NAG 5 9605	395
39	DUKE UNIV	R KNOX	GSFC	D L URBAN	NCC 5 233	395
39	ELIZABETH CITY STATE UNIV	B MEESON	GSFC	L HAYDEN	NAG 5 9371	396
39	ELIZABETH CITY STATE UNIV	N KHAZENIE	GSFC	L B HAYDEN	NAG 5 9372	396
39	FLA INTERNATIONAL UNIV	J W CAMPBELL	GSFC	L L RICHARDSON	NAG 5 8156	162
39	FLORIDA STATE UNIV	D E WICKLAND	GSFC	E A SMITH	NAG 5 7302	167
39	FLORIDA STATE UNIV	D E WICKLAND	GSFC	E A SMITH	NAG 5 9866	168
39	FLORIDA STATE UNIV	D W DEERING	GSFC	E A SMITH	NCC 5 292	168
39	FLORIDA STATE UNIV	D WICKLAND	GSFC	E SMITH	NAG 5 6258	167
39	FLORIDA STATE UNIV	E LINDSTROM	GSFC	J J O	NAG 5 8327	167
39	FLORIDA STATE UNIV	E T ENGMAN	GSFC	S E NICHOLSON	NAG 5 8598	167
39	FLORIDA STATE UNIV	J C DODGE	GSFC	E A SMITH	NAG 5 6665	167
39	FLORIDA STATE UNIV	M WEI	GSFC	S E NICHOLSON	NGT 5 30186	169
39	FLORIDA STATE UNIV	M WEI	GSFC	T KRISHNAMURTI	NGT 5 30191	169
39	FLORIDA STATE UNIV	M Y WEI	GSFC	D NOF	NGT 5 30164	169
39	FLORIDA STATE UNIV	M Y WEI	GSFC	J J OBRIEN	NGT 5 30158	169
39	FLORIDA STATE UNIV	W ESAIAS	GSFC	W DEWAR	NAG 5 7630	167
39	FORT HAYS STATE UNIV	E LINDSTROM	GSFC	J HEINRICHS	NAG 5 8633	227
39	GEORGE MASON UNIV	A T CHANG	GSFC	L CHIU	NAG 5 10879	510
39	GEORGE MASON UNIV	A T CHANG	GSFC	L CHIU	NAG 5 11346	510
39	GEORGE MASON UNIV	A T CHANG	GSFC	L S CHIU	NAG 5 9035	509
39	GEORGE MASON UNIV	J A WEINMAN	GSFC	L CHIU	NAG 5 9636	509
39	GEORGE MASON UNIV	W GRAHAM	SSC	M KAFATOS	NAG13 01009	510
39	GEORGE WASHINGTON UNIV	J GASCH	GSFC	D WILLIAMSON	NAG 5 3957	152
39	GEORGIA INST OF TECH	A J TUYAHOV	GSFC	W L CHAMEIDES	NAG 5 3855	183
39	GEORGIA INST OF TECH	A J TUYAHOV	GSFC	W L CHAMEIDES	NAG 5 9868	184
39	GEORGIA INST OF TECH	E T ENGMAN	GSFC	C D PETERS-LIDARD	NAG 5 8698	184
39	GEORGIA INST OF TECH	M KURYLO	GSFC	P H WINE	NAG 5 8931	184
39	GEORGIA INST OF TECH	M WEI	GSFC	W L CHAMEIDES	NGT 5 50330	188
39	GEORGIA INST OF TECH	M Y WEI	GSFC	R E DICKINSON	NAG 5 8880	184
39	GEORGIA INST OF TECH	P DECOLA	GSFC	F EISELE	NAG 5 8891	184
39	GEORGIA INST OF TECH	R TRAVIS	SSC	K MAXWELL	NGT13 52742	188
39	HARVARD UNIV	D E WICKLAND	GSFC	S C WORSY	NAG 5 7534	284
39	HARVARD UNIV	D W DEERING	GSFC	S C WOFYSY	NCC 5 341	285
39	HARVARD UNIV	M WEI	GSFC	J ANDERSON	NGT 5 30336	286
39	HARVARD UNIV	M WEI	GSFC	S C WOFYSY	NGT 5 30205	286
39	HARVARD UNIV	M Y WEI	GSFC	R FORMAN	NGT 5 30144	286
39	HARVARD UNIV	M Y WEI	GSFC	S C WOFYSY	NGT 5 30152	286
39	HARVARD UNIV	P DECOLA	GSFC	D J JACOB	NAG 5 9643	284
39	HARVARD UNIV	R CURRAN	GSFC	J ANDERSON	NAG 5 8779	284
39	HOFSTRA UNIV	E J LINDSTROM	GSFC	D E WEISSMAN	NAG 5 7503	382
39	IDAHO STATE UNIV	W TURNER	GSFC	K T WEBER	NAG 5 10982	199
39	ILLINOIS STATE UNIV	J F DOWNDY	MSFC	D HOLLAND	NAG 8 1262	200
39	INDIANA UNIV - BLOOMINGTON	D DEERING	GSFC	E MORAN	NCC 5 334	216
39	INDIANA UNIV - BLOOMINGTON	G GUTMAN	GSFC	E F MORAN	NAG 5 9852	215
39	IOWA STATE UNIV	E K GIBSON	JSC	P A BAZLINSKI	NAG 9 1115	223
39	IOWA STATE UNIV	M WEI	GSFC	T CHEN	NGT 5 30419	224
39	JOHNS HOPKINS UNIV	E LINDSTROM	GSFC	K RANEY	NAG 5 9113	246
39	JOHNS HOPKINS UNIV	K H BERGMAN	GSFC	M B PARLANGE	NAG 5 9426	246
39	JOHNS HOPKINS UNIV	M WEI	GSFC	D WAUGH	NGT 5 50328	253
39	JOHNS HOPKINS UNIV	P E HUNTER	GSFC	A SZALAY	NAG 5 8590	245
39	JOHNS HOPKINS UNIV	S GOGINENI	GSFC	B L GOTWOLS	NAG 5 8007	244
39	KANSAS STATE UNIV	A JANETOS	GSFC	D JOHNSON	NAG 5 6213	228
39	KANSAS STATE UNIV	G GUTMAN	GSFC	L JOHNSON	NAG 5 11337	228
39	KENT STATE UNIV	M WEI	GSFC	D L WITTER	NAG 5 11266	413
39	KENT STATE UNIV	T SCOTT	GRC	D MUNRO-STASIUK	NAG 3 2416	412
39	LAC COURTE OREILLES OJIBWA COMM COL	A F HEPP	GRC	D H ANDERSON	NAG 3 2293	546
39	LOUISIANA STATE UNIV - BATON ROUGE	C E HALL	MSFC	J ZHU	NCC 8 201	235
39	LOUISIANA STATE UNIV - BATON ROUGE	R TRAVIS	SSC	B S GOODWIN	NGT13 52743	235
39	MASSACHUSETTS INST OF TECH	E J LINSTROM	GSFC	B HAGER	NAG 5 6352	291
39	MASSACHUSETTS INST OF TECH	E LINDSTROM	GSFC	C WUNSCH	NAG 5 7857	292
39	MASSACHUSETTS INST OF TECH	E LINDSTROM	GSFC	P RIZZOLI	NAG 5 7194	291

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	MASSACHUSETTS INST OF TECH	E LINDSTROM	GSFC	P RIZZOLI	NAG 5 10793	295
39	MASSACHUSETTS INST OF TECH	E T ENGMAN	GSFC	D MCLAUGHLIN	NCC 5 416	299
39	MASSACHUSETTS INST OF TECH	E T ENGMAN	GSFC	E B ELTAHIR	NAG 5 8617	293
39	MASSACHUSETTS INST OF TECH	J MARRA	GSFC	J MARSHALL	NCC 5 244	299
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	B TROUT	NGT 5 30334	299
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	C WUNSCH	NGT 5 30337	299
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	D ENTEKHABI	NGT 5 30190	299
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	E ELTAHIR	NAG 5 7525	292
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	J MARSHALL	NGT 5 30189	299
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	K X WHIPPLE	NGT 5 30188	299
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	R A PLUMB	NGT 5 30200	299
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	R BRAS	NGT 5 30339	299
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	R L BRAS	NGT 5 30212	299
39	MASSACHUSETTS INST OF TECH	P DECOLA	GSFC	M MOLINA	NAG 5 8887	293
39	MIAMI UNIV	T M SCOTT	GRC	J MILLARD	NAG 3 2436	413
39	MICHIGAN STATE UNIV	A C JANETOS	GSFC	J LIU	NAG 5 8317	307
39	MICHIGAN STATE UNIV	A JANETOS	GSFC	D SKOLE	NAG 5 6538	307
39	MICHIGAN STATE UNIV	A JOYCE	SSC	P SORRANO	NGT13 52715	308
39	MICHIGAN STATE UNIV	D DEERING	GSFC	D SKOLE	NCC 5 291	308
39	MICHIGAN STATE UNIV	D WILLIAMS	GSFC	D SKOLE	NAG 5 4810	307
39	MICHIGAN STATE UNIV	G GUTMAN	GSFC	R WALKER	NAG 5 9232	307
39	MICHIGAN STATE UNIV	G GUTMAN	HQ	J QI	NAG 5 9286	307
39	MICHIGAN STATE UNIV	M WEI	GSFC	D J CAMPBELL	NGT 5 30340	308
39	MICHIGAN STATE UNIV	M Y WEI	GSFC	J LIU	NGT 5 30166	308
39	MICHIGAN TECHNOLOGICAL UNIV	M Y WEI	GSFC	G BLUTH	NGT 5 30154	309
39	MICHIGAN TECHNOLOGICAL UNIV	S GOGINENI	GSFC	D PILANT	NAG 5 7051	309
39	MISSISSIPPI STATE UNIV	R MCKELLIP	SSC	S ROBERTS	NAG13 99018	328
39	MONTANA STATE UNIV	A C JANETOS	GSFC	A HASEN	NAG 5 6005	337
39	MONTANA STATE UNIV	G GUTMAN	GSFC	A HANSEN	NAG 5 9300	337
39	MONTANA STATE UNIV	G GUTMAN	GSFC	A HANSEN	NAG 5 9806	337
39	MONTANA STATE UNIV	G GUTMAN	GSFC	A HANSEN	NAG 5 11158	337
39	MONTANA TECH OF THE U OF MONTANA	N KHAZENIE	GSFC	T MOON	NAG 5 9139	338
39	MT HOLYOKE COLLEGE	M Y WEI	GSFC	J L BUBIER	NAG 5 8635	300
39	NEW MEXICO HIGHLANDS UNIV	K KRISHEN	JSC	J CAIBACA	NAG 9 1374	361
39	NEW MEXICO HIGHLANDS UNIV	L M ARMEDARIZ	JSC	J C	NAG 9 1139	361
39	NEW MEXICO INST OF MINING & TECH	D WICKLAND	GSFC	E E SMALL	NAG 5 9328	361
39	NEW MEXICO INST OF MINING & TECH	F K GIBSON	JSC	T L KIEFT	NAG 9 1106	361
39	NEW MEXICO STATE UNIV - LAS CRUCES	C E WADE	ARC	E E SERRANO	NAG 2 1334	362
39	NY UNIV	M REINECKER	GSFC	R KLEEMAN	NAG 5 9871	383
39	NY UNIV	S GOGINENI	GSFC	D M HOLLAND	NAG 5 8475	383
39	NORFOLK STATE UNIV	N KHAZENIE	GSFC	W J RODRIGUEZ	NAG 5 6298	514
39	NORFOLK STATE UNIV	N KHAZENIE	GSFC	W J RODRIQUEZ	NAG 5 9374	514
39	NORTH CAROLINA STATE UNIV	J CAMPBELL	GSFC	J MORRISON	NAG 5 6520	400
39	NORTH CAROLINA STATE UNIV	J MARRA	GSFC	J MORRISON	NAG 5 8865	400
39	NORTH CAROLINA STATE UNIV	M WEI	GSFC	J M MORRISON	NGT 5 30192	402
39	OHIO STATE UNIV	D L WILLIAMS	GSFC	C MERRY	NAG 5 7685	415
39	OHIO STATE UNIV	E J LINDSTROM	GSFC	C K SHUM	NAG 5 7284	415
39	OHIO STATE UNIV	E LIDSTROM	GSFC	K N BERLINER	NAG 5 8455	416
39	OHIO STATE UNIV	E LINDSTROM	GSFC	C DER VEEN	NAG 5 8632	416
39	OHIO STATE UNIV	E LINDSTROM	GSFC	C K SHUM	NAG 5 6700	415
39	OHIO STATE UNIV	E LINDSTROM	GSFC	G S HAMILTON	NAG 5 6838	415
39	OHIO STATE UNIV	E LINDSTROM	GSFC	K C JEZEK	NAG 5 8608	416
39	OHIO STATE UNIV	G ASRAR	GSFC	L G THOMPSON	NGT 5 30012	418
39	OHIO STATE UNIV	J DODGE	GSFC	K JEZEK	NAG 5 9538	416
39	OHIO STATE UNIV	K PARTINGTON	GSFC	C K SHUM	NAG 5 9335	416
39	OHIO STATE UNIV	M WEI	GSFC	L BROWN	NGT 5 30042	418
39	OHIO STATE UNIV	P HOUSER	GSFC	D BROMWICH	NAG 5 9596	416
39	OHIO STATE UNIV	R KAKAR	GSFC	D BROMWICH	NAG 5 9518	416
39	OHIO STATE UNIV	S GOGINENI	GSFC	D H BROMWICH	NAG 5 7750	415
39	OHIO STATE UNIV	S GOGINENI	GSFC	E S MOSLEY-THOMPSON	NAG 5 6817	415
39	OHIO STATE UNIV	S GOGINENI	GSFC	K C JEZEK	NAG 5 6818	415
39	OHIO STATE UNIV	S GOGINENI	GSFC	K C JEZEK	NAG 5 7286	415
39	OHIO STATE UNIV	S GOGINENI	GSFC	R R FORSTER	NAG 5 7848	415
39	OHIO STATE UNIV	S GOGINENI	HQ	D BROMWICH	NAG 5 6001	415
39	OHIO STATE UNIV	T M SCOTT	GRC	D L MORRISON	NAG 3 2412	414
39	OHIO STATE UNIV	T M SCOTT	GRC	J K KLEIN	NAG 3 2410	414

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	OHIO STATE UNIV	T M SCOTT	GRC	S DAVIS	NAG 3 2428	414
39	OKLAHOMA STATE UNIV	D E WICKLAND	GSFC	S J STADLER	NAG 5 7451	428
39	OLD DOMINION UNIV	N KHAZENIE	GSFC	E SMITH	NAG 5 4515	518
39	OREGON STATE UNIV	D E WICKLAND	GSFC	B LAW	NAG 5 7551	432
39	OREGON STATE UNIV	D E WICKLAND	GSFC	L MAHRT	NAG 5 7416	431
39	OREGON STATE UNIV	D E WICKLAND	GSFC	M H UNSWORTH	NAG 5 7531	432
39	OREGON STATE UNIV	D E WICKLAND	GSFC	R H WARING	NAG 5 7506	432
39	OREGON STATE UNIV	D E WICKLAND	GSFC	W B COHEN	NAG 5 7856	432
39	OREGON STATE UNIV	D WICKLAND	HQ	B E LAW	NAG 5 8315	432
39	OREGON STATE UNIV	E T ENGMAN	GSFC	L MAHRT	NAG 5 8601	432
39	OREGON STATE UNIV	G C GUTMAN	GSFC	D E HARMON	NAG 5 6242	431
39	OREGON STATE UNIV	G GUTMAN	GSFC	O KRANKINA	NAG 5 11250	433
39	OREGON STATE UNIV	G GUTMAN	GSFC	O N KRANKINA	NAG 5 9677	432
39	OREGON STATE UNIV	J C DODGE	GSFC	D FREILICH	NAG 5 6642	431
39	OREGON STATE UNIV	J CAMPBELL	GSFC	J R ZANEVELD	NAG 5 6647	431
39	OREGON STATE UNIV	J CAMPBELL	GSFC	K SHIFRIN	NAG 5 6530	431
39	OREGON STATE UNIV	J DODGE	GSFC	M R ABBOTT	NAG 5 8969	432
39	OREGON STATE UNIV	J MARRA	GSFC	M R ABBOTT	NAG 5 11125	433
39	OREGON STATE UNIV	M WEI	GSFC	B MATE	NGT 5 30185	434
39	OREGON STATE UNIV	M WEI	GSFC	R P DICK	NGT 5 96	434
39	OREGON STATE UNIV	M WEI	GSFC	W B COHEN	NGT 5 30214	434
39	PENN STATE UNIV	D L WILLIAMS	GSFC	W L MYERS	NAG 5 10541	448
39	PENN STATE UNIV	D WILLIAMS	GSFC	W MEYERS	NAG 5 6713	445
39	PENN STATE UNIV	E ENGMAN	GSFC	K DAVIS	NAG 5 10050	448
39	PENN STATE UNIV	E T ENGMAN	GSFC	D MILLER	NAG 5 8738	446
39	PENN STATE UNIV	J A MARRA	GSFC	R NAJJAR	NAG 5 6389	445
39	PENN STATE UNIV	J CAMPBELL	GSFC	R NAJJAR	NAG 5 6451	445
39	PENN STATE UNIV	M J IMHOFF	GSFC	G W PETERSEN	NAG 5 3856	444
39	PENN STATE UNIV	M WEI	GSFC	D PEUQUET	NGT 5 30224	451
39	PENN STATE UNIV	M WEI	GSFC	E J BARRON	NAG 5 4553	444
39	PENN STATE UNIV	M WEI	GSFC	G JENKINS	NGT 5 30420	451
39	PENN STATE UNIV	M WEI	GSFC	J VERLINDE	NGT 5 30208	451
39	PENN STATE UNIV	M WEI	GSFC	S BRANTLEY	NGT 5 30193	451
39	PENN STATE UNIV	M WEI	HQ	BRUNES	NGT 5 30139	451
39	PENN STATE UNIV	M Y WEI	GSFC	A P BARROS	NAG 5 6656	445
39	PENN STATE UNIV	M Y WEI	GSFC	R B ALLEY	NGT 5 30171	451
39	PENN STATE UNIV	P R HOUSER	GSFC	D R STAUFFER	NAG 5 8735	446
39	PENN STATE UNIV	S GOGINENI	GSFC	R ALLEY	NAG 5 7776	446
39	PORTLAND STATE UNIV	J F DOWDY	MSFC	A M FRASER	NAG 8 1283	434
39	PRAIRIE VIEW A&M UNIV	M WEI	GSFC	S H SHAKIR	NAG 5 6823	475
39	PRINCETON UNIV	D E WICKLAND	GSFC	E F WOOD	NAG 5 7297	353
39	PRINCETON UNIV	G ASRAR	GSFC	J L SARMIENTO	NAG 5 6591	352
39	PRINCETON UNIV	J DODGE	GSFC	E WOOD	NAG 5 6494	352
39	PRINCETON UNIV	J DODGE	GSFC	E WOOD	NAG 5 9414	353
39	PRINCETON UNIV	J DODGE	GSFC	E WOOD	NAG 5 9635	354
39	PRINCETON UNIV	M WEI	GSFC	A DOBSON	NGT 5 30341	355
39	PRINCETON UNIV	M WEI	GSFC	E F WOOD	NGT 5 50333	355
39	PRINCETON UNIV	M WEI	GSFC	G PHILANDER	NGT 5 30333	355
39	PRINCETON UNIV	M WEI	GSFC	J SARMIENTO	NGT 5 30356	355
39	PRINCETON UNIV	M WEI	GSFC	L RUSSELL	NAG 5 8676	353
39	PRINCETON UNIV	M Y WEI	GSFC	G PHILANDER	NGT 5 30134	355
39	PRINCETON UNIV	M Y WEI	GSFC	H LEVY	NGT 5 30137	355
39	PRINCETON UNIV	M Y WEI	GSFC	I M HELD	NGT 5 30156	355
39	PRINCETON UNIV	P DECOLA	GSFC	D L MAUZERALL	NAG 5 9810	354
39	PRINCETON UNIV	P HOUSER	GSFC	E WOOD	NAG 5 9486	353
39	PURDUE UNIV	A TUYAHOV	GSFC	B A ENGEL	NAG 5 7954	218
39	PURDUE UNIV	D E WICKLAND	GSFC	C E BRODLEY	NAG 5 6971	218
39	PURDUE UNIV	M Y WEI	GSFC	P B SHEPSON	NGT 5 30163	220
39	PURDUE UNIV	R MCKELLIP	SSC	C J JOHANNSEN	NAG 13 00001	219
39	PURDUE UNIV	T BENCIC	GRC	D A LANGREBE	NAG 5 3975	217
39	ROCHESTER INST OF TECH	B L MARKHAM	GSFC	J SCHOTT	NAG 5 11298	386
39	ROCHESTER INST OF TECH	D L WILLIAMS	GSFC	J SCHOTT	NAG 5 3443	386
39	ROCHESTER INST OF TECH	T D GUBBELS	GSFC	A VODECEK	NAG 5 10051	386
39	RUTGERS ST UNIV N	E LINSTROM	GSFC	D HAIDVOGEL	NAG 5 9847	358
39	RUTGERS ST UNIV N	E T ENGMAN	GSFC	R AVISSAR	NAG 5 8213	357
39	RUTGERS ST UNIV N	J CAMPBELL	GSFC	M J BEHRENFELD	NAG 5 7437	357



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	RUTGERS ST UNIV N	J MARRA	GSFC	A ROBECK	NAG 5 9792	358
39	RUTGERS ST UNIV N	J MARRA	GSFC	M J BEHRENFELD	NAG 5 9787	357
39	RUTGERS ST UNIV N	J MARRA	GSFC	P G FALKONSKI	NAG 5 11345	358
39	RUTGERS ST UNIV N	J MARRA	GSFC	Y GAO	NAG 5 9340	357
39	RUTGERS ST UNIV N	J W CAMPBELL	GSFC	P G FALKOWSKI	NAG 5 6982	357
39	RUTGERS ST UNIV N	P R HOUSER	GSFC	R AVISSAR	NAG 5 9746	357
39	RUTGERS STATE UNIV OF NJ COOK CAMP	K BERGMAN	GSFC	R AVISSAR	NAG 5 9359	359
39	RUTGERS STATE UNIV OF NJ NEW BRUNS	J MARRA	GSFC	P G FALKOWSKI	NAG 5 11356	359
39	SALISH KOOTENAI COLLEGE	B MEESON	GSFC	J M GOBERT	NAG 5 9368	338
39	SALISH KOOTENAI COLLEGE	N K HAZENIE	GSFC	T S OLSON	NAG 5 9102	338
39	SAN DIEGO STATE UNIV	G GUTMAN	GSFC	A HOPE	NAG 5 11141	54
39	SAN DIEGO STATE UNIV	G GUTMAN	GSFC	J FRANKLIN	NAG 5 9301	54
39	SAN DIEGO STATE UNIV	M WEI	GSFC	A S HOPE	NGT 5 30335	54
39	SAN DIEGO STATE UNIV	M Y WEI	GSFC	R MELLORS	NAG 5 8560	54
39	SAN DIEGO STATE UNIV	R MCKELLIP	JSC	D STOW	NAG13 99017	54
39	SAN FRANCISCO STATE UNIV	J W CAMPBELL	GSFC	D H ROBINSON	NAG 5 8013	55
39	SAN FRANCISCO STATE UNIV	J W MARRA	GSFC	D H ROBINSON	NAG 5 7511	55
39	SAN JOSE STATE UNIV	V VANDERBILT	ARC	P A HAMILL	NCC 2 1132	57
39	SOUTH DAKOTA SCH OF MINES & TECH	J ARNOLD	MSFC	S O FAREWELL	NAG 8 1447	466
39	SOUTH DAKOTA SCH OF MINES & TECH	M WEI	GSFC	P R ZIMMERMAN	NGT 5 30402	467
39	SOUTH DAKOTA SCH OF MINES & TECH	N KHAZENIE	GSFC	L A VIERLING	NAG 5 8973	466
39	SOUTH DAKOTA SCH OF MINES & TECH	R MCKELLIP	JSC	M PRICE	NAG13 99021	466
39	SOUTH DAKOTA STATE UNIV	B L MARKHAM	GSFC	D HELDER	NAG 5 11351	467
39	SOUTH DAKOTA STATE UNIV	D L WILLIAMS	GSFC	HELDER	NAG 5 3445	467
39	SOUTH DAKOTA STATE UNIV	DL WILLIAMS	GSFC	D HELDER	NAG 5 3540	467
39	SOUTH DAKOTA STATE UNIV	S UNGAR	GSFC	D HELDER	NCC 5 472	467
39	SOUTHERN ILLINOIS UNIV - CARBONDALE	M WEI	GSFC	N PINTER	NGT 5 50321	204
39	ST UN NY COL-ENV SCI & FORESTRY	N SOVIK	SSC	P HOPKINS	NCC13 98001	386
39	STANFORD UNIV	A KELLEY	MSFC	F CHANG	NCC 8 197	66
39	STANFORD UNIV	D E WICKLAND	GSFC	H A MOONEY	NAG 5 9862	62
39	STANFORD UNIV	J MARRA	GSFC	K ARRIGO	NAG 5 8866	62
39	STANFORD UNIV	M L IMHOFF	GSFC	M L IMHOFF	NAG 5 8563	61
39	STANFORD UNIV	M L IMHOFF	GSFC	P EHRLICH	NAG 5 9760	62
39	STANFORD UNIV	M WEI	GSFC	G W ERNST	NGT 5 30360	66
39	STANFORD UNIV	M WEI	GSFC	H ZEBKER	NGT 5 30342	66
39	STANFORD UNIV	M WEI	GSFC	M Z JACOBSON	NAG 5 8645	61
39	STANFORD UNIV	M WEI	GSFC	P M VITOUSEK	NGT 5 30216	66
39	STANFORD UNIV	M WEI	GSFC	P MATSON	NGT 5 30204	66
39	STANFORD UNIV	M Y WEI	GSFC	K SETO	NAG 5 10534	63
39	STANFORD UNIV	R H THOMAS	GSFC	D ZEBKER	NAG 5 3732	60
39	STANFORD UNIV	W ABDALATI	GSFC	H ZEBKER	NAG 5 9853	62
39	ST UN NY COL-ENV SCI & FORESTRY	N SOVIK	SSC	P HOPKINS	NAG13 01003	386
39	STATE UNIV OF NY - ALBANY	A J TUYAHOV	GSFC	P F HOPKINS	NAG 5 9676	387
39	STATE UNIV OF NY - ALBANY	D W DEERING	GSFC	D R FRITZJARRALD	NCC 5 283	387
39	STATE UNIV OF NY - BUFFALO	M BECKER	GSFC	M BECKER	NAG 5 10608	388
39	STATE UNIV OF NY - STONY BROOK	B CARLSON	GSFC	GELLER	NCC 5 126	391
39	STATE UNIV OF NY - STONY BROOK	D WICKLAND	GSFC	M LERDAU	NAG 5 6601	389
39	STATE UNIV OF NY - STONY BROOK	M WEI	GSFC	D WALISER	NGT 5 50322	391
39	STATE UNIV OF NY - STONY BROOK	N AVAILABLE	LARC	N AVAILABLE	NAS 1 96006	391
39	STATE UNIV OF NY - STONY BROOK	P DECOLA	GSFC	M A GELLER	NAG 5 9786	390
39	TEXAS A&M UNIV	D K HALL	GSFC	A KLEIN	NAG 5 9455	481
39	TEXAS A&M UNIV	D K HALL	GSFC	A KLEIN	NAG 5 10877	482
39	TEXAS A&M UNIV	G GUTMAN	GSFC	R LACEY	NAG 5 11144	482
39	TEXAS A&M UNIV	J CAMPBELL	GSFC	W D NOWLIN	NAG 5 6446	481
39	TEXAS A&M UNIV	K BERGMAN	GSFC	P CHANG	NAG 5 9409	481
39	TEXAS A&M UNIV	M WEI	GSFC	C MUNSTER	NGT 5 30408	484
39	TEXAS A&M UNIV	M WEI	GSFC	T BOUTTON	NGT 5 30211	484
39	TEXAS A&M UNIV	M Y WEI	GSFC	R ZHANG	NAG 5 8706	481
39	TEXAS A&M UNIV	S GOGINENI	GSFC	A STOESSEL	NAG 5 7751	481
39	THE SCRIPPS REASERCH INST	F E HOGE	GSFC	M VERNET	NAG 5 5191	67
39	THE SCRIPPS REASERCH INST	J DODGE	GSFC	J J SIMPSON	NAG 5 9604	67
39	THE UNIV OF CENTRAL FLORIDA	J W QUINN	KSC	D R REINHART	NAG10 301	170
39	THE UNIV OF CENTRAL FLORIDA	M COLLINS	KSC	D C COOPER	NCC10 35	170
39	TULANE UNIV	R TRAVIS	JSC	B MCKEE	NGT13 52722	237
39	TULANE UNIV	R TRAVIS	SSC	J CORBINO	NGT13 52745	237
39	U OF MD CTR FOR ENV SCI-CAMBRIDGE	A C JANETOS	GSFC	P R FISHER	NAG 5 6249	254

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	U OF MD CTR FOR ENV SCI-CAMBRIDGE	G GUTMAN	GSFC	T FISHER	NAG 5 11083	255
39	U OF MD CTR FOR ENV SCI-CAMBRIDGE	J HARDING	GSFC	L HARDING	NAG 5 6286	254
39	U OF MD CTR FOR ENV SCI-CAMBRIDGE	J MARRA	GSFC	R G HOOD	NAG 5 6387	254
39	U OF MD CTR FOR ENV SCI-CAMBRIDGE	J MARRA	GSFC	T MALONE	NAG 5 9527	254
39	U OF MD CTR FOR ENV SCI-CAMBRIDGE	J W CAMPBELL	GSFC	L W HARDING	NAG 5 7602	254
39	U OF MD CTR FOR ENV SCI-CAMBRIDGE	J W CAMPBELL	GSFC	T C MALONE	NAG 5 7455	254
39	U OF MD CTR FOR ENV SCI-CAMBRIDGE	S G UNGAR	GSFC	P A TOWNSEND	NCC 5 493	255
39	UNIV HOUSTON-HOUSTON	E K GIBSON	JSC	H S CHAFETZ	NAG 9 1103	487
39	UNIV OF MINN	D E WICKLAND	GSFC	P B REICH	NAG 5 7917	322
39	UNIV OF MINN	G GUTMAN	GSFC	J PASTOR	NAG 5 9312	323
39	UNIV OF MINN	G GUTMAN	GSFC	P BOLSTAD	NAG 5 11130	323
39	UNIV OF MINN	M KURYLO	GSFC	R W CARR	NAG 5 8869	322
39	UNIV OF MINN	M Y WEI	GSFC	E FOUFOULA-GEORGI	NAG 5 6191	322
39	UNIV OF MINN	M Y WEI	GSFC	S HOBBIE	NGT 5 30111	325
39	UNIV OF MINN	R MCKELLIP	SSC	M BAUER	NAG13 99022	324
39	UNIV OF MINN	T M SANDERS	GRC	D H PUI	NAG 3 2187	321
39	UNIV	S G UNGAR	GSFC	K C MCGWIRE	NCC 5 486	342
39	UNIV	S GOGINENI	GSFC	G L DANA	NAG 5 7870	341
39	UNIV OF AKRON	T M SCOTT	GRC	D SIEBERT	NAG 3 2444	420
39	UNIV OF ALABAMA - BIRMINGHAM	E PAYLOR	GSFC	L DELUCAS	NAG 5 8786	6
39	UNIV OF ALABAMA - BIRMINGHAM	E PAYLOR	GSFC	L DELUCAS	NAG 5 11267	6
39	UNIV OF ALABAMA - HUNTSVILLE	D L PIERCE	GSFC	J DIMMOCK	NAG 5 5273	7
39	UNIV OF ALABAMA - HUNTSVILLE	M Y WEI	GSFC	D M WELCH	NGT 5 30168	14
39	UNIV OF ALABAMA - HUNTSVILLE	R GREENWOOD	MSFC	R MCNIDER	NCC 8 141	13
39	UNIV OF ALABAMA - HUNTSVILLE	R J OLIVERSEN	GSFC	W PACIESAS	NAG 5 9045	9
39	UNIV OF ALABAMA - HUNTSVILLE	S GOGINENI	GSFC	R T MCNIDER	NAG 5 7844	8
39	UNIV OF ALABAMA - HUNTSVILLE	T BRAKE	GSFC	R WELCH	NAG 5 31718	12
39	UNIV OF ALASKA - FAIRBANKS	A JANETOS	GSFC	D MCGUIRE	NAG 5 6275	17
39	UNIV OF ALASKA - FAIRBANKS	D E WICKLAND	GSFC	A D MCGUIRE	NAG 5 9859	18
39	UNIV OF ALASKA - FAIRBANKS	D WICKLAND	GSFC	C L WILLIAMS	NAG 5 7507	17
39	UNIV OF ALASKA - FAIRBANKS	E LINDSTROM	GSFC	L MCNUTT	NAG 5 9915	18
39	UNIV OF ALASKA - FAIRBANKS	E LINDSTROM	GSFC	S R OKKONEN	NAG 5 7603	17
39	UNIV OF ALASKA - FAIRBANKS	E T ENGMAN	GSFC	S LI	NAG 5 8614	18
39	UNIV OF ALASKA - FAIRBANKS	G GUTMAN	GSFC	C WILLIAMS	NAG 5 9315	18
39	UNIV OF ALASKA - FAIRBANKS	G GUTMAN	GSFC	D MCGUIRE	NAG 5 11142	18
39	UNIV OF ALASKA - FAIRBANKS	M WEI	GSFC	S F CHAPIN	NGT 5 50324	19
39	UNIV OF ALASKA - FAIRBANKS	P J ONDRUS	GSFC	N AVAILBLE	NAG 5 98129	18
39	UNIV OF ALASKA - FAIRBANKS	R H THOMAS	GSFC	D JEFFRIES	NAG 5 4170	16
39	UNIV OF ALASKA - FAIRBANKS	S GOGINENI	GSFC	M O JEFFRIES	NAG 5 7299	17
39	UNIV OF ALASKA - FAIRBANKS	S H GOGINENI	GSFC	C LINGLE	NAG 5 4068	16
39	UNIV OF ALASKA - FAIRBANKS	S K HALL	GSFC	C S BENSON	NCC 5 379	19
39	UNIV OF ARIZONA	A TUYAHOV	GSFC	C F HUTCHINSON	NAG 5 9174	31
39	UNIV OF ARIZONA	A TUYAHOV	GSFC	D YOUNG	NAG 5 8157	30
39	UNIV OF ARIZONA	A TUYAHOV	GSFC	S E MARSH	NAG 5 8341	30
39	UNIV OF ARIZONA	B L MARKHAM	GSFC	K THOME	NAG 5 11339	36
39	UNIV OF ARIZONA	D L WILLIAMS	GSFC	C J THOME	NAG 5 3436	26
39	UNIV OF ARIZONA	D W DEERING	GSFC	A R HUETE	NAG 5 11316	36
39	UNIV OF ARIZONA	E T ENGMAN	GSFC	J W SHUTTLEWORTH	NAG 5 8214	30
39	UNIV OF ARIZONA	E WOOD	GSFC	S SOROOSHIAN	NAG 5 8503	30
39	UNIV OF ARIZONA	E Y WOOD	GSFC	S SOROOSHAIN	NAG 5 3640	26
39	UNIV OF ARIZONA	J PRIVETTE	GSFC	A HAUTE	NAG 5 8660	30
39	UNIV OF ARIZONA	M WEI	GSFC	M W WALLENDORF	NAG 5 10007	33
39	UNIV OF ARIZONA	M WEI	GSFC	R E DICKSON	NGT 5 30013	39
39	UNIV OF ARIZONA	M Y WEI	GSFC	C E GLASS	NGT 5 30148	39
39	UNIV OF ARIZONA	M Y WEI	GSFC	C HUTCHINSON	NGT 5 30140	39
39	UNIV OF ARIZONA	P R HOUSER	GSFC	W SHUTTLEWORTH	NAG 5 9796	33
39	UNIV OF ARIZONA	R H THOMAS	GSFC	V R BAKER	NAG 5 4124	26
39	UNIV OF ARIZONA	R SCHIEFFER	GSFC	S SOROOSHIAN	NAG 5 8502	30
39	UNIV OF ARIZONA	S G UNGAR	GSFC	S F BIGGAR	NCC 5 460	39
39	UNIV OF ARIZONA	S G UNGER	GSFC	A R HUETE	NCC 5 478	39
39	UNIV OF ARIZONA	S GOGINENI	GSFC	R BALES	NAG 5 6779	28
39	UNIV OF ARK MAIN CAMP - FAYETTEVILLE	J BOYCE	GSFC	P BENOIT	NAG 5 9496	41
39	UNIV OF CALIFORNIA - BERKELEY		GSFC	K BOERING	NGT 5 30424	78
39	UNIV OF CALIFORNIA - BERKELEY	A NURRIDIN	HQ	O E GRANGER	NGT 5 50223	79
39	UNIV OF CALIFORNIA - BERKELEY	D E WICKLAND	GSFC	D BALDOCCHI	NAG 5 8510	72
39	UNIV OF CALIFORNIA - BERKELEY	D E WICKLAND	GSFC	W SILVER	NCC 5 352	77

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	UNIV OF CALIFORNIA - BERKELEY	D WICKLAND	GSFC	I FUNG	NAG 5 9514	73
39	UNIV OF CALIFORNIA - BERKELEY	G ASRAR	GSFC	D G AMUNDSON	NGT 5 30044	77
39	UNIV OF CALIFORNIA - BERKELEY	G GUTMAN	GSFC	P GONG	NAG 5 9231	73
39	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	D M KAMMEN	NGT 5 30361	78
39	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	I CHAPELA	NGT 5 30351	78
39	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	R C COHEN	NGT 5 30219	78
39	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	T L BENNING	NGT 5 30183	78
39	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	W SILVER	NGT 5 50331	79
39	UNIV OF CALIFORNIA - BERKELEY	M Y WEI	GSFC	F S CHAPIN	NGT 5 50216	79
39	UNIV OF CALIFORNIA - BERKELEY	M Y WEI	GSFC	W L SILVER	NGT 5 30141	78
39	UNIV OF CALIFORNIA - BERKELEY	N KHAZENIE	GSFC	A GOULD	NAG 5 9317	73
39	UNIV OF CALIFORNIA - BERKELEY	P DECOLA	GSFC	A GOLDSTEIN	NAG 5 7173	70
39	UNIV OF CALIFORNIA - BERKELEY	P T HOUSER	GSFC	X LIANG	NAG 5 8737	72
39	UNIV OF CALIFORNIA - BERKELEY	S G UNGAR	GSFC	P GONG	NCC 5 492	77
39	UNIV OF CALIFORNIA - BERKELEY	W ABDALATI	GSFC	X LIANG	NAG 5 10673	74
39	UNIV OF CALIFORNIA - DAVIS	D E WICKLAND	GSFC	S L USTIN	NAG 5 7216	80
39	UNIV OF CALIFORNIA - DAVIS	D E WICKLAND	GSFC	S USTIN	NAG 5 9360	81
39	UNIV OF CALIFORNIA - DAVIS	D L JAN	HQ	S D COLLINS	NAG 9 1048	81
39	UNIV OF CALIFORNIA - DAVIS	M WEI	GSFC	C ANASTASIO	NGT 5 30187	83
39	UNIV OF CALIFORNIA - DAVIS	M WEI	GSFC	S USTIN	NGT 5 30352	83
39	UNIV OF CALIFORNIA - DAVIS	V C VANDERBILT	ARC	S L USTIN	NCC 2 5343	82
39	UNIV OF CALIFORNIA - IRVINE	A NURRIDIN	HQ	R J RICE	NGT 5 50226	87
39	UNIV OF CALIFORNIA - IRVINE	D DEERING	GSFC	S TRUMBORE	NCC 5 336	86
39	UNIV OF CALIFORNIA - IRVINE	D W DEERING	GSFC	M L GOULDEN	NCC 5 280	86
39	UNIV OF CALIFORNIA - IRVINE	D WICKLAND	GSFC	S TRUMBORE	NAG 5 7301	85
39	UNIV OF CALIFORNIA - IRVINE	M KURYLO	GSFC	D R BLAKE	NAG 5 8935	85
39	UNIV OF CALIFORNIA - IRVINE	M W WEI	GSFC	R J CICERONE	NGT 5 50325	87
39	UNIV OF CALIFORNIA - IRVINE	M WEI	GSFC	G MAGNUSDOTTIR	NGT 5 30203	86
39	UNIV OF CALIFORNIA - IRVINE	M WEI	GSFC	ZENDER	NAG 5 10546	85
39	UNIV OF CALIFORNIA - LOS ANGELES	E LINDSTROM	GSFC	J MCWILLIAMS	NAG 5 9860	93
39	UNIV OF CALIFORNIA - LOS ANGELES	K BERGMAN	GSFC	D J NEELIN	NAG 5 9358	92
39	UNIV OF CALIFORNIA - LOS ANGELES	M JACKSON	GSFC	J KIM	NAG 5 11363	94
39	UNIV OF CALIFORNIA - LOS ANGELES	M WEI	GSFC	A ELDERING	NAG 5 8812	91
39	UNIV OF CALIFORNIA - LOS ANGELES	M WEI	GSFC	L SMITH	NGT 5 30338	95
39	UNIV OF CALIFORNIA - LOS ANGELES	M WEI	GSFC	R P TURCO	NGT 5 30215	95
39	UNIV OF CALIFORNIA - LOS ANGELES	M WEI	GSFC	R TURCO	NGT 5 50332	95
39	UNIV OF CALIFORNIA - LOS ANGELES	M Y WEI	GSFC	K LIOU	NGT 5 30133	95
39	UNIV OF CALIFORNIA - LOS ANGELES	P R HOUSER	GSFC	Y XUE	NAG 5 9713	92
39	UNIV OF CALIFORNIA - RIVERSIDE	E T ENGMAN	GSFC	B P MOHANTY	NAG 5 8682	96
39	UNIV OF CALIFORNIA - SAN DIEGO	D E WICKLAND	GSFC	C KEELING	NAG 5 11217	102
39	UNIV OF CALIFORNIA - SAN DIEGO	D E WICKLAND	GSFC	D D KEELING	NAG 5 3528	96
39	UNIV OF CALIFORNIA - SAN DIEGO	D E WICKLANS	GSFC	R F KEELING	NAG 5 7637	99
39	UNIV OF CALIFORNIA - SAN DIEGO	E LINDSTROM	GSFC	D MILLER	NAG 5 6497	98
39	UNIV OF CALIFORNIA - SAN DIEGO	E LINDSTROM	GSFC	D STAMMER	NAG 5 8623	100
39	UNIV OF CALIFORNIA - SAN DIEGO	E LINDSTROM	GSFC	D STAMMER	NAG 5 8901	100
39	UNIV OF CALIFORNIA - SAN DIEGO	E LINDSTROM	GSFC	P NILER	NAG 5 8322	99
39	UNIV OF CALIFORNIA - SAN DIEGO	E LINSTROM	GSFC	A MILLER	NAG 5 9788	101
39	UNIV OF CALIFORNIA - SAN DIEGO	E PAYLOR	GSFC	J ROADS	NAG 5 8780	100
39	UNIV OF CALIFORNIA - SAN DIEGO	J A YODER	GSFC	R FROUIN	NAG 5 6202	98
39	UNIV OF CALIFORNIA - SAN DIEGO	J CAMPBELL	GSFC	R F KEELING	NAG 5 6668	98
39	UNIV OF CALIFORNIA - SAN DIEGO	J DODGE	GSFC	J J SIMPSON	NAG 5 9721	101
39	UNIV OF CALIFORNIA - SAN DIEGO	J W CAMPBELL	GSFC	D STRAMSKI	NAG 5 7100	98
39	UNIV OF CALIFORNIA - SAN DIEGO	J YODER	GSFC	B MITCHELL	NAG 5 6559	98
39	UNIV OF CALIFORNIA - SAN DIEGO	P DECOLA	GSFC	R F WEISS	NAG 5 8180	99
39	UNIV OF CALIFORNIA - SANTA BARBARA	A J TUYAHOV	GSFC	D C CLARKE	NAG 5 3620	106
39	UNIV OF CALIFORNIA - SANTA BARBARA	A TUYAHOV	GSFC	J E ESTES	NAG 5 10457	108
39	UNIV OF CALIFORNIA - SANTA BARBARA	D DEERING	GSFC	J MELACK	NCC 5 281	110
39	UNIV OF CALIFORNIA - SANTA BARBARA	D E WICKLAND	GSFC	D A ROBERTS	NAG 5 7248	107
39	UNIV OF CALIFORNIA - SANTA BARBARA	D W DEERING	GSFC	D A ROBERTS	NCC 5 589	110
39	UNIV OF CALIFORNIA - SANTA BARBARA	D W DEERING	GSFC	O A CHADWICK	NCC 5 282	110
39	UNIV OF CALIFORNIA - SANTA BARBARA	E KRIENS	GSFC	C GAUTIER	NAS 5 31374	109
39	UNIV OF CALIFORNIA - SANTA BARBARA	E LINDSTROM	GSFC	J C DOZIER	NAG 5 9844	108
39	UNIV OF CALIFORNIA - SANTA BARBARA	E T ENGMAN	GSFC	J SHI	NAG 5 8616	107
39	UNIV OF CALIFORNIA - SANTA BARBARA	E T ENGMAN	GSFC	T DUNNE	NAG 5 8396	107
39	UNIV OF CALIFORNIA - SANTA BARBARA	G A SHELTON	ARC	D A ROBERTS	NAG 2 1140	105
39	UNIV OF CALIFORNIA - SANTA BARBARA	J A MARRA	GSFC	R C SMITH	NAG 5 6434	107

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	UNIV OF CALIFORNIA - SANTA BARBARA	J MARRA	GSFC	D A SIEGEL	NAG 5 9818	108
39	UNIV OF CALIFORNIA - SANTA BARBARA	J W CAMPBELL	GSFC	D A SIEGEL	NAG 5 8319	107
39	UNIV OF CALIFORNIA - SANTA BARBARA	J YODER	GSFC	D SIEGEL	NAG 5 6288	106
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	D A ROBERTS	NGT 5 50327	111
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	D A SIEGEL	NGT 5 30194	110
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	D SIEGEL	NAG 5 6478	107
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	K C CLARKE	NGT 5 30201	110
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	MERTES	NGT 5 30173	110
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	O CHADWICK	NGT 5 30357	111
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	T DUNNE	NGT 5 30225	110
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	T DUNNE	NGT 5 30332	111
39	UNIV OF CALIFORNIA - SANTA BARBARA	M Y WEI	GSFC	N M MAHOWALD	NAG 5 8680	108
39	UNIV OF CALIFORNIA - SANTA BARBARA	N KHAZENIE	GSFC	C GAUTIER	NAG 5 4963	106
39	UNIV OF CALIFORNIA - SANTA BARBARA	P DECOLA	GSFC	N M MAHOWALD	NAG 5 9671	108
39	UNIV OF CALIFORNIA - SANTA BARBARA	S G UNGAR	GSFC	D A ROBERTS	NCC 5 496	110
39	UNIV OF CALIFORNIA - SANTA BARBARA	S GOGINENI	GSFC	J C DOZIER	NAG 5 4814	106
39	UNIV OF CALIFORNIA - SANTA BARBARA	T JANETOS	GSFC	T DUNNE	NAG 5 6120	106
39	UNIV OF CALIFORNIA - SANTA BARBARA	W ABDALATI	GSFC	J SHI	NAG 5 10671	108
39	UNIV OF CALIFORNIA - SANTA CRUZ	D DESMARAIS	ARC	G H RAU	NCC 2 5456	114
39	UNIV OF CALIFORNIA - SANTA CRUZ	D J DES MARAIS	ARC	G H RAU	NCC 2 5339	113
39	UNIV OF CALIFORNIA - SANTA CRUZ	J MARRA	GSFC	R KUDELA	NAG 5 8855	112
39	UNIV OF CALIFORNIA - SANTA CRUZ	J W MARRA	GSFC	R KUDELA	NAG 5 8750	112
39	UNIV OF CALIFORNIA - SANTA CRUZ	M Y WEI	GSFC	R S ANDERSON	NGT 5 30112	114
39	UNIV OF CHICAGO	E G STANSBERY	JSC	A J TUZZOLINO	NAG 9 1306	207
39	UNIV OF CINCINNATI	D E WICKLAND	GSFC	R C FROHN	NAG 5 7098	423
39	UNIV OF CINCINNATI	T SCOTT	GRC	D BECK	NAG 3 2437	423
39	UNIV OF COLORADO - BOULDER	A C JANETOS	GSFC	D A WESSMAN	NAG 5 6134	127
39	UNIV OF COLORADO - BOULDER	A	GSFC	K STEFFEN	NAG 5 10857	136
39	UNIV OF COLORADO - BOULDER	B A WIELICKI	LARC	E C WEATHERHEAD	NCC 1 01048	139
39	UNIV OF COLORADO - BOULDER	B A WIELICKI	LARC	E C	NAG 1 01081	123
39	UNIV OF COLORADO - BOULDER	D C WICKLAND	GSFC	G P ASNER	NAG 5 8320	131
39	UNIV OF COLORADO - BOULDER	D E WICKLAND	GSFC	A TOWNSEND	NAG 5 7402	129
39	UNIV OF COLORADO - BOULDER	D J KAHLE	GSFC	W EMERY	NAG 5 3847	125
39	UNIV OF COLORADO - BOULDER	D L PIERCE	WFF	W EMERY	NAG 5 5274	127
39	UNIV OF COLORADO - BOULDER	D L WILLIAMS	GSFC	A GOETZ	NAG 5 3437	125
39	UNIV OF COLORADO - BOULDER	D L WILLIAMS	GSFC	T SCAMBOS	NAG 5 3438	125
39	UNIV OF COLORADO - BOULDER	D WICKLAND	GSFC	A GOETZ	NAG 5 8912	132
39	UNIV OF COLORADO - BOULDER	E ENGMAN	GSFC	D YATES	NAG 5 7541	129
39	UNIV OF COLORADO - BOULDER	E LINDSTROM	GSFC	J MASLANIK	NAG 5 9861	134
39	UNIV OF COLORADO - BOULDER	E LINDSTROM	GSFC	J STROEVE	NAG 5 9602	134
39	UNIV OF COLORADO - BOULDER	G ASRAR	HQ	D WEISMAN	NGT 5 30026	140
39	UNIV OF COLORADO - BOULDER	G C GUTMIN	GSFC	D WEBB	NAG 5 6051	127
39	UNIV OF COLORADO - BOULDER	G GUTMAN	GSFC	C WESSMAN	NAG 5 11238	138
39	UNIV OF COLORADO - BOULDER	J C DODGE	GSFC	D EMERY	NAG 5 6521	127
39	UNIV OF COLORADO - BOULDER	J C DODGE	GSFC	D FOWLER	NAG 5 6666	128
39	UNIV OF COLORADO - BOULDER	J C DODGE	GSFC	D L ARMSTRONG	NAG 5 6636	128
39	UNIV OF COLORADO - BOULDER	J C DODGE	GSFC	W EMERY	NAG 5 10288	135
39	UNIV OF COLORADO - BOULDER	J DODGE	GSFC	G R SCHARFEN	NAG 5 9722	134
39	UNIV OF COLORADO - BOULDER	J DODGE	GSFC	P J WEBSTER	NAG 5 9404	133
39	UNIV OF COLORADO - BOULDER	J DODGE	GSFC	R ARMSTRONG	NAG 5 9412	133
39	UNIV OF COLORADO - BOULDER	J L PRIVETTE	GSFC	N KHATIB	NGT 5 93	140
39	UNIV OF COLORADO - BOULDER	J ZWALLY	GSFC	K STEFFEN	NAG 5 7466	129
39	UNIV OF COLORADO - BOULDER	J ZWALLY	GSFC	K STEFFEN	NAG 5 9692	134
39	UNIV OF COLORADO - BOULDER	K H BERGMAN	GSFC	D EVANS	NAG 5 7021	129
39	UNIV OF COLORADO - BOULDER	L MILAN	GSFC	J GILLE	NAG 5 97046	138
39	UNIV OF COLORADO - BOULDER	M WEI	GSFC	G ASNER	NGT 5 30348	141
39	UNIV OF COLORADO - BOULDER	M WEI	GSFC	J WAHR	NGT 5 50320	143
39	UNIV OF COLORADO - BOULDER	M WEI	GSFC	L M AVALLONE	NGT 5 30209	141
39	UNIV OF COLORADO - BOULDER	M WEI	GSFC	M A TOLBERT	NGT 5 30363	141
39	UNIV OF COLORADO - BOULDER	M Y WEI	GSFC	A H LYNCH	NGT 5 30170	141
39	UNIV OF COLORADO - BOULDER	M Y WEI	GSFC	B TOON	NGT 5 30155	141
39	UNIV OF COLORADO - BOULDER	M Y WEI	GSFC	G ASNER	NAG 5 8709	132
39	UNIV OF COLORADO - BOULDER	M Y WEI	GSFC	M TOLBERT	NGT 5 30136	141
39	UNIV OF COLORADO - BOULDER	P HAUSER	GSFC	M SERREZE	NAG 5 9568	133
39	UNIV OF COLORADO - BOULDER	P HOUSER	GSFC	J WAHR	NAG 5 9450	133
39	UNIV OF COLORADO - BOULDER	P R HOUSER	GSFC	T ZHANG	NAG 5 8615	131

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	UNIV OF COLORADO - BOULDER	Q A BARKER	GSFC	R G BARRY	NAS 5 98070	139
39	UNIV OF COLORADO - BOULDER	R H THOMAS	GSFC	D STEFFEN	NAG 5 4218	126
39	UNIV OF COLORADO - BOULDER	R THOMAS	GSFC	D STEFFEN	NAG 5 4248	126
39	UNIV OF COLORADO - BOULDER	S G UNGAR	GSFC	A F GOETZ	NCC 5 458	139
39	UNIV OF COLORADO - BOULDER	S G UNGAR	GSFC	G P ASNER	NCC 5 480	139
39	UNIV OF COLORADO - BOULDER	S G UNGAR	GSFC	G P ASNER	NCC 5 481	140
39	UNIV OF COLORADO - BOULDER	S GOGINENI	GSFC	A LYNCH	NAG 5 6820	128
39	UNIV OF COLORADO - BOULDER	S GOGINENI	GSFC	D CURRY	NAG 5 4901	126
39	UNIV OF COLORADO - BOULDER	S GOGINENI	GSFC	J WAHR	NAG 5 6875	128
39	UNIV OF COLORADO - BOULDER	S GOGINENI	GSFC	R G BARRY	NAG 5 4440	126
39	UNIV OF COLORADO - BOULDER	S GOGINENI	GSFC	T A SCAMBOS	NAG 5 7760	130
39	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	J STROEVE	NAG 5 10600	136
39	UNIV OF CONNECTICUT	J W MARRA	GSFC	C ROESLER	NAG 5 7654	145
39	UNIV OF CONNECTICUT	M Y WEI	GSFC	E N ANAGOSTOU	NAG 5 8636	145
39	UNIV OF DAYTON	G S OLSEN	MSFC	A J PIEKUTOWSKI	NAS 8 98216	424
39	UNIV OF DELAWARE	E LINDSTROM	GSFC	F WEBSTER	NAG 5 8556	149
39	UNIV OF DELAWARE	E LINDSTROM	GSFC	X YAN	NAG 5 7949	149
39	UNIV OF DISTRICT OF COLUMBIA	D T TOLL	GSFC	G WYCHE-MOORE	NCC 5 421	161
39	UNIV OF FLORIDA	A JOYCE	JSC	S SHIH	NGT13 52710	176
39	UNIV OF FLORIDA	D W DEERING	GSFC	H L GHOLZ	NAG 5 7559	173
39	UNIV OF FLORIDA	G GUTMAN	GSFC	M W BINFORD	NAG 5 9331	173
39	UNIV OF FLORIDA	M WEI	GSFC	J JACOBS	NAG 5 10567	173
39	UNIV OF FLORIDA	N MAYNARD	GSFC	D WOOD	NAG 5 3772	172
39	UNIV OF GEORGIA	E K GIBSON	JSC	C S ROMANEK	NAG 9 1110	191
39	UNIV OF HAWAII AT MANOA - HONOLULU	D L PIERCE	GSFC	M ATKINSON	NAG 5 5276	192
39	UNIV OF HAWAII AT MANOA - HONOLULU	D L WILLIAMS	GSFC	FLYNN	NAG 5 3451	191
39	UNIV OF HAWAII AT MANOA - HONOLULU	E D PAYLOR	GSFC	P J MOUGINIS-MARK	NAG 5 8920	195
39	UNIV OF HAWAII AT MANOA - HONOLULU	E LINDSTROM	GSFC	B QIU	NAG 5 6442	193
39	UNIV OF HAWAII AT MANOA - HONOLULU	E LINDSTROM	GSFC	J MCCREARY	NAG 5 10045	196
39	UNIV OF HAWAII AT MANOA - HONOLULU	E PAYLOR	GSFC	G J FRYER	NAG 5 8745	194
39	UNIV OF HAWAII AT MANOA - HONOLULU	E PAYLOR	GSFC	K F CHEUNG	NAG 5 8748	194
39	UNIV OF HAWAII AT MANOA - HONOLULU	E PAYLOR	GSFC	M BEVIS	NAG 5 8757	194
39	UNIV OF HAWAII AT MANOA - HONOLULU	E PAYLOR	GSFC	S BUSINGER	NAG 5 9580	196
39	UNIV OF HAWAII AT MANOA - HONOLULU	J DODGE	GSFC	L FLYNN	NAG 5 9413	196
39	UNIV OF HAWAII AT MANOA - HONOLULU	J DODGE	GSFC	T NEILSEN	NAG 5 6433	193
39	UNIV OF HAWAII AT MANOA - HONOLULU	J DODGE	HQ	T NIELSEN	NAG 5 9252	195
39	UNIV OF HAWAII AT MANOA - HONOLULU	J MARRA	GSFC	R R BIDIGARE	NAG 5 9757	196
39	UNIV OF HAWAII AT MANOA - HONOLULU	J W CAMPBELL	GSFC	M J ATKINSON	NAG 5 7513	193
39	UNIV OF HAWAII AT MANOA - HONOLULU	M WEI	GSFC	B POPP	NGT 5 30207	199
39	UNIV OF HAWAII AT MANOA - HONOLULU	M WEI	GSFC	P MOUGINIS-MARK	NGT 5 50319	199
39	UNIV OF HAWAII AT MANOA - HONOLULU	N KHAZENIE	GSFC	L P FLYNN	NAG 5 7730	193
39	UNIV OF HAWAII AT MANOA - HONOLULU	R H THOMAS	GSFC	B M DOUSSET	NAG 5 4024	192
39	UNIV OF HAWAII AT MANOA - HONOLULU	S G UNGAR	GSFC	L P FLYNN	NCC 5 461	198
39	UNIV OF HAWAII WINDWARD COMM COLL	M Y WEI	GSFC	J E CIOTTI	NAG 5 6799	199
39	UNIV OF IDAHO - MOSCOW	N KHAZENIE	GSFC	M R ODELL	NAG 5 9052	199
39	UNIV OF IDAHO - MOSCOW	P HOUSER	GSFC	R QUALLS	NAG 5 9876	199
39	UNIV OF IDAHO - MOSCOW	P R HOUSER	GSFC	R J QUALLS	NAG 5 9846	199
39	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D E WICKLAND	GSFC	D DELUCIA	NAG 5 4858	210
39	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	E T ENGMAN	GSFC	P KUMAR	NAG 5 8555	211
39	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	M WEI	GSFC	D WUEBBLES	NGT 5 50326	214
39	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	M Y WEI	GSFC	P KUMAR	NAG 5 7170	211
39	UNIV OF IOWA	E T ENGMAN	GSFC	A BRADLEY	NAG 5 8873	226
39	UNIV OF IOWA	M WEI	GSFC	G CARMICHAEL	NGT 5 30199	227
39	UNIV OF KANSAS	B DAVIS	SSC	K P PRICE	NAG13 01008	229
39	UNIV OF KANSAS	E LINDSTROM	GSFC	S GOGINENI	NAG 5 8758	229
39	UNIV OF KANSAS	E LINDSTROM	GSFC	S GOGINENI	NAG 5 9840	229
39	UNIV OF KANSAS	M Y WEI	GSFC	G S PRASAD	NGT 5 50219	230
39	UNIV OF KANSAS	R THOMAS	GSFC	D A BRAATEN	NAG 5 7053	229
39	UNIV OF MAINE - ORONO	A JANETOS	GSFC	S SADER	NAG 5 6041	238
39	UNIV OF MAINE - ORONO	C PERSON	GSFC	R RINDFUSS	NAG 5 6002	238
39	UNIV OF MAINE - ORONO	E LINDSTROM	GSFC	G HAMILTON	NAG 5 10035	238
39	UNIV OF MAINE - ORONO	G GUTMAN	GSFC	S A SADER	NAG 5 8712	238
39	UNIV OF MAINE - ORONO	J A MARRA	GSFC	A C THOMAS	NAG 5 6558	238
39	UNIV OF MAINE - ORONO	J MARRA	GSFC	A THOMAS	NAG 5 6604	238
39	UNIV OF MAINE - ORONO	J MARRA	GSFC	M PERRY	NAG 5 9959	238
39	UNIV OF MAINE - ORONO	J ZWALLY	GSFC	G S HAMILTON	NAG 5 9913	238

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	UNIV OF MAINE - ORONO	M WEI	GSFC	L M MAYER	NGT 5 30353	239
39	UNIV OF MARYLAND - COLLEGE PARK	A C JANETOS	GSFC	J TOWNSHEND	NAG 5 6282	258
39	UNIV OF MARYLAND - COLLEGE PARK	A C JANETOS	GSFC	R DEFRIES	NAG 5 8177	261
39	UNIV OF MARYLAND - COLLEGE PARK	C J TUCKER	GSFC	C J TUCKER	NAG 5 10235	265
39	UNIV OF MARYLAND - COLLEGE PARK	C J TUCKER	GSFC	C O JUSTICE	NAG 5 9892	265
39	UNIV OF MARYLAND - COLLEGE PARK	C J TUCKER	GSFC	C O JUSTICE	NAG 5 9893	265
39	UNIV OF MARYLAND - COLLEGE PARK	C J TUCKER	GSFC	D R TOWNSEND	NAG 5 10527	266
39	UNIV OF MARYLAND - COLLEGE PARK	C J TUCKER	GSFC	J R TOWNSHEND	NAG 5 4056	257
39	UNIV OF MARYLAND - COLLEGE PARK	C J TUCKER	GSFC	J TOWNSHEND	NAG 5 8575	261
39	UNIV OF MARYLAND - COLLEGE PARK	C J TUCKER	GSFC	N T LAPORTE-GOETZ	NAG 5 8789	262
39	UNIV OF MARYLAND - COLLEGE PARK	D E WICKLAND	GSFC	R E DEFRIES	NAG 5 6970	259
39	UNIV OF MARYLAND - COLLEGE PARK	D E WICKLAND	GSFC	S D PRINCE	NAG 5 6421	258
39	UNIV OF MARYLAND - COLLEGE PARK	D E WICKLAND	GSFC	S D PRINCE	NAG 5 8121	260
39	UNIV OF MARYLAND - COLLEGE PARK	D E WICKLAND	GSFC	S LIANG	NAG 5 8179	261
39	UNIV OF MARYLAND - COLLEGE PARK	D E WICKLAND	GSFC	S N GOWARD	NAG 5 7587	260
39	UNIV OF MARYLAND - COLLEGE PARK	D E WICKLAND	GSFC	S PRINCE	NAG 5 10859	266
39	UNIV OF MARYLAND - COLLEGE PARK	D L WILLIAMS	GSFC	M A FAHNSTOCK	NAG 5 3455	256
39	UNIV OF MARYLAND - COLLEGE PARK	D L WILLIAMS	GSFC	S GOWARD	NCC 5 408	270
39	UNIV OF MARYLAND - COLLEGE PARK	D L WILLIAMS	GSFC	S N GOWARD	NAG 5 3454	256
39	UNIV OF MARYLAND - COLLEGE PARK	D WICKLAND	GSFC	K KASISCHKE	NAG 5 9440	263
39	UNIV OF MARYLAND - COLLEGE PARK	E LINDSTROM	GSFC	R MURTUGUDDE	NAG 5 8263	261
39	UNIV OF MARYLAND - COLLEGE PARK	E LINSTROM	GSFC	L WANG	NAG 5 9524	263
39	UNIV OF MARYLAND - COLLEGE PARK	E PAYLOR	GSFC	B DOUGLAS	NAG 5 8613	262
39	UNIV OF MARYLAND - COLLEGE PARK	E T ENGMAN	GSFC	R T PINKER	NAG 5 8366	261
39	UNIV OF MARYLAND - COLLEGE PARK	E WOOD	GSFC	R DUBAYAH	NAG 5 8809	262
39	UNIV OF MARYLAND - COLLEGE PARK	F HALL	GSFC	K HUMMERICK	NAG 5 7536	260
39	UNIV OF MARYLAND - COLLEGE PARK	G C GUTMAN	GSFC	D DEFRIES	NAG 5 6004	258
39	UNIV OF MARYLAND - COLLEGE PARK	G C GUTMAN	GSFC	S PRINCE	NAG 5 4811	257
39	UNIV OF MARYLAND - COLLEGE PARK	G GUTMAN	GSFC	C JUSTICE	NAG 5 10858	266
39	UNIV OF MARYLAND - COLLEGE PARK	G GUTMAN	GSFC	E S KASISCHKE	NAG 5 9644	264
39	UNIV OF MARYLAND - COLLEGE PARK	G GUTMAN	GSFC	G SUN	NAG 5 9338	263
39	UNIV OF MARYLAND - COLLEGE PARK	G GUTMAN	GSFC	J R TOWNSHEND	NAG 5 9337	263
39	UNIV OF MARYLAND - COLLEGE PARK	G GUTMAN	GSFC	L ZHANQUING	NAG 5 10898	266
39	UNIV OF MARYLAND - COLLEGE PARK	G GUTMAN	GSFC	N BOCKSTAEI	NAG 5 11149	267
39	UNIV OF MARYLAND - COLLEGE PARK	G GUTMAN	GSFC	N LAPORTE	NAG 5 9319	263
39	UNIV OF MARYLAND - COLLEGE PARK	G GUTMAN	GSFC	R DEFRIES	NAG 5 9339	263
39	UNIV OF MARYLAND - COLLEGE PARK	G GUTMAN	GSFC	R DEFRIES	NAG 5 11161	267
39	UNIV OF MARYLAND - COLLEGE PARK	G GUTMAN	GSFC	S D PRINCE	NAG 5 9329	263
39	UNIV OF MARYLAND - COLLEGE PARK	G J COLLATZ	GSFC	L BOUNOUA	NAG 5 10090	265
39	UNIV OF MARYLAND - COLLEGE PARK	H OSEROFF	GSFC	C JUSTICE	NAS 5 31365	268
39	UNIV OF MARYLAND - COLLEGE PARK	J DODGE	GSFC	P ELLINGSON	NAG 5 6483	259
39	UNIV OF MARYLAND - COLLEGE PARK	J DODGE	GSFC	P PINKER	NAG 5 6667	259
39	UNIV OF MARYLAND - COLLEGE PARK	J DODGE	GSFC	R DEFRIES	NAG 5 9620	264
39	UNIV OF MARYLAND - COLLEGE PARK	J DODGE	GSFC	R DUBAYAH	NAG 5 9411	263
39	UNIV OF MARYLAND - COLLEGE PARK	J G COLLATZ	GSFC	L BOUNOUA	NAG 5 8230	261
39	UNIV OF MARYLAND - COLLEGE PARK	J JENNER	SSC	S GOWARD	NAG13 98001	268
39	UNIV OF MARYLAND - COLLEGE PARK	J MARRA	GSFC	A SUBRAMANIAN	NAG 5 11274	267
39	UNIV OF MARYLAND - COLLEGE PARK	J MARRA	GSFC	T MALONE	NAG 5 9481	263
39	UNIV OF MARYLAND - COLLEGE PARK	J RANSON	GSFC	S LIANG	NAG 5 3548	257
39	UNIV OF MARYLAND - COLLEGE PARK	J ROBINSON	GSFC	R DUBAYAH	NAS 5 97160	269
39	UNIV OF MARYLAND - COLLEGE PARK	J W CAMPBELL	GSFC	R MURTUGUDDE	NAG 5 8595	261
39	UNIV OF MARYLAND - COLLEGE PARK	K J RANSON	GSFC	G SUN	NAG 5 8764	262
39	UNIV OF MARYLAND - COLLEGE PARK	M RIENECKER	GSFC	E KALNAY	NAG 5 8528	261
39	UNIV OF MARYLAND - COLLEGE PARK	M WEI	GSFC	A DESSLER	NAG 5 8936	262
39	UNIV OF MARYLAND - COLLEGE PARK	M WEI	GSFC	E RUSSEK-COHEN	NGT 5 100	271
39	UNIV OF MARYLAND - COLLEGE PARK	M WEI	GSFC	F BAER	NGT 5 30196	271
39	UNIV OF MARYLAND - COLLEGE PARK	M WEI	GSFC	R DUBAYAH	NAG 5 6319	258
39	UNIV OF MARYLAND - COLLEGE PARK	M WEI	GSFC	R DUBAYAH	NGT 5 99	271
39	UNIV OF MARYLAND - COLLEGE PARK	M Y WEI	GSFC	A VERNEKAR	NGT 5 30142	271
39	UNIV OF MARYLAND - COLLEGE PARK	M Y WEI	GSFC	K PICKERING	NGT 5 50217	272
39	UNIV OF MARYLAND - COLLEGE PARK	P DECOLA	GSFC	A DESSLER	NAG 5 9632	264
39	UNIV OF MARYLAND - COLLEGE PARK	P DECOLA	GSFC	K E PICKERING	NAG 5 9672	264
39	UNIV OF MARYLAND - COLLEGE PARK	P HOUSER	GSFC	R DUBAYAH	NAG 5 9447	263
39	UNIV OF MARYLAND - COLLEGE PARK	P R HOUSER	GSFC	R DUBAYAH	NAG 5 9809	264
39	UNIV OF MARYLAND - COLLEGE PARK	P R HOUSER	GSFC	R T PINKER	NAG 5 9916	265
39	UNIV OF MARYLAND - COLLEGE PARK	R C HARRISS	GSFC	D TOWNSHEND	NCC 5 190	270

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	UNIV OF MARYLAND - COLLEGE PARK	R CURAN	GSFC	R T PINKER	NAG 5 9634	264
39	UNIV OF MARYLAND - COLLEGE PARK	S G UNGAR	GSFC	S LIANG	NCC 5 462	270
39	UNIV OF MARYLAND - COLLEGE PARK	S GOGINENI	GSFC	M FAHNESTOCK	NAG 5 7058	259
39	UNIV OF MARYLAND - COLLEGE PARK	S SAMADI	GSFC	A J FLAG	NCC 5 128	270
39	UNIV OF MARYLAND - COLLEGE PARK	W J WAGNER	GSFC	M R KUNDU	NAG 5 8192	261
39	UNIV OF MARYLAND BALTIMORE COUNTY	E R KREINS	GSFC	L L STROW	NAS 5 31378	275
39	UNIV OF MARYLAND BALTIMORE COUNTY	G GUTMAN	GSFC	Y SOHN	NAG 5 9645	273
39	UNIV OF MARYLAND BALTIMORE COUNTY	J DODGE	GSFC	A MEHTA	NAG 5 9707	273
39	UNIV OF MARYLAND BALTIMORE COUNTY	M KURYLO	GSFC	J M SIROTA	NAG 5 9588	273
39	UNIV OF MASSACHUSETTS - AMHERST	M KURYLO	GSFC	A PARRISH	NAG 5 9652	303
39	UNIV OF MASSACHUSETTS - AMHERST	M N ABEDIN	LARC	S K YNGVESSON	NAS 1 01058	303
39	UNIV OF MASSACHUSETTS - AMHERST	N KHAZENIE	GSFC	M STERNHEIM	NAG 5 6161	302
39	UNIV OF MASSACHUSETTS-DARTHMOUTH	D R KAHLE	GSFC	B J ROTHSCHILD	NAG 5 9752	304
39	UNIV OF MASSACHUSETTS-DARTHMOUTH	J MARRA	GSFC	J J BISAGNI	NAG 5 6605	304
39	UNIV OF MIAMI	A R TUYAHOV	GSFC	T DIXON	NAG 5 9627	177
39	UNIV OF MIAMI	J C DODGE	GSFC	P J MINNETT	NAG 5 6577	176
39	UNIV OF MIAMI	J MARRA	GSFC	R H EVANS	NAG 5 8864	176
39	UNIV OF MIAMI	J W CAMPBELL	GSFC	M DONELAN	NAG 5 8161	176
39	UNIV OF MIAMI	J YODER	GSFC	R EVANS	NAG 5 6576	176
39	UNIV OF MIAMI	M RIENECKER	GSFC	G HALIWELL	NAG 5 8229	176
39	UNIV OF MIAMI	T GUBBELS	GSFC	T DIXON	NAG 5 10928	177
39	UNIV OF MICHIGAN - ANN ARBOR	D E WICKLAND	GSFC	K SARABANDI	NAG 5 4939	312
39	UNIV OF MICHIGAN - ANN ARBOR	D W DEERING	GSFC	M C DOBSON	NCC 5 296	318
39	UNIV OF MICHIGAN - ANN ARBOR	E G STANSBERY	JSC	P O SIETZER	NAG 9 1373	316
39	UNIV OF MICHIGAN - ANN ARBOR	G GUTMAN	GSFC	D BROWN	NAG 5 11271	316
39	UNIV OF MICHIGAN - ANN ARBOR	G GUTMAN	GSFC	K BERGEN	NAG 5 11084	316
39	UNIV OF MICHIGAN - ANN ARBOR	J RANSON	GSFC	D G BROWN	NAG 5 8630	313
39	UNIV OF MICHIGAN - ANN ARBOR	J RANSON	GSFC	D G BROWN	NAG 5 8719	314
39	UNIV OF MICHIGAN - ANN ARBOR	M WEI	GSFC	J PENNER	NGT 5 30359	319
39	UNIV OF MICHIGAN - ANN ARBOR	M Y WEI	GSFC	C OLSON	NGT 5 30172	318
39	UNIV OF MICHIGAN - ANN ARBOR	P E O'NEILL	GSFC	A ENGLAND	NAG 5 10036	315
39	UNIV OF MICHIGAN - ANN ARBOR	P T HOUSER	GSFC	A W ENGLAND	NAG 5 8661	313
39	UNIV OF MICHIGAN - ANN ARBOR	R MCKELLIP	SSC	M DOBSON	NAG13 99024	316
39	UNIV OF MISSOURI - COLUMBIA	E LINDSTROM	GSFC	C DAVIS	NAG 5 8557	330
39	UNIV OF MISSOURI - COLUMBIA	E LINDSTROM	GSFC	C K WIKLE	NAG 5 8344	330
39	UNIV OF MISSOURI - COLUMBIA	R MCKELLIP	JSC	D BLANCHARD	NAG13 99014	331
39	UNIV OF MISSOURI - COLUMBIA	R MCKELLIP	SSC	D D HIPPLE	NAG13 00006	330
39	UNIV OF MISSOURI - COLUMBIA	S GOGINENI	GSFC	D KLUEVER	NAG 5 6837	330
39	UNIV OF MISSOURI - COLUMBIA	W ABDALATI	GSFC	C DAVIS	NAG 5 11081	330
39	UNIV OF MONTANA	D E WICKLAND	GSFC	S W RUNNING	NAG 5 4923	339
39	UNIV OF MONTANA	D E WICKLAND	GSFC	S W RUNNING	NCC 5 382	339
39	UNIV OF MONTANA	D WICKLAND	GSFC	S RUNNING	NAG 5 6719	339
39	UNIV OF MONTANA	E G ENGMAN	GSFC	S W RUNNING	NAG 5 8599	339
39	UNIV OF MONTANA	G GUTMAN	GSFC	J KIMBALL	NAG 5 9333	339
39	UNIV OF MONTANA	G GUTMAN	GSFC	R NEMANI	NAG 5 9332	339
39	UNIV OF MONTANA	H OSEROFF	GSFC	S W RUNNING	NAS 5 31368	339
39	UNIV OF MONTANA	M WEI	GSFC	S RUNNING	NGT 5 50329	340
39	UNIV OF MONTANA	N KHAZENIE	GSFC	J R KUGLIN	NAG 5 9062	339
39	UNIV OF NEBRASKA - LINCOLN	D C WICKLAND	GSFC	E WALTER-SHEA	NAG 5 6990	340
39	UNIV OF NEBRASKA - LINCOLN	D L WILLIAMS	GSFC	J W MERCHANT	NAG 5 3442	340
39	UNIV OF NEBRASKA - LINCOLN	S GOGINENI	GSFC	M ANDERSON	NGT 5 30175	341
39	UNIV OF NEVADA - RENO	D SENSKE	GSFC	R A SCHULTZ	NAG 5 9001	342
39	UNIV OF NEVADA - RENO	E LINDSTROM	GSFC	W M CALVIN	NAG 5 9127	342
39	UNIV OF NEVADA - RENO	M WEI	GSFC	S TYLER	NGT 5 30385	343
39	UNIV OF NEVADA - RENO	S G UNGAR	GSFC	R J WATTERS	NAG 5 9498	342
39	UNIV OF NEW HAMPSHIRE - DURHAM	A C JANETOS	GSFC	B MOORE	NAG 5 6137	346
39	UNIV OF NEW HAMPSHIRE - DURHAM	A C JANETOS	GSFC	C LI	NAG 5 7631	347
39	UNIV OF NEW HAMPSHIRE - DURHAM	D DEERING	GSFC	B MOORE III	NAG 5 8828	348
39	UNIV OF NEW HAMPSHIRE - DURHAM	D E WICKLAND	GSFC	M MARTIN	NAG 5 3527	345
39	UNIV OF NEW HAMPSHIRE - DURHAM	D E WICKLAND	GSFC	P CRILL	NCC 5 357	349
39	UNIV OF NEW HAMPSHIRE - DURHAM	D E WICKLAND	GSFC	S FROLKING	NAG 5 6623	346
39	UNIV OF NEW HAMPSHIRE - DURHAM	D E WICKLAND	GSFC	S FROLKING	NAG 5 7095	346
39	UNIV OF NEW HAMPSHIRE - DURHAM	D W DEERING	GSFC	B MOORE	NCC 5 338	349
39	UNIV OF NEW HAMPSHIRE - DURHAM	D WICKLAND	GSFC	B BRASWELL	NAG 5 6115	346
39	UNIV OF NEW HAMPSHIRE - DURHAM	D WICKLAND	GSFC	B ROCK	NAG 5 5192	345
39	UNIV OF NEW HAMPSHIRE - DURHAM	D WICKLAND	GSFC	C LI	NAG 5 6453	346

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	UNIV OF NEW HAMPSHIRE - DURHAM	D WICKLAND	GSFC	D BARTLETT	NCC 5 226	349
39	UNIV OF NEW HAMPSHIRE - DURHAM	D WICKLAND	GSFC	W SALAS	NCC 5 587	350
39	UNIV OF NEW HAMPSHIRE - DURHAM	E A LINDSTROM	GSFC	W S BROWN	NAG 5 6289	346
39	UNIV OF NEW HAMPSHIRE - DURHAM	E T ENGMAN	GSFC	C J VOROSMARTY	NAG 5 8683	347
39	UNIV OF NEW HAMPSHIRE - DURHAM	G Q GUTMAN	GSFC	X XIAO	NAG 5 11160	349
39	UNIV OF NEW HAMPSHIRE - DURHAM	J A YODER	GSFC	C VOROSMARTY	NAG 5 6452	346
39	UNIV OF NEW HAMPSHIRE - DURHAM	M WEI	GSFC	P CRILL	NGT 5 30125	350
39	UNIV OF NEW HAMPSHIRE - DURHAM	P HOUSER	GSFC	C VOROSMARTY	NAG 5 9617	348
39	UNIV OF NEW HAMPSHIRE - DURHAM	P T HOUSER	GSFC	C J VOROSMARTY	NAG 5 8443	347
39	UNIV OF NEW HAMPSHIRE - DURHAM	S G UNGAR	GSFC	M E MARTIN	NCC 5 477	349
39	UNIV OF NEW HAMPSHIRE - DURHAM	S GOGINENI	GSFC	W SALAS	NAG 5 8452	347
39	UNIV OF NEW MEXICO-ALBUQUERQUE	A C JANETOS	GSFC	C N DAHM	NAG 5 6999	364
39	UNIV OF NEW MEXICO-ALBUQUERQUE	A PEEK	SSC	S A MORAIN	NCC13 98002	366
39	UNIV OF NORTH ALABAMA	N KHAZENIE	GSFC	W R STRONG	NAG 5 9085	16
39	UNIV OF NORTH CAROLINA - CHAPEL HILL	D DEERING	GSFC	R BILSBORROW	NCC 5 295	403
39	UNIV OF NORTH CAROLINA - CHAPEL HILL	D E WICKLAND	GSFC	S C WHALEN	NAG 5 6278	402
39	UNIV OF NORTH CAROLINA - CHAPEL HILL	D W DEERING	GSFC	C S MARTENS	NCC 5 337	403
39	UNIV OF NORTH CAROLINA - CHAPEL HILL	G GUTMAN	GSFC	R RINDFUSS	NAG 5 11290	403
39	UNIV OF NORTH CAROLINA - CHAPEL HILL	P DECOLA	GSFC	R E MILLER	NAG 5 8924	403
39	UNIV OF NO CAROLINA AT WILMINGTON	J W CAMPBELL	GSFC	S D EMSLIE	NAG 5 7629	19
39	UNIV OF NO CAROLINA AT WILMINGTON	J W CAMPBELL	GSFC	S D EMSLIE	NAG 5 8114	403
39	UNIV OF NORTH DAKOTA	B A SPIERING	SSC	G A SEIESTAD	NAG13 01006	405
39	UNIV OF NORTH DAKOTA	C YUHAS	GSFC	M POELLET	NCC 5 503	405
39	UNIV OF NORTH DAKOTA	D E WICKLAND	GSFC	C A GRAINGER	NAG 5 7950	404
39	UNIV OF NORTH DAKOTA	F HASLER	GSFC	C A WOOD	NAG 5 2696	404
39	UNIV OF NORTH DAKOTA	J J COLLIER	GSFC	G A SEIELSTAD	NAG 5 3616	404
39	UNIV OF OKLAHOMA - NORMAN	M Y WEI	GSFC	K CRAWFORD	NGT 5 30151	430
39	UNIV OF OREGON - EUGENE	M WEI	GSFC	P BARTLEIN	NGT 5 50107	435
39	UNIV OF PENNSYLVANIA	M Y WEI	GSFC	H DAI	NGT 5 30165	453
39	UNIV OF PITTSBURGH	N KHAZENIE	GSFC	A A PANAH	NAG 5 6164	454
39	UNIV OF PITTSBURGH	N KHAZENIE	GSFC	A I PANAH	NAG 5 9051	455
39	UNIV OF PUERTO RICO - MAYAGUEZ	J W CAMBELL	GSFC	J CORREDOR	NAG 5 7198	557
39	UNIV OF PUERTO RICO - MAYAGUEZ	M WEI	GSFC	A J CRUZ	NGT 5 30364	557
39	UNIV OF PUERTO RICO-RIO PIEDRAS	N KHAZENIE	GSFC	I L APONTE-AVELLANE	NAG 5 9050	558
39	UNIV OF RHODE ISLAND	E LINDSTROM	GSFC	P CORNILLON	NAG 5 6320	461
39	UNIV OF RHODE ISLAND	E T ENGMAN	GSFC	Y WANG	NAG 5 8739	461
39	UNIV OF RHODE ISLAND	J CAMPBELL	GSFC	J A YODER	NAG 5 6645	461
39	UNIV OF RHODE ISLAND	J DODGE	GSFC	J YODER	NAG 5 9724	461
39	UNIV OF RHODE ISLAND	J DODGE	GSFC	P CORNILLON	NAG 5 9633	461
39	UNIV OF RHODE ISLAND	J YODER	GSFC	P M STEGMANN	NAG 5 6560	461
39	UNIV OF RHODE ISLAND	M WEI	GSFC	Y WANG	NAG 5 8829	461
39	UNIV OF SAN DIEGO	M MAIDEN	GSFC	J J SIMPSON	NCC 5 308	115
39	UNIV OF SOUTH ALABAMA	R ARNOLD	MSFC	M CARPENTER	NCC 8 161	16
39	UNIV OF SOUTH CAROLINA-COLUMBIA	A JOYCE	JSC	J JENSEN	NGT13 52712	466
39	UNIV OF SOUTH CAROLINA-COLUMBIA	D WICKLAND	GSFC	V LAKSHMI	NAG 5 9233	465
39	UNIV OF SOUTH CAROLINA-COLUMBIA	E T ENGMAN	GSFC	V LAKSHMI	NAG 5 8875	465
39	UNIV OF SOUTH CAROLINA-COLUMBIA	P T HOUSER	GSFC	V LAKSHMI	NAG 5 8837	465
39	UNIV OF SOUTH FLORIDA	D L WILLIAMS	GSFC	KARGER	NAG 5 3446	178
39	UNIV OF SOUTH FLORIDA	J DODGE	GSFC	F E MULLER-KARGER	NAG 5 8175	178
39	UNIV OF SOUTH FLORIDA	J DODGE	GSFC	F MULLER-KARGER	NAG 5 10532	178
39	UNIV OF SOUTH FLORIDA	J MARRA	GSFC	F MULLER-KARGER	NAG 5 6448	178
39	UNIV OF SOUTH FLORIDA	J MARRA	GSFC	J WALSH	NAG 5 6449	178
39	UNIV OF SOUTH FLORIDA	M WEI	GSFC	F MULLER-KARGER	NGT 5 30354	179
39	UNIV OF SOUTH FLORIDA	M Y WEI	GSFC	G T MITHCHUM	NGT 5 30143	179
39	UNIV OF SOUTH FLORIDA	M Y WEI	GSFC	J R BROOKS	NGT 5 30159	179
39	UNIV OF SOUTHERN CALIFORNIA	J CAMPBELL	GSFC	D BOGUCKI	NAG 5 8309	117
39	UNIV OF SOUTHERN CALIFORNIA	J MARRA	GSFC	D BOGUCKI	NAG 5 11218	117
39	UNIV OF SOUTHERN CALIFORNIA	J MARRA	GSFC	D CAPONE	NAG 5 8884	117
39	UNIV OF SOUTHERN CALIFORNIA	J MARRA	GSFC	R ITURRIAGA	NAG 5 9740	117
39	UNIV OF SOUTHERN CALIFORNIA	J W CAMPBELL	GSFC	B H JONES	NAG 5 8445	117
39	UNIV OF SOUTHERN MAINE	N KHAZENIE	GSFC	S M LOCKE	NAG 5 9128	239
39	UNIV OF SOUTHERN MISSISSIPPI	M THOMAS	SSC	W HAWKINS	NAG13 01005	329
39	UNIV OF TENNESSEE - CHATTANOOGA	B MEESON	GSFC	T L PATTY	NAG 5 9031	469
39	UNIV OF TENNESSEE - KNOXVILLE	B V GUYNES	MSFC	G J BUNICK	NAG 8 1568	471
39	UNIV OF TEXAS - AUSTIN	E T ENGMAN	GSFC	J S FAMIGLIETTI	NAG 5 8611	494
39	UNIV OF TEXAS - AUSTIN	M RIENECKER	GSFC	J S FAMIGLIETTI	NAG 5 8290	494



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	UNIV OF TEXAS - AUSTIN	M WEI	GSFC	J FAMIGLIETTI	NAG 5 6395	493
39	UNIV OF TEXAS - AUSTIN	M WEI	GSFC	J S FAMIGLIETTI	NGT 5 30162	498
39	UNIV OF TEXAS - AUSTIN	R FITZGERALD	GSFC	B TAPLEY	NAS 5 97213	497
39	UNIV OF TEXAS - AUSTIN	S G UNGAR	GSFC	W A WHITE	NCC 5 463	497
39	UNIV OF TEXAS - AUSTIN	S GOGINENI	GSFC	D D BLANKENSHIP	NAG 5 7910	494
39	UNIV OF TEXAS - EL PASO	J BRADEN	DFRC	V HARDER	NAG 5 6163	499
39	UNIV OF TOLEDO	D E WICKLAND	GSFC	K P CZAJKOWSKI	NAG 5 8052	426
39	UNIV OF TOLEDO	M Y WEI	GSFC	K P CZAJKOWSKI	NAG 5 8671	426
39	UNIV OF TOLEDO	T M SCOTT	GRC	D P CZAJKOWSKI	NAG 3 2409	425
39	UNIV OF UTAH	D DEERING	GSFC	J EHLERINGER	NCC 5 297	503
39	UNIV OF UTAH	D E WICKLAND	GSFC	J R EHLERINGER	NAG 5 7447	502
39	UNIV OF UTAH	E ENGMAN	GSFC	D TARBOTON	NAG 5 7521	502
39	UNIV OF UTAH	J C DODGE	GSFC	K JEZEK	NAG 5 8550	503
39	UNIV OF UTAH	M WEI	GSFC	J R EHLERINGER	NGT 5 30202	503
39	UNIV OF UTAH	M WEI	GSFC	R R FORSTER	NGT 5 30184	503
39	UNIV OF UTAH	S GOGINENI	GSFC	R FORESTER	NAG 5 7871	503
39	UNIV OF VERMONT	V C VANDERBILT	ARC	G P LIVINGSTON	NCC 2 5342	506
39	UNIV OF VERMONT	V C VANDERBILT	ARC	G P LIVINGSTON	NCC 2 5399	506
39	UNIV OF VIRGINIA	A C JANETOS	GSFC	C O JUSTICE	NAG 5 8162	524
39	UNIV OF VIRGINIA	A C JANETOS	GSFC	P DESANKER	NAG 5 6384	523
39	UNIV OF VIRGINIA	A JANETOS	GSFC	H SHUGART	NAG 5 6043	523
39	UNIV OF VIRGINIA	A JANETOS	GSFC	T SMITH	NAG 5 6351	523
39	UNIV OF VIRGINIA	C J TUCKER	GSFC	C O JUSTICE	NAG 5 8838	525
39	UNIV OF VIRGINIA	C J TUCKER	GSFC	C O JUSTICE	NAG 5 11341	526
39	UNIV OF VIRGINIA	C TUCKER	GSFC	C JUSTICE	NAG 5 7417	524
39	UNIV OF VIRGINIA	D E WICKLAND	GSFC	H H SHUGART	NAG 5 7956	524
39	UNIV OF VIRGINIA	D E WICKLAND	GSFC	H H SHUGART	NAG 5 9357	525
39	UNIV OF VIRGINIA	D E WICKLAND	GSFC	W R EMANUEL	NAG 5 8612	524
39	UNIV OF VIRGINIA	D WICKLAND	GSFC	C O JUSTICE	NAG 5 7862	524
39	UNIV OF VIRGINIA	G GUTMAN	GSFC	P V DESANKER	NAG 5 9289	525
39	UNIV OF VIRGINIA	H K RAMPRIYAN	GSFC	G D EMMITT	NAG 5 7033	523
39	UNIV OF VIRGINIA	J GRANT	GSFC	A HOWARD	NAG 5 8902	525
39	UNIV OF VIRGINIA	J PRIVETTE	GSFC	R J SWAPP	NAG 5 7266	524
39	UNIV OF VIRGINIA	J PRIVETTE	GSFC	R J SWAPP	NAG 5 10985	526
39	UNIV OF VIRGINIA	M WEI	GSFC	R SWAP	NAG 5 10606	526
39	UNIV OF VIRGINIA	M Y WEI	GSFC	J D ALBERTSON	NAG 5 8670	525
39	UNIV OF WASHINGTON	A C JANETOS	GSFC	J RICHEY	NAG 5 4712	535
39	UNIV OF WASHINGTON	A T CHANG	GSFC	L TSANG	NAG 5 4739	535
39	UNIV OF WASHINGTON	A T CHANG	GSFC	L TSANG	NAG 5 9835	539
39	UNIV OF WASHINGTON	D W DEERING	GSFC	J E RICHEY	NCC 5 345	541
39	UNIV OF WASHINGTON	D WICKLAND	GSFC	D LETTENMAIER	NAG 5 7300	537
39	UNIV OF WASHINGTON	E LINDSTROM	GSFC	A T JESSUP	NAG 5 7526	537
39	UNIV OF WASHINGTON	E LINDSTROM	GSFC	K KELLY	NAG 5 8296	537
39	UNIV OF WASHINGTON	J A CURRAN	GSFC	J M DECOSMO	NAG 5 6297	536
39	UNIV OF WASHINGTON	J A WEINMAN	GSFC	R HOUZE	NCC 5 584	541
39	UNIV OF WASHINGTON	J DODGE	GSFC	D LETTENMAIER	NAG 5 9416	538
39	UNIV OF WASHINGTON	J DODGE	GSFC	R LINDSAY	NAG 5 6493	536
39	UNIV OF WASHINGTON	J R BLOCKER	MSFC	M BAKER	NAG 8 1512	540
39	UNIV OF WASHINGTON	J W MARRA	GSFC	B FROST	NAG 5 7604	537
39	UNIV OF WASHINGTON	J ZWALLY	GSFC	C F RAYMOND	NAG 5 9906	539
39	UNIV OF WASHINGTON	K PARTINGTON	GSFC	H STERN	NAG 5 9854	539
39	UNIV OF WASHINGTON	K PATRINGTON	GSFC	D A ROTHROCK	NAG 5 9334	538
39	UNIV OF WASHINGTON	M WEI	GSFC	D P LETTENMAIER	NGT 5 30220	542
39	UNIV OF WASHINGTON	M WEI	GSFC	J M WALLACE	NGT 5 30195	542
39	UNIV OF WASHINGTON	M WEI	GSFC	S R EMERSON	NGT 5 30213	542
39	UNIV OF WASHINGTON	M WEI	GSFC	S WARREN	NGT 5 50334	543
39	UNIV OF WASHINGTON	M WEI	GSFC	T HINCKLEY	NGT 5 30343	542
39	UNIV OF WASHINGTON	M Y WEI	GSFC	J E RICHEY	NGT 5 30149	542
39	UNIV OF WASHINGTON	M Y WEI	GSFC	J E RICHEY	NGT 5 30161	542
39	UNIV OF WASHINGTON	M Y WEI	GSFC	T M HINCKLEY	NGT 5 30157	542
39	UNIV OF WASHINGTON	P HOUSER	GSFC	D LETTENMAIER	NAG 5 9454	538
39	UNIV OF WASHINGTON	S GOGINENI	GSFC	A SCHWEIGER	NAG 5 7847	537
39	UNIV OF WASHINGTON	S GOGINENI	GSFC	D A ROTHROCK	NAG 5 4375	535
39	UNIV OF WASHINGTON	S GOGINENI	GSFC	D WINEBRENNER	NAG 5 6819	536
39	UNIV OF WASHINGTON	S GOGINENI	GSFC	S MARTIN	NAG 5 6894	536
39	UNIV OF WISCONSIN - MADISON	B N HOLBEN	GSFC	E PRINS	NAG 5 4751	548

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
39	UNIV OF WISCONSIN - MADISON	D DEERING	GSFC	J FOLEY	NCC 5 335	554
39	UNIV OF WISCONSIN - MADISON	D E WICKLAND	GSFC	J A FOLEY	NAG 5 3513	548
39	UNIV OF WISCONSIN - MADISON	D E WICKLAND	GSFC	J FOLEY	NAG 5 7214	549
39	UNIV OF WISCONSIN - MADISON	D E WICKLAND	GSFC	S T GOWER	NAG 5 7298	549
39	UNIV OF WISCONSIN - MADISON	D E WICKLAND	GSFC	S T GOWER	NAG 5 8069	550
39	UNIV OF WISCONSIN - MADISON	D L PIERCE	GSFC	S ACKERMAN	NAG 5 5272	548
39	UNIV OF WISCONSIN - MADISON	D W DEERING	GSFC	J M NORMAN	NCC 5 294	554
39	UNIV OF WISCONSIN - MADISON	D WICKLAND	GSFC	J FOLLEY	NAG 5 9452	551
39	UNIV OF WISCONSIN - MADISON	E KREINS	GSFC	W L SMITH	NAS 5 31377	553
39	UNIV OF WISCONSIN - MADISON	E T ENGMAN	GSFC	D MACKAY	NAG 5 8554	550
39	UNIV OF WISCONSIN - MADISON	E T ENGMAN	GSFC	J A FOLEY	NAG 5 8597	550
39	UNIV OF WISCONSIN - MADISON	G GUTMAN	GSFC	M COE	NAG 5 11085	552
39	UNIV OF WISCONSIN - MADISON	J DODGE	GSFC	A HUANG	NAG 5 9389	551
39	UNIV OF WISCONSIN - MADISON	J DODGE	GSFC	F BRETHERTON	NAG 5 7192	549
39	UNIV OF WISCONSIN - MADISON	J DODGE	GSFC	G DIAK	NAG 5 9436	551
39	UNIV OF WISCONSIN - MADISON	M WEI	GSFC	D MACKAY	NAG 5 6535	548
39	UNIV OF WISCONSIN - MADISON	M Y WEI	GSFC	H F WANG	NGT 5 30146	554
39	UNIV OF WISCONSIN - MADISON	M Y WEI	GSFC	W BRINKMANN	NGT 5 30160	554
39	UNIV OF WISCONSIN - MADISON	N KHAZENIE	GSFC	S S LIMAYE	NAG 5 9028	550
39	UNIV OF WISCONSIN - MADISON	S GOGINENI	GSFC	J R KEY	NAG 5 8625	550
39	UNIV OF WYOMING	D E WICKLAND	GSFC	E HUNT	NAG 5 3861	555
39	UNIV OF WYOMING	M WEI	GSFC	W REINER	NGT 5 30350	556
39	UTAH STATE UNIV	J F DOWDY	MSFC	F BAKER	NGT 8 52866	506
39	UTAH STATE UNIV	S PEARSON	MSFC	J R DENNISON	NAS 8 98221	505
39	VA POLYTECH INST & ST UNIV	M WEI	GSFC	R H WYNNE	NGT 5 30198	532
39	VA POLYTECH INST & ST UNIV	M WEI	GSFC	R WYNNE	NAG 5 10548	530
39	VALPARISO UNIV	J C DODGE	GSFC	G A MORRIS	NAG 5 8490	222
39	WEST VIRGINIA UNIV	D LONGEDDY	MSFC	J G WELLS	NAG 8 1496	545
39	WEST VIRGINIA UNIV	J POE	MSFC	T MELOY	NAG 8 1494	545
39	WHEELING JESUIT UNIV	M Y WEI	GSFC	R J MEYERS	NAG 5 8628	546
39	WHEELING JESUIT UNIV	N KHAZENIE	GSFC	R MYERS	NAG 5 6961	546
39	WOODS HOLE OCEANOGRAPHIC INST	A C JANETOS	GSFC	H M SOSIK	NAG 5 7538	305
39	WOODS HOLE OCEANOGRAPHIC INST	E LINDSTROM	GSFC	R A KRISHFIELD	NAG 5 7770	305
39	WOODS HOLE OCEANOGRAPHIC INST	J MARRA	GSFC	D J MCGILLICUDDY	NAG 5 6455	304
39	WOODS HOLE OCEANOGRAPHIC INST	J MARRA	GSFC	H SOSIK	NAG 5 8868	305
39	WOODS HOLE OCEANOGRAPHIC INST	J W CAMPBELL	GSFC	H M SOSIK	NAG 5 7445	305
39	WOODS HOLE OCEANOGRAPHIC INST	M WEI	GSFC	D M GLOVER	NGT 5 30362	305
39	WOODS HOLE OCEANOGRAPHIC INST	M WEI	GSFC	H SOSIK	NGT 5 30206	305
39	YALE UNIV	G GUTMAN	GSFC	R SMITH	NAG 5 9316	147
39	YALE UNIV	J DODGE	GSFC	M ASHTON	NAG 5 9437	147
41	ALABAMA A&M UNIV	J R PRUITT	MSFC	R B LAL	NCC 8 211	2
41	ALABAMA A&M UNIV	L CHOU	MSFC	G S LIAW	NAG 8 1626	2
41	ARIZONA STATE UNIV	A CHAIT	GRC	K D SQUIRES	NAG 3 2081	19
41	ARIZONA STATE UNIV	C D WIESEMAN	LARC	A CHATTOPADYAY	NAG 1 1988	19
41	ARIZONA STATE UNIV	D R AMBUR	LARC	A CHATTOPADHYAY	NAG 1 2283	19
41	ARIZONA STATE UNIV	H MIURA	ARC	A CHATTOPADHYAY	NAG 2 908	19
41	BETHUNE - COOKMAN COLLEGE	S DUTCZAK	KSC	G W BECKLES	NAG10 195	161
41	BOWLING GREEN STATE UNIV	J L DOLCE	GRC	S BALLARD	NAS 3 99202	405
41	BROWN UNIV	H L ATKINS	LARC	C SHU	NAG 1 2070	457
41	BROWN UNIV	P C MURPHY	LARC	A E PEARSON	NAG 1 2201	457
41	CALIFORNIA INST OF TECH	J H STARNES	GSFC	W G KNAUSS	NAG 1 1975	41
41	CALIFORNIA INST OF TECH	M B TISCHER	ARC	D J BIEZAD	NAG 2 1316	41
41	CALIFORNIA POLYTECH STATE U-SAN LUIS	J ZUK	ARC	D W HALL	NCC 2 5392	50
41	CALIFORNIA POLYTECH STATE U-SAN LUIS	M B TISCHER	ARC	D J BIEZAD	NAG 2 1169	50
41	CALIFORNIA POLYTECH STATE U-SAN LUIS	M D MOORE	LARC	D HALL	NAG 1 01099	50
41	CALIFORNIA POLYTECH STATE U-SAN LUIS	M TISCHER	ARC	D J BIEZAD	NCC 2 1149	50
41	CALIFORNIA POLYTECH STATE U-SAN LUIS	S ATKINS	ARC	S HOCKADAY	NAG 2 1386	50
41	CALIFORNIA ST	K GUPTA	DFRC	W E MORTENSEN	NAG 4 171	50
41	CALIFORNIA STATE UNIV - FRESNO	J BRADEN	DFRC	S MAHANTY	NAG 4 153	51
41	CALIFORNIA STATE UNIV - FRESNO	J BRADEN	DFRC	S MAHANTY	NAG 4 172	51
41	CALIFORNIA STATE UNIV - LOS ANGELES	E L DUKE	DFRC	T ADENIKA-MORROW	NAG 4 127	51
41	CALIFORNIA STATE UNIV - LOS ANGELES	J BRADEN	DFRC	L - HSIA	NAG 4 151	51
41	CALIFORNIA STATE UNIV - LOS ANGELES	K GUPTA	DFRC	C WU	NAG 4 174	51
41	CALIFORNIA STATE UNIV - LOS ANGELES	K GUPTA	DFRC	M MIRMIRANI	NAG 4 175	51
41	CARNEGIE - MELLON UNIV	M B TISCHER	ARC	C E THORPE	NAG 2 1276	436
41	CARNEGIE - MELLON UNIV	M B TISCHER	ARC	W C MESSNER	NAG 2 1441	436

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
41	CARNEGIE - MELLON UNIV	R T BIEDRON	LARC	O GHATTAS	NAG 1 2090	436
41	CASE WESTERN RESERVE UNIV	B STEINETZ	GRC	S M PHILLIPS	NCC 3 892	408
41	CASE WESTERN RESERVE UNIV	D NG	GRC	D HAZONY	NAG 3 2243	406
41	CASE WESTERN RESERVE UNIV	M G POTAPCZUK	GRC	J D ALEXANDER	NAG 3 2581	406
41	CASE WESTERN RESERVE UNIV	S M ARNOLD	GRC	R M AIKEN	NCC 3 464	407
41	CHRISTOPHER NEWPORT UNIV	R C SINGLETERRY	LARC	K CHANG	NCC 1 01028	507
41	CHRISTOPHER NEWPORT UNIV	T E PINELLI	LARC	R CATON	NAG 1 2219	507
41	CITY UNIV OF NY CITY COLLEGE	D O DAVIS	GRC	Y ANDREOPOULOS	NAG 3 2163	367
41	CITY UNIV OF NY CITY COLLEGE	K J BREISACHER	GRC	P P HO	NAG 3 2074	367
41	CITY UNIV OF NY CITY COLLEGE	S M JOSHI	LARC	K SOBEL	NAG 1 2028	367
41	CLARKSON UNIV	C C CHAMIS	GRC	D MINNETYAN	NAG 3 2394	369
41	CLARKSON UNIV	C C CHAMIS	GRC	D MINNETYAN	NAG 3 2609	369
41	CLARKSON UNIV	C S YAO	LARC	M N GLAUSER	NGT 1 52214	369
41	CLARKSON UNIV	J JUANG	LARC	R F SCHMIT	NGT 1 52222	369
41	CLARKSON UNIV	M E HILL	GRC	D MINNETYAN	NAG 3 2393	369
41	CLEVELAND STATE UNIV	W MORALES	GRC	J E GATICA	NCC 3 876	411
41	COLLEGE OF WILLIAM AND MARY	D J JOBSON	LARC	Z RAHMAD	NCC 1 01030	508
41	COLLEGE OF WILLIAM AND MARY	J H STARNES, JR.	LARC	D M MANOS	NCC 1 356	508
41	COLLEGE OF WILLIAM AND MARY	J SOBIESKI	LARC	R K KINCAID	NAG 1 2077	507
41	COLLEGE OF WILLIAM AND MARY	J SOBIESKI	LARC	R K KINCAID	NAG 1 2320	508
41	COLLEGE OF WILLIAM AND MARY	R A HATHAWAY	LARC	M HINDERS	NGT 1 01010	508
41	COLUMBIA UNIV	J GRADY	GSFC	S M KAHN	NAS 5 98037	373
41	COLUMBIA UNIV	T GRUNER	GSFC	B CRAIG	NAG 5 8854	372
41	CORNELL UNIV	R HARMAN	GSFC	D PSIAKI	NAG 5 9612	379
41	CUYAHOGA COMM COLLEGE	F H YARRIS	GRC	R L MOSS	NAG 3 1778	412
41	DARTMOUTH COLLEGE	C M BELCASTRO	LARC	M Q PHAN	NCC 1 01045	344
41	DELFT UNIV OF TECH-NETHERLANDS	J H STARNES, JR.	LARC	J ARBOCZ	NAG 1 2129	559
41	DREXEL UNIV	C M BELCASTRO	LARC	A C LAU	NCC 1 278	441
41	DREXEL UNIV	C M BELCASTRO	LARC	B C CHANG	NAG 1 01118	440
41	DREXEL UNIV	M G POTAPCZUK	GRC	D A RUFF	NAG 3 2295	440
41	DREXEL UNIV	R R TACINA	GRC	K J CHOI	NAG 3 2212	440
41	DUKE UNIV	D E COX	LARC	K C HALL	NAG 1 01062	394
41	DUKE UNIV	R H CABELL	LARC	R L CLARK	NAG 1 01014	394
41	EAST CAROLINA UNIV	S E MASSENBERG	LARC	L TISE	NCC 1 01027	396
41	EMBRY-RIDDLE AERONAUTICAL UNIV	B J HOLMES	LARC	S HAMPTON	NCA 1 133	162
41	EMBRY-RIDDLE AERONAUTICAL UNIV	J R BURLEY	LARC	S HAMPTON	NCA 1 01003	162
41	FAYETTEVILLE STATE UNIV	S MASSENBERG	LARC	I EDWARDS	NAG 1 2227	397
41	FLA INTERNATIONAL UNIV	J NUNEZ	KSC	G ROIG	NAG10 309	163
41	FLORIDA A&M UNIV	G K YAMAUCHI	ARC	A KROTHAPALLI	NCC 2 1221	164
41	FLORIDA A&M UNIV	J C ROSS	ARC	A KROTHAPALLI	NCC 2 956	164
41	FLORIDA A&M UNIV	K GUPTA	DFRC	M ABDUDLLAH	NAG 4 164	163
41	FLORIDA A&M UNIV	M E LIVINGSTON	ARC	A KROTHAPALLI	NCC 2 1018	164
41	FLORIDA A&M UNIV	S A GORTON	LARC	F S ALVI	NAG 1 01057	163
41	FLORIDA A&M UNIV	W SELLERS	LARC	J JOHNSON	NCC 1 252	164
41	FLORIDA ATLANTIC UNIV	E ENVIA	GRC	S A GLEGG	NAG 3 2319	165
41	FLORIDA ATLANTIC UNIV	J H STARNES, JR.	LARC	T ELISHAKOFF	NAG 1 2115	165
41	FLORIDA ATLANTIC UNIV	J W POSEY	LARC	S L GLEGG	NAG 1 1993	165
41	FLORIDA STATE UNIV	E ENVIA	GRC	C TAM	NAG 3 2327	166
41	FLORIDA STATE UNIV	F FARASSAT	LARC	M Y HUSSAINI	NAG 1 01031	166
41	FLORIDA STATE UNIV	J M SEINER	LARC	M Y HUSSANI	NAG 1 1889	166
41	FLORIDA STATE UNIV	M K NORUM	LARC	A KROTHAPALLI	NAG 1 2078	166
41	FLORIDA STATE UNIV	R R ANTCLIFF	LARC	C K TAM	NAG 1 2145	166
41	FLORIDA STATE UNIV	W R WATSON	LARC	C K TAM	NCC 1 01026	168
41	FLORIDA STATE UNIV	W R WATSON	LARC	K W TAM	NAG 1 1986	166
41	GEORGE MASON UNIV	J R BURLEY	LARC	G DONOHUE	NCA 1 01004	510
41	GEORGE WASHINGTON UNIV	C A POWELL	LARC	M K MYERS	NCC 1 374	153
41	GEORGE WASHINGTON UNIV	C V ECKSTROM	LARC	R R SANDUSKY	NAG 1 1972	152
41	GEORGE WASHINGTON UNIV	D ASATO	GSFC	S A SARKANI	NCC 5 436	153
41	GEORGE WASHINGTON UNIV	E WAGGONER	LARC	J L WHITESIDES	NCC 1 384	153
41	GEORGE WASHINGTON UNIV	G S DISKIN	LARC	A D CUTLER	NCC 1 370	153
41	GEORGE WASHINGTON UNIV	J G BATTERSON	LARC	V KLEIN	NCC 1 326	153
41	GEORGE WASHINGTON UNIV	L R CLARK	LARC	H LIEBOWITZ	NCC 1 14	153
41	GEORGE WASHINGTON UNIV	M D MOORE	LARC	R R SANDUSKY	NCC 1 387	153
41	GEORGE WASHINGTON UNIV	R L YANG	LARC	J L WHITESIDES	NCC 1 47	153
41	GEORGE WASHINGTON UNIV	R T BRIGHT	LARC	H LIEBOWITZ	NCC 1 24	153
41	GEORGIA INST OF TECH	A C TRUJILLO	LARC	A R PRITCHETT	NAG 1 2014	181

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
41	GEORGIA INST OF TECH	A C TRUJILLO	LARC	A R PRITCHETT	NAG 1 01055	182
41	GEORGIA INST OF TECH	C I STATLER	ARC	D GOLDSMAN	NAG 2 1291	182
41	GEORGIA INST OF TECH	C M MEYERS	LARC	R E MCKINLEY	NAS 3 00179	185
41	GEORGIA INST OF TECH	C TUNG	ARC	L N SANKAR	NAG 2 1390	182
41	GEORGIA INST OF TECH	D THURMAN	GRC	D N MAVRIS	NAG 3 2586	183
41	GEORGIA INST OF TECH	E A PALMER	ARC	C M MITCHELL	NCC 2 961	186
41	GEORGIA INST OF TECH	G L STEFKO	GRC	O G MCGEE	NAG 3 2205	183
41	GEORGIA INST OF TECH	J F DOWDY	MSFC	J R OLDS	NGT 8 52854	188
41	GEORGIA INST OF TECH	J J HUTT	MSFC	J R OLDS	NAG 8 1597	185
41	GEORGIA INST OF TECH	J KANESHIGE	ARC	A CALIS	NGT 2 52255	187
41	GEORGIA INST OF TECH	J L RAPERS	LARC	D C SCHRAGE	NCC 2 945	186
41	GEORGIA INST OF TECH	J M LUCERO	GRC	D G MCGEE	NAG 3 2500	183
41	GEORGIA INST OF TECH	K K GUPTA	DFRC	J CORRADO	NGT 4 52405	187
41	GEORGIA INST OF TECH	L R CLARK	LARC	K K AHUJA	NAS 1 00087	185
41	GEORGIA INST OF TECH	M A MOTTER	LARC	A J CALISE	NAG 1 01117	182
41	GEORGIA INST OF TECH	M D MOORE	LARC	D N MAVRIS	NAG 1 2149	181
41	GEORGIA INST OF TECH	M E LIVINGSTON	ARC	D N MAVRIS	NCC 2 1193	186
41	GEORGIA INST OF TECH	M J AHOSMIS	ARC	S M RUFFIN	NGT 2 52266	187
41	GEORGIA INST OF TECH	M S WHALLEY	ARC	J P PRASAD	NAG 2 1418	182
41	GEORGIA INST OF TECH	N H SAIYED	GRC	D K AHULA	NAG 3 2352	183
41	GEORGIA INST OF TECH	N N MANSOUR	ARC	B ZINN	NAG 2 1488	183
41	GEORGIA INST OF TECH	P F WERCINSKI	ARC	S M RUFFIN	NGT 2 52253	187
41	GEORGIA INST OF TECH	P KOLOZIEJ	ARC	R OLDS	NCC 2 5332	186
41	GEORGIA INST OF TECH	R A LEPSCH	LARC	J R OLDS	NGT 1 52163	186
41	GEORGIA INST OF TECH	R R ANTCLIFF	LARC	K K AHUIA	NAG 1 2146	181
41	GEORGIA INST OF TECH	T K OBRIEN	LARC	E A ARMANIOS	NAG 1 2276	182
41	GEORGIA INST OF TECH	V BATTISTE	ARC	A B PRITCHETT	NAG 2 1314	182
41	GEORGIA INST OF TECH	W T HODGES	LARC	R J ENGLAR	NAG 1 2169	181
41	GEORGIA INST OF TECH	Y H YU	ARC	D P SCHRAGE	NGT 2 52274	187
41	HAMPTON UNIV	D R SCHRYER	LARC	A AKYURTLU	NAG 1 2223	511
41	HAMPTON UNIV	D W LAM	GRC	D GILLINSKY	NAG 3 2495	512
41	HAMPTON UNIV	I M BLANKSON	GRC	M GILLINSKY	NAG 3 2422	512
41	HAMPTON UNIV	J W POSEY	LARC	M H MORGAN	NAG 1 1936	510
41	HAMPTON UNIV	R A THOMPSON	LARC	D J DEPRIEST	NAG 1 01075	511
41	HAMPTON UNIV	R C STRAWN	ARC	H HU	NAG 2 1331	511
41	HOWARD UNIV	H L BELVIN	LARC	S T SMITH	NAG 1 2124	154
41	HOWARD UNIV	R R ANTOLIFF	LARC	S T SMITH	NAG 1 2148	154
41	ILLINOIS INST OF TECH	S GARG	GRC	M OZBAY	NAG 8 1723	200
41	INDIANA UNIV	G E WELSH	GRC	D NALIM	NAG 3 2325	214
41	INDIANA UNIV	M LIU	GRC	D HSU	NAG 3 2399	214
41	IOWA STATE UNIV	J BURKEN	DFRC	P LU	NCC 4 122	224
41	IOWA STATE UNIV	M G POTAPCZUK	GRC	A P ROTHMAYER	NAG 3 2571	222
41	IOWA STATE UNIV	M G POTAPCZUK	GRC	A ROTHMAYER	NAG 3 2342	222
41	IOWA STATE UNIV	R L BARTON	JSC	L M LILJEGREN	NAG 9 1184	223
41	IOWA STATE UNIV	S M JOSHI	LARC	A G KELKAR	NCC 1 01038	223
41	IOWA STATE UNIV	S M JOSHI	LARC	A G KELKAR	NCC 1 01039	223
41	IOWA STATE UNIV	S NASH-STEVENSON	MSFC	P LU	NGT 8 52895	224
41	IOWA STATE UNIV	U B MEHTA	ARC	J C TANNEHILL	NCC 2 5379	224
41	JAMES MADISON UNIV	J A WOODS-VEDELER	LARC	J R BLANDINO	NAG 1 01093	513
41	JOHNS HOPKINS UNIV	D VITABLANO	GSFC	W MOOS	NAS 5 30403	252
41	JOHNS HOPKINS UNIV	H D PERKINS	GRC	P WALTRUP	NAG 3 2569	241
41	JOHNS HOPKINS UNIV	J BRISTOW	GSFC	P A STADTER	NAG 5 8655	245
41	JOHNS HOPKINS UNIV	J BRISTOW	GSFC	P STADTER	NAG 5 8741	245
41	JOHNS HOPKINS UNIV	J BRISTOW	GSFC	P STADTER	NAG 5 9872	247
41	JOHNS HOPKINS UNIV	R R ARTCLIFF	LARC	P S LEES	NAG 1 2329	241
41	JOHNS HOPKINS UNIV	S P HUGHES	GSFC	P A STADTER	NAG 5 10562	249
41	JOHNS HOPKINS UNIV	T D SMITH	GRC	T RICE	NAG 3 2333	241
41	JOHNS HOPKINS UNIV	T D SMITH	GRC	T RICE	NAG 3 2460	241
41	JOHNS HOPKINS UNIV	I GHUNER	GSFC	H FORD	NAG 5 8862	245
41	JOHNS HOPKINS UNIV	V W JONES	GSFC	S M KRIMIGIS	NAG 5 11060	251
41	JOHNSON C	D M BLANKSON	GRC	D E MILLER	NAG 3 2300	397
41	JOHNSON C	I M BLANKSON	GRC	M F ATTIA	NAG 3 2290	397
41	KANSAS STATE UNIV	D M JOSHI	LARC	D G KELKAR	NCC 1 226	228
41	KANSAS STATE UNIV	S M JOSHI	LARC	A G KELKAR	NCC 1 348	228
41	MARY WASHINGTON COLLEGE	J C YU	LARC	C P BRITCHER	NCC 1 394	513
41	MASSACHUSETTS INST OF TECH	A K OWEN	GRC	C S TAN	NAG 3 2051	288

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
41	MASSACHUSETTS INST OF TECH	A REEHORST	GRC	R J HANSMAN	NAG 3 2178	289
41	MASSACHUSETTS INST OF TECH	B J WOOLFORD	JSC	D J NEWMAN	NAG 9 1089	297
41	MASSACHUSETTS INST OF TECH	B SRIDHAR	ARC	E FERON	NCC 2 1044	298
41	MASSACHUSETTS INST OF TECH	C C WEY	GRC	L WAITZ	NAG 3 2179	289
41	MASSACHUSETTS INST OF TECH	G J FOLLEN	GRC	R HAIMES	NAG 3 2019	288
41	MASSACHUSETTS INST OF TECH	G L STEFKO	GRC	D S TAN	NAG 3 2321	289
41	MASSACHUSETTS INST OF TECH	H K WILKIE	LARC		NAG 1 01102	287
41	MASSACHUSETTS INST OF TECH	J J ADAMCZYK	GRC	C S TAN	NAG 3 2078	288
41	MASSACHUSETTS INST OF TECH	J L THOMAS	LARC	D L DARMOTAL	NAG 1 2275	287
41	MASSACHUSETTS INST OF TECH	K BILIMORIA	ARC	E FERON	NCC 2 1209	298
41	MASSACHUSETTS INST OF TECH	K GUPTA	DFRC	J PERAIRE	NAG 4 157	289
41	MASSACHUSETTS INST OF TECH	K L BIBB	LARC	J PERAIRE	NAG 1 2122	286
41	MASSACHUSETTS INST OF TECH	K L SUDER	GRC	C S TAN	NAG 3 2101	288
41	MASSACHUSETTS INST OF TECH	L A MEYN	ARC	J P CLARKE	NAG 2 1515	288
41	MASSACHUSETTS INST OF TECH	L POVINELLI	GRC	I A WATZ	NCC 3 632	298
41	MASSACHUSETTS INST OF TECH	M B TISCHER	ARC	E FERON	NAG 2 1482	288
41	MASSACHUSETTS INST OF TECH	M BRIGHT	GRC	J PADUANO	NAG 3 2052	288
41	MASSACHUSETTS INST OF TECH	M C WALLER	LARC	J K KUCHAR	NAG 1 2189	287
41	MASSACHUSETTS INST OF TECH	M L WILBUR	LARC	C E CESNIK	NCC 1 323	297
41	MASSACHUSETTS INST OF TECH	M T PALMER	LARC	R J HANSMAN	NAG 1 1857	286
41	MASSACHUSETTS INST OF TECH	N S LIU	GRC	I A WAITZ	NAS 3 01153	297
41	MASSACHUSETTS INST OF TECH	P G MAGHAMI	LARC	D W MILLER	NAG 1 01025	287
41	MASSACHUSETTS INST OF TECH	R J OLIVERSEN	GSFC	D CHAKRABARTY	NAG 5 9185	294
41	MASSACHUSETTS INST OF TECH	R J OLIVERSEN	GSFC	V M KASPI	NAG 5 9120	293
41	MASSACHUSETTS INST OF TECH	R OLIVERSEN	GSFC	D CHARKRABARTY	NAG 5 9164	294
41	MASSACHUSETTS INST OF TECH	R OLIVERSEN	GSFC	D CHARKRABARTY	NAG 5 9184	294
41	MASSACHUSETTS INST OF TECH	R OLIVERSEN	GSFC	G ALLEN	NAG 5 9211	294
41	MASSACHUSETTS INST OF TECH	R OLIVERSEN	GSFC	G ALLEN	NAG 5 9235	294
41	MASSACHUSETTS INST OF TECH	R OLIVERSEN	GSFC	S RAPPAPORT	NAG 5 9189	294
41	MASSACHUSETTS INST OF TECH	S ATKINS	ARC	E FERON	NCC 2 1147	298
41	MASSACHUSETTS INST OF TECH	S C LOZITO	ARC	J K KUCHAR	NAG 2 1111	287
41	MASSACHUSETTS INST OF TECH	S C LOZITO	ARC	J K KUCHAR	NAG 2 1425	288
41	MASSACHUSETTS INST OF TECH	S NASH-STEVENSON	MSFC	M MARTINEZ-SANCHEZ	NGT 8 52892	300
41	MASSACHUSETTS INST OF TECH	S PAI	GRC	D M DARMOFAL	NAG 3 2320	289
41	MASSACHUSETTS INST OF TECH	T A TANG	LARC	A T PATERN	NAG 1 1978	286
41	MASSACHUSETTS INST OF TECH	T MAINE	DFRC	J D PADUANO	NCC 4 123	298
41	MASSACHUSETTS INST OF TECH	T TOBIAS	ARC	J P CLARKE	NAG 2 1272	287
41	MICHIGAN STATE UNIV	B P WILLIS	GRC	T I SHIH	NAG 3 2203	307
41	MICHIGAN STATE UNIV	D DAVIS	GRC	T SHIH	NAG 3 2234	307
41	MICHIGAN STATE UNIV	W A SILVA	LARC	B F FEENY	NAG 1 01048	306
41	MICHIGAN STATE UNIV	W M HUMPHREYS, JR.	LARC	L M HUDY	NGT 1 52216	308
41	MICHIGAN STATE UNIV	Y CHOO	GRC	T SHIH	NAG 3 2576	307
41	MICHIGAN TECHNOLOGICAL UNIV	R R TACINA	GRC	S L YANG	NAG 3 2088	308
41	MISSISSIPPI STATE UNIV	D J BAKER	LARC	M RAIS-BHANI	NAG 1 2038	327
41	MISSISSIPPI STATE UNIV	D L HUFF	GRC	J M JANUS	NAG 3 1699	327
41	MISSISSIPPI STATE UNIV	E MCFARLAND	GRC	J CHEN	NAS 3 00181	328
41	MISSISSIPPI STATE UNIV	E R MCFARLAND	GRC	D L WHITFIELD	NAG 3 1712	327
41	MISSISSIPPI STATE UNIV	J L THOMAS	LARC	D L WITFIELD	NAG 1 1990	327
41	MISSISSIPPI STATE UNIV	R C STRAWN	ARC	D L WHITFIELD	NAG 2 1232	327
41	MISSISSIPPI STATE UNIV	Y K CHOO	GRC	D THOMPSON	NAG 3 2562	327
41	MONTANA STATE UNIV	J HARRISON	LARC	V H SCHMIDT	NGT 1 01012	338
41	MONTANA STATE UNIV	P KOLODZIEJ	ARC	D CAIRNS	NCC 2 1181	338
41	NEW MEXICO STATE UNIV - LAS CRUCES	G S JONES	LARC	G A REYNOLDS	NAG 1 1868	362
41	NEW MEXICO STATE UNIV - LAS CRUCES	R S NOCK	WFF	N APPLICABLE	NAS 5 98009	363
41	NORFOLK STATE UNIV	K GUPTA	DFRC	D HULBERT	NAG 4 165	514
41	NORFOLK STATE UNIV	R A HATHAWAY	LARC	P TUCKER-HOGAN	NAG 1 2230	514
41	NORFOLK STATE UNIV	R HATHAWAY	LARC	E WILSON	NAG 1 01127	514
41	NORFOLK STATE UNIV	R HATHAWAY	LARC	P E MCNEIL	NCC 1 01057	515
41	NORTH CAROLINA A&T STATE UNIV	A BEAM	MSFC	N	NAG 8 1646	398
41	NORTH CAROLINA A&T STATE UNIV	D R REDDY	GRC	K N SHIVAKUMAR	NCC 3 576	399
41	NORTH CAROLINA A&T STATE UNIV	J BRADEN	DFRC	S CHANDRA	NAG 4 152	398
41	NORTH CAROLINA A&T STATE UNIV	K GUPTA	DFRC	A V HOMAIFAR	NAG 4 131	397
41	NORTH CAROLINA A&T STATE UNIV	K GUPTA	DFRC	D D SONG	NAG 4 211	398
41	NORTH CAROLINA A&T STATE UNIV	K GUPTA	DFRC	J CLOUSE	NAG 4 132	398
41	NORTH CAROLINA A&T STATE UNIV	K GUPTA	DFRC	S CHANDRA	NGT 4 52409	399
41	NORTH CAROLINA A&T STATE UNIV	K K GUPTA	DFRC	M HUMAN	NAG 4 118	397

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
41	NORTH CAROLINA A&T STATE UNIV	R A HATHAWAY	LARC	J D MONROE	NCC 1 01058	399
41	NORTH CAROLINA A&T STATE UNIV	R K BOGUE	DFRC	D HOMAIFAR	NCC 4 105	399
41	NORTH CAROLINA A&T STATE UNIV	R S CALLOWAY	LARC	F FERGUSON	NAG 1 2225	397
41	NORTH CAROLINA A&T STATE UNIV	S LOZITO	ARC	C NTUEN	NAG 2 1469	397
41	NORTH CAROLINA A&T STATE UNIV	W WHIGGLOW, JR.	LARC	E O DOSE	NCC 1 255	398
41	NORTH CAROLINA STATE UNIV	A C TRUJILLO	LARC	D B KABER	NAG 1 01002	399
41	NORTH CAROLINA STATE UNIV	C C POE	LARC	F G YUAN	NAG 1 1981	399
41	NORTH CAROLINA STATE UNIV	C L STREETT	LARC	S C TSYNKOV	NAG 1 01064	399
41	NORTH CAROLINA STATE UNIV	D E COX	LARC	L SILVERBERG	NGT 1 01007	401
41	NORTH CAROLINA STATE UNIV	D L RANEY	LARC	N E CHOKANI	NAG 1 01069	399
41	NORTH CAROLINA STATE UNIV	H H HAMILTON	LARC	F R DE JARNETTE	NGT 1 52172	402
41	NORTH CAROLINA STATE UNIV	H H HAMILTON	LARC	F R DEJARNETTE	NCC 1 407	401
41	NORTH CAROLINA STATE UNIV	J B ANDERS	LARC	N CHOKANI	NCC 1 01008	401
41	NORTH CAROLINA STATE UNIV	P C MURPHY	LARC	F WU	NAG 1 01119	400
41	NORTH CAROLINA STATE UNIV	P H JOHNSTON	LARC	F G YUAN	NAS 1 01082	401
41	NORTH CAROLINA STATE UNIV	R D JOSLIN	LARC	N CHOKANI	NCC 1 335	401
41	NORTH DAKOTA STATE UNIV	K GUPTA	DFRC	Y XU	NGT 4 52411	404
41	NORTH DAKOTA STATE UNIV	K K GUPTA	DFRC	Y XU	NGT 4 52424	404
41	NORTH DAKOTA STATE UNIV	M J BRENNER	DFRC	Y XU	NAG 4 209	404
41	NORTHERN ARIZONA UNIV	C TUNG	ARC	E P DUQUE	NCC 2 5429	25
41	OHIO STATE UNIV	T H GUO	GRC	K M PASSINO	NAG 3 2084	413
41	OHIO STATE UNIV	T L KANTZ	GRC	R G PARKER	NAG 3 1979	413
41	OHIO UNIV	B BREAM	GRC	J RANKIN	NAG 3 2612	419
41	OHIO UNIV	R M HUESCHEN	LARC	J M RANKIN	NCC 1 351	420
41	OKLAHOMA STATE UNIV	K GUPTA	DFRC	A ARENA	NAG 4 176	428
41	OKLAHOMA STATE UNIV	K GUPTA	DFRC	A ARENA	NGT 4 52412	429
41	OKLAHOMA STATE UNIV	K K GUPTA	DFRC	D S ARENA	NAG 4 216	428
41	OKLAHOMA STATE UNIV	K K GUPTA	DFRC	D S ARENA	NGT 4 52425	429
41	OKLAHOMA STATE UNIV	M GOLIGHTLY	JSC	S MCKEEVER	NAG 9 1332	429
41	OLD DOMINION UNIV	A G PRICE	LARC	R L ASH	NCC 1 369	519
41	OLD DOMINION UNIV	C R MCCLINTON	LARC	P BALAKUMAR	NAG 1 2100	515
41	OLD DOMINION UNIV	C YAO	LARC	O A KANDIL	NCC 1 322	518
41	OLD DOMINION UNIV	D B SHAFER	LARC	M SCERBO	NGT 1 01030	520
41	OLD DOMINION UNIV	D B SHAFER	LARC	M SCERBO	NGT 1 52236	521
41	OLD DOMINION UNIV	D B SHAFER	LARC	P HIX	NGT 1 52235	521
41	OLD DOMINION UNIV	D B SHAFER	LARC	S ZOHORIOD	NGT 1 01029	520
41	OLD DOMINION UNIV	D E REUBUSH	LARC	S W TIWARI	NAG 1 2266	516
41	OLD DOMINION UNIV	D R AMBUR	LARC	R PRABHAKARAN	NCC 1 389	519
41	OLD DOMINION UNIV	E J JOHNSON	LARC	P J KAUFFMANN	NAG 1 01097	517
41	OLD DOMINION UNIV	E J JOHNSON	LARC	P KACHROO	NAG 1 2278	516
41	OLD DOMINION UNIV	F FARASSAT	LARC	M H DUNN	NAG 1 2265	516
41	OLD DOMINION UNIV	H H HAMILTON	LARC	P BALAKUMAR	NAG 1 2297	516
41	OLD DOMINION UNIV	H L ATKINS	LARC	F HU	NAG 1 01044	517
41	OLD DOMINION UNIV	H W JARRETT III	LARC	M L SANDY	NAG 1 2315	516
41	OLD DOMINION UNIV	H W JARRETT	LARC	M L SANDY	NAG 1 01047	517
41	OLD DOMINION UNIV	J H STARNES, JR.	LARC	A K NOOR	NAG 1 01028	517
41	OLD DOMINION UNIV	J L BURT	LARC	M D LEE	NGT 1 01001	520
41	OLD DOMINION UNIV	J R COMSTOCK, JR.	LARC	M SCERBO	NGT 1 01020	520
41	OLD DOMINION UNIV	J SOBIESKI	LARC	D T NGUYEN	NGT 1 52210	521
41	OLD DOMINION UNIV	M L BLOSSER	LARC	C MEI	NAG 1 2150	515
41	OLD DOMINION UNIV	N J GROOW	LARC	C P BRITCHER	NGT 1 52171	520
41	OLD DOMINION UNIV	P A NEWMAN	LARC	A C TAYLOR	NCC 1 01015	519
41	OLD DOMINION UNIV	R A GOLUB	LARC	J TWEED	NAG 1 2289	516
41	OLD DOMINION UNIV	R A LEPSCH	LARC	R UNAL	NAG 1 01086	517
41	OLD DOMINION UNIV	R HATHAWAY	LARC	E WILSON	NAG 1 01121	517
41	OLD DOMINION UNIV	S A COOKE	LARC	M L SANDY	NCA 1 188	518
41	OLD DOMINION UNIV	S A RIZZI	LARC	C MEI	NAG 1 2294	516
41	OLD DOMINION UNIV	S E MASSENBERG	LARC	S N TIWARI	NCC 1 349	518
41	OLD DOMINION UNIV	T B GATSKI	LARC	C E GROSCH	NAG 1 2251	516
41	OLD DOMINION UNIV	T B GATSKI	LARC	C E GROSCH	NAG 1 01012	517
41	OLD DOMINION UNIV	T L TURNER	LARC	C MEI	NAG 1 2141	515
41	OLD DOMINION UNIV	W R WATSON	LARC	D T NGUYEN	NAG 1 01033	517
41	OLD DOMINION UNIV	W T FREEMAN	LARC	H P BAO	NAG 1 2195	515
41	PENN STATE UNIV	AWKERR	GSFC	E C SMITH	NGT 2 52275	451
41	PENN STATE UNIV	D P LOCKAND	LARC	P J MORRIS	NAG 1 1924	442
41	PENN STATE UNIV	H E JONES	LARC	K S BRENTNER	NCC 1 406	449

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
41	PENN STATE UNIV	J C MCARTHUR	MSFC	S PAL	NAS 8 40890	449
41	PENN STATE UNIV	J ELDRIDGE	GRC	D SINGH	NCC 3 767	450
41	PENN STATE UNIV	J F DOWDY	MSFC	G A SMITH	NGT 8 52856	452
41	PENN STATE UNIV	K L BREISACHER	GRC	V G YANG	NAG 3 2151	443
41	PENN STATE UNIV	M D DAHL	GRC	P J MORRIS	NAG 3 2328	443
41	PENN STATE UNIV	M G BALLEEN	LARC	S T KIEMARA	NGT 1 01018	450
41	PENN STATE UNIV	M G BALLIN	LARC	M D LATORELLA	NGT 1 52249	450
41	PENN STATE UNIV	M R KHORRAMI	LARC	P J MORRIS	NAG 1 01009	442
41	PENN STATE UNIV	R D BUEHRLE	LARC	V W SPARROW	NCC 1 382	449
41	PENN STATE UNIV	R R ANTOLIFF	LARC	P J MORRIS	NAG 1 2147	442
41	PENN STATE UNIV	T GUO	GRC	A RAY	NAG 3 2448	443
41	PENN STATE UNIV	T NORUM	LARC	P K MCLAUGHLIN	NGT 1 52191	450
41	PENN STATE UNIV	Y H YU	ARC	F C SMITH	NCC 2 943	450
41	PRAIRIE VIEW A&M UNIV	D GUPTA	DFRC	D K KIRBY	NAG 4 210	475
41	PRAIRIE VIEW A&M UNIV	E COX	DFRC	R WILKINS	NAG 4 148	475
41	PRINCETON UNIV	A NURRIDDIN	GSFC	L PAGE	NGT 5 50033	355
41	PRINCETON UNIV	J A FRANKLIN	ARC	H C CURTISS	NAG 2 561	352
41	PRINCETON UNIV	M B TISCHER	ARC	H C CURTIS	NAG 2 1400	352
41	PRINCETON UNIV	M RABINOWITZ	GRC	D L DRYER	NAG 3 2473	352
41	PRINCETON UNIV	P G MAGHAMI	LARC	M Q PHAN	NAG 1 2291	351
41	PRINCETON UNIV	R HARMAN	GSFC	N KASDIN	NAG 5 9748	354
41	PRINCETON UNIV	S E CLIFF	ARC	T J BAKER	NAG 2 1327	352
41	PURDUE UNIV	A NURRIDDIN	HQ	T ZWIER	NGT 5 50130	220
41	PURDUE UNIV	B T UPCHURCH	LARC	J P SULLIVAN	NAG 1 2109	216
41	PURDUE UNIV	C H CAMPBELL	JSC	S P SCHNEIDER	NAG 9 1385	219
41	PURDUE UNIV	D C JANETZKE	GRC	S FLEETER	NAG 3 2169	217
41	PURDUE UNIV	D H BUFFUM	GRC	S FLEETER	NAG 3 1730	217
41	PURDUE UNIV	D W BARTLETT	LARC	G L ROTH	NGT 1 52198	220
41	PURDUE UNIV	E MCFARLAND	GRC	D FLEETER	NAG 3 2536	217
41	PURDUE UNIV	I BLANKSON	GRC	S MURTHY	NAG 3 2413	217
41	PURDUE UNIV	J R SCOTT	GRC	A S LYRINTZIS	NAG 3 2095	217
41	PURDUE UNIV	M THARP	GRC	S MURTHY	NAG 3 2246	217
41	PURDUE UNIV	M THARP	GRC	S MURTHY	NAG 3 2532	217
41	PURDUE UNIV	R E FIELD	SSC	D HEISTER	NAG13 00008	219
41	PURDUE UNIV	S A BERRY	LARC	S P SCHNEIDER	NAG 1 01027	216
41	PURDUE UNIV	S B KOTTAPALLI	ARC	W A CROSSLEY	NAG 2 1403	217
41	PURDUE UNIV	S L PADULA	LARC	W A CROSSLEY	NAG 1 2119	216
41	PURDUE UNIV	S L PADULA	LARC	W A CROSSLEY	NAG 1 2262	216
41	PURDUE UNIV	S L PADULA	LARC	W A CROSSLEY	NAG 1 01115	216
41	PURDUE UNIV	S L PADULA	LARC	W A CROSSLEY	NCC 1 01042	219
41	PURDUE UNIV	S R KOTTAPALLI	ARC	W A CROSSLEY	NGT 2 52225	220
41	PURDUE UNIV	S R THOMAS	GRC	S MURTHY	NAG 3 2217	217
41	PURDUE UNIV	T BENCIC	GRC	D P SULLIVAN	NAG 3 2635	217
41	RENSSELAER POLYTECH INST	J SOBIESKI	LARC	P HAJELA	NAG 1 2089	384
41	RENSSELAER POLYTECH INST	J W CONNELL	LARC	J V CRIVELLO	NAG 1 1939	384
41	RICE UNIV	P J HALEY	LARC	S M KELLOGG	NGT 1 52215	479
41	RICE UNIV	R R ANTOLIFF	LARC	S S COLLIS	NAG 1 2134	476
41	SAINT LOUIS UNIV	J B GATSKI	LARC	W D THACKER	NAG 1 2253	329
41	SAINT LOUIS UNIV	T B GATSKI	LARC	W D THACKER	NCC 1 01003	329
41	SAN JOSE STATE UNIV	I C STATLER	ARC	K CORKER	NAG 2 1435	55
41	SAN JOSE STATE UNIV	M B TISCHER	ARC	K P JORDAN	NCC 2 1097	56
41	SANTA CLARA UNIV	K LUU	GSFC	C A KITTS	NAG 5 9736	58
41	SHAW UNIV	R HATHAWAY	LARC	P PIERCE RAMSEY	NAG 1 01126	402
41	SOUTHERN ILLINOIS UNIV - CARBONDALE	R TRIPATHI	LARC	J SCOTT	NGT 1 01026	204
41	SOUTHERN METHODIST UNIV	D G JOHNSON	LARC	Z CELIK-BUTLER	NAS 1 01104	480
41	SOUTHERN UNIV & A&M COLLEGE	L BERKE	GRC	R A MIRSHAMS	NAG 3 1825	235
41	SPELMAN COLLEGE	Q NGUYEN	GRC	D C CHEN	NCC 3 758	190
41	SPELMAN COLLEGE	Q NGUYEN	GRC	D CHEN	NAG 3 2486	190
41	STANFORD UNIV	D KWAK	ARC	S K LELE	NAG 2 1373	59
41	STANFORD UNIV	G A RAICHE	ARC	R K HANSON	NCC 2 5377	65
41	STANFORD UNIV	J H STARNES, JR.	LARC	F K CHANG	NAG 1 2107	59
41	STANFORD UNIV	J O BRISTOW	GSFC	R BYER	NAG 5 8802	62
41	STANFORD UNIV	K LUU	GSFC	DEBRA	NAG 5 9737	62
41	STANFORD UNIV	N MANSOUR	ARC	T J HUGHES	NCC 2 5457	66
41	STANFORD UNIV	N N MANSOUR	ARC	C T BOWMAN	NAG 2 1219	59
41	STANFORD UNIV	P KOLODZIEJ	ARC	B CANTWELL	NCC 2 5335	65

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
41	STANFORD UNIV	R A MEHTA	ARC	B J CANTWELL	NCC 2 1074	64
41	STANFORD UNIV	R D MEHTA	ARC	S M ROCK	NGT 2 52267	66
41	STANFORD UNIV	R R ANTCLIFF	LARC	I KROO	NAG 1 2144	59
41	STANFORD UNIV	S P SHARMA	ARC	M A CAPPELLI	NCC 2 5352	65
41	STANFORD UNIV	U B MANTA	ARC	R W MACCORMICK	NCC 2 5444	65
41	STATE UNIV OF NY - BINGHAMTON	C M BELCASTRO	LARC	N WU	NCC 1 336	387
41	STATE UNIV OF NY - BUFFALO	C TUNG	ARC	G LEE	NAG 2 1429	387
41	STATE UNIV OF NY - BUFFALO	J SOBIESKI	LARC	K E LEWIS	NGT 1 52185	388
41	STATE UNIV OF NY COL	D A QUINN	GSFC	J CRASSIDIS	NAG 5 11331	392
41	SYRACUSE UNIV	C B MCGINLEY	LARC	M A KEGERISE	NGT 1 52169	393
41	SYRACUSE UNIV	D A POVINELLI	GRC	D LAGRAFF	NAG 3 2419	392
41	SYRACUSE UNIV	D ASHPIS	GRC	D E LAGRAFF	NAG 3 2309	392
41	SYRACUSE UNIV	J R WOOD	GRC	T DANG	NAG 3 2089	392
41	TEXAS A&M UNIV	B A SINGER	LARC	S GIRIMAJI	NAG 1 01005	480
41	TEXAS A&M UNIV	D ASHPIS	GRC	I SCHOBELI	NCC 3 793	483
41	TEXAS A&M UNIV	G D BADHWAR	JSC	L A BRABY	NAS 9 99096	483
41	TEXAS A&M UNIV	G T MONTAGUE	GRC	B D PALAZZOLO	NCC 3 762	483
41	TEXAS A&M UNIV	L MARKLEY	GSFC	D L JUNKINS	NCC 5 448	484
41	TEXAS A&M UNIV	M J WALSH	LARC	O K REDINIOTIS	NAG 1 01015	480
41	TEXAS A&M UNIV	R J BOYLE	GRC	J C HAN	NAG 3 2002	480
41	TEXAS A&M UNIV	R L THOM	MSFC	L SAN ANDREAS	NAG 8 1395	482
41	TEXAS A&M UNIV	R LIND	DFRC	D STRGANAC	NAG 4 212	481
41	TEXAS A&M UNIV	S G LABBE	JSC	J L MARTINEZ	NAS 9 97002	483
41	TEXAS A&M UNIV	S R MONDAY	JSC	J L VALASEK	NAG 9 1231	482
41	THE CATHOLIC UNIV OF AMERICA	D J WING	LARC	R PARASUROMA	NGT 1 01028	161
41	THE CATHOLIC UNIV OF AMERICA	R MOGFORD	ARC	R PARASURAMAN	NCC 2 1247	160
41	TUSKEGEE UNIV	K A NORLIN	DFRC	S FIRASAT ALI	NAG 4 169	4
41	TUSKEGEE UNIV	K NORLIN	DFRC	D ALI	NAG 4 203	5
41	TUSKEGEE UNIV	M W KEHOE	DFRC	H A AGLAN	NAG 4 201	5
41	UNIV OF MINN	C M BELCASTRO	LARC	G J BALAS	NCC 1 337	324
41	UNIV OF MINN	J F ROBINSON	ARC	Y J ZHAO	NAG 2 1470	321
41	UNIV OF MINN	J OLEJNICZAK	ARC	G V CANDLER	NCC 2 5393	324
41	UNIV OF MINN	M S WHALLEY	ARC	Y J ZHAO	NAG 2 1428	320
41	UNIV OF MINN	M STEPHENSON	DFRC	G J BAIAS	NAG 4 205	321
41	UNIV OF MINN	P JORGENSON	GRC	G V CANDLER	NCC 3 754	325
41	UNIV OF MINN	R T CHEN	ARC	Y ZHAO	NCC 2 809	324
41	UNIV OF MINN	S GARG	GRC	W L GARRARD	NAG 3 1975	321
41	UNIV OF MINN	S R MUNDY	JSC	G J BALAS	NAG 9 1222	324
41	UNIV OF MINN	T J DAVIS	ARC	Y ZHAO	NCC 2 990	324
41	UNIV OF AKRON	E ENVIA	GRC	S SAWYER	NAG 3 2312	420
41	UNIV OF AKRON	E ENVIA	GRC	S SAWYER	NAG 3 2537	421
41	UNIV OF AKRON	J SCOTT	GRC	K KREIDER	NCC 3 765	421
41	UNIV OF AKRON	S M ARNOLD	GRC	A F SALEEB	NAG 3 1747	420
41	UNIV OF AKRON	S M ARNOLD	GRC	A F SALEEB	NCC 3 441	421
41	UNIV OF AKRON	S M ARNOLD	GRC	A F SALEEB	NCC 3 808	422
41	UNIV OF ALABAMA - BIRMINGHAM	S LIDE	MSFC	L J DELUCAS	NCC 8 126	6
41	UNIV OF ALABAMA - HUNTSVILLE	B A SINGER	LARC	K FRENDI	NAG 1 01008	7
41	UNIV OF ALABAMA - HUNTSVILLE	G W JOHNSON	MSFC	R FORK	NAG 8 1815	12
41	UNIV OF ALABAMA - HUNTSVILLE	J DOWDY	MSFC	S WU	NGT 8 52882	14
41	UNIV OF ALABAMA - HUNTSVILLE	J R PRUITT	MSFC	C R KARR	NCC 8 213	14
41	UNIV OF ALABAMA - HUNTSVILLE	S RUSSELL	MSFC	G WORKMAN	NAG 8 1548	12
41	UNIV OF ALABAMA - UNIV	A NURRIDIN	HQ	M	NGT 5 50129	16
41	UNIV OF ALABAMA - UNIV	C DILL	MSFC	T ZEILER	NAG 8 1422	15
41	UNIV OF ALABAMA - UNIV	I C STATLER	ARC	D B BROWN	NAG 2 1290	14
41	UNIV OF ALABAMA - UNIV	K GUPTA	DFRC	R E SMITH	NGT 4 52403	16
41	UNIV OF ARIZONA	B A SINGER	LARC	H F FASEL	NGT 1 52206	39
41	UNIV OF ARIZONA	D R AMBUR	LARC	E MADENCI	NAG 1 2317	25
41	UNIV OF ARIZONA	G A RAICHE	ARC	K R SRIDHAR	NCC 2 5385	38
41	UNIV OF ARIZONA	J E FINN	ARC	K R SRIDHAR	NGT 2 52268	39
41	UNIV OF ARIZONA	J H STARNES	LARC	E MADENCI	NAG 1 2041	25
41	UNIV OF ARIZONA	J M BOYCE	GSFC	A L SPRAGUE	NAG 5 11166	36
41	UNIV OF ARIZONA	K GUPTA	SSC	H F FASEL	NGT 4 52408	39
41	UNIV OF ARIZONA	M H KAISS	ARC	K R SRIDHAR	NCC 2 5316	38
41	UNIV OF ARKANSAS - LITTLE ROCK	A JOYCE	SSC	C MEADORS	NGT13 52718	41
41	UNIV OF CALIFORNIA - BERKELEY	A NURRIDIN	HQ	CHARLES	NGT 5 50061	78
41	UNIV OF CALIFORNIA - BERKELEY	A NURRIDIN	HQ	D PACKARD	NGT 5 50066	78



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
41	UNIV OF CALIFORNIA - BERKELEY	D A DURSTON	ARC	O SAVAS	NCC 2 5461	77
41	UNIV OF CALIFORNIA - BERKELEY	F CARADONNA	ARC	O SAVAS	NCC 2 5388	76
41	UNIV OF CALIFORNIA - BERKELEY	P F WERCINSKI	ARC	G T CHAPMAN	NCC 2 5334	76
41	UNIV OF CALIFORNIA - BERKELEY	R R TACINA	GRC	R DIBBLE	NAG 3 2103	68
41	UNIV OF CALIFORNIA - DAVIS	B J BACON	GSFC	R A HESS	NCC 1 345	81
41	UNIV OF CALIFORNIA - DAVIS	C M FREMAUX	LARC	C P VAN DAM	NCC 1 01007	81
41	UNIV OF CALIFORNIA - DAVIS	D KWAK	ARC	M HAFEZ	NCC 2 1011	82
41	UNIV OF CALIFORNIA - DAVIS	D L DIETRICH	GRC	C P VAN DAM	NCC 4 120	83
41	UNIV OF CALIFORNIA - DAVIS	D T TRAN	ARC	R A	NCC 2 5425	82
41	UNIV OF CALIFORNIA - DAVIS	D TRAN	ARC	R A HESS	NCC 2 5369	82
41	UNIV OF CALIFORNIA - DAVIS	D W BANKS	DFRC	C VAN DAM	NCC 4 151	83
41	UNIV OF CALIFORNIA - DAVIS	E N DUQUE	ARC	C P VANDAM	NCC 2 5308	82
41	UNIV OF CALIFORNIA - DAVIS	K R SACKSTEDER	GRC	Z A MUNIR	NCC 3 872	83
41	UNIV OF CALIFORNIA - DAVIS	L S SROUE	ARC	R A HESS	NCC 2 1131	82
41	UNIV OF CALIFORNIA - DAVIS	M B TISCHER	ARC	R HESS	NCC 2 1183	82
41	UNIV OF CALIFORNIA - DAVIS	M V FULTON	ARC	C P VANDAM	NCC 2 5406	82
41	UNIV OF CALIFORNIA - DAVIS	P A GELHAUSEN	LARC	C P VAN DAM	NAG 1 01045	79
41	UNIV OF CALIFORNIA - DAVIS	P A GELHAUSEN	LARC	C P VAN-DAM	NAG 1 2215	79
41	UNIV OF CALIFORNIA - IRVINE	C O LEE	DFRC	K D MEASE	NAG 4 217	84
41	UNIV OF CALIFORNIA - IRVINE	J CARTER	DFRC	K MEASE	NAG 4 166	84
41	UNIV OF CALIFORNIA - IRVINE	J M SEINER	LARC	D PAPAMOSCHOU	NAG 1 2104	84
41	UNIV OF CALIFORNIA - LOS ANGELES	A RUSSO	GSFC	R J STRANGEWAY	NAS 5 00247	94
41	UNIV OF CALIFORNIA - LOS ANGELES	D KWAK	ARC	J B FREUND	NAG 2 1324	87
41	UNIV OF CALIFORNIA - LOS ANGELES	G A SOFFEN	GSFC	J L SPEYER	NGT 5 112	95
41	UNIV OF CALIFORNIA - LOS ANGELES	G L SPEYER	DFRC	J L SPEYER	NAS 4 00051	94
41	UNIV OF CALIFORNIA - LOS ANGELES	J BRIDGES	GRC	J B FREUND	NAG 3 2344	88
41	UNIV OF CALIFORNIA - LOS ANGELES	J CARPENTER	GSFC	J SPEYER	NAG 5 8694	91
41	UNIV OF CALIFORNIA - LOS ANGELES	J S RAJA	LARC	S N ATTURE	NAG 1 01082	87
41	UNIV OF CALIFORNIA - LOS ANGELES	L TOBIAS	ARC	J L SPEYER	NAG 2 1484	87
41	UNIV OF CALIFORNIA - LOS ANGELES	R G BRYANT	LARC	G CARMEN	NGT 1 01039	95
41	UNIV OF CALIFORNIA - SAN DIEGO	K K GUPTA	DFRC	R D CALLAFON	NGT 4 52429	104
41	UNIV OF CALIFORNIA - SAN DIEGO	S M CASNER	ARC	E L HUTCHINS	NAG 2 1313	96
41	UNIV OF CALIFORNIA - SANTA BARBARA	K GUPTA	SSC	J C BRUCH	NGT 4 52407	110
41	UNIV OF CALIFORNIA - SANTA BARBARA	K K GUPTA	DFRC	H YANG	NGT 4 52428	110
41	UNIV OF CALIFORNIA - SANTA BARBARA	K K KUPTA	DFRC	H T YANG	NGT 4 52423	110
41	UNIV OF CINCINNATI	D FOLTA	GSFC	T WILLIAMS	NAG 5 10384	423
41	UNIV OF CINCINNATI	G L COLE	GRC	M SAJBEN	NAG 3 2087	422
41	UNIV OF CINCINNATI	P K MCCONNAUGHEY	MSFC	K N GHIA	NGT 8 52801	424
41	UNIV OF CINCINNATI	R R TACINA	GRC	S JENG	NAG 3 2462	423
41	UNIV OF CINCINNATI	R R TACINA	GRC	S M JENG	NAG 3 1987	422
41	UNIV OF CINCINNATI	T J DAVIS	ARC	G L SLATER	NCC 2 1139	423
41	UNIV OF COLORADO - BOULDER	C PARRA	JSC	L PETERSON	NCC 9 65	140
41	UNIV OF COLORADO - BOULDER	J LEITNER	GSFC	P AXELRAD	NAG 5 8697	131
41	UNIV OF COLORADO - BOULDER	R WHEELER	KSC	D HOEHN	NGT10 52624	143
41	UNIV OF COLORADO - BOULDER	S J KATZBERG	LARC		NAG 1 1927	123
41	UNIV OF COLORADO - BOULDER	S J KATZBERG	LARC	M J ARMATYS	NGT 1 52182	140
41	UNIV OF COLORADO AT COL SPRINGS	T F ROMER	ARC	P J GORDOR	NCC 2 1176	143
41	UNIV OF CONNECTICUT	J H ROBINSON	LARC	K D MURPHY	NAG 1 01113	144
41	UNIV OF FLORIDA	A E WASHBURN	LARC	M SHEPLAK	NCC 1 01060	174
41	UNIV OF FLORIDA	D DETROYE	GSFC	H CAMPINS	NGT 5 50021	175
41	UNIV OF FLORIDA	D H RUDY	LARC	R MEI	NAG 1 2092	171
41	UNIV OF FLORIDA	D R AMBUR	LARC	B V SANKAR	NAG 1 2232	171
41	UNIV OF FLORIDA	G H KLOPTER	ARC	R T HAITKA	NAG 2 1179	172
41	UNIV OF FLORIDA	J H STARNES, JR.	LARC	R T HAFTKA	NAG 1 2177	171
41	UNIV OF FLORIDA	J M HOUSNER	LARC	A L KURDILA	NAG 1 2060	171
41	UNIV OF FLORIDA	K BLANDING	GSFC	S DERMOTT	NGT 5 50031	175
41	UNIV OF FLORIDA	K K TEDJOJONO	LARC	M SHEPHERD	NGT 1 52233	175
41	UNIV OF FLORIDA	K K TEDJOJUWONS	LARC	M SHEPLAK	NGT 1 01022	175
41	UNIV OF FLORIDA	K TUCKER	MSFC	W SHYY	NAG 8 1742	174
41	UNIV OF FLORIDA	M R WASZAK	LARC	P G IFJU	NCC 1 397	174
41	UNIV OF FLORIDA	R FERNANDEZ	GRC	C SEGAL	NAG 3 2553	172
41	UNIV OF FLORIDA	R R ANTELIFF	LARC	M SHEPLAK	NAG 1 2133	171
41	UNIV OF FLORIDA	S A GORTON	LARC	L N CATTAFESTA	NAG 1 2249	171
41	UNIV OF FLORIDA	S A GORTON	LARC	R MITTAL	NAG 1 01024	172
41	UNIV OF FLORIDA	W A SILVA	LARC	A J KURDILA	NAG 1 2198	171
41	UNIV OF HAWAII AT MANOA - HONOLULU	J M HOUSNER	LARC	H R RIGGS	NAG 1 1850	191

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
41	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	B J BOLAND	LARC	D A WIEGMANN	NAG 1 01026	209
41	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D N ANDERSON	GRC	M B BRAGG	NAG 3 1988	209
41	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	E R MCFARLAND	GRC	K D LEE	NAG 3 2314	210
41	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	H E ADDY	GRC	D B BRAGG	NAG 3 2271	210
41	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	H E ADDY	GRC	M BRAGG	NCC 3 852	213
41	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	M G POTAPCZUK	GRC	E LOTH	NAG 3 2623	210
41	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R BURTON	JSC	M BRAGG	NAG 9 1371	213
41	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R E MCKINLEY	LARC	W J MAHER	NAG 1 01114	209
41	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	T H BOND	GRC	M B BRAGG	NAG 3 2135	209
41	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	Y K CHOO	GRC	K D LEE	NAG 3 2236	209
41	UNIV OF KANSAS	J M BRANDON	LARC	C E LAN	NAG 1 01011	228
41	UNIV OF KANSAS	M MEYER	GRC	R TAGHAVI	NGT 3 52361	229
41	UNIV OF KENTUCKY	D E ASHPIS	GRC	G HUANG	NCC 3 590	232
41	UNIV OF KENTUCKY	D E ASHPIS	GRC	P G HVANG	NAG 3 2099	231
41	UNIV OF KENTUCKY	D E ASHPIS	GRC	S W SMETH	NGT 1 01006	232
41	UNIV OF MARYLAND - COLLEGE PARK	A NURRIDIN	HQ	A HEARN	NGT 5 50083	272
41	UNIV OF MARYLAND - COLLEGE PARK	A S POTOTZKY	LARC	I CHOPRA	NAG 1 01084	255
41	UNIV OF MARYLAND - COLLEGE PARK	C L STREETT	LARC	U PIOMELLI	NAG 1 2285	255
41	UNIV OF MARYLAND - COLLEGE PARK	D FOLTA	GSFC	P KRISHNAPRASAD	NAG 5 10819	266
41	UNIV OF MARYLAND - COLLEGE PARK	D T PALAC	GRC	D J LEWIS	NAG 3 2480	256
41	UNIV OF MARYLAND - COLLEGE PARK	G SOFFEN	GSFC	D PINES	NGT 5 107	271
41	UNIV OF MARYLAND - COLLEGE PARK	J L THOMAS	LARC	U PIOMELLI	NAG 1 1880	255
41	UNIV OF MARYLAND - COLLEGE PARK	J TOTH	GSFC	B SHAPIRO	NAG 5 10563	266
41	UNIV OF MARYLAND - COLLEGE PARK	K Q NGYUEN	ARC	I CHOPRA	NGT 2 52214	271
41	UNIV OF MARYLAND - COLLEGE PARK	M B TISCHER	ARC	R CELI	NAG 2 1407	256
41	UNIV OF MARYLAND - COLLEGE PARK	M B TISCHER	ARC	W S LEVINE	NAG 2 1311	255
41	UNIV OF MARYLAND - COLLEGE PARK	M CONCHA	GSFC	M J LEWIS	NAG 5 9890	264
41	UNIV OF MARYLAND - COLLEGE PARK	M S BURRELL	GSFC	M GAVRILAS	NAG 5 9151	262
41	UNIV OF MARYLAND - COLLEGE PARK	P KOLODZIEJ	ARC	M J LEWIS	NCC 2 1129	269
41	UNIV OF MARYLAND - COLLEGE PARK	R A STRAWN	ARC	F SCHMITZ	NAG 2 1405	255
41	UNIV OF MARYLAND - COLLEGE PARK	R R TACINA	GRC	A K GUPTA	NAG 3 2337	256
41	UNIV OF MARYLAND - COLLEGE PARK	S R THOMAS	GRC	M J LEWIS	NAG 3 2106	256
41	UNIV OF MARYLAND - COLLEGE PARK	S STRARIN	GSFC	R SANNER	NAG 5 11313	268
41	UNIV OF MARYLAND - COLLEGE PARK	T STENGLE	GSFC	E M ATKINS	NAG 5 9961	265
41	UNIV OF MARYLAND - COLLEGE PARK	T STENGLE	GSFC	W FOURNEY	NAG 5 99211	269
41	UNIV OF MARYLAND - COLLEGE PARK	W G WARMBRODT	ARC	I CHOPRA	NAG 2 1329	255
41	UNIV OF MARYLAND - COLLEGE PARK	W WARMBRODT	ARC	F HARRIS	NCC 2 1146	269
41	UNIV OF MARYLAND - COLLEGE PARK	Y H YU	ARC	I CHOPRA	NCC 2 944	269
41	UNIV OF MARYLAND - COLLEGE PARK	Y YU	ARC	CHOPRA	NGT 2 52273	271
41	UNIV OF MASSACHUSETTS - AMHERST	A REEHORST	GRC	S SEKELSEY	NAG 3 00121	304
41	UNIV OF MASSACHUSETTS - AMHERST	M E LIVINGSTON	ARC	A DASCHMULCH	NCC 2 1180	304
41	UNIV OF MICHIGAN - ANN ARBOR	G SOFFEN	GSFC	K POWELL	NGT 5 75	318
41	UNIV OF MICHIGAN - ANN ARBOR	J A LEITNER	GSFC	D HYLAND	NAG 5 10336	315
41	UNIV OF MICHIGAN - ANN ARBOR	K K GUPTA	DFRC	D BERNSTEIN	NGT 4 52404	318
41	UNIV OF MICHIGAN - ANN ARBOR	K K GUPTA	DFRC	D S BERNSTEIN	NGT 4 52421	318
41	UNIV OF MICHIGAN - ANN ARBOR	K K GUPTA	DFRC	P FRIEDMAN	NGT 4 52426	318
41	UNIV OF MICHIGAN - ANN ARBOR	S NASH-STEVENSON	MSFC	I BOYD	NGT 8 52900	319
41	UNIV OF MICHIGAN - ANN ARBOR	W MORALES	GRC	P P FRIEDMAN	NAG 3 2582	311
41	UNIV OF MICHIGAN - ANN ARBOR	W WARMBRODT	ARC	P P FRIEDMAN	NGT 2 52269	318
41	UNIV OF MISSOURI - COLUMBIA	T B GATSKI	LARC	O VASILYEV	NGT 1 01017	331
41	UNIV OF MISSOURI - COLUMBIA	T B GATSKI	LARC	O VASILYEV	NGT 1 52239	331
41	UNIV OF MISSOURI - ROLLA	C C WEY	GRC	P D WHITEFIELD	NAG 3 2185	331
41	UNIV OF MISSOURI - ROLLA	C R MCCLINTON	LARC	D W RIGGINS	NAG 1 01122	331
41	UNIV OF MISSOURI - ROLLA	D THURMAN	GRC	D W RIGGINS	NAG 3 2608	331
41	UNIV OF MISSOURI - ROLLA	E ENVIA	GRC	W EVERSMAN	NAG 3 2340	331
41	UNIV OF MISSOURI - ROLLA	I Y TUMER	ARC	R B STONE	NCC 2 5423	332
41	UNIV OF MISSOURI - ROLLA	J J TOTAH	GSFC	S N BALAKRISHNAN	NCC 2 5419	331
41	UNIV OF NEW MEXICO-ALBUQUERQUE	J GAMBINO	GSFC	M OSINSKI	NAG 5 10372	365
41	UNIV OF NEW MEXICO-ALBUQUERQUE	J GOODRICH	GRC	T HAGSTROM	NAG 3 2626	364
41	UNIV OF NEW MEXICO-ALBUQUERQUE	R D JOSLIN	LARC	C R TRUMAN	NAG 1 2018	364
41	UNIV OF NEW ORLEANS	A JOYCE	SSC	Y TRAYHAM	NGT13 52719	237
41	UNIV OF NORTH CAROLINA - CHAPEL HILL	J SMITH, JR.	LARC	O	NAG 1 01061	402
41	UNIV OF NOTRE DAME	D ASHPIS	GRC	P C CORKE	NCC 3 775	222
41	UNIV OF NOTRE DAME	D FISHER	DFRC	D O THOMAS	NAG 4 206	221
41	UNIV OF NOTRE DAME	J B ANDERS	LARC	F O THOMAS	NAG 1 2179	220
41	UNIV OF NOTRE DAME	J B ANDERS	LARC	F O THOMAS	NCC 1 01054	221

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
41	UNIV OF NOTRE DAME	J B ANDERS	LARC	R C NELSON	NCC 1 395	221
41	UNIV OF NOTRE DAME	J C ROSS	ARC	F O THOMAS	NCC 2 1014	222
41	UNIV OF NOTRE DAME	J H STARNES, JR.	LARC	E CORONA	NAG 1 2214	220
41	UNIV OF NOTRE DAME	J R SCOTT	GRC	D ATASSI	NCC 3 770	222
41	UNIV OF NOTRE DAME	K W KINZIE	LARC	T C CORKE	NAG 1 01020	221
41	UNIV OF OREGON - EUGENE	T H BOND	GRC	R MAURO	NCC 3 880	435
41	UNIV OF OTAGO	I BARSHI	ARC	D O	NAG 2 1395	559
41	UNIV OF QUEENSLAND	A H AUSLENDER	LARC	A PAULL	NAG 1 2113	558
41	UNIV OF RHODE ISLAND	J LEI	GRC	O GREGORY	NAG 3 2208	460
41	UNIV OF SOUTH FLORIDA	J A DIGGS	KSC	R E HENNING	NAG10 204	179
41	UNIV OF SOUTHERN CALIFORNIA	J R CURZ	LARC	P B LISSAMAN	NAG 1 1996	115
41	UNIV OF SOUTHERN COLORADO	A E MOTLEY	LARC	L M GARRETT	NGT 1 52209	144
41	UNIV OF TENNESSEE - KNOXVILLE	C R MCCLINTON	LARC	D W RIGGINS	NAG 1 2292	469
41	UNIV OF TEXAS - AUSTIN	G S SOFFEN	GSFC	B D TAPLEY	NGT 5 72	497
41	UNIV OF TEXAS - AUSTIN	J R CARPENTER	GSFC	E LIGHTSEY	NAG 5 11278	495
41	UNIV OF TEXAS - AUSTIN	R CARPENTER	GSFC	R H BISHOP	NAG 5 9829	495
41	UNIV OF TEXAS - AUSTIN	T A TOLAY	LARC	W T FOWLER	NGT 1 52147	497
41	UNIV OF TEXAS - AUSTIN	T S GRITES	LARC	K LIECHTI	NCC 1 303	497
41	UNIV OF TEXAS - AUSTIN	W A SILVA	LARC	E J POWERS	NAG 1 01109	491
41	UNIV OF TEXAS - EL PASO	A R ROCHA	JSC	C FERREGUT	NAG 9 1099	500
41	UNIV OF TEXAS AT SAN ANTONIO	C CHAMIS	GRC	R D MANTEUFEL	NAG 3 2297	501
41	UNIV OF TOLEDO	D JANETZKE	GRC	T G KEITH	NCC 3 596	427
41	UNIV OF TOLEDO	E ENVA	GRC	T G KEITH	NAG 3 2502	425
41	UNIV OF TOLEDO	G J FOLLEN	GRC	A A AFEH	NAG 3 2264	424
41	UNIV OF TOLEDO	G J FOLLEN	GRC	A A AFJEH	NAG 3 2508	425
41	UNIV OF TOLEDO	J ADMACZYK	GRC	T G KEITH	NAG 3 2505	425
41	UNIV OF TOLEDO	M D HATHAWAY	GRC	T G KEITH	NAG 3 2507	425
41	UNIV OF TOLEDO	O MEHMED	GRC	T KEITH	NCC 3 605	427
41	UNIV OF VIRGINIA	A NURRIDIN	HQ	J FRENCH	NGT 5 50062	527
41	UNIV OF VIRGINIA	C E GLASS	GSFC	J C MCDANIEL JR	NGT 1 52247	527
41	UNIV OF VIRGINIA	C E GLASS	LARC	J C MCDANIEL	NAG 1 01051	522
41	UNIV OF VIRGINIA	C E GLASS	LARC	J C MCDANIEL	NGT 1 01031	527
41	UNIV OF VIRGINIA	C MOORE	LARC	H N WADLEY	NAG 1 1964	522
41	UNIV OF VIRGINIA	D D MOERDER	LARC	N NAJ-HARERI	NAG 1 01120	522
41	UNIV OF VIRGINIA	D E REUBUSH	LARC	J C MCDANIEL	NAG 1 2131	522
41	UNIV OF VIRGINIA	J H STARNES	LARC	A K NOOR	NAG 1 2016	522
41	UNIV OF VIRGINIA	J H STARNES	LARC	C O HORGAN	NAG 1 2031	522
41	UNIV OF VIRGINIA	K A CANNON	LARC	A K NOORE	NCC 1 263	526
41	UNIV OF VIRGINIA	R H THOMAS	LARC	H G WOOD	NGT 1 52234	527
41	UNIV OF VIRGINIA	S ARNOLD	GRC	M PINDERG	NAG 3 97190	526
41	UNIV OF VIRGINIA	S E MASSENBERG	LARC	D CHESTNUTT	NCC 1 237	526
41	UNIV OF VIRGINIA	S M JOSHI	LARC	G TAO	NCC 1 342	526
41	UNIV OF WALES	K K GUPTA	ARC	O C ZIENKIEWICZ	NAGW 2127	559
41	UNIV OF WASHINGTON	A MARTIN	MSFC	J SLOUGH	NAG 8 1849	540
41	UNIV OF WASHINGTON	C D WIESEMAN	LARC	E LIVNE	NAG 1 01029	534
41	UNIV OF WASHINGTON	K LUU	GSFC	M CAMPPELL	NAG 5 9250	538
41	UNIV OF WASHINGTON	W J STROUD	LARC	K Y LIN	NAG 1 2055	533
41	UNIV OF WEST FLORIDA	J DEMAIO	ARC	N SURI	NAG 2 1226	179
41	UNIV OF WEST FLORIDA	W K GERDEN	LARC	A K RAV	NAG 1 2236	179
41	UNIV OF WYOMING	D M DRIVER	ARC	J W NAUGHTON	NCC 2 5315	556
41	UNIV OF WYOMING	F J CHEN	LARC	D R SMITH	NAG 1 01063	555
41	UNIV OF WYOMING	S A WHITMORE	DFRC	D W NAUGHTON	NAG 4 208	555
41	UTAH STATE UNIV	K LUU	GSFC	R FULLMER	NAG 5 9290	504
41	VA POLYTECH INST & ST UNIV	A E WASHBURN	LARC	D P TELIONES	NGT 1 01035	532
41	VA POLYTECH INST & ST UNIV	C H GERHOLD	LARC	R A BURDISO	NAG 1 2137	528
41	VA POLYTECH INST & ST UNIV	C L BURLEY	LARC	W J DAVENPORT	NAG 1 2272	528
41	VA POLYTECH INST & ST UNIV	C L BURLEY	LARC	W J DEVENPORT	NAG 1 1942	528
41	VA POLYTECH INST & ST UNIV	D A WARDWELL	ARC	A MYKLEBUST	NAG 2 1521	530
41	VA POLYTECH INST & ST UNIV	D QUINN	GSFC	C HALL	NAG 5 11315	531
41	VA POLYTECH INST & ST UNIV	D R AMBUR	LARC	E R JOHNSON	NCC 1 398	531
41	VA POLYTECH INST & ST UNIV	D R AMBUR	LARC	M W HYER	NAG 1 2298	529
41	VA POLYTECH INST & ST UNIV	E J SIOCHI	LARC	T LONG	NGT 1 01033	532
41	VA POLYTECH INST & ST UNIV	G H KLOPTER	ARC	B GROSSMAN	NAG 2 1180	530
41	VA POLYTECH INST & ST UNIV	H E JONES	LARC	D D BOYD	NCC 1 367	531
41	VA POLYTECH INST & ST UNIV	I S RAJU	LARC	R K KAPAUIA	NAG 1 2286	529
41	VA POLYTECH INST & ST UNIV	J B DAVIDSON	LARC	W C DURHAM	NAG 1 2246	528

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
41	VA POLYTECH INST & ST UNIV	J C STALER	ARC	M R ANDERSON	NAG 2 1292	530
41	VA POLYTECH INST & ST UNIV	J H STAMES	LARC	M W HYER	NAG 1 1895	528
41	VA POLYTECH INST & ST UNIV	J H STARNES, JR.	LARC	M W HYER	NGT 1 52112	532
41	VA POLYTECH INST & ST UNIV	J V FOSTER	LARC	F H LUTZE	NAG 1 1851	528
41	VA POLYTECH INST & ST UNIV	J V FOSTER	LARC	W C DURHAM	NAG 1 2111	528
41	VA POLYTECH INST & ST UNIV	K LUU	GSFC	C HALL	NAG 5 9291	530
41	VA POLYTECH INST & ST UNIV	M D MOORE	LARC	J MARCHMAN	NAG 1 01100	529
41	VA POLYTECH INST & ST UNIV	M R WAZAK	LARC	L MEIROVITCH	NCC 1 346	531
41	VA POLYTECH INST & ST UNIV	N J JOHNSTON	LARC	A C LOOS	NGT 1 52226	532
41	VA POLYTECH INST & ST UNIV	R B OITNOTT	LARC	E R JOHNSON	NAG 1 01123	530
41	VA POLYTECH INST & ST UNIV	R H THOMAS	LARC	J J KELLEY	NGT 1 01002	532
41	VA POLYTECH INST & ST UNIV	R L BOITNOTT	LARC	E R JOHNSON	NAG 1 2309	529
41	VA POLYTECH INST & ST UNIV	S A COOKE	LARC	A A TRANI	NCA 1 01002	531
41	VA POLYTECH INST & ST UNIV	S A RIZZI	LARC	M E JOHNSON	NCC 1 01029	531
41	VA POLYTECH INST & ST UNIV	S HUGHES	GSFC	C HALL	NAG 5 10818	531
41	VA POLYTECH INST & ST UNIV	S HUGHES	GSFC	D FOLTA	NAG 5 9744	530
41	VA POLYTECH INST & ST UNIV	T L PARROTT	LARC	R H THOMAS	NCC 1 344	531
41	VA POLYTECH INST & ST UNIV	T NAUMONICE	ARC	A MYKLEBUST	NAG 2 1486	530
41	VA POLYTECH INST & ST UNIV	T T BUI	DFRC	J A SCHETZ	NAG 4 204	530
41	VA POLYTECH INST & ST UNIV	T T BUI	DFRC	J A SCHETZ	NAG 4 218	530
41	VA POLYTECH INST & ST UNIV	W A SILVA	LARC	L LEBESCU	NAG 1 01007	529
41	VA POLYTECH INST & ST UNIV	W A SILVA	LARC	L LIBRESCU	NAG 1 2281	529
41	VANDERBILT UNIV	D L RANEY	LARC	K D FRAMPTOM	NCC 1 01018	473
41	VANDERBILT UNIV	J DOWDY	MSFC	S MAHADEVAN	NGT 8 52868	473
41	VANDERBILT UNIV	T A ZHANG	LARC	S MAHADEVAN	NCC 1 01031	473
41	VIRGINIA COMMONWEALTH UNIV	D E ASHPIS	GRC	D J DORNEY	NCC 3 645	533
41	WASHINGTON UNIV - ST	A NURRIDIN	GSFC	SPOSATO	NGT 5 50023	336
41	WASHINGTON UNIV - ST	A NURRIDIN	GSFC	W B MCKINNON	NGT 5 50063	336
41	WASHINGTON UNIV - ST	B MERRITT	GSFC	P HINK	NAG 5 5215	333
41	WASHINGTON UNIV - ST	R W CLAUS	GRC	D L LEVINE	NCC 3 777	336
41	WAYNE STATE UNIV	P C JORGENSON	GRC	S T YU	NCC 3 580	320
41	WAYNE STATE UNIV	P C JORGENSON	GRC	S YU	NAG 3 2313	319
41	WAYNE STATE UNIV	P C JORGENSON	GRC	S YU	NAG 3 2542	319
41	WEST VIRGINIA UNIV	J F MEYERS	LARC	J M KUHLMAN	NAG 1 2132	545
41	WEST VIRGINIA UNIV	W F BROOKS	ARC	M R NAPOLITANO	NAG 2 1158	545
41	WESTERN MICHIGAN UNIV	C L RUMSEY	LARC	W W LIOU	NAG 1 1979	320
41	WESTERN MICHIGAN UNIV	J N MOSS	LARC	W W LIOU	NAG 1 01023	320
41	WESTERN MICHIGAN UNIV	S CHANG	GRC	W W LIOU	NAG 3 2529	320
41	WICHITA STATE UNIV	C S BIDWELL	GRC	M PAPADAKIS	NAG 3 1985	230
41	WICHITA STATE UNIV	T H BOND	GRC	D ELLIS	NAG 3 2137	230
41	WICHITA STATE UNIV	T H BOND	GRC	D ELLIS	NCA 3 111	230
41	WICHITA STATE UNIV	T P RATVASKY	GRC	M PAPADAKIS	NCC 3 624	230
41	WICHITA STATE UNIV	W E RICKS	LARC	H WILLIFORD	NCA 1 106	230
41	YALE UNIV	A NURRIDIN	HQ	K GIBBLE	NGT 5 50067	148
42	ARIZONA STATE UNIV	C L MOORE	LARC	B WIE	NAS 1 00122	23
42	AUBURN UNIV	D R KRUP	MSFC	A S HODEL	NAG 8 1806	3
42	BOSTON UNIV	D J BOGAN	GSFC	M MENDILLO	NAG 5 11165	279
42	BOSTON UNIV	L CHRISTENSEN	GSFC	T FRITZ	NAG 5 6926	277
42	BOWIE STATE UNIV	M S BURRELL	GSFC	N T WAKIM	NAG 5 9544	239
42	CALIFORNIA POLYTECH STATE U-SAN LUIS	L G LEMKE	ARC	D W HALL	NCC 2 5464	50
42	CALIFORNIA POLYTECH STATE U-SAN LUIS	T A TALAY	LARC	D DETURRIS	NAG 1 2327	50
42	CALIFORNIA POLYTECH STATE U-SAN LUIS	T A TALAY	LARC	D J DETURRIS	NAG 1 2293	50
42	CASE WESTERN RESERVE UNIV	P DOTY	MSFC	J I ALEXANDER	NAG 8 1727	407
42	CHRISTIAN BROTHERS COLLEGE	E WONG	GRC	D SANTI	NAG 3 2454	467
42	CORNELL UNIV	B L EDWARDS	GSFC	M L PSIAKI	NCC 5 563	381
42	DUKE UNIV	M L TINKER	MSFC	L N VIRGIN	NAG 8 1736	395
42	GEORGE WASHINGTON UNIV	K L BRINKLEY	LARC	P A COOPER	NCC 1 01017	153
42	GEORGE WASHINGTON UNIV	R W BUCHAN	LARC	R H TOLSON	NCC 1 331	153
42	GEORGE WASHINGTON UNIV	T E HUBER	GSFC	C FRIEDER	NCC 5 51	153
42	GEORGIA INST OF TECH	T A TALAY	LARC	J R OLDS	NAG 1 2280	182
42	JOHNS HOPKINS UNIV	C KREBS	GSFC	D FORD	NAS 5 32865	252
42	JOHNS HOPKINS UNIV	C M MC ARTHUR	MSFC	P J WALTRUP	NAG 8 1648	251
42	JOHNS HOPKINS UNIV	G H MUCKLOW	GSFC	P A STADTER	NAG 5 8665	245
42	JOHNS HOPKINS UNIV	J BREDEDAMP	GSFC	A S SZALAY	NAG 5 8347	244
42	MASSACHUSETTS INST OF TECH	G MOSIER	GSFC	D W MILLER	NAG 5 7839	292
42	MASSACHUSETTS INST OF TECH	L G CLARK	LARC	E CROWLEY	NAS 1 18690	297

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
42	MASSACHUSETTS INST OF TECH	N J DENNEHY	GSFC	D P HOW	NAG 5 10440	295
42	MASSACHUSETTS INST OF TECH	S SCHNEIDER	GRC	D H EPSTEIN	NAG 3 2506	289
42	MOREHOUSE SCH MED	L PUTCHA	JSC	D POTTER	NAG 9 971	189
42	NORTH CAROLINA A&T STATE UNIV	S E WOODARD	LARC	F VAINSTEIN	NGT 1 52178	399
42	NORTH CAROLINA STATE UNIV	E M QUEEN	LARC	G D WALBERG	NAG 1 01111	400
42	NORTH CAROLINA STATE UNIV	E M QUEEN	LARC	G O WALBERG	NAG 1 2222	399
42	NORTHERN ARIZONA UNIV	D J BOGAN	GSFC	R YELLE	NAG 5 11078	25
42	OHIO STATE UNIV	C H WILLIAMS	GRC	P J TURCHI	NAG 3 2202	414
42	OHIO UNIV	D R KRUPP	MSFC	J J ZHU	NAG 8 1789	419
42	OLD DOMINION UNIV	A A MOORE	LARC	R UNAL	NGT 1 52245	521
42	PENN STATE UNIV	B D REED	GRC	D A LEVIN	NAG 3 2590	443
42	PENN STATE UNIV	B D REED	GRC	D KUO	NAG 3 2501	443
42	PENN STATE UNIV	J H RUFF	MSFC	R J SANTORO	NAG 8 1844	449
42	PRINCETON UNIV	F L MARKLEY	GSFC	J KASDIN	NAG 5 10933	354
42	PURDUE UNIV	B WOOLFORD	JSC	B S CALDWELL	NAG 9 1292	219
42	PURDUE UNIV	J A LEITNER	GSFC	J L GARRISON	NAG 5 10747	218
42	PURDUE UNIV	J ANTOL	LARC	J L GARRISON	NAG 1 01083	216
42	RUTGERS ST UNIV N	L KALUZIENSKI	GSFC	J P HUGHES	NGT 5 50376	359
42	SANTA CLARA UNIV	P KOLODZIEJ	ARC	C A KITTS	NCC 2 1195	58
42	STANFORD UNIV	D G SICKOREZ	JSC	J HOW	NGT 9 28	67
42	STANFORD UNIV	D M VENTO	GRC	B J CANTWELL	NAG 3 2615	60
42	STANFORD UNIV	G G ZILLIAC	ARC	B J CANTWELL	NCC 2 1172	64
42	STANFORD UNIV	J M BOYCE	GSFC	R L BYER	NAG 5 10719	63
42	STANFORD UNIV	M T FLYNN	ARC	M REINHARD	NCC 2 1175	64
42	TEXAS A&M UNIV	E M BRADEN	JSC	S R VACLALIC	NAG 9 1086	482
42	TEXAS A&M UNIV	E M BRADEN	JSC	S R VADALI	NAG 9 1239	483
42	TEXAS A&M UNIV	J W BELL	JSC	J L CRASSIDIS	NAG 9 1188	482
42	TEXAS A&M UNIV	L G HORTA	LARC	J L JUNKINS	NCC 1 386	483
42	UNIV HOUSTON-HOUSTON	J W BELL	JSC	J T WILLIAMS	NAG 9 1293	487
42	UNIV OF MINN	R TREVINO	JSC	V KOSCHEYER	NAG 9 1218	324
42	UNIV OF ALABAMA - HUNTSVILLE	C C LAPENTA	MSFC	S J GRAVES	NCC 8 180	13
42	UNIV OF ALABAMA - HUNTSVILLE	D C ALHORN	MSFC	R D HAMPTON	NAG 8 1598	12
42	UNIV OF ARIZONA	D JACOBSON	MSFC	K R SRIDHAR	NAS 9 97224	38
42	UNIV OF ARIZONA	D MCKAY	JSC	D SARID	NAG 9 1307	37
42	UNIV OF ARIZONA	E P SMITH	GSFC	M MEYER	NAG 5 9325	32
42	UNIV OF CALIFORNIA - BERKELEY	M H ACUNA	GSFC	R LIN	NAG 5 9305	73
42	UNIV OF CALIFORNIA - LOS ANGELES	E P SMITH	GSFC	D RICH	NAG 5 9431	92
42	UNIV OF CALIFORNIA - LOS ANGELES	R CARPENTER	GSFC	J L SPEYER	NAG 5 8879	91
42	UNIV OF COLORADO - BOULDER	C MOORE	LARC	A BETY	NAG 1 01074	123
42	UNIV OF COLORADO - BOULDER	J A LEITNER	GSFC	P AXELRAD	NCC 5 564	140
42	UNIV OF COLORADO - BOULDER	M S LAKE	LARC	L D PETERSON	NCC 1 281	139
42	UNIV OF COLORADO - BOULDER	M S LAKE	LARC	M M MIKULAS	NAG 1 2068	123
42	UNIV OF COLORADO - BOULDER	V GRIFFIN	GSFC	G ROTTMAN	NAS 5 97045	138
42	UNIV OF COLORADO - BOULDER	W K BELVIN	LARC	M M MIKULAS	NCC 1 01046	139
42	UNIV OF COLORADO - BOULDER	W K BELVIN	LARC	T O MANN	NGT 1 01023	140
42	UNIV OF CONNECTICUT	W K BELVIN	LARC	K D MURPHY	NGT 1 01025	145
42	UNIV OF DENVER	G D OLSEN	MSFC	J E WILLIAMSEN	NCC 8 176	144
42	UNIV OF FLORIDA	J POE	MSFC	J R THORNTON	NAS 8 97110	174
42	UNIV OF FLORIDA	L W GRIFFIN	MSFC	W SHYY	NAG 8 1729	174
42	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D G SICKOREZ	JSC	S R WHITE	NGT 9 33	214
42	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	M C HICKS	GRC	J D BUCKMASTER	NAG 3 2516	210
42	UNIV OF MARYLAND - COLLEGE PARK	B WOOLFORD	JSC	D L AKIN	NAG 9 1180	268
42	UNIV OF MARYLAND - COLLEGE PARK	D E JAMISON	GSFC	D R BASILI	NCC 5 464	270
42	UNIV OF MARYLAND - COLLEGE PARK	G ASRAR	GSFC	T MEAD	NGT 5 60	271
42	UNIV OF MARYLAND - COLLEGE PARK	M RHEE	GSFC	M J LEWIS	NAG 5 8583	261
42	UNIV OF MARYLAND - COLLEGE PARK	M S BURRELL	GSFC	D SHAPIRO	NGT 5 116	271
42	UNIV OF MICHIGAN - ANN ARBOR	F R CHANG-DIAZ	JSC	B E GILCHRIST	NAG 9 1167	316
42	UNIV OF MICHIGAN - ANN ARBOR	G SOULAS	GRC	I D BOYD	NAG 3 2497	311
42	UNIV OF MICHIGAN - ANN ARBOR	J L BALATICE	MSFC	B GILCHRIST	NAS 8 99128	317
42	UNIV OF MICHIGAN - ANN ARBOR	M W CASTLEMANN	MSFC	G E GILCHRIST	NAS 8 99127	317
42	UNIV OF MISSOURI - COLUMBIA	J M HANSON	MSFC	C A KLUEVER	NAG 8 1741	330
42	UNIV OF NEW MEXICO-ALBUQUERQUE	G THOMAS	JSC	J BRINKER	NAG 9 1324	366
42	UNIV OF PITTSBURGH	P I CARAWAY	LARC	L HUMMEL	NAS 8 97111	456
42	UNIV OF SOUTH FLORIDA	M L BLOSSER	LARC	R T HAFTA	NAG 1 01046	178
42	UNIV OF SOUTHERN CALIFORNIA	C CASTELLANO	ARC	G BEKEY	NAS 8 97115	118
42	UNIV OF SOUTHERN CALIFORNIA	C COSTELLANO	ARC	K DOZIER	NAS 2 00091	118

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
42	UNIV OF TENNESSEE - KNOXVILLE	B MEESON	GSFC	J E LYNE	NAG 1 2163	469
42	UNIV OF TENNESSEE - KNOXVILLE	T A TALAY	LARC	B R STARR	NGT 1 52218	471
42	UNIV OF TEXAS - AUSTIN	E L CHRISTIANSEN	JSC	E P FAHRENTHOLD	NAG 9 1244	496
42	UNIV OF TEXAS - AUSTIN	E M BRADEN	JSC	R BISHOP	NAG 9 1225	496
42	UNIV OF TEXAS - AUSTIN	F E LUMPKIN	JSC	D B GOLDSTEIN	NAG 9 1117	496
42	UNIV OF TEXAS - AUSTIN	G C BLACKBURN	JSC	G E LIGHTSEY	NAG 9 1124	496
42	UNIV OF TEXAS - AUSTIN	G C BLACKBURN	JSC	G E LIGHTSEY	NAG 9 1187	496
42	UNIV OF TEXAS - AUSTIN	J W BELL	JSC	G LIGHTSEY	NAG 9 1189	496
42	UNIV OF TEXAS - AUSTIN	T CRANE	JSC	R BISHOP	NAG 9 1323	496
42	UNIV OF WASHINGTON	E P SMITH	GSFC	B MARGON	NAG 5 9324	538
42	UNIV OF WISCONSIN - MADISON	G MUCKLOW	GSFC	J W PERCIVAL	NAG 5 8588	550
42	UNIV OF WISCONSIN - MADISON	R SPAGNUOLO	GSFC	J W PERCIVAL	NAG 5 7026	549
42	UTAH STATE UNIV	M D VANEK	LARC	J ULWICK	NAS 1 20467	505
42	VA POLYTECH INST & ST UNIV	W K WILKIE	LARC	D J INMAN	NAG 1 01104	529
43	CASE WESTERN RESERVE UNIV	G W HUNTER	GRC	C C LIU	NCC 3 772	408
43	CASE WESTERN RESERVE UNIV	G W HUNTER	GRC	C LUI	NCC 3 679	408
43	CLARK ATLANTA UNIV	R LAWRENCE	GRC	D OKHIO	NAG 3 2292	180
43	CLEVELAND STATE UNIV	S R LEVINE	GRC	J MASNOVI	NCC 3 759	411
43	CORNELL UNIV	B S SINGH	GRC	P H STEEN	NAG 3 1854	375
43	CORNELL UNIV	H K NAHRA	GRC	D KOCH	NGT 3 52362	381
43	CORNELL UNIV	P DOTY	MSFC	N ZABARAS	NAG 8 1671	380
43	FISK UNIV	G HUNTER	GRC	D E COLLINS	NAG 3 2298	467
43	FLORIDA STATE UNIV	P H RHODES	MSFC	B R LOCKE	NAG 8 1163	168
43	GEORGETOWN UNIV	D RISIN	JSC	J M JESSUP	NAG 9 1366	154
43	GEORGIA INST OF TECH	E WEISER	LARC	W H REES	NGT 1 52225	187
43	HARVARD UNIV	S D BAI	MSFC	I F SILVERA	NAG 8 1822	285
43	HOWARD UNIV	H L BELVIN	LARC	W E COLLINS	NAG 1 2019	154
43	JOHNS HOPKINS UNIV	B S SINGH	GRC	K J STEBE	NAG 3 1923	241
43	JOHNS HOPKINS UNIV	D SINGH	GRC	M E PAULATIS	NAG 3 1954	241
43	JOHNS HOPKINS UNIV	B RISIN	KSC	J L HARDEN	NAG 9 1345	251
43	NORTH CAROLINA A&T STATE UNIV	G ALLEN	KSC	G WHITE	NAG10 201	398
43	NORTHWESTERN UNIV	J HINES	ARC	V HATZIMMANIKATIS	NAG 2 1527	201
43	OHIO STATE UNIV	F J MONTEGANI	GRC	P K DUTTA	NGT 3 52363	418
43	PENN STATE UNIV	J H AGUI	GRC	D E SCHIFFER	NAG 3 2546	443
43	PENN STATE UNIV	K TUCKER	MSFC	R J SANTORO	NAG 8 1792	449
43	POLYTECH UNIV - BROOKLYN	C TALLEY	MSFC	A S MEYERSON	NAG 8 1455	384
43	PRAIRIE VIEW A&M UNIV	A BEAM	MSFC	Z HAQUE	NAG 8 1644	476
43	RENSSELAER POLYTECH INST	J SKARDA	GRC	P C WAGNER	NAG 3 2383	384
43	RUTGERS STATE UNIV OF NJ NEW BRUNS	V KLOERIS	JSC	J L KOKINI	NAG 9 1318	359
43	SYRACUSE UNIV	H K NAHRA	GRC	A S SANGANI	NAG 3 1853	392
43	TUSKEGEE UNIV	M COLLINS	KSC	N VAHDAT	NAG10 253	5
43	UNIV HOUSTON-HOUSTON	B FILES	JSC	R KRISHNAMOORTI	NAG 9 1305	487
43	UNIV OF ALABAMA - HUNTSVILLE	S NASH-STEVENSON	MSFC	R CERRO	NGT 8 52908	14
43	UNIV OF ARIZONA	R S BAIRD	JSC	K R SRIDHAR	NAG 9 1175	37
43	UNIV OF CALIFORNIA - DAVIS	F P CHIARAMONTE	GRC	B L POWELL	NAG 3 2153	80
43	UNIV OF CALIFORNIA - SANTA BARBARA	B S SINGH	GRC	L G LEAL	NAG 3 2115	106
43	UNIV OF CALIFORNIA - SANTA BARBARA	D MONTEGANI	GRC	S BANERJEE	NGT 3 52317	110
43	UNIV OF COLORADO - BOULDER	B S SINGH	GRC	R H DAVIS	NAG 3 2116	124
43	UNIV OF DELAWARE	B S SINGH	GRC	E W KALER	NAG 3 1955	149
43	UNIV OF FLORIDA	M LONERGAN	KSC	C SEGAL	NAG10 285	174
43	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	T L PANONTIN	ARC	J S MOORE	NGT 3 52345	213
43	UNIV OF KENTUCKY	M MEYYA	ARC	S SINNOT	NCC 2 5383	232
43	UNIV OF MICHIGAN - ANN ARBOR	F J MONTEGANI	GRC	A ATREYA	NGT 3 52365	318
43	UNIV OF NEVADA - RENO	D RISIN	JSC	G ALMEIDA-PORADA	NAG 9 1340	343
43	UNIV OF PENNSYLVANIA	A NURRIDIN	HQ	D A HAMMER	NGT 5 50210	454
43	UNIV OF ROCHESTER	G A SOFFEN	GSFC	R H HEIST	NGT 5 104	394
43	UNIV OF TEXAS - ARLINGTON	S K KAHNG	LARC	S P JOSHI	NAG 1 01017	491
43	UNIV OF TOLEDO	M RABINOWITZ	GRC	K L DEWITT	NAG 3 2338	425
43	UNIV OF WASHINGTON	D RISIN	JSC	A FOLCH	NAG 9 1343	540
43	VANDERBILT UNIV	A NURRIDIN	HQ	R BAYUZICK	NGT 5 50209	473
43	VANDERBILT UNIV	J E FINN	ARC	M D LEVAN	NCC 2 1127	473
43	VANDERBILT UNIV	J E FINN	ARC	M D LEVAN	NCC 2 5384	473
43	VIRGINIA COMMONWEALTH UNIV	J S HARRISON	LARC	G E WNEK	NAG 1 2302	533
43	YALE UNIV	B S SINGH	GRC	D E ROSNER	NAG 3 1951	146
43	YALE UNIV	B SINGH	GRC	M LOEWENBERG	NAG 3 1935	146
43	YALE UNIV	F MONTEGANI	GRC	M LOEWENBERG	NGT 3 52347	148

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
44	POLYTECH UNIV - BROOKLYN	J DOWDY	MSFC	F LIN	NGT 8 52879	384
44	SALISH KOOTENAI COLLEGE	P SAKIMOTO	GSFC	T S OLSON	NAG 5 10144	339
44	UNIV OF VIRGINIA	S M ARNOLD	GRC	M PINDERA	NAG 3 2524	523
44	VANDERBILT UNIV	S NASH-STEVENSON	MSFC	S MAHADEVAN	NGT 8 52907	474
45	ALABAMA A&M UNIV	D J LARKIN	GRC	D ILA	NAG 3 2302	1
45	ALABAMA A&M UNIV	J MONTENEGRO	MSFC	A BOND	NAG 8 1497	1
45	ALCORN STATE UNIV	W C ROEH	JSC	N W MOSES	NAG 9 1135	326
45	ARIZONA STATE UNIV	T X NGUYEN	LARC	C BALANIS	NAG 1 1781	19
45	ARIZONA STATE UNIV	T X NGUYEN	LARC	C BALANIS	NCC 1 01051	23
45	AUBURN UNIV	C SHAFER	MSFC	I HRBUD	NAG 8 1717	3
45	AUBURN UNIV	D K HALL	MSFC	S A MERRYMAN	NAS 8 98249	3
45	AUBURN UNIV	F B BECK	LARC	M L WALLER	NGT 1 52205	4
45	AUBURN UNIV	S NASH-STEVENSON	MSFC	A S HODEL	NGT 8 52904	4
45	BRIGHAM YOUNG UNIV	R D SAKAHARA	DFRC	M D RICE	NAG 4 215	501
45	BROWN UNIV	F J MONTEGANI	GRC	G P CRAWFORD	NGT 3 52369	460
45	BUCKNELL UNIV	J DORBAND	GSFC	M F ABURDENE	NAG 5 10821	436
45	CASE WESTERN RESERVE UNIV	K BHASIN	GRC	F L MERAT	NAG 3 2578	406
45	CASE WESTERN RESERVE UNIV	L G MATUS	GRC	M MEHREGANY	NAG 3 2204	406
45	CASE WESTERN RESERVE UNIV	L G MATUS	GRC	M MEHREGANY	NCA 3 201	407
45	CITY UNIV OF NY CITY COLLEGE	J TILTON	GSFC	N SCHEINBERG	NAG 5 7160	368
45	CLARK ATLANTA UNIV	S A ALTERNOVITZ	GRC	M D WILLIAMS	NAG 3 1973	180
45	CLEMSON UNIV - CLEMSON	G BUCKINGHAM	KSC	D DAWSON	NGT10 52611	464
45	CLEMSON UNIV - CLEMSON	J F DOWDY	MSFC	J N GOWDY	NGT 8 52858	464
45	CLEVELAND STATE UNIV	J F SOEDER	GRC	Z GAO	NCC 3 699	411
45	CLEVELAND STATE UNIV	K CHUN	GSFC	F XIONG	NAG 3 2619	410
45	CLEVELAND STATE UNIV	R E JONES	GRC	P P CHU	NAG 3 2040	409
45	CLEVELAND STATE UNIV	R KERCZEWSKI	GRC	V K KONANGI	NCC 3 764	411
45	CLEVELAND STATE UNIV	R R ROMANOFSKY	GRC	F XIONG	NAG 3 2531	410
45	CLEVELAND STATE UNIV	S G BAILEY	GRC	D G NEHEMANN	NCC 3 883	412
45	CLEVELAND STATE UNIV	T M WALLETT	GRC	V K KONANGI	NCC 3 595	411
45	EMBRY-RIDDLE AERONAUTICAL UNIV	P G NEUDECK	GRC	A HELFRICK	NCC 3 685	162
45	FLORIDA A&M UNIV	F MCKENZIE	KSC	B A HARVEY	NAG10 289	164
45	FLORIDA A&M UNIV	G C RYBICKI	GRC	S M DURBIN	NAG 3 1971	163
45	FLORIDA ATLANTIC UNIV	T P BIZON	GRC	W E GLENN	NAG 3 2023	165
45	GEORGE WASHINGTON UNIV	M DUTTA	GSFC	M ZAGHLOUL	NAG 5 11343	152
45	GEORGIA INST OF TECH	C T RAMOS	GRC	D F AKYILDIZ	NAG 3 2585	183
45	GEORGIA INST OF TECH	G E PONCHAK	GRC	D M TENTZERIS	NAG 3 2329	183
45	GEORGIA INST OF TECH	G E PONCHAK	GRC	D PAPAPOLYMEROU	NCC 3 900	186
45	GEORGIA INST OF TECH	S D HARRAH	LARC	G GIMMESTAD	NAS 1 99073	185
45	HAMPTON UNIV	F B BECK	LARC	A O OLADIPUPO	NCC 1 366	513
45	HOWARD UNIV	A SHARMA	GSFC	D MOHAMMAD	NAG 5 11118	155
45	HOWARD UNIV	D F NOGA	GRC	A RUBARI	NAG 3 2030	154
45	HOWARD UNIV	D F NOGA	GRC	D RUBAAI	NAG 3 2287	154
45	HOWARD UNIV	J L DOLCE	GRC	J A MOMOH	NAG 3 1978	154
45	HOWARD UNIV	R M BUTTON	GRC	D A MOMOH	NAG 3 2621	154
45	IOWA STATE UNIV	W P WINFREE	LARC	S S UPDA	NAG 1 01040	222
45	JOHNS HOPKINS UNIV	D C VANDEMARK	WFF	D R THOMPSON	NAG 5 5301	242
45	JOHNS HOPKINS UNIV	E WEBB	GSFC	P EISENREICH	NAG 5 10778	249
45	JOHNS HOPKINS UNIV	F SELDON- JONES	GSFC	J KANG	NAS 5 00166	252
45	JOHNS HOPKINS UNIV	H C SHAW	GSFC	D B KHURGIN	NAG 5 8841	245
45	JOHNS HOPKINS UNIV	H SHAW	GSFC	J B KHURGIN	NAG 5 11332	251
45	JOHNS HOPKINS UNIV	M E BEATTY, III	LARC	M A DARRIN	NCC 1 01019	252
45	JOHNS HOPKINS UNIV	P J LUERS	GSFC	M G DARRIN	NAG 5 10464	249
45	JOHNS HOPKINS UNIV	P J LUERS	GSFC	R CONDE	NAG 5 8852	245
45	JOHNS HOPKINS UNIV	P LUERS	GSFC	B ANDREWS	NAG 5 10234	248
45	JOHNS HOPKINS UNIV	P LUERS	GSFC	R F CONDE	NAG 5 9456	246
45	JOHNS HOPKINS UNIV	P MILLAR	GSFC	M DAVIDSON	NAG 5 2232	241
45	JOHNS HOPKINS UNIV	Q A SHAMS	LARC	P D SCHWARTZ	NAG 1 01059	241
45	MANCHESTER COLLEGE	C HUNG	GRC	G W CLARK	NCC 3 873	216
45	MICHIGAN TECHNOLOGICAL UNIV	M S BURRELL	GSFC	E ROTHWELL	NGT 5 120	309
45	MORGAN STATE UNIV	B MOTT	GSFC	C J SCOTT	NAG 5 7136	253
45	MORGAN STATE UNIV	D NGUYEN	GSFC	C WHITE	NAG 5 10913	253
45	MORGAN STATE UNIV	J PIEDMEIER	GSFC	C WHITE	NCC 5 565	254
45	MORGAN STATE UNIV	J PIEDMEIER	GSFC	D WHITE	NAG 5 9895	253
45	NEW JERSEY INST OF TECH	E WONG	GRC	D P DHAWAN	NAG 3 2459	350
45	NORTH CAROLINA A&T STATE UNIV	B COLLINS	ARC	R M SALAMI	NAG 2 6028	397

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
45	NORTH CAROLINA A&T STATE UNIV	G FUJIKAWA	GRC	D DOGAN	NAG 3 2584	397
45	NORTH CAROLINA A&T STATE UNIV	P CORONADO	GSFC	A WALKER	NAG 5 7158	398
45	NORTHWESTERN UNIV	M S BURRELL	GSFC	P KUMAR	NGT 5 90	203
45	OHIO NORTHERN UNIV	R BUTTON	GRC	F L GRISMORE	NAG 3 2544	413
45	OHIO STATE UNIV	D M WILT	GRC	D A RINGEL	NAG 3 2215	414
45	OHIO STATE UNIV	E B CLARK	GRC	S A RINGEL	NCC 3 899	418
45	OHIO STATE UNIV	F J MONTEGANI	GRC	S A RINGEL	NGT 3 52355	418
45	OHIO STATE UNIV	R ROMANOFSKY	GRC	G WASHINGTON	NCC 3 733	418
45	OHIO UNIV	P E POINSATTE	GRC	T A SKIDMORE	NAG 3 2385	419
45	OHIO UNIV	P POINSATTE	GRC	T SKIDMORE	NAG 3 2575	419
45	OHIO UNIV	R W WILLS	LARC	J M RANKIN	NAG 1 2036	419
45	OKLAHOMA STATE UNIV	D NGO	GRC	M ATIQUZZAMAN	NCC 3 903	429
45	OLD DOMINION UNIV	K J MOELLER	LARC	C F BUNTING	NAG 1 1982	515
45	OLD DOMINION UNIV	M D DESHBANDE	LARC	R P JOSHI	NAG 1 01071	517
45	OLD DOMINION UNIV	P G NEUDECK	GRC	D P JOSHI	NAG 3 2483	518
45	OLD DOMINION UNIV	R J DEYOUNG	LARC	H SAYID ELE	NGT 1 52211	521
45	OLD DOMINION UNIV	S D YOUNG	LARC	L VAHALA	NGT 1 01013	520
45	OLD DOMINION UNIV	T X NGUYEN	LARC	C F BUNTING	NCC 1 01032	519
45	OREGON STATE UNIV	G ADAMOVSKY	GRC	T K PLANT	NAG 3 2463	431
45	PENN STATE UNIV	B KENNY	GRC	H HOFMANN	NAG 3 2598	443
45	PENN STATE UNIV	G V BROWN	GRC	D HOFMANN	NAG 3 2603	443
45	PRAIRIE VIEW A&M UNIV	M D KANKAM	GRC	J O ATTIA	NAG 3 2065	475
45	PURDUE UNIV	K CHUN	GRC	D S LEHNERT	NAG 3 2550	217
45	RICE UNIV	B BIEGEL	ARC	J KONO	NCC 2 1279	479
45	RICE UNIV	D L JAN	JPL	F K TITTLE	NAG 9 1049	478
45	RICE UNIV	T R GOVINDAN	ARC	J KONO	NCC 2 5458	479
45	SOUTHERN METHODIST UNIV	E KIST, JR.	LARC	Z CELIK-BUTLER	NAS 1 99100	480
45	STANFORD UNIV	K BHASIN	GRC	A FOX	NAG 3 2579	60
45	STANFORD UNIV	M S BURRELL	GSFC	U UMRAN	NGT 5 92	66
45	STATE UNIV OF NY - ALBANY	P NEUDECK	GRC	D DUDLEY	NCC 3 891	387
45	TEXAS A&M UNIV	R LEE	GRC	D CHANG	NAG 3 2551	480
45	TEXAS A&M UNIV-KINGSVILLE	K L HAMES	JSC	S W PARK	NAG 9 1093	485
45	TEXAS TECH UNIV	L R PINERO	GRC	E A O	NAG 3 2005	485
45	TUSKEGEE UNIV	D C FERGUSON	GRC	C V DORESWMY	NCC 3 726	5
45	TUSKEGEE UNIV	S A ALTEROVITZ	GRC	K K DAS	NAG 3 2127	4
45	UNIV OF MINN	B H KENNY	GRC	P MOHAN	NAG 3 2468	321
45	UNIV OF MINN	R M BUTTON	GRC	N MOHAN	NCC 3 811	325
45	UNIV OF MINN	T T PETERSON	GRC	N MOHAN	NCC 3 857	325
45	UNIV OF AKRON	H NGUYEN	GRC	O C UGWEJE	NCC 3 828	422
45	UNIV OF AKRON	R J ACOSTA	GRC	O C UGWEJE	NAG 3 2279	420
45	UNIV OF AKRON	R L PATTERSON	GRC	M E ELBULUK	NAG 3 2278	420
45	UNIV OF ALABAMA - HUNTSVILLE	D J LARKIN	GRC	D A GEORGE	NAG 3 2285	7
45	UNIV OF ALABAMA - HUNTSVILLE	K MCCALL	MSFC	Y B SHTESSEL	NAG 8 1787	12
45	UNIV OF CALIFORNIA - SANTA BARBARA	T DOIRON	GSFC	M SHERWIN	NAG 5 10299	108
45	UNIV OF CALIFORNIA - SANTA BARBARA	T R GOVINDAN	ARC	M W WU	NCC 2 5368	110
45	UNIV OF CINCINNATI	G E PONCHAK	GRC	K P ROENKER	NAG 3 2487	423
45	UNIV OF CINCINNATI	S M GENG	GRC	H HENDERSON	NAG 3 2281	422
45	UNIV OF COLORADO - BOULDER	H NGUYEN	GRC	Y LEE	NCC 3 773	139
45	UNIV OF COLORADO - BOULDER	R Q LEE	GRC	Z POPOVIC	NAG 3 2587	124
45	UNIV OF COLORADO - BOULDER	W HEAPS	GSFC	J L HALL	NAG 5 10368	135
45	UNIV OF DAYTON	F A MIRANDA	GRC	G SUBRAMANYAN	NCC 3 882	424
45	UNIV OF DAYTON	F MIRANDA	GRC	G SUBRAMANYAM	NCC 3 771	424
45	UNIV OF DAYTON	H NGUYEN	GRC	M ATIQUZZAMAN	NCC 3 824	424
45	UNIV OF FLORIDA	M A MOTTER	LARC	J C PRINCIPE	NAG 1 2188	171
45	UNIV OF FLORIDA	S K KAHNG	LARC	M SHEPLAK	NAG 1 01098	172
45	UNIV OF HAWAII AT MANOA - HONOLULU	W H MILLER	GSFC	G UEHARA	NAG 5 7383	193
45	UNIV OF ILLINOIS - CHICAGO CIRCLE	P J GEORGE	GRC	K SHENAI	NAS 3 99189	208
45	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	K S CHUN	GRC	U MADHOW	NAG 3 2263	210
45	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R R ROMANOFSKY	GRC	D BERNHARD	NAG 3 2555	210
45	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R R ROMANOFSKY	GRC	D BERNHARD	NCC 3 780	213
45	UNIV OF KANSAS	K BHASIN	GRC	G	NAS 3 00162	229
45	UNIV OF MARYLAND - COLLEGE PARK	H C SHAW	GSFC	D DAGENAI	NAG 5 8711	262
45	UNIV OF MARYLAND - COLLEGE PARK	J W BAGWELL	GRC	J S BARAS	NCC 3 528	269
45	UNIV OF MASSACHUSETTS - AMHERST	D LEVINE	GSFC	K CARVER	NAS 5 99133	304
45	UNIV OF MASSACHUSETTS - AMHERST	T A DOIRON	GSFC	K CARVER	NAG 5 9630	303
45	UNIV OF MASSACHUSETTS - AMHERST	T DOIRON	GSFC	K CARVER	NAG 5 10699	303



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
45	UNIV OF MICHIGAN - ANN ARBOR	C M PRINCIPE	GSFC	C RUF	NAG 5 9762	314
45	UNIV OF MICHIGAN - ANN ARBOR	D C VANDEMARK	WFF	K SARABANDI	NAG 5 5304	312
45	UNIV OF MICHIGAN - ANN ARBOR	D MONTEGANI	GRC	D PAVLIDIS	NGT 3 52372	318
45	UNIV OF MICHIGAN - ANN ARBOR	G E PONCHAK	GRC	L P KATEHI	NCC 3 790	317
45	UNIV OF MICHIGAN - ANN ARBOR	G E PONCHAK	GRC	L P KATEHI	NCC 3 837	317
45	UNIV OF MICHIGAN - ANN ARBOR	G E PONCHAK	GRC	P BHATTACHARYA	NAG 3 2530	311
45	UNIV OF MICHIGAN - ANN ARBOR	G PONCHAK	GRC	P BHATTACHARYA	NAG 3 2330	310
45	UNIV OF MICHIGAN - ANN ARBOR	J W JOHNSON	LARC	A W ENGLAND	NAG 1 2142	309
45	UNIV OF MICHIGAN - ANN ARBOR	J W JOHNSON	LARC	C S RUF	NAG 1 01032	310
45	UNIV OF MICHIGAN - ANN ARBOR	S NASH-STEVENSON	MSFC	B GILCHRIST	NGT 8 52889	319
45	UNIV OF NEBRASKA - LINCOLN	M L BLOXXER	LARC	K D COLE	NAG 1 01087	340
45	UNIV OF NEW MEXICO-ALBUQUERQUE	K KRISHEN	JSC	M SHAHINPOOR	NAG 9 995	366
45	UNIV OF NEW MEXICO-ALBUQUERQUE	R L CATALDO	GRC	M EL-GENK	NAG 3 2543	364
45	UNIV OF NEW MEXICO-ALBUQUERQUE	W H MILLER	GSFC	G MAKI	NAG 5 7360	365
45	UNIV OF OKLAHOMA - NORMAN	S K KAHNG	LARC	J R CRUZ	NAG 1 2178	429
45	UNIV OF PUERTO RICO HUMACAO U COL	R ACOSTA	GRC	J C CERSOSIMO	NAG 3 2836	558
45	UNIV OF ROCHESTER	C R MCCREIGHT	ARC	W J FORREST	NAG 2 1280	393
45	UNIV OF SOUTH FLORIDA	A HEPP	GRC	D MOREL	NAG 3 2614	178
45	UNIV OF SOUTHERN CALIFORNIA	J POUCH	GRC	A LEVI	NAG 3 2559	115
45	UNIV OF SOUTHERN CALIFORNIA	M MEYYAPPAN	ARC	C ZHOU	NCC 2 5454	118
45	UNIV OF TEXAS - AUSTIN	D CHRISTOPHER	GRC	J L BENO	NAG 3 2265	492
45	UNIV OF TEXAS - AUSTIN	F ADAMS	KSC	R ZOWARKA	NAG10 288	496
45	UNIV OF TEXAS - EL PASO	A HEPP	GRC	G B LUSH	NAG 3 2303	499
45	UNIV OF TEXAS - EL PASO	LOWRY	ARC	P J TELLER	NAG 2 1138	499
45	UNIV OF TOLEDO	G E PONCHAK	GRC	V J KAPOOR	NCC 3 881	427
45	UNIV OF TOLEDO	R BEACH	GRC	T G KEITH	NCC 3 916	427
45	UNIV OF TOLEDO	R L PATTERSON	GRC	V J KAPOOR	NAG 3 2565	425
45	UNIV OF TOLEDO	R L PATTERSON	GRC	Y J KAPOOR	NAG 3 1967	424
45	UNIV OF VIRGINIA	G MUCKLOW	GSFC	T CROWE	NAG 5 8663	524
45	UNIV OF WEST FLORIDA	A R GROSS	HQ	D STILL	NAG 2 1332	180
45	VA POLYTECH INST & ST UNIV	R S ROGOWSKI	LARC	A WANG	NAG 1 01018	529
45	VANDERBILT UNIV	G A SOFFEN	GSFC	R D SCHRIMPF	NGT 5 105	473
45	VANDERBILT UNIV	M M GATES	GSFC	L MASSENGILL	NAG 5 7103	472
45	VIRGINIA COMMONWEALTH UNIV	Q A SHAMS	LARC	J H TUCKER	NAG 1 01042	533
45	WAYNE STATE UNIV	D BRINKER	GRC	P WOODYARD	NAG 3 2180	319
45	WRIGHT STATE UNIV	J FREEMAN	GRC	D C LOOK	NAG 3 2637	428
46	ALABAMA A&M UNIV	A CHOW	MSFC	K X HO	NAG 8 1808	2
46	ALABAMA A&M UNIV	A CHOW	MSFC	Z T DENG	NAG 8 1804	2
46	ALABAMA A&M UNIV	G MYERS	MSFC	A SHARMA	NAG 8 1614	1
46	AUBURN UNIV	J F DOWDY	MSFC	G T FLOWERS	NGT 8 52851	4
46	AUBURN UNIV	J F DOWDY	MSFC	P D JONES	NGT 8 52870	4
46	AUBURN UNIV	J TRUPELL	GRC	D GOWAYED	NAG 3 2597	3
46	AUBURN UNIV	K R SACKSTEDER	GRC	D W MACKOWSKI	NCC 3 864	3
46	BRIGHAM YOUNG UNIV	J DOWDY	MSFC	R DAINES	NGT 8 52877	502
46	CALIFORNIA INST OF TECH	F P CHIARAMONTE	GRC	J F BRADY	NAG 3 2166	42
46	CALIFORNIA INST OF TECH	J GRADY	GSFC	F HARRISON	NAS 5 98152	49
46	CARNEGIE - MELLON UNIV	C CULBERT	JSC	W WHITTAKER	NAG 9 1276	438
46	CARNEGIE - MELLON UNIV	C FARMER	JSC	R SIMMONS	NAG 9 1327	438
46	CARNEGIE - MELLON UNIV	D LAVERY	HQ	T KANADE	NAG 9 1090	438
46	CARNEGIE - MELLON UNIV	D LAVERY	JSC	T KANADE	NAG 9 1092	438
46	CASE WESTERN RESERVE UNIV	C DELLACORTE	GRC	J M PRAHL	NCC 3 743	408
46	CASE WESTERN RESERVE UNIV	F J MONTEGANI	GRC	J R KADAMBI	NGT 3 52374	409
46	CASE WESTERN RESERVE UNIV	J C DUH	GRC	I D ALEXANDER	NAG 3 2160	406
46	CASE WESTERN RESERVE UNIV	J PEREIRA	GRC	V PRAKASH	NAG 3 2315	406
46	CASE WESTERN RESERVE UNIV	K BLANDING	GSFC	R QUINN	NGT 5 50274	409
46	CASE WESTERN RESERVE UNIV	K SACKSTEDER	GRC	J S T	NCC 3 633	407
46	CASE WESTERN RESERVE UNIV	N N NEMETH	GRC	D A GASPARINI	NCC 3 653	408
46	CASE WESTERN RESERVE UNIV	P DUNLAP	GRC	J D CAWLEY	NCC 3 898	409
46	CASE WESTERN RESERVE UNIV	S J SCHNEIDER	GRC	I ADAMOVICH	NAG 3 2239	406
46	CITY UNIV OF NY CITY COLLEGE	F D CHIARAMONTE	GRC	A ACRIVOS	NCC 3 607	368
46	CLARKSON UNIV	J DOWDY	MSFC	G AHMADI	NGT 8 52849	369
46	CLARKSON UNIV	J F DOWDY	MSFC	G AHMADI	NGT 8 52853	369
46	CLEVELAND STATE UNIV	J MANDERSCHIED	GRC	S F DUFFY	NCC 3 761	411
46	CLEVELAND STATE UNIV	L THIEMENE	GRC	D IBRAHIM	NAG 3 2482	410
46	COLORADO SCH OF MINES	B SINGH	GRC	M NAKAGAWA	NAG 3 1970	119
46	COLORADO STATE UNIV	M C GREENNISEN	JSC	S P JAMES	NGT 9 49	122

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
46	CORNELL UNIV	D G LOWICKI	GRC	A R INGRAFFEA	NAG 3 1993	375
46	CORNELL UNIV	F P CHARIAMONTE	GRC	J JENKINS	NCC 3 797	381
46	CORNELL UNIV	J C NEWMAN, JR.	LARC	A R INGRAFFEA	NAG 1 2069	375
46	CORNELL UNIV	M NIX	MSFC	P JACKSON	NAG 8 1716	380
46	CORNELL UNIV	R HAKIMAZADEH	GRC	M LOUGE	NAG 3 2112	375
46	CORNELL UNIV	R HAKIMAZADEH	GRC	J T JENKINS	NCC 3 468	381
46	DREXEL UNIV	D D ROSS	GRC	D A RUFF	NAG 3 1884	440
46	DUKE UNIV	A P KURKOV	GRC	K C HALL	NAG 3 2627	394
46	DUKE UNIV	J DOWDY	MSFC	L N VIRGIN	NGT 8 52842	396
46	FLORIDA ATLANTIC UNIV	W J STROUD	LARC	I ELISHAKOFF	NAG 1 01079	165
46	FLORIDA INST OF TECH	L E JONES	LARC	D C FLEMING	NAG 1 2260	165
46	FLORIDA STATE UNIV	K Q ZAMAN	GRC	C K TAM	NAG 3 2102	166
46	GEORGIA INST OF TECH	B J JENSEN	LARC	W S JOHNSON	NAG 1 2312	182
46	GEORGIA INST OF TECH	B SINGH	GRC	M K SMITH	NAG 3 1949	183
46	GEORGIA INST OF TECH	F J MONTEGANI	GRC	J H GINSBERG	NGT 3 52371	187
46	GEORGIA INST OF TECH	R D JOSLIN	LARC	A GLEZER	NGT 1 52132	186
46	GEORGIA INST OF TECH	R DABNEY	MSFC	A CALISE	NAG 8 1638	185
46	GEORGIA INST OF TECH	R S KARDA	GRC	G P NEITZEL	NAG 3 1894	183
46	GEORGIA INST OF TECH	T A ZANG	LARC	F MISTREE	NGT 1 52170	187
46	ILLINOIS INST OF TECH	B M STEINETZ	GRC	D RAMAN	NCC 3 798	200
46	INDIANA UNIV	D E PAXON	GRC	R NALIM	NAG 3 2207	214
46	IOWA STATE UNIV	F J MONTEGANI	GRC	A ROTHMAYER	NGT 3 52332	224
46	IOWA STATE UNIV	G DUKEMAN	MSFC	P LU	NAG 8 1637	223
46	IOWA STATE UNIV	K R SACKSTEDER	GRC	G M COLVER	NCC 3 846	224
46	JOHNS HOPKINS UNIV	B S SINGH	GRC	A PROSPERETTI	NAG 3 1924	241
46	JOHNS HOPKINS UNIV	D DOUGLAS	GSFC	R OSIANDER	NAG 5 10241	248
46	JOHNS HOPKINS UNIV	H K NAHRA	GRC	D HERMAN	NAG 3 1815	241
46	KETTERING UNIV	D REDDY	GRC	S ROY	NAG 3 2638	306
46	MASSACHUSETTS INST OF TECH	H THOMAS	ARC	J K SALISBURY	NCC 2 1121	298
46	MASSACHUSETTS INST OF TECH	J DOWDY	MSFC	A WITT	NGT 8 52880	300
46	MICHIGAN STATE UNIV	J B RANSOM	LARC	R C AVERILL	NAG 1 2213	306
46	MISSISSIPPI STATE UNIV	E R MCFARLAND	GRC	W R BRILEY	NAG 3 2176	327
46	NORFOLK STATE UNIV	S H CHOI	LARC	K D SONG	NCC 1 280	515
46	NORTH CAROLINA A&T STATE UNIV	G ZILLIAC	ARC	M HUMAN	NAG 2 1430	397
46	NORTH CAROLINA STATE UNIV	P DOTY	MSFC	N MA	NAG 8 1817	401
46	NORTHWESTERN UNIV	A NURRIDIN	HQ	T IGUSA	NGT 5 50198	203
46	NORTHWESTERN UNIV	F P CHIARAMONTE	GRC	H RIECKE	NAG 3 2113	201
46	NORTHWESTERN UNIV	J GRADY	GSFC	M P ULMER	NAG 5 98153	203
46	NORTHWESTERN UNIV	N D PILTCH	GRC	S H SOHRAB	NAG 3 1863	201
46	NORTHWESTERN UNIV	N PACKMAN	JSC	R M LUEPTOW	NAG 9 1053	202
46	OHIO STATE UNIV	F J MONTEGANI	GRC	V V SUBRAMANIAM	NGT 3 52373	418
46	OHIO STATE UNIV	K C CIVISKAS	GRC	M G DUNN	NAG 3 2157	414
46	OHIO STATE UNIV	S J SCHNEIDER	GRC	I ADAMOVICH	NAG 3 2339	414
46	OHIO STATE UNIV	T T MOCKLER	GRC	R N CHRISTENSEN	NCC 3 434	418
46	OLD DOMINION UNIV	C M BELCASTRO	LARC	W S GRAY	NCC 1 392	519
46	OLD DOMINION UNIV	N J JOHNSTON	LARC	S TIWARI	NCC 1 227	518
46	OLD DOMINION UNIV	P FERGEN	LARC	J HUANG	NGT 1 01027	520
46	OLD DOMINION UNIV	R J DEYOUNG	LARC	H ELSAVIDELE	NGT 1 52229	521
46	PENN STATE UNIV	B A LERCH	GRC	C J LISSENOEN	NCC 3 597	450
46	PENN STATE UNIV	F J MONTEGANI	GRC	D A SANTAVICCA	NGT 3 52368	451
46	PENN STATE UNIV	J DOWDY	MSFC	G A SMITH	NGT 8 52876	452
46	PENN STATE UNIV	M HAGOPIAN	GSFC	J E FREDLEY	NCC 5 508	450
46	PENN STATE UNIV	W ANDERSON	MSFC	R J SANTORO	NAG 8 1732	449
46	POLYTECH UNIV - BROOKLYN	D B ZAMAN	GRC	M OTUGEN	NAG 3 2533	383
46	PRAIRIE VIEW A&M UNIV	W C ROEH	JSC	W F TROTTY	NAG 9 1136	476
46	PRINCETON UNIV	D L URBAN	GRC	F L DRYER	NCC 3 735	355
46	PURDUE UNIV	Y R HICKS	GRC	N M LAVRENDEAN	NAG 8 1782	219
46	RENSSELAER POLYTECH INST	J W LEHNER	MSFC	L N MYRABO	NAG 8 1795	385
46	RENSSELAER POLYTECH INST	M H CARPENTER	LARC	K E JARSEN	NGT 1 52160	385
46	RICE UNIV	J CREWS	JSC	E V BARRERA	NAG 9 1285	478
46	STANFORD UNIV	F CHARIMONTE	GRC	J K EATON	NCC 3 640	66
46	STANFORD UNIV	N N MANSOUR	ARC	P MOIN	NCC 2 1151	64
46	STANFORD UNIV	N N MANSOUR	ARC	R K HANSON	NAG 2 1478	59
46	STATE UNIV OF NY - BUFFALO	J P DRUMMOND	LARC	P GIVI	NAG 1 2238	387
46	TENNESSEE STATE UNIV	D S SINGH	GRC	P X TAO	NAG 3 1797	468
46	TENNESSEE TECHNOLOGICAL UNIV	J DOWDY	MSFC	C WILSON	NGT 8 52883	469

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
46	TENNESSEE TECHNOLOGICAL UNIV	J J HUTT	MSFC	S S HAN	NAG 8 1794	469
46	TENNESSEE TECHNOLOGICAL UNIV	K WELZN	MSFC	S CANFIELD	NAG 8 1793	469
46	TENNESSEE TECHNOLOGICAL UNIV	S NASH-STEVENSON	MSFC	S CANFIELD	NGT 8 52911	469
46	TEXAS A&M UNIV	E K UNGAR	JSC	J SEYED-YAGOObI	NAG 9 1145	482
46	TEXAS A&M UNIV	F P CHIARAMONTE	GRC	J SEYED-YAGOObI	NCC 3 602	483
46	TEXAS A&M UNIV	I S RAJU	LARC	J D WHITCOMB	NAG 1 01080	480
46	TEXAS A&M UNIV	K HURLBERT	JSC	F R BEST	NAG 9 1328	483
46	TEXAS A&M UNIV	K P MCLALLIN	GRC	D PALAZZOLO	NCC 3 836	483
46	TEXAS A&M UNIV	T R REINARTS	KSC	F R BEST	NAG10 304	483
46	TEXAS SOUTHERN UNIV	M K EWERT	JSC	D C DAVIS	NAG 9 1132	485
46	TUSKEGEE UNIV	H TRINH	MSFC	D A IBRAHIM	NAG 8 1246	5
46	UNIV HOUSTON-HOUSTON	B S MOTIL	GRC	V BALAKOTAIAH	NAG 3 1840	486
46	UNIV HOUSTON-HOUSTON	D SICKOREZ	JSC	R B BANNEROT	NAG 9 867	486
46	UNIV HOUSTON-HOUSTON	J D CORNWELL	JSC	L C WHITTE	NAG 9 1012	487
46	UNIV OF MINN	D E ASHPIS	GRC	T W SIMON	NCC 3 652	325
46	UNIV WISCONSIN-PLATTEVILLE	N N NEMETH	GRC	O JADAAN	NAG 3 2242	546
46	UNIV OF AKRON	A ARNOLD	GRC	D F SALEEB	NCC 3 788	422
46	UNIV OF AKRON	D HOPKINS	GRC	S N PATNAIK	NCC 3 831	422
46	UNIV OF AKRON	S A THORP	GRC	A F SALEEB	NCC 3 578	421
46	UNIV OF AKRON	W B DUVAL	GRC	C BATUR	NCC 3 567	421
46	UNIV OF ALABAMA - HUNTSVILLE	J DOWDY	MSFC	C HAWK	NGT 8 52878	14
46	UNIV OF ALABAMA - HUNTSVILLE	S NASH-STEVENSON	MSFC	C HAWK	NGT 8 52891	14
46	UNIV OF ARIZONA	J E FINN	ARC	K R SRIDHAR	NCC 2 5357	38
46	UNIV OF ARIZONA	P M DOTY	MSFC	J R SRIDHAR	NAG 8 1469	36
46	UNIV OF ARIZONA	S P WALKER	LARC	E MADENCI	NAG 1 2052	25
46	UNIV OF CALIFORNIA - BERKELEY	B ADELSTEIN	ARC	H KAZEROONI	NCC 2 1255	76
46	UNIV OF CALIFORNIA - BERKELEY	H D ROSS	GRC	A C FERNANDEZ-PELLO	NCC 3 478	77
46	UNIV OF CALIFORNIA - BERKELEY	H D ROSS	GRC	D FERNANDEZ-PELLO	NCC 3 803	77
46	UNIV OF CALIFORNIA - BERKELEY	S R ELLIS	ARC	H KAZERAONI	NCC 2 909	76
46	UNIV OF CALIFORNIA - BERKELEY	S R ELLIS	ARC	H KAZEROONI	NCC 2 1171	76
46	UNIV OF CALIFORNIA - DAVIS	D KWAK	ARC	B D SHAW	NCC 3 353	82
46	UNIV OF CALIFORNIA - IRVINE	H D ROSS	GRC	W A SIRIGNANO	NAG 3 2024	84
46	UNIV OF CALIFORNIA - IRVINE	J HANSON	MSFC	K D MEASE	NAG 8 1652	86
46	UNIV OF CALIFORNIA - IRVINE	K Q ZAMAN	GRC	D PAPAMOSCHOU	NAG 3 2345	84
46	UNIV OF CALIFORNIA - LOS ANGELES	B S SINGH	GRC	R E KELLY	NAG 3 1819	88
46	UNIV OF CALIFORNIA - LOS ANGELES	D F CHAO	GRC	V K DHIR	NAG 3 2467	88
46	UNIV OF CALIFORNIA - LOS ANGELES	I S RAJU	LARC	S N ATLURI	NAG 1 2274	87
46	UNIV OF CALIFORNIA - LOS ANGELES	J DOWDY	MSFC	M A ABDOU	NGT 8 52844	96
46	UNIV OF CALIFORNIA - SAN DIEGO	O MEHMED	GRC	D KOSMATKA	NCC 3 902	104
46	UNIV OF CALIFORNIA - SAN DIEGO	O MEHMED	GRC	J KOSMATKA	NCC 3 569	103
46	UNIV OF CINCINNATI	C L MOORE	LARC	H T HENDERSOM	NAS 1 00123	423
46	UNIV OF CINCINNATI	E GOLLIHER	GRC	T HENSERSON	NAS 3 01120	423
46	UNIV OF COLORADO - BOULDER	M S BURRELL	GSFC	P AXELRAD	NGT 5 47	140
46	UNIV OF CONNECTICUT	B S SINGH	GRC	A FAGHRI	NAG 3 1870	145
46	UNIV OF DELAWARE	M W WEISLOGEL	GRC	L W SCHWARTZ	NAG 3 1920	149
46	UNIV OF FLORIDA	E L GOLLIHER	GRC	D E LEAR	NAG 3 2461	172
46	UNIV OF FLORIDA	E L GOLLIHER	GRC	D E LEAR	NAG 3 2630	172
46	UNIV OF FLORIDA	M S BURRELL	GSFC	P C MASON	NGT 5 128	175
46	UNIV OF FLORIDA	S NASH-STEVENSON	MSFC	N ARAKERE	NGT 8 52890	176
46	UNIV OF ILLINOIS - CHICAGO CIRCLE	A NURRIDIN	HQ	C M MEGARIDIS	NGT 5 50214	209
46	UNIV OF ILLINOIS - CHICAGO CIRCLE	C A SANDRIDGE	LARC	P BANERJEE	NAG 1 01065	207
46	UNIV OF ILLINOIS - CHICAGO CIRCLE	C TALLEY	MSFC	C MEGARIDIS	NAG 8 1473	208
46	UNIV OF ILLINOIS - CHICAGO CIRCLE	R F HANDSCHUH	GRC	D L LITVIN	NAG 3 2450	208
46	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	B S SINGH	GRC	H AREF	NAG 3 2122	209
46	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R W HAMPTON	ARC	R H DODDS	NAG 2 1126	209
46	UNIV OF KENTUCKY	D MIN	GRC	V CAPECE	NAG 3 2613	231
46	UNIV OF KENTUCKY	G C HORNER	LARC	M ROCHE	NGT 1 52223	232
46	UNIV OF KENTUCKY	J F DOWDY	MSFC	J A MAIN	NGT 8 52869	232
46	UNIV OF KENTUCKY	M S BURRELL	GSFC	J A MAIN	NGT 5 71	232
46	UNIV OF KENTUCKY	R S PAPP	LARC	J A MAIN	NCC 1 385	231
46	UNIV OF KENTUCKY	R S PAPP	LARC	S W SMITH	NAS 1 01099	231
46	UNIV OF MARYLAND - COLLEGE PARK	D G LEWICKI	GRC	D J PINES	NAG 3 2223	256
46	UNIV OF MARYLAND - COLLEGE PARK	H D ROSS	GRC	D L	NCC 3 804	269
46	UNIV OF MARYLAND - COLLEGE PARK	M S BURRELL	GSFC	D L AKIN	NGT 5 50	271
46	UNIV OF MARYLAND - EASTERN SHORE	R WESCOTT	GSFC	E BOYD	NCC 5 437	272
46	UNIV OF MASSACHUSETTS - AMHERST	D LEWICKI	GRC	D DANAI	NAG 3 2452	302

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
46	UNIV OF MASSACHUSETTS - AMHERST	T MARTIN	JSC	A G BARTO	NAG 9 1379	303
46	UNIV OF MICHIGAN - ANN ARBOR	D URBAN	GRC	G M FAETH	NAG 3 2048	310
46	UNIV OF MICHIGAN - ANN ARBOR	D URBAN	GRC	G M FAETH	NAG 3 2404	311
46	UNIV OF MICHIGAN - ANN ARBOR	D W GRIFFIN	GRC	R G LARSON	NAG 3 2134	310
46	UNIV OF MICHIGAN - ANN ARBOR	F CHIARAMONTE	GRC	P MERTE	NAG 3 1900	310
46	UNIV OF MICHIGAN - ANN ARBOR	H D ROSS	GRC	G M FAETH	NAG 3 1878	310
46	UNIV OF MICHIGAN - ANN ARBOR	O MEHMED	GRC	C PIERRE	NAG 3 2604	311
46	UNIV OF MICHIGAN - ANN ARBOR	W F EMRICH	MSFC	T KAMMASH	NAG 8 1725	316
46	UNIV OF MISSOURI - COLUMBIA	J F DOWDY	MSFC	C A KLUEVER	NGT 8 52850	331
46	UNIV OF MISSOURI - ROLLA	D KRUPP	MSFC	S N BALAKRISHNAN	NAG 8 1805	331
46	UNIV OF MISSOURI - ROLLA	M A MEADER	GRC	D ROY	NAG 3 2357	331
46	UNIV OF NEVADA - RENO	G FRALICK	GRC	J A KLEPPE	NCC 3 750	343
46	UNIV OF NEW MEXICO-ALBUQUERQUE	M D WATSON	MSFC	M OSINSKI	NAG 8 1664	366
46	UNIV OF NORTH CAROLINA	S NASH-STEVENSON	MSFC	S SMITH	NGT 8 52901	404
46	UNIV OF SOUTHERN CALIFORNIA	B S SINGH	GRC	S S SADHAL	NAG 3 1842	115
46	UNIV OF SOUTHERN CALIFORNIA	B SIGH	GRC	T MAXWORTHY	NAG 3 2125	115
46	UNIV OF SOUTHERN CALIFORNIA	D D ROSS	GRC	P N EGOLFOPOULOS	NAG 3 1877	115
46	UNIV OF SOUTHERN CALIFORNIA	D W GRIFFIN	GRC	H G PEARLMAN	NCC 3 501	118
46	UNIV OF SOUTHERN CALIFORNIA	K J WEILAND	GRC	P D RONNEY	NAG 3 2124	115
46	UNIV OF TEXAS - AUSTIN	C LIN	JSC	K R DILLER	NAG 9 841	496
46	UNIV OF TEXAS - AUSTIN	J C NEWMAN, JR.	LARC	M E MEAR	NAG 1 2197	491
46	UNIV OF TEXAS - AUSTIN	K KONNO	JSC	J H BENO	NAS 3 99169	497
46	UNIV OF TEXAS - AUSTIN	K L MCLALLIN	GRC	R H BENO	NAS 3 01133	497
46	UNIV OF TEXAS - AUSTIN	L A TREVINO	JSC	H L PAUL	NAG 9 1213	496
46	UNIV OF TEXAS AT TYLER	C D SCOTT	JSC	R B GREENDYKE	NAG 9 1382	501
46	UNIV OF TOLEDO	D P FLEMING	GRC	T G KEITH	NAG 3 2408	425
46	UNIV OF TOLEDO	J MINNS	GRC	T KEITH	NAS 3 01116	427
46	UNIV OF TOLEDO	K MCLALLIN	GRC	T G KEITH	NCC 3 907	427
46	UNIV OF TOLEDO	O MEHMED	GRC	T G KEITH	NCC 3 527	427
46	UNIV OF TOLEDO	O MEHMED	GRC	T G KEITH	NCC 3 717	427
46	UNIV OF TOLEDO	R F BEACH	GRC	T G KEITH	NAG 3 2646	425
46	UNIV OF TOLEDO	R HANDSCHUH	GRC	A KAHRAMAN	NAG 3 2641	425
46	UNIV OF TOLEDO	T L KRANTZ	GRC	T G KEITH	NAG 3 2269	424
46	UNIV OF VIRGINIA	H ROSS	GRC	H CHELLIAH	NAG 3 1928	522
46	UNIV OF VIRGINIA	T GLASGOW	GRC	H HAJ-HARIRI	NAG 3 1916	522
46	UNIV OF WISCONSIN - MADISON	M L TINKER	MSFC	D C KAMMER	NAG 8 1651	552
46	UNIV OF WISCONSIN - MADISON	M L TINKER	MSFC	D C KAMMER	NAG 8 1820	553
46	VA POLYTECH INST & ST UNIV	C H GERHOLD	LARC	R A BURDISSO	NAG 1 2325	529
46	VA POLYTECH INST & ST UNIV	D L PALUMBO	LARC	C R FULLER	NAG 1 2158	528
46	VA POLYTECH INST & ST UNIV	D L PALUMBO	LARC	M AHMADIAN	NGT 1 01038	532
46	VA POLYTECH INST & ST UNIV	G C HORNER	LARC	D J LEO	NAG 1 2190	528
46	VA POLYTECH INST & ST UNIV	K J PRIESTLEY	LARC	A M SMITH	NGT 1 52248	532
46	VA POLYTECH INST & ST UNIV	L G HORTA	LARC	R KAPANIA	NAG 1 2277	528
46	VA POLYTECH INST & ST UNIV	O MEHMED	GRC	W NG	NAG 3 2098	530
46	VA POLYTECH INST & ST UNIV	S NASH-STEVENSON	MSFC	D J INMAN	NGT 8 52909	532
46	VANDERBILT UNIV	G C HORNER	LARC	A COX	NGT 1 52227	473
46	VANDERBILT UNIV	J F DOWDY	MSFC	M GOLDFARB	NGT 8 52839	473
46	VANDERBILT UNIV	J F DOWDY	MSFC	M GOLDFARB	NGT 8 52857	473
46	VANDERBILT UNIV	J F DOWDY	MSFC	M GOLDFARB	NGT 8 52859	473
46	VANDERBILT UNIV	S NASH-STEVENSON	MSFC	R A WELLER	NGT 8 52905	473
46	VANDERBILT UNIV	S NASH-STEVENSON	MSFC	R W PITZ	NGT 8 52910	474
46	WASHINGTON UNIV - ST	C TUNG	ARC	D A PETERS	NAG 2 1457	332
46	YALE UNIV	K J WEILAND	GRC	M B LONG	NAG 3 1939	146
47	ALABAMA A&M UNIV	B PENN	MSFC	M D AGGARWAL	NAG 8 1623	2
47	ALL RUSSIAN SCI RES INST VIAM	R K BIRD	LARC	J FRIDLANDER	NCC 1 353	559
47	AUBURN UNIV	R D NOEBE	GRC	W F GALE	NAG 3 2120	2
47	AUBURN UNIV	S LAMBING	MSFC	R A OVERFELT	NCC 8 128	3
47	CARNEGIE - MELLON UNIV	D L BRITTON	GRC	P N KUMTA	NAG 3 2640	436
47	CARNEGIE - MELLON UNIV	H SHAW	GSFC	P KUMTA	NAG 5 9242	437
47	CASE WESTERN RESERVE UNIV	A CHAIT	GRC	D H MATTHIESEN	NCC 3 681	408
47	CASE WESTERN RESERVE UNIV	A CHAIT	GRC	P L TAYLOR	NCC 3 701	408
47	CASE WESTERN RESERVE UNIV	D L KIETRICH	GRC	J S T	NAG 3 2331	406
47	CASE WESTERN RESERVE UNIV	J A DICARLO	GRC	A SAYIR	NCC 3 372	407
47	CASE WESTERN RESERVE UNIV	J J MONTEGANI	GRC	J S TIEN	NGT 3 52350	409
47	CASE WESTERN RESERVE UNIV	J LANG	GRC	J D CRAWLEY	NCC 3 714	408
47	CASE WESTERN RESERVE UNIV	M NATHAL	GRC	D L ELLIS	NCC 3 830	408

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
47	CASE WESTERN RESERVE UNIV	M V NATHAL	GRC	I E LOCCI	NCC 3 766	408
47	CASE WESTERN RESERVE UNIV	R V MINER	GRC	G M MICHAL	NCC 3 463	407
47	CASE WESTERN RESERVE UNIV	S C FARMER	GRC	S SAYIR	NCC 3 850	408
47	CHRISTOPHER NEWPORT UNIV	M NAMKUNG	LARC	R SELIM	NAG 1 01070	507
47	CITY UNIV OF NY CITY COLLEGE	K J BOWLES	GRC	B LIAW	NAG 3 2259	367
47	CLARK ATLANTA UNIV	E S WEISER	LARC	D R VEAZIE	NAG 1 01091	180
47	CLARK ATLANTA UNIV	S DUTTA	GRC	A A MINTZ	NCC 3 552	181
47	CLEMSON UNIV - CLEMSON	H C SHAW	GSFC	D L CARROLL	NAG 5 9459	463
47	CLEVELAND STATE UNIV	H C DE GROH	GRC	D N TEWARI	NCC 3 631	411
47	CLEVELAND STATE UNIV	H E KAUTZ	GRC	J HEMANN	NAG 3 2514	410
47	CLEVELAND STATE UNIV	H KAUTZ	GRC	J HEMANN	NCC 3 581	410
47	CLEVELAND STATE UNIV	L A GREENBAUER-SENG	GRC	S N TEWARI	NCC 3 444	410
47	CLEVELAND STATE UNIV	L A GREENBAUER-SENG	GRC	S TEWARI	NCC 3 862	411
47	CLEVELAND STATE UNIV	L A GREENBAUER-SENG	GRC	S N TEWARI	NCC 3 445	410
47	CLEVELAND STATE UNIV	L GREENBAUER-SENG	GRC	S N TEWARI	NCC 3 853	411
47	CLEVELAND STATE UNIV	M NATHAL	GRC	S N TEWARI	NCC 3 749	411
47	COLLEGE OF WILLIAM AND MARY	J W CONNELL	LARC	R A ORWOLL	NGT 1 52200	508
47	COLLEGE OF WILLIAM AND MARY	M W SMITH	LARC	B C HOLLOWAY	NCC 1 01056	508
47	CORNELL UNIV	J C NEWMAN	LARC	R PETTIT	NAG 1 2268	375
47	CORNELL UNIV	M MEADOR	GRC	D P GIANNELIS	NCC 3 832	381
47	CORNELL UNIV	P DOTY	MSFC	A J SIEVERS	NAG 8 1666	380
47	DREXEL UNIV	J K SUTTER	GRC	D KNIGHT	NCC 3 825	441
47	DREXEL UNIV	M A MEADOR	GRC	D R PALMESE	NCC 3 835	441
47	DUKE UNIV	E NELSON	GRC	R BEHRINGER	NAG 3 1917	394
47	DUKE UNIV	M TINKER	MSFC	L N VIRGIN	NAG 8 1715	395
47	FLORIDA STATE UNIV	A CHAIT	GRC	J VINALS	NAG 3 1885	166
47	GEORGIA INST OF TECH	A NETTLES	MSFC	W S JOHNSON	NAG 8 1819	185
47	GEORGIA INST OF TECH	B GUYNES	MSFC	W S JOHNSON	NAG 1 1890	181
47	GEORGIA INST OF TECH	J DOWDY	MSFC	A GOKHALE	NGT 8 52881	188
47	GEORGIA INST OF TECH	J R ELLIS	GRC	D TALREJA	NCC 3 711	186
47	GEORGIA INST OF TECH	P DOTY	MSFC	A M GOKHALE	NAG 8 1245	184
47	GEORGIA INST OF TECH	W D BREWER	LARC	J K COCHRAN	NAG 1 2245	182
47	GEORGIA INST OF TECH	W DUVAL	GRC	M F SCHATZ	NAG 3 2006	183
47	HARVARD UNIV	P DOTY	MSFC	F A SPAEPEN	NAG 8 1680	285
47	HOPE COLLEGE	T S GATES	LARC	J PAWLOSKE	NAG 1 01060	306
47	IOWA STATE UNIV	A JACKSON	MSFC	R K TRIVETI	NAG 8 1681	223
47	KENT STATE UNIV	M A MEADOR	GRC	R J TWIEG	NCC 3 721	413
47	LE TOURNEAU UNIV	C SCOTT	JSC	G DE BOER	NAG 9 1274	475
47	MASSACHUSETTS INST OF TECH	J F DOWDY	MSFC	A F WITT	NGT 8 52860	300
47	MASSACHUSETTS INST OF TECH	M PURVEY	MSFC	A WITT	NAG 8 1487	296
47	MASSACHUSETTS INST OF TECH	P DOTY	MSFC	R SADOWAY	NAG 8 1689	296
47	MICHIGAN STATE UNIV	J M BENAVIDES	GSFC	V AYRES	NAG 5 8893	307
47	MICHIGAN STATE UNIV	M V NATHAL	GRC	D S GRUMMON	NCC 3 868	308
47	MICHIGAN STATE UNIV	P DOTY	MSFC	A BERNARD	NAG 8 1690	308
47	MONTANA STATE UNIV	W F BROOKS	ARC	A E CRAIG	NAG 2 1323	337
47	MORGAN STATE UNIV	E ORDONEZ	MSFC	A KENNEDY	NAG 8 1847	254
47	NEW JERSEY INST OF TECH	E S WEISER	LARC	M JAFFE	NAG 1 01110	350
47	NORFOLK STATE UNIV	E T PRIOR	LARC	J JACOBS	NAG 1 2125	514
47	NORFOLK STATE UNIV	J C BARNES	LARC	L MATTIX	NCC 1 01049	515
47	NORTH CAROLINA A&T STATE UNIV	D R AMBUR	LARC	K N SHIVAKUMAR	NAG 1 1956	397
47	NORTH CAROLINA A&T STATE UNIV	M R FREEDMAN	GRC	D N SHIVAKUMAR	NAG 3 2650	397
47	NORTH CAROLINA A&T STATE UNIV	R BHATT	GRC	J SANKAR	NAS 3 96055	398
47	NORTH CAROLINA A&T STATE UNIV	T HAAG	GRC	K SHIVAKUMAR	NAS 3 01197	398
47	NORTH CAROLINA STATE UNIV	C H LIN	JSC	M H MOHAMAD	NAG 9 1087	401
47	NORTH CAROLINA STATE UNIV	D L RANEY	LARC	F G YUAN	NAG 1 01103	399
47	NORTH CAROLINA STATE UNIV	D R AMBER	LARC	F G YUAN	NAG 1 01128	400
47	NORTH CAROLINA STATE UNIV	J S HARRISON	LARC	R C SMITH	NAG 1 2287	399
47	NORTHWESTERN UNIV	A CHART	GRC	S H DAVIS	NAG 3 1737	201
47	NORTHWESTERN UNIV	B S SINGH	GRC	A Z PATASHINSKI	NAG 3 1932	201
47	NORTHWESTERN UNIV	M V NATHAL	GRC	D C DUNAND	NCC 3 870	203
47	NORTHWESTERN UNIV	R D NOEBE	GRC	D N SEIDMAN	NAG 3 2485	201
47	NORTHWESTERN UNIV	T K GLASGOW	GRC	P W VOORHEES	NAG 3 1823	201
47	NORTHWESTERN UNIV	T S GATES	LARC	L C BRINSON	NCC 1 01002	203
47	NORTHWESTERN UNIV	T S GATES	LARC	R S RUOFF	NAG 1 2313	201
47	OHIO STATE UNIV	D J ROTH	GRC	S ROKHLIN	NAS 3 97030	418
47	OHIO STATE UNIV	G D ROBERTS	GRC	A GILAT	NAG 3 2233	414

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
47	OHIO STATE UNIV	M V ZELLER	GRC	P DUTTA	NCA 3 206	418
47	OHIO STATE UNIV	P DOTY	MSFC	P K DUTTA	NAG 8 1670	417
47	OHIO STATE UNIV	R K GOLDBERG	GRC	GILAT	NAG 3 2522	414
47	OLD DOMINION UNIV	A T NETTLES	MSFC	R PRABHAKARAN	NAG 8 1813	518
47	OLD DOMINION UNIV	K M TAMINGER	LARC	K NAGARATHNAM	NCC 1 403	519
47	OLD DOMINION UNIV	T HOU	LARC	R B PIPES	NCC 1 363	518
47	OLD DOMINION UNIV	T S GATES	LARC	R B PIPES	NAG 1 01043	517
47	PENN STATE UNIV	D T ELLERBY	ARC	J R HELLMANN	NAG 2 1524	443
47	PENN STATE UNIV	G E SCHWARZE	GRC	D T LANAGAN	NAG 3 2561	443
47	PENN STATE UNIV	R DRAPER	GRC		NAS 3 01082	449
47	PENN STATE UNIV	S M ARNOLD	GRC	D J LISSENDEN	NCC 3 848	450
47	PURDUE UNIV	J REAGAN	GRC	C GIBSON	NAG 3 2453	217
47	PURDUE UNIV	T S GATES	LARC	C T SUN	NAG 1 01073	216
47	RENSSELAER POLYTECH INST	E A WINSA	GRC	M E GLICKSMAN	NAS 3 25368	385
47	RENSSELAER POLYTECH INST	P M DOTY	MSFC	M E GLICKSMAN	NAG 8 1696	385
47	SAINT LOUIS UNIV	C DELLACORTE	GRC	P A BENOY	NAG 3 2469	329
47	SAINT LOUIS UNIV	C DELLACORTE	GRC	P A BENOY	NAG 3 2642	329
47	TEXAS A&M UNIV	M R EFFINGER	MSFC	O O OCHOA	NAG 8 1802	482
47	TUFTS UNIV	T K GLASGOW	GRC	C ROGERS	NCC 3 479	301
47	TUSKEGEE UNIV	M J VERILLE	GRC	A HAQUE	NCC 3 591	5
47	TUSKEGEE UNIV	R ROGOSKI	LARC	J N BHUYAN	NAG 1 1865	4
47	UNIV HOUSTON-HOUSTON	J C BRASUNAS	GSFC	C	NAG 5 8126	486
47	UNIV HOUSTON-HOUSTON	S J LAMBING	MSFC	A IGNATIEV	NCC 8 127	487
47	UNIV OF MINN	P M DOTY	MSFC	J J DERBY	NAG 8 1676	324
47	UNIV OF AKRON	A CHAIT	GRC	G W YOUNG	NCC 3 716	421
47	UNIV OF AKRON	C CHUANG	GRC	F W HARRIS	NAG 3 2390	420
47	UNIV OF AKRON	G D ROBERTS	GRC	E SANCAKTAR	NCC 3 744	421
47	UNIV OF AKRON	M A MEADOR	GRC	F N KELLEY	NAG 3 2566	421
47	UNIV OF AKRON	M A MEADOR	GRC	R K EBY	NCC 3 682	421
47	UNIV OF AKRON	M A MEADOR	GRC	R K EBY	NCC 3 877	422
47	UNIV OF ARIZONA	J CONNOLLY	JSC	K R SRIDHAR	NAG 9 1229	37
47	UNIV OF ARKANSAS - LITTLE ROCK	R TRAVIS	SSC	K MAXWELL	NGT13 52724	41
47	UNIV OF CALIFORNIA - DAVIS	D R AMBUR	LARC	L W REHFIELD	NAG 1 01116	79
47	UNIV OF CALIFORNIA - DAVIS	M NATHAL	GRC	J GIBELING	NCC 3 859	83
47	UNIV OF CALIFORNIA - LOS ANGELES	R G BRYANT	LARC	G P CARMEN	NGT 1 52240	95
47	UNIV OF CALIFORNIA - LOS ANGELES	R ROGERS	GRC	S PUTTERMAN	NAG 3 1889	88
47	UNIV OF COLORADO - BOULDER	B V GUYNES	MSFC	S STURE	NAS 8 38779	139
47	UNIV OF FLORIDA	D E LUECK	KSC	E D WACHSMAN	NAG10 303	174
47	UNIV OF FLORIDA	D R AMBUR	LARC	B V SANKAR	NAG 1 01088	172
47	UNIV OF FLORIDA	M BASSIGNANI	KSC	E D WACHSMAN	NAG10 274	174
47	UNIV OF FLORIDA	P R DOTY	MSFC	T J ANDERSON	NAG 8 1243	173
47	UNIV OF FLORIDA	W J EMRICH, JR.	MSFC	S ANGHZIE	NAG 8 1251	173
47	UNIV OF ILLINOIS - CHICAGO CIRCLE	W DUVAL	GRC	D POULIKAKOS	NAG 3 1905	207
47	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	S J HALES	LARC	R S AVERBACK	NAG 1 01035	209
47	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	T L PANONTIN	ARC	G H PAULINO	NGT 2 52271	213
47	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	T L PANONTIN	ARC	R H DODDS	NAG 2 1424	209
47	UNIV OF IOWA	P DOTY	GSFC	C BECKERMANN	NCC 8 199	227
47	UNIV OF MICHIGAN - ANN ARBOR	M P NEMETH	LARC	A P WAAS	NCC 1 01050	317
47	UNIV OF MISSOURI - ROLLA	T S GATES	LARC	S ROY	NAG 1 01050	331
47	UNIV OF NEW MEXICO-ALBUQUERQUE	D ELLERBY	ARC	R E LOEHMAN	NAG 2 1516	364
47	UNIV OF NEW MEXICO-ALBUQUERQUE	D T ELLERBY	ARC	R E LOEHMAN	NAG 2 1437	364
47	UNIV OF NORTH CAROLINA - CHAPEL HILL	R L JAFFE	ARC	O ZHOU	NGT 2 52247	403
47	UNIV OF PENNSYLVANIA	H SHAW	GSFC	D LUZZI	NAG 5 9241	453
47	UNIV OF SOUTH CAROLINA-COLUMBIA	R A HAFLEY	LARC	A P REYNOLDS	NAG 1 2108	465
47	UNIV OF SOUTH CAROLINA-COLUMBIA	R S PLASCIK	LARC	A P REYNOLDS	NAG 1 2237	465
47	UNIV OF TEXAS - AUSTIN	K MCLALLIN	GRC	R THOMPSON	NAG 3 2602	492
47	UNIV OF TEXAS - EL PASO	A BEAM	MSFC	J C MCCLURE	NAG 8 1645	500
47	UNIV OF TEXAS - EL PASO	E B CLARK	GRC	V P SINGH	NAG 3 1820	499
47	UNIV OF TEXAS - EL PASO	J DING	MSFC	J MCCLURE	NCC 8 137	500
47	UNIV OF TEXAS - EL PASO	L ARMENDARIZ	JSC	L E MURR	NAG 9 1171	500
47	UNIV OF UTAH	B MCKISSOCK	GRC	G D SMITH	NAG 3 2624	502
47	UNIV OF UTAH	J R REEDERS	LARC	D O ADAMS	NCC 1 256	503
47	UNIV OF VIRGINIA	D L DICUS	LARC	R P GANGLOFF	NAG 1 2176	522
47	UNIV OF VIRGINIA	M P NEMETH	LARC	C O HORGAN	NAG 1 01022	522
47	UNIV OF VIRGINIA	M S DOMACK	LARC	D A LITTLE	NAG 1 2282	522
47	UNIV OF VIRGINIA	R PIASCIK	LARC	G SHIFLET	NAG 1 2321	522

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
47	UNIV OF VIRGINIA	R S PIASCIK	LARC	R G KELLY	NCC 1 01009	527
47	UNIV OF WASHINGTON	B J JENSEN	LARC	J C SEFERIS	NAG 1 01078	534
47	UNIV OF WASHINGTON	J F DOWDY	MSFC	L N BRUSH	NGT 8 52862	543
47	UNIV OF WISCONSIN - MADISON	P M DOTY	MSFC	S KOU	NAG 8 1459	552
47	VA POLYTECH INST & ST UNIV	D R AMBUR	LARC	L LIBRESCU	NAG 1 01101	529
47	VA POLYTECH INST & ST UNIV	D R AMBUR	LARC	Z GURDAL	NAG 1 01105	529
47	VA POLYTECH INST & ST UNIV	H B DEXTTER	LARC	A C LOOS	NAG 1 1881	528
47	VA POLYTECH INST & ST UNIV	M E PRINCE	MSFC	D A DILLIARD	NAG 8 1846	531
47	VA POLYTECH INST & ST UNIV	M H JASKOWIAK	GRC	W A CURTIN	NAG 3 2100	530
47	VA POLYTECH INST & ST UNIV	M P NEMETH	LARC	M W HYER	NAG 1 01072	529
47	VA POLYTECH INST & ST UNIV	R J CANO	LARC	A C LOOS	NCC 1 01037	531
47	WASHINGTON UNIV - ST	P DOTY	MSFC	K F KELTON	NAG 8 1682	336
47	WICHITA STATE UNIV	A C NUNES	MSFC	G E TALIA	NCC 8 202	230
47	WINONA STATE UNIV	T S GATES	LARC	B ABDEL-MAGID	NAG 1 01054	326
49	ALABAMA A&M UNIV	W LOVE	MSFC	D ILA	NAG 8 1655	2
49	ALCORN STATE UNIV	B ST. CYR	JSC	S ACEIL	NAG13 98005	326
49	ARIZONA STATE UNIV	N R PELLIS	JSC	B TOWE	NAG 9 815	23
49	AUBURN UNIV	J HOWELL	MSFC	S A MERRYMAN	NAG 8 1728	3
49	BOSTON UNIV	A NURRIDIN	HO	S CHAKRABARTI	NGT 5 50171	280
49	BOSTON UNIV	N R HALL	GRC	D HOLT	NAG 3 2392	276
49	BRANDEIS UNIV	F P CHIARAMONTE	GRC	D FRADEN	NAG 3 2386	281
49	BROWN UNIV	G A SOFFEN	GSFC	G CRAWFORD	NGT 5 91	460
49	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	R A MEWALDT	NAG 5 5203	43
49	CALIFORNIA INST OF TECH	J H AGUI	GRC	M L HUNT	NAG 3 2358	42
49	CALIFORNIA ST	T J LLOYD	NMO	V H GARNER	NCC 7 10	50
49	CALIFORNIA STATE UNIV-BAKERSFIELD	K S SHY	DFRC	K L NYBERG	NAG 4 200	53
49	CARNEGIE - MELLON UNIV	C J CULBERT	JSC	D APOSTOLOPOULOS	NAG 9 1248	438
49	CARNEGIE - MELLON UNIV	C J CULBERT	JSC	R W WHITTAKER	NAG 9 1240	438
49	CARNEGIE - MELLON UNIV	C J CULBERT	JSC	W R WHITTAKER	NAG 9 1256	438
49	CARNEGIE - MELLON UNIV	C J CULBERT	JSC	W WHITTAKER	NAG 9 1214	438
49	CARNEGIE - MELLON UNIV	F J MONTEGANI	GRC	M E MCHENRY	NGT 3 52379	439
49	CARNEGIE - MELLON UNIV	F J MONTEGANI	GRC	P N KUMTA	NGT 3 52370	439
49	CARNEGIE - MELLON UNIV	R D JUDAY	JSC	O AMIDI	NAG 9 1232	438
49	CARNEGIE - MELLON UNIV	T PENDLETON	JSC	R SIMMONS	NAG 9 1226	438
49	CASE WESTERN RESERVE UNIV	A CHAIT	GRC	P L TAYLOR	NAG 3 2541	406
49	CASE WESTERN RESERVE UNIV	A D PLINE	GRC	S OSTRACH	NAG 3 1868	406
49	CASE WESTERN RESERVE UNIV	B S SINGH	GRC	A SAYIR	NAG 3 2238	406
49	CASE WESTERN RESERVE UNIV	D GREEN	GRC	Y KAMOTANI	NCC 3 823	408
49	CASE WESTERN RESERVE UNIV	F J MONTEGANI	GRC	J R KADAMBI	NGT 3 52352	409
49	CASE WESTERN RESERVE UNIV	F J MONTEGANI	GRC	K LOPARO	NGT 3 52328	409
49	CASE WESTERN RESERVE UNIV	F P CHIARAMONTE	GRC	B OVRYN	NAG 3 2504	406
49	CASE WESTERN RESERVE UNIV	G MEYER	ARC	M S BRANICKY	NAG 2 1333	405
49	CASE WESTERN RESERVE UNIV	K R SACKSTEDER	GRC	C SUNG	NCC 3 838	408
49	CASE WESTERN RESERVE UNIV	K R SACKSTEDER	GRC	J S TIEN	NCC 3 669	408
49	CASE WESTERN RESERVE UNIV	S L OLSON	GRC	J S TIEN	NCC 3 658	408
49	CITY UNIV OF NY CITY COLLEGE	F P CHIARAMONTE	GRC	D KOPLIK	NAG 3 2335	368
49	CLARK ATLANTA UNIV	H D ROSS	GRC	Y D YEBOAH	NCC 3 707	181
49	CLEMSON UNIV - CLEMSON	B G KANKI	ARC	A K GRAMOPADHYE	NCC 2 1114	463
49	CLEMSON UNIV - CLEMSON	F P CHIARAMONTE	GRC	D M OCHTERBECK	NAG 3 2214	461
49	CLEMSON UNIV - CLEMSON	J BARTH	GSFC	P MCNULTY	NAG 5 9824	463
49	CLEMSON UNIV - CLEMSON	W CAMPBELL	GSFC	D LIGON	NAG 5 6210	462
49	CLEVELAND STATE UNIV	F TORRES	GRC	Y LIU	NAG 3 2490	410
49	CLEVELAND STATE UNIV	H C DE GROH	GRC	S N TEWARI	NCC 3 829	411
49	CLEVELAND STATE UNIV	H DEGROH	GRC	D TEWARI	NCC 3 818	411
49	CLEVELAND STATE UNIV	H E KAUTZ	GRC	J HEMANN	NCC 3 582	410
49	CLEVELAND STATE UNIV	H KAUTZ	GRC	J HEMANN	NAG 3 2306	409
49	CLEVELAND STATE UNIV	H KAUTZ	GRC	J T SAWICKI	NAG 3 2573	410
49	CLEVELAND STATE UNIV	J M MULLINS	GRC	G L KRAMERICH	NCC 3 647	411
49	CLEVELAND STATE UNIV	J MULLINS	GRC	G L KRAMERICH	NCC 3 908	412
49	CLEVELAND STATE UNIV	K JULES	GRC	P P LIN	NAG 3 2326	409
49	CLEVELAND STATE UNIV	P S GREENSBERG	GRC	J A LOCK	NAG 3 2423	409
49	COLORADO SCH OF MINES	J R WEST	MSFC	F SCHOWENGERDT	NCCW 96	119
49	COLORADO SCH OF MINES	S A GOKOGLU	GRC	D J MOORE	NCC 3 659	119
49	CORNELL UNIV	D L DIETRICH	GRC	T AVEDISIAN	NAG 3 2224	375
49	CORNELL UNIV	F P CHIARAMONTE	GRC	D T JENKINS	NAG 3 2353	375
49	CORNELL UNIV	H K NAHRA	GRC	D L KOCH	NAG 3 2349	375

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
49	CORNELL UNIV	H K NAHRA	GRC	D L KOCH	NAG 3 2440	376
49	DINE COLLEGE	L ARMENDARIZ	JSC	M C BAUER	NAG 9 1172	24
49	DREXEL UNIV	B S SINGH	GRC	M A DELLAVECCHIA	NAG 3 2291	440
49	DREXEL UNIV	D L URBAN	GRC	D A RUFF	NCC 3 847	441
49	DREXEL UNIV	D L URBAN	GRC	D CHOI	NCC 3 822	441
49	DREXEL UNIV	D L URBAN	GRC	D Y CHOI	NCC 3 913	441
49	DUKE UNIV	R A WILKINSON	GRC	R P BEHRINGER	NAG 3 2372	394
49	FLA INTERNATIONAL UNIV	A MITSKEVICH	KSC	M A CENTENO	NAG10 212	162
49	FLORIDA A&M UNIV	E SMITH	KSC	F S HUMPHRIES	NAG10 238	164
49	FLORIDA A&M UNIV	F P CHIARAMONTE	GRC	D CHELLA	NAG 3 2387	163
49	FLORIDA A&M UNIV	W C JONES	KSC	R G ROBERTS	NAG10 272	164
49	FLORIDA INST OF TECH	M M AVERNER	ARC	C E HELMSTETTER	NAG 2 1508	165
49	FLORIDA STATE UNIV	F P CHIARAMONTE	GRC	D CHELLA	NAG 3 2445	166
49	GEORGE WASHINGTON UNIV	R L YANG	LARC	J L WHITESIDES	NAG 1 1353	152
49	GEORGIA INST OF TECH	C M BELCASTRO	LARC	A R PRITCHETT	NCC 1 401	186
49	GEORGIA INST OF TECH	F J MONTEGANI	GRC	G T ZHOU	NGT 3 52334	187
49	GEORGIA INST OF TECH	F J MONTEGANI	GRC	M LIU	NGT 3 52338	187
49	GEORGIA INST OF TECH	F P CHIARAMONTE	GRC	D YODA	NAG 3 2373	183
49	GEORGIA INST OF TECH	R E YACKOVETSKY	GRC	D MAVRIS	NAG 1 2235	182
49	GEORGIA INST OF TECH	R HOLLAND	SSC	R RIVERA	NGT13 52750	188
49	GEORGIA INST OF TECH	R SKARDA	GRC	D P NEITZEL	NAG 3 2431	183
49	GEORGIA INST OF TECH	S NASH-STEVENSON	MSFC	J SEITZMAN	NGT 8 52887	188
49	HAMPTON UNIV	D GRIFFIN	GRC	D R LYONS	NAG 3 2189	511
49	HAMPTON UNIV	D W GRIFFIN	GRC	C M OKPODU	NAG 3 2618	512
49	HAMPTON UNIV	I BLANKSON	GRC	M H MORGAN	NAG 3 2249	512
49	HARVARD UNIV	B MOTIL	GRC	D A WEITZ	NAG 3 2376	282
49	HARVARD UNIV	D GRIFFIN	GRC	D A WEITZ	NAG 3 2492	283
49	HARVARD UNIV	F P CHIARAMONTE	GRC	D A WHITE	NAG 3 2381	283
49	HENDRIX COLLEGE	B ST. CYR	SSC	M W TEAGUE	NAG13 99016	40
49	INDIANA UNIV - BLOOMINGTON	W CULPEPPER	JSC	J CAMERON	NAG 9 01103	216
49	IOWA STATE UNIV	F J MONTGOMERY	GRC	D ROTHMAYER	NGT 3 52380	224
49	IOWA STATE UNIV	S NASH-STEVENSON	MSFC	R NAPOLITANO	NGT 8 52903	224
49	JACKSON STATE UNIV	D F NOGA	GRC	D MITRA	NAG 3 2277	326
49	JAMES MADISON UNIV	A D LITTLE	LARC	J J MILES	NAG 1 2186	513
49	JOHNS HOPKINS UNIV	F P CHIARAMONTE	GRC	K J STEBE	NCC 3 812	252
49	JOHNS HOPKINS UNIV	G CHOMOS	GRC	L BACHMAN	NAS 3 01146	252
49	JOHNS HOPKINS UNIV	J F SUTTON	GSFC	D STROHBEHN	NAG 5 10402	248
49	JOHNS HOPKINS UNIV	M M HASAN	GRC	A PROSPERETTI	NAG 3 2362	241
49	JOHNS HOPKINS UNIV	P YEP	GSFC	R EDWARDS	NAG 5 10397	248
49	LOUISIANA STATE UNIV - BATON ROUGE	E SHAW	MSFC	B SARKER	NAG 8 1845	234
49	LOUISIANA STATE UNIV - BATON ROUGE	H C NEEDLEMAN	GSFC	J P WEFEL	NAG 5 5064	233
49	LOUISIANA STATE UNIV - BATON ROUGE	J SKARDA	GRC	H WONG	NAG 3 2361	233
49	MARSHALL UNIV	M M AVERNER	ARC	M R JULIAN	NCC 5 542	544
49	MASSACHUSETTS INST OF TECH	F J MONTEGANI	GRC	G H MCKINLEY	NGT 3 52360	299
49	MASSACHUSETTS INST OF TECH	H A ALDRIDGE	JSC	J P CLARKE	NAG 9 1078	296
49	MASSACHUSETTS INST OF TECH	J E BROOKER	GRC	J B HOWARD	NAG 3 1879	288
49	MASSACHUSETTS INST OF TECH	M E ROSENTHAL	MSFC	C R CANIZARES	NAS 8 38249	297
49	MISSISSIPPI STATE UNIV	R TRAVIS	SSC	R FOLLET	NGT13 52741	328
49	MISSISSIPPI STATE UNIV	Y K CHOO	GRC	B K SONI	NAG 3 2235	327
49	MOREHOUSE COLLEGE	W LOVE	MSFC	J KING	NAG 8 1711	189
49	MOREHOUSE SCH MED	D W GRIFFIN	GRC	D J KLEMENT	NAG 3 2611	189
49	MORGAN STATE UNIV	G SOFFEN	GSFC	E DELOATCH	NAG 5 9215	253
49	MORGAN STATE UNIV	J OBERRIGHT	GSFC	G CHEN	NAG 5 10104	253
49	NEW JERSEY INST OF TECH	A WILKENSEN	GRC	L KONDIC	NAG 3 2367	350
49	NEW JERSEY INST OF TECH	R F FRIEDMAN	GRC	E L DREIZEN	NCC 3 746	351
49	NEW MEXICO HIGHLANDS UNIV	W LOVE	MSFC	R CLARK	NAG 8 1708	361
49	NEW MEXICO STATE UNIV - LAS CRUCES	W H MILLER	GSFC	S HORAN	NAG 5 9323	363
49	NEW MEXICO STATE UNIV - LAS CRUCES	W MILLER	GSFC	S HORAN	NAG 5 7520	362
49	NORTH CAROLINA A&T STATE UNIV	J RUF	MSFC	K JONES	NAG 8 1142	398
49	NORTH CAROLINA A&T STATE UNIV	W LOVE	MSFC	E CHEEK	NAG 8 1707	398
49	NORTHEASTERN UNIV	M NALL	MSFC	A SACCO	NCC 8 139	300
49	NORTHERN ARIZONA UNIV	A R GROSS	ARC	G M BOYNE	NAG 2 6003	24
49	NORTHWESTERN UNIV	A NURRIDIN	HQ	M MATALON	NGT 5 50211	203
49	NORTHWESTERN UNIV	C E NIEDERHAUS	GRC	M SILBER	NAG 3 2364	201
49	NORTHWESTERN UNIV	F J MONTEGANI	GRC	D N SEIDMAN	NGT 3 52378	203
49	NORTHWESTERN UNIV	H C DEGROH	GRC	D H DAVIS	NAG 3 2369	201



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
49	NORTHWESTERN UNIV	K R SACKSTEDER	GRC	D MATALON	NAG 3 2511	202
49	NORTHWESTERN UNIV	S A GOGOKLU	GRC	B J MATKOWSKY	NAG 3 2209	201
49	NORTHWESTERN UNIV	W B DUVAL	GRC	P W VOORHEES	NAG 3 2474	201
49	OAKWOOD COLLEGE	W LOVE	MSFC	E GWEBU	NAG 8 1653	4
49	OHIO STATE UNIV	G D ROBERTS	GRC	P J TURCHI	NAG 3 2316	414
49	OHIO STATE UNIV	R S OKOJIE	GRC	L BRILLSON	NAG 3 2549	414
49	OHIO UNIV	J M RANKIN	MSFC	J ZHU	NAS 8 01105	419
49	OHIO UNIV	W D IVANCIC	GRC	S OSTERMANN	NCC 3 680	420
49	OLD DOMINION UNIV	A E MOTLEY, III	LARC	C K AASEN	NGT 1 52201	521
49	OLD DOMINION UNIV	J C NEWMAN	LARC	S A TIWARI	NCC 1 371	519
49	OLD DOMINION UNIV	K S BEY	LARC	G HOU	NAG 1 2300	516
49	OLD DOMINION UNIV	R D BRAUN	LARC	A K NOOR	NCC 1 01014	519
49	PENN STATE UNIV	B A MERRITT	WFF	J J BEATTY	NAG 5 5210	444
49	PENN STATE UNIV	C E JOHNSON	ARC	L R RADOVIC	NCC 2 1122	450
49	PENN STATE UNIV	F J MONTEGANI	GRC	K W WANG	NGT 3 52359	451
49	PENN STATE UNIV	F P CHIARAMONTE	GRC	D BANAVAR	NAG 3 2374	443
49	PENN STATE UNIV	F P CHIARAMONTE	GRC	D R COLLINS	NAG 3 2470	443
49	PENN STATE UNIV	M E ROSENTHAL	MSFC	G P GARMIRE	NAS 8 38252	449
49	PENN STATE UNIV	R A GOLUB	LARC	P J MORRIS	NAG 1 2208	442
49	PHIL COLLEGE OF PHARMACY & SCIENCE	B S SINGH	GRC	D DUBLIN	NAG 3 2424	452
49	PRAIRIE VIEW A&M UNIV	L MCWHORTER	JSC	J D OLIVER	NCC 9 66	476
49	PRINCETON UNIV	B S SINGH	GRC	P M CHALKIN	NAG 3 2248	352
49	PRINCETON UNIV	D SACKSTEDER	GRC	C K LAW	NCC 3 687	355
49	PRINCETON UNIV	E J SIOCHI	LARC	C K LAW	NCC 3 670	355
49	PURDUE UNIV	M HANSAN	GRC	I MUDAWAR	NAG 3 2336	217
49	PURDUE UNIV	N AVAILABLE	GRC	N AVAILABLE	NAS 3 00132	219
49	RENSSELAER POLYTECH INST	R SKARDA	GRC	D C WAYNER	NAG 3 2351	384
49	RENSSELAER POLYTECH INST	S GOTT	GRC	M D SMITH	NAG 3 2334	384
49	RENSSELAER POLYTECH INST	T ROGERS	GRC	M D SMITH	NAG 3 2552	384
49	RICE UNIV	B FILES	JSC	E V BARRERA	NGT 9 23	479
49	RICE UNIV	F MARTIN	JSC	T E TEZDUYAR	NAG 9 1059	478
49	ROWAN UNIV	K SACKSTEDER	GRC	D MARCHESE	NAG 3 2521	356
49	RUTGERS ST UNIV N	B J MOTIL	GRC	D J GLASSER	NAG 3 2350	356
49	RUTGERS STATE UNIV OF NJ NEW BRUNS	G A THOMAS	JSC	M C TRACHTENBERG	NAG 9 1923	359
49	SAN DIEGO STATE UNIV	S L OLSON	GRC	S BHATTACHARJEE	NCC 3 842	54
49	SAN JOSE STATE UNIV	N MUSCETTOLA	ARC	J MURPHY	NCC 2 1286	57
49	SAVANNAH STATE UNIV	R J ACOSTA	GRC	D KALU	NAG 3 2241	189
49	SOUTHERN ILLINOIS UNIV - CARBONDALE	S RUSSELL	MSFC	T CHU	NAG 8 1812	204
49	SOUTHERN UNIV & A&M COLLEGE	B B ST. CYR	SSC	A AMINI	NAG13 98003	236
49	SOUTHERN UNIV & A&M COLLEGE	R TRAVIS	SSC	G M LANE	NGT13 52744	236
49	SOUTHERN UNIV & A&M COLLEGE	S MCDANIELS	KSC	S S CHEHL	NAG10 210	236
49	SPELMAN COLLEGE	W LOVE	MSFC	C GILLYARD	NAG 8 1712	190
49	SPELMAN COLLEGE	W LOVE	MSFC	E FALCONER	NAG 8 1635	190
49	SPELMAN COLLEGE	W LOVE	MSFC	E FALCONER	NCC 8 227	190
49	STANFORD UNIV	F P CHIARAMONTE	GRC	G M HOMSY	NAG 3 2446	60
49	STANFORD UNIV	G MEYER	ARC	C TOMLIN	NCC 2 5422	65
49	STANFORD UNIV	J H AGUI	GRC	A P GAST	NAG 3 2398	60
49	STATE UNIV OF NY - BUFFALO	K R SACKSTEDER	GRC	D GIVI	NAG 3 2225	387
49	STATE UNIV OF NY - BUFFALO	S L PADULA	LARC	K E LEWIS	NGT 1 52228	388
49	STATE UNIV OF NY - BUFFALO	S L PADULA	LARC	K LEWIS	NGT 1 01034	388
49	STATE UNIV OF NY - STONY BROOK	G MEYER	ARC	J S MITCHELL	NAG 2 1325	388
49	STATE UNIV OF NY - STONY BROOK	T TURNER	MSFC	D LARSON	NCC 8 100	391
49	STATE UNIV OF NY COL	F P CHIARAMONTE	GRC	H MENG	NAG 3 2464	392
49	SYRACUSE UNIV	H K NAHRA	GRC	D SANGANI	NAG 3 2427	392
49	SYRACUSE UNIV	R D BRAUN	LARC	B D DAVIDSON	NCC 1 01004	393
49	TENNESSEE STATE UNIV	S MERRITT	GRC	D ROGERS	NAG 3 2471	468
49	TEXAS A&M UNIV	C G PARRA	JSC	D R BOYLE	NCC 9 69	484
49	TEXAS A&M UNIV	J TORRES	DFRC	W TURNER	NCC 4 152	484
49	TEXAS A&M UNIV	S LAMBING	MSFC	D BOYLE	NCC 8 226	484
49	TEXAS TECH UNIV	D L HENNINGER	JSC	J L SMITH	NCC 9 143	486
49	THE AMERICAN UNIV	G SOFFEN	GSFC	J KAY	NGT 5 79	156
49	THE UNIV OF CENTRAL FLORIDA	C G STEVENSON	KSC	F GOMEZ	NAG10 306	170
49	THE UNIV OF CENTRAL FLORIDA	G CATES	KSC	M MOLLAGHASGEMI	NCA10 41	170
49	THE UNIV OF CENTRAL FLORIDA	J D HEIDMANN	GRC	D KAPAT	NAG 3 2311	169
49	THE UNIV OF CENTRAL FLORIDA	J LYONS	KSC	T KOTNOUR	NAG10 296	170
49	THE UNIV OF CENTRAL FLORIDA	L GOSPER	KSC		NGT10 52630	171

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
49	THE UNIV OF CENTRAL FLORIDA	L GOSPER	KSC	D G KOTNOUR	NGT10 52625	171
49	THE UNIV OF CENTRAL FLORIDA	L GOSPER	KSC	T KOTNOUR	NGT10 52615	171
49	THE UNIV OF CENTRAL FLORIDA	R MCKINNEY	KSC	E R HOSLER	NAG10 260	170
49	THE UNIV OF CENTRAL FLORIDA	R MCKINNEY	KSC	J SMITH	NAG10 258	169
49	TRINITY UNIV	K BAKER	JSC	K NICKELS	NAG 9 1278	486
49	TUSKEGEE UNIV	S CAMPBELL	GRC	D DEAN	NAG 3 2432	4
49	UNIV HOUSTON-HOUSTON	E G STANSBERY	JSC	T J HEBERT	NAG 9 1140	487
49	UNIV HOUSTON-HOUSTON	R S BAIRD	JSC	A IGNATIEV	NAG 9 1287	487
49	UNIV OF MINN	P S GREENBERG	GRC	D H PUI	NAG 3 2435	321
49	UNIV OF MINN	P S GREENBERG	GRC	D H PUL	NAG 3 2275	321
49	UNIV OF AKRON	A FREED	GRC	S C JANA	NCC 3 752	421
49	UNIV OF AKRON	C LORENZO	GRC	T T HARTLEY	NCC 3 526	421
49	UNIV OF AKRON	D HOPKINS	GRC	S N PATNAIK	NCC 3 738	421
49	UNIV OF AKRON	F J MONTEGANI	GRC	R K EBY	NGT 3 52344	422
49	UNIV OF AKRON	G R HALFORD	GRC	S N PATNAIK	NAG 3 2420	420
49	UNIV OF AKRON	G R HALFORD	GRC	V K ARYA	NCC 3 768	421
49	UNIV OF AKRON	H LEE	GRC	G SONG	NCC 3 839	422
49	UNIV OF AKRON	K R SACKSTEDER	GRC	D PERRY	NAG 3 2512	421
49	UNIV OF AKRON	M MANZO	GRC	D T HARTLEY	NCC 3 820	422
49	UNIV OF AKRON	P S COWINGS	ARC	B C TAYLOR	NGT 2 52228	422
49	UNIV OF AKRON	W B DUVAL	GRC	C BATUR	NAG 3 2442	420
49	UNIV OF ALABAMA - BIRMINGHAM	K R SACKSTEDER	GRC	J BAKER	NAG 3 2560	5
49	UNIV OF ALABAMA - HUNTSVILLE	J PRESSON	MSFC	G WORKMAN	NCC 8 132	13
49	UNIV OF ALABAMA - HUNTSVILLE	M DIJOSEPH	GSFC	D KIPPEN	NAG 5 7772	8
49	UNIV OF ALABAMA - HUNTSVILLE	S C JOHNSON	MSFC	J DIMMOCK	NCC 8 146	13
49	UNIV OF ALABAMA - UNIV	A DUARTE	MSFC	P S RAY	NAG 8 1753	16
49	UNIV OF ALABAMA - UNIV	F Y KUO	JSC	G P	NAG 9 1419	16
49	UNIV OF ALABAMA - UNIV	J R SAUS	GRC	K S KRISHNAKUMAR	NAG 3 2004	15
49	UNIV OF ALASKA - FAIRBANKS	W F LAU	GSFC	G W WALKER	NAS 5 01074	18
49	UNIV OF ARIZONA	C A HOSTETLER	LARC	J A REAGAN	NGT 1 52176	39
49	UNIV OF ARIZONA	C E NIEDERHAUS	GRC	C F CHEN	NAG 3 2354	26
49	UNIV OF ARIZONA	D JACOBSON	MSFC	J H BURGE	NAS 8 97309	38
49	UNIV OF ARIZONA	M HUBBARD	MSFC	D R POIRIER	NCC 8 96	39
49	UNIV OF ARIZONA	P YEH	GSFC	W RYAN	NAG 5 10643	35
49	UNIV OF CALIFORNIA - BERKELEY	D L URBAN	GRC	A C FERNANDEZ-PELLO	NAG 3 2026	68
49	UNIV OF CALIFORNIA - BERKELEY	D L URBAN	GRC	C F PELLO	NCC 3 874	77
49	UNIV OF CALIFORNIA - BERKELEY	G MEYER	ARC	S S SASTRY	NAG 2 1479	68
49	UNIV OF CALIFORNIA - BERKELEY	K R SACKSTEDER	GRC	C FERNANDEZ-PELLO	NCC 3 896	77
49	UNIV OF CALIFORNIA - BERKELEY	K SACKSTEDER	GRC	J CHEN	NAG 3 2221	68
49	UNIV OF CALIFORNIA - BERKELEY	N D PILTCH	GRC	M FRENKLACH	NCC 3 833	77
49	UNIV OF CALIFORNIA - DAVIS	D HARPOLD	GSFC	R SMITH	NCC 5 287	83
49	UNIV OF CALIFORNIA - DAVIS	D L DIETRICH	GRC	B D SHAW	NCC 3 683	83
49	UNIV OF CALIFORNIA - DAVIS	D L DIETRICH	GRC	B D SHAW	NCC 3 890	83
49	UNIV OF CALIFORNIA - DAVIS	K R SACKSTEDER	GRC	I M KENNEDY	NCC 3 668	82
49	UNIV OF CALIFORNIA - DAVIS	K R SACKSTEDER	GRC	R C ALDREDGE	NCC 3 845	83
49	UNIV OF CALIFORNIA - DAVIS	P YEH	GSFC	S LIN	NAG 5 10480	81
49	UNIV OF CALIFORNIA - DAVIS	W H MILLER	GSFC	S LIN	NAG 5 9025	81
49	UNIV OF CALIFORNIA - IRVINE	B GUYNES	MSFC	F JURNAK	NAG 8 1572	86
49	UNIV OF CALIFORNIA - IRVINE	H D ROSS	GRC	D DUNN-RANKIN	NAG 3 2226	84
49	UNIV OF CALIFORNIA - LOS ANGELES	D F CHAO	GRC	V K DHIR	NAG 3 2397	88
49	UNIV OF CALIFORNIA - LOS ANGELES	F P CHARIAMONTE	GRC	D J DURIAN	NAG 3 2481	88
49	UNIV OF CALIFORNIA - LOS ANGELES	K SACKSTEDER	GRC	O I SMITH	NCC 3 690	94
49	UNIV OF CALIFORNIA - LOS ANGELES	K W HIFF	SSC	A V BALAKRISHNAN	NCC 4 121	94
49	UNIV OF CALIFORNIA - SAN DIEGO	D L DIETRICH	GRC	F A WILLIAMS	NCC 3 693	103
49	UNIV OF CALIFORNIA - SAN DIEGO	D L URBAN	GRC	F A WILLIAMS	NCC 3 695	103
49	UNIV OF CALIFORNIA - SAN DIEGO	D L URBAN	GRC	F A WILLIAMS	NCC 3 769	104
49	UNIV OF CALIFORNIA - SAN DIEGO	F J MONTEGANI	GRC	J KOSMATKA	NGT 3 52333	104
49	UNIV OF CALIFORNIA - SAN DIEGO	K R SACKSTEDER	GRC	F WILLIAMS	NAG 3 2554	96
49	UNIV OF CALIFORNIA - SAN DIEGO	L KALUZIENSKI	GSFC	R E ROTHSCHILD	NAG 5 8498	99
49	UNIV OF CALIFORNIA - SAN DIEGO	M E HILL	GRC	J D GODDARD	NAG 3 2465	96
49	UNIV OF CALIFORNIA - SAN DIEGO	O MEHMED	GRC	D KOSMATKA	NCC 3 819	104
49	UNIV OF CALIFORNIA - SANTA BARBARA	F P CHARIAMONTE	GRC	E MEIBURG	NAG 3 2466	106
49	UNIV OF CALIFORNIA - SANTA BARBARA	F P CHIARAMONTE III	GRC	G M HOMSY	NAG 3 2513	106
49	UNIV OF CALIFORNIA - SANTA BARBARA	F P CHIARAMONTE	GRC	D S CANNELL	NAG 3 2439	106
49	UNIV OF CALIFORNIA - SANTA BARBARA	F P CHIARAMONTE	GRC	E H MEIBURG	NAG 3 2493	106
49	UNIV OF CALIFORNIA - SANTA BARBARA	H K TRAN	ARC	F MILSTEIN	NCC 2 1049	109

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
49	UNIV OF CALIFORNIA - SANTA BARBARA	J B MCQUILLEN	GRC	T G THEOFANOUS	NAG 3 2119	106
49	UNIV OF CALIFORNIA - SANTA BARBARA	J H AGUI	LARC	P BANERJEE	NAG 3 2414	106
49	UNIV OF CINCINNATI	H C DEGROH	GRC	W B KRANTZ	NAG 3 2451	423
49	UNIV OF COLORADO - BOULDER	B J MOTIL	GRC	J E COLWELL	NAG 3 2267	124
49	UNIV OF COLORADO - BOULDER	B J MOTIL	GRC	J E COLWELL	NAG 3 2400	124
49	UNIV OF COLORADO - BOULDER	D G SICKOREZ	JSC	L NELSON	NGT 9 22	143
49	UNIV OF COLORADO - BOULDER	F P CHIARAMONTE	GRC	R H DAVIS	NCC 3 796	139
49	UNIV OF COLORADO - BOULDER	F P CHIARAMONTE	GRC	J E HART	NAG 3 2402	124
49	UNIV OF COLORADO - BOULDER	F P CHIARAMONTE	GRC	N A CLARK	NAG 3 2457	124
49	UNIV OF COLORADO - BOULDER	R FRIEDMAN	GRC	M C BRANCH	NAG 3 2220	124
49	UNIV OF CONNECTICUT	F P CHIARAMONTE	GRC	D FAGHRI	NCC 3 789	145
49	UNIV OF DAYTON	F J MONTEGANI	GRC	V JAIN	NGT 3 52351	424
49	UNIV OF DELAWARE	K R SACKSTER	GRC	D WANG	NCC 3 843	150
49	UNIV OF FLORIDA	B J MOTIL	GRC	A L LADD	NAG 3 2382	172
49	UNIV OF FLORIDA	F P CHIARAMONTE III	GRC	D NARAYANAN	NAG 3 2415	172
49	UNIV OF FLORIDA	F P CHIARAMONTE	GRC	D M HANES	NAG 3 2341	172
49	UNIV OF FLORIDA	K TUCKER	MSFC	W SHYY	NAG 8 1791	174
49	UNIV OF FLORIDA	M G JONES	LARC	L N SHEPLAK	NAG 1 01013	172
49	UNIV OF FLORIDA	M G JONES	LARC	M SHEPLAK	NAG 1 2261	171
49	UNIV OF HAWAII AT MANOA - HONOLULU	D L URBAN	GRC	B CHAO	NCC 3 696	198
49	UNIV OF HAWAII AT MANOA - HONOLULU	S GOKOGLU	GRC	B H CHAO	NAG 3 1912	191
49	UNIV OF ILLINOIS - CHICAGO CIRCLE	D L URBAN	GRC	M Y CHOI	NCC 3 665	208
49	UNIV OF ILLINOIS - CHICAGO CIRCLE	D L URBAN	GRC	Y CHOI	NCC 3 655	208
49	UNIV OF ILLINOIS - CHICAGO CIRCLE	G MEYER	ARC	R GROSSMAN	NAG 2 1172	207
49	UNIV OF ILLINOIS - CHICAGO CIRCLE	K R SACKSTEDER	GRC	D K PURI	NCC 3 688	208
49	UNIV OF ILLINOIS - CHICAGO CIRCLE	M DUTTA	GSFC	A FEINERMAN	NAG 5 10398	208
49	UNIV OF ILLINOIS - CHICAGO CIRCLE	S L OLSON	GRC	I K PURI	NCC 3 694	208
49	UNIV OF ILLINOIS - CHICAGO CIRCLE	W B DUVAL	GRC	D M MEGARIDIS	NAG 3 2456	208
49	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	B MCGILL	MSFC	R H DODDS	NAG 8 1751	213
49	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	F J MONTEGANI	GRC	M BRAGGS	NGT 3 52357	214
49	UNIV OF IOWA	C E NIEDERHAUS	GRC	D S MARSHALL	NAG 3 2368	225
49	UNIV OF IOWA	D P STOCKER	GRC	D CHEN	NCC 3 666	227
49	UNIV OF IOWA	R B ROGERS	GRC	A BHATTACHARJEE	NAG 3 2375	225
49	UNIV OF KENTUCKY	C H ROLLINS	LARC	V SINGH	NAG 1 01036	230
49	UNIV OF KENTUCKY	K R SACKSTEDER	GRC	K SAITO	NAG 3 2567	231
49	UNIV OF MARYLAND - COLLEGE PARK	C CULBERT	JSC	D AKIN	NAG 9 1290	268
49	UNIV OF MARYLAND - COLLEGE PARK	C J CULBERT	JSC	D AKIN	NAG 9 1116	268
49	UNIV OF MARYLAND - COLLEGE PARK	D STOCKER	GRC	A K GUPTA	NCC 3 686	269
49	UNIV OF MARYLAND - COLLEGE PARK	F MONTEGANI	GRC	D C WILSON JR	NGT 3 52367	271
49	UNIV OF MARYLAND - COLLEGE PARK	F P CHIARAMONTE	GRC	D DEANE	NAG 3 2479	256
49	UNIV OF MARYLAND - COLLEGE PARK	G A RUFF	GRC	J L TORERO	NAG 3 2568	256
49	UNIV OF MARYLAND - COLLEGE PARK	J B MCQUILLEN	GRC	J KIM	NAG 3 2206	256
49	UNIV OF MARYLAND - COLLEGE PARK	J B MCQUILLEN	GRC	J KIM	NCC 3 783	269
49	UNIV OF MARYLAND - COLLEGE PARK	J MCQUILLEN	GRC	P KIM	NAG 3 2228	256
49	UNIV OF MARYLAND - COLLEGE PARK	R AFZAL	GSFC	D CHRISTOU	NCC 5 238	270
49	UNIV OF MARYLAND - COLLEGE PARK	S OLSON	GRC	T KASHIWAGI	NCC 3 919	269
49	UNIV OF MARYLAND - EASTERN SHORE	D MENCHAN	WFF	M WILSON	NAG 5 8501	272
49	UNIV OF MASSACHUSETTS - AMHERST	P DOTY	MSFC	M TSAPATIS	NAG 8 1697	303
49	UNIV OF MASSACHUSETTS - AMHERST	P DOTY	MSFC	T P RUSSELL	NAG 8 1694	303
49	UNIV OF MASSACHUSETTS	H DEGROH	GRC	D CHARMCHI	NAG 3 2426	301
49	UNIV OF MICHIGAN - ANN ARBOR	A GONZALEZ	GRC	D E SCOTT	NAG 3 2082	310
49	UNIV OF MICHIGAN - ANN ARBOR	C LEK	GRC	M PERLIN	NAG 3 2406	311
49	UNIV OF MICHIGAN - ANN ARBOR	D F CHAO	GRC	G TRYGGVASON	NAG 3 2332	310
49	UNIV OF MICHIGAN - ANN ARBOR	E S NELSON	GRC	M KAVIANY	NCC 3 723	317
49	UNIV OF MICHIGAN - ANN ARBOR	F J MONTEGANI	GRC	A D GALLIMORE	NGT 3 52349	318
49	UNIV OF MICHIGAN - ANN ARBOR	F J MONTEGANI	GRC	A GALLIMORE	NGT 3 52348	318
49	UNIV OF MICHIGAN - ANN ARBOR	F J MONTEGANI	GRC	W J DAHM	NGT 3 52377	318
49	UNIV OF MICHIGAN - ANN ARBOR	F P CHIARAMONTE	GRC	M D SOLOMON	NAG 3 2356	311
49	UNIV OF MICHIGAN - ANN ARBOR	J E BROOKER	GRC	J F DRISCOLL	NCC 3 656	317
49	UNIV OF MICHIGAN - ANN ARBOR	K R SACKSTEDER	GRC	W DAHM	NCC 3 663	317
49	UNIV OF MICHIGAN - ANN ARBOR	K SACKSTEDER	GRC	G M FAETH	NCC 3 661	317
49	UNIV OF MICHIGAN - ANN ARBOR	O MEHMED	GRC	C PIERRE	NAG 3 2346	310
49	UNIV OF MICHIGAN - ANN ARBOR	R S JANKOVSKY	GRC	A D GALLIMORE	NAG 3 2307	310
49	UNIV OF MICHIGAN - ANN ARBOR	S NASH-STEVENSON	MSFC	T KAMMASH	NGT 8 52888	319
49	UNIV OF MISSOURI - COLUMBIA	G A THOMAS	JSC	S NAIR	NAG 9 1210	330
49	UNIV OF MISSOURI - COLUMBIA	P YE H	GSFC	C CHEN	NAG 5 10720	330

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
49	UNIV OF MISSOURI - COLUMBIA	W K BELVIN	LARC	P PAI	NAG 1 01037	329
49	UNIV OF NEBRASKA - LINCOLN	J JOCHIM	JSC	S FARRITOR	NAG 9 1137	340
49	UNIV OF NEBRASKA - LINCOLN	P YEH	GSFC	K SAYOOD	NAG 5 8677	340
49	UNIV OF NEBRASKA - LINCOLN	P YEH	GSFC	K SAYOOD	NAG 5 9834	340
49	UNIV OF NEBRASKA - LINCOLN	P YEH	GSFC	K SAYOOD	NAG 5 10408	340
49	UNIV OF NEW MEXICO-ALBUQUERQUE	J BOYCE	GSFC	G DONOHOE	NAG 5 9469	365
49	UNIV OF NEW MEXICO-ALBUQUERQUE	P YEP	GSFC	G K MAKI	NAG 5 10960	366
49	UNIV OF NEW MEXICO-ALBUQUERQUE	W H MILLER	GSFC	G K MAKI	NAG 5 9993	365
49	UNIV OF NEW MEXICO-ALBUQUERQUE	W H MILLER	GSFC	G K MAKI	NAG 5 10337	365
49	UNIV OF NEW MEXICO-ALBUQUERQUE	W H MILLER	GSFC	G MAKI	NAG 5 8454	365
49	UNIV OF NEW MEXICO-ALBUQUERQUE	W H MILLER	GSFC	G MAKI	NAG 5 9152	365
49	UNIV OF NEW MEXICO-ALBUQUERQUE	W H MILLER	GSFC	G MAKI	NAG 5 9402	365
49	UNIV OF NEW MEXICO-ALBUQUERQUE	W H MILLER	GSFC	G W DONOHOE	NAG 5 9704	365
49	UNIV OF NEW ORLEANS	F P CHIARAMONTEH	GRC	J HEGSETH	NAG 3 2447	237
49	UNIV OF NEW ORLEANS	J VICKERS	MSFC	J N CRISP	NCC 8 223	237
49	UNIV OF NEW ORLEANS	R TRAVIS	SSC	R SAXTON	NGT13 52740	238
49	UNIV OF NOTRE DAME	F P CHIARMONTE	GRC	D A GLAZIER	NAG 3 2366	221
49	UNIV OF NOTRE DAME	J B MCGUILLEN	GRC	M J MCCREADY	NCC 3 466	222
49	UNIV OF NOTRE DAME	J H AGUI	GRC	D BARBASI	NAG 3 2384	221
49	UNIV OF NOTRE DAME	J L ROSEY	LARC	J E RENAUD	NAG 1 2240	220
49	UNIV OF NOTRE DAME	P YEH	GSFC	D J COSTELLO	NAG 5 10503	221
49	UNIV OF NOTRE DAME	R FRIEDMAN	GRC	A VARMA	NAG 3 2213	221
49	UNIV OF NOTRE DAME	W H MILLER	GSFC	D J COSTELLO	NAG 5 8355	221
49	UNIV OF OKLAHOMA - NORMAN	F P CHIARAMONTE	GRC	A K AGRAWAI	NAG 3 2388	429
49	UNIV OF OKLAHOMA - NORMAN	H C DEGROH	GRC	D C LAI	NCC 3 791	430
49	UNIV OF OKLAHOMA - NORMAN	J B MCQUILLEN	GRC	D N PARTHASAEATHY	NCC 3 787	430
49	UNIV OF PENNSYLVANIA	D W GRIFFIN	GRC	D A HAMMER	NAG 3 2417	452
49	UNIV OF PITTSBURGH	F P CHIARAMONTE	GRC	D WI	NAG 3 2396	454
49	UNIV OF RHODE ISLAND	D A JACQUIN	GRC	A BOSE	NAG 3 2229	460
49	UNIV OF RHODE ISLAND	H C DEGROH	GRC	D FAGHRI	NAG 3 2434	460
49	UNIV OF ROCHESTER	D GRIFFIN	GRC	K MARSHALL	NAG 3 2348	393
49	UNIV OF SOUTHERN CALIFORNIA	D L URBAN	GRC	H PEARLMAN	NCC 3 871	119
49	UNIV OF SOUTHERN CALIFORNIA	F P CHARIAMONTE	GRC	D MAXWORTHY	NAG 3 2478	115
49	UNIV OF SOUTHERN CALIFORNIA	J E BROOKER	GRC	H PEARLMAN	NCC 3 854	119
49	UNIV OF SOUTHERN CALIFORNIA	K R SACKSTEDER	GRC	F N EGOLFOPOLUOS	NCC 3 678	118
49	UNIV OF SOUTHERN CALIFORNIA	K R SACKSTEDER	GRC	K OHSAKA	NCC 3 841	119
49	UNIV OF SOUTHERN CALIFORNIA	K R SACKSTEDER	GRC	P N EGOLFPOPOULOS	NCC 3 834	118
49	UNIV OF SOUTHERN CALIFORNIA	M DUTTA	GSFC	G SHIFLETT	NAG 5 10399	117
49	UNIV OF SOUTHERN CALIFORNIA	M M HASAN	GRC	K OHSAKA	NCC 3 827	118
49	UNIV OF SOUTHERN CALIFORNIA	S A GOKOGLU	GRC	P D RONNEY	NCC 3 671	118
49	UNIV OF SOUTHERN MISSISSIPPI	P DOTY	MSFC	J WHITEHEAD	NAG 8 1684	329
49	UNIV OF TENN SPACE INST-TULLAHOMA	M E OLSEN	ARC	S VENKATESWARAN	NCC 2 5413	472
49	UNIV OF TEXAS - AUSTIN	K MCLALLIN	GRC	J BENO	NAS 3 00119	497
49	UNIV OF TEXAS - AUSTIN	K SACKSTEDER	GRC	N T CLEMENS	NCC 3 677	497
49	UNIV OF TEXAS - AUSTIN	P GEORGE	GRC	W A WALLS	NAS 3 00135	497
49	UNIV OF TEXAS - AUSTIN	P S GREENBERG	GRC	P L VARGHESE	NAG 3 2240	492
49	UNIV OF TEXAS - DALLAS	P H YEH	GSFC	J P FONSEKA	NAG 5 9476	498
49	UNIV OF TEXAS AT BROWNSVILLE	L ARMENDARIZ	JSC	W WELLS	NAG 9 1064	501
49	UNIV OF TEXAS AT SAN ANTONIO	F SAFIE	MSFC	R MANTUEFEL	NAG 8 1720	501
49	UNIV OF TOLEDO	D C JANETZKE	GRC	T G KEITH	NCC 3 719	427
49	UNIV OF TOLEDO	D JANETZKE	GRC	T KEITH	NCC 3 774	427
49	UNIV OF TOLEDO	D MONTEGANI	GRC	D J KAPOOR	NGT 3 52342	428
49	UNIV OF TOLEDO	F J MONTEGANI	GRC	V J KAPOOR	NGT 3 52375	428
49	UNIV OF TOLEDO	P MURTHY	GRC	T G KEITH	NCC 3 524	427
49	UNIV OF TURABO	M MATEU	GSFC	A COURTIER	NAG 5 10240	558
49	UNIV OF TURABO	M MATEU	GSFC	B A MARRERO	NGT 5 90064	558
49	UNIV OF UTAH	H D ROSS	GRC	D E MELL	NAG 3 2403	502
49	UNIV OF UTAH	H D ROSS	GRC	W MELL	NAG 3 2548	502
49	UNIV OF VIRGINIA	H A ROELANT	LARC	J BECHTA-DUGAN	NAS 1 99098	526
49	UNIV OF VIRGINIA	L E JONES	LARC	R W KENT	NGT 1 52244	527
49	UNIV OF VIRGINIA	S M ARNOLD	GRC	M J PINDERA	NAG 3 2359	522
49	UNIV OF VIRGINIA	S M ARNOLD	GRC	M J PINDERA	NAG 3 2411	523
49	UNIV OF WASHINGTON	G MEYER	ARC	S DEVASIA	NAG 2 1450	534
49	UNIV OF WASHINGTON	J E BROOKER	GRC	D RILEY	NAG 3 2517	534
49	UNIV OF WASHINGTON	N R HALL	GRC	T J MATULA	NAG 3 2379	534
49	UNIV OF WASHINGTON	W J STLOUD	LARC	K Y LIN	NAG 1 2296	534

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
49	UNIV OF WEST FLORIDA	B WARD	JSC	J HANSEN	NAG 9 1386	180
49	UNIV OF WISCONSIN - MADISON	J F DOWDY	MSFC	J F CRUISE	NGT 8 52865	555
49	VA POLYTECH INST & ST UNIV	D L PALOMBO	LARC	M AHMODEON	NGT 1 52246	532
49	VA POLYTECH INST & ST UNIV	J E MAY	GRC	U VANDSBURGER	NAG 3 2093	530
49	VA POLYTECH INST & ST UNIV	J M SEATON	LARC	C E NUNNALLY	NAG 1 01021	529
49	VA POLYTECH INST & ST UNIV	R S PIASCCLK	LARC	J A NEWMAN	NGT 1 52174	532
49	VANDERBILT UNIV	C J CULBERT	JSC	R A PETERS II	NGT 9 52	474
49	VANDERBILT UNIV	J BARTH	GSFC	L MASSENGILL	NAG 5 9828	472
49	VANDERBILT UNIV	J F DOWDY	MSFC	S MAHADEVAN	NGT 8 52852	473
49	VANDERBILT UNIV	R D GREEN	GRC	D LEVAN	NAG 3 2401	472
49	WASHINGTON STATE UNIV	C NIEDERHAUS	GRC	D MARSTON	NAG 3 2378	543
49	WASHINGTON UNIV - ST	D L URBAN	GRC	R L AXELBAUM	NCC 3 697	336
49	WASHINGTON UNIV - ST	L KALUZIENSKI	GSFC	P L HINK	NAG 5 8568	334
49	WASHINGTON UNIV - ST	P S GREENBERG	GRC	D CHEN	NAG 3 2625	332
49	WASHINGTON UNIV - ST	S A GOKOGLE	GRC	R L AXELBAUM	NAG 3 1910	332
49	WAYNE STATE UNIV	G MEYER	ARC	F LIN	NAG 2 1279	319
49	WICHITA STATE UNIV	C BIDWELL	GRC	D PAPADAKIS	NAG 3 2324	230
49	WILBERFORCE UNIV	A F HEPP	GRC	D R BUFFINGER	NAG 3 2301	428
49	WOFFORD COLLEGE	J F DOWDY	MSFC	D M SCOTT	NAG 8 1310	466
49	WORCESTER POLYTECH INST	D F CHAO	GRC	D TRYGGVASON	NAG 3 2545	306
49	WORCESTER POLYTECH INST	D F CHAO	GRC	D TRYGGVASON	NAG 3 2583	306
49	WORCESTER POLYTECH INST	D P STOCKER	GRC	D C HERMANSON	NCC 3 673	306
49	WORCESTER POLYTECH INST	F CHIARAMONTE	GRC	D C HERMANSON	NAG 3 2395	305
49	WORCESTER POLYTECH INST	F P CHIARAMONTE	GRC	D TRYGGVASON	NAG 3 2535	305
49	XAVIER UNIV - LOUISIANA	L RANDOLPH	GSFC	G BAKER	NGT 5 90084	238
49	YALE UNIV	B MOTIL	GRC	D L GRANT	NAG 3 2425	146
49	YALE UNIV	D L URBAN	GRC	M D SMOOKE	NAG 3 2262	146
49	YALE UNIV	F P CHIARAMONTE	GRC	D LOEWENBERG	NAG 3 2477	147
49	YALE UNIV	K SACKSTEDER	GRC	D E ROSNER	NCC 3 691	148
49	YALE UNIV	R ROGERS	GRC	R E APFEL	NAG 3 2377	146
51	ALABAMA A&M UNIV	R C RICHMOND	MSFC	D KALE	NAG 8 1541	1
51	ARIZONA STATE UNIV	B GUYNES	MSFC	J ALLEN	NAG 8 1353	23
51	ARIZONA STATE UNIV	D J DESMARAIS	ARC	F G PICHEL	NCC 2 5411	23
51	ARIZONA STATE UNIV	L ROTHSCHILD	ARC	R E BLAKENSHIP	NGT 2 52284	23
51	ARIZONA STATE UNIV	M A MEYER	GSFC	P KNAUTH	NAG 5 4860	20
51	ARIZONA STATE UNIV	M MEYER	GSFC	D CRONIN	NAG 5 4131	20
51	ARIZONA STATE UNIV	M MEYER	GSFC	J FARMER	NAG 5 9507	22
51	BAYLOR COLLEGE OF MED	C F SAWIN	JSC	B R ALFORD	NCC 9 58	475
51	BAYLOR COLLEGE OF MED	D RISIN	JSC	B YOFEE	NAG 9 1361	475
51	BAYLOR COLLEGE OF MED	M M AVERNER	ARC	B B HASHEMI	NAG 2 1357	474
51	BAYLOR COLLEGE OF MED	M M AVERNER	ARC	H J BELLEN	NAG 2 1355	474
51	BAYLOR COLLEGE OF MED	M M AVERNER	ARC	H J BELLEN	NAG 2 1496	474
51	BAYLOR COLLEGE OF MED	N R PELLIS	JSC	A S RAJAN	NAG 8 1583	474
51	BENEDICT COLLEGE	R E GRINDELAND	ARC	L LOWE	NAG 2 1164	461
51	CALIFORNIA INST OF TECH	M A MEYER	GSFC	D YUNG	NAG 5 4022	42
51	CALIFORNIA INST OF TECH	M M AVERNER	ARC	E M DAVIDSON	NAG 2 1368	42
51	CALIFORNIA INST OF TECH	M M AVERNER	ARC	E V ROTHENBERG	NAG 2 1370	42
51	CALIFORNIA INST OF TECH	M M AVERNER	ARC	M BRONNER-FRASER	NAG 2 1346	42
51	CALIFORNIA INST OF TECH	M MEYER	GSFC	G BLAKE	NAG 5 8822	45
51	CASE WESTERN RESERVE UNIV	D REISS-BUBENHEIM	ARC	S J MOORMAN	NCC 2 1204	407
51	CASE WESTERN RESERVE UNIV	M M AVERNER	ARC	S J MOORMAN	NAG 2 1356	405
51	COLORADO STATE UNIV	D F BLAKE	ARC	M CRISWELL	NCC 2 1268	122
51	COLUMBIA UNIV	M M AVRENER	ARC	D J WOLGEMUTH	NAG 2 1345	369
51	CORNELL UNIV	B GUYNES	MSFC	R THORNE	NAG 8 1574	380
51	CORNELL UNIV	R K GLOBUS	ARC	M C VAN DER MEULEN	NCC 2 1201	380
51	CREIGHTON UNIV	M M AVERNER	ARC	B FRITZSCH	NAG 2 1353	340
51	DARTMOUTH COLLEGE	H K HIGGINBOTTAM	MSFC	U J GIBSON	NAG 8 1590	344
51	DARTMOUTH COLLEGE	M M AVERNER	ARC	K PETERSON	NAG 2 1420	343
51	DELAWARE STATE UNIV	D MENCHAN	GSFC	G OFOSU	NAG 5 8240	149
51	DREXEL UNIV	D RISIN	JSC	P LELKE	NCC 9 130	441
51	DREXEL UNIV	H SHAW	GSFC	M A WHEATLEY	NAG 5 11340	440
51	DREXEL UNIV	M M AVERNER	ARC	P I LELKES	NAG 2 1436	440
51	DUKE UNIV	B GUYNES	MSFC	W E KRAUS	NAG 8 1581	395
51	DUKE UNIV	C M WINGET	ARC	P ANDERSON	NAG 2 1002	394
51	DUKE UNIV	M M AVERNER	ARC	G A WRAT	NAG 2 1377	394
51	EAST CAROLINA UNIV	A E RONCA	ARC	H W BURDEN	NCC 2 1165	396

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
51	EMORY UNIV	B GUYNES	MSFC	V CONTICELLO	NAG 8 1579	181
51	FLORIDA A&M UNIV	C M WINGET	ARC	M S SACHDEVA	NCC 2 1005	164
51	FLORIDA INST OF TECH	B GUYNES	MSFC	C HELMSTALTER	NAG 8 1582	165
51	FLORIDA STATE UNIV	M A MEYER	GSFC	D FRIEDMANN	NAG 5 4921	167
51	GEORGIA INST OF TECH	M M AVERNER	ARC	H JO	NAG 2 1431	182
51	HARVARD UNIV	G A SOFFEN	GSFC	C CAVANAUGH	NGT 5 101	285
51	HARVARD UNIV	M A MEYER	GSFC	D D HOLLAND	NAG 5 4174	283
51	HARVARD UNIV	M M AVERNER	ARC	N M HOLBROOK	NAG 2 1417	282
51	HARVARD UNIV	M M AVERNER	ARC	N WANG	NAG 2 1509	282
51	HARVARD UNIV	M MEYER	GSFC	C M CAVANAUGH	NAG 5 10906	285
51	HOWARD UNIV	L PUTCHA	JSC	M W COOMES	NAG 9 977	155
51	INDIANA UNIV	A NURRIDIN	HQ	R L DUCN	NGT 5 50203	215
51	INDIANA UNIV	B GUYNES	MSFC	C M TRAYCOFF	NAG 8 1586	215
51	INDIANA UNIV - BLOOMINGTON	A E RONCA	ARC	J R ALBERTS	NAG 2 1449	215
51	JUDSON COLLEGE-ELGIN ILLINOIS	M M AVERNER	ARC	E A JUERGENSMEYER	NAG 2 1512	200
51	KANSAS STATE UNIV	W E HINDS	ARC	S K CHAPES	NAG 2 1274	228
51	KENT STATE UNIV	M M AVERNER	ARC	L G LEFF	NAG 2 1497	412
51	LOUISIANA STATE UNIV - BATON ROUGE	C M WINGET	ARC	M E MUSGRAVE	NAG 2 1020	233
51	LOUISIANA STATE UNIV - BATON ROUGE	L E BEBOUT	ARC	J R BATTISTA	NAG 2 1460	233
51	LOUISIANA STATE UNIV - BATON ROUGE	M M AVERNER	ARC	V J LICATA	NAG 2 1511	233
51	LOUISIANA STATE UNIV - BATON ROUGE	M MEYAPPAN	ARC	P VASHISTA	NCC 2 5440	235
51	MARSHALL UNIV	M M AVERNER	ARC	W B RHOTEN	NAG 2 1194	544
51	MASSACHUSETTS INST OF TECH	M M AVERNER	ARC	A L DEMAIN	NAG 2 1350	288
51	MASSACHUSETTS INST OF TECH	N R PELLIS	JSC	L E FREED	NAG 9 836	296
51	MASSACHUSETTS INST OF TECH	N R PELLIS	JSC	L FREED	NCC 8 174	299
51	MEDICAL COLLEGE OF GEORGIA	M M AVERNER	ARC	P L MCNEIL	NAG 2 1416	188
51	MEDICAL COLLEGE OF WISCONSIN	R D MACELROY	ARC	D A RILEY	NAG 2 1422	546
51	MEDICAL COLLEGE OF WISCONSIN	W E HINDS	ARC	D A RILEY	NAG 2 956	546
51	MEDICAL UNIV OF SOUTH CAROLINA	M M AVERNER	ARC	S HOFFMAN	NAG 2 1415	465
51	MIAMI UNIV	C M WINGET	ARC	J Z KISS	NAG 2 1017	413
51	MIAMI UNIV	D REISS-BUBENHEIM	ARC	J Z KISS	NCC 2 1200	413
51	MICHIGAN STATE UNIV	B GUYNES	GSFC	L R MCCABE	NAG 8 1575	307
51	MISSISSIPPI STATE UNIV	B GUYNES	MSFC	W W WILSON	NAG 8 1837	327
51	MISSISSIPPI STATE UNIV	B V GUYNES	MSFC	W W WILSON	NAG 8 1566	327
51	MONTANA STATE UNIV	M F VASQUES	ARC	B H PYLE	NCC 2 1143	337
51	MONTANA STATE UNIV	M T FLYNN	ARC	B H PYLE	NCC 2 5277	338
51	MOREHOUSE SCH MED	M M AVERNER	ARC	B J KLEMENT	NAG 2 1215	189
51	MOREHOUSE SCH MED	S M HING	ARC	G SONNENFELD	NCC 2 1262	189
51	MT SINAI SCH OF MED OF THE CUNY	C LLOYD	JSC	M SCHAFFLER	NAG 9 1097	383
51	MT SINAI SCH OF MED OF THE CUNY	M F VASQUES	ARC	G R HOLSTEIN	NCC 2 1173	383
51	MT SINAI SCH OF MED OF THE CUNY	M M AVERNER	ARC	G R HOLSTEIN	NAG 2 1191	382
51	MT SINAI SCH OF MED OF THE CUNY	W E HINDS	ARC	G R HOLSTEIN	NAG 2 946	382
51	NEW MEXICO HIGHLANDS UNIV	D S MCKAY	JSC	J C DEBACA	NAG 9 1168	361
51	NY UNIV	MM AVERNER	ARC	K D WALTON	NAG 2 1426	383
51	NY UNIV	W E HINDS	ARC	K D WALTON	NAG 2 951	383
51	NORTH CAROLINA STATE UNIV	J LETCHWORTH	KSC	D S BROWN	NAG10 308	401
51	NORTH CAROLINA STATE UNIV	M M AVERNER	ARC	I Y PERERA	NAG 2 1502	400
51	NORTHERN ARIZONA UNIV	M L FONDA	ARC	J H WITTKE	NCC 2 5356	25
51	OHIO STATE UNIV	M M AVERNER	ARC	M L EVANS	NAG 2 1411	413
51	OREGON HEALTH SCIENCES UNIV	M M AVERNER	ARC	M V DANILCHIK	NAG 2 1199	431
51	OREGON STATE UNIV	M M AVERNER	ARC	T L LOMAX	NAG 2 1341	431
51	PENN STATE UNIV	M M AVERNER	ARC	D J COSGROVE	NAG 2 1342	442
51	PENN STATE UNIV	M M AVERNER	ARC	S G GILROY	NAG 2 1366	442
51	PURDUE UNIV	C A CONLEY	ARC	C A MITCHELL	NGT 2 52285	220
51	PURDUE UNIV	L KARR	MSFC	J MORRE	NAG 8 1147	219
51	PURDUE UNIV	M M AVERNER	ARC	D J MORRE	NAG 2 1344	216
51	PURDUE UNIV	R MACELROY	ARC	C MITCHELL	NAG 2 1389	217
51	RENSSELAER POLYTECH INST	M MEYER	GSFC	D P FERRIS	NAG 5 4557	384
51	RENSSELAER POLYTECH INST	M MEYER	GSFC	D WHITTET	NAG 5 9148	385
51	ROCHESTER INST OF TECH	J A SMITH	GSFC	D SCHOTT	NAG 5 11009	386
51	RUTGERS ST UNIV N	A NURRIDIN	HQ	K C TING	NGT 5 50229	359
51	RUTGERS STATE UNIV OF NJ NEW BRUNS	K DAUES	JSC	L KERKHOF	NAG 9 1283	359
51	SAN FRANCISCO STATE UNIV	N D SEARBY	ARC	S WEINSTEIN	NCC 2 1277	55
51	SAN JOSE STATE UNIV	K W CULLINGS	ARC	C A BRINEGAR	NCC 2 5311	57
51	SAN JOSE STATE UNIV	N G DAUNTON	ARC	R A FOX	NCC 2 1096	56
51	STANFORD UNIV	C A CONLEY	ARC	S K KIM	NCC 2 1208	64

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
51	STANFORD UNIV	M GERALD-YAMASAKI	ARC	R B LAUGHLIN	NCC 2 5298	65
51	STANFORD UNIV	M M AVERNER	ARC	D BERSTEIN	NAG 2 1354	59
51	STANFORD UNIV	R D BOYLE	ARC	J RAYMOND	NGT 2 52282	66
51	STANFORD UNIV	R M WHEELER	KSC	C S CRIDDLE	NGT10 52619	67
51	STATE UNIV OF NY - STONY BROOK	C HUA SU	MSFC	M DUDLEY	NCC 8 208	391
51	STATE UNIV OF NY - STONY BROOK	M M AVERNER	ARC	M A MORROW	NAG 2 1379	388
51	STATE UNIV OF NY - STONY BROOK	M M AVERNER	ARC	M HADJIARYROU	NAG 2 1517	388
51	STATE UNIV OF NY COL - PURCHASE	M A MEYER	GSFC	D J FLYNN	NAG 5 4691	391
51	STATE UNIV OF NY COL	D A QUINN	GSFC	G R WILSKY	NGT 8 52861	392
51	TEXAS A&M UNIV	M ANDERSON	JSC	G COTE	NCC 8 169	484
51	TEXAS A&M UNIV	M F VASQUES	ARC	M D DELP	NCC 2 1166	483
51	TEXAS A&M UNIV	M M AVERNER	ARC	M D DELP	NAG 2 1340	480
51	TEXAS CHRISTIAN UNIV	B L GUYNES	MSFC	J G ALBRIGHT	NAG 8 1356	485
51	THE UNIV OF CENTRAL FLORIDA	C QUINCY	KSC	J F WEISHAMPEL	NAG10 278	170
51	THOMAS JEFFERSON UNIV	D RISEN	JSC	A FERTALA	NAG 9 1342	452
51	THOMAS JEFFERSON UNIV	F A CUCINOTTA	JSC	C ILIAKIS	NAG 9 1023	452
51	TULANE UNIV	M M AVERNER	ARC	C A NICKERSON	NAG 2 1378	237
51	TULANE UNIV	N PELLIS	JSC	K O	NAG 9 826	237
51	UNIV HOUSTON-HOUSTON	R E GRINDELAND	ARC	A C VAILAS	NAG 2 1284	486
51	UNIV OF MARYLAND	B L WOOD	ARC	R R COLWELL	NAG 2 1195	255
51	UNIV OF MASSACHUSETTS	M M AVERNER	ARC	P J MACCAFFERY	NAG 2 1438	301
51	UNIV OF MASSACHUSETTS	M M AVERNER	ARC	Y L WANG	NAG 2 1197	301
51	UNIV OF MASSACHUSETTS	M M AVERNER	ARC	Y L WANG	NAG 2 1495	301
51	UNIV OF MED AND DENTISTRY	M M AVERNER	ARC	R S NOWAKOWSKI	NAG 2 1367	360
51	UNIV OF MINN	B GUYNES	MSFC	W S HU	NAG 8 1349	323
51	UNIV OF TEXAS MED BRAN - GALVESTON	B PALOSKI	JSC	G KAUFMAN	NCC 9 123	488
51	UNIV OF TEXAS MED BRAN - GALVESTON	C HAVEN	JSC	M MCGINNIS	NAS 9 98138	488
51	UNIV OF TEXAS MED BRAN - GALVESTON	C M WINGET	ARC	D NIESSEL	NCC 2 1160	488
51	UNIV OF TEXAS MED BRAN - GALVESTON	C W LLOYD	JSC	C W COOPER	NGT 9 47	488
51	UNIV OF TEXAS	D REISS-BUBENHEIM	ARC	S T BRADY	NAG 2 962	489
51	UNIV OF TX-HLTH SCI CTR-SAN ANTONIO	W E HINDS	ARC	M L WIEDERHOLD	NAG 2 952	488
51	UNIV	B V GUYNES	MSFC	E A GRIMM	NAG 8 1570	489
51	UNIV	B V GUYNES	MSFC	L P RUTZKY	NAG 8 1585	489
51	UNIV	C W LLOYD	JSC	J WEINDER	NGT 9 46	490
51	UNIV	M M AVERNER	ARC	B W MCINTYRE	NAG 2 1505	489
51	UNIV	M M AVERNER	ARC	D W ROWE	NAG 2 1434	144
51	UNIV	M M AVERNER	ARC	M E MARSH	NAG 2 1498	489
51	UNIV	M R POWELL	JSC	C FIFE	NAG 9 952	490
51	UNIV	N PELLIS	JSC	D DIMITRIJEVICH	NAG 9 813	489
51	UNIV	N PELLIS	JSC	P JOHNSON	NAG 9 834	489
51	UNIV	O SANTOS	ARC	P J DUKE	NAG 2 1261	489
51	UNIV	S GONDAS	JSC	A D KULKARNI	NCC 8 168	490
51	UNIV	S R GONDAS	JSC	C A SAVARY	NAG 8 1347	489
51	UNIV	S R GONDAS	JSC	E H GRIMM	NAG 8 1348	489
51	UNIV	W E HINDS	ARC	R S KOWAKOWSKI	NAG 2 950	360
51	UNIV OF ALABAMA - BIRMINGHAM	M M AVERNER	ARC	V D DARLEY-USMAR	NAG 2 1348	5
51	UNIV OF ALABAMA - BIRMINGHAM	T OWEN	MSFC	L J DELUCAS	NCC 8 172	6
51	UNIV OF ALABAMA - HUNTSVILLE	A E RONCA	ARC	R F EATON	NGT 2 52283	14
51	UNIV OF ALABAMA - HUNTSVILLE	B GUYNES	MSFC	R J NAVMANN	NAG 8 1577	12
51	UNIV OF ALABAMA - HUNTSVILLE	C R TALLEY	MSFC	F ROSENBERGER	NAG 8 1354	11
51	UNIV OF ALABAMA - HUNTSVILLE	H K HIGGINBOTHAM	MSFC	P G VEKILOV	NAG 8 1790	12
51	UNIV OF ALABAMA - HUNTSVILLE	M L PUSEY	MSFC	J D NG	NCC 8 203	13
51	UNIV OF ALABAMA - UNIV	M M AVERNER	ARC	J M O	NAG 2 1499	15
51	UNIV OF ARIZONA	M M AVERNER	ARC	D DELUCA	NAG 2 1369	25
51	UNIV OF ARIZONA	M M AVERNER	ARC	M E TISCHER	NAG 2 1187	25
51	UNIV OF ARIZONA	R S BAIRD	JSC	K R SRIDHAR	NAG 9 923	37
51	UNIV OF CALIFORNIA - BERKELEY	C MCKAY	ARC	R ADMUNDSON	NCC 2 5455	76
51	UNIV OF CALIFORNIA - BERKELEY	M M AVERNER	ARC	D A WEISBLAT	NAG 2 1359	68
51	UNIV OF CALIFORNIA - BERKELEY	M M AVERNER	ARC	J C GERHART	NAG 2 1361	68
51	UNIV OF CALIFORNIA - BERKELEY	M M AVERNER	ARC	L J FELDMAN	NAG 2 1351	68
51	UNIV OF CALIFORNIA - DAVIS	E M HOLTON	ARC	C A FULLER	NCC 2 1271	82
51	UNIV OF CALIFORNIA - DAVIS	M M AVERNER	ARC	B A HORWITZ	NAG 2 1494	80
51	UNIV OF CALIFORNIA - DAVIS	M M AVERNER	ARC	C A FULLER	NAG 2 1451	80
51	UNIV OF CALIFORNIA - DAVIS	R D MACELROY	ARC	T M HOBAN-HIGGINS	NAG 2 1404	80
51	UNIV OF CALIFORNIA - DAVIS	W E HINDS	ARC	B CHAPMAN	NAG 2 1019	79
51	UNIV OF CALIFORNIA - DAVIS	W E HINDS	ARC	C A FULLER	NAG 2 944	79

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
51	UNIV OF CALIFORNIA - IRVINE	A POHORILLE	ARC	J K LANYI	NCC 2 5404	86
51	UNIV OF CALIFORNIA - IRVINE	B GUYNES	MSFC	A J MALKIN	NAG 8 1569	85
51	UNIV OF CALIFORNIA - IRVINE	C W LLOYD	JSC	R E PURDY	NAG 9 1149	86
51	UNIV OF CALIFORNIA - IRVINE	W E HINDS	ARC	K M BALDWIN	NAG 2 942	84
51	UNIV OF CALIFORNIA - LOS ANGELES	M M AVERNER	ARC	L F HOFFMAN	NAG 2 1222	87
51	UNIV OF CALIFORNIA - LOS ANGELES	M M AVERNER	ARC	T J TIDBALL	NAG 2 1193	87
51	UNIV OF CALIFORNIA - LOS ANGELES	R E GRINDELAND	ARC	V R EDGERTON	NAG 2 1270	87
51	UNIV OF CALIFORNIA - LOS ANGELES	R E GRINDELAND	ARC	V R EDGERTON	NGT 2 52265	95
51	UNIV OF CALIFORNIA - SAN DIEGO	B GUYNES	MSFC	J A FRANGOS	NAG 8 1589	102
51	UNIV OF CALIFORNIA - SAN DIEGO	M M AVERNER	ARC	L Z HOLLAND	NAG 2 1376	96
51	UNIV OF CALIFORNIA - SAN DIEGO	M MEYER	GSFC	G ARRHENIUS	NAG 5 9566	101
51	UNIV OF CALIFORNIA - SAN DIEGO	M MEYER	HQ	P L BADA	NAG 5 4546	97
51	UNIV OF CALIFORNIA - SAN FRANCISCO	R K GLOBUS	ARC	C H DAMSKY	NCC 2 1194	105
51	UNIV OF CALIFORNIA - SAN FRANCISCO	R L JAFFE	ARC	M A WILSON	NCC 2 5412	105
51	UNIV OF CALIFORNIA - SANTA CRUZ	B N BEBOUT	ARC	J P ZEHR	NCC 2 5370	114
51	UNIV OF CALIFORNIA - SANTA CRUZ	C E WADE	ARC	C L ORTIZ	NGT 2 52230	114
51	UNIV OF CALIFORNIA - SANTA CRUZ	M KLISS	ARC	G MILLHAUSER	NCC 2 5358	114
51	UNIV OF CALIFORNIA - SANTA CRUZ	M L FONDA	ARC	A KANAVARIOTI	NCC 2 5367	114
51	UNIV OF CALIFORNIA - SANTA CRUZ	M MEYER	GSFC	D DEAMER	NAG 5 4665	111
51	UNIV OF CHICAGO	R D MAC-ELROY	ARC	N H PATEL	NAG 2 6050	204
51	UNIV OF COLORADO - BOULDER	D REISS-BEBENHEIM	ARC	L STODIECK	NCC 2 5391	139
51	UNIV OF COLORADO - BOULDER	M KLISS	ARC	G HEYENGA	NCC 2 1145	139
51	UNIV OF CONNECTICUT	B M BEBOUT	ARC	P T VISSCHER	NCC 2 1067	145
51	UNIV OF DISTRICT OF COLUMBIA	D MENCHAN	GSFC	H L PHELPS	NAG 5 9545	161
51	UNIV OF DISTRICT OF COLUMBIA	E ENGMAN	GSFC	G WYCHE-MOORE	NCC 5 196	161
51	UNIV OF FLORIDA	D R COX	KSC	R J FERL	NAG10 291	174
51	UNIV OF FLORIDA	R K GLOBUS	ARC	T J WRONSKI	NCC 2 1197	174
51	UNIV OF HAWAII AT MANOA - HONOLULU	M M AVERNER	ARC	M Q MARTINDALE	NAG 2 1374	191
51	UNIV OF HAWAII AT MANOA - HONOLULU	M M AVERNER	ARC	M Q MARTINDALE	NAG 2 1519	191
51	UNIV OF ILLINOIS - CHICAGO CIRCLE	M M AVERNER	ARC	A LYSAKOWSKI	NAG 2 1358	207
51	UNIV OF IOWA	B GUYNES	MSFC	J WIENECK	NAG 8 1588	227
51	UNIV OF IOWA	B GUYNES	MSFC	T L PEEPLES	NAG 8 1593	227
51	UNIV OF IOWA	M ANDERSON	JSC	V G RODGERS	NAG 8 1591	227
51	UNIV OF IOWA	S GONDA	JSC	D W MURHAMMER	NAG 8 1592	227
51	UNIV OF KANSAS MEDICAL CTR	M M AVERNER	ARC	J S TASH	NAG 2 1491	230
51	UNIV OF KENTUCKY	M M AVERNER	ARC	S DAUNERT	NAG 2 1363	231
51	UNIV OF LOUISVILLE	J W HINES	ARC	E WANG	NCC 2 5373	232
51	UNIV OF LOUISVILLE	J W HINES	ARC	E WANG	NCC 2 5374	232
51	UNIV OF MARYLAND - COLLEGE PARK	D E WALTER	GSFC	L W ADAMS	NAG 5 8678	262
51	UNIV OF MARYLAND - COLLEGE PARK	M M AVERNER	ARC	S I SUKHAREV	NAG 2 1352	255
51	UNIV OF MARYLAND BALTIMORE	B GUYNE	MSFC	K COLLINS	NAG 8 1573	272
51	UNIV OF MASSACHUSETTS - AMHERST	M M AVERNER	ARC	M E MUSGRAVE	NAG 2 1375	302
51	UNIV OF MASSACHUSETTS - AMHERST	M MEYER	GSFC	L MARGULIS	NAG 5 6701	302
51	UNIV OF MIAMI	D RISEN	JSC	L INVERARDI	NAG 9 1346	177
51	UNIV OF MICHIGAN - ANN ARBOR	D A REISS-BUBENHEIM	ARC	K I CLARK	NCC 2 856	317
51	UNIV OF MISSOURI - COLUMBIA	M M AVERNER	ARC	F W BOOTH	NAG 2 1372	330
51	UNIV OF NEVADA - RENO	R T WHALEN	ARC	E WANG	NCC 2 5408	343
51	UNIV OF NEW ORLEANS	M T FLYNN	ARC	Z ROSENZWEIG	NCC 2 5376	237
51	UNIV OF NORTH CAROLINA - CHAPEL HILL	B GUYNES	MSFC	C W CARTER	NAG 8 1580	403
51	UNIV OF NORTH CAROLINA - CHAPEL HILL	M M AVERNER	ARC	M YAMAUCHI	NAG 2 1188	402
51	UNIV OF NORTH TEXAS	M MEYER	GSFC	D S BRATERMAN	NAG 5 4891	491
51	UNIV OF OKLAHOMA - NORMAN	D BLAKE	ARC	R D ELMORE	NCC 2 5382	430
51	UNIV OF OKLAHOMA - NORMAN	M M AVERNER	ARC	J T THOMPSON	NAG 2 1427	429
51	UNIV OF OREGON - EUGENE	B M BEBATH	ARC	R W CASTENHOLZ	NCC 2 5409	435
51	UNIV OF OREGON - EUGENE	B M BEBOUT	ARC	R W CASTEBOLZ	NCC 2 5299	435
51	UNIV OF OREGON - EUGENE	C P MCKAY	ARC	R W CASTENHOLZ	NCC 2 5306	435
51	UNIV OF PENNSYLVANIA	P DOTY	MSFC	D A	NAG 8 1683	453
51	UNIV OF PITTSBURGH	M M AVERNER	ARC	C D BALABAN	NAG 2 1186	454
51	UNIV OF PITTSBURGH	N PELLIS	JSC	J M JESSUP	NAG 9 835	455
51	UNIV OF PUERTO RICO - MAYAGUEZ	R TRAVIS	SSC	F GILBES	NAG13 99029	557
51	UNIV OF ROCHESTER	D RISEN	JSC	J H WU	NAG 9 1360	394
51	UNIV OF SAN FRANCISCO	C M WINGET	ARC	E V BENTON	NCC 2 893	115
51	UNIV OF SAN FRANCISCO	E A ALMEIDA	ARC	C H DAMSKY	NCC 2 1282	115
51	UNIV OF SOUTH ALABAMA	S NASH-STEVENSON	MSFC	R HONKANEN	NGT 8 52896	16
51	UNIV OF SOUTH ALABAMA	V L KLOERIS	JSC	J CRUTHIRDS	NAG 9 1282	16
51	UNIV OF SOUTH FLORIDA	D RISIN	JSC	J L BECKER	NAG 9 1341	179



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
51	UNIV OF SOUTH FLORIDA	S R GONDA	JSC	J L BECKER	NAG 9 648	178
51	UNIV OF SOUTHWESTERN LOUISIANA	R D MACELROY	ARC	K H HASENSTEIN	NAG 2 1423	238
51	UNIV OF SOUTHWESTERN LOUISIANA	W M KNOTT	KSC	K H HASENSTEIN	NAG10 190	238
51	UNIV OF TENNESSEE - KNOXVILLE	D JAN	JPL	G S SAYLER	NAG 9 1080	471
51	UNIV OF TENNESSEE - KNOXVILLE	W KNOTT	KSC	R CONGES	NAG10 221	471
51	UNIV OF TEXAS - AUSTIN	D SCHULTZ	KSC	D ROUX	NAG10 295	497
51	UNIV OF TEXAS - AUSTIN	M M AVERNER	ARC	S J ROUX	NAG 2 1347	491
51	UNIV OF TEXAS - AUSTIN	M M AVERNER	ARC	S M SHANKLAND	NAG 2 1349	492
51	UNIV OF TEXAS - AUSTIN	W M KNOTT	KSC	S J POUX	NAG10 202	496
51	UNIV OF TOLEDO	B GUYNES	MSFC	C A SCHALL	NAG 8 1578	427
51	UNIV OF VIRGINIA	D R MORRISON	MSFC	L W CHUNG	NCC 8 171	527
51	UNIV OF WASHINGTON	J H BELL	ARC	J B CALLIS	NGT 2 52281	542
51	UNIV OF WASHINGTON	M M AVERNER	ARC	J S STONE	NAG 2 1514	534
51	UNIV OF WISCONSIN - MADISON	M M AVERNER	ARC	E SCHULTZ	NAG 2 1220	547
51	UNIV OF WISCONSIN - MADISON	M M AVERNER	ARC	E SCHULTZ	NAG 2 1510	547
51	UNIV OF WISCONSIN - MADISON	M M AVERNER	ARC	P H MASSON	NAG 2 1189	547
51	UNIV OF WISCONSIN - MADISON	M M AVERNER	ARC	P H MASSON	NAG 2 1492	547
51	UNIV OF WISCONSIN - MADISON	M M AVERNER	ARC	P MASSON	NAG 2 1336	547
51	UNIV OF WISCONSIN - MADISON	R D MACELROY	ARC	P I LELKES	NAG 2 1380	547
51	UNIV OF WISCONSIN - MILWAUKEE	D R MORRISON	JSC	P I LELKES	NCC 8 173	555
51	UTAH STATE UNIV	C P MCKAY	ARC	L S POWERS	NCC 2 5466	505
51	WAKE FOREST UNIV	M M AVERNER	ARC	G K MUDAAY	NAG 2 1203	404
51	WAKE FOREST UNIV	M M AVERNER	ARC	G K MUDAY	NAG 2 1507	404
51	WASHINGTON STATE UNIV	M M AVERNER	ARC	N G LEWIS	NAG 2 1513	543
51	WASHINGTON UNIV - ST	M M AVERNER	ARC	D E ANGELAKI	NAG 2 1493	332
51	WASHINGTON UNIV - ST	M M AVERNER	ARC	J B SKEATH	NAG 2 1500	332
51	WASHINGTON UNIV - ST	W E HINDS	ARC	S M HIGHSTEIN	NAG 2 945	332
51	WAYNE STATE UNIV	M M AVERNER	ARC	D A RAPPOLEE	NAG 2 1503	319
51	WAYNE STATE UNIV	S P COLOMBAN	ARC	K PETER ZAUNER	NCC 2 1189	320
51	WEST VIRGINIA UNIV	A NURRIDIN	GSFC	W T PETERJOHN	NGT 5 50009	546
51	WOODS HOLE OCEANOGRAPHIC INST	M MEYER	GSFC	D M HAYES	NAG 5 9422	305
51	YALE UNIV	B GUYNES	MSFC	R E APFEL	NAG 8 1351	148
51	YALE UNIV	D R BUBENHEIM	ARC	H S KESHISHIAN	NAG 2 1433	146
51	YALE UNIV	D REISS-BUBENHEIM	ARC	H S KESHISHIAN	NAG 2 948	146
51	YALE UNIV	M M AVERNER	ARC	R G KALB	NAG 2 1504	146
51	YALE UNIV	M MEYER	GSFC	D SOLL	NAG 5 9554	147
54	ALABAMA A&M UNIV	M H KLISS	ARC	C A BEYL	NAG 2 1175	1
54	ARIZONA STATE UNIV	D RISEN	JSC	B C TOWE	NAG 9 1359	23
54	FLORIDA A&M UNIV	A JOYCE	SSC	Y P HSIEH	NAG13 41	164
54	MONTANA STATE UNIV	D J DES MARAIS	ARC	D M WARD	NCC 2 1073	337
54	MONTANA STATE UNIV	K CULLINGS	ARC	J HENSON	NCC 2 5445	338
54	NORTHWESTERN UNIV	D RUSSO	JSC	R M LUEPTOW	NAG 9 1297	203
54	OHIO STATE UNIV	M M AVERNER	ARC	M L EVANS	NAG 2 1190	413
54	PENN STATE UNIV	D RUSSO	JSC	M V PISHKO	NAG 9 1372	449
54	PONCE SCH OF MED	H L D'ANTONI	ARC	J L MATTA	NAG 2 1176	556
54	RICE UNIV	J C GRAF	JSC	F K TITTEL	NGT 9 19	479
54	STEVENS INST OF TECH	J GRAF	JSC	G P KORFIATIS	NAG 9 1063	360
54	TEXAS A&M UNIV	D RUSSO	JSC	M V PISHKO	NAG 9 1277	483
54	UNIV OF MARYLAND	S GONDA	JSC	J DI RUAGIERO	NCC 8 175	255
54	UNIV OF MASSACHUSETTS	S R GONDA	MSFC	W J SCHWARTZ	NAG 8 1358	301
54	UNIV OF TEXAS-PAN AMERICAN	S GONZALEZ	JSC	R FOWLER	NAG 9 1169	489
54	UNIV OF ARIZONA	C A DARBY	MSFC	P H SMITH	NAG 8 1654	37
54	UNIV OF ARIZONA	D L PETERSON	ARC	B D GANAPOL	NCC 2 5239	38
54	UNIV OF ARK MAIN CAMP - FAYETTEVILLE	C P MCKAY	ARC	T A KRAL	NGT 2 52243	41
54	UNIV OF CALIFORNIA - BERKELEY	D J DES MARAIS	ARC	N R PACE	NGT 2 52233	77
54	UNIV OF CALIFORNIA - SAN DIEGO	K ARRIGO	GSFC	D LUBIN	NAG 5 6414	98
54	UNIV OF CONNECTICUT	M S BURRELL	GSFC	R COLWELL	NGT 5 82	146
54	UNIV OF FLORIDA	A T LEE	JSC	J J WARWICK	NCC 9 110	175
54	UNIV OF MARYLAND BALTIMORE COUNTY	F A CUCINOTTA	JSC	B M RABIN	NAG 9 1190	275
54	UNIV OF NORTH CAROLINA-GREENSBORO	D RUSSO	JSC	C N STEWART	NAG 9 1296	403
54	UNIV OF PUERTO RICO-RIO PIEDRAS	W J LOVE	MSFC	B R WEINER	NAG 8 1709	558
54	UNIV OF VERMONT	R H THOMAS	GSFC	D MORRISSEY	NAG 5 4138	506
54	UNIV OF WISCONSIN - MADISON	A L MATISAK	MSFC	W L ZHOU	NCC 8 129	554
54	UTAH STATE UNIV	R M WHEELER	KSC	B G BUGBEE	NAG 9 999	505
54	VIRGINIA COMMONWEALTH UNIV	C M BUNTIN	JSC	H B CHERMSIDE	NAG 9 19541	533
54	WASHINGTON STATE UNIV	M M AVERNER	ARC	N G LEWIS	NAG 2 1198	543

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
55	CLARK UNIV	S S WEGENER	ARC	S R HERWITZ	NAG 2 1443	281
55	CORNELL UNIV	B L EDWARDS	GSFC	L D ALBRIGHT	NCC 9 86	381
55	CORNELL UNIV	R WHEELER	KSC	L ALBRIGHT	NGT10 52623	382
55	INST AM INDIAN & AK NATIVE CULT & DEV	W LOVE	MSFC	S SULNA	NAG 8 1730	360
55	IOWA STATE UNIV	H LANE	JSC	D OLSEN	NCC 9 100	224
55	LOUISIANA STATE UNIV - BATON ROUGE	W M KNOTT	KSC	M E MUSGRAVE	NAG10 139	234
55	MISSISSIPPI VALLEY STATE UNIV	G CARTER	JSC	R BAHADUR	NAG13 98004	328
55	MISSISSIPPI VALLEY STATE UNIV	R TRAVIS	JSC	R BAHDUR	NAG13 99026	328
55	OHIO STATE UNIV	G ETHERIDGE	KSC	F SACK	NAG10 263	418
55	PRAIRIE VIEW A&M UNIV	W C ROEH	JSC	R CUERO	NAG 9 1241	476
55	TEXAS A&M UNIV	C T BOURLAND	JSC	R L RICHTER	NAG 9 1119	482
55	TEXAS A&M UNIV	D G SICKOREZ	JSC	R W WEAVER	NGT 9 34	484
55	TEXAS SOUTHERN UNIV	L ARMENDARIZ	JSC	G A JEJEDOWO	NAG 9 1227	485
55	TEXAS SOUTHERN UNIV	L ARMENDARIZ	JSC	O A JEJELOWO	NAG 9 1194	485
55	UNIV OF ARIZONA	D BARTA	JSC	G GIACOMELLI	NAG 9 1378	37
55	UNIV OF CALIFORNIA - DAVIS	S S WEGENER	ARC	S USTIN	NAG 2 1442	80
55	UNIV OF FLORIDA	A L FROST	MSFC	R J FERL	NAG10 145	174
55	UNIV OF FLORIDA	J C SAGER	KSC	R A BUCKLIN	NAG10 293	174
55	UNIV OF MAINE - ORONO	B GRAHAM	JSC	S SADER	NAG13 98008	239
55	UNIV OF VIRGINIA	R WHEELER	KSC	A MILLS	NGT10 52620	528
55	UTAH STATE UNIV	D BARTA	JSC	B BUGBEE	NAG 9 1237	505
55	UTAH STATE UNIV	G C JAHNS	ARC	W F CAMPBELL	NCC 2 831	505
56	BAYLOR COLLEGE OF MED	C LLOYD	JSC	B J SCHWARTZ	NAG 9 1158	474
56	BAYLOR COLLEGE OF MED	C R TALLEY	MSFC	B YOFE	NAG 8 1383	474
56	BAYLOR COLLEGE OF MED	L C SHACKELFORD	JSC	A D LE BLANC	NCC 9 61	475
56	BOSTON UNIV	M ANDERSON	JSC	C J DE LUCA	NCC 9 127	280
56	BROWN UNIV	J JONES	JSC	M RUTHERFORD	NAG 9 1302	459
56	CASE WESTERN RESERVE UNIV	J M SANKOVIC	GRC	J R KADAMBI	NAG 3 2620	407
56	COLORADO SCH OF MINES	D RISIN	JSC	D W	NAG 9 1364	119
56	DARTMOUTH COLLEGE	C LLYOD	JSC	J BUCKLEY	NAG 9 1387	344
56	DARTMOUTH COLLEGE	D BELL	JSC	J BUCKEY	NAG 9 1088	344
56	HOWARD UNIV	R SRIDHAR	MSFC	R SRIDHAR	NCC 8 184	155
56	JOHNS HOPKINS UNIV	F A CUCINOTTA	JSC	J DICELLO	NGT 9 50	253
56	MASSACHUSETTS INST OF TECH	B WOOLFORD	JSC	D J NEWMAN	NAG 9 1003	296
56	MASSACHUSETTS INST OF TECH	S SAWYER	SSC	C M OMAN	NAS 9 19536	297
56	MEDICAL UNIV OF SOUTH CAROLINA	N R PELLIS	MSFC	A J SMOKA	NAG 8 1385	465
56	MOREHOUSE COLLEGE	K KRISHEN	JSC	K DUTT	NAG 9 964	189
56	MOREHOUSE SCH MED	C SAMS	JSC	M THIERRY-PALMER	NCC 9 112	189
56	MOREHOUSE SCH MED	K KRISHEN	JSC	R SRIDARAN	NAG 9 963	189
56	MOREHOUSE SCH MED	L ARMENDARIZ	JSC	M THIERRY-PALMER	NCC 9 53	189
56	NY UNIV	F A CUCINOTTA	JSC	F J BURNS	NAG 9 1024	383
56	PENN STATE UNIV -HERSHEY MED	C F SAWIN	JSC	L I SINOWAY	NAG 9 1044	442
56	PENN STATE UNIV -HERSHEY MED	C W LLOYD	JSC	C A RAY	NAG 9 1034	442
56	PENN STATE UNIV	C W LLOYD	JSC	P CAVANAGH	NAG 9 1264	449
56	PENN STATE UNIV	M KAMMAN	JSC	P CAVANAGH	NAS 9 99095	449
56	PONCE SCH OF MED	H L D'ANTONI	ARC	J L MATTA	NAG 2 1385	556
56	STANFORD UNIV	K A SOUZA	ARC	S A SCHENDEL	NCC 2 1010	64
56	STANFORD UNIV	R MAH	ARC	S JEFFREY	NCC 2 5381	65
56	STANFORD UNIV	R T WHALEN	ARC	N J PELC	NCC 2 5434	65
56	STANFORD UNIV	R T WHALEN	ARC	S A NAPEL	NCC 2 5186	64
56	TUFTS UNIV	P M DOTY	MSFC	D L KAPLAN	NAG 8 1699	301
56	TULANE UNIV	D RIIN	JSC	K C O	NAG 9 1351	237
56	TULANE UNIV	D RISEN	JSC	T HAMMOND	NAG 9 1344	237
56	TULANE UNIV	D RISIN	JSC	C A NICKERSON	NAG 9 1350	237
56	TULANE UNIV	S R GONDA	JSC	T HAMMOND	NAG 8 1362	237
56	UNIV OF MASSACHUSETTS	D RISEN	JSC	W J SCHWARTZ	NAG 9 1356	301
56	UNIV OF MED AND DENTISTRY	C W LLOYD	JSC	T P STEIN	NAG 9 1162	360
56	UNIV OF TEXAS MED BRAN - GALVESTON	A LEE	JSC	A FERRANDO	NAS 9 97147	488
56	UNIV OF TEXAS MED BRAN - GALVESTON	C LLOYD	JSC	A A FERRANDO	NAG 9 1155	488
56	UNIV OF TEXAS MED BRAN - GALVESTON	M ANDERSON	JSC	A D BARRET	NAS 9 01006	488
56	UNIV OF TEXAS MED BRAN - GALVESTON	R BILLICA	JSC	W A WASSON	NAG 9 859	488
56	UNIV OF TEXAS MED BRAN - GALVESTON	V CHOPPA	MSFC	V CHOPPA	NCC 8 170	488
56	UNIV OF TEXAS	C M SMITH	JSC	C G BLOMQVIST	NAS 9 19540	489
56	UNIV OF TEXAS	C W LLOYD	JSC	C G CRANDALL	NAG 9 1033	489
56	UNIV OF TX-HLTH SCI CTR-SAN ANTONIO	S GONDA	JSC	J M JESSUP	NAG 9 1206	488
56	UNIV	C SAWIN	JSC	B BUTLER	NAG 9 1040	490

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
56	UNIV	D RISIN	JSC	L P RUTZKY	NAG 9 1353	490
56	UNIV	J T JAMES	JSC	A HOLIAN	NAG 9 1144	490
56	UNIV OF ALABAMA - HUNTSVILLE	S SPEARMAN	MSFC	M BANISH	NAG 8 1476	11
56	UNIV OF ARIZONA	J SCHONFELD	ARC	J SZIVEK	NCC 2 5375	38
56	UNIV OF ARKANSAS - LITTLE ROCK	J D SMITH	ARC	C M COMPADRE	NGT 2 52242	41
56	UNIV OF CALIFORNIA - DAVIS	J E GREENLEAF	ARC	P MOLE	NGT 2 52238	83
56	UNIV OF CALIFORNIA - SAN DIEGO	C M WINGET	ARC	R A PEDOWITZ	NCC 2 978	103
56	UNIV OF CALIFORNIA - SAN DIEGO	D R MORRISON	JSC	R L SAH	NAG 8 1571	102
56	UNIV OF CALIFORNIA - SAN DIEGO	E M HOLTON	ARC	A R HARGENS	NCC 2 1133	103
56	UNIV OF CALIFORNIA - SAN DIEGO	E M HOLTON	ARC	C ROGERS	NCC 2 1196	103
56	UNIV OF CALIFORNIA - SAN FRANCISCO	C W LLOYD	JSC	J P MURNANE	NAG 9 1261	105
56	UNIV OF CALIFORNIA - SAN FRANCISCO	D BAUMANN	JSC	T LANG	NAS 9 99055	105
56	UNIV OF FLORIDA	D A TIPTON	KSC	A H NEIMS	NAS10 96004	174
56	UNIV OF NEW MEXICO-ALBUQUERQUE	K A SOUZA	ARC	D ALVERSON	NCC 2 5345	366
56	UNIV OF OKLAHOMA - NORMAN	B WOOLFORD	JSC	R SCHEGEL	NAG 9 1280	430
56	UNIV OF PENNSYLVANIA	B WOOLFORD	JSC	N BADLER	NAG 9 1279	453
56	UNIV OF PENNSYLVANIA	C SAMS	JSC	J R HOYER	NAG 9 1047	453
56	UNIV OF PITTSBURGH	C W LLOYD	JSC	T H MONK	NAG 9 1234	456
56	UNIV OF SAN DIEGO	D RISIN	JSC	R SAH	NAG 9 1354	115
56	UNIV OF SOUTH FLORIDA	D RISEN	JSC	S SAPORTA	NAG 9 1365	179
56	UNIV OF SOUTHERN COLORADO	T T SCHEGEL	JSC	J DEPALMA	NAG 9 1257	144
56	UNIV OF TENNESSEE - KNOXVILLE	G D BADHER	JSC	J NEAL	NAG 9 1269	471
56	UNIV OF TEXAS - AUSTIN	C LLOYD	JSC	R L HELMREICH	NAG 9 1275	496
56	UTAH STATE UNIV	K DAUES	JSC	G BINGHAM	NAG 9 1284	505
56	VIRGINIA COMMONWEALTH UNIV	A LEE	JSC	D ECKBURG	NAS 9 19539	533
59	ALABAMA A&M UNIV	B J COLLINS	ARC	P G KALE	NAG 2 1130	1
59	ARIZONA STATE UNIV	D G SICKCOREZ	JSC	R D SEIDLER	NGT 9 21	24
59	ARIZONA STATE UNIV	R A GRYMES	ARC	J D FARMER	NCC 2 1051	23
59	ARIZONA STATE UNIV	R V MORRIS	JSC	P R CHRISTENSON	NAG 9 1331	23
59	BAYLOR COLLEGE OF MED	C LLOYD	JSC	C SMITH	NAG 9 1253	474
59	BAYLOR COLLEGE OF MED	F A CUCINOTTA	JSC	L E PETERSON	NAG 9 1052	474
59	BAYLOR COLLEGE OF MED	L SHACKE	JSC	A LEBLANC	NAG 9 1133	474
59	BRANDEIS UNIV	C W LLOYD	JSC	J LACKNER	NAG 9 1037	281
59	BRANDEIS UNIV	C W LLOYD	JSC	J LACKNER	NAG 9 1038	281
59	BRANDEIS UNIV	V SCHNEIDER	GSFC	D LACKNER	NAG 5 6100	281
59	CALIFORNIA INST OF TECH	P DOTY	MSFC	W K RHIM	NAG 8 1743	48
59	CALIFORNIA INST OF TECH	P DOTY	MSFC	W L JOHNSON	NAG 8 1744	48
59	COLORADO STATE UNIV	S POTTER	ARC	G R COULTER	NCC 2 1099	122
59	COLORADO STATE UNIV	W M KNOTT	KSC	A N REDDY	NAG10 234	122
59	COLUMBIA UNIV	F A CUCINOTTA	JSC	E J HALL	NAG 9 1148	373
59	CORNELL UNIV	H W JONES	ARC	J B HUNTER	NCC 2 5459	380
59	CORNELL UNIV	M P AVERNER	GSFC	R WAYNE	NAG 5 6437	377
59	EAST TENNESSEE STATE UNIV	B GUYNES	MSFC	L WILSON	NAG 8 1375	467
59	FINCH UNIV HEALTH SCIENCES	B GUYNES	MSFC	R S KAPLAN	NAG 8 1827	200
59	HARVARD UNIV	R A GRYMES	ARC	A H KNOLL	NCC 2 1053	285
59	HARVARD UNIV	W J WAGNER	GSFC	D H PARKINSON	NAG 5 6554	283
59	INDIANA UNIV	L SMITH	GSFC	F PAVALKO	NGT 5 50291	215
59	IOWA STATE UNIV	D JAN	JPL	M D PORTER	NAG 9 1191	223
59	JOHNS HOPKINS UNIV	J A KAYE	GSFC	J YEE	NAG 5 7552	243
59	LOUISIANA STATE UNIV - BATON ROUGE	D L DEVINCENZI	ARC	J R BATTISTA	NAG 2 1320	233
59	MARQUETTE UNIV	D BAUMANN	JSC	D L COSTILL	NCC 9 116	546
59	MARQUETTE UNIV	V ELLERBEE	JSC	R H FITTS	NAS 9 18768	546
59	MASSACHUSETTS INST OF TECH	D K BAUMAN	JSC	C M OMAN	NAS 9 00097	297
59	MASSACHUSETTS INST OF TECH	J DETROVE	JSC	C M OMAN	NAG 9 1004	296
59	MASSACHUSETTS INST OF TECH	V SCHNEIDER	GSFC	R COHEN	NAG 5 4989	290
59	MOREHOUSE SCH MED	B LUNA	ARC	G L SANFORD	NGT 2 52239	189
59	MOREHOUSE SCH MED	B LUNA	ARC	G SONNENFELD	NAG 2 6029	189
59	MOREHOUSE SCH MED	C SAMS	JSC	K DUTT	NAG 9 1164	189
59	MT SINAI SCH OF MED OF THE CUNY	M E ANDERSON	JSC	S MOORE	NCC 9 128	383
59	MT SINAI SCH OF MED OF THE CUNY	V SCHNEIDER	GSFC	H KAUFMANN	NAG 5 6276	382
59	NORTH CAROLINA STATE UNIV	D P LISKOWSKY	GSFC	E DAVIES	NAG 5 3743	400
59	NORTHEASTERN OHIO UNIV COL OF MED	M M AVERNER	GSFC	W J LANDIS	NAG 5 7789	413
59	NORTHEASTERN UNIV	P DOTY	MSFC	A KARMA	NAG 8 1668	300
59	OHIO STATE UNIV	B J WOOLFORD	JSC	D D WOODS	NAG 9 1005	417
59	OHIO STATE UNIV	R MORRIS	JSC	J BIGHAM	NGT 9 51	419
59	OHIO UNIV	J M ORASANU	ARC	C E MCCOY	NCC 2 827	420

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
59	OLD DOMINION UNIV	J R COMSTOCK, JR.	LARC	J M STARK	NGT 1 52232	521
59	PENN STATE UNIV	C LLOYD	JSC	J A PAWELCZYK	NAG 9 1173	449
59	PENN STATE UNIV	M AVERNER	GSFC	N V FEDOROFF	NAG 5 3970	444
59	PENN STATE UNIV	M AVERNER	GSFC	R CYR	NAG 5 4840	444
59	PENN STATE UNIV	R A GRYMES	ARC	H OHMOTO	NCC 2 1057	450
59	RICE UNIV	D LASKOWSKY	GSFC	L MCINTIRE	NAG 5 4072	477
59	RUTGERS ST UNIV N	G FOGLEMAN	GSFC	H JANES	NAG 5 6011	357
59	SAN FRANCISCO STATE UNIV	A PLAZA	JSC	D PALMER	NAS 9 19410	55
59	SAN JOSE STATE UNIV	H L D'ANTONI	ARC	E P METZGER	NCC 2 5344	57
59	SAN JOSE STATE UNIV	R D MACELROY	ARC	M M AVERNER	NCC 2 6042	58
59	SOUTHERN UNIV & A&M COLLEGE	G J FISHMAN	MSFC	J G STACY	NAG 8 1625	236
59	SPELMAN COLLEGE	D O FRAIZER	MSFC	O SCRIVEN	NCC 8 194	190
59	STANFORD UNIV	A JANETOS	GSFC	P MATSON	NAG 5 6615	61
59	STANFORD UNIV	R T WHALEN	ARC	B LUSIGNAN	NGT 2 52246	66
59	STATE UNIV OF NY - ALBANY	K HIGGINBOTHAN	MSFC	W M GIBSON	NCC 8 125	387
59	STATE UNIV OF NY - STONY BROOK	V SCHNEIDER	GSFC	C T RUBIN	NAG 5 3950	389
59	TENNESSEE TECHNOLOGICAL UNIV	D HATHAWAY	MSFC	S HAN	NAG 8 1631	469
59	TEXAS A&M UNIV	M A SHEPANEK	GSFC	M D DELP	NAG 5 3754	481
59	TEXAS TECH UNIV	D L HENNINGER	JSC	J L SMITH	NCC 9 108	486
59	THE SCRIPPS REASERCH INST	L J CAROFF	ARC	R GHADIRI	NCC 2 1055	67
59	THE UNIV OF CENTRAL FLORIDA	C D QUINCY	KSC	D W JOHNSON	NAG10 276	170
59	TUFTS UNIV	D JAN	JPL	S P KOUNAVES	NAG 9 1182	301
59	TUSKEGEE UNIV	P X CALLAHAN	ARC	W A HILL	NAG 2 6049	4
59	TUSKEGEE UNIV	R WHEELER	KSC	D MARTLEY	NAG10 209	5
59	TUSKEGEE UNIV	S POTTER	KSC	D HILL	NAG10 281	5
59	UNIV HOUSTON-HOUSTON	C W LLOYD	JSC	D A MARTINEZ	NAG 9 1152	487
59	UNIV OF TEXAS MED BRAN - GALVESTON	R BILLICA	JSC	J R DAVIS	NCC 9 81	488
59	UNIV OF TEXAS	A M LEE	JSC	C G BLOMQUIST	NAS 9 19429	489
59	UNIV OF TEXAS	V SCHNEIDER	GSFC	B LEVINE	NAG 5 4846	489
59	UNIV OF TX-HLTH SCI CTR-SAN ANTONIO	W M KNOTT	KSC	M L WIEDERHOLD	NAG10 180	488
59	UNIV	J MECK	JSC	R F LODATO	NCC 9 103	490
59	UNIV	M AVERNER	GSFC	D ROWE	NAG 5 6316	144
59	UNIV	M AVERNER	GSFC	E DURBAN	NAG 5 4710	489
59	UNIV	M R POWELL	JSC	B D BUTLER	NCC 9 90	490
59	UNIV OF ALABAMA - BIRMINGHAM	D K COLLINS	MSFC	L J DELUCAS	NAS 8 40189	6
59	UNIV OF ALABAMA - HUNTSVILLE	P M DOTY	MSFC	M T ZUGRAV	NAG 8 1456	11
59	UNIV OF ALABAMA - HUNTSVILLE	P M DOTY	MSFC	R J NAUMANN	NAG 8 1464	11
59	UNIV OF ALABAMA - HUNTSVILLE	S SPEARMAN	MSFC	F ROSENBERGER	NCC 8 99	13
59	UNIV OF ARIZONA	R WHEELER	KSC	J L CUELLO	NAG10 255	37
59	UNIV OF CALIFORNIA - BERKELEY	A C JANETOS	GSFC	T L BENNING	NAG 5 6593	70
59	UNIV OF CALIFORNIA - DAVIS	R E GRINDELAND	ARC	C A FULLER	NAG 2 1265	80
59	UNIV OF CALIFORNIA - DAVIS	V SCHNEIDER	GSFC	D MURAKAMI	NAG 5 6440	80
59	UNIV OF CALIFORNIA - IRVINE	A POHORILLE	ARC	J K LANYI	NCC 2 5333	86
59	UNIV OF CALIFORNIA - IRVINE	S ROBBINS	MSFC	A MCPHERSON	NAS 8 00017	86
59	UNIV OF CALIFORNIA - IRVINE	S ROBBINS	MSFC	A MCPHERSON	NAS 8 00019	86
59	UNIV OF CALIFORNIA - IRVINE	S ROBBINS	MSFC	A MCPHERSON	NAS 8 39763	86
59	UNIV OF CALIFORNIA - LOS ANGELES	R A GRYMES	ARC	B RUNNEGAR	NCC 2 1050	94
59	UNIV OF CALIFORNIA - SAN DIEGO	G ASRAR	GSFC	R GOERICKE	NGT 5 30122	104
59	UNIV OF CALIFORNIA - SAN DIEGO	J MECK	JSC	M G ZEIGLER	NCC 9 106	104
59	UNIV OF CALIFORNIA - SAN DIEGO	M AVERNER	GSFC	J A FRANGOS	NAG 5 4648	97
59	UNIV OF CALIFORNIA - SAN DIEGO	P MOUNTJOY	GSFC	P J MILLS	NCC 9 105	104
59	UNIV OF CALIFORNIA - SAN DIEGO	S M MCCULLUM	JSC	J B WEST	NAS 9 98124	103
59	UNIV OF CALIFORNIA - SAN FRANCISCO	M H NEW	ARC	M A WILSON	NCC 2 5295	105
59	UNIV OF CALIFORNIA - SANTA BARBARA	C LLOYD	JSC	M ECKSTIEN	NAG 9 1329	109
59	UNIV OF CALIFORNIA - SANTA CRUZ	M FONDA	ARC	J PEARSE	NCC 2 5351	114
59	UNIV OF COLORADO - BOULDER	M AVERNER	GSFC	A STAEHELIN	NAG 5 3967	125
59	UNIV OF COLORADO - BOULDER	R A GRYMES	ARC	B JAKOSKI	NCC 2 1052	139
59	UNIV OF COLORADO - BOULDER	S J LAMBING	MSFC	G MORGENTHALER	NCC 8 131	140
59	UNIV OF FLORIDA	A L FRÖST	MSFC	B CARROLL	NAG 8 1821	174
59	UNIV OF GEORGIA	C KUNDROT	MSFC	B WANG	NCC 8 233	191
59	UNIV OF HOUSTON - CLEAR LAKE	M POWELL	JSC	R S CHHIKARA	NAG 9 1083	490
59	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	J R ROGERS	MSFC	C F ZOKOSKI	NAG 8 1376	212
59	UNIV OF IOWA	L SMITH	GSFC	C V GISOLFI	NGT 5 50156	227
59	UNIV OF KENTUCKY	D JAN	GSFC	C A GRIMES	NAG 5 4594	231
59	UNIV OF MARYLAND - COLLEGE PARK	L P CHAMBERS	GSFC	S I SUKHAVREV	NAG 5 6526	259
59	UNIV OF MISSOURI - COLUMBIA	M AVERNER	GSFC	T A JONES	NAG 5 4607	330

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
59	UNIV OF MISSOURI - COLUMBIA	R P KEHOE	JSC	G M CHIPPENDALE	NAG 9 1230	330
59	UNIV OF NEVADA - RENO	M T FLYNN	ARC	V D ADAMS	NCC 2 5443	343
59	UNIV OF NORTH TEXAS HLTH SCI	V SCHNEIDER	GSFC	M SMITH	NAG 5 3744	491
59	UNIV OF NORTH TEXAS HLTH SCI	V SCHNEIDER	GSFC	P B RAVEN	NAG 5 4668	491
59	UNIV OF PENNSYLVANIA	C W LLOYD	JSC	H VAN D	NAG 9 1161	453
59	UNIV OF PENNSYLVANIA	D RISEN	JSC	L M SHAPIRO	NAG 9 1357	453
59	UNIV OF PITTSBURGH	C W LLOYD	JSC	T H MONK	NAG 9 1036	455
59	UNIV OF PUERTO RICO - MAYAGUEZ	J SAYER	KSC	G COLON	NAG10 257	557
59	UNIV OF ROCHESTER	C TALLEY	MSFC	D WU	NAG 8 1382	394
59	UNIV OF SOUTHERN CALIFORNIA	B J WOOLFORD	JSC	U NEUMANN	NAG 9 1165	118
59	UNIV OF TENNESSEE - KNOXVILLE	F A CUCINOTTA	JSC	L W TOWNSEND	NAG 9 1123	471
59	UNIV OF TENNESSEE - KNOXVILLE	G BADHWAR	JSC	J S NEAL	NAG 9 1121	471
59	UNIV OF TEXAS - EL PASO	A R ROCHA	JSC	L E MURR	NAG 9 1100	500
59	UNIV OF UTAH	W SHIMMERLING	GSFC	R WARTERS	NAG 5 4452	502
59	UNIV OF VIRGINIA	B Q GUYNES	MSFC	M C WIENER	NAG 8 1832	526
59	UNIV OF WASHINGTON	M AVERNER	GSFC	D CLELAND	NAG 5 6328	536
59	UNIV OF WISCONSIN - LA CROSSE	J D SMITH	ARC	S O SENGER	NCC 2 1163	547
59	UNIV OF WISCONSIN - MADISON	B WOOLFORD	JSC	B S CALDWELL	NAG 9 1008	553
59	UNIV OF WISCONSIN - MADISON	C LLYOD	KSC	D SCHOELLER	NAG 9 1039	553
59	UNIV OF WYOMING	C LUNDQUIST	GSFC	R E GANTENBEIN	NAG 9 1176	556
59	UTAH STATE UNIV	R WHEELER	KSC	P GROSSEL	NGT10 52617	506
59	VANDERBILT UNIV	R GRUGEL	MSFC	A V ANIKUMER	NAG 8 1745	472
59	WASHINGTON STATE UNIV	M AVERNER	GSFC	B POOVAIAH	NAG 5 4841	543
59	WASHINGTON UNIV - ST	C SAWIN	GSFC	D E ANGELAKI	NAG 5 8194	334
59	WRIGHT STATE UNIV	R J WILLIAMS	GSFC	S R MOHLER	NGT 5 30091	428
61	CLEVELAND STATE UNIV	B GUYNES	MSFC	J M BELOVICH	NAG 8 1584	410
61	DREXEL UNIV	H SHAW	GSFC	P LELKES	NAG 9 1380	440
61	MOREHOUSE COLLEGE	R RICHMOND	MSFC	G L SANFORD	NAG 8 1636	188
61	OLD DOMINION UNIV	A T POPE	LARC	F G FREEMAN	NGT 1 52219	521
61	OLD DOMINION UNIV	A T POPE	LARC	G D COATES	NGT 1 52220	521
61	RUTGERS STATE UNIV OF NJ NEW BRUNS	J B HARTLEY	GSFC	Z KOLBER	NAS 5 99138	359
61	STANFORD UNIV	R W REMINGTON	ARC	J E GABRIELI	NCC 2 5261	64
61	TEXAS WOMAN	R SAULSBERRY	JSC	N E MEAGHER	NAG 9 1192	486
61	UNIV HOUSTON-HOUSTON	D HARM	JSC	R B LOFTIN	NCC 9 57	487
61	UNIV OF MICHIGAN - ANN ARBOR	C LLOYD	JSC	G L AMIDON	NAG 9 1154	316
61	UNIV OF PITTSBURGH	B GUYNES	MSFC	X L WU	NAG 8 1587	455
61	UNIV OF TENNESSEE - KNOXVILLE	A NURRIDIN	HQ	G SAYLER	NGT 5 50206	471
62	FLORIDA A&M UNIV	R MCKINNEY	KSC	B MCCUNE	NAG10 248	164
62	HERITAGE COLLEGE	R TRAVIS	SSC	J W FALCO	NAG13 99027	533
62	OLD DOMINION UNIV	P C SCHUTTE	LARC	A A FINK	NGT 1 52221	521
62	OLD DOMINION UNIV	P C SCHUTTE	LARC	D DAVIS	NAG 1 2101	515
62	OLD DOMINION UNIV	P C SHUTTE	LARC	A FITZGIBBONS	NGT 1 52193	520
62	OLD DOMINION UNIV	P C SHUTTIE	LARC	D D DAVIS	NAG 1 2303	516
62	SANTA CLARA UNIV	B G KANKI	ARC	J C TAYLOR	NCC 2 1025	58
62	SANTA CLARA UNIV	B KANKI	ARC	J TAYLOR	NCC 2 1156	58
62	TUSKEGEE UNIV	D BARTA	JSC	W A HILL	NCC 9 51	5
69	BRADLEY UNIV	L J PRINZEL	LARC	D A MONTGOMERY	NAG 1 2263	200
69	ESTRN VA MED SCH-ESTRN VA MED AUTH	A T POPE	LARC	O S PALSSON	NCC 1 310	509
69	GEORGE MASON UNIV	S M CASNER	ARC	D B DAVIS	NAG 2 1289	509
69	GEORGIA INST OF TECH	J M ORASANU	ARC	U M FISCHER	NCC 2 1124	186
69	GEORGIA INST OF TECH	N AVAILABLE	LARC	N AVAILABLE	NCA 1 163	185
69	MASSACHUSETTS INST OF TECH	S C LOZITO	ARC	R J HANSMAN	NAG 2 1299	287
69	MASSACHUSETTS INST OF TECH	S C LOZITO	ARC	T B SHERIDAN	NAG 2 729	287
69	MISSISSIPPI STATE UNIV	M R ENDSLEY	LARC	D B KABER	NAG 1 2295	327
69	NY UNIV	A J AHUMADA	ARC	M LANDY	NCC 2 5417	383
69	NORTH CAROLINA STATE UNIV	I BARSHI	ARC	D H MERSHON	NAG 2 1281	400
69	NORTH CAROLINA STATE UNIV	L J PRINZEL, III	LARC	D KABER	NGT 1 01004	401
69	NORTH CAROLINA STATE UNIV	L J PRINZEL	LARC	D KABER	NAG 1 01039	399
69	NORTHWESTERN UNIV	B G KANKI	ARC	E J CZEPIEL	NCC 2 1098	203
69	OHIO STATE UNIV	J M ORASANU	ARC	C E MCCOY	NCC 2 1130	418
69	OHIO UNIV	J M ORASANU	ARC	C E MCCOY	NCC 2 1030	420
69	OHIO UNIV	J ORASANU	ARC	C E MCCOY	NCC 2 1258	420
69	OLD DOMINION UNIV	A T POPE	LARC	F G FREEMAN	NCC 1 364	518
69	OLD DOMINION UNIV	A T POPE	LARC	M W SCERBO	NAG 1 2254	516
69	OLD DOMINION UNIV	A T POPE	LARC	T L DICKINSON	NAG 1 2252	516
69	OLD DOMINION UNIV	I BARSHI	ARC	D S MCNAMARA	NAG 2 1319	517

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
69	OLD DOMINION UNIV	I BARSHI	ARC	D S MCNAMARA	NAG 2 1481	517
69	OLD DOMINION UNIV	J R COMSTOCK, JR.	LARC	M W SCERBO	NGT 1 01019	520
69	OLD DOMINION UNIV	L J PRENZEL	LARC	F G FREEMAN	NGT 1 01015	520
69	OLD DOMINION UNIV	L J PRINZEL	LARC	F G FREEMAN	NCC 1 01012	519
69	OLD DOMINION UNIV	L J PRINZEL	LARC	F G FREEMAN	NGT 1 52231	521
69	OLD DOMINION UNIV	P C SCHUTTE	LARC	D D DOVES	NGT 1 01021	520
69	OLD DOMINION UNIV	P C SCHUTTE	LARC	M MIHALECZ	NGT 1 52230	521
69	OREGON GRADUATE INST OF SCI & TECH	A J AHUMADA	ARC	M PAVEL	NCC 2 1190	430
69	OREGON GRADUATE INST OF SCI & TECH	B L BEARD	ARC	M PAVEL	NCC 2 1215	430
69	PENN STATE UNIV	L J PRINZEL	LARC	W J RAY	NAG 1 2273	442
69	RICE UNIV	B L BEARD	ARC	M BYRNE	NCC 2 1219	478
69	SAN FRANCISCO STATE UNIV	J M ORASANU	ARC	K L MOSIER	NAG 2 1285	55
69	SAN JOSE STATE UNIV	R K DISMUKES	ARC	K P JORDAN	NCC 2 798	56
69	TEXAS TECH UNIV	J BREDEKAMP	GSFC	P R DELUCIA	NCC 2 5257	485
69	THE CATHOLIC UNIV OF AMERICA	L J PRINZEL	LARC	R PARASURAMAN	NAG 1 01066	156
69	THE CATHOLIC UNIV OF AMERICA	P C SHUTTE	LARC	S M GALSTER	NGT 1 52190	161
69	THE CATHOLIC UNIV OF AMERICA	W JOHNSON	ARC	R PARASURAMAN	NAG 2 1096	156
69	UNIV OF ARKANSAS - LITTLE ROCK	C SAWIN	JSC	P A TESCH	NAG 9 1061	40
69	UNIV OF CALIFORNIA - IRVINE	J MULLIGAN	ARC	T M DZMURA	NCC 2 5378	86
69	UNIV OF COLORADO - BOULDER	I BARSHI	ARC	A F HEALY	NCC 2 1112	139
69	UNIV OF IDAHO - MOSCOW	B G KANKE	ARC	L T OSTROM	NCC 2 1174	200
69	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	B BEARD	ARC	C D WICKENS	NCC 2 1214	213
69	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D C FOYLE	ARC	C D WICKENS	NAG 2 1120	209
69	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	I BARSHI	ARC	H L TAYLOR	NAG 2 1282	209
69	UNIV OF OREGON - EUGENE	I BARSHI	ARC	R MAURO	NCC 2 1089	435
69	UNIV OF VIRGINIA	M K KAISER	ARC	D R PROFFITT	NCC 2 1093	527
69	UNIV OF WASHINGTON	R A HOFFMAN	GSFC	G K PARKS	NAG 5 3170	535
69	UNIV OF WEST FLORIDA	D C FOYLE	ARC	D L STILL	NAG 2 1225	179
69	UNIV OF WEST FLORIDA	J DEMAIO	ARC	A K RAJ	NAG 2 1490	180
69	UNIV OF WISCONSIN - MADISON	E M WENZEL	ARC	F L WIGHTMAN	NCC 2 542	554
69	WRIGHT STATE UNIV	A NURRIDIN	HQ	R H GILKEY	NGT 5 50213	428
73	SOUTHWEST TEXAS STATE UNIV	W A LARSEN	JSC	K MARGERISON	NCC 9 54	480
75	UNIV OF MARYLAND - COLLEGE PARK	J BOYCE	HQ	L MUKHIN	NASW 00028	269
79	ALBANY STATE UNIV	R J MCKINNEY	KSC	D HODGES-TILLER	NAG10 265	180
79	BETHUNE - COOKMAN COLLEGE	W B WILLIAMS	KSC	A D TAYLOR	NAG10 269	161
79	FLA INTERNATIONAL UNIV	R MCKINNEY	KSC	C MENDEZ	NAG10 254	163
79	FLORIDA A&M UNIV	R J MCKINNEY	KSC	S C MOBLEY	NAG10 267	164
79	GEORGE MASON UNIV	R H THOMAS	GSFC	B HAACK	NAG 5 4140	509
79	HAMPTON UNIV	R A HATHAWAY	LARC	R SCHWAN	NAG 1 2331	511
79	MIAMI-DADE COMM COLLEGE	D CULBERTSON	KSC	E J PADRON	NAG10 282	169
79	SAVANNAH STATE UNIV	R J MCKINNEY	KSC	D SAJWAN	NAG10 266	190
79	TUSKEGEE UNIV	C D BLACK	KSC	H J FINDLAY	NAG10 298	5
79	UNIV OF MICHIGAN - ANN ARBOR	J F DOWDY	MSFC	H T WRIGHT	NGT 8 52864	319
79	UTAH STATE UNIV	R MCKELLIP	SSC	D BAKER	NCC13 18	505
99	ALABAMA A&M UNIV	C PERSON	GSFC	A MANU	NAG 5 9885	1
99	ALABAMA A&M UNIV	M WEI	GSFC	T COLEMAN	NAG 5 10721	1
99	ALCORN STATE UNIV	N SULLIVAN	JSC	D ADDIE	NAG13 98010	326
99	ARIZONA STATE UNIV	A NURRIDIN	HQ	R GREELEY	NGT 5 50077	24
99	ARIZONA STATE UNIV	A TUYAHOV	GSFC	D BOYER	NAG 5 10899	22
99	ARIZONA STATE UNIV	D SENSKE	GSFC	M A PRESLEY	NAG 5 10214	22
99	ARIZONA STATE UNIV	J BOYCE	GSFC	A S MCEWEN	NAG 5 10268	22
99	ARIZONA STATE UNIV	K BLANDING	GSFC	T SHARP	NGT 5 50276	24
99	ARIZONA STATE UNIV	M MEYER	GSFC	P KNAUTH	NAG 5 9430	21
99	ARIZONA STATE UNIV	M MEYER	GSFC	R BLANKENSHIP	NAG 5 10689	22
99	ARKANSAS TECH UNIV	J F DOWDY	MSFC	M CONNOR	NAG 8 1284	40
99	AUBURN UNIV	J E DUDENHOEFER	GRC	D W BRANDHORST	NCC 3 511	3
99	AUBURN UNIV	J HOWELL	MSFC	H BRANDHORST	NAG 8 1617	3
99	BALL STATE UNIV	D WICKLAND	GSFC	A F RAHMAN	NAG 5 11261	214
99	BAY MILLS COMM COLLEGE	M COMBERIETE	GSFC	R DICKINSON	NAG 5 8799	306
99	BAYLOR COLLEGE OF MED	C LLOYD	JSC	B A BRODY	NAG 9 1153	474
99	BETHUNE - COOKMAN COLLEGE	S DUTCZAK	KSC	A LONG	NCC10 55	162
99	BLUEFIELD STATE COLLEGE	M MATHEWS	GSFC	F WOOTEN BLANKS	NAG 5 11072	544
99	BOSTON COLLEGE	W J WAGNER	GSFC	D F WEBB	NAG 5 10833	276
99	BOSTON UNIV	D WICKLAND	GSFC	R B MYNENI	NAG 5 10156	279
99	BOSTON UNIV	J SHARBER	GSFC	G ERICKSON	NAG 5 9110	278
99	BOSTON UNIV	J SHARBER	GSFC	M MENDILLO	NAG 5 10286	279

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	BOSTON UNIV	L SMITH	GSFC	L ODDSSON	NGT 5 50309	280
99	BOSTON UNIV	L SMITH	GSFC	M OPPENHEIM	NGT 5 50288	280
99	BOSTON UNIV	L SMITH	GSFC	S KANDARIAN	NGT 5 50307	280
99	BOSTON UNIV	M MELLOTT	GSFC	M OPPENHEIM	NAG 5 9444	279
99	BOSTON UNIV	M WEI	GSFC	C WOODSTOCK	NGT 5 30401	280
99	BOSTON UNIV	M WEI	GSFC	M FRIEDL	NGT 5 30405	280
99	BOWIE STATE UNIV	C HOLLINGSWORTH	GSFC	A L GASKINS--NEDD	NAG 5 9843	240
99	BOWIE STATE UNIV	D MENCHAN	GSFC	D LANGDON	NAG 5 9458	239
99	BOWIE STATE UNIV	D MENCHAN	GSFC	D LANGDON	NAG 5 10697	240
99	BOWIE STATE UNIV	D MENCHAN	GSFC	D W CRIM	NAG 5 8370	239
99	BOWIE STATE UNIV	D MENCHAN	GSFC	N T WAKIM	NCC 5 516	240
99	BOWIE STATE UNIV	L RANDOLPH	GSFC	N WAKIM	NCC 5 232	240
99	BOWIE STATE UNIV	P CROUSE	GSFC	N WAKIM	NAG 5 8787	239
99	BOWLING GREEN STATE UNIV	V L KLOERIS	JSC	D L HENTGES	NAG 9 1186	405
99	BROWN UNIV	D D DETROYE	GSFC	P H SCHULTZ	NGT 5 40106	460
99	BROWN UNIV	D DETROYE	GSFC	P H SCHULTZ	NGT 5 90014	460
99	BROWN UNIV	D E SMITH	GSFC	J W HEAD	NAG 5 6144	458
99	BROWN UNIV	H CARR	SSC	J F MUSTARD	NCC13 98005	460
99	BROWN UNIV	K BLANDING	HQ	R BRANDENBERGER	NGT 5 50355	460
99	CALIFORNIA INST OF TECH	B BETTS	GSFC	J L KIRSCHVINK	NAG 5 9687	46
99	CALIFORNIA INST OF TECH	D E SMITH	GSFC	D O MUHLEMAN	NAG 5 4437	43
99	CALIFORNIA INST OF TECH	D SENSKE	GSFC	T AHRENS	NAG 5 10198	47
99	CALIFORNIA INST OF TECH	G ASRAR	GSFC	Y L YUNG	NGT 5 30096	49
99	CALIFORNIA INST OF TECH	G STRINGFELLOW	GSFC	J ZMUIDZINAS	NAG 5 9493	46
99	CALIFORNIA INST OF TECH	J BOYCE	GSFC	A P INGERSOLL	NAG 5 11214	48
99	CALIFORNIA INST OF TECH	J BOYCE	HQ	A ALBEE	NAG 5 11257	48
99	CALIFORNIA INST OF TECH	J BREDEKAMP	GSFC	S DJORGOVSKI	NAG 5 9482	46
99	CALIFORNIA INST OF TECH	J BREDEKAMP	GSFC	S DJORGOVSKI	NAG 5 9603	46
99	CALIFORNIA INST OF TECH	J F SPANN	GSFC	Y L YUNG	NAG 5 10901	48
99	CALIFORNIA INST OF TECH	K BLANDING	GSFC	A ALBEE	NGT 5 60003	50
99	CALIFORNIA INST OF TECH	K BLANDING	GSFC	F CULICK	NGT 5 50280	50
99	CALIFORNIA INST OF TECH	K BLANDING	GSFC	G BLAKE	NGT 5 50231	49
99	CALIFORNIA INST OF TECH	K BLANDING	GSFC	M KAMIONKOWSKI	NGT 5 50339	50
99	CALIFORNIA INST OF TECH	L K SMITH	GSFC	A LANGE	NGT 5 50278	49
99	CALIFORNIA INST OF TECH	L SMITH	GSFC	A LANGE	NGT 5 50249	49
99	CALIFORNIA INST OF TECH	L SMITH	GSFC	N YEY	NGT 5 50308	50
99	CALIFORNIA INST OF TECH	M WEI	GSFC	J STOCK	NGT 5 30393	49
99	CALIFORNIA INST OF TECH	M WEI	GSFC	M SIMONS	NGT 5 30407	49
99	CALIFORNIA INST OF TECH	P DOTY	MSFC	D F BRADY	NAG 8 1237	48
99	CALIFORNIA INST OF TECH	T MORGAN	GSFC	M BROWN	NAG 5 11273	48
99	CALIFORNIA STATE UNIV - LOS ANGELES	B WHITE	GSFC	T ADENIKA--MORROW	NCC 5 439	52
99	CALIFORNIA STATE UNIV - LOS ANGELES	J MALONE	GSFC	H R BOUSSALIS	NAG 5 6757	52
99	CALIFORNIA STATE UNIV - LOS ANGELES	J MALONE	GSFC	H R BOUSSALIS	NAG 5 8889	52
99	CALIFORNIA STATE UNIV - LOS ANGELES	M MCCARTY	DFRC	T ADENIKA--MORROW	NAG 4 173	51
99	CALIFORNIA STATE UNIV - LOS ANGELES	M STOUTSENBERGER	GSFC	M EPSTEIN	NAG 5 9160	52
99	CALIFORNIA STATE UNIV - NORTHRIDGE	C PERSON	GSFC	B BAVARIAN	NCC 5 513	53
99	CALIFORNIA STATE UNIV - NORTHRIDGE	C PERSON	GSFC	S RENGARAJAN	NAG 5 9726	52
99	CALIFORNIA STATE UNIV - NORTHRIDGE	M MATTHEWS	GSFC	C SHUBIN	NCC 5 489	53
99	CALIFORNIA STATE UNIV - NORTHRIDGE	M MCCARTHY	DFRC	W FURUMOTO	NAG 4 162	52
99	CALIFORNIA STATE UNIV - NORTHRIDGE	R K DISMUKES	ARC	B TABACHIVIDE	NCC 2 1021	53
99	CALIFORNIA STATE UNIV - SACRAMENTO	DSIX	MSFC	B HAUSBACK	NAG 8 1220	53
99	CALIFORNIA STATE UNIV	C HILL	JSC	C LEE	NAG13 99010	53
99	CALIFORNIA STATE UNIV	M MC CARTHY	DFRC	E KRINSKY	NAG 4 161	53
99	CAPITOL COLLEGE	D JARRELL	GSFC	D MENCHAN	NAG 5 10560	240
99	CAPITOL COLLEGE	D MENCHAN	GSFC	D JARRELL	NAG 5 9375	240
99	CARNEGIE - MELLON UNIV	A KEYS	MSFC	L R CARLEY	NAG 8 1799	438
99	CARNEGIE - MELLON UNIV	J BREDEKAMP	GSFC	C GLYMOUR	NAG 5 9309	437
99	CARNEGIE - MELLON UNIV	K BLANDING	GSFC	A W MOORE	NGT 5 50279	439
99	CARNEGIE - MELLON UNIV	L SMITH	GSFC	J L ANDERSON	NGT 5 50054	439
99	CARNEGIE - MELLON UNIV	P E HUNTER	GSFC	R NICHOL	NAG 5 10740	437
99	CARNEGIE - MELLON UNIV	R E GABRYS	GSFC	P COPPIN	NCC 5 431	439
99	CASE WESTERN RESERVE UNIV	G STRINGFELLOW	GSFC	G STARKMAN	NAG 5 11059	407
99	CASE WESTERN RESERVE UNIV	K BLANDING	GSFC	J T	NGT 5 50369	409
99	CASE WESTERN RESERVE UNIV	M P WERNET	GRC	J R KADAMBI	NAG 3 2110	406
99	CAYUGA COUNTY COMM COLLEGE	D POWE	SSC	R FRESTOPKIK	NAG13 00043	367
99	CAYUGA COUNTY COMM COLLEGE	M MICK	SSC	R BROWER	NAG13 00044	367

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	CHICAGO STATE UNIV	C PERSON	GSFC	R SOLAKIEWICZ	NAG 5 9734	200
99	CHRISTOPHER NEWPORT UNIV	D BUSHNELL	LARC	L LAMBERT	NAG 1 2284	507
99	CHRISTOPHER NEWPORT UNIV	D GABRYS	GSFC	N B FREEMAN	NCC 5 435	507
99	CITY UNIV OF NY HERBERT H	R F LAWRENCE	GRC	A L ROTHSETIN	NAG 3 2268	367
99	CITY UNIV COLLEGE OF NY YORK COLLEGE	M STOUTSENBERGER	GSFC	J SCHEIN	NAG 5 7532	367
99	CITY UNIV OF NY CITY COLLEGE	B WHITE	HQ	R KHANBILVARDI	NCC 5 344	368
99	CITY UNIV OF NY CITY COLLEGE	C PERSON	GSFC	F MOSHARY	NAG 5 9732	368
99	CITY UNIV OF NY CITY COLLEGE	J HARRINGTON	GSFC	S AUSTIN	NCC 5 530	368
99	CITY UNIV OF NY CITY COLLEGE	J MALONE	GSFC	R R ALFANO	NAG 5 6952	368
99	CITY UNIV OF NY CITY COLLEGE	M MATEU	GSFC	J BARBA	NAG 5 4911	368
99	CITY UNIV OF NY CITY COLLEGE	M MATEU	GSFC	J BARBA	NAG 5 10845	368
99	CITY UNIV OF NY CITY COLLEGE	R F LAWRENCE	GRC	L P JOHNSON	NAG 3 2258	367
99	CLARK ATLANTA UNIV	A C BEAM	MSFC	B E ALICK	NAG 8 1535	181
99	CLARK ATLANTA UNIV	M MATHEWS	GSFC	C H WILLIAMS	NCC 5 347	181
99	CLARK UNIV	G ASRAR	GSFC	B TURNER	NGT 5 30129	281
99	CLARK UNIV	G GUTMAN	GSFC	B TURNER	NAG 5 11134	281
99	CLARK UNIV	M Y WEI	GSFC	L LEWIS	NGT 5 30061	281
99	CLEMSON UNIV - CLEMSON	J KU	GSFC	D M OCHTERBECK	NAG 5 10367	463
99	CLEMSON UNIV - CLEMSON	M MELLOTT	GSFC	M HICKEY	NAG 5 10251	463
99	CLEMSON UNIV - CLEMSON	S DAVISON	GSFC	I D WALKER	NAG 5 8759	462
99	CLEVELAND STATE UNIV	D WHITE	GRC	D M KOCHER	NAG 3 2296	409
99	CLEVELAND STATE UNIV	M L BOROWSKI	GRC	P CHARITY	NAG 3 2075	409
99	CLEVELAND STATE UNIV	R C ALEXANDER	GRC	Z AUSTRIAN	NAG 3 2273	409
99	COLLEGE OF CHARLESTON	D DETROYE	GSFC	M COLGAN	NCC 5 413	464
99	COLLEGE OF CHARLESTON	D DETROYE	GSFC	M COLGAN	NCC 5 575	464
99	COLLEGE OF CHARLESTON	D DETROYE	GSFC	M COLGAN	NGT 5 40099	464
99	COLLEGE OF CHARLESTON	L KEFFER	GSFC	M COLGAN	NGT 5 40050	464
99	COLLEGE OF SANTA FE	L ARMENDARIZ	JSC	B COLEMAN	NAG 9 1066	360
99	COLLEGE OF WILLIAM AND MARY	T E PINELLI	LARC	M HINDERS	NGT 1 52204	508
99	COLLEGE OF WILLIAM AND MARY	W P CHU	LARC	D C BENNER	NAS 1 98039	508
99	COLORADO SCH OF MINES	D MCKAY	JSC	M B DUKE	NAG 9 1207	119
99	COLORADO STATE UNIV	J BOYCE	GSFC	J NELSON	NAG 5 11280	121
99	COLORADO STATE UNIV	K BLANDING	GSFC	J NELSON	NGT 5 50164	122
99	COLORADO STATE UNIV	M MELLOTT	GSFC	C SHE	NAG 5 10076	121
99	COLORADO STATE UNIV	M WEI	GSFC	A DENNING	NGT 5 30182	122
99	COLORADO STATE UNIV	M WEI	GSFC	R PIELKE	NGT 5 30344	122
99	COLUMBIA UNIV	E LINDSTROM	GSFC	X YUAN	NAG 5 8725	372
99	COLUMBIA UNIV	G ASRAR	GSFC	D SCHOSSER	NGT 5 30106	374
99	COLUMBIA UNIV	K E BLANDING	GSFC	S KAHN	NGT 5 50353	375
99	COLUMBIA UNIV	M WEI	GSFC	D PETEET	NGT 5 30226	375
99	COLUMBIA UNIV	M WEI	GSFC	M CANE	NGT 5 30123	374
99	CORNELL UNIV	D D DETROYE	GSFC	Y TERZIAN	NGT 5 40078	381
99	CORNELL UNIV	D DETROYE	GSFC	Y TERZIAN	NGT 5 40019	381
99	CORNELL UNIV	D G SICKOREZ	JSC	R W LANGHANS	NGT 9 16	382
99	CORNELL UNIV	D SENSKE	GSFC	P THOMAS	NAG 5 10168	379
99	CORNELL UNIV	G ASRAR	GSFC	B ISACKS	NGT 5 30126	381
99	CORNELL UNIV	G STRINGFELLOW	GSFC	S EIKENBERRY	NAG 5 10356	379
99	CORNELL UNIV	J GRANT	GSFC	W BOTTKER	NAG 5 8950	378
99	CORNELL UNIV	K BLANDING	GSFC	M H VAN DER MUELEN	NGT 5 50375	382
99	CORNELL UNIV	L SMITH	GSFC	M SALTZMAN	NGT 5 50270	382
99	CORNELL UNIV	R V MORRIS	JSC	R V MORRIS	NCC 9 89	381
99	CORNELL UNIV	S DAVISON	GSFC	C MONTEEMAGNO	NAG 5 8775	378
99	CUYAHOGA COMM COLLEGE	R F LAWRENCE	GRC	T L BUTLER	NAG 3 2496	412
99	CUYAHOGA COMM COLLEGE	R L BONDURANT	GRC	L L DARLING	NAS 3 98099	412
99	CUYAHOGA COMM COLLEGE	R LAWRENCE	GRC	S CHAND	NAG 3 2370	412
99	DARTMOUTH COLLEGE	M MELLOTT	GSFC	A V STRELTSOV	NAG 5 10216	344
99	DARTMOUTH COLLEGE	M MELLOTT	GSFC	M R LESSARD	NAG 5 10219	344
99	DINE COLLEGE	R TRAVIS	JSC	D ISELY	NAG13 99028	24
99	DUKE UNIV	G ASRAR	GSFC	D RICHTER	NGT 5 30117	395
99	DUKE UNIV	L SMITH	GSFC	G TRUSKEY	NGT 5 50266	396
99	DUKE UNIV	M GERNHARDT	JSC	R VANN	NCC 9 83	395
99	DUKE UNIV	M MELLOTT	GSFC	S CUMMER	NAG 5 10270	395
99	DUKE UNIV	M WEI	GSFC	D REYNOLDS	NGT 5 30105	395
99	DUKE UNIV	M WEI	GSFC	S ROJSTACZER	NGT 5 30379	396
99	DUKE UNIV	M WEI	GSFC	W H SCHESSINGER	NGT 5 30397	396
99	EASTERN NEW MEX. UNIV - MAIN CAMP.	L ARMENDARIZ	JSC	J MILLER	NAG 9 972	360



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	EASTERN NEW MEX. UNIV - MAIN CAMP.	L ARMENDARIZ	JSC	J MILLER	NAG 9 1255	360
99	EASTERN WASHINGTON UNIV	D JAMES	ARC	R SOLTERO	NAG 2 6041	533
99	ELIZABETH CITY STATE UNIV	J HARRINGTON	GSFC	L HAYDEN	NCC 5 533	396
99	ELIZABETH CITY STATE UNIV	STOUTSENBERGER	GSFC	S SACHDEV	NAG 5 6814	396
99	EMBRY-RIDDLE AERONAUTICAL UNIV	M MELLOTT	GSFC	G G SIVJEE	NAG 5 10066	162
99	FAYETTEVILLE STATE UNIV	M STOUTSENBERGER	GSFC	L EDWARDS	NAG 5 9155	397
99	FSK UNIV	C HUA SU	MSFC	A BURGER	NCC 8 195	467
99	FLA INTERNATIONAL UNIV	B J COLLINS	ARC	X HE	NAG 2 1440	162
99	FLA INTERNATIONAL UNIV	D MENCHAN	GSFC	N RISHE	NAG 5 9478	162
99	FLA INTERNATIONAL UNIV	H T STEWART	ARC	I R FERNANDEZ	NAG 2 1384	162
99	FLA INTERNATIONAL UNIV	R MC KINNEY	KSC	C MENDEZ	NAG10 251	163
99	FLORIDA A&M UNIV	B J COLLINS	ARC	M ENCINOSA	NAG 2 1439	163
99	FLORIDA A&M UNIV	E JOHNSON	KSC	B SAMUELS	NAG10 242	164
99	FLORIDA A&M UNIV	J E BOYD	GRC	F S HUMPHRIES	NAG 3 1759	163
99	FLORIDA A&M UNIV	J L HARRINGTON, JR.	GSFC	D H AMMONS	NAG 5 7989	163
99	FLORIDA A&M UNIV	J MALONE	GSFC	J H AMMONS	NAG 5 9119	163
99	FLORIDA A&M UNIV	J MALONE	GSFC	J ZHENG	NAG 5 9420	164
99	FLORIDA A&M UNIV	J MALONE	GSFC	K H PHIFER-MCGHEE	NAG 5 10726	164
99	FLORIDA ATLANTIC UNIV	T H MAIER	ARC	G H GEONKAR	NCC 2 5264	165
99	FLORIDA INST OF TECH	J MEDINA	KSC	R LANIER	NGT10 52621	166
99	FLORIDA INST OF TECH	L SMITH	GSFC	C HELMSTETTER	NGT 5 50257	165
99	FLORIDA INST OF TECH	L SMITH	GSFC	T OSWALT	NGT 5 50290	165
99	FLORIDA INST OF TECH	R WHEELER	KSC	M BUSH	NGT10 52622	166
99	FLORIDA INST OF TECH	W WAGNER	GSFC	M ZHANG	NAG 5 11036	165
99	FLORIDA STATE UNIV	G ASRAR	GSFC	E SMITH	NGT 5 30116	169
99	FLORIDA STATE UNIV	M WEI	GSFC	J O	NGT 5 30370	169
99	FOOTHILL-DE ANZA COM COL SYS OFF	G JAMES	ARC	M P CONRAD	NGT 2 52280	53
99	FOOTHILL-DE ANZA COM COL SYS OFF	M E LOPEZ	ARC	M CONWAY	NGT 2 1001	53
99	FRANKLIN-MARSHALL COLLEGE	L CAROFF	ARC	D BACKMAN	NCC 2 5365	441
99	FULTON-MONTGOMERY COMM COLLEGE	D L POWE	SSC	M PRESTOPNIK	NAG13 00007	382
99	FURMAN UNIV	R K DISMUKES	ARC	G O EINSTEIN	NCC 2 1085	465
99	GEORGE MASON UNIV	A J MATURO	GSFC	R R STOUGH	NCC 5 360	510
99	GEORGE MASON UNIV	M MAIDEN	GSFC	M KAFATOS	NCC 5 306	510
99	GEORGE MASON UNIV	M MELLOTT	GSFC	M E SUMMERS	NAG 5 9669	509
99	GEORGE WASHINGTON UNIV	D DETROYE	GSFC	J M LOGSDON	NGT 5 40058	154
99	GEORGE WASHINGTON UNIV	D JAN	NMO	J H MILLER	NAG 9 1185	153
99	GEORGE WASHINGTON UNIV	E T SCHWARTZ	HQ	J M LOGSDON	NGT 40056	153
99	GEORGE WASHINGTON UNIV	J BOYCE	GSFC	G KEATING	NAG 5 11175	152
99	GEORGE WASHINGTON UNIV	J I TROMBKA	GSFC	D A ROWLEY	NAG 5 10417	152
99	GEORGE WASHINGTON UNIV	R A HATHAWAY	LARC	J WHITESIDES	NCC 1 01020	153
99	GEORGIA INST OF TECH	C GRIFFIN	KSC	D BRIDGES	NAG10 01025	185
99	GEORGIA INST OF TECH	D D DETROYE	GSFC	E ARMANIOS	NGT 5 40116	187
99	GEORGIA INST OF TECH	D DETROYE	GSFC	E ARMANIOS	NGT 5 40023	187
99	GEORGIA INST OF TECH	G ASRAR	GSFC	D WINE	NGT 5 30069	187
99	GEORGIA INST OF TECH	J E GARDNER	LARC	B V GIBBENS	NGT 1 52162	186
99	GEORGIA INST OF TECH	J HOWELL	MSFC	J OLDS	NAG 8 1713	185
99	GEORGIA INST OF TECH	K BLANDING	GSFC	P NEITZEL	NGT 5 50363	188
99	GEORGIA INST OF TECH	L SMITH	GSFC	R FUJIMOTO	NGT 5 50284	187
99	GEORGIA INST OF TECH	M WEI	GSFC	L HUEY	NGT 5 30384	187
99	GEORGIA INST OF TECH	R A LEPSCH	LARC	K A CUNEFARE	NGT 1 52167	186
99	GLENDAL COMM COLLEGE	H KASS	GSFC	L SEROT	NAG 5 9700	53
99	HAMPTON UNIV	B W MEESON	GSFC	J RUSSELL	NAG 5 11126	512
99	HAMPTON UNIV	B WHITE	HQ	D A TEMPLE	NCC 5 348	513
99	HAMPTON UNIV	C P HOLMES	GSFC	S M BAILEY	NAG 5 10063	512
99	HAMPTON UNIV	C S PERSON	GSFC	C L REAVES	NAG 5 10015	512
99	HAMPTON UNIV	M STOUTSENBERGER	GSFC	C RANKINS	NAG 5 9156	512
99	HAMPTON UNIV	N KHAZENIE	GSFC	D A TEMPLE	NAG 5 6296	512
99	HAMPTON UNIV	R A HATHAWAY	LARC	C LOWE	NCC 1 379	513
99	HAMPTON UNIV	R A HATHAWAY	LARC	R SCHWAN	NAG 1 01089	511
99	HAMPTON UNIV	R A HATHAWAY	LARC	R SCHWAN	NCC 1 01034	513
99	HAMPTON UNIV	R HATHAWAY	LARC	C LOWE	NAG 1 2207	511
99	HAMPTON UNIV	R HATHAWAY	LARC	D DEPRIEST	NCC 1 358	513
99	HAMPTON UNIV	S MOSSENBERG	LARC	C REEVES	NAG 1 2256	511
99	HARVARD UNIV	A NURRIDIN	GSFC	J GRINDLEY	NGT 5 50020	286
99	HARVARD UNIV	A NURRIDIN	GSFC	L HERNQUIST	NGT 5 50028	286
99	HARVARD UNIV	D E WICKLAND	GSFC	S C WOFSY	NAG 5 11154	285

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	HARVARD UNIV	L SMITH	GSFC	R KIRSHNER	NGT 5 50244	286
99	HARVARD UNIV	L SMITH	GSFC	W H PARKINSON	NGT 5 50258	286
99	HARVARD UNIV	M WEI	GSFC	J ANDERSON	NGT 5 30410	286
99	HARVARD UNIV	M WEI	GSFC	S WOFSY	NGT 5 30366	286
99	HARVARD UNIV	P DECOLA	GSFC	D JACOB	NAG 5 11270	285
99	HARVARD UNIV	P R HOUSER	GSFC	A P BARROS	NAG 5 10792	285
99	HERITAGE COLLEGE	B J COLLINS	ARC	P T ALEXANDER	NAG 2 6034	533
99	HOUSTON COMM COLLEGE	M MATEU	GSFC	C GARCIA	NAG 5 8566	475
99	HOUSTON COMM COLLEGE	M MATEU	GSFC	C GARCIA	NAG 5 10239	475
99	HOWARD UNIV	C PERSON	GSFC	A N THORPE	NAG 5 10675	155
99	HOWARD UNIV	D MENCHAN	GSFC	D WOODARD	NAG 5 7384	155
99	HOWARD UNIV	D MENCHAN	GSFC	M C WOODARD	NAG 5 10838	155
99	HOWARD UNIV	D MENCHAN	GSFC	W WOODARD	NAG 5 9279	155
99	HOWARD UNIV	G A SOFFEN	GSFC	A N THORPE	NCC 5 184	155
99	HOWARD UNIV	G COOPER	ARC	P HAMBRIGHT	NAG 2 1526	154
99	HOWARD UNIV	M S BURRELL	GSFC	J B HALPERN	NGT 5 77	156
99	HOWARD UNIV	M S BURRELL	GSFC	J B HALPERN	NGT 5 113	156
99	HUNTER COLL OF THE CITY UNIV OF NY	J F DOWDY	MSFC	L COHEN	NAG 8 1259	382
99	ILLINOIS STATE UNIV	J SHARBER	GSFC	D HOLLAND	NAG 5 9584	200
99	INDIANA UNIV	K BLANDING	GSFC	R DUNCAN	NGT 5 50366	215
99	INDIANA UNIV	K BLANDING	GSFC	W WAGNER	NGT 5 50373	215
99	INTER AMER U OF PR AGUADILLA CAMP	M STOUTSENBERGER	HQ	R GONZALEZ	NAG 5 9311	382
99	IOWA STATE UNIV	D D DETROYE	GSFC	W J BYRD	NGT 5 40081	224
99	IOWA STATE UNIV	D DETROYE	GSFC	W J BYRD	NGT 5 40027	224
99	IOWA STATE UNIV	G FOGELMAN	GSFC	M PORTER	NAG 5 8892	223
99	JACKSON STATE UNIV	A JOYCE	SSC	A K MOHAMED	NAG13 98007	326
99	JACKSON STATE UNIV	A JOYCE	SSC	H GORE	NAG13 99004	326
99	JAMES MADISON UNIV	J JOHNSON	GSFC	J BLANDINO	NAG 5 10701	513
99	JAMES MADISON UNIV	R A HATHAWAY	LARC	A A TEATE	NAG 1 2155	513
99	JARVIS CHRISTIAN COLLEGE	L ARMENDARIZ	JSC	M J MCKINNEY	NAG 9 1085	475
99	JOHNS HOPKINS UNIV	D D DETROYE	GSFC	R C HENRY	NGT 5 40079	252
99	JOHNS HOPKINS UNIV	D GOLOBEKS	GSFC	S KRIMIGIS	NAG 5 9367	246
99	JOHNS HOPKINS UNIV	D R MENGERS	GSFC	D MOOS	NAG 5 3448	242
99	JOHNS HOPKINS UNIV	J F SPANN	GSFC	J M RUOHONIEMI	NAG 5 10902	250
99	JOHNS HOPKINS UNIV	J SHARBER	GSFC	B MAUK	NAG 5 10281	248
99	JOHNS HOPKINS UNIV	J SHARBER	GSFC	D G SIBECK	NAG 5 10285	248
99	JOHNS HOPKINS UNIV	J SHARBER	GSFC	K TAKAHASHI	NAG 5 8964	245
99	JOHNS HOPKINS UNIV	J SHARBER	GSFC	S OHTANI	NAG 5 10941	250
99	JOHNS HOPKINS UNIV	K BLANDING	GSFC	P C SEARSON	NGT 5 50372	253
99	JOHNS HOPKINS UNIV	L KEFFER	GSFC	R C HENRY	NGT 5 40029	252
99	JOHNS HOPKINS UNIV	L SMITH	GSFC	K J STEBE	NGT 5 50259	252
99	JOHNS HOPKINS UNIV	L SMITH	GSFC	K J STEBE	NGT 5 50268	253
99	JOHNS HOPKINS UNIV	M KURYLO	GSFC	S A LLOYD	NAG 5 11035	250
99	JOHNS HOPKINS UNIV	M MELLOTT	GSFC	R A GREENWALD	NAG 5 10060	247
99	JOHNS HOPKINS UNIV	P DECOLA	GSFC	D WAUCH	NAG 5 11283	251
99	JOHNS HOPKINS UNIV	P DECOLA	GSFC	W SWARTZ	NAG 5 11297	251
99	JOHNS HOPKINS UNIV	W ABDALATI	GSFC	R RANEY	NAG 5 10261	248
99	JOHNS HOPKINS UNIV	W J WAGNER	GSFC	D LARIO	NAG 5 10787	249
99	JOHNS HOPKINS UNIV	W J WAGNER	GSFC	G HO	NAG 5 10836	250
99	LINCOLN UNIV - PA	D MENCHAN	GSFC	R LANGLEY	NAG 5 10172	441
99	LOUISIANA STATE UNIV - BATON ROUGE	D DETROY	HQ	J WEFEL	NCC 5 393	235
99	LOUISIANA STATE UNIV - BATON ROUGE	D DETROYE	GSFC	J P WEFEL	NCC 5 167	235
99	LOUISIANA STATE UNIV - BATON ROUGE	D DETROYE	GSFC	J P WEFEL	NGT 5 40035	235
99	LOUISIANA STATE UNIV - BATON ROUGE	D DETROYE	HQ	J WEFEL	NGT 5 40115	235
99	MARIST COLLEGE	M MEYER	GSFC	R KEPNER	NAG 5 9889	382
99	MARQUETTE UNIV	C W LLOYD	JSC	R H FITTS	NAG 9 1156	546
99	MASSACHUSETTS INST OF TECH	D D DETROYE	GSFC	L YOUNG	NGT 5 40075	299
99	MASSACHUSETTS INST OF TECH	D E SMITH	GSFC	G H PETTENGILL	NAG 5 4434	290
99	MASSACHUSETTS INST OF TECH	D E SMITH	GSFC	M T ZUBER	NAG 5 4806	290
99	MASSACHUSETTS INST OF TECH	D E SMITH	GSFC	M T ZUBER	NAG 5 11113	296
99	MASSACHUSETTS INST OF TECH	D SENKE	GSFC	A RIVKIN	NAG 5 10328	295
99	MASSACHUSETTS INST OF TECH	K OGILVIE	GSFC	A LARARUS	NAG 5 7359	291
99	MASSACHUSETTS INST OF TECH	L KEFFER	GSFC	L R YOUNG	NGT 5 40048	299
99	MASSACHUSETTS INST OF TECH	L SMITH	GSFC	J B HOWARD	NGT 5 50302	300
99	MASSACHUSETTS INST OF TECH	L SMITH	GSFC	M FLEMINGS	NGT 5 50306	300
99	MASSACHUSETTS INST OF TECH	M KURYLO	GSFC	J I STEINFELD	NAG 5 10613	295

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	MASSACHUSETTS INST OF TECH	M MEYER	GSFC	J GROTZINGER	NAG 5 9445	294
99	MASSACHUSETTS INST OF TECH	M SISTILLI	GSFC	S C TING	NAG 5 10711	295
99	MASSACHUSETTS INST OF TECH	P DECOLA	GSFC	R A PLUMB	NAG 5 11285	296
99	MASSACHUSETTS INST OF TECH	R CROUCH	GSFC	G MCKINLEY	NAG 5 8776	293
99	MASSACHUSETTS INST OF TECH	T MATURO	GSFC	J KLEIN	NAG 5 11268	296
99	MEDGAR EVERS COLLEGE	M STOUTSENBERGER	HQ	L JOHNSON	NAG 5 9256	382
99	MICHIGAN STATE UNIV	A NURRIDIN	HQ	P WEBBER	NGT 5 50150	308
99	MICHIGAN STATE UNIV	D S MCKAY	JSC	M A VELBEL	NAG 9 1211	308
99	MICHIGAN STATE UNIV	G GUTMAN	GSFC	J LIU	NAG 5 10200	307
99	MICHIGAN STATE UNIV	K BLANDING	GSFC	P PIERRE	NGT 5 50378	308
99	MICHIGAN STATE UNIV	M MAIDEN	GSFC	D SKOLE	NCC 5 303	308
99	MICHIGAN STATE UNIV	R GRYMES	ARC	M THOMASHOW	NCC 2 1274	308
99	MICHIGAN STATE UNIV	S OLSON	GRC	I S WICHMAN	NCC 3 662	308
99	MICHIGAN TECHNOLOGICAL UNIV	M WEI	GSFC	R SHAW	NAG 5 10568	309
99	MISSISSIPPI STATE UNIV	H CARR	SSC	D SHAW	NCC13 99001	328
99	MISSISSIPPI STATE UNIV	M MATHEWS	GSFC	B JOINER	NAG 5 11127	327
99	MISSISSIPPI VALLEY STATE UNIV	C PERSON	GSFC	C BLAND	NAG 5 9535	328
99	MISSISSIPPI VALLEY STATE UNIV	M STOUTSENBERGER	GSFC	C BLAND	NAG 5 9197	328
99	MISSISSIPPI VALLEY STATE UNIV	N S SULLIVAN	SSC	S J WHITE	NAG13 99003	328
99	MISSISSIPPI VALLEY STATE UNIV	N SULLIVAN	JSC	S J WHITE	NAG13 51	328
99	MONTANA STATE UNIV	D D DETROYE	GSFC	W HISCOCK	NGT 5 40092	338
99	MONTANA STATE UNIV	D DETROYE	GSFC	W A HISCOCK	NGT 5 40036	338
99	MONTANA STATE UNIV	D DETROYE	GSFC	W HISCOCK	NCC 5 410	338
99	MONTANA STATE UNIV	D DETROYE	GSFC	W HISCOCK	NCC 5 579	338
99	MONTANA STATE UNIV	D JAN	JPL	B H PYLE	NAG 9 1082	337
99	MONTANA STATE UNIV	E T SCHWARTZ	HQ	W A HISCOCK	NGT 40041	338
99	MONTANA STATE UNIV	L SMITH	GSFC	J C PRISCU	NGT 5 50297	338
99	MONTANA STATE UNIV	M V PHELPS	GSFC	G TUTHILL	NAG 5 4576	337
99	MONTANA STATE UNIV	R A GRYMES	ARC	D L DICKENSHEETS	NCC 2 5437	338
99	MONTANA STATE UNIV	W WALTER	GSFC	D LONGCOPE	NAG 5 10489	337
99	MOREHOUSE SCH MED	B J COLLINS	ARC	M THIERRY-PALMER	NAG 2 1381	189
99	MOREHOUSE SCH MED	C E WADE	ARC	B J KLEMENT	NAG 2 1448	189
99	MORGAN STATE UNIV	B WHITE	GSFC	D N WILLIAMS	NAG 5 10947	254
99	MORGAN STATE UNIV	C PERSON	GSFC	D N WILLIAMS	NAG 5 9710	253
99	MORGAN STATE UNIV	D MENCHAN	GSFC	H WILLIAMS	NAG 5 8860	253
99	MORGAN STATE UNIV	J HARRINGTON	GSFC	W LUPTON	NCC 5 532	254
99	MORGAN STATE UNIV	K KRISHEN	JSC	J E WHITNEY	NAG 9 998	254
99	MORGAN STATE UNIV	P HOLLOWAY	GSFC	H WILLIAMS	NAG 5 8574	253
99	MT SINAI SCH OF MED OF THE CUNY	A M LEE	JSC	D COHEN	NAS 9 19441	383
99	NEW JERSEY INST OF TECH	P DOTY	MSFC	E DREIZIN	NAG 8 1714	351
99	NEW JERSEY INST OF TECH	W WAGNER	GSFC	D E GARY	NAG 5 10212	351
99	NEW MEXICO HIGHLANDS UNIV	G HENDERSEN	JSC	J R JUAREZ	NAG 9 1260	361
99	NEW MEXICO HIGHLANDS UNIV	J MALONE	GSFC	R CLARK	NAG 5 6532	360
99	NEW MEXICO HIGHLANDS UNIV	L ARMENDARIZ	JSC	J JUAREZ	NAG 9 1195	361
99	NEW MEXICO HIGHLANDS UNIV	L ARMENDARIZ	JSC	J R JUAREZ	NAG 9 1921	361
99	NEW MEXICO HIGHLANDS UNIV	L M ARMENDARIZ	JSC	J R JUAREZ	NAG 9 1330	361
99	NEW MEXICO HIGHLANDS UNIV	P SAKIMOTO	GSFC	J C	NGT 5 90069	361
99	NEW MEXICO HIGHLANDS UNIV	PBAKER	WFF	J JUAREZ	NAG 9 1369	361
99	NEW MEXICO STATE UNIV - LAS CRUCES	A NURRIDIN	GSFC	S CASTILLO	NGT 5 50117	363
99	NEW MEXICO STATE UNIV - LAS CRUCES	B J COLLINS	ARC	G V GARCIA	NAG 2 6030	362
99	NEW MEXICO STATE UNIV - LAS CRUCES	B WHITE	GSFC	H BAPTISTE	NCC 5 466	363
99	NEW MEXICO STATE UNIV - LAS CRUCES	D BOGAN	GSFC	M MARLEY	NAG 5 8919	363
99	NEW MEXICO STATE UNIV - LAS CRUCES	D D DETROYE	GSFC	P HYNES	NGT 5 40087	363
99	NEW MEXICO STATE UNIV - LAS CRUCES	D DETROYE	GSFC	P HYNES	NGT 5 40061	363
99	NEW MEXICO STATE UNIV - LAS CRUCES	D M RUSSO	JSC	G A EICEMAN	NAG 9 1291	363
99	NORFOLK STATE UNIV	B L WHITE	GSFC	G GOLEMBIEWSKI	NAG 5 9257	514
99	NORFOLK STATE UNIV	C PERSON	GSFC	L MATTIX	NCC 5 514	515
99	NORFOLK STATE UNIV	M MATTHEWS	GSFC	L MATTIX	NCC 5 457	515
99	NORFOLK STATE UNIV	N KHAZENIE	GSFC	S CHAUDHURY	NAG 5 8541	514
99	NORFOLK STATE UNIV	R A HATHAWAY	LARC	P TUCKER-HOGAN	NCC 1 391	515
99	NORFOLK STATE UNIV	R A HATHAWAY	LARC	P TUCKER-HOGAN	NCC 1 01053	515
99	NORFOLK STATE UNIV	R A HATHAWAY	LARC	R TUCKER-HOGAN	NCC 1 338	515
99	NORFOLK STATE UNIV	R A HATHAWAY	LARC	W RODRIGUEZ	NCC 1 01055	515
99	NORFOLK STATE UNIV	S CANRIGHT	LARC	C COLEMAN	NAG 1 1948	514
99	NORTH CAROLINA A&T STATE UNIV	B WHITE	GSFC	J D MONROE	NCC 5 349	399
99	NORTH CAROLINA A&T STATE UNIV	C WILKERSON	MSFC	D J SCHULZ	NAG 8 1247	398

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	NORTH CAROLINA A&T STATE UNIV	D F NOGA	GRC	Y ELLEN	NAG 3 2165	397
99	NORTH CAROLINA A&T STATE UNIV	J D ERICK SUN	JSC	B RAM	NAG 9 973	398
99	NORTH CAROLINA A&T STATE UNIV	J MALONE	GSFC	N DOGAN	NAG 5 9419	398
99	NORTH CAROLINA STATE UNIV	A GHASSEM	GSFC	D REICHLER	NGT 5 30054	402
99	NORTH CAROLINA STATE UNIV	C	ARC	D W BRENNER	NAG 2 1119	400
99	NORTH CAROLINA STATE UNIV	D D DETROYE	GSFC	F R DEJARNETTE	NGT 5 40109	402
99	NORTH CAROLINA STATE UNIV	D DETROYE	GSFC	F R DEJARNETTE	NGT 5 40011	402
99	NORTH CAROLINA STATE UNIV	J A WHITE	LARC	J R EDWARDS	NAG 1 2216	399
99	NORTH CAROLINA STATE UNIV	J BREDEKAMP	GSFC	K J BORKOWSKI	NAG 5 9490	400
99	NORTH CAROLINA STATE UNIV	S SPEARMAN	MSFC	K J BACHMANN	NCC 8 95	401
99	NORTHERN ARIZONA UNIV	D BOGAN	GSFC	R YELLE	NAG 5 9214	24
99	NORTHERN ARIZONA UNIV	J HILMAN	GSFC	C GRIFFITH	NAG 5 11239	25
99	NORTHWEST INDIAN COLLEGE	M JASINSKI	GSFC	G BLEDSOE	NCC 5 423	533
99	NORTHWESTERN UNIV	K BLANDING	GSFC	P VOORHEES	NGT 5 50368	203
99	NORTHWESTERN UNIV	L SMITH	GSFC	B J MATKOWSKY	NGT 5 50263	203
99	OAKWOOD COLLEGE	G HAMILTON	MSFC	K BENN-MARSHALL	NAG 8 1600	4
99	OGLALA LAKOTA COLLEGE	D MENCHAN	GSFC	S PHELPS	NAG 5 10935	466
99	OGLALA LAKOTA COLLEGE	T GULL	GSFC	J HAAS	NAG 5 7548	466
99	OHIO STATE UNIV	A NURRIDIN	HQ	M EVANS	NGT 5 50015	419
99	OHIO STATE UNIV	G STRINGFELLO	GSFC	E HERBST	NAG 5 10207	417
99	OHIO STATE UNIV	K PARTINGTON	GSFC	K JEZEK	NAG 5 10112	417
99	OHIO STATE UNIV	L SMITH	GSFC	E MOSLEY-THOMPSON	NGT 5 30178	418
99	OHIO STATE UNIV	M WEI	GSFC	D BRZEZINSKA	NAG 5 10619	417
99	OHIO STATE UNIV	W ABDALATI	GSFC	B CSATHO	NAG 5 10199	417
99	OHIO STATE UNIV	W ABDALATI	GSFC	D BROMWICH	NAG 5 10160	417
99	OHIO STATE UNIV	W ABDALATI	GSFC	E MOSLEY-THOMPSON	NAG 5 10266	417
99	OHIO STATE UNIV	W ABDALTI	GSFC	K JEZEK	NAG 5 10275	417
99	OHIO WESLEYAN UNINERITY	J ROSENDHAL	HQ	W LOUTHAN	NAG 5 10453	420
99	OKLAHOMA STATE UNIV	C W LLOYD	JSC	B J STOECKER	NAG 9 1159	428
99	OKLAHOMA STATE UNIV	L BILBROUGH	HQ	K WIGGINS	NASW 5043	429
99	OKLAHOMA STATE UNIV	L BILLBROUGH	GSFC	T COLLINS	NCC 5 561	429
99	OKLAHOMA STATE UNIV	P L MOUNTJOY	GSFC	K E WIGGINS	NCC 5 185	429
99	OLD DOMINION UNIV	D DETROYE	GSFC	M SANDY	NGT 5 40070	521
99	OLD DOMINION UNIV	D DETROYE	GSFC	M SANDY	NGT 5 40080	521
99	OLD DOMINION UNIV	D L HARM	JSC	R B LOFTIN	NCC 9 135	520
99	OLD DOMINION UNIV	J GORMAN	GSFC	M SANDY	NCC 5 592	520
99	OLD DOMINION UNIV	J L BURT	LARC	M SCERBO	NGT 1 01005	520
99	OLD DOMINION UNIV	J MARRA	GSFC	E HOFMANN	NAG 5 11259	518
99	OLD DOMINION UNIV	L KEFFER	GSFC	M L SANDY	NGT 5 40059	521
99	OLD DOMINION UNIV	R A HATHAWAY	LARC	B TIWARI	NCC 1 01043	519
99	OLD DOMINION UNIV	R A HATHAWAY	LARC	S N TUIVORE	NGT 1 52208	521
99	ORAL ROBERTS UNIV	R HARMAN	GSFC	D HALSMER	NAG 5 7378	429
99	OREGON STATE UNIV	D D DETROYE	GSFC	A C KLEIN	NGT 5 40103	434
99	OREGON STATE UNIV	D DETROYE	GSFC	A C KLEIN	NGT 5 40022	434
99	OREGON STATE UNIV	D WICKLAND	GSFC	B LAW	NAG 5 11223	433
99	OREGON STATE UNIV	D WICKLAND	GSFC	D P TURNER	NAG 5 11222	433
99	OREGON STATE UNIV	D WICKLAND	GSFC	L MAHRT	NAG 5 11231	433
99	OREGON STATE UNIV	G GUTMAN	GSFC	O N KRANKINA	NAG 5 10614	433
99	OREGON STATE UNIV	J MARRA	GSFC	Y SPITZ	NAG 5 11190	433
99	OREGON STATE UNIV	M MEYER	GSFC	M FISK	NAG 5 9446	432
99	OREGON STATE UNIV	M WEI	GSFC	W PEGAU	NGT 5 30347	434
99	OREGON STATE UNIV	M Y WEI	GSFC	B BOND	NGT 5 30181	434
99	OREGON STATE UNIV	N SOVIK	SSC	KIMERLING	NCC13 98004	434
99	OREGON STATE UNIV	R K DISMUKES	ARC	K H FUNK	NAG 2 1287	431
99	OREGON STATE UNIV	W WEI	GSFC	L MAHRT	NGT 5 30387	434
99	OUR LADY OF THE LAKE UNIV	L ARMENDARIZ	JSC	K A WARD	NAG 9 1170	475
99	PAINE COLLEGE	M STOUTSENBERGER	GSFC	R KESSLER	NAG 5 9157	189
99	PASADENA CITY COLLEGE	P J SAKIMOTO	GSFC	J SEPIKAS	NAG 5 11197	54
99	PASSAIC COUNTY COMM COLLEGE	STOUTSENBERGER	HQ	R EPSTEIN	NAG 5 9103	351
99	PENN STATE UNIV -HERSHEY MED	C W LLOYD	JSC	D MACLEAN	NAG 9 1259	442
99	PENN STATE UNIV -HERSHEY MED	L SMITH	GSFC	C CHENGE	NGT 5 50264	442
99	PENN STATE UNIV	D DETROYE	GSFC	R DEVON	NGT 5 40090	451
99	PENN STATE UNIV	D GOLOMBEK	GSFC	G BABU	NAG 5 10542	448
99	PENN STATE UNIV	J DASCH	HQ	R DEVON	NGT 5 40064	451
99	PENN STATE UNIV	J F DOWDY	MSFC	G SUBRAMANIAM	NAG 8 1286	448
99	PENN STATE UNIV	K BLANDING	GSFC	M BERSHADY	NGT 5 50236	452

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	PENN STATE UNIV	L K SMITH	GSFC	W BRANDT	NGT 5 50277	452
99	PENN STATE UNIV	L SMITH	GSFC	N BRANDT	NGT 5 50247	452
99	PENN STATE UNIV	L SMITH	GSFC	P N WALKER	NGT 5 50272	452
99	PENN STATE UNIV	L SMITH	GSFC	S COUTU	NGT 5 50296	452
99	PENN STATE UNIV	L SMITH	HQ	S BRANTLEY	NGT 5 50178	452
99	PENN STATE UNIV	M MC CARTHY	DFRC	B GRABOWSKI	NAG 4 160	444
99	PENN STATE UNIV	M WEI	GSFC	A BARROS	NGT 5 30060	451
99	PENN STATE UNIV	P CRANE	GSFC	R A WADE	NAG 5 9586	447
99	PENN STATE UNIV	R E GABRYS	GSFC	D L GRABOWSKI	NCC 5 432	450
99	POMONA COLLEGE	D SENSKE	GSFC	E GROSFILS	NAG 5 10157	54
99	PORTLAND STATE UNIV	M MEYER	GSFC	S CADY	NAG 5 9579	434
99	PORTLAND STATE UNIV	W ABDALATI	GSFC	C HULBE	NAG 5 11309	434
99	PORTLAND STATE UNIV	Y F SIAMAK	ARC	D M RAFFO	NCC 2 1152	434
99	PRAIRIE VIEW A&M UNIV	A JOYCE	SSC	S SHAKIR	NAG13 46	476
99	PRAIRIE VIEW A&M UNIV	J HARRINGTON	GSFC	J WILLIAMS	NCC 5 529	476
99	PRAIRIE VIEW A&M UNIV	J MALONE	GSFC	R WILKINS	NAG 5 11070	476
99	PRINCETON UNIV	J MARRA	GSFC	M BENDER	NAG 5 11301	354
99	PRINCETON UNIV	K BLANDING	GSFC	D SAVILLE	NGT 5 50370	356
99	PRINCETON UNIV	K BLANDING	GSFC	E CHOUJEIRI	NGT 5 50356	356
99	PRINCETON UNIV	M MELLOTT	GSFC	J R JOHNSON	NAG 5 10217	354
99	PRINCETON UNIV	M WEI	GSFC	S HUBBELL	NGT 5 30113	355
99	PURDUE UNIV	B J WOOLFORD	JSC	G SALVENDY	NAG 9 1281	219
99	PURDUE UNIV	D DETROYE	GSFC	D ANDRISANI	NGT 5 40114	220
99	PURDUE UNIV	D FOLTA	GSFC	K C HOWELL	NCC 5 358	219
99	PURDUE UNIV	D SENSKE	GSFC	B PICKETT	NAG 5 10262	218
99	PURDUE UNIV	J M BOYCE	GSFC	J SHAN	NAG 5 11080	219
99	PURDUE UNIV	K BLANDING	GSFC	J M LONGUSKI	NGT 5 50275	220
99	PURDUE UNIV	K BLANDING	GSFC	T ZWEIR	NGT 5 50336	220
99	PURDUE UNIV	L KEFFER	GSFC	D ANDRISANI	NGT 5 40043	220
99	PURDUE UNIV	M MEYER	GSFC	J A CHMIELEWSKI	NAG 5 10735	218
99	PURDUE UNIV	P ULRICH	GSFC	C NOUSSAIR	NAG 5 10061	218
99	RENSSELAER POLYTECH INST	D MONTEGANI	GRC	J A TICHY	NGT 3 52341	385
99	RENSSELAER POLYTECH INST	G A ROBERSTON	MSFC	L N MYRABO	NAG 8 1290	385
99	RENSSELAER POLYTECH INST	L SMITH	GSFC	B SZMANSKI	NGT 5 50165	385
99	RENSSELAER POLYTECH INST	M MEYER	GSFC	J P FERRIS	NAG 5 9607	385
99	RICE UNIV	A TUYAHOV	GSFC	P REIFF	NCC 5 311	479
99	RICE UNIV	C L FARMER	JSC	D SUBRAMANIAN	NAG 9 1249	478
99	RICE UNIV	J SHARBER	GSFC	R WOLF	NAG 5 9077	477
99	RICE UNIV	P HUNTER	GSFC	E MERENYI	NAG 5 10432	478
99	ROANOKE COLLEGE	D SIX	MSFC	A F BARGHOUTY	NAG 8 1208	522
99	RUTGERS ST UNIV N	G ASRAR	GSFC	D ROBINSON	NGT 5 30062	359
99	RUTGERS ST UNIV N	K BLADING	GSFC	C MAVROIDIS	NGT 5 50364	359
99	RUTGERS ST UNIV N	P CRANE	GSFC	J SELLWOOD	NAG 5 10110	358
99	RUTGERS STATE UNIV OF NJ NEW BRUNS	P DECOLA	GSFC	Y WANG	NAG 5 11244	359
99	SAINT CLOUD STATE UNIV	J HILLMAN	GSFC	M WOMACK	NAG 5 11287	320
99	SALISH KOOTENAI COLLEGE	M STOUTSENBERGER	GSFC	J M GOBERT	NAG 5 9147	338
99	SAN ANTONIO COLLEGE	L ARMENDARIZ	JSC	C GONZALES	NAG 9 975	479
99	SAN DIEGO STATE UNIV	A PEEK	SSC	D STOWE	NCC13 00002	54
99	SAN DIEGO STATE UNIV	M WEI	GSFC	A HOPE	NGT 5 30367	55
99	SAN JACINTO COLLEGE	D DENTON-MISFELDT	JSC	N J ANTHA	NAS 9 00106	479
99	SAN JACINTO COLLEGE	D SICKOREZ	JSC	M DALTON	NCC 9 137	479
99	SAN JACINTO COLLEGE	N AVAILABLE	JSC	N AVAILABLE	NCC 9 141	479
99	SAN JOSE STATE UNIV	I STATLER	ARC	K CORKER	NAG 2 1454	55
99	SAN JOSE STATE UNIV	J BOYCE	GSFC	A BRIDGER	NAG 5 11185	56
99	SAN JOSE STATE UNIV	J BOYCE	GSFC	S C RAFKIN	NAG 5 9500	55
99	SAN JOSE STATE UNIV	M MOORE	ARC	B STONE	NGT 2 52262	58
99	SAN JOSE STATE UNIV	N S DORGI	ARC	M S PATANKAR	NCC 2 1284	57
99	SAN JOSE STATE UNIV	R K DISMUKES	ARC	K P JORDAN	NCC 2 1095	56
99	SAN JOSE STATE UNIV	RJ DISMUKES	ARC	K JORDON	NCC 2 1155	57
99	SHAW UNIV	M STOUTSENBERGER	GSFC	K SATAGOPAN	NAG 5 9195	402
99	SONOMA STATE UNIV	D GABRYS	GSFC	L COMINSKY	NCC 5 429	59
99	SOUTH CAROLINA STATE UNIV	J HARRINGTON	GSFC	D WALTER	NCC 5 534	465
99	SOUTH CAROLINA STATE UNIV	M MATTHEWS	GSFC	D K WALTER	NCC 5 454	465
99	SOUTH CAROLINA STATE UNIV	N R PELLIS	MSFC	J D SALLEY	NAG 5 8246	465
99	SOUTH DAKOTA SCH OF MINES & TECH	D DETROYE	GSFC	S FARWELL	NCC 5 402	466
99	SOUTH DAKOTA SCH OF MINES & TECH	D DETROYE	GSFC	S O FARWELL	NCC 5 588	466

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	SOUTH DAKOTA SCH OF MINES & TECH	D DETROYE	GSFC	S O FARWELL	NGT 5 40042	467
99	SOUTH DAKOTA SCH OF MINES & TECH	D DETROYE	GSFC	S O FARWELL	NGT 5 40095	467
99	SOUTHERN UNIV & A&M COLLEGE	A JOYCE	SSC	E HILDRETH	NGT13 52720	236
99	SOUTHERN UNIV & A&M COLLEGE	B WHITE	GSFC	D BAGAYOKO	NAG 5 8552	236
99	SOUTHERN UNIV & A&M COLLEGE	D FORD	MSFC	C WANG	NCC 8 138	236
99	SOUTHERN UNIV & A&M COLLEGE	G GORDON	MSFC	M A STUNNLEFIELD	NAG 8 1536	236
99	SOUTHERN UNIV & A&M COLLEGE	R TRAVIS	SSC	D BAGAYOKO	NCC13 00010	236
99	SOUTHERN UNIV & A&M COLLEGE	W J LOVE	MSFC	L L LAURENCE	NAG 8 1627	236
99	SOUTHWEST TEXAS JUNIOR COLLEGE	L ARMENDARIZ	JSC	A HERNANDEZ	NAG 9 1019	480
99	SPELMAN COLLEGE	C PERSON	GSFC	S T BOZEMAN	NAG 5 9313	190
99	SPELMAN COLLEGE	W J LOVE	MSFC	E Z FALCONER	NCC 8 179	190
99	STANFORD UNIV	A NURRIDIN	GSFC	R WAGONER	NGT 5 50044	66
99	STANFORD UNIV	A NURRIDIN	HQ	J HOW	NGT 5 50075	67
99	STANFORD UNIV	B BETTS	GSFC	L TYLER	NAG 5 9494	62
99	STANFORD UNIV	D BOGAN	GSFC	G TYLER	NAG 5 9556	62
99	STANFORD UNIV	J SHARBER	GSFC	U S INAN	NGT 5 50351	67
99	STANFORD UNIV	K BLANDING	HQ	A FOX	NGT 5 50358	67
99	STANFORD UNIV	L SMITH	GSFC	A B WALKER	NGT 5 50254	67
99	STANFORD UNIV	M WEI	GSFC	C FIELD	NGT 5 50101	67
99	STANFORD UNIV	M WEI	GSFC	K ARRIGO	NGT 5 30392	66
99	STANFORD UNIV	T J BARTH	ARC	T HUGHES	NCC 2 5363	65
99	STATE UNIV OF NY - BUFFALO	J BOYCE	GSFC	T GREGG	NAG 5 9619	388
99	STATE UNIV OF NY - BUFFALO	S DAVISON	GSFC	B GONG	NAG 5 9873	388
99	STATE UNIV OF NY - STONY BROOK	M Y WEI	GSFC	M LERDAU	NGT 5 30124	391
99	STATE UNIV OF NY - STONY BROOK	P DECOLA	GSFC	M GELLER	NAG 5 11240	391
99	STATE UNIV OF NY - STONY BROOK	R R ANTCLIFF	LARC	Y SHAMASH	NAG 1 01052	388
99	STATE UNIV OF NY COL - PURCHASE	D SENSKE	GSFC	G FLYNN	NAG 5 10221	392
99	STEVENS INST OF TECH	D D DETROYE	GSFC	S THANGAM	NGT 5 40096	360
99	STEVENS INST OF TECH	L KEFFER	GSFC	S THANGAM	NGT 5 40041	360
99	TENNESSEE STATE UNIV	B J COLLINS	ARC	W A SMITH	NAG 2 6052	468
99	TENNESSEE STATE UNIV	J HARRINGTON	GSFC	W A SMITH	NCC 5 531	469
99	TENNESSEE STATE UNIV	M BOROWSKI	GRC	D ROGERS	NAG 3 2606	468
99	TENNESSEE STATE UNIV	M CAWTHON	GRC	D B ROGERS	NAG 3 2441	468
99	TENNESSEE STATE UNIV	M MATHEWS	GSFC	M BUSBY	NAG 5 10896	468
99	TENNESSEE STATE UNIV	M MATHEWS	GSFC	M BUSBY	NCC 5 511	469
99	TENNESSEE STATE UNIV	P SAKIMOTO	GSFC	M BUSBY	NCC 5 228	468
99	TENNESSEE STATE UNIV	R F LAWRENCE	GRC	D B ROGERS	NAG 3 2272	468
99	TENNESSEE STATE UNIV	R LAWRENCE	GRC	D ROGERS	NAG 3 2577	468
99	TENNESSEE TECHNOLOGICAL UNIV	C K CARRINGTON	MSFC	S CANFIELD	NAG 8 1749	469
99	TENNESSEE TECHNOLOGICAL UNIV	J P DOWDY	MSFC	J C CHAI	NAG 8 1279	469
99	TEXAS A&M UNIV	A STRAHAN	JSC	D T WARD	NAG 9 1268	483
99	TEXAS A&M UNIV	C PERSON	GSFC	C STEIDLEY	NCC 5 517	484
99	TEXAS A&M UNIV	D BARTA	JSC	M C DREW	NAG 9 1067	482
99	TEXAS A&M UNIV	D SICKOREZ	JSC	W A HYMAN	NGT 9 39	484
99	TEXAS A&M UNIV	D SICKOREZ	JSC	W A HYMAN	NGT 9 54	484
99	TEXAS A&M UNIV	J E CALOGERAS	GRC	F R BEST	NCC 3 516	483
99	TEXAS A&M UNIV	J HOWELL	MSFC	K CHANG	NAG 8 1618	482
99	TEXAS A&M UNIV	K W LASSMAN	GRC	G SERA	NAG 9 00100	483
99	TEXAS A&M UNIV	M MEYER	GSFC	M C KENNICUT	NAG 5 9485	481
99	TEXAS A&M UNIV	M WEI	GSFC	D COLLINS	NAG 5 10549	481
99	TEXAS A&M UNIV	M WEI	GSFC	P CHANG	NGT 5 30417	484
99	TEXAS A&M UNIV	P MOUNTJPOY	HQ	S BEDNARZ	NCC 5 359	484
99	TEXAS A&M UNIV-CORPUS CHRISTI	N KHAZENIE	GSFC	G BLOUNT	NAG 5 9196	484
99	TEXAS COLLEGE	C PERSON	GSFC	M NAMBOODIRI	NAG 5 11002	485
99	TEXAS COLLEGE	C PERSON	GSFC	T NAMBOODIRI	NAG 5 8934	485
99	TEXAS TECH UNIV	J BREDEKAMP	GSFC	D COOKE	NAG 5 9505	485
99	THE AMERICAN UNIV	D DETROYE	GSFC	R BERENDZEN	NGT 5 40068	156
99	THE CATHOLIC UNIV OF AMERICA	J BOYCE	GSFC	D CRIDER	NAG 5 11225	160
99	THE CATHOLIC UNIV OF AMERICA	L PURVES	GSFC	D NGUYEN	NAG 5 8357	157
99	THE CATHOLIC UNIV OF AMERICA	P CRANE	GSFC	S KRAEMER	NAG 5 10500	159
99	THE CATHOLIC UNIV OF AMERICA	R CROUCH	GSFC	R D PARASURAMAN	NAG 5 8761	158
99	THE CATHOLIC UNIV OF AMERICA	W J WAGNER	GSFC	N GOPALSWAMY	NAG 5 10837	159
99	THE SCRIPPS REASERCH INST	M MEYER	HQ	G JOYCE	NAG 5 9386	67
99	THE UNIV OF CENTRAL FLORIDA	C BLACK	KSC	R HOSLER	NAG10 299	170
99	THE UNIV OF CENTRAL FLORIDA	D DETROYE	GSFC	S DURRANCE	NGT 5 40069	170
99	THE UNIV OF CENTRAL FLORIDA	D DETROYE	GSFC	S DURRANCE	NGT 5 40071	170

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	THE UNIV OF CENTRAL FLORIDA	D DETROYE	GSFC	S DURRANCE	NGT 5 40107	171
99	THE UNIV OF CENTRAL FLORIDA	J P GORDON	KSC	D HOSIER	NAG10 280	170
99	TUFTS UNIV	P E HUNTER	GSFC	K R LANG	NAG 5 10350	301
99	TUFTS UNIV	R E GABRYS	GSFC	C ROGERS	NCC 5 434	301
99	TUFTS UNIV	W J WAGNER	GSFC	K R LANG	NAG 5 9725	300
99	TUSKEGEE UNIV	B ST. CYR	SSC	E SHEPPARD	NAG13 50	5
99	TUSKEGEE UNIV	B WHITE	HQ	N O EGIEBOR	NCC 5 346	5
99	TUSKEGEE UNIV	M MATHEWS	GSFC	R D PACE	NAG 5 10535	5
99	TUSKEGEE UNIV	R MCKINNEY	KSC	C DAVIS	NAG10 256	5
99	U OF MD CTR FOR ENVI SCI-CAMBRIDGE	E LINDSTROM	GSFC	L HARDING	NAG 5 11302	255
99	UNIV HOUSTON-HOUSTON	F J MONTEGANI	GRC	V BALAKOTIAH	NGT 3 52356	488
99	UNIV HOUSTON-HOUSTON	H L DAVIS	JSC	A V VAILLAS	NCC 9 70	487
99	UNIV HOUSTON-HOUSTON	L ARMENDARIZ	JSC	T MINDIOLA	NAG 9 1055	487
99	UNIV HOUSTON-HOUSTON	L M ARMENDARIZ	JSC	T MINDIOLA	NAG 9 1363	487
99	UNIV OF MASSACHUSETTS	K BLANDING	GSFC	L BONASSAR	NGT 5 50374	301
99	UNIV OF MED AND DENTISTRY	L SMITH	HQ	N C PARTRIDGE	NGT 5 50335	360
99	UNIV OF MINN	A NURRIDIN	HQ	HALLEY	NGT 5 50091	325
99	UNIV OF MINN	A TUYAHOV	GSFC	T BURK	NCC 5 316	325
99	UNIV OF MINN	D DETROYE	GSFC	W L GARRARD	NGT 5 40040	325
99	UNIV OF MINN	D DETROYE	GSFC	W L GARRARD	NGT 5 40086	325
99	UNIV OF MINN	E LINDSTROM	GSFC	G NIEMI	NAG 5 11262	323
99	UNIV OF MINN	G ASRAR	GSFC	G POURFOULA	NGT 5 50104	325
99	UNIV OF MINN	G ASRAR	GSFC	M DAVIS	NGT 5 30115	325
99	UNIV OF MINN	G ASRAR	GSFC	M PERSON	NGT 5 30080	325
99	UNIV OF MINN	J SHARBER	GSFC	J WYGANT	NGT 5 50312	326
99	UNIV OF MINN	K BLANDING	GSFC	E SKILLMAN	NGT 5 50346	326
99	UNIV OF MINN	K BLANDING	GSFC	S HANAY	NGT 5 50344	326
99	UNIV OF MINN	K OGILVIE	GSFC	P KELLOG	NAG 5 7202	322
99	UNIV OF MINN	L SMITH	GSFC	C CATTELL	NGT 5 50251	326
99	UNIV OF MINN	L SMITH	GSFC	J DICKEY	NGT 5 50250	326
99	UNIV OF MINN	L SMITH	GSFC	R LYSAK	NGT 5 50293	326
99	UNIV OF MINN	M WEI	GSFC	F PORTE-AGEL	NAG 5 10569	323
99	UNIV	L KEFFER	GSFC	J V TARANIK	NGT 5 40038	342
99	UNIV	M GERNHARDT	JSC	B BUTLER	NCC 9 82	490
99	UNIV OF AKRON	FJ MONTEGANI	GRC	R K EBY	NGT 3 52327	422
99	UNIV OF ALABAMA - BIRMINGHAM	B BETTS	GSFC	T WDOWIAK	NAG 5 9424	6
99	UNIV OF ALABAMA - BIRMINGHAM	L P CHAMBERS	GSFC	L J DELUCAS	NAG 5 11146	6
99	UNIV OF ALABAMA - HUNTSVILLE	D D DETROYE	GSFC	J C GREGORY	NGT 5 40077	14
99	UNIV OF ALABAMA - HUNTSVILLE	D DETROYE	GSFC	J C GREGORY	NCC 5 580	13
99	UNIV OF ALABAMA - HUNTSVILLE	D DETROYE	GSFC	J GREGORY	NCC 5 391	13
99	UNIV OF ALABAMA - HUNTSVILLE	D E DETROYE	GSFC	J GREGORY	NGT 5 40018	14
99	UNIV OF ALABAMA - HUNTSVILLE	G HULLETT-SMITH	MSFC	S J GRAVES	NAS 8 00180	12
99	UNIV OF ALABAMA - HUNTSVILLE	J F DOWDY	MSFC	G R KARR	NGT 8 52874	14
99	UNIV OF ALABAMA - HUNTSVILLE	J F SPANN	GSFC	D F SMART	NAG 5 10943	11
99	UNIV OF ALABAMA - HUNTSVILLE	J R PRUITT	MSFC	G KARR	NAG 8 1786	12
99	UNIV OF ALABAMA - HUNTSVILLE	J RAKOCZY	MSFC	B PETERS	NAS 8 00118	12
99	UNIV OF ALABAMA - HUNTSVILLE	J SHARBER	GSFC	N SINGH	NAG 5 9397	10
99	UNIV OF ALABAMA - HUNTSVILLE	L KEFFER	GSFC	J C GREGORY	NCC 5 165	13
99	UNIV OF ALABAMA - HUNTSVILLE	M WATSON	MSFC	Y TAKAHASHI	NAS 8 98226	13
99	UNIV OF ALABAMA - HUNTSVILLE	N PELLIS	JSC	K CHITTUR	NAG 8 1355	11
99	UNIV OF ALABAMA - HUNTSVILLE	N QQURASHI	JSC	J RUPERT	NCC 9 109	14
99	UNIV OF ALABAMA - HUNTSVILLE	P DECOLA	GSFC	M NEWCHURCH	NAG 5 11248	11
99	UNIV OF ALABAMA - HUNTSVILLE	P E HUNTER	GSFC	G A GERMANY	NAG 5 10743	10
99	UNIV OF ALABAMA - HUNTSVILLE	S COLEMAN	MSFC	L R GREENWOOD	NCC 8 200	13
99	UNIV OF ALABAMA - HUNTSVILLE	W WAGNER	GSFC	M A SHEA	NAG 5 10785	11
99	UNIV OF ALABAMA - UNIV	D V GALLAWAY	HQ	M FREEMAN	NAG 5 4346	15
99	UNIV OF ALABAMA - UNIV	J HARRINGTON	GSFC	M FREEMAN	NAG 5 9855	15
99	UNIV OF ALABAMA - UNIV	J R PRUITT	MSFC	L M FREEMAN	NAG 8 1724	16
99	UNIV OF ALABAMA - UNIV	M PHELPS	GSFC	L FREEMAN	NAG 5 9388	15
99	UNIV OF ALASKA - FAIRBANKS	D DETROYE	GSFC	J G HAWKINS	NGT 5 40014	19
99	UNIV OF ALASKA - FAIRBANKS	D DETROYE	GSFC	J G HAWKINS	NGT 5 40100	19
99	UNIV OF ALASKA - FAIRBANKS	J BOYCE	GSFC	K YOSHIKAWA	NAG 5 11213	18
99	UNIV OF ALASKA - FAIRBANKS	J SHARBER	GSFC	A OTTO	NAG 5 9457	18
99	UNIV OF ALASKA - FAIRBANKS	M MELLOTT	GSFC	M CONDE	NAG 5 10069	18
99	UNIV OF ALASKA - FAIRBANKS	M MEYER	GSFC	G PLUMLEY	NAG 5 9513	18
99	UNIV OF ALASKA - FAIRBANKS	M WEI	GSFC	J FREYMUeller	NGT 5 30381	19

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	UNIV OF ALASKA - FAIRBANKS	W ABDALATI	GSFC	C LINGLE	NAG 5 11226	18
99	UNIV OF ALBUQUERQUE	LM ARMENDARIZ	JSC	R A LAFARGE	NAG 9 1312	364
99	UNIV OF ARIZONA	A NURRIDIN	GSFC	M LLOYD-HART	NGT 5 50046	40
99	UNIV OF ARIZONA	B BETTS	GSFC	T SWINDLE	NAG 5 9198	32
99	UNIV OF ARIZONA	B BETTS	GSFC	W BOYNTON	NAG 5 9425	32
99	UNIV OF ARIZONA	C HILL	SSC	R DAVIS	NAG13 99005	38
99	UNIV OF ARIZONA	D BOGAN	GSFC	D HUNTEN	NAG 5 8970	31
99	UNIV OF ARIZONA	D BOGAN	GSFC	E P TURTLE	NAG 5 8937	31
99	UNIV OF ARIZONA	D BOGAN	GSFC	F HERBERT	NAG 5 8952	31
99	UNIV OF ARIZONA	D BOGAN	GSFC	R GREENBERG	NAG 5 8941	31
99	UNIV OF ARIZONA	D D DETROYE	GSFC	M J DRAKE	NGT 5 40082	40
99	UNIV OF ARIZONA	D DETROYE	GSFC	E H LEVY	NGT 5 40026	39
99	UNIV OF ARIZONA	D SENSKE	GSFC	P GEISSLER	NAG 5 10162	33
99	UNIV OF ARIZONA	G STRINGFELLOW	GSFC	L ZIURYS	NAG 5 10333	34
99	UNIV OF ARIZONA	G STRINGFELLOW	GSFC	P BERNATH	NAG 5 10205	33
99	UNIV OF ARIZONA	J BOYCE	GSFC	M J DRAKE	NAG 5 9435	32
99	UNIV OF ARIZONA	J BREDEKAMP	GSFC	E MERENYI	NAG 5 9405	32
99	UNIV OF ARIZONA	J BREDEKAMP	GSFC	J HOLBERG	NAG 5 9408	32
99	UNIV OF ARIZONA	K BLANDING	GSFC	C WALKER	NGT 5 50246	40
99	UNIV OF ARIZONA	L SMITH	GSFC	A BURROWS	NGT 5 50300	40
99	UNIV OF ARIZONA	L SMITH	GSFC	D DELUCA	NGT 5 50303	40
99	UNIV OF ARIZONA	L SMITH	GSFC	D MCCARTHY	NGT 5 50283	40
99	UNIV OF ARIZONA	L SMITH	GSFC	L ZIURYS	NGT 5 50282	40
99	UNIV OF ARIZONA	L SMITH	GSFC	R GREENBERG	NGT 5 50289	40
99	UNIV OF ARIZONA	L SMITH	GSFC	U FINK	NGT 5 50243	40
99	UNIV OF ARIZONA	M JASINSKI	GSFC	S SOROOSHIAN	NAG 5 11044	35
99	UNIV OF ARIZONA	M WEI	GSFC	R C BALES	NGT 5 30386	39
99	UNIV OF ARIZONA	P HUNTER	GSFC	J A LARSEN	NAG 5 8095	29
99	UNIV OF ARIZONA	T MORGAN	GSFC	S LARSEN	NAG 5 10853	35
99	UNIV OF ARIZONA	T MORGAN	GSFC	S LARSON	NAG 5 9465	32
99	UNIV OF ARIZONA	W ABDALATI	GSFC	R BALES	NAG 5 10264	33
99	UNIV OF ARIZONA	W ABDALATI	GSFC	V BAKER	NAG 5 10123	33
99	UNIV OF ARIZONA	W J WAGNER	GSFC	G M WEBB	NAG 5 10974	35
99	UNIV OF ARIZONA	W J WAGNER	GSFC	J KOTA	NAG 5 10884	35
99	UNIV OF ARIZONA	W J WAGNER	GSFC	J R JOKIPII	NAG 5 10990	35
99	UNIV OF ARKANSAS - LITTLE ROCK	D DETROYE	GSFC	K HUDSON	NCC 5 404	41
99	UNIV OF ARKANSAS - LITTLE ROCK	D DETROYE	GSFC	K HUDSON	NCC 5 597	41
99	UNIV OF ARKANSAS - LITTLE ROCK	D DETROYE	GSFC	M HUDSON	NGT 5 40119	41
99	UNIV OF ARKANSAS - LITTLE ROCK	L KEFFER	GSFC	G M NORTHROP	NGT 5 40063	41
99	UNIV OF ARK MAIN CAMP - FAYETTEVILLE	M J LEON	ARC	T KRAL	NCC 2 5360	41
99	UNIV OF CALIFORNIA - BERKELEY	A NURRIDIN	GSFC	E HALLER	NGT 5 50048	78
99	UNIV OF CALIFORNIA - BERKELEY	A NURRIDIN	HQ	P PRICE	NGT 5 50157	78
99	UNIV OF CALIFORNIA - BERKELEY	D WICKLAND	GSFC	I FUNG	NAG 5 11200	75
99	UNIV OF CALIFORNIA - BERKELEY	F S HERRERO	GSFC	D SIEGMUND	NAG 5 7615	71
99	UNIV OF CALIFORNIA - BERKELEY	G ASRAR	GSFC	M FIRESTONE	NGT 5 30071	78
99	UNIV OF CALIFORNIA - BERKELEY	J SHARBER	GSFC	L MUSCHIETTI	NAG 5 10300	74
99	UNIV OF CALIFORNIA - BERKELEY	J SPANN	GSFC	T PHAN	NAG 5 10471	74
99	UNIV OF CALIFORNIA - BERKELEY	K BLANDING	GSFC	J TAYLOR	NGT 5 50342	79
99	UNIV OF CALIFORNIA - BERKELEY	K BLANDING	GSFC	R LIN	NGT 5 50338	79
99	UNIV OF CALIFORNIA - BERKELEY	K BLANDING	GSFC	S FREEDMAN	NGT 5 50365	79
99	UNIV OF CALIFORNIA - BERKELEY	L SMITH	GSFC	J GRAHAM	NGT 5 50245	79
99	UNIV OF CALIFORNIA - BERKELEY	M MEYER	GSFC	R SAYKALLY	NAG 5 7457	71
99	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	D DE PAOLO	NGT 5 30380	78
99	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	J HARTE	NGT 5 30403	78
99	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	R AMUNDSON	NGT 5 30383	78
99	UNIV OF CALIFORNIA - BERKELEY	P CRANE	GSFC	D BUZASI	NAG 5 9318	73
99	UNIV OF CALIFORNIA - BERKELEY	P E HUNTER	GSFC	I HAWKINS	NAG 5 10314	74
35	UNIV OF CALIFORNIA - BERKELEY	R GRYMES	ARC	J F BANFIELD	NAG 2 1523	68
99	UNIV OF CALIFORNIA - BERKELEY	R PFAFF	GSFC	C W CARLSON	NAG 5 99242	76
99	UNIV OF CALIFORNIA - BERKELEY	W WAGNER	GSFC	J G LUHMANN	NAG 5 10925	75
99	UNIV OF CALIFORNIA - DAVIS	A NURRIDIN	HQ	C A FULLER	NGT 5 50204	83
99	UNIV OF CALIFORNIA - DAVIS	B W MEESON	GSFC	C O QUALSET	NAG 5 8586	81
99	UNIV OF CALIFORNIA - DAVIS	E LINDSTROM	GSFC	S USTIN	NAG 5 11260	81
99	UNIV OF CALIFORNIA - DAVIS	K BLANDING	GSFC	L H KELLOGG	NGT 5 50230	84
99	UNIV OF CALIFORNIA - DAVIS	L SMITH	GSFC	S CARLIP	NGT 5 50281	84
99	UNIV OF CALIFORNIA - DAVIS	M WEI	GSFC	S G USTIN-KENNEDY	NGT 5 30073	83



FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	UNIV OF CALIFORNIA - DAVIS	M WEI	GSFC	S USTIN	NGT 5 30373	83
99	UNIV OF CALIFORNIA - DAVIS	M WEI	GSFC	S USTIN	NGT 5 30411	83
99	UNIV OF CALIFORNIA - IRVINE	G ASRAR	GSFC	M PRATHER	NGT 5 30127	86
99	UNIV OF CALIFORNIA - IRVINE	G GUTMAN	GSFC	C ZENDER	NAG 5 10147	85
99	UNIV OF CALIFORNIA - IRVINE	L SMITH	GSFC	R E PURDY	NGT 5 50317	87
99	UNIV OF CALIFORNIA - IRVINE	M WEI	GSFC	S TYLER	NGT 5 30409	86
99	UNIV OF CALIFORNIA - IRVINE	P DECOLA	GSFC	M PRATHER	NAG 5 11272	85
99	UNIV OF CALIFORNIA - IRVINE	R WILKINSON	GRC	P TABOREK	NAG 3 2389	84
99	UNIV OF CALIFORNIA - LOS ANGELES	A NURRIDIN	HQ	V EDGERTON	NGT 5 50202	95
99	UNIV OF CALIFORNIA - LOS ANGELES	C W LLOYD	JSC	B	NAG 9 1252	94
99	UNIV OF CALIFORNIA - LOS ANGELES	D BOGAN	GSFC	C T RUSSELL	NAG 5 8938	91
99	UNIV OF CALIFORNIA - LOS ANGELES	D BOGAN	GSFC	R THORNE	NAG 5 9074	92
99	UNIV OF CALIFORNIA - LOS ANGELES	D J BOGAN	GSFC	G SCHUBERT	NAG 5 11210	94
99	UNIV OF CALIFORNIA - LOS ANGELES	G MADDERA	LARC	R P TURCO	NAG 1 1899	87
99	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	C WU	NAG 5 9111	92
99	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	P L PRITCHETT	NAG 5 10287	93
99	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	R WALKER	NAG 5 10282	93
99	UNIV OF CALIFORNIA - LOS ANGELES	K BLANDING	GSFC	C RUSSELLI	NGT 5 50359	95
99	UNIV OF CALIFORNIA - LOS ANGELES	L SMITH	GSFC	D K JACOBS	NGT 5 50310	95
99	UNIV OF CALIFORNIA - LOS ANGELES	M MAIDEN	GSFC	R MUNTZ	NCC 5 301	94
99	UNIV OF CALIFORNIA - LOS ANGELES	M WEI	GSFC	A ELDERING	NGT 5 30372	95
99	UNIV OF CALIFORNIA - LOS ANGELES	M WEI	GSFC	L SMITH	NAG 5 10609	93
99	UNIV OF CALIFORNIA - LOS ANGELES	S CURTIS	GSFC	M ABDALLA	NAG 5 6689	89
99	UNIV OF CALIFORNIA - LOS ANGELES	S MCGEE	HQ	P WANG	NGT 5 50220	95
99	UNIV OF CALIFORNIA - LOS ANGELES	W J WAGNER	GSFC	C T RUSSELL	NAG 5 10834	93
99	UNIV OF CALIFORNIA - SAN DIEGO	A NURRIDIN	HQ	F BERMAN	NGT 5 50131	105
99	UNIV OF CALIFORNIA - SAN DIEGO	D D DETROYE	GSFC	J ARNOLD	NGT 5 40085	105
99	UNIV OF CALIFORNIA - SAN DIEGO	J A YODER	GSFC	P NILLER	NAG 5 6375	98
99	UNIV OF CALIFORNIA - SAN DIEGO	J BREDEKAMP	GSFC	R P PUETTER	NAG 5 9506	101
99	UNIV OF CALIFORNIA - SAN DIEGO	J MARRA	GSFC	B MITCHELL	NAG 5 10276	101
99	UNIV OF CALIFORNIA - SAN DIEGO	J SHARBER	GSFC	K QUEST	NAG 5 10993	102
99	UNIV OF CALIFORNIA - SAN DIEGO	K PARTINGTON	GSFC	D SANDWELL	NAG 5 10065	101
99	UNIV OF CALIFORNIA - SAN DIEGO	L KEFFER	GSFC	J A ARNOLD	NGT 5 40007	104
99	UNIV OF CALIFORNIA - SAN DIEGO	L SMITH	GSFC	G FULLER	NGT 5 50234	105
99	UNIV OF CALIFORNIA - SAN DIEGO	M MEYER	GSFC	E FURTEK	NAG 5 10669	101
99	UNIV OF CALIFORNIA - SAN DIEGO	M WEI	GSFC	D SANDWELL	NGT 5 30368	104
99	UNIV OF CALIFORNIA - SAN DIEGO	P HUNTER	GSFC	B V JACKSON	NAG 5 9423	100
99	UNIV OF CALIFORNIA - SAN DIEGO	P L MOUNTJOY	GSFC	S RIDE	NCC 5 540	104
99	UNIV OF CALIFORNIA - SAN DIEGO	P MOUNTJOY	HQ	D K RIDE	NCC 5 257	104
99	UNIV OF CALIFORNIA - SAN DIEGO	P MOUNTJOY	GSFC	S RIDE	NCC 5 585	104
99	UNIV OF CALIFORNIA - SAN DIEGO	R CROUCH	GSFC	T JUNG	NAG 5 8768	100
99	UNIV OF CALIFORNIA - SAN DIEGO	T MORGAN	GSFC	N OMIDI	NAG 5 9314	100
99	UNIV OF CALIFORNIA - SANTA BARBARA	D SPEARS	GSFC	G HOMSY	NAG 5 11249	109
99	UNIV OF CALIFORNIA - SANTA BARBARA	G ASRAR	GSFC	R SMITH	NGT 5 30063	110
99	UNIV OF CALIFORNIA - SANTA BARBARA	J MARRA	GSFC	N NELSON	NAG 5 10146	108
99	UNIV OF CALIFORNIA - SANTA BARBARA	L SMITH	GSFC	J RUHL	NGT 5 50269	111
99	UNIV OF CALIFORNIA - SANTA BARBARA	M MAIDEN	GSFC	J FREW	NCC 5 302	110
99	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	D ROBERTS	NGT 5 30400	111
99	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	D SIEGEL	NGT 5 30406	111
99	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	N MAHOWALD	NGT 5 30413	111
99	UNIV OF CALIFORNIA - SANTA CRUZ	D J BOGAN	GSFC	G A GLATZMAIER	NAG 5 11220	113
99	UNIV OF CALIFORNIA - SANTA CRUZ	G ASRAR	GSFC	D SILVER	NGT 5 30074	114
99	UNIV OF CALIFORNIA - SANTA CRUZ	G ASRAR	GSFC	G VALLIS	NGT 5 90077	114
99	UNIV OF CALIFORNIA - SANTA CRUZ	M WEI	GSFC	D POTTS	NGT 5 30415	114
99	UNIV OF CALIFORNIA - SANTA CRUZ	S . PARKHUST	ARC	D L STANSBURY	NCC 2 1037	113
99	UNIV OF CHICAGO	J BOYCE	GSFC	A M DAVIS	NAG 5 9510	206
99	UNIV OF CHICAGO	J BOYCE	GSFC	M HUMAYUN	NAG 5 9800	206
99	UNIV OF CHICAGO	W J WAGNER	GSFC	F CATTANEO	NAG 5 10831	207
99	UNIV OF CINCINNATI	A NURRIDIN	GSFC	P L RICHARDSON	NGT 5 50040	423
99	UNIV OF CINCINNATI	G ASRAR	GSFC	S ISLAM	NGT 5 30108	423
99	UNIV OF CINCINNATI	L SMITH	GSFC	J W PIKE	NGT 5 50265	423
99	UNIV OF COLORADO - BOULDER	B BETTS	GSFC	A L BETZ	NAG 5 9474	133
99	UNIV OF COLORADO - BOULDER	C P HOLMES	GSFC	C A BARTH	NAG 5 10106	134
99	UNIV OF COLORADO - BOULDER	D BOGAN	GSFC	K SIMMONS	NAG 5 8940	132
99	UNIV OF COLORADO - BOULDER	D D DETROYE	GSFC	E R HANSEN	NGT 5 40028	142
99	UNIV OF COLORADO - BOULDER	D D DETROYE	GSFC	E R HANSEN	NGT 5 40072	142

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	UNIV OF COLORADO - BOULDER	D SENSKÉ	GSFC	M MELLON	NAG 5 10265	135
99	UNIV OF COLORADO - BOULDER	E T SCHWARTZ	HQ	E R HANSEN	NGT 40008	140
99	UNIV OF COLORADO - BOULDER	F VILAS	JSC	A R HENDRIX	NAG 9 1209	138
99	UNIV OF COLORADO - BOULDER	G ASRAR	GSFC	J CURRY	NGT 5 30128	141
99	UNIV OF COLORADO - BOULDER	G ASRAR	HQ	J CURRY	NGT 5 30072	141
99	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	S ZHONG	NAG 5 11224	137
99	UNIV OF COLORADO - BOULDER	J F SPANN	GSFC	T FULLER-ROWELL	NAG 5 10937	136
99	UNIV OF COLORADO - BOULDER	J M BOYCE	GSFC	J FORBES	NAG 5 11167	137
99	UNIV OF COLORADO - BOULDER	J SHARBER	GSFC	R ERGUN	NAG 5 9336	133
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	E ZWEIBEL	NGT 5 50350	143
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	J FORBES	NGT 5 50352	143
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	J GREEN	NGT 5 50340	143
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	M HORANYI	NGT 5 50345	143
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	R RAPPALARDO	NGT 5 50337	143
99	UNIV OF COLORADO - BOULDER	K E BLANDING	GSFC	J GREEN	NGT 5 50341	143
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	A BROWN	NGT 5 50241	142
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	C A WESSMAN	NGT 5 30180	141
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	C WESSMAN	NGT 5 50271	142
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	J E COLDWELL	NGT 5 50294	142
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	J FORBES	NGT 5 50232	142
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	J LINSKY	NGT 5 50242	142
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	L ESPOSITO	NGT 5 50273	142
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	R CANUP	NGT 5 50237	142
99	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	M CODRESCU	NAG 5 10309	135
99	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	R ERGUN	NAG 5 9353	133
99	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	S ROBERTSON	NAG 5 9443	133
99	UNIV OF COLORADO - BOULDER	M S BURRELL	GSFC	D AXELRAD	NGT 5 123	140
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	A R RAVISHANKARA	NGT 5 30076	141
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	G ASNER	NGT 5 30345	141
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	J RUNDLE	NGT 5 50102	142
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	K STEFFEN	NGT 5 30376	141
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	M A TOLBERT	NGT 5 30422	142
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	M TOLBERT	NGT 5 50106	142
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	R BARRY	NGT 5 30399	141
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	S NEREM	NGT 5 30394	141
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	T PFEFFER	NGT 5 30416	141
99	UNIV OF COLORADO - BOULDER	P CRANE	GSFC	A L BETZ	NAG 5 10213	134
99	UNIV OF COLORADO - BOULDER	P DECOLA	GSFC	O B TOON	NAG 5 11243	138
99	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	J WAHR	NAG 5 10211	134
99	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	T ARBETTER	NAG 5 10556	136
99	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	T SCAMBOS	NAG 5 10983	137
99	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	T SCAMBOS	NAG 5 11308	138
99	UNIV OF COLORADO - DENVER	M MELLOTT	GSFC	J M FORBES	NAG 5 10521	143
99	UNIV OF CONNECTICUT	C HILL	SSC	D CIVCO	NAG13 99001	145
99	UNIV OF CONNECTICUT	E SHEFFNER	GSFC	D CIVCO	NAG 5 11307	145
99	UNIV OF CONNECTICUT	M PHELPS	GSFC	D MOSS	NAG 5 10599	145
99	UNIV OF CONNECTICUT	M WEI	GSFC	E ANAGNOSTOU	NGT 5 30369	146
99	UNIV OF DELAWARE - BARTOL RES. INST	D DETROYE	GSFC	N F NESS	NGT 5 40024	151
99	UNIV OF DELAWARE - BARTOL RES. INST	D DETROYE	GSFC	N F NESS	NGT 5 40122	151
99	UNIV OF DELAWARE - BARTOL RES. INST	L SMITH	GSFC	A M LENHOFF	NGT 5 50167	151
99	UNIV OF DELAWARE	K BLANDING	GSFC	P DHUJATI	NGT 5 50367	150
99	UNIV OF DISTRICT OF COLUMBIA	C HOLLINSWORTH	GSFC	W COLEMAN	NAG 5 10855	161
99	UNIV OF DISTRICT OF COLUMBIA	L RANDOLPH	GSFC	W R COLEMAN	NAG 5 4724	161
99	UNIV OF FLORIDA	A NURRIDIN	HQ	T ANDERSON	NGT 5 50074	175
99	UNIV OF FLORIDA	B CAMPBELL	GSFC	D GUSTAFSON	NAG 5 4547	172
99	UNIV OF FLORIDA	B W MESSON	GSFC	J F DAY	NAG 5 7664	173
99	UNIV OF FLORIDA	D BOGAN	GSFC	L KOLOKOLOVA	NAG 5 8944	173
99	UNIV OF FLORIDA	D DETROYE	GSFC	W SHYY	NGT 5 40025	175
99	UNIV OF FLORIDA	L SMITH	GSFC	E A LADA	NGT 5 50233	176
99	UNIV OF FLORIDA	M MEYER	GSFC	L B GOWER	NAG 5 10670	173
99	UNIV OF FLORIDA	R KOZOR	MSFC	D TREISE	NCC 8 149	175
99	UNIV OF GEORGIA	D BOGAN	GSFC	N G ADAMS	NAG 5 8951	190
99	UNIV OF HARTFORD	D D DETROYE	GSFC	S TOWNSEND	NGT 5 40093	146
99	UNIV OF HARTFORD	D DETROYE	GSFC	S L TOWNSEND	NGT 5 40031	146
99	UNIV OF HARTFORD	D DETROYE	GSFC	S TOWNSEND	NCC 5 390	146
99	UNIV OF HAWAII AT MANOA - HONOLULU	A KEYS	MSFC	B J LABONTE	NAG 8 1798	198

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	UNIV OF HAWAII AT MANOA - HONOLULU	A NURRIDIN	GSFC	J E BARMES	NGT 5 50017	199
99	UNIV OF HAWAII AT MANOA - HONOLULU	D BOGAN	GSFC	G HANSEN	NAG 5 8983	195
99	UNIV OF HAWAII AT MANOA - HONOLULU	D D DETROYE	GSFC	G TAYLOR	NGT 5 40076	199
99	UNIV OF HAWAII AT MANOA - HONOLULU	D DETROYE	GSFC	D TAYLOR	NGT 5 40021	199
99	UNIV OF HAWAII AT MANOA - HONOLULU	D SENSKE	GSFC	F P FANALE	NAG 5 10229	197
99	UNIV OF HAWAII AT MANOA - HONOLULU	E D PAYLOR, II	GSFC	P MOUGINIS-MARK	NAG 5 10640	197
99	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	G TAYLOR	NAG 5 3782	192
99	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	K KEIL	NAG 5 11362	198
99	UNIV OF HAWAII AT MANOA - HONOLULU	J GRANT	GSFC	F P FANALE	NAG 5 8870	195
99	UNIV OF HAWAII AT MANOA - HONOLULU	J M BOYCE	GSFC	S ROWLAND	NAG 5 10909	197
99	UNIV OF HAWAII AT MANOA - HONOLULU	K E BLANDING	GSFC	D JEWITT	NGT 5 50357	199
99	UNIV OF HAWAII AT MANOA - HONOLULU	K PARTINGTON	GSFC	F AMELUNG	NAG 5 10111	196
99	UNIV OF HAWAII AT MANOA - HONOLULU	L SMITH	GSFC	C FLETCHER	NGT 5 30179	198
99	UNIV OF HAWAII AT MANOA - HONOLULU	M BALTUCK	GSFC	P J MOUGINIS-MARK	NAG 5 4395	192
99	UNIV OF HAWAII AT MANOA - HONOLULU	M MEYER	GSFC	K KEIL	NAG 5 9511	196
99	UNIV OF HAWAII AT MANOA - HONOLULU	P E HUNTER	GSFC	I SZAPUDI	NAG 5 10750	197
99	UNIV OF HAWAII AT MANOA - HONOLULU	T MORGAN	GSFC	R KUDRITZKI	NCC 5 538	198
99	UNIV OF HOUSTON - CLEAR LAKE	N G ROBERTSON	JSC	J N MACIR	NGT 9 48	490
99	UNIV OF HOUSTON - DOWNTOWN	L ARMENDARIZ	JSC	R ALO	NAG 9 1018	491
99	UNIV OF HOUSTON - DOWNTOWN	P SAKIMOTO	GSFC	P A MORRIS-SMITH	NAG 5 10149	491
99	UNIV OF IDAHO - MOSCOW	D D DETROYE	GSFC	J TEASDALE	NGT 5 40108	200
99	UNIV OF IDAHO - MOSCOW	D DETROYE	GSFC	J TEASDALE	NCC 5 577	200
99	UNIV OF IDAHO - MOSCOW	D DETROYE	HQ	R GILL	NCC 5 395	200
99	UNIV OF IDAHO - MOSCOW	D E DETROYE	GSFC	J TEASDALE	NGT 5 40056	200
99	UNIV OF IDAHO - MOSCOW	M PHELPS	GSFC	J A TEASDALE	NAG 5 10210	199
99	UNIV OF ILLINOIS - CHICAGO CIRCLE	A NURRIDIN	HQ	M CHOI	NGT 5 50155	208
99	UNIV OF ILLINOIS - CHICAGO CIRCLE	M MEYER	GSFC	P DORAN	NAG 5 9427	208
99	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	B F CHAO	GSFC	X SONG	NAG 5 8871	211
99	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D D DETROYE	GSFC	W C SOLOMON	NGT 5 40073	214
99	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D DETROYE	GSFC	W C SOLOMON	NGT 5 40030	214
99	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	K BLANDING	GSFC	R GAMMIE	NGT 5 50343	214
99	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	L SMITH	GSFC	A SCHEELINE	NGT 5 50238	214
99	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	M MELLOTT	GSFC	G R SWENSON	NAG 5 10072	212
99	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	S DAVIDSON	GSFC	C LIU	NAG 5 8781	211
99	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	S MCGEE	HQ	R K IYER	NGT 5 50228	214
99	UNIV OF IOWA	A JACKMAN	MSFC	C BECKERMANN	NCC 8 94	227
99	UNIV OF IOWA	D BOGAN	GSFC	J MENIETTI	NAG 5 8918	226
99	UNIV OF IOWA	J SHARBER	GSFC	A BHATTACHARJEE	NAG 5 10329	226
99	UNIV OF IOWA	K BLANDING	HQ	T PEEPLES	NGT 5 50377	227
99	UNIV OF KANSAS	A NURRIDIN	HQ	J HARRINGTON	NGT 5 50161	230
99	UNIV OF KANSAS	A NURRIDIN	HQ	R G PLUMB	NGT 5 50073	230
99	UNIV OF KANSAS	C HILL	SSC	E A MARTINKO	NAG13 99009	229
99	UNIV OF KANSAS	D DETROYE	GSFC	D DOWNING	NCC 5 415	229
99	UNIV OF KANSAS	D DETROYE	GSFC	D R DOWNING	NCC 5 168	229
99	UNIV OF KANSAS	D DETROYE	GSFC	D R DOWNING	NGT 5 40065	229
99	UNIV OF KANSAS	D DETROYE	GSFC	D R DOWNING	NGT 5 40121	230
99	UNIV OF KANSAS	M WEI	GSFC	S EGBERT	NGT 5 30404	229
99	UNIV OF KENTUCKY	C LEVIT	ARC	S B SINNOTT	NAG 2 1121	231
99	UNIV OF MAINE - ORONO	E LINDSTROM	GSFC	D A BYRNE	NAG 5 11132	239
99	UNIV OF MAINE - ORONO	M WEI	GSFC	G HAMILTON	NGT 5 30426	239
99	UNIV OF MAINE - ORONO	R MILLER	SSC	W SLADE	NGT13 52751	239
99	UNIV OF MARYLAND - COLLEGE PARK	C E COCKRELL	LARC	M LEWIS	NGT 1 52158	271
99	UNIV OF MARYLAND - COLLEGE PARK	C HILL	SSC	S D PRINCE	NAG13 99011	268
99	UNIV OF MARYLAND - COLLEGE PARK	D CAVALIERI	GSFC	K Y VINNIKOV	NAG 5 10746	266
99	UNIV OF MARYLAND - COLLEGE PARK	D WICKLAND	GSFC	R DUBAYAH	NAG 5 11252	267
99	UNIV OF MARYLAND - COLLEGE PARK	D WICKLAND	GSFC	S GOETZ	NAG 5 10126	265
99	UNIV OF MARYLAND - COLLEGE PARK	E J MASUOKA	GSFC	D ROY	NCC 5 449	270
99	UNIV OF MARYLAND - COLLEGE PARK	G A SOFFEN	GSFC	M GAVRILAS	NGT 5 62	271
99	UNIV OF MARYLAND - COLLEGE PARK	G GUTMAN	GSFC	D ROY	NAG 5 11251	267
99	UNIV OF MARYLAND - COLLEGE PARK	G GUTMAN	GSFC	J TOWNSHEND	NAG 5 11306	268
99	UNIV OF MARYLAND - COLLEGE PARK	J M BOYCE	GSFC	R WALKER	NAG 5 10425	265
99	UNIV OF MARYLAND - COLLEGE PARK	J SHARBER	GSFC	S SHARMA	NAG 5 10298	265
99	UNIV OF MARYLAND - COLLEGE PARK	K OBLIVIE	GSFC	G GLOECKLER	NAG 5 7111	259
99	UNIV OF MARYLAND - COLLEGE PARK	K PARTINGTON	GSFC	E KASISCHKE	NAG 5 10097	265
99	UNIV OF MARYLAND - COLLEGE PARK	M GUHATHAKURTA	GSFC	A S SHARMA	NAG 5 10585	266
99	UNIV OF MARYLAND - COLLEGE PARK	M MAIDEN	GSFC	J TOWNSENDE	NCC 5 300	270

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	UNIV OF MARYLAND - COLLEGE PARK	M PHELPS	GSFC	G L GEOFFROY	NAG 5 9228	263
99	UNIV OF MARYLAND - COLLEGE PARK	M S BURRELL	GSFC	M GAVRILAS	NAG 5 9560	263
99	UNIV OF MARYLAND - COLLEGE PARK	M WEI	GSFC	E KASISCHKE	NGT 5 30377	271
99	UNIV OF MARYLAND - COLLEGE PARK	P DE COLA	GSFC	D CONSIDINE	NAG 5 11151	267
99	UNIV OF MARYLAND - COLLEGE PARK	P DECOLA	GSFC	D ALLEN	NAG 5 11246	267
99	UNIV OF MARYLAND - COLLEGE PARK	P DECOLA	GSFC	K PICKERING	NAG 5 11276	267
99	UNIV OF MARYLAND - COLLEGE PARK	P DECOLA	GSFC	R HUDSON	NAG 5 11247	267
99	UNIV OF MARYLAND - COLLEGE PARK	W ABDALATI	GSFC	M FAHNESTOCK	NAG 5 10179	265
99	UNIV OF MARYLAND - COLLEGE PARK	W J WAGNER	GSFC	C S GOODRICH	NAG 5 10882	266
99	UNIV OF MARYLAND - COLLEGE PARK	W WAGNER	GSFC	S WHITE	NAG 5 10175	265
99	UNIV OF MARYLAND - EASTERN SHORE	D MENCHAN	GSFC	T DUBE	NAG 5 10122	272
99	UNIV OF MARYLAND - EASTERN SHORE	M STOUTSENBERGER	GSFC	G SINGH	NAG 5 9243	272
99	UNIV OF MARYLAND BALTIMORE COUNTY	D MENCHAN	GSFC	E B BAKER	NAG 5 9954	273
99	UNIV OF MARYLAND BALTIMORE COUNTY	G STRINGFELLOW	GSFC	D STEVERT	NAG 5 10206	274
99	UNIV OF MARYLAND BALTIMORE COUNTY	P DECOLA	GSFC	J REICHARDT	NAG 5 11269	275
99	UNIV OF MARYLAND BALTIMORE COUNTY	P DECOLA	GSFC	L SPARLING	NAG 5 11284	275
99	UNIV OF MARYLAND BALTIMORE COUNTY	P DECOLA	GSFC	S STRAHAN	NAG 5 11230	275
99	UNIV OF MARYLAND BALTIMORE COUNTY	R HARTLE	GSFC	R CURRAN	NCC 5 494	276
99	UNIV OF MASSACHUSETTS - AMHERST	M WEI	GSFC	D MCLAUGHLIN	NGT 5 30375	304
99	UNIV OF MASSACHUSETTS - AMHERST	M WEI	GSFC	S SEKELSKY	NGT 5 30412	304
99	UNIV OF MASSACHUSETTS-DARTHMOUTH	J MARRA	GSFC	J J BISAGNI	NAG 5 10125	304
99	UNIV OF MIAMI	M WEI	GSFC	S S CHEN	NGT 5 30425	178
99	UNIV OF MIAMI	M Y WEI	GSFC	O B BROWN	NGT 5 30222	178
99	UNIV OF MIAMI	P DECOLA	GSFC	J RODRIGUEZ	NAG 5 10725	177
99	UNIV OF MIAMI	P DECOLA	GSFC	J RODRIQUEZ	NAG 5 11277	177
99	UNIV OF MICHIGAN - ANN ARBOR	D D DETROYE	GSFC	A D GALLIMORE	NGT 5 40118	319
99	UNIV OF MICHIGAN - ANN ARBOR	J BOYCE	GSFC	M C LIEMOHN	NAG 5 11187	316
99	UNIV OF MICHIGAN - ANN ARBOR	J BREDEKAMP	GSFC	M COMBI	NAG 5 9464	314
99	UNIV OF MICHIGAN - ANN ARBOR	J BREDEKAMP	GSFC	T GOMBOSI	NAG 5 9406	314
99	UNIV OF MICHIGAN - ANN ARBOR	J SHARBER	GSFC	K KOZYRA	NAG 5 10297	315
99	UNIV OF MICHIGAN - ANN ARBOR	K BLANDING	GSFC	L FISK	NGT 5 50349	319
99	UNIV OF MICHIGAN - ANN ARBOR	L KEFFER	GSFC	R M JOHNSON	NGT 5 40062	319
99	UNIV OF MICHIGAN - ANN ARBOR	L SMITH	GSFC	L FISK	NGT 5 50255	319
99	UNIV OF MICHIGAN - ANN ARBOR	P DECOLA	GSFC	J PENNER	NAG 5 11275	316
99	UNIV OF MICHIGAN - ANN ARBOR	R HOFFMAN	GSFC	A NAGEY	NAG 5 7557	313
99	UNIV OF MICHIGAN - ANN ARBOR	W J WAGNER	GSFC	L A FINK	NAG 5 10975	316
99	UNIV OF MISSISSIPPI - UNIV	D D DETROYE	GSFC	P SUKANEK	NGT 5 40098	329
99	UNIV OF MISSISSIPPI - UNIV	D DETROYE	GSFC	P R SUKANEK	NGT 5 40032	329
99	UNIV OF MISSISSIPPI - UNIV	D DETROYE	GSFC	P SUKANEK	NCC 5 405	328
99	UNIV OF MISSISSIPPI - UNIV	D DETROYE	GSFC	P SUKANEK	NCC 5 574	329
99	UNIV OF MISSISSIPPI - UNIV	M MICK	SSC	J GABRYNOWICZ	NAG13 00036	328
99	UNIV OF MISSOURI - COLUMBIA	A NURRIDIN	HQ	M LAUGHLIN	NGT 5 50205	331
99	UNIV OF MISSOURI - COLUMBIA	B DAVIS	SSC	A K SHACKLEFORD	NGT13 52747	331
99	UNIV OF MISSOURI - COLUMBIA	M MEYER	GSFC	F SCHMIDT	NAG 5 9555	330
99	UNIV OF MISSOURI - ROLLA	D D DETROYE	GSFC	F FINIASH	NGT 5 40112	332
99	UNIV OF MISSOURI - ROLLA	L KEFFER	GSFC	B P SELBERG	NGT 5 40060	332
99	UNIV OF MONTANA	D WICKLAND	GSFC	S RUNNING	NAG 5 11256	339
99	UNIV OF MONTANA	M WEI	GSFC	S RUNNING	NGT 5 30395	339
99	UNIV OF MONTANA	M Y WEI	GSFC	R J FIELD	NGT 5 50225	339
99	UNIV OF NEBRASKA - LINCOLN	A PEEK	SSC	RUNDQUIST	NCC13 98003	341
99	UNIV OF NEBRASKA - LINCOLN	D D DETROYE	GSFC	B D BOWEN	NCC 5 169	341
99	UNIV OF NEBRASKA - LINCOLN	D L KALE	GSFC	D RUNDQUIST	NAG 5 4217	340
99	UNIV OF NEBRASKA - LINCOLN	G GUTMAN	GSFC	A GITELSON	NAG 5 11147	340
99	UNIV OF NEBRASKA - LINCOLN	M Y WEI	GSFC	M BLUM	NGT 5 30358	341
99	UNIV OF NEBRASKA - LINCOLN	R E GABRYS	GSFC	D C RUNDQUIST	NCC 5 430	341
99	UNIV OF NEBRASKA-OMAHA	D D DETROYE	GSFC	B D BOWEN	NGT 5 40104	341
99	UNIV OF NEBRASKA-OMAHA	D DETROYE	GSFC	B D BOWEN	NCC 5 572	341
99	UNIV OF NEBRASKA-OMAHA	D DETROYE	HQ	B BROWN	NCC 5 401	341
99	UNIV OF NEBRASKA-OMAHA	L KEFFER	GSFC	B D BOWEN	NGT 5 40037	341
99	UNIV OF NEVADA - LAS VEGAS	J BREDEKAMP	GSFC	S LATIFI	NAG 5 9489	342
99	UNIV OF NEVADA - RENO	D DETROYE	GSFC	J V TARANIK	NGT 5 40113	343
99	UNIV OF NEVADA - RENO	K BLANDING	GSFC	W CALVIN	NGT 5 50362	343
99	UNIV OF NEVADA SYSTEM	D DETROYE	GSFC	J TARANKI	NCC 5 397	343
99	UNIV OF NEVADA SYSTEM	D DETROYE	HQ	J V TARANIK	NCC 5 583	343
99	UNIV OF NEW HAMPSHIRE - DURHAM	D DETROYE	GSFC	D BARTLETT	NGT 5 40088	350
99	UNIV OF NEW HAMPSHIRE - DURHAM	D DETROYE	GSFC	D S BARTLETT	NGT 5 40010	350

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	UNIV OF NEW HAMPSHIRE - DURHAM	D E WICKLAND	GSFC	B MOORE	NAG 5 10135	348
99	UNIV OF NEW HAMPSHIRE - DURHAM	D WICKLAND	GSFC	S OLLINGER	NAG 5 11310	349
99	UNIV OF NEW HAMPSHIRE - DURHAM	J MARRA	GSFC	C VOROSMARTY	NAG 5 10260	348
99	UNIV OF NEW HAMPSHIRE - DURHAM	J MARRA	GSFC	J W CAMPBELL	NAG 5 11258	349
99	UNIV OF NEW HAMPSHIRE - DURHAM	M WEITH	GSFC	J E DIBB	NGT 5 30349	350
99	UNIV OF NEW HAMPSHIRE - DURHAM	W J WAGNER	GSFC	B J VASQUEZ	NAG 5 10988	349
99	UNIV OF NEW HAMPSHIRE - DURHAM	W J WAGNER	GSFC	P A ISENBERG	NAG 5 10835	348
99	UNIV OF NEW HAMPSHIRE - DURHAM	W J WAGNER	GSFC	T G FORBES	NAG 5 10977	348
99	UNIV OF NEW HAMPSHIRE - DURHAM	W WAGNER	GSFC	C FARRUGIA	NAG 5 10883	348
99	UNIV OF NEW HAMPSHIRE - DURHAM	W WAGNER	GSFC	M L MCCONNEL	NAG 5 10203	348
99	UNIV OF NEW MEXICO-ALBUQUERQUE	A TUYAHOV	GSFC	S MORAIN	NCC 5 309	366
99	UNIV OF NEW MEXICO-ALBUQUERQUE	B J COLLINS	ARC	P DORATO	NAG 2 1480	364
99	UNIV OF NEW MEXICO-ALBUQUERQUE	L ARMENDARIZ	JSC	H E NEWSOM	NAG 9 1017	366
99	UNIV OF NEW MEXICO-ALBUQUERQUE	M MATHEWS	GSFC	M JAMSHIDI	NCC 5 350	366
99	UNIV OF NEW MEXICO-ALBUQUERQUE	M WEI	GSFC	B MILNE	NGT 5 30227	366
99	UNIV OF NEW MEXICO-ALBUQUERQUE	R CROUCH	GSFC	J BRINKER	NAG 5 8821	365
99	UNIV OF NEW MEXICO-ALBUQUERQUE	W H MILLER	GSFC	G MAKI	NAG 5 7006	364
99	UNIV OF NEW ORLEANS	F SIX	MSFC	J J HEGSETH	NAG 8 1116	237
99	UNIV OF NEW ORLEANS	R MILLER	SSC	J CORBINO	NGT13 52749	238
99	UNIV OF NORTH CAROLINA - CHAPEL HILL	L SMITH	GSFC	R W MURRAY	NGT 5 50311	403
99	UNIV OF NORTH CAROLINA - CHAPEL HILL	L SMITH	GSFC	T M WHITMORE	NGT 5 30177	403
99	UNIV OF NORTH CAROLINA - CHAPEL HILL	M WEI	GSFC	J BANE	NGT 5 30389	403
99	UNIV OF NORTH CAROLINA - CHAPEL HILL	M WEI	GSFC	L BAND	NGT 5 30390	403
99	UNIV OF NORTH CAROLINA	J F DOWDY	MSFC	R D FORSYTHE	NAG 8 1314	403
99	UNIV OF NORTH DAKOTA	A TUYAHOV	GSFC	G SEIELSTAD	NCC 5 310	405
99	UNIV OF NORTH DAKOTA	C HILL	SSC	P R ZIMMERMAN	NAG13 99006	405
99	UNIV OF NORTH DAKOTA	D D DETROYE	GSFC	R ANDRES	NGT 5 40117	405
99	UNIV OF NORTH DAKOTA	D DETROYE	GSFC	C WOOD	NCC 5 399	405
99	UNIV OF NORTH DAKOTA	D DETROYE	GSFC	R ANDRES	NCC 5 582	405
99	UNIV OF NORTH DAKOTA	L KEFFER	GSFC	C A WOOD	NGT 5 40034	405
99	UNIV OF NORTH DAKOTA	N LAL	GSFC	C WOOD	NAG 5 8681	405
99	UNIV OF NORTH TEXAS HLTH SCI	A NURRIDIN	HQ	M SMITH	NGT 5 50179	491
99	UNIV OF NORTH TEXAS HLTH SCI	C W LLOYD	JSC	M L SMITH	NAG 9 1262	491
99	UNIV OF NOTRE DAME	R LAWRENCE	GRC	S JOHNSON	NAG 3 2418	221
99	UNIV OF OKLAHOMA - NORMAN	D D DETROYE	GSFC	V DUCA-SNOWDEN	NGT 5 40111	430
99	UNIV OF OKLAHOMA - NORMAN	D DETROYE	GSFC	V DUCA-SNOWDEN	NCC 5 398	430
99	UNIV OF OKLAHOMA - NORMAN	D DETROYE	GSFC	V DUCA-SNOWDEN	NCC 5 586	430
99	UNIV OF OKLAHOMA - NORMAN	J DASCH	GSFC	V DUCA-SNOWDEN	NCC 5 171	430
99	UNIV OF OKLAHOMA - NORMAN	L KEFFER	GSFC	V DUCA	NGT 5 40013	430
99	UNIV OF OREGON - EUGENE	P E HUNTER	GSFC	J SCHOMBERT	NAG 5 11300	435
99	UNIV OF PENNSYLVANIA	A NURRIDIN	HQ	D A HAMMER	NGT 5 50267	454
99	UNIV OF PENNSYLVANIA	J STANFORD	JSC	C J LAMBERTSEN	NAG 9 1265	453
99	UNIV OF PENNSYLVANIA	R CROUCH	GSFC	D N METAXAS	NAG 5 8767	452
99	UNIV OF PITTSBURGH	K BLANDING	GSFC	M DRUZDZEL	NGT 5 50252	456
99	UNIV OF PITTSBURGH	L SMITH	GSFC	B J YATES	NGT 5 50256	456
99	UNIV OF PITTSBURGH	L SMITH	GSFC	B J YATES	NGT 5 50292	456
99	UNIV OF PITTSBURGH	L SMITH	GSFC	C L COLBY	NGT 5 50318	456
99	UNIV OF PITTSBURGH	P VAUGHN	MSFC	C TALLEY	NAG 8 1360	455
99	UNIV OF PUERTO RICO - MAYAGUEZ	B WHITE	HQ	R VASQUEZ	NCC 5 340	557
99	UNIV OF PUERTO RICO - MAYAGUEZ	D DETROYE	GSFC	D G WEINER	NGT 5 40012	558
99	UNIV OF PUERTO RICO - MAYAGUEZ	D L WILLIAMS	GSFC	R FERNANDEZ-SEIN	NCC 5 518	557
99	UNIV OF PUERTO RICO - MAYAGUEZ	D WILLIAMS	GSFC	R FERNANDEZ-SEIN	NCC 5 252	557
99	UNIV OF PUERTO RICO - MAYAGUEZ	J DIGGS	KSC	B RAMIREZ	NAG10 243	557
99	UNIV OF PUERTO RICO - MAYAGUEZ	J MARRA	GSFC	J CORREDOR	NAG 5 11296	557
99	UNIV OF PUERTO RICO-RIO PIEDRAS	D DETROYE	GSFC	B R WEINER	NCC 5 407	558
99	UNIV OF PUERTO RICO-RIO PIEDRAS	D DETROYE	GSFC	B WEINER	NCC 5 595	558
99	UNIV OF PUERTO RICO-RIO PIEDRAS	D DETROYE	GSFC	W WEINER	NGT 5 40091	558
99	UNIV OF REDLANDS	M PHELPS	HQ	P DOOLITTLE	NAG 5 9570	115
99	UNIV OF REDLANDS	M V PHELPS	GSFC	J R APPLETON	NAG 5 11366	115
99	UNIV OF RHODE ISLAND	J MARRA	GSFC	B UZ	NAG 5 10554	461
99	UNIV OF RHODE ISLAND	R A GRYMES	ARC	S D	NCC 2 1275	461
99	UNIV OF ROCHESTER	K BLANDING	GSFC	M BOCKO	NGT 5 50360	394
99	UNIV OF SAN DIEGO	M PHELPS	GSFC	S LOWERY	NAG 5 10049	115
99	UNIV OF SOUTH ALABAMA	J F DOWDY	MSFC	P KULKARNI	NAG 8 1397	16
99	UNIV OF SOUTH CAROLINA-COLUMBIA	D DETROYE	GSFC	J D ODOM	NCC 5 174	466
99	UNIV OF SOUTH CAROLINA-COLUMBIA	J MARRA	GSFC	R THUNELL	NAG 5 11253	465

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	UNIV OF SOUTH CAROLINA-COLUMBIA	N SOVIK	SSC	J JENSEN	NCC13 00003	466
99	UNIV OF SOUTH FLORIDA	J MARRA	GSFC	F MULLER-KARGER	NAG 5 11254	178
99	UNIV OF SOUTH FLORIDA	J MARRA	GSFC	S ANDREFOUET	NAG 5 10908	178
99	UNIV OF SOUTH FLORIDA	M WEI	GSFC	F MULLER-KARGER	NGT 5 30414	179
99	UNIV OF SOUTH FLORIDA	M WEI	GSFC	P COBLE	NGT 5 30346	179
99	UNIV OF SOUTHERN CALIFORNIA	D SPEARS	GSFC	S SADHAL	NAG 5 11304	117
99	UNIV OF SOUTHERN CALIFORNIA	P DOTY	MSFC	P RONNEY	NAG 8 1701	118
99	UNIV OF SOUTHERN CALIFORNIA	P DOTY	MSFC	S SADHAL	NAG 8 1663	118
99	UNIV OF SOUTHERN CALIFORNIA	W J WAGNER	GSFC	E J RHODES	NAG 5 11001	117
99	UNIV OF SOUTHERN CALIFORNIA	W J WAGNER	GSFC	P K GANGOPADHAY	NAG 5 10989	117
99	UNIV OF TENNESSEE - KNOXVILLE	K BLANDING	GSFC	H Y MCSWEEN	NGT 5 50286	471
99	UNIV OF TENNESSEE - KNOXVILLE	R CROUCH	GSFC	G S SAYLER	NAG 5 8760	470
99	UNIV OF TEXAS - ARLINGTON	M WEI	GSFC	D COOK	NGT 5 30382	491
99	UNIV OF TEXAS - AUSTIN	D D DETROYE	GSFC	B D TAPLEY	NGT 5 40053	498
99	UNIV OF TEXAS - AUSTIN	D D DETROYE	GSFC	B TAPLEY	NGT 5 40083	498
99	UNIV OF TEXAS - AUSTIN	D J PEARSON	JSC	R H BISHOP	NGT 9 20	498
99	UNIV OF TEXAS - AUSTIN	D L CARTER	GSFC	P J SHELUS	NAS 5 01096	497
99	UNIV OF TEXAS - AUSTIN	H C MANDELL	JSC	B D TAPLEY	NAG 9 1060	496
99	UNIV OF TEXAS - AUSTIN	J LABRECQUE	GSFC	B D TAPLEY	NAG 5 9989	495
99	UNIV OF TEXAS - AUSTIN	J LABRECQUE	GSFC	B TAPLEY	NAG 5 6309	493
99	UNIV OF TEXAS - AUSTIN	J MCGARRY	GSFC	P J SHELUS	NAS 5 32997	497
99	UNIV OF TEXAS - AUSTIN	K BLANDING	GSFC	C OCAMPO	NGT 5 50361	498
99	UNIV OF TEXAS - AUSTIN	K BLANDING	GSFC	M CRAWFORD	NGT 5 50239	498
99	UNIV OF TEXAS - AUSTIN	K BLANDING	GSFC	S ROUX	NGT 5 50371	498
99	UNIV OF TEXAS - AUSTIN	L SMITH	GSFC	G J HILL	NGT 5 50301	498
99	UNIV OF TEXAS - AUSTIN	P CRANE	GSFC	P J SHELUS	NAG 5 10195	495
99	UNIV OF TEXAS - AUSTIN	T MORGAN	GSFC	E BARKER	NAG 5 10183	495
99	UNIV OF TEXAS - DALLAS	J BREDEKAMP	GSFC	M HAIRSTON	NAG 5 9297	498
99	UNIV OF TEXAS - DALLAS	M E MELLOTT	GSFC	R A HEELIS	NGT 5 50354	499
99	UNIV OF TEXAS - DALLAS	M MELLOTT	GSFC	R HEELIS	NAG 5 10271	498
99	UNIV OF TEXAS - EL PASO	B DELIWALA	KSC	R QUINTANA	NAG10 225	500
99	UNIV OF TEXAS - EL PASO	C HOLLINGSWORTH	GSFC	S BLAKE	NCC 5 468	500
99	UNIV OF TEXAS - EL PASO	J BRADEN	DFRC	R WICKER	NAG 4 150	499
99	UNIV OF TEXAS - EL PASO	J HARRINGTON	GSFC	H L SCHULTE	NCC 5 535	500
99	UNIV OF TEXAS - EL PASO	J LAMBRECQUE	GSFC	S STARKS	NCC 5 498	500
99	UNIV OF TEXAS - EL PASO	P SAKIMOTO	GSFC	S A STARKS	NCC 5 209	500
99	UNIV OF TEXAS - EL PASO	R D EASON	GSFC	M A KOLITSKY	NCC 5 207	500
99	UNIV OF TEXAS AT BROWNSVILLE	B WHITE	GSFC	J TELESE	NCC 5 438	501
99	UNIV OF TEXAS AT BROWNSVILLE	L ARMENDARIZ	JSC	A RIVAS	NAG 9 1304	501
99	UNIV OF TEXAS AT BROWNSVILLE	L ARMENDARIZ	JSC	J GARCIA	NAG 9 1238	501
99	UNIV OF TEXAS AT BROWNSVILLE	L ARMENDARIZ	JSC	O RIVAS	NAG 9 1054	500
99	UNIV OF TEXAS AT SAN ANTONIO	B J COLLINS	ARC	A T CHRONPOULOS	NAG 2 1383	501
99	UNIV OF TEXAS AT SAN ANTONIO	M J LEON	ARC	R F SINCOVEC	NAG 2 6040	501
99	UNIV OF THE INCARNATE WORD	B WHITE	GSFC	J BEAUFORD	NCC 5 465	501
99	UNIV OF TOLEDO	R CROUCH	GSFC	B GONG	NAG 5 8785	426
99	UNIV OF UTAH	D D DETROYE	GSFC	W WESTENSKOW	NGT 5 40101	504
99	UNIV OF UTAH	D DETROYE	GSFC	D WESTENSKOW	NGT 5 40066	504
99	UNIV OF UTAH	M WEI	GSFC	E SIPZER	NGT 5 30423	504
99	UNIV OF UTAH	M WEI	GSFC	G MACE	NGT 5 30398	503
99	UNIV OF VERMONT	D DETROYE	GSFC	W D LAKIN	NCC 5 581	507
99	UNIV OF VERMONT	D DETROYE	GSFC	W LAKIN	NCC 5 394	507
99	UNIV OF VERMONT	D DETROYE	GSFC	W LAKIN	NGT 5 40110	507
99	UNIV OF VERMONT	J BOYCE	GSFC	T RUSHMER	NAG 5 9532	506
99	UNIV OF VERMONT	J DASCH	HQ	W D LAKIN	NGT 5 40045	507
99	UNIV OF VERMONT	J F DOWDY	MSFC	G MIRCHANDANI	NAG 8 1281	506
99	UNIV OF VIRGINIA	L SMITH	GSFC	M C WIENER	NGT 5 50305	528
99	UNIV OF VIRGINIA	M MEYER	GSFC	S MACKO	NAG 5 9758	525
99	UNIV OF VIRGINIA	M WEI	GSFC	H SHUGART	NGT 5 30418	527
99	UNIV OF VIRGINIA	M WEI	GSFC	J FUENTES	NGT 5 30365	527
99	UNIV OF WASHINGTON	A NURRIDIN	GSFC	G LAKE	NGT 5 50078	543
99	UNIV OF WASHINGTON	C W LLOYD	JSC	F H SHEEHAN	NAG 9 1258	540
99	UNIV OF WASHINGTON	C YUHAS	GSFC	P HOBBS	NCC 5 550	541
99	UNIV OF WASHINGTON	D D DETROYE	GSFC	J DECOSMO	NGT 5 40084	543
99	UNIV OF WASHINGTON	D HARM	JSC	D E PARKER	NCC 9 56	541
99	UNIV OF WASHINGTON	D L JAN	JSC	D STAHL	NAG 9 1271	540
99	UNIV OF WASHINGTON	G ASRAR	GSFC	D HEGG	NGT 5 30121	542

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	UNIV OF WASHINGTON	G L MADDREA	LARC	J R HOLTON	NAG 1 2193	534
99	UNIV OF WASHINGTON	J F SPANN	GSFC	M J BRITTNACHER	NAG 5 10903	540
99	UNIV OF WASHINGTON	K BLANDING	GSFC	J BARDEEN	NGT 5 50298	543
99	UNIV OF WASHINGTON	K OGILVIE	GSFC	G PARKS	NAG 5 7114	536
99	UNIV OF WASHINGTON	K PARTINGTON	GSFC	D LETTENMAIER	NAG 5 10092	539
99	UNIV OF WASHINGTON	K PARTINGTON	GSFC	P MOURAD	NAG 5 10114	539
99	UNIV OF WASHINGTON	L KEFFER	GSFC	G K PARKS	NGT 5 40017	543
99	UNIV OF WASHINGTON	L SMITH	GSFC	J DALCANTON	NGT 5 50299	543
99	UNIV OF WASHINGTON	L SMITH	GSFC	R WINGLEE	NGT 5 50285	543
99	UNIV OF WASHINGTON	M WEI	GSFC	C NEWHALL	NGT 5 98	542
99	UNIV OF WASHINGTON	M WEI	GSFC	D LETTENMAIER	NGT 5 30120	542
99	UNIV OF WASHINGTON	M WEI	GSFC	R HOUZE	NGT 5 30378	542
99	UNIV OF WASHINGTON	M WEI	GSFC	R TYLER	NAG 5 10570	539
99	UNIV OF WASHINGTON	R A GRYMES	ARC	P D WARD	NCC 2 1273	541
99	UNIV OF WASHINGTON	S DAVISON	GSFC	V VOGEL	NAG 5 8784	538
99	UNIV OF WASHINGTON	W ABDALATI	GSFC	D WINEBRENNER	NAG 5 10225	539
99	UNIV OF WASHINGTON	W ABDALATI	GSFC	R LINDSAY	NAG 5 10621	539
99	UNIV OF WEST FLORIDA	B H WHITAKER	ARC	A J CANAS	NCC 2 1036	180
99	UNIV OF WEST FLORIDA	R CROUCH	GSFC	A K RAJ	NAG 5 8782	180
99	UNIV OF WISCONSIN - GREEN BAY	D D DETROYE	GSFC	R A YINGST	NGT 5 40097	546
99	UNIV OF WISCONSIN - MADISON	A PEEK	SSC	T LILLESAND	NCC13 00004	554
99	UNIV OF WISCONSIN - MADISON	C LLYOD	KSC	G DIAK	NAG13 99008	553
99	UNIV OF WISCONSIN - MADISON	D WICKLAND	GSFC	S T GOWER	NAG 5 11242	552
99	UNIV OF WISCONSIN - MADISON	G ASRAR	GSFC	J FOLEY	NGT 5 30119	554
99	UNIV OF WISCONSIN - MADISON	G STRINGFELLOW	GSFC	P TIMBIE	NAG 5 10204	551
99	UNIV OF WISCONSIN - MADISON	J BREDEKAMP	GSFC	W T SANDERS	NAG 5 9483	551
99	UNIV OF WISCONSIN - MADISON	J MARRA	GSFC	A WINGUTH	NAG 5 11245	552
99	UNIV OF WISCONSIN - MADISON	L SMITH	GSFC	J FOLEY	NGT 5 30176	555
99	UNIV OF WISCONSIN - MADISON	L SMITH	GSFC	J S GALLAGHER	NGT 5 50295	555
99	UNIV OF WISCONSIN - MADISON	M WEI	GSFC	J FOLEY	NGT 5 30396	555
99	UNIV OF WISCONSIN - MADISON	P DECOLA	GSFC	M HITCHMAN	NAG 5 11303	552
99	UNIV OF WISCONSIN - MADISON	W W DOLCI	ARC	C M JOHNSON	NCC 2 5449	554
99	UNIV OF WISCONSIN - MADISON	Y SUD	GSFC	G WAHBA	NAG 5 10273	552
99	UNIV OF WISCONSIN - MILWAUKEE	D E DETROYE	GSFC	J W NORBURY	NGT 5 40039	555
99	UNIV OF WYOMING	D BOGAN	GSFC	R N HOWELL	NAG 5 8917	556
99	UNIV OF WYOMING	D D DETROYE	GSFC	P E JOHNSON	NGT 5 40102	556
99	UNIV OF WYOMING	D DETROYE	GSFC	P E JOHNSON	NGT 5 40008	556
99	UNIV OF WYOMING	D DETROYE	GSFC	P JOHNSON	NCC 5 414	556
99	UNIV OF WYOMING	G L MADDREA	LARC	T DESHLER	NAG 1 2164	555
99	UNIV OF WYOMING	J GRANT	GSFC	R HOWELL	NAG 5 8904	556
99	UTAH STATE UNIV	A PEEK	SSC	R D RAMSEY	NCC13 00005	505
99	UTAH STATE UNIV	D DETROYE	GSFC	D BAKER	NGT 5 40047	506
99	UTAH STATE UNIV	D WICKLAND	GSFC	M WHITE	NAG 5 11282	505
99	UTAH STATE UNIV	M MELLOTT	GSFC	B G FEJER	NAG 5 10215	504
99	VA POLYTECH INST & ST UNIV	L SMITH	GSFC	B M KLEINER	NGT 5 50260	532
99	VA POLYTECH INST & ST UNIV	L SMITH	GSFC	W HERBERT	NGT 5 50262	532
99	VANDERBILT UNIV	D D DETROYE	GSFC	A M STRAUSS	NGT 5 40074	473
99	VANDERBILT UNIV	L KEFFER	GSFC	A M STRAUSS	NGT 5 40054	473
99	VANDERBILT UNIV	P DOTY	MSFC	K A DEBELAK	NAG 8 1662	472
99	VANDERBILT UNIV	P DOTY	MSFC	R J BAYUZICK	NAG 8 1677	472
99	VIRGINIA COMMONWEALTH UNIV	J S LOGAN	JSC	R C MERRELL	NCC 9 87	533
99	VOORHEES COLLEGE	C PERSON	GSFC	C SMITH	NAG 5 9624	466
99	WASHINGTON STATE UNIV	M AVERNER	GSFC	B W POOVAIAH	NAG 5 11364	544
99	WASHINGTON STATE UNIV	M WEI	GSFC	L JAEGLE	NAG 5 10637	544
99	WASHINGTON UNIV - ST	B CAMPBELL	GSFC	D A HASKIN	NAG 5 4642	333
99	WASHINGTON UNIV - ST	D E SMITH	GSFC	R J PHILLIPS	NAG 5 4435	333
99	WASHINGTON UNIV - ST	D SENSKE	GSFC	B JOLLIFF	NAG 5 10227	335
99	WASHINGTON UNIV - ST	D SENSKE	GSFC	R ARVIDSON	NAG 5 10158	335
99	WASHINGTON UNIV - ST	K BLANDING	GSFC	E SHOCK	NGT 5 50348	336
99	WASHINGTON UNIV - ST	L SMITH	GSFC	M ISRAEL	NGT 5 50240	336
99	WASHINGTON UNIV - ST	P CRANE	GSFC	C M WILL	NAG 5 10186	335
99	WAYNE STATE UNIV	B WOOLFORD	JSC	L ZAMORANO	NAG 9 1183	319
99	WEST VIRGINIA STATE COLLEGE	M MATHEWS	GSFC	E V GRIFFIN	NAG 5 11103	545
99	WEST VIRGINIA STATE COLLEGE	M MATHEWS	GSFC	J MAYHUGH	NAG 5 11088	545
99	WEST VIRGINIA UNIV	D DETROYE	GSFC	M JARAIEDI	NCC 5 406	545
99	WEST VIRGINIA UNIV	D DETROYE	GSFC	M JARAIEDI	NCC 5 570	545

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
99	WEST VIRGINIA UNIV	D DETROYE	GSFC	M JARAIEDI	NGT 5 40120	545
99	WEST VIRGINIA UNIV	D OZBURN	ARC	K DAVIS	NCC 2 6043	545
99	WEST VIRGINIA UNIV	G ASRAR	GSFC	S KITE	NGT 5 50103	546
99	WEST VIRGINIA UNIV	L KEFFER	GSFC	M JARAIEDI	NGT 5 40055	545
99	WEST VIRGINIA UNIV	M MELLOTT	GSFC	M KOEPKE	NAG 5 10218	545
99	WESTERN KENTUCKY UNIV	D D DETROYE	GSFC	R HACKNEY	NGT 5 40105	233
99	WESTERN KENTUCKY UNIV	D DETROYE	GSFC	R HACKNEY	NCC 5 222	232
99	WESTERN KENTUCKY UNIV	D DETROYE	GSFC	R HACKNEY	NCC 5 396	232
99	WESTERN KENTUCKY UNIV	D DETROYE	GSFC	R HACKNEY	NCC 5 571	233
99	WESTERN KENTUCKY UNIV	L KEFFER	GSFC	R HACKNEY	NGT 5 40051	233
99	WESTERN MICHIGAN UNIV	D S KEENAN	KSC	W J HOMAN	NAG10 279	320
99	WHEELING JESUIT UNIV	N CHEEKS	GSFC	J P ALLEN	NCC 5 440	546
99	WHEELING JESUIT UNIV	S CANRIGHT	GSFC	N NAIK	NCC 5 451	546
99	WILLIAM JEWELL COLLEGE	M P BODIFORD	MSFC	P BUNTON	NAG 8 1851	336
99	WOODS HOLE OCEANOGRAPHIC INST	J MARRA	GSFC	D MCGILLICUDDY	NAG 5 11265	305
99	WORCESTER POLYTECH INST	M R BROWN	GSFC	F J LOOFT	NAG 5 8578	306
99	WORCESTER POLYTECH INST	M R BROWN	GSFC	F J LOOFT	NAG 5 9754	306
99	WORCESTER POLYTECH INST	S J BRODEUR	GSFC	F J LOOFT	NAG 5 10712	306
99	XAVIER UNIV - LOUISIANA	C PERSON	GSFC	A Z CHATTERS	NGT 5 90086	238
99	XAVIER UNIV - LOUISIANA	N SULLIVAN	SSC	R P HALE	NAG13 53	238
99	XAVIER UNIV - LOUISIANA	R TRAVIS	JSC	S O	NAG13 98006	238
99	YALE UNIV	A NURRIDIN	HQ	PROBER	NGT 5 50042	148
99	YALE UNIV	G GUTMAN	GSFC	L M CURRAN	NAG 5 11335	148
99	YALE UNIV	K BLANDING	GSFC	C E BAILYN	NGT 5 50287	149
99	YALE UNIV	M WEI	GSFC	D FISH	NGT 5 30371	148