

# **UNIVERSITY PROGRAM MANAGEMENT INFORMATION SYSTEM**

**FY 2002**

**Prepared by:  
Office of Education/N**

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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 2002

**Gary Gans, Project Manager**

**National Aeronautics and Space Administration**

**Office of Education/N**

**Washington, DC 20546-0001**

This publication was prepared by the NASA Center for Aerospace Information,  
7121 Standard Drive, Hanover, MD 21076-1320, 301-621-0390.

## FOREWORD

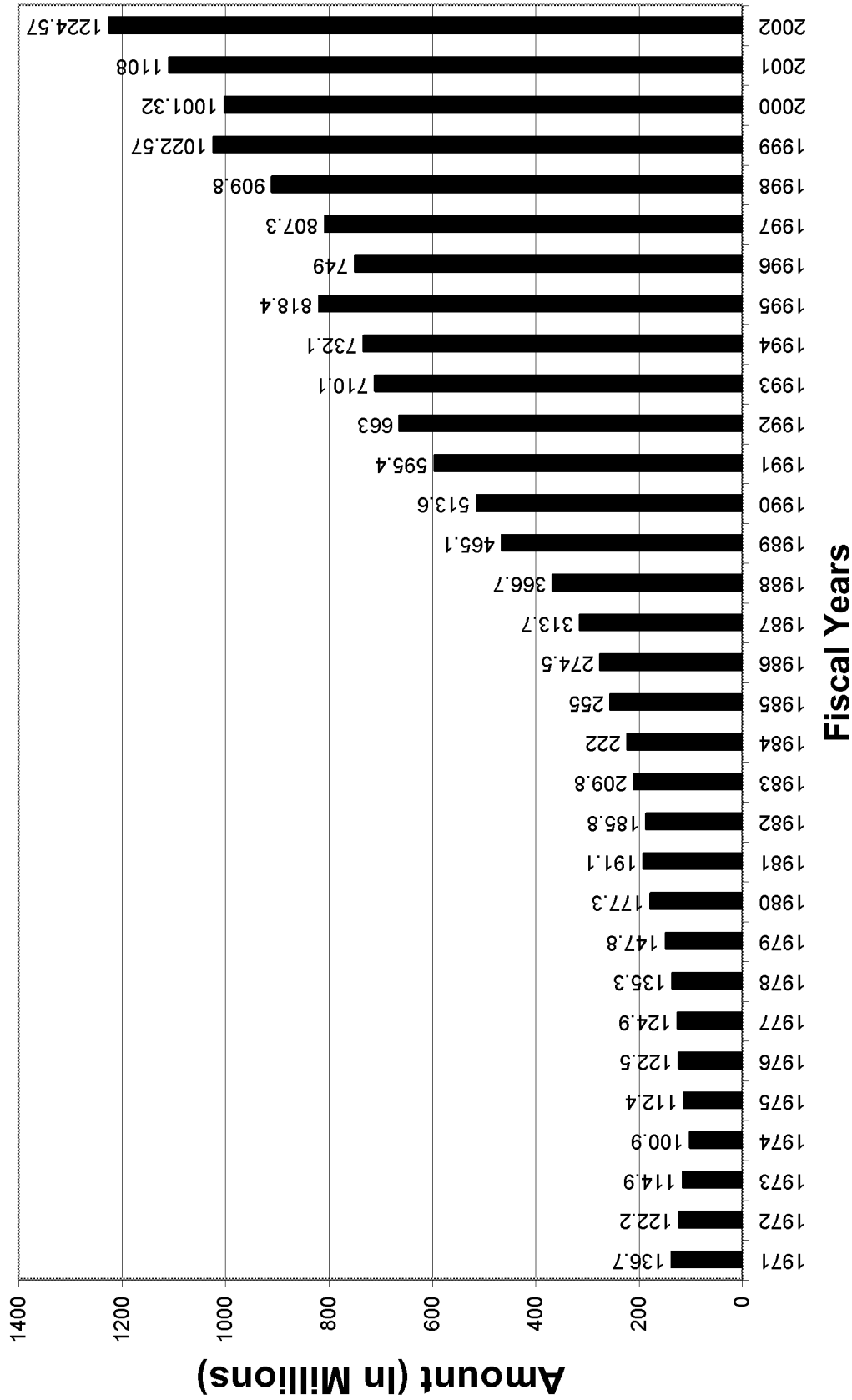
As basic policy, NASA believes that colleges and universities should be encouraged to participate in the nation's space and aeronautics program to the maximum extent practicable. Indeed, universities are considered as partners with government and industry in the nation's aerospace program. NASA's objective 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 Office of Education/N.

\* 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 1971-2002



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

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

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

**FIFTY EDUCATIONAL INSTITUTIONS  
LISTED ACCORDING TO TOTAL OBLIGATIONS – FY 2002**

<b>TOTALS*</b>		<b>OBLIGATIONS</b>	<b>PERCENT</b>
		<b>1,224,570,313</b>	<b>100.00</b>
1	Johns Hopkins University .....	167,103,681 .....	13.65
2	Stanford University .....	64,685,637 .....	5.28
3	University of Colorado - Boulder .....	49,621,199 .....	4.05
4	University of Maryland - College Park .....	42,156,713 .....	3.44
5	Baylor College of Medicine .....	26,539,222 .....	2.17
6	University of Hawaii at Manoa - Honolulu .....	24,489,155 .....	2.00
7	University of California - Berkeley .....	24,157,500 .....	1.97
8	California Institute of Technology .....	23,560,782 .....	1.92
9	Utah State University .....	22,860,619 .....	1.87
10	Massachusetts Institute of Technology .....	22,783,130 .....	1.86
11	Pennsylvania State Univ. - Univ. Park .....	20,620,356 .....	1.68
12	University of Maryland Baltimore County .....	19,996,728 .....	1.63
13	University of Alabama - Huntsville .....	18,590,296 .....	1.52
14	New Mexico State University - Las Cruces .....	18,473,905 .....	1.51
15	University of Arizona .....	15,805,740 .....	1.29
16	University of Alaska - Fairbanks .....	15,495,275 .....	1.27
17	University of California - Los Angeles .....	14,323,772 .....	1.17
18	Columbia University .....	12,258,104 .....	1.00
19	Georgia Institute of Technology .....	11,747,241 .....	0.96
20	University of California - San Diego .....	11,742,971 .....	0.96
21	Oklahoma State University .....	11,225,773 .....	0.92
22	University of Florida .....	11,156,736 .....	0.91
23	University of Texas - Austin .....	10,960,392 .....	0.90
24	Wheeling Jesuit University .....	10,931,591 .....	0.89
25	University of Michigan - Ann Arbor .....	10,457,672 .....	0.85
26	University of Wisconsin - Madison .....	9,975,159 .....	0.81
27	Texas A&M University .....	9,952,030 .....	0.81
28	University of Washington .....	9,599,369 .....	0.78
29	George Mason University .....	9,034,005 .....	0.74
30	University of New Hampshire - Durham .....	8,907,356 .....	0.73
31	San Jose State University .....	8,818,433 .....	0.72
32	Harvard University .....	8,426,647 .....	0.69
33	University of Alabama - Birmingham .....	8,023,081 .....	0.66
34	Purdue University .....	7,697,090 .....	0.63
35	Mississippi State University .....	7,335,238 .....	0.60
36	Princeton University .....	7,192,687 .....	0.59
37	Carnegie - Mellon University .....	7,123,116 .....	0.58
38	The University of Central Florida .....	6,990,535 .....	0.57
39	Cornell University .....	6,927,384 .....	0.57
40	University of California - Irvine .....	6,894,120 .....	0.56
41	Hampton University .....	6,814,571 .....	0.56
42	University of Illinois at Urbana-Champaign .....	6,170,958 .....	0.50
43	University of Miami .....	6,100,520 .....	0.50
44	Oregon State University .....	6,017,003 .....	0.49
45	University of Missouri - Columbia .....	5,958,311 .....	0.49
46	Colorado State University .....	5,905,323 .....	0.48
47	University of California - Santa Barbara .....	5,578,665 .....	0.46
48	Old Dominion University .....	5,499,005 .....	0.45
49	University of Iowa .....	5,496,691 .....	0.45
50	University of Mississippi - University .....	5,406,236 .....	0.44
	Other Colleges & Universities .....	360,982,590 .....	29.48

\* 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, 2002)**

	STATE	FY02-OBLIGATIONS (WHOLE DOLLARS)	PERCENT
<b>TOTALS*</b>		<b>1,224,369,999</b>	<b>100.00</b>
1	Maryland.....	235,489,743	19.23
2	California.....	191,972,295	15.68
3	Texas.....	76,166,780	6.22
4	Colorado.....	60,990,150	4.98
5	Massachusetts.....	46,624,264	3.81
6	New York.....	41,490,734	3.39
7	Alabama.....	40,001,896	3.27
8	Florida.....	39,642,734	3.24
9	Pennsylvania.....	35,925,203	2.93
10	Virginia.....	33,207,153	2.71
11	Ohio.....	27,465,236	2.24
12	Utah.....	25,531,479	2.09
13	New Mexico.....	24,877,785	2.03
14	Hawaii.....	24,489,155	2.00
15	Arizona.....	21,767,550	1.78
16	Georgia.....	21,667,742	1.77
17	West Virginia.....	18,013,317	1.47
18	Michigan.....	17,165,449	1.40
19	Illinois.....	15,577,631	1.27
20	Alaska.....	15,495,275	1.27
21	Mississippi.....	13,798,196	1.13
22	New Jersey.....	12,970,219	1.06
23	Oklahoma.....	12,490,625	1.02
24	North Carolina.....	12,340,301	1.01
25	Missouri.....	11,624,108	0.95
26	New Hampshire.....	11,493,538	0.94
27	Tennessee.....	11,333,709	0.93
28	Wisconsin.....	10,688,960	0.87
29	Washington.....	10,677,805	0.87
30	Montana.....	9,894,370	0.81
31	Indiana.....	9,701,088	0.79
32	Iowa.....	9,691,193	0.79
33	Louisiana.....	9,470,387	0.77
34	District of Columbia.....	8,269,362	0.68
35	Oregon.....	7,149,129	0.58
36	Idaho.....	6,685,912	0.55
37	Puerto Rico.....	5,087,657	0.42
38	Minnesota.....	5,010,546	0.41
39	North Dakota.....	4,860,160	0.40
40	Connecticut.....	4,826,222	0.39
41	Rhode Island.....	4,797,345	0.39
42	South Carolina.....	3,891,333	0.32
43	Kentucky.....	2,699,707	0.22
44	Kansas.....	2,636,269	0.22
45	Nevada.....	1,692,342	0.14
46	Nebraska.....	1,570,135	0.13
47	Delaware.....	1,311,718	0.11
48	Vermont.....	1,143,908	0.09
49	Wyoming.....	946,453	0.08
50	South Dakota.....	922,083	0.08
51	Arkansas.....	783,233	0.06
52	Maine.....	350,415	0.03

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

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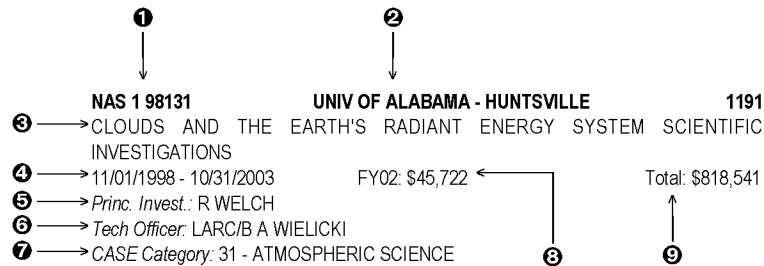
This report includes data on projects active during Fiscal Year 2002.

Alabama .....	1	Nebraska .....	335
Alaska .....	16	Nevada .....	337
Arizona .....	18	New Hampshire .....	339
Arkansas .....	39	New Jersey .....	346
California .....	40	New Mexico .....	356
Colorado .....	117	New York .....	363
Connecticut .....	143	North Carolina .....	388
Delaware .....	148	North Dakota .....	398
District of Columbia .....	150	Ohio .....	399
Florida .....	159	Oklahoma .....	423
Georgia .....	177	Oregon .....	426
Hawaii .....	189	Pennsylvania .....	430
Idaho .....	197	Rhode Island .....	451
Illinois .....	198	South Carolina .....	456
Indiana .....	212	South Dakota .....	460
Iowa .....	220	Tennessee .....	461
Kansas .....	225	Texas .....	468
Kentucky .....	228	Utah .....	495
Louisiana .....	230	Vermont .....	501
Maine .....	235	Virginia .....	501
Maryland .....	236	Washington .....	526
Massachusetts .....	274	West Virginia .....	537
Michigan .....	303	Wisconsin .....	539
Minnesota .....	317	Wyoming .....	547
Mississippi .....	322	Commonwealth of Puerto Rico .....	548
Missouri .....	325	Foreign Countries .....	550
Montana .....	332		
Appendix/Cross Index by Field of Science and Engineering .....			553

# 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.

For additional information please visit the NASA Education website at: <http://education.nasa.gov/>.

Mr. Gary Gans Code N <b>NASA Headquarters</b> Office of Education Washington, DC 20546 Phone: 202-358-1110	HQ	Ms. Linda Rodgers University Programs Administrator Mail Stop 180-109 <b>NASA Jet Propulsion Laboratory</b> Pasadena, CA 91109-8099 Phone: 818-354-3274 Fax: 818-393-4977 Email: linda.rodgers@jpl.nasa.gov	JSC
Dr. Katie Blanding Mail Code: N <b>NASA Headquarters</b> Washington, DC 20546 Phone: 202-358-0402 Fax: 202-358-3048 Email: kblandin@hq.nasa.gov	HQ	Dr. Donn G. Sickorez Mail Stop AH2 <b>Lyndon B. Johnson Space Center</b> Houston, TX 77058 Phone: (281) 483-4724 FAX: (281) 483-9192 Email: donn.g.sickorez1@jsc.nasa.gov	JSC
Brenda Collins University Affairs Specialist <b>NASA Ames Research Center</b> Mail Stop is 204-14 Moffett Field, CA 94035 Phone: 650-604-3540 Fax: 650-604-0978 Email: bcollins@mail.arc.nasa.gov	ARC	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 Email: gregg.buckingham-1@ksc.nasa.gov	KSC
Dr. Kajal K. Gupta <b>NASA Dryden Flight Research Center</b> P.O. Box 273, Mail Stop D2701 Edwards, CA 93523-0273 Phone: (661) 276-3710 FAX: (661) 276-3744 Email: kajal.gupta@dfrc.nasa.gov	DFRC	Mr. Roger A. Hathaway Mail Stop 400 <b>Langley Research Center</b> Hampton, VA 23681-2199 Phone: (757) 864-3312 FAX: (757) 864-8835 Email: r.a.hathaway@larc.nasa.gov	LARC
Dr. Francis J. Montegani Mail Stop 49-5 <b>NASA Glenn Research Center</b> Cleveland, OH 44135 Phone: (216) 433-2956 FAX: (216) 433-3687 Email: fjm@grc.nasa.gov	GRC	Dr. Shelia Nash-Stevenson <b>George C. Marshall Space Flight Center</b> Mail Stop CD60 MSFC, AL 35812 Phone: (256) 544 - 3453 FAX: (256) 544 - 8899 Email: shelia.nash-stevenson@msfc.nasa.gov	MSFC
Dr. Richard Fahey (Acting) University Affairs Officer Code 160 <b>NASA Goddard Space Flight Center</b> Greenbelt, MD 20771-0001 Phone: 301-286-9877 Fax: 301-286-1610 Email: fahey@stars.gsfc.nasa.gov	GSFC	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 Email: 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**

<b>NAG 2 1130</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1000</b>			
IRON-ION INDUCED LOW DOSE MUTAGENESIS					
06/11/1997 - 06/30/2002	FY02: \$0	Total: \$359,883			
<i>Prin. Invest.:</i> P G KALE					
<i>Tech. Officer:</i> ARC/A CARDENAS, ARC/P X CALLAHAN					
<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER					
<b>NAG 2 1175</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1001</b>			
NEURAL NETWORK ANALYSIS OF LEAF MULTISPECTRAL REFLECTANCE FOR DETECTION & DISCRIMINATION OF .....					
02/03/1998 - 04/30/2002	FY02: \$0	Total: \$299,752			
<i>Prin. Invest.:</i> C A BEYL					
<i>Tech. Officer:</i> ARC/M H KLISS, ARC/G S LEE					
<i>CASE Category:</i> 54 - ENVIRONMENTAL BIOLOGY					
<b>NAG 2 1527</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1002</b>			
GENETIC EFFECTS OF NEUTRON RADIATION IN DROSOPHILA					
10/11/2001 - 09/30/2003	FY02: \$26,911	Total: \$89,498			
<i>Prin. Invest.:</i> V HATZIMANIKATIS					
<i>Tech. Officer:</i> ARC/J HINES, ARC/P FUNG					
<i>CASE Category:</i> 43 - CHEMICAL ENGR					
<b>NAG 3 1956</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1003</b>			
OPTICAL SENSORS BASED ON SINGLE ARM THIN FILM WAVE GUIDE INTERFEROMETER					
08/19/1996 - 10/31/2000	FY02: \$0	Total: \$258,000			
<i>Prin. Invest.:</i> P VENKATESWARLY, S S SARKISOV					
<i>Tech. Officer:</i> GRC/G ADAWOVSKY					
<i>CASE Category:</i> 13 - PHYSICS					
<b>NAG 3 2302</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1004</b>			
DEVELOPMENT OF IMPROVED HIGH TEMPERATURE SILICON CARBIDE SENSORS					
12/13/1999 - 11/02/2002	FY02: \$0	Total: \$199,136			
<i>Prin. Invest.:</i> D I LA, M A GEORGE					
<i>Tech. Officer:</i> GRC/D J LARKIN, GRC/R LAWRENCE					
<i>CASE Category:</i> 45 - ELECTRICAL ENGR					
<b>NAG 5 9885</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1005</b>			
STUDENT REFLECTION GPS EXPERIMENT					
08/24/2000 - 02/14/2002	FY02: \$0	Total: \$100,000			
<i>Prin. Invest.:</i> A MANU					
<i>Tech. Officer:</i> GSFC/C PERSON					
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER					
<b>NAG 5 10202</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1006</b>			
SPACE SCIENCE EDUCATION & THE SUN-EARTH CONNECTION					
12/22/2000 - 12/31/2003	FY02: \$0	Total: \$225,000			
<i>Prin. Invest.:</i> A TAN					
<i>Tech. Officer:</i> GSFC/P SAKIMOTO					
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE					
<b>NAG 5 10721</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1007</b>			
CENTER FOR HYDROLOGY, SOIL CLIMATOLOGY, AND REMOTE SENSING (HSCARS): CONTINUATION OF A GROUP 2 MINOR					
04/20/2001 - 04/14/2006	FY02: \$0	Total: \$759,171			
<i>Prin. Invest.:</i> T COLEMAN					
<i>Tech. Officer:</i> GSFC/M WEI					
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER					
<b>NAG 5 11752</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1008</b>			
THE 16TH NATIONAL CONFERENCE OF THE BLACK PHYSICS STUDENTS (NCBPS) NATIONAL SOCIETY OF BLACK PH					
02/20/2002 - 02/28/2003	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> R B LAL					
<i>Tech. Officer:</i> GSFC/D MENCHAN					
<i>CASE Category:</i> 13 - PHYSICS					
<b>NAG 5 12028</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1009</b>			
CHARACTERIZING ELECTRO-OPTICAL PROPERTIES					
04/24/2002 - 04/30/2005	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> M EDWARDS					
<i>Tech. Officer:</i> GSFC/H A ABDELDAYEM					
<i>CASE Category:</i> 13 - PHYSICS					
<b>NAG 5 12524</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1010</b>			
R&D REQUIRED TO PROVIDE ESSENTIAL INPUTS TO SUPPORT DEVELOPMENT OF GUIDANCE & PRACTICES FOR CE					
09/19/2002 - 09/14/2003	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> E E MOYERS					
<i>Tech. Officer:</i> GSFC/K MCGILL					
<i>CASE Category:</i> 22 - COMPUTER SCIENCE					
<b>NAG 8 1390</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1011</b>			
R/S "BULK AND THIN FILM ORGANIC NONLINEAR OPTICAL CRYSTALS FOR DEVICES AND MICROGRAVITY PROCESSING"					
07/23/1997 - 07/22/2001	FY02: -\$43	Total: \$199,957			
<i>Prin. Invest.:</i> M D AGGARWAL					
<i>Tech. Officer:</i> MSFC/D FRAZIER, MSFC/W J LOVE					
<i>CASE Category:</i> 13 - PHYSICS					
<b>NAG 8 1497</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1012</b>			
COMPUTER MODEL OF THE TVC ELECTROMECHANICAL ACTUATOR					
06/10/1999 - 08/15/2002	FY02: \$0	Total: \$252,865			
<i>Prin. Invest.:</i> A BOND					
<i>Tech. Officer:</i> MSFC/J MONTENEGRO					
<i>CASE Category:</i> 45 - ELECTRICAL ENGR					
<b>NAG 8 1498</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1013</b>			
ELECTRO-OPTIC MODULATOR BASED ON ORGANIC PLANAR WAVEGUIDE INTEGRATED WITH PRISM COUPLER.					
06/24/1999 - 05/30/2002	FY02: \$0	Total: \$240,000			
<i>Prin. Invest.:</i> S SARKISOV					
<i>Tech. Officer:</i> MSFC/B PENN					
<i>CASE Category:</i> 13 - PHYSICS					
<b>NAG 8 1541</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1014</b>			
CYTOGENETIC INVESTIGATIONS INTO RADIOSENSITIVITY					
07/17/1998 - 07/16/2003	FY02: \$0	Total: \$204,804			
<i>Prin. Invest.:</i> D KALE					
<i>Tech. Officer:</i> MSFC/R C RICHMOND					
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)					
<b>NAG 8 1560</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1015</b>			
MATHEMATICAL SAFETY ANALYSIS					
09/30/1999 - 09/30/2002	FY02: \$0	Total: \$199,912			
<i>Prin. Invest.:</i> M A ELSHAMY					
<i>Tech. Officer:</i> MSFC/D O FRAZIER					
<i>CASE Category:</i> 21 - MATHEMATICS					

## ALABAMA

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1614**                      **ALABAMA A&M UNIV**                      **1016**  
 RESEARCH ENTITLED: INVESTIGATION OF STRUCTURAL PROPERTIES OF  
 COMPOSITE SMART MATERIALS .  
 09/09/1999 - 12/31/2002                      FY02: \$0                      Total: \$197,216  
*Prin. Invest.:* A SHARMA  
*Tech. Officer:* MSFC/G MYERS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1620**                      **ALABAMA A&M UNIV**                      **1017**  
 FASAT REACTION SPATIAL-TEMPORAL LIGHT MODULATORS FOR OPTICAL  
 RECOGNITION AND IMAGE PROCESSING.  
 08/25/1999 - 08/30/2003                      FY02: \$99,895                      Total: \$286,287  
*Prin. Invest.:* N KUKHATAREV, T KUHTERVA  
*Tech. Officer:* MSFC/B G PENN  
*CASE Category:* 13 - PHYSICS

**NAG 8 1623**                      **ALABAMA A&M UNIV**                      **1018**  
 INNOVATIVE EXPLORATION OF SEMIORGANIC NONLINEAR OPTICAL MATE-  
 RIALS FOR OPTICAL PROCESSING APPLIC.  
 09/24/1999 - 09/23/2003                      FY02: \$0                      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**                      **1019**  
 INVESTIGATION OF MICROBIAL LIFE IN PLAR ICE AND PERMA FROST  
 08/13/1999 - 09/14/2001                      FY02: \$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**                      **1020**  
 RESEARCH ENTITLED: "HYPERSONIC NON-EQUILIBRIUM FLOWS WITH  
 LOW REYNOLDS EFFECT"  
 09/16/1999 - 05/31/2002                      FY02: \$0                      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**                      **1021**  
 HIGH SCHOOL/HIGH-TECH CAREER DEVELOPMENT PROGRAM IN MATH-  
 EMATICS, SCIENCE ENGINEERING, ADN TECH.  
 09/30/1999 - 09/29/2002                      FY02: \$0                      Total: \$195,360  
*Prin. Invest.:* B CADY  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 21 - MATHEMATICS

**NAG 8 1643**                      **ALABAMA A&M UNIV**                      **1022**  
 ENHANCEMENT OF STUDENTS IN SCIENCE, ENGINEERING, AND MATH-  
 EMATICS.  
 09/27/1999 - 03/26/2002                      FY02: \$0                      Total: \$195,592  
*Prin. Invest.:* E TEMPLE  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 21 - MATHEMATICS

**NAG 8 1655**                      **ALABAMA A&M UNIV**                      **1023**  
 PRODUCTION OF ULTRA-LIGHT MIRRORS  
 03/20/2000 - 03/19/2001                      FY02: \$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**                      **1024**  
 COMPUTATIONAL ANALYSIS OF ION TRAJECTORY IN PULSA MAGNETIC  
 FLUX COMPRESSION REACTION  
 06/07/2001 - 06/30/2002                      FY02: \$0                      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**                      **1025**  
 RESEARCH, "NUMERICAL PREDUCATION OF DRAG OF AJAX TYPE VE-  
 HICLES  
 05/17/2001 - 05/15/2004                      FY02: \$0                      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**                      **1026**  
 RESEARCH, "WEAKLY IONIZED GAS CHARACTERISTICS AND EFFECT ON  
 THE SHOCK WAVE STRUCTURE.  
 05/02/2001 - 04/15/2004                      FY02: \$0                      Total: \$95,000  
*Prin. Invest.:* K X HO  
*Tech. Officer:* MSFC/A CHOW  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1861**                      **ALABAMA A&M UNIV**                      **1027**  
 DIRECTIONALLY SENSITIVE SILICON RADIATION SENSOR  
 05/20/2002 - 05/19/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K B COOK  
*Tech. Officer:* MSFC/W T POWERS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1095**                      **ALABAMA A&M UNIV**                      **1028**  
 MICROBIAL VIABILITY AND BIOCIDES EFFICIENCY STUDIES FOR THE INTER  
 SPACE STATION  
 03/31/1999 - 04/01/2003                      FY02: \$0                      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**                      **1029**  
 MISSION PLANNING AND RISK MANAGEMENT  
 04/06/1998 - 05/15/2002                      FY02: \$0                      Total: \$292,002  
*Prin. Invest.:* M ELSHAMY  
*Tech. Officer:* KSC/R TILLEY  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG10 324**                      **ALABAMA A&M UNIV**                      **1030**  
 STUDENT PREPARATION AND PARTICIPATION IN INTERNSHI PS FOR  
 APPLIED STATISTICIANS  
 09/03/2002 - 08/27/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E TEMPLE  
*Tech. Officer:* KSC/G BUCKINGHAM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 736**                      **ALABAMA A&M UNIV**                      **1031**  
 ALL OPTICAL MICRO MOTORS BASED ON MOVING GRATING IN PHOTO  
 SENSITIVE MEDIA  
 09/30/1999 - 09/30/2002                      FY02: \$0                      Total: \$187,128  
*Prin. Invest.:* D CURLEY  
*Tech. Officer:* GRC/G ADAMOVSKY  
*CASE Category:* 13 - PHYSICS

## NASA'S UNIVERSITY PROGRAM

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<b>NCC 8 140</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1032</b>	<b>NAG 5 8081</b>	<b>AUBURN UNIV</b>	<b>1040</b>
R/S "CENTER FOR HYDROLOGY, SOIL CLIMATOLOGY AND REMOTE SENSING (HSCARS)"			MAGNETIC RECONNECTION AND PARTICLE PRECIPITATION A CROSS THE MAGNETOPAUSE		
07/21/1997 - 12/31/2000	FY02: \$0	Total: \$3,853,109	01/21/1999 - 02/28/2003	FY02: \$0	Total: \$169,914
<i>Prin. Invest.:</i> T L COLEMAN			<i>Prin. Invest.:</i> D LIN		
<i>Tech. Officer:</i> MSFC/R ARNOLD			<i>Tech. Officer:</i> GSFC/D EVANS		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NCC 8 211</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1033</b>	<b>NAG 5 11121</b>	<b>AUBURN UNIV</b>	<b>1041</b>
STUDEN LAUNCH INITIATIVE			RADIATION EFFECTS IN SIGE HBT BICMOS TECHNOLOGY		
03/23/2001 - 12/31/2002	FY02: \$0	Total: \$49,997	07/13/2001 - 01/31/2003	FY02: \$0	Total: \$65,000
<i>Prin. Invest.:</i> R B LAL, G SHARMA, M MANMOHAN			<i>Prin. Invest.:</i> J D CRESSLER		
<i>Tech. Officer:</i> MSFC/JR PRUITT			<i>Tech. Officer:</i> GSFC/R REED		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 13 - PHYSICS		
<b>NGT 8 52902</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1034</b>	<b>NAG 5 12316</b>	<b>AUBURN UNIV</b>	<b>1042</b>
FABRICATION & OPTICAL AND ELECTRICAL CHARACTERIZATION OF THE DIFFRACTIVE HOLOGRAPHIC OPTICAL ELEMN			SINGLE-EVENT EFFECTS MODELING IN SIGE HBTS; NEW GR ANT		
05/25/2001 - 06/30/2005	FY02: \$0	Total: \$22,000	07/02/2002 - 08/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J C WANG			<i>Prin. Invest.:</i> G NIU		
<i>Tech. Officer:</i> MSFC/S NASH-STEVENSON			<i>Tech. Officer:</i> GSFC/R REED		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 13 - PHYSICS		
<b>NGT 8 52918</b>	<b>ALABAMA A&amp;M UNIV</b>	<b>1035</b>	<b>NAG 8 1728</b>	<b>AUBURN UNIV</b>	<b>1043</b>
URBAN SPRAWL AND THE DEVELOPMENT OF A LEAPFROG INDEX			"GROUND SYSTEM-RECTENNA-SATELLITE INTERFACE ISSUES FOR SPACE SOLAR POW SYSTEMS"		
05/08/2002 - 06/30/2005	FY02: \$0	Total: \$0	06/09/2000 - 03/31/2001	FY02: \$0	Total: \$54,474
<i>Prin. Invest.:</i> W MCALLISTER			<i>Prin. Invest.:</i> S A MERRYMAN		
<i>Tech. Officer:</i> MSFC/S NASH-STEVENSON			<i>Tech. Officer:</i> MSFC/J HOWELL		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 3 2120</b>	<b>AUBURN UNIV</b>	<b>1036</b>	<b>NAG 8 1806</b>	<b>AUBURN UNIV</b>	<b>1044</b>
TIAL JOINING SCIENCE AND TECHNOLOGY FOR ADVANCED A EROPROPULSION SYSTEM			RESEARCH, "X-33 ADVANCED GUIDANCE AND CONTROL PROJECT: SOFTWARE REFINEMENTS FOR VERIFICATION..."		
02/11/1998 - 01/13/2002	FY02: \$0	Total: \$238,491	04/25/2001 - 03/15/2002	FY02: \$0	Total: \$32,188
<i>Prin. Invest.:</i> W F GALE, J W FERGUS			<i>Prin. Invest.:</i> A S HODEL		
<i>Tech. Officer:</i> GRC/R D NOEBE, GRC/M V NATHAL			<i>Tech. Officer:</i> MSFC/D R KRUP		
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR			<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR		
<b>NAG 3 2597</b>	<b>AUBURN UNIV</b>	<b>1037</b>	<b>NAS 3 99200</b>	<b>AUBURN UNIV</b>	<b>1045</b>
DAMPING AND CONTROL OF MULTI-DIRECTION COMPOSITE FLYWHEELS			EFFECTS OF HYPERVELOCITY IMPACTS ON HIGH VOLTAGE SOLAR ARRAYS		
04/27/2001 - 11/05/2003	FY02: \$0	Total: \$61,044	09/17/1999 - 10/31/2000	FY02: \$0	Total: \$124,781
<i>Prin. Invest.:</i> D GOWAYED			<i>Prin. Invest.:</i> H W BRANDHORST		
<i>Tech. Officer:</i> GRC/J TRUDELL			<i>Tech. Officer:</i> GRC/P J GEORGE		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 3 2639</b>	<b>AUBURN UNIV</b>	<b>1038</b>	<b>NAS 8 98249</b>	<b>AUBURN UNIV</b>	<b>1046</b>
A STUDY OF THE EFFECTS OF GAMMA AND CHARGED PARTICLE RADIATION ON SILICON CARBIDE DIODES AND METAL-			DEVELOPMENT AND PACKAGING OF SUPERCAPACITORS FOR LAUNCH VEHICLE APPLICATIONS		
06/22/2001 - 03/31/2003	FY02: \$0	Total: \$87,203	09/10/1998 - 07/06/2002	FY02: \$0	Total: \$523,572
<i>Prin. Invest.:</i> J R WILLIAMS			<i>Prin. Invest.:</i> S A MERRYMAN, Z CHEN		
<i>Tech. Officer:</i> GRC/G E SCHWARZE			<i>Tech. Officer:</i> MSFC/D K HALL, MSFC/T M EDGE		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 45 - ELECTRICAL ENGR		
<b>NAG 3 2682</b>	<b>AUBURN UNIV</b>	<b>1039</b>	<b>NCC 3 511</b>	<b>AUBURN UNIV</b>	<b>1047</b>
TRANSIENT LIQUID PHASE BONDING OF TIAL ALLOYS TRANSIENT LIQUID PHASE BONDING OF TIAL ALLOYS			CENTER FOR THE COMMERCIAL DEVELOPMENT OF SPACE: SPACE POWER & ADVANCED ELECTRONICS		
01/04/2002 - 12/20/2002	FY02: \$0	Total: \$0	11/01/1996 - 10/31/2002	FY02: \$0	Total: \$4,620,501
<i>Prin. Invest.:</i> W F GALE			<i>Prin. Invest.:</i> D W BRANDHORST, JR., M F ROSE		
<i>Tech. Officer:</i> GRC/S L DRAPER			<i>Tech. Officer:</i> GRC/J E DUDENHOEFER, GRC/R J SOVIE		
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

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**NCC 3 864**                      **AUBURN UNIV**                      **1048**  
 COUPLED RADIATION/THERMOPHORESUS EFFECTS IN SOOTIN G MICRO-  
 GRAVITY FLAMES  
 02/20/2001 - 12/20/2004                      FY02: \$0                      Total: \$49,167  
*Prin. Invest.:* D W MACKOWSKI  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 5 333**                      **AUBURN UNIV**                      **1049**  
 SOIL ORGANIC MATTER FLUXES IN AMAZONIAN FORESTS: N ATURAL VS  
 INTENSIVELY MANAGED SYSTEMS  
 06/17/1998 - 12/31/2001                      FY02: \$0                      Total: \$225,482  
*Prin. Invest.:* K MCNABB  
*Tech. Officer:* GSFC/D DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 459**                      **AUBURN UNIV**                      **1050**  
 CENTER FOR SPACE POWER AND ADVANCED ELECTRONICS  
 03/01/2000 - 01/31/2002                      FY02: \$0                      Total: \$1,030,000  
*Prin. Invest.:* H W BRANDHORST  
*Tech. Officer:* GSFC/D BRUNNER  
*CASE Category:* 11 - ASTRONOMY

**NCC 8 128**                      **AUBURN UNIV**                      **1051**  
 FOR RESEARCH: "AUBURN COMMERCIAL SPACE CENTER FOR THE  
 SOLIDIFICATION DESIGN/CASTNET PROGRAM"  
 01/28/1997 - 01/31/2002                      FY02: \$0                      Total: \$8,322,924  
*Prin. Invest.:* R A OVERFELT  
*Tech. Officer:* MSFC/S LAMBING  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 8 151**                      **AUBURN UNIV**                      **1052**  
 GLOBAL CHANGE R/S EDUCATION & OUTREACH RELATED TO THE EARTH'S  
 SURFACE RESOURCES AND HYDROLOGIC CYCLE  
 06/30/1998 - 03/31/2003                      FY02: \$0                      Total: \$493,343  
*Prin. Invest.:* U HATCH  
*Tech. Officer:* MSFC/J R ARNOLD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 8 237**                      **AUBURN UNIV**                      **1053**  
 PROMOTE COMMERCIALY FUNDED RESCH & DEV IN THE FIELD OF SPACE  
 POWER AND ADV ELECTRONICS  
 01/09/2002 - 10/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* H BRANDHORST, JR  
*Tech. Officer:* MSFC/S LAMBING  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 8 240**                      **AUBURN UNIV**                      **1054**  
 PROMOTE COMMERCIALY FUNDED RESEARCH AND TECH DEV. IN THE  
 FIELD OF SOLIDIFICATION DESIGN  
 01/08/2002 - 10/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R A OVERFELT  
*Tech. Officer:* MSFC/J SAMS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 8 247**                      **AUBURN UNIV**                      **1055**  
 RESEARCH AND DEVELOPMENT, NSSTC  
 02/06/2002 - 02/05/2007                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C MORIARTY  
*Tech. Officer:* MSFC/S COLEMAN, MSFC/J SIMONDS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 02015**                      **AUBURN UNIV**                      **1056**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/20/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M E BAGINSKI, D L FAIRCLOTH  
*Tech. Officer:* LARC/M DESHPANDE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 1 52205**                      **AUBURN UNIV**                      **1057**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 09/04/1998 - 06/30/2001                      FY02: -\$1                      Total: \$65,999  
*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**                      **1058**  
 ADVANCED METHOD FOR VIBRATION ANALYSIS OF HIGH SPEED ROTOR  
 SYSTEMS  
 07/21/1998 - 12/31/2001                      FY02: \$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**                      **1059**  
 OPTIMAL APPLICATION OF COMBUSTION TEST DATA TO FLAMABILITY  
 ASSESSMENT IN GASEOUS OXYGEN  
 07/27/1998 - 08/15/2002                      FY02: \$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**                      **1060**  
 CLOSED LOOP ROBUST CONTROL ALLOCATION FOR AEROSPAC VEHICLE  
 RELIABLE STABILITY AND PERFORMANCE  
 05/25/2001 - 06/30/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* A S HODEL  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 11870**                      **BIRMINGHAM SOUTHERN COLL**                      **1061**  
 INVESTIGATIONS OF COMPRESSIONAL SOLUTIONS FOR THE IO CURRENT  
 WING  
 04/04/2002 - 03/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D PONTIUS  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 12251**                      **JACKSONVILLE STATE UNIV**                      **1062**  
 VON BRAUN SCHOLARS PROGRAM  
 05/30/2002 - 05/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T HUDDLESTON  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1330**                      **JACKSONVILLE STATE UNIV**                      **1063**  
 DECODING EMG SIGNALS TO REDUCE LATENCY IN VE APPLI CATIONS  
 03/29/2002 - 03/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M AGUILAR  
*Tech. Officer:* ARCIY BARNIV  
*CASE Category:* 22 - COMPUTER SCIENCE

## NASA'S UNIVERSITY PROGRAM

ALABAMA

<p><b>NAG 5 11986</b>                      <b>LAWSON STATE COMM COLL</b>                      <b>1064</b>  INFUSING TECHNOLOGY, ENGINEERING, MATHEMATICS, AND SCIENCE IN  THE DUAL ENROLLMENT/ACCELERATED STUDEN  04/26/2002 - 04/30/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> B CRAWFORD  <i>Tech. Officer:</i> GSFC/C PERSON  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 8 1610</b>                      <b>TRENHOLM STATE TECHNICAL COLL</b>                      <b>1072</b>  NASA HIGH SCHOOL SCIENCE ENRICHMENT PROGRAM (HSSEP)  06/07/1999 - 06/06/2002                      FY02: \$0                      Total: \$300,000  <i>Prin. Invest.:</i> C THOMPSON  <i>Tech. Officer:</i> MSFC/W LOVE, MSFC/A C BEAM  <i>CASE Category:</i> 21 - MATHEMATICS</p>
<p><b>NAG 8 1871</b>                      <b>LAWSON STATE COMM COLL</b>                      <b>1065</b>  GIRLS LEADING OTHERS BY EXAMPLE (GLOBE) PROJECT  06/06/2002 - 06/05/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> B CRAWFORD  <i>Tech. Officer:</i> MSFC/W J LOVE  <i>CASE Category:</i> 76 - SOCIOLOGY</p>	<p><b>NAG 2 6049</b>                      <b>TUSKEGEE UNIV</b>                      <b>1073</b>  NASA'S SLSTP ACADEMIC PARTNER ALLIANCE (NSAPA)  04/16/2001 - 03/31/2003                      FY02: \$0                      Total: \$180,691  <i>Prin. Invest.:</i> W A HILL, C E MORRIS  <i>Tech. Officer:</i> ARC/P X CALLAHAN, ARC/K A SOUZA  <i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER</p>
<p><b>NAG 8 1653</b>                      <b>OAKWOOD COLL</b>                      <b>1066</b>  MINORITY STUDENT DEVELOPMENT PROGRAM IN SCIENCE &amp; ENGINEER-  ING  02/03/2000 - 02/04/2003                      FY02: \$0                      Total: \$200,000  <i>Prin. Invest.:</i> E GWEBU  <i>Tech. Officer:</i> MSFC/W LOVE  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NAG 3 2127</b>                      <b>TUSKEGEE UNIV</b>                      <b>1074</b>  STUDY OF ELECTRICAL CONTACTS AND DEVICES IN ADVANC ED SEMI-  CONDUCTORS  02/13/1998 - 07/31/2001                      FY02: \$0                      Total: \$299,637  <i>Prin. Invest.:</i> K K DAS  <i>Tech. Officer:</i> GRC/S A ALTEROVITZ  <i>CASE Category:</i> 45 - ELECTRICAL ENGR</p>
<p><b>NAG 8 1734</b>                      <b>OAKWOOD COLL</b>                      <b>1067</b>  DEVELOPMENT OF ULTRA-LIGHT NORMAL INCIDENCE MIRROR ELECTOR-  CHEMICAL ASPECTS  08/18/2000 - 08/17/2003                      FY02: \$0                      Total: \$100,000  <i>Prin. Invest.:</i> A VOLKOV  <i>Tech. Officer:</i> MSFC/W BRANTLEY  <i>CASE Category:</i> 12 - CHEMISTRY</p>	<p><b>NAG 3 2347</b>                      <b>TUSKEGEE UNIV</b>                      <b>1075</b>  SPUTTERING EROSION IN THE ION THRUSTER SPUTTERING EROSION IN  THE ION THRUSTER  03/09/2000 - 10/31/2001                      FY02: \$0                      Total: \$45,000  <i>Prin. Invest.:</i> D K RAY  <i>Tech. Officer:</i> GRC/M A MANTENIEKS  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 8 1868</b>                      <b>OAKWOOD COLL</b>                      <b>1068</b>  EVALUATION OF NUMERICAL TECHNIQUES FOR MGD PROPUL- SION  SIMULATION  08/19/2002 - 08/18/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> A OSEI  <i>Tech. Officer:</i> MSFC/W LOVE, MSFC/E ORDONEZ  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 3 2432</b>                      <b>TUSKEGEE UNIV</b>                      <b>1076</b>  POLYIMIDE BASED NANOCOMPOSITES FOR AFFORDABLE SPACE TRANS-  PORT  06/23/2000 - 04/16/2003                      FY02: \$0                      Total: \$200,000  <i>Prin. Invest.:</i> D DEAN  <i>Tech. Officer:</i> GRC/S CAMPBELL  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 8 1888</b>                      <b>OAKWOOD COLL</b>                      <b>1069</b>  ENHANCING MATHEMATICS AND SCIENCE EDUCATION THUR RESEARCH  (EMSER)  09/27/2002 - 09/26/2006                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> A OSEI  <i>Tech. Officer:</i> MSFC/W LOVE  <i>CASE Category:</i> 21 - MATHEMATICS</p>	<p><b>NAG 3 2654</b>                      <b>TUSKEGEE UNIV</b>                      <b>1077</b>  SURVIVABILITY OF AFFORDABLE HIGH TEMPERATURE POLYM ER MATRIX  COMPOSITES FOR PROPULSION ENGINE COMPON  01/31/2002 - 12/11/2004                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> D HAGUE  <i>Tech. Officer:</i> GRC/M A MEADOR  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NCC 1 02033</b>                      <b>OAKWOOD COLL</b>                      <b>1070</b>  2002 PRE SERVICE TEACHER INST (PSTI)  06/14/2002 - 09/13/2002                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> F BLISS  <i>Tech. Officer:</i> LARC/R A HATHAWAY  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NAG 3 2667</b>                      <b>TUSKEGEE UNIV</b>                      <b>1078</b>  A NONLINEAR MODEL FOR FUEL ATOMIZATION IN SPRAY CO MBUSTION  12/11/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> D A IBRAHIM  <i>Tech. Officer:</i> GRC/N LIU  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 8 1866</b>                      <b>STILLMAN COLL</b>                      <b>1071</b>  PROJECT MI FUTURO  07/11/2002 - 07/11/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> H PRADO, M D GREEN  <i>Tech. Officer:</i> MSFC/E S ORDONEZ  <i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER</p>	<p><b>NAG 4 169</b>                      <b>TUSKEGEE UNIV</b>                      <b>1079</b>  EFFECTS OF ABOVE REAL TIME TRAINING  05/17/1999 - 05/31/2001                      FY02: -\$208                      Total: \$68,503  <i>Prin. Invest.:</i> S FIRASAT ALI  <i>Tech. Officer:</i> DFRC/K A NORLIN, DFRC/R BINKLEY  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>

## ALABAMA

## NASA'S UNIVERSITY PROGRAM

**NAG 4 201**                      **TUSKEGEE UNIV**                      **1080**  
 DURABILITY ASSESSMENT OF AIRFRAME COMPOSITE REPAIR PATCHES  
 02/15/2000 - 09/30/2002                      FY02: \$0                      Total: \$120,000  
*Prin. Invest.:* H A AGLAN  
*Tech. Officer:* DFRC/M W KEHOE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 203**                      **TUSKEGEE UNIV**                      **1081**  
 EFFECTS OF SELF-INSTRUCTIONAL METHODS AND ABOVE REAL TIME  
 TRAINING (ARTT) FOR MANEUVERING TASKS ON  
 03/03/2000 - 02/28/2003                      FY02: \$0                      Total: \$52,447  
*Prin. Invest.:* D ALI  
*Tech. Officer:* DFRC/K NORLIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 226**                      **TUSKEGEE UNIV**                      **1082**  
 DEVELOPMENT AND ASSESSMENT OF A NOVEL TRAINING PACKAGE FOR  
 BASIC MANEUVERING TASKS ON A FLIGHT SIMU  
 03/25/2002 - 03/21/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S F ALI  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10535**                      **TUSKEGEE UNIV**                      **1083**  
 SOY RESEARCH PILOT STUDY  
 03/08/2001 - 09/14/2002                      FY02: \$0                      Total: \$20,000  
*Prin. Invest.:* R D PACE  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1408**                      **TUSKEGEE UNIV**                      **1084**  
 2002 NASA/TUSKEGEE UNIV INTERNSHIP PROGRAM  
 07/16/2002 - 07/15/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D MORTLEY  
*Tech. Officer:* JSC/L M ARMENDARIZ  
*CASE Category:* 55 - AGRICULTURE

**NAG10 209**                      **TUSKEGEE UNIV**                      **1085**  
 SWEETPOTATO STEM CUTTING DATABASE IN PREPARATION FOR FLIGHT  
 09/01/1997 - 02/28/2002                      FY02: \$0                      Total: \$295,346  
*Prin. Invest.:* D MARTLEY  
*Tech. Officer:* KSC/R WHEELER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG10 253**                      **TUSKEGEE UNIV**                      **1086**  
 EVAL OF FIRE EXTINGUISHING HALON COMPOUNDS  
 02/01/1999 - 12/31/2002                      FY02: \$0                      Total: \$302,507  
*Prin. Invest.:* N VAHDAT  
*Tech. Officer:* KSC/M COLLINS  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG10 256**                      **TUSKEGEE UNIV**                      **1087**  
 TUSKEGEE UNIV GATEWAY ACHIEVEMENT PROGRAM  
 03/01/1999 - 03/01/2002                      FY02: \$0                      Total: \$257,306  
*Prin. Invest.:* C DAVIS  
*Tech. Officer:* KSC/R MCKINNEY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 281**                      **TUSKEGEE UNIV**                      **1088**  
 NASA SPACEFLIGHT AND LIFE SCIENCES TRAINING PROGRAM  
 04/25/2000 - 06/18/2003                      FY02: \$0                      Total: \$620,025  
*Prin. Invest.:* D HILL  
*Tech. Officer:* KSC/S POTTER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG10 298**                      **TUSKEGEE UNIV**                      **1089**  
 STARSAT 12000 TESTING TACTICS AND STRATEGIES STARSAT 12000  
 TESTING TACTICS AND STRATEGIES  
 04/27/2001 - 08/31/2002                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* H J FINDLAY  
*Tech. Officer:* KSC/C D BLACK  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NCC 3 591**                      **TUSKEGEE UNIV**                      **1090**  
 HIGH TEMPERATURE FATIGUE AND CREEP BEHAVIOR OF CERAMIC MATRIX  
 COMPOSITES FOR EXHAUST NOZZLE APPLICATIONS  
 03/11/1998 - 06/30/2001                      FY02: \$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 5 346**                      **TUSKEGEE UNIV**                      **1091**  
 CENTER FOR LIDAR AND ATMOSPHERIC SCIENCES STUDENTS  
 07/01/1998 - 02/28/2002                      FY02: \$0                      Total: \$1,488,578  
*Prin. Invest.:* N O EGIEBOR  
*Tech. Officer:* HQ/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 234**                      **TUSKEGEE UNIV**                      **1092**  
 PROVIDE FUNDING FOR YEAR 4 OF COOP AGREEMENT NCC5-346  
 09/05/2001 - 07/31/2003                      FY02: \$499,900                      Total: \$499,900  
*Prin. Invest.:* N O EGREFOR  
*Tech. Officer:* MSFC/C TERRELL, MSFC/W LOVE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 9 51**                      **TUSKEGEE UNIV**                      **1093**  
 CENTER FOR FOOD & ENVIRONMENTAL SYSTEMS ... (CFESH)  
 07/31/1997 - 12/31/2002                      FY02: \$0                      Total: \$5,225,000  
*Prin. Invest.:* W A HILL  
*Tech. Officer:* JSC/D BARTA  
*CASE Category:* 62 - PSYCHOLOGY SOCIAL ASPECTS

**NAG 3 2560**                      **UNIV OF ALABAMA - BIRMINGHAM**                      **1094**  
 MAGNETICALLY ASSISTED COMBUSTION EXPERIMENT (MACE)  
 03/22/2001 - 05/17/2002                      FY02: \$0                      Total: \$20,000  
*Prin. Invest.:* J BAKER  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 4853**                      **UNIV OF ALABAMA - BIRMINGHAM**                      **1095**  
 FORMATION OF THE HYDROCARBONS OF CARBONACEOUS CHON  
 07/23/1997 - 09/30/2002                      FY02: \$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**                      **1096**  
 INVESTIGATION OF THE CONTRIBUTION OF POLYCYCLIC AROMATIC  
 HYDROCARBONS TO INTERSTELLAR ULTRAVIOLET EMISSION  
 01/05/1998 - 12/31/2001                      FY02: \$0                      Total: \$76,492  
*Prin. Invest.:* T W DOWIAK  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY



## NASA'S UNIVERSITY PROGRAM

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<p><b>NAG 5 8786</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1097</b>  DEVELOPMENT OF HIGH AFFINITY SENSORS FOR BIOLOGICAL PATHOGENS  09/02/1999 - 09/30/2001                    FY02: \$0                    Total: \$800,000  Prin. Invest.: L DELUCAS  Tech. Officer: GSFC/E PAYLOR  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAS 8 02062</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1105</b>  "IMPROVED REAL FLUIDS MODEL FOR THE FDNS 550 CDF"  05/13/2002 - 09/30/2002                    FY02: \$0                    Total: \$0  Prin. Invest.: G CHENG  Tech. Officer: MSFC/K TUCKER  CASE Category: 22 - COMPUTER SCIENCE</p>
<p><b>NAG 5 8819</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1098</b>  THE IR EMITTING AROMATIC COMPONENT OF THE INTERSTELLAR AND CIRCUMSTELLAR MEDIUMS  09/07/1999 - 07/31/2003                    FY02: \$0                    Total: \$115,460  Prin. Invest.: T WDOWNIAK  Tech. Officer: GSFC/M MEYER  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAS 8 40189</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1106</b>  PROTEIN CRYSTAL GROWTH IN MICROGRAVITY  04/01/1994 - 06/30/2004                    FY02: \$0                    Total: \$22,629,136  Prin. Invest.: L J DELUCAS  Tech. Officer: MSFC/D K COLLINS  CASE Category: 59 - LIFE SCIENCE, OTHER</p>
<p><b>NAG 5 9424</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1099</b>  TOF MS IN SITU PLANETARY SCIENCE AND EXOBIOLOGY ON EUROPA  04/17/2000 - 04/30/2003                    FY02: \$0                    Total: \$248,738  Prin. Invest.: T WDOWNIAK  Tech. Officer: GSFC/B BETTS  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAS 8 99059</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1107</b>  R/S COUPLED GROWTH IN HYPERMONOTECTICS  01/22/1999 - 06/22/2003                    FY02: \$0                    Total: \$968,323  Prin. Invest.: J B ANDREWS  Tech. Officer: MSFC/R KING  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 10694</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1100</b>  NEAR-CRITICAL WATER AQUEOUS ALTERATION PROCESSES IN PLANETESIMALS  04/16/2001 - 04/14/2002                    FY02: \$0                    Total: \$15,000  Prin. Invest.: T WDOWNIAK  Tech. Officer: GSFC/J BOYCE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NCC 8 126</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1108</b>  FOR RES:"CONTINUATION OF SUPPORT FOR COMMERCIAL SPACE CTR, CTR FOR MACROMOLECULAR CRYSTALLOGRAPHY"  01/27/1997 - 09/30/2002                    FY02: \$38,698                    Total: \$37,538,945  Prin. Invest.: L J DELUCAS  Tech. Officer: MSFC/S LIDE, MSFC/S LAMBIHG  CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 5 11146</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1101</b>  STRUCTURE-BASED DRUG DESIGN AND EVALUATION OF NATURAL COMPOUNDS AGAINST CHAGAS'DISEASE  08/09/2001 - 09/30/2003                    FY02: \$0                    Total: \$997,800  Prin. Invest.: L J DELUCAS  Tech. Officer: GSFC/L P CHAMBERS  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NCC 8 172</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1109</b>  "MICROGRAVITY CRYSTAL GROWTH STUDIES OF MEDICALLY RELEVANT MACROMOLECULES"  02/11/1999 - 09/30/2002                    FY02: \$0                    Total: \$799,512  Prin. Invest.: L J DELUCAS  Tech. Officer: MSFC/T OWEN  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAG 5 11267</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1102</b>  DEVELOPMENT OF HIGH AFFINITY SENSORS FOR BIOLOGICAL PATHOGENS  09/26/2001 - 11/30/2002                    FY02: \$0                    Total: \$9,000  Prin. Invest.: L DELUCAS  Tech. Officer: GSFC/E PAYLOR  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NCC 8 204</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1110</b>  STRUCTURAL FLUCTUATIONS &amp; THERMOPHYSICAL PROPERTIES OF MOLTEN II - IV COMPOUNDS  07/14/2000 - 11/30/2003                    FY02: \$0                    Total: \$42,969  Prin. Invest.: R SCRIPA  Tech. Officer: MSFC/C HUA SU  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 8 1228</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1103</b>  THE EFFECT OF CONVECTION ON MORPHOLOGICAL STABILITY  05/01/1996 - 11/30/2001                    FY02: \$0                    Total: \$420,000  Prin. Invest.: J B ANDREWS  Tech. Officer: MSFC/P DOTY, MSFC/R POWER  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NCC 8 246</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1111</b>  PROMOTE COMMERCIALY FUNDED RESEARCH AND TECHNOLOGY DEVELOPMENT IN THE FIELD OF BIOPHYSICAL AND ENGINEERING  01/29/2002 - 10/31/2002                    FY02: \$0                    Total: \$0  Prin. Invest.: L DELUCAS  Tech. Officer: MSFC/J WEST  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAG 8 1678</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1104</b>  RESEARCH "CONTROLLED SYNTHESIS OF NANOPARTICLES USING BLOCK COPOLYMERS: NANOREACTORS IN MICROGRAVITY  04/11/2000 - 10/10/2003                    FY02: \$0                    Total: \$154,500  Prin. Invest.: J W MAYES  Tech. Officer: MSFC/P M DOTY  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NCC 8 248</b>                    <b>UNIV OF ALABAMA - BIRMINGHAM</b>                    <b>1112</b>  RESEARCH AND DEVELOPMENT, NSSTC  02/08/2002 - 02/07/2007                    FY02: \$0                    Total: \$0  Prin. Invest.: J F LORDEN  Tech. Officer: MSFC/S COLEMAN, MSFC/B HARPER  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>

## ALABAMA

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**NGT 5 50409**                    **UNIV OF ALABAMA - BIRMINGHAM**                    **1113**  
 THE EFFECTS OF MICROGRAVITY ON FIBROBLAST MIGRATION AND THY-  
 SURFACE EXPRESSION. STUDENT: THOM  
 07/29/2002 - 07/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J HAGOOD  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52845**                    **UNIV OF ALABAMA - BIRMINGHAM**                    **1114**  
 GRADUATE STUDENT RESEARCH PROGRAM FELLOWSHIP  
 09/12/1997 - 02/11/2001                    FY02: -\$31                    Total: \$65,969  
*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**                    **1115**  
 AEROSOL RETRIEVALS FROM HIGH RESOLUTION BROADBAND ATMOS-  
 SOLAR OCCULATION SPECTRA  
 03/19/1998 - 12/31/2001                    FY02: \$0                    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**                    **1116**  
 OZONE TRENDS IN SAGE, HALOE, TOMS, UMKEHR, AND LIDAR MEASURE-  
 MENTS (NRA-98-OES-04)  
 06/11/1999 - 06/30/2002                    FY02: \$0                    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**                    **1117**  
 NUMERICAL STUDY OF BLAST WAVES GENERATED DURING LAUNCH  
 VEHICLE TAKE-OFF & SUPPRESSION BY WATER ADD  
 02/06/2001 - 01/31/2004                    FY02: \$0                    Total: \$54,637  
*Prin. Invest.:* K FRENDE  
*Tech. Officer:* LARC/B A SINGER, LARC/R J SILCOX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02073**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1118**  
 INCREASED AVIATION SAFETY THRU IMPROVED COMPOSITE MATERIALS C  
 EARMARK #11  
 04/03/2002 - 04/02/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* F C WESSLING  
*Tech. Officer:* LARC/C M BELCASTRO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2285**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1119**  
 STUDY OF THE STRUCTURE COMPOSITION AND ELECTRICAL PROPERTIES  
 OF SILICON CARBIDE/EPITAXIAL FILMS FOR  
 08/04/1999 - 06/30/2002                    FY02: \$0                    Total: \$30,909  
*Prin. Invest.:* D A GEORGE  
*Tech. Officer:* GRC/D J LARKIN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 4268**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1120**  
 THERMAL STRUCTURE AND COMPOSITION OF THE INNER MAG  
 03/25/1997 - 05/14/2001                    FY02: \$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**                    **1121**  
 ION ACCELERATION AND ABUNDANCE ENHANCEMENTS IN IMP  
 05/20/1997 - 12/31/2001                    FY02: \$0                    Total: \$105,000  
*Prin. Invest.:* P A MILLER  
*Tech. Officer:* GSFC/J A LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5273**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1122**  
 PHASE 1 OF THOR PROJECT PHAS 1 OF THOR PROJECT  
 04/17/2000 - 04/13/2006                    FY02: \$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**                    **1123**  
 SCINTILLATING FIBER TELESCOPE FOR ENERGETIC RADIATION, GAMMA-  
 RAY APPLICATIONS (SIFTER)  
 06/12/2000 - 06/30/2002                    FY02: \$0                    Total: \$130,000  
*Prin. Invest.:* PENDLETON  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6986**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1124**  
 QUANTIFICATION OF CHANGES IN THEMOSPHERIC O/N2 FROM OBSERVA-  
 TIONS OF UV AIRGLOW AND AURORA  
 02/10/1998 - 03/31/2001                    FY02: \$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**                    **1125**  
 DERIVATION OF TROPOSPHERIC OZONE CLIMATOLOGY AND TRENDS  
 FROM TOMS DATA  
 05/07/1998 - 05/14/2002                    FY02: \$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**                    **1126**  
 VALIDATION AND INTERCOMPARISON OF TOMS AEROSOL PRO DUCTS  
 USING SATELLITE AND GROUND BASED MEASUREMENTS  
 04/22/1998 - 09/30/2003                    FY02: \$0                    Total: \$227,500  
*Prin. Invest.:* S A CHRISTOPHER  
*Tech. Officer:* GSFC/J R HERMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7811**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1127**  
 A NEW GRB DURATION MEASURE AND ITS APPLICATIONS TO COSMOLOGI-  
 CAL INVARIANT PARAMETERS  
 11/12/1998 - 11/30/2000                    FY02: \$0                    Total: \$15,000  
*Prin. Invest.:* R PREECE  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7927**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1128**  
 RELATIVISTIC ASTROPHYSICS IN BLACK HOLE AND LOW-MA SS NEUTRON  
 STAR X-RAY BINARIES; LTSA98  
 01/12/1999 - 01/14/2004                    FY02: \$0                    Total: \$96,600  
*Prin. Invest.:* S ZHANG  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 7972</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1129</b>  TESTING THE PHYSICAL MECHANISMS OF GAMMA-RAY BURST S WITH  MULTI-INSTRUMENT TIME-RESOL  12/22/1998 - 12/31/2004                      FY02: \$0                      Total: \$267,013  <i>Prin. Invest.:</i> M S BRIGGS  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8480</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1137</b>  STOCHASTIC PARTICLE ACCELERATION IN IMPULSIVE SOLA RE FLARES  04/29/1999 - 12/31/2000                      FY02: \$0                      Total: \$112,181  <i>Prin. Invest.:</i> J J MILLER  <i>Tech. Officer:</i> GSFC/W J WAGNER  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 7991</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1130</b>  AN EMPIRICAL MODEL OF CORONAL HEATING DEDUCED FROM SOHO  OBSERVATIONS OF TRANSITION REGION DYNAM  01/05/1999 - 01/31/2002                      FY02: \$0                      Total: \$166,538  <i>Prin. Invest.:</i> G EMSLIE  <i>Tech. Officer:</i> GSFC/J GURMAN  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 5 8523</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1138</b>  MULTIWAVELENGTH EXAMINATION OF GALACTIC SUPERLUMINAL JET  SOURCES (L TSA98  05/27/1999 - 05/31/2004                      FY02: \$0                      Total: \$220,560  <i>Prin. Invest.:</i> S ZHANG  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8011</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1131</b>  GROUND-LEVEL SOLAR COSMIC RAY DATA FROM SOLAR CYCLE 19  01/13/1999 - 03/31/2002                      FY02: \$0                      Total: \$57,000  <i>Prin. Invest.:</i> M SHEA  <i>Tech. Officer:</i> GSFC/J H BREDEKAMP  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8956</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1139</b>  SEARCH FOR UV EMISSION LINES FROM THE WARM INTRACLUSTER  MEDIUM - FUSE  01/24/2000 - 01/31/2002                      FY02: \$0                      Total: \$36,200  <i>Prin. Invest.:</i> R LIEU  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8034</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1132</b>  UAH ANALYSIS OF TIDE/PSSI DATA FOR ISTEP SOLAR MAXIMUM EXTENDED  MISSION  01/19/1999 - 04/30/2002                      FY02: \$0                      Total: \$307,862  <i>Prin. Invest.:</i> H COMFORT  <i>Tech. Officer:</i> GSFC/R HOFFMAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 9045</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1140</b>  STUDIES OF ACCRETING NEUTRON STARS WITH RXTE CYCLE 4 OBS. II:  TOO OBSERVATIONS OF TRANSIENT LOW-MAS  02/25/2000 - 02/28/2001                      FY02: \$0                      Total: \$42,293  <i>Prin. Invest.:</i> W PACIESAS  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8210</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1133</b>  TOWARDS AN UNDERSTANDING OF THE LUMINOUS SOFT EXCESS  EMISSION FROM CLUSTERS OF GALAXIES (ADP9  02/25/1999 - 02/28/2003                      FY02: \$0                      Total: \$118,486  <i>Prin. Invest.:</i> R LIEU  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 9183</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1141</b>  DIAGNOSING THE SOFT EXCESS EMISSION OF A1795 CLUSTER OF  GALAXIES - BEPOSAX BROAD BAND IMAGING  03/07/2000 - 03/14/2002                      FY02: \$0                      Total: \$40,482  <i>Prin. Invest.:</i> R LIEU  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8234</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1134</b>  BASTE TRIGGERED MULTIWAVELENGTH OBSERVATIONS OF THE GALACTIC  SUPERLUMINAL SOURCES GRO J1655-40 AND  03/03/1999 - 02/14/2002                      FY02: \$0                      Total: \$23,779  <i>Prin. Invest.:</i> C ROBINSON  <i>Tech. Officer:</i> GSFC/J SWANK  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 9200</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1142</b>  INVESTIGATION OF THERMOSPHERIC &amp; IONOSPHERIC CHANGES DURING  IONOSPHERIC STORMS WITH SATELLITE  03/09/2000 - 03/14/2003                      FY02: \$0                      Total: \$157,408  <i>Prin. Invest.:</i> P RICHARDS  <i>Tech. Officer:</i> GSFC/M MELLOTT  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 8303</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1135</b>  RESTORATION, ENHANCEMENT, AND DISTRIBUTION OF THE ATLAS-1 IM-  AGING SPECTROMETRIC OBSERVATORY (ISO)  03/05/1999 - 09/14/2001                      FY02: \$0                      Total: \$221,869  <i>Prin. Invest.:</i> G A GERMANY  <i>Tech. Officer:</i> GSFC/J BREDEKAMP  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 9292</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1143</b>  STUDIES OF ACCRETING BLACK HOLES WITH RXTE (CYCLE 4  OBSERVATIONS)-ADP99  03/20/2000 - 03/31/2001                      FY02: \$0                      Total: \$22,593  <i>Prin. Invest.:</i> W PACIESAS  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8440</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1136</b>  BROAD BAND LONG TERM MONITORING OF X-RAY BURSTERS  04/01/1999 - 01/31/2001                      FY02: \$0                      Total: \$14,700  <i>Prin. Invest.:</i> S ZHANG  <i>Tech. Officer:</i> GSFC/J P NORRIS  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 9397</b>                      <b>UNIV OF ALABAMA - HUNTSVILLE</b>                      <b>1144</b>  THREE-DIMENSIONAL KINETIC SIMULATIONS OF THE COMBINED CROSS-  CURRENT AND TEARING MODE INSTABILITIES  04/05/2000 - 09/30/2001                      FY02: \$0                      Total: \$16,500  <i>Prin. Invest.:</i> N SINGH  <i>Tech. Officer:</i> GSFC/J SHARBER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>

## ALABAMA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9508**                      **UNIV OF ALABAMA - HUNTSVILLE**                      **1145**  
 ANALYSES OF EIT/LASCO OBSERVATIONS USING AVAILABLE MHD MODELS:  
 INVESTIGATION OF CME INITIATION  
 04/25/2000 - 05/31/2001                      FY02: \$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**                      **1146**  
 EARTH SCIENCE MARKUP LANGUAGE  
 05/19/2000 - 05/14/2002                      FY02: \$0                      Total: \$335,000  
*Prin. Invest.:* D GRAVES  
*Tech. Officer:* GSFC/J BEHNKE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 9598**                      **UNIV OF ALABAMA - HUNTSVILLE**                      **1147**  
 PRODUCTION OF LOOP-TOP HARD X-RAY EMISSION  
 05/15/2000 - 04/30/2003                      FY02: \$0                      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**                      **1148**  
 BATSE/SAX & BATSE/RXTE-ASM JOINT SPECTRAL STUDIES OF GRBS  
 06/05/2000 - 06/14/2001                      FY02: -\$198                      Total: \$9,802  
*Prin. Invest.:* W PACIESAS  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9741**                      **UNIV OF ALABAMA - HUNTSVILLE**                      **1149**  
 PROPERTIES OF CUSP DIAMAGNETIC CAVITIES  
 06/21/2000 - 06/30/2002                      FY02: \$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**                      **1150**  
 THERMAL & NONTHERMAL EMISSION FROM THE INTRACLUSTER MEDIUM OF A 2199  
 09/05/2000 - 09/14/2002                      FY02: \$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**                      **1151**  
 PULSARS OLD AND CLOSE IN SPACE: HOT POLAR-CAPS OR MAGNETOSPHERIC EMISSION  
 09/25/2000 - 09/30/2001                      FY02: \$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**                      **1152**  
 PROBING THE X-RAY EMISSION MECHANISMS OF RECYCLED PULSARS:  
 PSR J0034-0534  
 09/25/2000 - 09/30/2002                      FY02: \$0                      Total: \$6,600  
*Prin. Invest.:* S N ZHANG  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10134**                      **UNIV OF ALABAMA - HUNTSVILLE**                      **1153**  
 STUDY OF THE EVOLUTION OF PRECIPITATION AND CLOUD STRUCTURES  
 DURING THE LIFE CYCLE OF TROPICAL MEOSCs  
 12/15/2000 - 07/31/2003                      FY02: \$0                      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**                      **1154**  
 ESML FOR EARTH SCIENCE DATA SET AND ANALYSIS.  
 04/02/2001 - 04/30/2003                      FY02: \$0                      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**                      **1155**  
 ONLINE SEARCH AND METADATA VISUALIZATION TOOL  
 04/12/2001 - 04/30/2004                      FY02: \$0                      Total: \$124,702  
*Prin. Invest.:* G A GERMANY  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10785**                      **UNIV OF ALABAMA - HUNTSVILLE**                      **1156**  
 HISTORICAL EVIDENCE FOR MAJOR-SOLAR-TERRRESTRIAL- OUTBURSTS  
 FOR PAST 150 YEARS FROM THE ANALYSIS OF  
 04/27/2001 - 04/30/2003                      FY02: \$0                      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**                      **1157**  
 CHANGES IN GEOMAGNETIC CUTOFF RIGIDITIES OVER A 400-YEAR INTER-  
 VAL  
 05/15/2001 - 06/30/2003                      FY02: \$0                      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**                      **1158**  
 COMPTEL GRB SPECTRAL CATALOG (ADP 2000)  
 05/24/2001 - 05/31/2002                      FY02: \$0                      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**                      **1159**  
 OZONE RETRIEVAL ERRORS ASSOCIATED WITH CLOUDS  
 06/01/2001 - 05/31/2002                      FY02: \$0                      Total: \$60,000  
*Prin. Invest.:* M NEWCHURCH  
*Tech. Officer:* GSFC/R MCPETERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11096**                      **UNIV OF ALABAMA - HUNTSVILLE**                      **1160**  
 CRITICAL ASSESSMENT OF TOMS-DERIVED TROPOSPHERIC OZONE: COM-  
 PARISONS WITH OTHER MEASUREMENTS & MODEL  
 07/11/2001 - 08/31/2004                      FY02: \$0                      Total: \$60,000  
*Prin. Invest.:* M NEWCHURCH  
*Tech. Officer:* GSFC/R MCPETERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

<b>NAG 5 11100</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1161</b>	<b>NAG 5 11995</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1170</b>
VALIDATING AIRS OZONE OBSERVATIONS WITH TOMS, DOBS ON, BREWER, SAGE, MLS,HALOE AND OZONESONDE OBSERV			INTEROPERABLE FRAMEWORK FOR DATA MINING AND ANALYSIS OF SPACE SCIENCE DATA.		
07/10/2001 - 08/31/2004	FY02: \$0	Total: \$56,969	04/11/2002 - 04/30/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> M J NEWCHURCH			<i>Prin. Invest.:</i> S J GRAVES		
<i>Tech. Officer:</i> GSFC/D STARR			<i>Tech. Officer:</i> GSFC/P E HUNTER		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 11209</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1162</b>	<b>NAG 5 12008</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1171</b>
EARLY BATSE GRB AFTERGLOWS (ADP 2000)			SOURCES OF CUSP ENERGETIC IONS AND THEIR IMPLICATIONS		
09/10/2001 - 08/31/2002	FY02: \$0	Total: \$10,000	04/11/2002 - 04/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> V C CONNAUGHTON			<i>Prin. Invest.:</i> S CHANG		
<i>Tech. Officer:</i> GSFC/R J OLIVERSEN			<i>Tech. Officer:</i> GSFC/J SPANN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 11248</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1163</b>	<b>NAG 5 12109</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1172</b>
OPTIMAL AEROSOL PARAMETERIZATION FOR REMOTE SENSING RETRIEVALS			TERRESTRIAL PLASMASPHERE FEATURE TRACKING & VOLUME VISUALIZATION.		
08/16/2001 - 08/14/2004	FY02: \$0	Total: \$132,485	04/11/2002 - 04/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> M NEWCHURCH			<i>Prin. Invest.:</i> T NEWMAN		
<i>Tech. Officer:</i> GSFC/P DECOLA			<i>Tech. Officer:</i> GSFC/P E HUNTER		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 11484</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1164</b>	<b>NAG 5 12368</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1173</b>
CLUSTER SOFT EXCESS BY EUVE AND OTHER MISSIONS (ADP 2001)			INTERCHANGE TECHNOLOGY FOR ENABLING DATA-APPLICATION INTEROPERABILITY IN EARTH S		
12/18/2001 - 12/31/2004	FY02: \$0	Total: \$0	07/10/2002 - 03/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R LIEU			<i>Prin. Invest.:</i> D GRAVES		
<i>Tech. Officer:</i> GSFC/R J OLIVERSEN			<i>Tech. Officer:</i> GSFC/K L MOE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 5 11606</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1165</b>	<b>NAG 5 12468</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1174</b>
A HARD X-RAY ALL-SKY IMAGING SURVEY			MAGNETIC CLOUD INDUCED MAGNETIC STORM INTENSITY AND TIMING: REAL TIME PREDICTION		
01/22/2002 - 01/31/2005	FY02: \$0	Total: \$0	09/12/2002 - 09/30/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> V C CONNAUGHTON			<i>Prin. Invest.:</i> C WU		
<i>Tech. Officer:</i> GSFC/R J OLIVERSEN			<i>Tech. Officer:</i> GSFC/R LEPPING		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 11626</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1166</b>	<b>NAG 5 12530</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1175</b>
FOLLOW ON TO NAGS-8034 ANALYSIS OF TIDE/PSSI DATA			FUZE OBSERVATIONS OF WARM GAS IN CLUSTERS OF GALAXIES AND OF GALACTIC OVI EMISSION		
01/17/2002 - 01/31/2005	FY02: \$0	Total: \$0	08/28/2002 - 08/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R COMFORT			<i>Prin. Invest.:</i> M BONAMENTE		
<i>Tech. Officer:</i> GSFC/B GILES			<i>Tech. Officer:</i> GSFC/G SONNEBORN		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 11633</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1167</b>	<b>NAG 5 12563</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1176</b>
SCIENCE DATA SUBSETTING			PASSIVE MICROWAVE HURRICANE INTENSITY FORECASTS		
01/18/2002 - 01/31/2004	FY02: \$0	Total: \$0	09/12/2002 - 09/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D GRAVES			<i>Prin. Invest.:</i> D CECIL		
<i>Tech. Officer:</i> GSFC/J BEHNKE			<i>Tech. Officer:</i> GSFC/M WEI		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 11843</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1168</b>	<b>NAG 8 1354</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1177</b>
SOLAR FLARE ELECTRONS			R/S PROTEIN PRECIPITANT SPECIFIC CRITERIA FOR THE IMPACT OF REDUCED GRAVITY ON CRYSTAL PEFECTON		
03/11/2002 - 03/31/2004	FY02: \$0	Total: \$0	06/04/1997 - 07/31/2001	FY02: \$0	Total: \$619,406
<i>Prin. Invest.:</i> G EMSLIE			<i>Prin. Invest.:</i> F ROSENBERGER		
<i>Tech. Officer:</i> GSFC/T KUCERA			<i>Tech. Officer:</i> MSFC/C R TALLEY, MSFC/J P DOWNEY		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NAG 5 11941</b>	<b>UNIV OF ALABAMA - HUNTSVILLE</b>	<b>1169</b>			
THE IMPACT OF DEFORESTATION ON CONVECTIVE AND OROGRAPHIC CLOUD FORMATION IN A COMPLEX TROP					
03/29/2002 - 03/31/2005	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> R M WELCH					
<i>Tech. Officer:</i> GSFC/P R HOUSER					
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER					

## ALABAMA

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**NAG 8 1355**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1178**  
 RESEARCH "INFRARED SIGNATURES FOR MAMMALIAN CELLS IN CULTURE"  
 06/26/1997 - 11/30/2002                    FY02: \$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**                    **1179**  
 THEORETICAL ANALYSIS FOR CONSTRUCTION OF A NON- GRAVITY LABORATORY ON ORBIT  
 08/28/1997 - 12/31/2001                    FY02: \$0                    Total: \$86,000  
*Prin. Invest.:* L SMALLEY  
*Tech. Officer:* MSFC/J CAMPBELL  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1456**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1180**  
 GROUND BASED EXPERIMENTS IN SUPPORT OF MICRO- GRAVITY RESEARCH RESULTS VAPOR GROWTH OF ORGANIC  
 03/31/1998 - 07/31/2002                    FY02: \$0                    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**                    **1181**  
 REDUCTION OF CONVECTION IN CLOSED TUBE VAPOR GROWTH EXPERIMENTS  
 03/24/1998 - 01/31/2002                    FY02: \$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**                    **1182**  
 THERMOPHYSICAL PROPERTY MEASUREMENTS OF TE-BASED II-VI SEMICONDUCTOR COMPOUNDS  
 03/26/1998 - 04/30/2003                    FY02: \$0                    Total: \$637,935  
*Prin. Invest.:* M BANISH  
*Tech. Officer:* MSFC/M CROUCH  
*CASE Category:* 56 - MEDICL

**NAG 8 1548**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1183**  
 STUDY OF INSPECTION OF CRITICAL SURFACES AND AEROSPACE SYSTEMS  
 09/24/1998 - 12/04/2002                    FY02: \$0                    Total: \$151,884  
*Prin. Invest.:* G WORKMAN  
*Tech. Officer:* MSFC/S RUSSELL  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1577**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1184**  
 CONTROL OF TRANSPORT IN PROTEIN CRYSTAL USING RESTRICTIVE GEOMETRIES  
 12/16/1998 - 08/31/2003                    FY02: \$0                    Total: \$251,450  
*Prin. Invest.:* R J NAVMANN  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1786**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1185**  
 2001 SUMMER FACULTY FELLOWSHIP PROGRAM  
 04/25/2001 - 04/24/2003                    FY02: \$0                    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**                    **1186**  
 IMPROVED RE-CONFIGURABLE SLIDING MODE CONTROLLER F FOR REUSABLE LAUNCH VEHICLE OF SECOND GENERATION  
 01/24/2001 - 11/30/2001                    FY02: \$0                    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**                    **1187**  
 R/S ENTITLED, "EFFECTS OF CONVECTIVE TRANSPORT OF SOLUTE IMPURITIES ON DEFECT-CAUSING KINETICS..."  
 02/14/2001 - 08/31/2001                    FY02: \$0                    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**                    **1188**  
 OPTICAL AMPLIFIER BASED SPACE SOLAR POWER SYSTEMS  
 05/08/2001 - 11/07/2001                    FY02: \$0                    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**                    **1189**  
 MACROMOLECULE NUCLEATION AND GROWTH RATE DISPERSION STUDIES.  
 05/10/2001 - 12/31/2002                    FY02: \$0                    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**                    **1190**  
 NON-EQUILIBRIUM THERMODYNAMICS OF HGZNTZ MELTS  
 09/10/2001 - 12/31/2002                    FY02: \$0                    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**                    **1191**  
 CLOUDS AND THE EARTH'S RADIANT ENERGY SYSTEM SCIENTIFIC INVESTIGATIONS  
 11/01/1998 - 10/31/2003                    FY02: \$45,722                    Total: \$818,541  
*Prin. Invest.:* R WELCH  
*Tech. Officer:* LARC/B A WIELICKI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 2 00102**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1192**  
 REFINEMENT AND TESTING OF AN XML BASED SENSOR MODEL LANGUAGE  
 11/20/2000 - 11/19/2003                    FY02: \$0                    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**                    **1193**  
 AIST PROGRAM RESEARCH PROJECT ENTITLED: "EVE: AN ENVIRONMENT FOR ON-BOARD PROCESSING"  
 12/18/2000 - 12/18/2003                    FY02: \$0                    Total: \$746,414  
*Prin. Invest.:* S GRAVES  
*Tech. Officer:* ARC/S LAU, ARC/R CARVALHO  
*CASE Category:* 22 - COMPUTER SCIENCE

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**NAS 5 31718**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1194**  
 EOS ASTER/HRIS INVESTIGATION  
 01/09/1992 - 06/14/2003                    FY02: \$0                    Total: \$1,784,661  
*Prin. Invest.:* R WELCH  
*Tech. Officer:* GSFC/T BRAKE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 8 00180**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1195**  
 INTERNAITONAL SPACE STATION PROGRAM INDEPENDENT DATABASE  
 ASSESSMENT  
 08/01/2000 - 07/31/2001                    FY02: \$0                    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**                    **1196**  
 THE DESIGN AND DEVELOPMENT OF THE ORBITAL ARRAY OF WIDE ANGLE  
 LENSES MISSION OPTICAL SYSTEM  
 07/01/1998 - 12/31/2001                    FY02: \$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**                    **1197**  
 TO SUPPORT RESEARCH ACTIVITIES UNDER THE NASA EXPE STIMULATE  
 COMPETITIVE RESEARCH (EPSCOR)  
 11/02/1996 - 02/28/2002                    FY02: \$0                    Total: \$2,269,998  
*Prin. Invest.:* J C GREGORY  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 391**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1198**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/13/1999 - 02/28/2002                    FY02: \$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**                    **1199**  
 ALABAMA NASA EPSCOR PROGRAM  
 08/22/2001 - 07/31/2004                    FY02: \$0                    Total: \$316,814  
*Prin. Invest.:* J C GREGORY  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 8 99**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1200**  
 SELF-DIFFUSION IN LIQUID ELEMENTS  
 05/24/1996 - 04/30/2003                    FY02: \$0                    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**                    **1201**  
 FOR RESEARCH: "CONSORTIUM FOR MATERIALS DEVELOP- MEFNT IN  
 SPACE."  
 01/29/1997 - 02/28/2002                    FY02: \$0                    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**                    **1202**  
 GLOBAL CHANGE RESEARCH RELATED TO THE EARTH'S ENERGY AND  
 HYDROLOGY CYCLE  
 09/22/1997 - 09/29/2002                    FY02: \$0                    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**                    **1203**  
 R/S INVESTIGATION OF SPACE BASED SOLID STATE COHERENT LIDAR  
 UNDER DR. FARZIN AMZAJERDIAN  
 10/02/1997 - 11/30/2001                    FY02: \$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 8 180**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1204**  
 INTERNATIONAL SPACE STATION MICROGRAVITY DATA AND INFORMATION  
 SYSTEMS  
 03/19/1999 - 02/28/2003                    FY02: \$0                    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**                    **1205**  
 RESEARCH AND DEVELOPMENT  
 08/10/2000 - 08/09/2005                    FY02: \$0                    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**                    **1206**  
 INVESTIGATION OF INTER-AND INTRA-MOLECULAR INTER- ACTIONS OF  
 RECOMBINANT CANAVALIN /E. COLI  
 07/20/2000 - 06/30/2002                    FY02: \$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**                    **1207**  
 STRUCTURAL FLUCTUATIONS & THERMOPHYSICAL PROPER- TIES OF  
 MOLTEN II - IV COMPOUNDS  
 09/08/2000 - 11/30/2003                    FY02: \$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**                    **1208**  
 MECHANIZATIONS FOR THE CRYSTALLIZATION OF ZBLAN  
 07/24/2000 - 11/30/2003                    FY02: \$0                    Total: \$44,603  
*Prin. Invest.:* W KINKLER  
*Tech. Officer:* MSFC/E ETHRIDGE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 8 209**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1209**  
 THEORETICAL INVESTIGATION OF ULTRASONIC PROCESSING FOR DIREC-  
 TIONAL SOLIDIFICATION OF HYPERMONOTECTIC  
 12/01/2000 - 04/30/2002                    FY02: \$0                    Total: \$25,000  
*Prin. Invest.:* A FEDOSEYEV  
*Tech. Officer:* MSFC/R N GRUGEL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## ALABAMA

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**NCC 8 213**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1210**  
 STUDENT LAUNCH INITIATIVE  
 03/23/2001 - 12/31/2002                    FY02: \$0                    Total: \$50,000  
*Prin. Invest.:* C R KARR  
*Tech. Officer:* MSFC/J R PRUITT  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NCC 8 243**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1211**  
 PROMOTE COMMERCIALY FUNDED RESEARCH AND TECH DEVELOP-  
 MENT INTHE FIELD OF MATERIALS RESEARCH  
 12/19/2001 - 03/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* W GATHINGS  
*Tech. Officer:* MSFC/J WEST  
*CASE Category:* 49 – ENGINEERING, OTHER

**NCC 8 245**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1212**  
 THEORETICAL INVESTIGATION OF ULTRASONIC PROCESSING FOR DIREC-  
 TIONS SOLIDIFICATION OF HYPERMONOTEC ALL  
 11/19/2001 - 12/30/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* W KAUKLER  
*Tech. Officer:* MSFC/R N GRUGEL  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NCC 9 109**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1213**  
 COOPERATIVE AGREEMENT  
 06/22/2000 - 07/01/2001                    FY02: -\$5,605                    Total: \$16,395  
*Prin. Invest.:* J RUPERT  
*Tech. Officer:* JSC/N Q QURAIISHI, JSC/D SICKOREZ  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NGT 2 52283**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1214**  
 EMBRYO DEVELOPMENT & HATCHING BEHAVIOR IN BOBWHITE & COTUNIX  
 QUAIL EXPOSED TO EARTH'S GRAVITY & HYP  
 08/09/2001 - 08/31/2003                    FY02: \$0                    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 30430**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1215**  
 SHORTWAVE AEROSOL RADIATIVE FORCING FROM TERRA (STUDENT:  
 JIANGLONG ZHANG)  
 08/15/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* S CHRISTOPHER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NGT 5 30455**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1216**  
 CLIMATIC INFLUENCE OF LAND USE ON THE MESOAMERICAN BIOLOGICAL  
 CORRIDOR. STUDENT: RAY K. DEEPAK  
 08/20/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R M WELCH  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NGT 5 40018**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1217**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLL AND  
 FELLOWSHIP PROGRAM.  
 01/09/1997 - 01/31/2001                    FY02: \$0                    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**                    **1218**  
 ALABAMA SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2005                    FY02: \$0                    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**                    **1219**  
 AN EMPIRICAL MODEL OF CORONAL HEATING DEDUCED FROM SOHO  
 OBSERVATIONS OF TRANSITION REGION DYNAMICS  
 06/02/1998 - 07/31/2001                    FY02: \$0                    Total: \$44,000  
*Prin. Invest.:* E EMSLIE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 – PHYSICS

**NGT 8 52874**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1220**  
 1999 SUMMER FACULTY FELLOWSHIP PROGRAM  
 04/12/1999 - 06/30/2001                    FY02: \$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**                    **1221**  
 ION CYCLOTRON RESONANCE HEATING OF A PLASMA BY HELICON WAVES  
 FOR THE GASDYNAMICMIRROR FUSION...  
 08/31/1999 - 08/11/2002                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* C HAWK  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 46 – MECHANICAL ENGR

**NGT 8 52882**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1222**  
 GRADUATE STUDENT RESEARCH PROGRAM "OPTIMIZATION OF A MAG-  
 NETIC MIRROR FUSION REACTOR FOR SPACE PROPUL  
 09/15/1999 - 08/14/2003                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* S WU  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NGT 8 52886**                    **UNIV OF ALABAMA - HUNTSVILLE**                    **1223**  
 DIFFRACTION LIMITED GRAZING INCIDENCE OPTICS  
 05/17/2000 - 08/22/2003                    FY02: \$0                    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**                    **1224**  
 INTERACTION OF EXPANDING PLASMA WITH A COMPRESSED MAGNETIC  
 FIELD  
 06/22/2000 - 07/31/2003                    FY02: \$0                    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**                    **1225**  
 CERAMIC MATRIX COMPOSITE DEV FOR SPACE TRANS APPLI CATIONS  
 05/25/2001 - 08/31/2002                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* R CERRO  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 43 – CHEMICAL ENGR



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<b>NAG 2 1499</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1226</b>	<b>NAG 5 11204</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1234</b>
CATECHOLAMINE REGULATION AND RESPONSE TO ENVIRONMENTAL CHANGE IN DROSOPHILA MELANOGASTER			SHOCKS IN GROUPS		
07/11/2001 - 06/30/2003	FY02: \$0	Total: \$107,541	08/08/2001 - 08/14/2002	FY02: \$0	Total: \$8,700
<i>Prin. Invest.:</i> J M O'DONNELL			<i>Prin. Invest.:</i> J W SULENTIC		
<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY			<i>Tech. Officer:</i> GSFC/R MUSHOTZKY		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 4346</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1227</b>	<b>NAG 8 1724</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1235</b>
PROJECT NOVA			"2000 SUMMER FACULTY FELLOWSHIP PROGRAM"		
05/01/1997 - 02/28/2002	FY02: \$0	Total: \$2,775,000	06/22/2000 - 03/30/2002	FY02: \$0	Total: \$733,392
<i>Prin. Invest.:</i> M FREEMAN			<i>Prin. Invest.:</i> L M FREEMAN		
<i>Tech. Officer:</i> HQ/D V GALLAWAY			<i>Tech. Officer:</i> MSFC/J R PRUITT		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 7702</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1228</b>	<b>NAG 8 1753</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1236</b>
ESTIMATE THE INDIRECT AEROSOL EFFECT AND RETRIEVAL OF RELATED PARAMETERS FROM SATELLITE MEASUREMENT			RESEARCH THE APPLICATIONS THAT RESULTED IN SUCCESSFUL PROJECT MANAGEMENT IN INDUSTRY.		
09/23/1998 - 09/30/2001	FY02: \$0	Total: \$228,407	11/28/2000 - 05/31/2002	FY02: \$0	Total: \$67,514
<i>Prin. Invest.:</i> Q HAN			<i>Prin. Invest.:</i> P S RAY		
<i>Tech. Officer:</i> GSFC/M MISHCHENKO			<i>Tech. Officer:</i> MSFC/A DUARTE		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 5 8269</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1229</b>	<b>NAG 8 1859</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1237</b>
THEORETICAL CALCULATION OF CO2 FAR-WING LINE SHAPE S			2002 SUMMER FACULTY FELLOWSHIP PROGRAM		
02/25/1999 - 12/31/2001	FY02: \$0	Total: \$123,700	05/23/2002 - 05/23/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R H TIPPING			<i>Prin. Invest.:</i> M FREEMAN, G KARR		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> MSFC/S STEVENSON		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 8959</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1230</b>	<b>NAG 9 1419</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1238</b>
NEARBY GALAXIES IN THE FAR-UV: TOWARD COMPARISON WITH HIGH-REDSHIFT GALAXIES -FUZE			DESIGN OF AN INTERGRATED HYBRID SYSTEM		
01/24/2000 - 01/31/2003	FY02: \$0	Total: \$29,600	08/17/2000 - 08/17/2001	FY02: \$0	Total: \$99,999
<i>Prin. Invest.:</i> W C KEEL			<i>Prin. Invest.:</i> G P, P S ROY, D J FONSECA		
<i>Tech. Officer:</i> GSFC/G SONNEBORN			<i>Tech. Officer:</i> JSC/F Y KUO		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 5 9388</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1231</b>	<b>NAG10 305</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1239</b>
THE PROJECT NOVA CONSORTIUM			EVALUATION OF IONIC LIQUIDS FOR USE IN A PROPOSED LOW TEMPERATURE ELECTROLYSIS CELL FOR THE PROCESS		
04/10/2000 - 03/31/2003	FY02: \$0	Total: \$2,092,690	08/27/2001 - 08/31/2002	FY02: \$0	Total: \$24,980
<i>Prin. Invest.:</i> L FREEMAN			<i>Prin. Invest.:</i> R D ROGERS		
<i>Tech. Officer:</i> GSFC/M PHELPS			<i>Tech. Officer:</i> KSC/D E LUECK		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 12 - CHEMISTRY		
<b>NAG 5 9855</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1232</b>	<b>NAS 8 00207</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1240</b>
TO EXPAND AND CONTINUE TO DISSEMINATE A HIGHER EDUCATION MODEL FOR CREATING INPRE-SERVICE EDUCATION			PARTICLE ENGULFMENT AND PUSHING BY SOLIDIFYING INTERFACES (PEP)		
08/07/2000 - 07/31/2001	FY02: \$0	Total: \$118,581	10/03/2000 - 09/28/2004	FY02: \$0	Total: \$243,000
<i>Prin. Invest.:</i> M FREEMAN			<i>Prin. Invest.:</i> D M STEFANESCU		
<i>Tech. Officer:</i> GSFC/J HARRINGTON			<i>Tech. Officer:</i> MSFC/M PURVEY		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 10914</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1233</b>	<b>NCC 2 1326</b>	<b>UNIV OF ALABAMA - UNIV</b>	<b>1241</b>
INVESTIGATING THE INTERACTION-STARBURST CONNECTION (ADP 2000)			AN IMMUNIZED AIRCRAFT MANEUVER SELECTION SYSTEM		
05/18/2001 - 04/30/2003	FY02: \$0	Total: \$37,396	03/22/2002 - 03/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J W SULENTIC			<i>Prin. Invest.:</i> C KARR		
<i>Tech. Officer:</i> GSFC/R J OLIVERSEN			<i>Tech. Officer:</i> ARC/K KRISHNAKUMAR, ARC/J KANESHIGE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		

## ALASKA

## NASA'S UNIVERSITY PROGRAM

**NCC 3 964**                    **UNIV OF ALABAMA - UNIV**                    **1242**  
 MAGNETICALLY-ASSISTED COMBUSTION EXPERIMENT (MACE)  
 MAGNETICALLY-ASSISTED COMBUSTION EXPERIMENT (MACE)  
 05/07/2002 - 05/06/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J BAKER  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 8 256**                    **UNIV OF ALABAMA - UNIV**                    **1243**  
 RESEARCH & DEVELOPEMENT NSSTC  
 02/15/2002 - 02/14/2007                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R L WELLS  
*Tech. Officer:* MSFC/S COLEMAN, MSFC/M HUIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9085**                    **UNIV OF NORTH ALABAMA**                    **1244**  
 EARTH SYS SCIENCE ON-LINE COURSE: ON OPPURTUNITY IN GEOGRA-  
 PHY EDUCATION  
 02/17/2000 - 01/31/2003                    FY02: \$0                    Total: \$65,076  
*Prin. Invest.:* W R STRONG  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1282**                    **UNIV OF SOUTH ALABAMA**                    **1245**  
 MATHEMATICAL MODELING OF FOOD SUPPLY FOR LONG TERM SPACE  
 MISSIONS USING LIFE SUPPORT  
 02/12/2001 - 05/15/2001                    FY02: \$0                    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**                    **1246**  
 REGIONAL/INTERNATIONAL CHANGE ASSESSMENT STRATEGIES, RE-  
 SEARCH AND TECHNOLOGY  
 01/19/1999 - 01/18/2004                    FY02: \$0                    Total: \$113,105  
*Prin. Invest.:* M CARPENTER  
*Tech. Officer:* MSFC/R ARNOLD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 8 249**                    **UNIV OF SOUTH ALABAMA**                    **1247**  
 RESEARCH AND DEVELOPMENT, NSSTC  
 05/22/2002 - 05/21/2007                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J E AYLING, R G GALBRAITH  
*Tech. Officer:* MSFC/S COLEMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52896**                    **UNIV OF SOUTH ALABAMA**                    **1248**  
 STRUCTURE DETERMINATION OF PP5, A SENSOR OF CELL CYCLE CON-  
 TROL CHECKPOINTS AND A PROGNOSTIC INDICAT  
 05/25/2001 - 06/30/2004                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* R HONKANEN  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

## ALASKA

**NAG 2 1534**                    **UNIV OF ALASKA - FAIRBANKS**                    **1249**  
 UNDERSTANDING THE EFFECT OF LAND COVER CLASSIFICAT ION ON  
 MODEL ESTIMATES OF REGIONAL CARBON CYCLING  
 02/07/2002 - 01/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* A MCGUIRE  
*Tech. Officer:* ARC/C S POTTER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4269**                    **UNIV OF ALASKA - FAIRBANKS**                    **1250**  
 UNIQUE SIMULTANEOUS OBSERVATIONS OF THE CONJUGATE HEMI-  
 SPHERES WITH THE DYNAMICS EXPLORER AND VIKING  
 03/25/1997 - 12/31/2001                    FY02: \$0                    Total: \$99,987  
*Prin. Invest.:* D D CRAVEN  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 13 - PHYSICS

**NAG 5 5125**                    **UNIV OF ALASKA - FAIRBANKS**                    **1251**  
 GROUND AND BALLOON-BORNE OBSERVATIONS OF RED SPRITES AND  
 BLUE JETS  
 07/02/1997 - 01/31/2002                    FY02: \$0                    Total: \$343,690  
*Prin. Invest.:* E WESTCOTT  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5218**                    **UNIV OF ALASKA - FAIRBANKS**                    **1252**  
 CODA: COUPLING OF DYNAMICS AND AURORA-A CO- INVESTIGATION  
 PROPOSAL WITH AEROSPACE PI COLLINS  
 01/15/1999 - 01/14/2003                    FY02: \$0                    Total: \$29,267  
*Prin. Invest.:* COLLINS  
*Tech. Officer:* GSFC/W JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5243**                    **UNIV OF ALASKA - FAIRBANKS**                    **1253**  
 FIRST YEAR OF A TWO YEAR EFFORT NAG5-5243 PI DR. RICHARD COLLINS  
 03/29/1999 - 12/31/2002                    FY02: \$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**                    **1254**  
 MAPPING THE E-REGION VERTICAL AND ZONAL WINDS NEAR A STABLE  
 AURORAL ARC USING A NEAR HORIZONTAL  
 02/14/2001 - 02/11/2004                    FY02: \$0                    Total: \$215,855  
*Prin. Invest.:* M CONDE  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6275**                    **UNIV OF ALASKA - FAIRBANKS**                    **1255**  
 THE ROLE OF LAND-COVER CHANGE IN HIGH LATITUDE ECO FOR THE  
 GLOBAL CARBON CYCLE  
 08/27/1997 - 08/31/2001                    FY02: \$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**                    **1256**  
 VALIDATION OF MODIS SNOW & SEA ICE PRODUCTS IN THE SOUTHERN  
 OCEAN  
 10/02/1997 - 03/31/2003                    FY02: \$0                    Total: \$468,742  
*Prin. Invest.:* S LI  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7507**                    **UNIV OF ALASKA - FAIRBANKS**                    **1257**  
 JERS-1 NORTH AMERICAN BOREAL FOREST MAPPING STUDY TASK PLAN  
 UAF COMPONENT  
 06/26/1998 - 06/30/2001                    FY02: \$0                    Total: \$150,000  
*Prin. Invest.:* C L WILLIAMS  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

ALASKA

<p><b>NAG 5 7603</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1258</b>  THE INFLUENCE OF PROPAGATING EDDIES ON THE ENVIRONMENT OF  THE CONTINENTAL SHELF IN THE NORTHERN G  07/21/1998 - 07/31/2002                    FY02: \$0                    Total: \$71,973  Prin. Invest.: S R OKKONEN  Tech. Officer: GSFC/E LINDSTROM  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9457</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1266</b>  PLASMA PROCESSES AT THE EARTH'S MAGNETOSPHERIC BOUNDARY  AND CUSPS  04/24/2000 - 04/30/2003                    FY02: \$0                    Total: \$109,729  Prin. Invest.: A OTTO  Tech. Officer: GSFC/J SHARBER  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 7659</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1259</b>  'SPACE GEODETIC CASE STUDIES OF RECENT VOLCANIC EVENTS IN  ALASKA' SENH98-0028  09/09/1998 - 08/31/2002                    FY02: \$0                    Total: \$240,000  Prin. Invest.: J T FREYMUELLER  Tech. Officer: GSFC/H V FREY  CASE Category: 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 9513</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1267</b>  PHOTOTROPHIC ORGANISMS AT HYDROTHERMAL VENTS  04/25/2000 - 04/30/2003                    FY02: \$0                    Total: \$160,000  Prin. Invest.: G PLUMLEY  Tech. Officer: GSFC/M MEYER  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 7683</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1260</b>  MODELING OF THE ATMOSPHERE-MAGNETOSPHERE-IONOSPHERE SYS-  TEM: BASELINE EFFORT  09/15/1998 - 09/30/2001                    FY02: \$0                    Total: \$335,010  Prin. Invest.: M H REES  Tech. Officer: GSFC/S A CURTIS  CASE Category: 13 - PHYSICS</p>	<p><b>NAG 5 9859</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1268</b>  APPLICATION OF THE TERRESTRIAL ECOSYSTEM MODEL TO SIMULATE  CARBON DYNAMICS OF THEBOREAS REGIO  08/07/2000 - 08/31/2001                    FY02: \$0                    Total: \$25,000  Prin. Invest.: A D MCGUIRE  Tech. Officer: GSFC/D E WICKLAND  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 7799</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1261</b>  A STUDY OF THE INSTANTANEOUS DISTRIBUTION OF BIRKLAND CUR-  RENTS USING POLAR UVI, SUPERDARN, IMP8  12/17/1998 - 09/30/2002                    FY02: \$0                    Total: \$275,081  Prin. Invest.: W A BRISTOW  Tech. Officer: GSFC/L ZANETTI  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 10069</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1269</b>  CEDAR/TIMED: THERMOSPHERIC VERTICAL WIND OBSERVATIONS FROM  THREE SITES IN THE NORTHERN AURORAL ZON  10/24/2000 - 08/31/2003                    FY02: \$0                    Total: \$187,000  Prin. Invest.: M CONDE  Tech. Officer: GSFC/M MELLOTT  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 8042</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1262</b>  THERMOSPHERIC NEUTRAL WIND RESPONSE TO THE AURORA AT HIGH  RESOLUTION; SIMULTANEOUS GROUND-BASED AN  01/07/1999 - 09/30/2001                    FY02: \$0                    Total: \$58,510  Prin. Invest.: J D CRAVEN  Tech. Officer: GSFC/M H ACUNA  CASE Category: 13 - PHYSICS</p>	<p><b>NAG 5 11142</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1270</b>  THE ROLE OF LAND-COVER CHANGE IN HIGH LATITUDE ECOSYSTEMS:  IMPLICATIONS FOR CARBON BUDGETS IN NORTH  07/31/2001 - 07/31/2004                    FY02: \$0                    Total: \$87,359  Prin. Invest.: D MCGUIRE  Tech. Officer: GSFC/G GUTMAN  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8614</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1263</b>  APPLICATION OF SATELLITE SAR IMAGERY IN MAPPING THE ACTIVE LAYER  OF ARCTIC PERMAFROST  06/14/1999 - 06/30/2002                    FY02: \$0                    Total: \$186,618  Prin. Invest.: S LI  Tech. Officer: GSFC/E T ENGMAN  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 11213</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1271</b>  PERIGLACIAL GEOMORPHOLOGY ANALYSES ON UTOPIA PLANITIA  08/13/2001 - 08/31/2002                    FY02: \$0                    Total: \$40,000  Prin. Invest.: K YOSHIKAWA  Tech. Officer: GSFC/J BOYCE  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 8722</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1264</b>  RUSSIAN-US PARTNERSHIP TO STUDY THE 23-KM-DIAMETER  EL'GYGTGYN IMPACT CRATER, NORTHEAST RUSSIA  08/25/1999 - 08/14/2002                    FY02: \$0                    Total: \$70,000  Prin. Invest.: V SHARPTON  Tech. Officer: GSFC/J BOYCE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11226</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1272</b>  INTERNATIONAL SYMPOSIUM ON FAST GLACIER FLOW  08/13/2001 - 08/31/2003                    FY02: \$0                    Total: \$20,000  Prin. Invest.: C LINGLE  Tech. Officer: GSFC/W ABDALATI  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 9315</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1265</b>  MONITORING BOREAL LANDCOVER AND ECOSYSTEM DYNAMICS AT RE-  GIONAL SCALES USING INTEGRATED SPACEBORNE  03/28/2000 - 04/30/2003                    FY02: \$0                    Total: \$33,000  Prin. Invest.: C WILLIAMS  Tech. Officer: GSFC/G GUTMAN  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 11411</b>                    <b>UNIV OF ALASKA - FAIRBANKS</b>                    <b>1273</b>  TIMED SOLAR EUV EXPERIMENT PHASE E CO-INVESTIGATOR - SCOTT  BAILEY.  12/13/2001 - 12/31/2005                    FY02: \$0                    Total: \$0  Prin. Invest.: S M BAILEY  Tech. Officer: GSFC/R A GOLDBERGB  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11822 UNIV OF ALASKA - FAIRBANKS 1274**  
 TOWARD IMPROVED PROCESS BASED PAN-ARCTIC PREDICTION OF  
 LAND SURFACE MOISTURE AND ENERGY FLUXES  
 03/01/2002 - 08/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L D HINZMAN  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12192 UNIV OF ALASKA - FAIRBANKS 1275**  
 LARGE SCALE CONSEQUENCES OF SMALL SCALE AURORAL STRUCTURES  
 05/16/2002 - 05/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D LUMMERZHEIM  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12411 UNIV OF ALASKA - FAIRBANKS 1276**  
 DETECTION OF CLIMATE CHANGE IN THE WESTERN ARCTIC: SEA ICE  
 TELECONNECTION AND PRODUCTIVITY  
 08/01/2002 - 08/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L MCNUIT  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12449 UNIV OF ALASKA - FAIRBANKS 1277**  
 THE MAGNITUDE AND VARIABILITY OF THE SOLAR SOFT X- RAY IRRADI-  
 ANCE  
 08/19/2002 - 08/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S M BAILEY  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 5 01074 UNIV OF ALASKA - FAIRBANKS 1278**  
 MAINTENANCE/MISSION SUPPORT AT POKER FLAT RESEARCH RANGE.  
 03/12/2001 - 03/11/2006 FY02: \$0 Total: \$940,000  
*Prin. Invest.:* G W WALKER, R SHEFCHIK  
*Tech. Officer:* GSFC/W F LAU  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 5 98129 UNIV OF ALASKA - FAIRBANKS 1279**  
 OPERATION & MANAGEMENT OF ALASKA SAR FACILITY  
 03/30/1998 - 03/31/2003 FY02: \$0 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 1280**  
 PROCESSING SYNTHETIC APERTURE RADAR DATA  
 04/27/1988 - 03/31/2003 FY02: \$0 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 1281**  
 MODIS/SNOW MAPPING: IN-SITU MEASUREMENTS ON THE SNOW OF  
 INTERIOR & ARCTIC ALASKA  
 01/29/1999 - 09/30/2001 FY02: \$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 1282**  
 GLACIAL UNLOADING: FORCINGS, RESPONSES & PROCESSES  
 /CHRISTOPHER LARSEN  
 08/13/2001 - 08/31/2004 FY02: \$0 Total: \$21,984  
*Prin. Invest.:* J FREYMUELLER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40100 UNIV OF ALASKA - FAIRBANKS 1283**  
 ALASKA SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 02/28/2001 - 02/28/2005 FY02: \$0 Total: \$223,453  
*Prin. Invest.:* J G HAWKINS  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50324 UNIV OF ALASKA - FAIRBANKS 1284**  
 TREES, FIRE & CLIMATE: EVALUATING POTENTIAL FEED BACKS BETWEEN  
 DISTURBANCE REGIME FOREST SUCCESSION  
 08/17/2001 - 08/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* S F CHAPIN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50423 UNIV OF ALASKA - FAIRBANKS 1285**  
 METHANE EFFLUX FROM THERMOKARST LAKES IN NE SIBERIA: PHYSICAL,  
 HYDROLOGICAL, & BIOGEOCHEMICAL  
 08/12/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* T CHAPIN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## ARIZONA

**NAG 1 1781 ARIZONA STATE UNIV 1286**  
 PENETRATION OF HIGH-INTENSITY RADIATED FIELDS INTO GENERAL  
 AVIATION AIRCRAFT  
 12/13/1995 - 12/31/2001 FY02: \$0 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 1287**  
 DEVELOPMENT OF COMPREHENSIVE MODELING TECHNIQUES FOR  
 SMART COMPOSITE STRUCTURES  
 01/06/1998 - 01/14/2001 FY02: \$0 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 1288**  
 DETERM & USE OF SENSITIVITIES FOR REDESIGN/ANAL OF MISTUNED  
 BLADED DISKS - NRA 98-LARC-8  
 09/27/1999 - 07/31/2002 FY02: \$0 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 1289**  
 USING FORMAL APPROACH FOR REVERSE ENGR'G & DESIGN RECOVERY  
 TO SUPPORT SOFTWARE REUSE--NRA-98-LARC-8  
 09/27/1999 - 08/30/2002 FY02: \$0 Total: \$192,186  
*Prin. Invest.:* G C GANNOD  
*Tech. Officer:* LARC/B L DI VITO  
*CASE Category:* 22 - COMPUTER SCIENCE

## NASA'S UNIVERSITY PROGRAM

ARIZONA

<b>NAG 1 2283</b>	<b>ARIZONA STATE UNIV</b>	<b>1290</b>	<b>NAG 5 6741</b>	<b>ARIZONA STATE UNIV</b>	<b>1299</b>
A NONLINEAR THEORY FOR SMART COMPOSITE STRUCTURES			SYSTEMATIC DETERMINATIONS OF ELEMENTAL ABUNDANCES FOR GALACTIC AND LMC NOVAE		
03/24/2000 - 03/14/2003	FY02: \$0	Total: \$98,305	12/19/1997 - 12/31/2001	FY02: \$0	Total: \$200,688
<i>Prin. Invest.:</i> A CHATTOPADHYAY			<i>Prin. Invest.:</i> S STARRFIELD		
<i>Tech. Officer:</i> LARC/D R AMBUR			<i>Tech. Officer:</i> GSFC/D K WEST		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 1 02010</b>	<b>ARIZONA STATE UNIV</b>	<b>1291</b>	<b>NAG 5 7540</b>	<b>ARIZONA STATE UNIV</b>	<b>1300</b>
COUPLED NONLINEAR AERO-THERMO-ELASTIC ANALYSIS FOR AEROSPACE APPLICATIONS			INVESTIGATION OF NEBULAR PROCESSES THROUGH OXYGEN ISOTOPIC ANALYSIS OF PRIMITIVE METEORITE MATERIAL		
12/06/2001 - 01/15/2005	FY02: \$0	Total: \$0	06/18/1998 - 09/30/2002	FY02: \$0	Total: \$121,100
<i>Prin. Invest.:</i> A CHATIPHADYAJ			<i>Prin. Invest.:</i> L LESHIN		
<i>Tech. Officer:</i> LARC/W A SILVA			<i>Tech. Officer:</i> HQ/J BOYCE		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 2 1461</b>	<b>ARIZONA STATE UNIV</b>	<b>1292</b>	<b>NAG 5 8158</b>	<b>ARIZONA STATE UNIV</b>	<b>1301</b>
CONTINUAL PLANNING IN METRIC/TEMPORAL DOMAINS			MICROBEAM INVESTIGATIONS OF PRESOLAR AND EARLY SOLAR SYSTEM MATERIALS		
03/13/2001 - 02/28/2003	FY02: \$0	Total: \$161,928	02/04/1999 - 01/31/2003	FY02: \$0	Total: \$299,000
<i>Prin. Invest.:</i> S KAMBHAMPPATI			<i>Prin. Invest.:</i> D R HUSS		
<i>Tech. Officer:</i> ARC/R A MORRIS			<i>Tech. Officer:</i> HQ/J BOYCE		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 3 2081</b>	<b>ARIZONA STATE UNIV</b>	<b>1293</b>	<b>NAG 5 8173</b>	<b>ARIZONA STATE UNIV</b>	<b>1302</b>
DECOUPLING THE ROLE OF INERTIA & GRAVITY ON PARTICLE DISPERSION LSN000850-(NRA-94-OLMSA)			PRESOLAR GRAINS AS TRACERS OF NEBULA PROCESSES		
09/26/1997 - 09/16/2001	FY02: \$0	Total: \$49,456	02/03/1999 - 10/14/2001	FY02: \$0	Total: \$38,000
<i>Prin. Invest.:</i> K D SQUIRES			<i>Prin. Invest.:</i> D R HUSS		
<i>Tech. Officer:</i> GRC/A CHAIT			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 3 2591</b>	<b>ARIZONA STATE UNIV</b>	<b>1294</b>	<b>NAG 5 8278</b>	<b>ARIZONA STATE UNIV</b>	<b>1303</b>
OPTIMIZATION OF ENGINEERED III-N MATERIAL FOR ELECTRON EMISSION DEVICES			MULTIWAVELENGTH SPECTRAL SYNTHESSES OF NOV ATMOSPHERES (ADP 98)		
04/16/2001 - 02/28/2003	FY02: \$0	Total: \$19,990	02/24/1999 - 02/28/2002	FY02: \$0	Total: \$98,991
<i>Prin. Invest.:</i> N NEWMAN			<i>Prin. Invest.:</i> S G STARRFIELD		
<i>Tech. Officer:</i> GRC/I KRAINSKY			<i>Tech. Officer:</i> GSFC/D K WEST		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 3628</b>	<b>ARIZONA STATE UNIV</b>	<b>1295</b>	<b>NAG 5 8286</b>	<b>ARIZONA STATE UNIV</b>	<b>1304</b>
THERMAL-INFRARED LABORATORY STUDIES			ACQUISITION OF A CAMECA IMS 6F SECONDARY ION MASS SPECTROMETER FOR APPLICATIONS IN COSMOCHEMISTRY		
02/25/1997 - 12/31/2001	FY02: \$0	Total: \$476,921	02/22/1999 - 02/28/2001	FY02: -\$9	Total: \$489,491
<i>Prin. Invest.:</i> D R CHRISTENSEN			<i>Prin. Invest.:</i> L A LESHIN		
<i>Tech. Officer:</i> GSFC/P G ROGERS			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 3783</b>	<b>ARIZONA STATE UNIV</b>	<b>1296</b>	<b>NAG 5 8453</b>	<b>ARIZONA STATE UNIV</b>	<b>1305</b>
DETERMINING THE COMPOSITION OF MARTIAN AND VENUSIA			ANALYSIS OF AEOLIAN FEATURES AND PROCESSES ON MARS		
02/21/1997 - 06/30/2002	FY02: \$0	Total: \$361,350	04/14/1999 - 04/14/2003	FY02: \$0	Total: \$234,000
<i>Prin. Invest.:</i> D FINK			<i>Prin. Invest.:</i> R GREELEY		
<i>Tech. Officer:</i> GSFC/P G ROGERS			<i>Tech. Officer:</i> HQ/J BOYCE		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 3908</b>	<b>ARIZONA STATE UNIV</b>	<b>1297</b>	<b>NAG 5 8481</b>	<b>ARIZONA STATE UNIV</b>	<b>1306</b>
STUDIES IN PLANETARY VOLCANOLOGY			FORMATION & EVOLUTION OF BINARY SYSTEMS CONTAINING COLLAPSED STARS (ATP 98)		
02/12/1997 - 02/28/2002	FY02: \$0	Total: \$919,053	04/29/1999 - 04/30/2003	FY02: \$0	Total: \$29,420
<i>Prin. Invest.:</i> D GREELEY			<i>Prin. Invest.:</i> M POLITANO		
<i>Tech. Officer:</i> GSFC/P ROGERS			<i>Tech. Officer:</i> GSFC/D K WEST		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 4131</b>	<b>ARIZONA STATE UNIV</b>	<b>1298</b>			
ORGANICS IN METEORITES					
03/15/1997 - 09/14/2001	FY02: \$0	Total: \$345,000			
<i>Prin. Invest.:</i> D CRONIN					
<i>Tech. Officer:</i> GSFC/M MEYER					
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)					

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8721**                      **ARIZONA STATE UNIV**                      **1307**  
 SMALL IMPACTS ON MARS: ATMOSPHERIC EFFECTS  
 08/03/1999 - 08/14/2002                      FY02: \$0                      Total: \$70,500  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8805**                      **ARIZONA STATE UNIV**                      **1308**  
 PHASE-RESOLVED INVESTIGATION OF SUPERSOFT X-RAY BINARIES -  
 FUSE  
 02/01/2000 - 02/14/2002                      FY02: \$0                      Total: \$23,900  
*Prin. Invest.:* A P COWLEY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8897**                      **ARIZONA STATE UNIV**                      **1309**  
 GEOLOGICAL STUDIES OF THE GALILEAN SATELLITES  
 01/13/2000 - 01/14/2003                      FY02: \$0                      Total: \$176,600  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8898**                      **ARIZONA STATE UNIV**                      **1310**  
 MECHANISMS, MANIFESTATION AND IMPLICATIONS OF CRYO MAGMATISM  
 ON EUROPA  
 01/13/2000 - 01/14/2003                      FY02: \$0                      Total: \$83,700  
*Prin. Invest.:* S A FAGENTS  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8948**                      **ARIZONA STATE UNIV**                      **1311**  
 STUDIES OF MARTIAN AEOLIAN GEOLOGY  
 01/19/2000 - 02/28/2003                      FY02: \$0                      Total: \$181,350  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9070**                      **ARIZONA STATE UNIV**                      **1312**  
 MONITORING THE HAZARDS OF SILICIC VOLCANOES WITH REMOTE  
 SENSING  
 02/27/2000 - 02/28/2003                      FY02: \$0                      Total: \$98,703  
*Prin. Invest.:* J FINK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9263**                      **ARIZONA STATE UNIV**                      **1313**  
 MULTIDIMENSIONAL STUDIES OF THE CONSEQUENCES OF THERMO-  
 NUCLEAR RUNAWAYS ON ACCRETING WHITEDWARFS  
 03/13/2000 - 03/14/2003                      FY02: \$0                      Total: \$186,581  
*Prin. Invest.:* S STARRFIELD  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9352**                      **ARIZONA STATE UNIV**                      **1314**  
 COSMOCHEMISTRY & MINERALOGY OF PRIMITIVE METEORITE  
 03/30/2000 - 03/31/2003                      FY02: \$0                      Total: \$194,000  
*Prin. Invest.:* P R BUSECK  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9381**                      **ARIZONA STATE UNIV**                      **1315**  
 HIGH PRESSURE MINERALS IN SHOCKED METEORITES: CONS TRAITNS  
 ON SHOCK CONDITIONS AND DURATION  
 04/03/2000 - 03/31/2003                      FY02: \$0                      Total: \$98,000  
*Prin. Invest.:* T G SHARP  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9395**                      **ARIZONA STATE UNIV**                      **1316**  
 FUSE OBSERVATIONS OF GALACTIC AND LMC NOVAE IN OUT BURST -  
 FUSE  
 04/05/2000 - 04/14/2002                      FY02: \$0                      Total: \$9,084  
*Prin. Invest.:* S G STARRFIELD  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9430**                      **ARIZONA STATE UNIV**                      **1317**  
 ENVIRONMENTS OF EARLY EVOLUTION AND THE SEARCH FOR AN EXTRA-  
 TERRESTIAL FOSSIL RECORD  
 04/13/2000 - 05/31/2003                      FY02: \$0                      Total: \$192,316  
*Prin. Invest.:* P KNAUTH  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9451**                      **ARIZONA STATE UNIV**                      **1318**  
 CHIRAL ANALYSES OF ORGANIC COMPOUNDS IN CARBONACEOUS  
 METEORITES  
 04/12/2000 - 04/14/2003                      FY02: \$0                      Total: \$213,620  
*Prin. Invest.:* S PIZZARELLO  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 9507**                      **ARIZONA STATE UNIV**                      **1319**  
 MICROBIAL PALEONTOLOGY, MINERALOGY & GEOCHEMISTRY OF MODERN  
 & ANCIENT THERMAL SPRING DEPOSITS & THEI  
 05/23/2000 - 04/30/2003                      FY02: \$0                      Total: \$240,992  
*Prin. Invest.:* J FARMER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 9773**                      **ARIZONA STATE UNIV**                      **1320**  
 GEOLOGY OF POTENTIAL LANDING SITES FOR MARTIAN SAMPLE RE-  
 TURNS  
 07/05/2000 - 06/30/2003                      FY02: \$0                      Total: \$83,800  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9838**                      **ARIZONA STATE UNIV**                      **1321**  
 RADIATION SCIENCE PROGRAM TRANSMISSION ELECTRON MICROSCOPY  
 (TEM) STUDY OF SOUTHERN AFRICAN FIRE-ATM  
 11/20/2000 - 11/30/2003                      FY02: \$0                      Total: \$124,000  
*Prin. Invest.:* P R BUSECK  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10077**                      **ARIZONA STATE UNIV**                      **1322**  
 CHEMICAL CONSTRAINTS ON THE EARLY SOLAR NEBULA: IRACING MO-  
 LECULAR & ISOTOPIC ABUNDANCES FROM INTE  
 11/15/2000 - 11/14/2001                      FY02: \$0                      Total: \$40,000  
*Prin. Invest.:* S WYCKOFF  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 10214</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1323</b>  THERMAL CONDUCTIVITY RELATIONSHIPS TO PHYSICAL PROPERTIES OF  MARTIAN SURFICIAL MATERIALS: A TOOL FO  01/04/2001 - 01/14/2003                      FY02: \$0                      Total: \$55,000  <i>Prin. Invest.:</i> M A PRESLEY  <i>Tech. Officer:</i> GSFC/D SENSKE  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 10689</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1331</b>  THE EVOLUTIONARY DEVELOPMENT OF PHOTOSYNTHESIS &amp; THE TRAN-  SITION FROM AN ANAEROBIC TO AN AEROBIC  04/06/2001 - 03/31/2004                      FY02: \$0                      Total: \$90,000  <i>Prin. Invest.:</i> R BLANKENSHIP  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 10268</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1324</b>  RECENT VOLCANIC AND FLUVIAL ACTIVITY ON MARS  01/18/2001 - 04/30/2003                      FY02: \$0                      Total: \$166,400  <i>Prin. Invest.:</i> A S MCEWEN  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 10753</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1332</b>  CHEMICAL CONSTRAINTS ON THE EARLY SOLAR NEBULA  04/11/2001 - 04/14/2003                      FY02: \$0                      Total: \$20,000  <i>Prin. Invest.:</i> S WYCKOFF  <i>Tech. Officer:</i> GSFC/J M BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10310</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1325</b>  MAPPING MINERALOGY, ROCK ABUNDANCE, &amp; THERMAL INERTIA USING  MGS THERMAL EMISSION SPECTROMETER (TES)  01/25/2001 - 01/31/2004                      FY02: \$0                      Total: \$150,000  <i>Prin. Invest.:</i> P R CHRISTIANSON  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10899</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1333</b>  THIRD INTERNATIONAL SYMPOSIUM ON ENVIRONMENTAL HYDRAULICS  05/04/2001 - 05/31/2002                      FY02: \$0                      Total: \$15,000  <i>Prin. Invest.:</i> D BOYER  <i>Tech. Officer:</i> GSFC/A TUYAHOV  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 10316</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1326</b>  OBSERVATIONS OF THE LISM WITH HOT WHITE DWARFS - FUSE - 2000  01/26/2001 - 04/30/2002                      FY02: \$0                      Total: \$23,600  <i>Prin. Invest.:</i> J B HOLBERG  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11199</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1334</b>  ORIGINS OF SMALL VOLCANIC CONES: ERUPTION MECHANISMS AND  IMPLICATIONS FOR WATER ON MARS  08/07/2001 - 08/14/2004                      FY02: \$0                      Total: \$49,926  <i>Prin. Invest.:</i> S FAGENTS  <i>Tech. Officer:</i> GSFC/J M BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10449</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1327</b>  PRESOLAR GRAINS: PROBES OF PROCESS IN INTERSTELLAR SPACE, IN  THE SOLAR NEBULA, &amp; ON METEORITE PARENTS  02/21/2001 - 10/31/2002                      FY02: \$0                      Total: \$33,000  <i>Prin. Invest.:</i> G HUSS  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11494</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1335</b>  THERMAL INFRARED LABORATORY MEASUREMENTS  12/27/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> P R CHRISTENSEN  <i>Tech. Officer:</i> GSFC/D SENSKE  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 10460</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1328</b>  REGIONAL PLANETARY IMAGE FACILITY-ARIZONA STATE UNIV  02/26/2001 - 02/28/2006                      FY02: \$0                      Total: \$65,900  <i>Prin. Invest.:</i> R GREELY  <i>Tech. Officer:</i> GSFC/D SENSKE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11543</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1336</b>  MICROBEAM INVESTIGATIONS OF PRESOLAR &amp; EARLY SOLAR SYSTEM  MATERIALS  01/04/2002 - 01/31/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> G HUSS  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 12 - CHEMISTRY</p>
<p><b>NAG 5 10523</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1329</b>  ISOTOPIC &amp; PETROLOGIC INVESTIGATIONS OF EXTRATERRESTRIAL  MATERIALS: CONSTRAINTS ON NEBULAR, ASTEROID  03/06/2001 - 03/14/2004                      FY02: \$0                      Total: \$100,000  <i>Prin. Invest.:</i> L A LESHIN  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 12 - CHEMISTRY</p>	<p><b>NAG 5 11552</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1337</b>  CHARACTERIZATION OF INDIVIDUAL AEROSOL PARTICLES ASSOCIATED  WITH CLOUDS (CRYSTALL-FACE)  01/10/2002 - 01/14/2004                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> P BUSECK  <i>Tech. Officer:</i> GSFC/D ANDERSON  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 10524</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1330</b>  MICHIGAN COLLABORATION: THE ABUNDANCE &amp; ISOTOPIC COMPO-  SITION OF Hg IN EXTRATERRESTRIAL MATERIAL  03/05/2001 - 07/31/2001                      FY02: \$0                      Total: \$3,158  <i>Prin. Invest.:</i> D LAURETTA  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 12 - CHEMISTRY</p>	<p><b>NAG 5 11566</b>                      <b>ARIZONA STATE UNIV</b>                      <b>1338</b>  INJECTION OF SHORT-LIVED RADIOACTIVITIES INTO THE PRESOLAR CLOUD  02/08/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> H VANHALA  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11655**                      **ARIZONA STATE UNIV**                      **1339**  
ANALYSIS OF EXTRATERRESTRIAL VOLCANISM FROM LAVA FLOW-SCALE  
TO EDIFICE-SCALE PROCESSES  
02/11/2002 - 02/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J FINK  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11770**                      **ARIZONA STATE UNIV**                      **1340**  
CHARACTERIZATION AND HISTORY OF THE PRESOLAR DUST THAT BE-  
CAME THE SOLAR SYSTEM  
02/25/2002 - 02/28/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G R HUSS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11787**                      **ARIZONA STATE UNIV**                      **1341**  
STUDIES IN PLANETARY VOLCANOLOGY  
02/22/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11809**                      **ARIZONA STATE UNIV**                      **1342**  
CONTINUED INVESTIGATION OF NEBULAR PROCESSES THROUGH ISOTO-  
PIC ANALYSES OF PRIMITIVE METEORITE MATERIALS  
02/27/2002 - 03/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L A LESHIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11899**                      **ARIZONA STATE UNIV**                      **1343**  
SECONDARY ION ISOTOPE RATIO DETERMINATION USING A SENSITIVE  
ELECTROMETER ARRAY DETECTOR  
03/27/2002 - 03/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P WILLIAMS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12141**                      **ARIZONA STATE UNIV**                      **1344**  
SEDIMENTARY MATERIALS IN WESTERN ARABIA AND INTRACRATER  
DEPOSITS SIMILAR TO WHITE ROCK: CLUES TO PAST  
05/08/2002 - 05/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M A PRESLEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12142**                      **ARIZONA STATE UNIV**                      **1345**  
ANALYSIS OF AEOLIAN FEATURES AND PROCESSES ON MARS  
05/08/2002 - 05/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R GREELEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12460**                      **ARIZONA STATE UNIV**                      **1346**  
NEXT GENERATION FRONTIER STUDIES OF GALAXY FORMATION AND  
EVOLUTION WITH NEXT GENERATION SPACE TELESCOPES  
09/09/2002 - 09/14/2014                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R A WINDHORST  
*Tech. Officer:* GSFC/M GREENHOUSE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12543**                      **ARIZONA STATE UNIV**                      **1347**  
HYDROTHERMAL ECOSYSTEMS IN A SOLAR SYSTEM CONTEXT  
09/05/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E SHOCK  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1331**                      **ARIZONA STATE UNIV**                      **1348**  
GENESIS OF THE CRYSTALLINE HEMATITE DEPOSIT IN SINUS MERIDIANI  
MARS  
07/05/2001 - 06/30/2003                      FY02: \$22,000                      Total: \$44,000  
*Prin. Invest.:* P R CHRISTENSON  
*Tech. Officer:* JSC/R V MORRIS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1359**                      **ARIZONA STATE UNIV**                      **1349**  
A MICROFLUIDIC BIO REPORTER FOR EXPLORATORY BIOENGINEERING  
07/27/2001 - 09/30/2004                      FY02: \$0                      Total: \$39,000  
*Prin. Invest.:* B C TOWE  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAS 5 31371**                      **ARIZONA STATE UNIV**                      **1350**  
EOS INVESTIGATION "ADVANCED SPACEBORNE THERMAL EMISSION AND  
REFLECTION"  
12/23/1991 - 06/14/2003                      FY02: \$0                      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**                      **1351**  
PENETRATION OF HIGH INTENSITY RADIATED FIELDS (HIRF) INTO AIR-  
CRAFT  
05/29/2001 - 05/31/2004                      FY02: \$0                      Total: \$54,000  
*Prin. Invest.:* C BALANIS  
*Tech. Officer:* LARC/T X NGUYEN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 2 1051**                      **ARIZONA STATE UNIV**                      **1352**  
EXPLORING THE LIVING UNIVERSE: ORIGIN, EVOLUTION AND DISTRIBU-  
TION OF LIFE IN THE SOLAR SYSTEM  
09/22/1998 - 06/30/2003                      FY02: \$0                      Total: \$3,907,192  
*Prin. Invest.:* J D FARMER  
*Tech. Officer:* ARC/R A GRAYMES, ARC/W W DOLCI  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1109**                      **ARIZONA STATE UNIV**                      **1353**  
OPERATION OF THE PLANETARY AEOLIAN LABORATORY  
04/02/1999 - 04/30/2003                      FY02: \$0                      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**                      **1354**  
HEURISTIC CONTROL OF PLANNING & EXECUTION IN METRIC/TEMPORAL  
DOMAINS  
03/23/2001 - 02/28/2003                      FY02: \$0                      Total: \$48,000  
*Prin. Invest.:* S KAMBHAMPATI  
*Tech. Officer:* ARC/R MORRIS  
*CASE Category:* 22 - COMPUTER SCIENCE



## NASA'S UNIVERSITY PROGRAM

ARIZONA

**NCC 2 1232** ARIZONA STATE UNIV 1355  
AGENT DEVELOPMENT & CONTROL VERIFICATION USING DUAL CHARACTERIZATION  
03/26/2001 - 11/30/2002 FY02: \$0 Total: \$75,000  
Prin. Invest.: C BARAL  
Tech. Officer: ARC/R MORRIS  
CASE Category: 22 - COMPUTER SCIENCE

**NCC 2 5362** ARIZONA STATE UNIV 1356  
TERAHERTZ MODULATION OF QUANTUM WELL LASERS WITH AN ELECTRICAL FIELD  
01/19/2000 - 12/14/2001 FY02: \$0 Total: \$47,000  
Prin. Invest.: Y ZHANG  
Tech. Officer: ARC/M MEYAPPAN  
CASE Category: 13 - PHYSICS

**NCC 2 5411** ARIZONA STATE UNIV 1357  
ECOGENOMICS: MOLECULAR BIOLOGICAL ANALYSES OF HYPERCALCAEMIA  
BACTERIAL COMMUNITIES  
11/22/2000 - 11/30/2002 FY02: \$0 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 1 02013** ARIZONA STATE UNIV 1358  
GRADUATE STUDENT RESEARCHER PROGRAM (GSRP)  
06/05/2002 - 06/30/2005 FY02: \$0 Total: \$0  
Prin. Invest.: A CHATTOPADHYAY, C R SWANN  
Tech. Officer: LARC/D R AMBUR  
CASE Category: 46 - MECHANICAL ENGR

**NGT 2 52284** ARIZONA STATE UNIV 1359  
THE PROTECTIVE ROLES OF THE ANTIOXIDANT ENZYMES SUPEROXIDE  
DISMUTASE & CATALASE IN THE GREEN PHOTOSYNTHESIS  
08/09/2001 - 08/31/2003 FY02: \$0 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 1360  
EFFECTS OF TECTONIC PROCESSES AND CLIMATIC FLUCTUATIONS ON  
LANDSCAPE DEVELOPMENT  
08/26/1999 - 08/31/2001 FY02: \$0 Total: \$44,000  
Prin. Invest.: J R ARROWSMITH  
Tech. Officer: GSFC/M WEI  
CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50276** ARIZONA STATE UNIV 1361  
PARTITIONING OF HIGHLY siderophile ELEMENTS AT ELEVATED PRESSURE & TEMPERATURE: CONSTRAINTS ON  
06/20/2000 - 06/30/2003 FY02: \$0 Total: \$44,000  
Prin. Invest.: T SHARP  
Tech. Officer: GSFC/K BLANDING  
CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 62** ARIZONA STATE UNIV 1362  
ASSESSMENT OF PALEOENVIRONMENT ON MARS  
05/29/2002 - 05/31/2005 FY02: \$0 Total: \$0  
Prin. Invest.: P NILES  
Tech. Officer: JSC/GMCKAY  
CASE Category: 32 - GEOLOGICAL SCIENCE

**NAG 5 10254** DINE COLL (FORMERLY NAVAJO COMM COLL) 1363  
INTERNET-BASED EDUCATION & RESEARCH WITH ROBOTIC TELESCOPES  
FOR NATIVE AMERICAN & HISPANIC  
01/10/2001 - 01/14/2004 FY02: \$0 Total: \$218,000  
Prin. Invest.: S SEMKEN  
Tech. Officer: GSFC/P SAKIMOTO  
CASE Category: 11 - ASTRONOMY

**NAG 9 1172** DINE COLL (FORMERLY NAVAJO COMM COLL) 1364  
SCIENCE ENRICHMENT ACTIVITIES  
09/28/1999 - 09/29/2001 FY02: \$0 Total: \$200,000  
Prin. Invest.: M C BAUER  
Tech. Officer: JSC/L ARMEDARIZ  
CASE Category: 49 - ENGINEERING, OTHER

**NAG13 99028** DINE COLL (FORMERLY NAVAJO COMM COLL) 1365  
EXPANDING THE POOL OF GIS PROFESSIONALS FOR THE NAVAJO NATION  
09/02/1999 - 09/27/2001 FY02: \$0 Total: \$192,080  
Prin. Invest.: D ISELY  
Tech. Officer: JSC/R TRAVIS  
CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 4 234** ESTRELLA MOUNTAIN COMM COLL 1366  
NASA PRECOLL ACHIEVEMENT OF EXCELLENCE IN MATHEMATICS, SCIENCE, ENGINEERING, AND TECHNOLOGY (PAC)  
09/25/2002 - 09/30/2003 FY02: \$0 Total: \$0  
Prin. Invest.: M A REYES  
Tech. Officer: DFRC/M RODAN  
CASE Category: 41 - AERONAUTICAL ENGR

**NAG 5 12476** ESTRELLA MOUNTAIN COMM COLL 1367  
NASA ESTRELLA MOUNTAIN CENTER FOR SUCCESS IN MATH AND SCIENCE  
09/05/2002 - 07/31/2003 FY02: \$0 Total: \$0  
Prin. Invest.: M REYES  
Tech. Officer: HQ/M MATEU  
CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6790** NORTHERN ARIZONA UNIV 1368  
INFRARED SPECTROSCOPY OF PLANETARY SATELLITES  
02/10/1998 - 09/14/2001 FY02: \$0 Total: \$164,147  
Prin. Invest.: C A GRIFFITH  
Tech. Officer: GSFC/T MORGAN  
CASE Category: 11 - ASTRONOMY

**NAG 5 7757** NORTHERN ARIZONA UNIV 1369  
A PHOTOMETRIC SURVEY OF TRANS-NEPTUNIAN OBJECTS  
12/07/1998 - 09/30/2002 FY02: \$0 Total: \$126,030  
Prin. Invest.: S C TEGLER  
Tech. Officer: GSFC/T MORGAN  
CASE Category: 11 - ASTRONOMY

**NAG 5 8146** NORTHERN ARIZONA UNIV 1370  
SPECTROSCOPIC INVESTIGATIONS OF EXTRASOLAR PLANETS AND BROWN DWARFS  
02/04/1999 - 09/30/2002 FY02: \$0 Total: \$58,000  
Prin. Invest.: C A GRIFFITH  
Tech. Officer: HQ/J BOYCE  
CASE Category: 11 - ASTRONOMY

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8203**                    **NORTHERN ARIZONA UNIV**                    **1371**  
 X-RAY PROCESSING OF COMETARY ICE MIXTURES  
 02/08/1999 - 01/31/2003                    FY02: \$0                    Total: \$102,000  
*Prin. Invest.:* D M CORNELISON  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9214**                    **NORTHERN ARIZONA UNIV**                    **1372**  
 STRUCTURE AND COMPOSITION OF PLANETARY ATMOSPHERES  
 03/09/2000 - 03/14/2003                    FY02: \$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**                    **1373**  
 DYNAMICS, COMPOSITION, AND THERMAL STRUCTURE OF TITAN'S UPPER  
 ATMOSPHERE  
 08/06/2001 - 08/14/2004                    FY02: \$0                    Total: \$41,802  
*Prin. Invest.:* R YELLE  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 11239**                    **NORTHERN ARIZONA UNIV**                    **1374**  
 SPECTROSCOPIC INVESTIGATIONS OF TITAN'S ATMOSPHERE AND SUR-  
 FACE  
 08/15/2001 - 11/30/2001                    FY02: \$0                    Total: \$70,600  
*Prin. Invest.:* C GRIFFITH  
*Tech. Officer:* GSFC/J HILMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11729**                    **NORTHERN ARIZONA UNIV**                    **1375**  
 PROCESSING AND ANALYSIS OF COMETARY ICE MIXTURES  
 02/14/2002 - 02/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D CORNELISON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12510**                    **NORTHERN ARIZONA UNIV**                    **1376**  
 CONTINUED INVESTIGATIONS OF MARTIAN IMPACT CRATER MORPHOLO-  
 GIES AND MORPHOMETRIES  
 09/05/2002 - 08/31/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* N BARLOW  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5356**                    **NORTHERN ARIZONA UNIV**                    **1377**  
 STUDY OF THE HOST ROCKS OF CARBONACEOUS MATTER FROM IMPACT  
 DEPOSITS, METEORITES & EXPERIMENTAL PROD  
 09/29/1999 - 03/31/2001                    FY02: \$0                    Total: \$30,000  
*Prin. Invest.:* J H WITTKE  
*Tech. Officer:* ARC/M L FONDA, ARC/T E BUNCH  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5429**                    **NORTHERN ARIZONA UNIV**                    **1378**  
 AN UNSTEADY REYNOLDS-AVERAGED NAVIER-STOKES SIMULATION OF  
 THE FLOW AROUND AN UNCONFINED CUBOID AT H  
 03/22/2001 - 06/14/2003                    FY02: \$0                    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 COLL**                    **1379**  
 STATE AND LOCAL GOVERNMENT APPLICATIONS PROGRAM  
 06/07/2000 - 12/31/2001                    FY02: \$0                    Total: \$872,000  
*Prin. Invest.:* W W ORR  
*Tech. Officer:* ARC/E P CONDON  
*CASE Category:* 13 - PHYSICS

**NAG 5 11550**                    **PRESCOTT COLL**                    **1380**  
 STATE AND LOCAL GOVERNMENT APPLICATIONS PROGRAM  
 03/06/2002 - 02/28/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* W ORR  
*Tech. Officer:* GSFC/RVENEZIA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2023**                    **UNIV OF ARIZONA**                    **1381**  
 SATELLITE DATA STUDIES OF STRATOSPHERIC OZONE MY 1/3  
 03/18/1998 - 04/30/2001                    FY02: \$0                    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**                    **1382**  
 DEVELOPMENT OF ANALYSIS METHODS FOR DESIGNING WITH COMPO-  
 NENTS  
 03/31/1998 - 03/31/2001                    FY02: \$0                    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**                    **1383**  
 BOLTED DOUBLE-LAP JOINTS W/SANDWICH PANELS & LAMINATES UNDER  
 MECH & THERMAL LOADING  
 04/08/1998 - 04/07/2001                    FY02: \$0                    Total: \$155,176  
*Prin. Invest.:* E MADENCI  
*Tech. Officer:* LARC/S P WALKER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 2218**                    **UNIV OF ARIZONA**                    **1384**  
 IMPROVEMENT AND REFINEMENT OF THE GPS/MET (GLOBAL POSITIONING  
 SYS/METEOROLOGY) DATA ANAL ALGORITHM  
 08/10/1999 - 07/31/2001                    FY02: \$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**                    **1385**  
 TAILORING OF BONDED AND BOLTED LAP JOINTS AND PATCH REPAIR OF  
 DAMAGED COMPOSITE PANELS  
 06/28/2000 - 10/31/2002                    FY02: \$0                    Total: \$198,450  
*Prin. Invest.:* E MADENCI  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01124**                    **UNIV OF ARIZONA**                    **1386**  
 SAGE II AND SAGE III SATELLITE VALIDATION AND SCIENCE STUDIES  
 09/18/2001 - 03/31/2004                    FY02: \$0                    Total: \$43,700  
*Prin. Invest.:* B M HERMAN  
*Tech. Officer:* LARC/W P CHU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

<b>NAG 1 02017</b>	<b>UNIV OF ARIZONA</b>	<b>1387</b>	<b>NAG 5 3436</b>	<b>UNIV OF ARIZONA</b>	<b>1395</b>
SATELLITE DATA STUDIES OF STRATOSPHERIC OZONE MY 1/3			ABSOLUTE RADIOMETRIC CALIBRATION AND ATMOSPHERIC CORRECTION		
12/07/2001 - 12/06/2004	FY02: \$0	Total: \$0	OF LANDSAT-7 THEMATIC MAPPER.		
<i>Prin. Invest.:</i> L L HOOD			10/07/1996 - 06/30/2001	FY02: \$0	Total: \$693,679
<i>Tech. Officer:</i> LARC/G L MADDREA			<i>Prin. Invest.:</i> C J THOME		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>Tech. Officer:</i> GSFC/D L WILLIAMS		
			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 2 1187</b>	<b>UNIV OF ARIZONA</b>	<b>1388</b>	<b>NAG 5 3631</b>	<b>UNIV OF ARIZONA</b>	<b>1396</b>
INFLUENCE OF UNWEIGHTING ON INSULIN SIGNAL TRANSDUCTION IN			PLANET FORMATION AND EVOLUTION: COLLISIONAL AND		
MUSCLE			02/12/1997 - 09/30/2001	FY02: \$0	Total: \$426,690
03/18/1998 - 04/30/2002	FY02: \$0	Total: \$425,994	<i>Prin. Invest.:</i> R GREENBERG		
<i>Prin. Invest.:</i> M E TISCHLER, E J HENRIKSEN			<i>Tech. Officer:</i> GSFC/P G ROGERS		
<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)					
<b>NAG 2 1369</b>	<b>UNIV OF ARIZONA</b>	<b>1389</b>	<b>NAG 5 3640</b>	<b>UNIV OF ARIZONA</b>	<b>1397</b>
EFFECT OF MICROGRAVITY ON THE DEVELOPMENT OF THE IMMUNE			UTILIZATION OF EOS DATA IN QUANTIFYING THE PROCESS HYDROLOGIC		
SYSTEM			CYCLE IN ARID/SEMI-ARID REGIONS		
08/02/1999 - 07/31/2003	FY02: \$0	Total: \$471,605	02/12/1997 - 03/31/2002	FY02: \$0	Total: \$2,809,008
<i>Prin. Invest.:</i> D DELUCA			<i>Prin. Invest.:</i> S SOROOSHAIN		
<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY			<i>Tech. Officer:</i> GSFC/E Y WOOD		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 2 1446</b>	<b>UNIV OF ARIZONA</b>	<b>1390</b>	<b>NAG 5 3791</b>	<b>UNIV OF ARIZONA</b>	<b>1398</b>
CONSTRUCTION METHODS FOR VERY LARGE FORMAT FAR INFRARED			A STUDY OF DUST JET EVOLUTION IN COMET HALLEY		
ARRAYS			03/07/1997 - 08/31/2002	FY02: \$0	Total: \$233,634
09/28/2000 - 08/31/2002	FY02: \$0	Total: \$50,000	<i>Prin. Invest.:</i> M M LARSON		
<i>Prin. Invest.:</i> E T YOUNG			<i>Tech. Officer:</i> GSFC/J BERGSTRALH		
<i>Tech. Officer:</i> ARC/C R MCCREIGHT, ARC/R E MCMURRAY			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<i>CASE Category:</i> 11 - ASTRONOMY					
<b>NAG 3 1869</b>	<b>UNIV OF ARIZONA</b>	<b>1391</b>	<b>NAG 5 3796</b>	<b>UNIV OF ARIZONA</b>	<b>1399</b>
AN EXPERIMENTAL STUDY OF RICHTMYER			RELATIVE ABUNDANCES OF <sup>13</sup> C, <sup>18</sup> O, <sup>15</sup> N AND <sup>2</sup> H ON TRIBEMEA-		
05/09/1996 - 05/08/2002	FY02: \$0	Total: \$414,000	MENTS AND REFLECTANCE SPECTROSCOPY		
<i>Prin. Invest.:</i> J JACOBS			03/11/1997 - 03/14/2003	FY02: \$0	Total: \$421,245
<i>Tech. Officer:</i> GRC/A T CHAI			<i>Prin. Invest.:</i> D H BROWN		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>Tech. Officer:</i> GSFC/P ROGERS		
			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<b>NAG 3 2154</b>	<b>UNIV OF ARIZONA</b>	<b>1392</b>	<b>NAG 5 3914</b>	<b>UNIV OF ARIZONA</b>	<b>1400</b>
MODELING OF TRANSPORT PROCESSES IN A SOLID OXIDE ELECTROLYZED			SUPPORT FOR THE SPACE IMAGERY CENTER		
GENERATING OXYGEN ON MARS			02/21/1997 - 12/31/2000	FY02: \$0	Total: \$78,601
04/10/1998 - 01/31/2002	FY02: \$0	Total: \$343,750	<i>Prin. Invest.:</i> R G STROM		
<i>Prin. Invest.:</i> K R SRIDHAR			<i>Tech. Officer:</i> GSFC/P G ROGERS		
<i>Tech. Officer:</i> GRC/I J S LING, GRC/B S SINGH			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<i>CASE Category:</i> 13 - PHYSICS					
<b>NAG 3 2354</b>	<b>UNIV OF ARIZONA</b>	<b>1393</b>	<b>NAG 5 3937</b>	<b>UNIV OF ARIZONA</b>	<b>1401</b>
RESONANCE EFFECTS IN SINGLE- AND DOUBLE-DIFFUSIVE SYSTEMS			PLANETARY SPECTROSCOPY		
UNDER GRAVITY MODULATION			03/26/1997 - 07/31/2001	FY02: \$0	Total: \$267,280
03/15/2000 - 11/30/2003	FY02: \$0	Total: \$145,000	<i>Prin. Invest.:</i> D FINK		
<i>Prin. Invest.:</i> C F CHEN			<i>Tech. Officer:</i> GSFC/J BERGSTRALH		
<i>Tech. Officer:</i> GRC/C E NIEDERHAUS			<i>CASE Category:</i> 11 - ASTRONOMY		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER					
<b>NAG 3 2725</b>	<b>UNIV OF ARIZONA</b>	<b>1394</b>	<b>NAG 5 3938</b>	<b>UNIV OF ARIZONA</b>	<b>1402</b>
AN EXPERIMENTAL INVESTIGATION OF INCOMPRESSIBLE RICHTMYER-			BEGINNING RESEARCH WITH THE 1.8-METER SPACEWATCH T		
MESHKOV INSTABILITY			03/10/1997 - 11/30/2000	FY02: \$0	Total: \$387,660
03/07/2002 - 11/30/2005	FY02: \$0	Total: \$0	<i>Prin. Invest.:</i> D GEHRELS		
<i>Prin. Invest.:</i> D NIEDERHAUS			<i>Tech. Officer:</i> GSFC/T MORGAN		
<i>Tech. Officer:</i> GRC/M HASAN			<i>CASE Category:</i> 11 - ASTRONOMY		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER					
<b>NAG 5 4214</b>	<b>UNIV OF ARIZONA</b>	<b>1403</b>			
INTERIORS AND ATMOSPHERES OF THE OUTER PLANETS					
03/24/1997 - 12/31/2002	FY02: \$0	Total: \$336,648			
<i>Prin. Invest.:</i> D B HUBBARD					
<i>Tech. Officer:</i> GSFC/J BERGSTRALH					
<i>CASE Category:</i> 11 - ASTRONOMY					

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 4598** **UNIV OF ARIZONA** **1404**  
 LONG TERM DOPPLER SHIFT AND LINE PROFILE STUDIES OF TARGET STARS  
 05/20/1997 - 02/28/2002 FY02: \$0 Total: \$410,967  
*Prin. Invest.:* D S MCMILLAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4767** **UNIV OF ARIZONA** **1405**  
 NOBLE GAS STUDIES OF EARLY SOLAR SYSTEM HISTORY  
 06/09/1997 - 05/31/2002 FY02: \$0 Total: \$228,000  
*Prin. Invest.:* D D SWINDLE  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4832** **UNIV OF ARIZONA** **1406**  
 COSMOGENIC <sup>14</sup>C IN METEORITES AND LUNAR SAMPLES  
 06/17/1997 - 05/31/2002 FY02: \$0 Total: \$175,000  
*Prin. Invest.:* D JULL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4834** **UNIV OF ARIZONA** **1407**  
 TRANSPORT EQUATIONS OF COSMIC RAYS  
 06/17/1997 - 11/30/2000 FY02: \$0 Total: \$201,585  
*Prin. Invest.:* M KOTA  
*Tech. Officer:* GSFC/M AFORMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4944** **UNIV OF ARIZONA** **1408**  
 MINERALOGIC AND TRACE-ELEMENT STUDIES OF METEORITE IMPACTS  
 06/23/1997 - 03/14/2001 FY02: \$0 Total: \$799,000  
*Prin. Invest.:* D V BOYNTON  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5336** **UNIV OF ARIZONA** **1409**  
 FULL FUNDING FOR THE 1ST YEAR OF THE GRANT FOR \$10 K, PI: G. G. WILLIAMS  
 GRANT TITLE: LOTIS (W/ PARK)  
 05/31/2001 - 09/30/2002 FY02: \$0 Total: \$10,000  
*Prin. Invest.:* G WILLIAMS  
*Tech. Officer:* WFF/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6339** **UNIV OF ARIZONA** **1410**  
 VALIDATION AND CORRECTION FOR THE MODIS SPATIAL RESPONSE  
 10/02/1997 - 09/30/2002 FY02: \$0 Total: \$593,294  
*Prin. Invest.:* R SCHOWENGERDT  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6543** **UNIV OF ARIZONA** **1411**  
 IMPACT CRATERING AND THE EVOLUTION OF THE TERRESTRIAL PLANETS  
 12/08/1997 - 09/30/2001 FY02: \$0 Total: \$592,500  
*Prin. Invest.:* H MELOSH  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6779** **UNIV OF ARIZONA** **1412**  
 ANALYSIS OF ICE CORES FOR ESTIMATING ACCUMULATION PATTERNS AND PAST ATMOSPHERIC CHEMISTRY IN GREENLAND  
 01/14/1998 - 06/30/2001 FY02: \$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** **1413**  
 A COMPREHENSIVE THEORY FOR M DWARFS, BROWN DWARFS, AND GIANT PLANETS-ATP  
 02/24/1998 - 02/14/2002 FY02: \$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** **1414**  
 INFRARED OBSERVATIONS OF SMALL BODIES IN THE OUTER SOLAR SYSTEM  
 03/10/1998 - 03/31/2001 FY02: \$0 Total: \$149,939  
*Prin. Invest.:* R H BROWN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7089** **UNIV OF ARIZONA** **1415**  
 STRUCTURE OF THE HELIOSPHERE INFERRED FROM VOYAGER UVS MEASUREMENTS  
 02/23/1998 - 01/31/2003 FY02: \$0 Total: \$117,700  
*Prin. Invest.:* B R SANDEL  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7215** **UNIV OF ARIZONA** **1416**  
 INCORPORATION OF NOBLE GASES INTO INTERSTELLAR ICE ANALOGS  
 03/31/1998 - 05/31/2001 FY02: \$0 Total: \$87,300  
*Prin. Invest.:* T D SWINDLE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7249** **UNIV OF ARIZONA** **1417**  
 MODELING OF MOSS AND LICHEN IN THE BOREAL FORESTS  
 04/28/1998 - 12/31/2000 FY02: -\$281 Total: \$141,940  
*Prin. Invest.:* K E SCHAUDT  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7257** **UNIV OF ARIZONA** **1418**  
 ALGORITHM FOR FUTURE OZONE PROFILING USING LIMS SCATTER MEASUREMENTS  
 04/14/1998 - 06/30/2002 FY02: \$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** **1419**  
 THERMAL HISTORY OF PLANETARY MATERIALS: EXPERIMENTAL & THEORETICAL STUDIES, AND APPLICATIONS  
 04/29/1998 - 04/30/2001 FY02: \$0 Total: \$179,000  
*Prin. Invest.:* J GANGULY  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7499** **UNIV OF ARIZONA** **1420**  
 THEORETICAL MODELS OF EXTRASOLAR GIANT PLANETS  
 06/01/1998 - 04/30/2002 FY02: \$0 Total: \$145,000  
*Prin. Invest.:* A BURROWS  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7533** **UNIV OF ARIZONA** **1421**  
 MOSAIC OF CCDS TO SURVEY FOR ASTEROIDS AND COMETS  
 06/11/1998 - 12/31/2001 FY02: \$0 Total: \$730,006  
*Prin. Invest.:* R S MCMILLAN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7554** **UNIV OF ARIZONA** **1422**  
 PRECURSORY SIGNALS ASSOCIATED WITH REGIONAL AND IN TERANNUAL  
 VARIABILITY OF THE NORTH AMERICAN SUMME  
 06/25/1998 - 06/30/2001 FY02: \$0 Total: \$399,999  
*Prin. Invest.:* W SHUTTLEWORTH  
*Tech. Officer:* GSFC/E ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7734** **UNIV OF ARIZONA** **1423**  
 HEAVY ELEMENT ABUNDANCES: CLUES TO THE EVOLUTION OF STAR  
 12/18/1998 - 10/31/2003 FY02: \$0 Total: \$342,731  
*Prin. Invest.:* D GARNETT  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7758** **UNIV OF ARIZONA** **1424**  
 2MASS ASTEROID AND COMET CATALOG  
 12/08/1998 - 09/30/2001 FY02: \$0 Total: \$110,700  
*Prin. Invest.:* M V SYKES  
*Tech. Officer:* GSFC/TMORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7780** **UNIV OF ARIZONA** **1425**  
 WORKSHOP ON SUN-TERRESTRIAL CLIMATE CONNECTIONS  
 10/29/1998 - 07/31/2001 FY02: \$0 Total: \$84,017  
*Prin. Invest.:* W A SPRIGG  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7793** **UNIV OF ARIZONA** **1426**  
 THEORY AND MODELING OF ENERGETIC PARTICLE COMPOSIT ION SPEC-  
 TRA AND ANISOTROPIES AND TIME VARIA  
 12/10/1998 - 10/31/2001 FY02: \$0 Total: \$280,414  
*Prin. Invest.:* J GIACALONE  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7834** **UNIV OF ARIZONA** **1427**  
 A COMPARISON OF OBSERVATIONS AND GCM SIMULATIONS O F THE  
 QUASI-DECADAL OSCILLATION  
 12/14/1998 - 03/14/2002 FY02: \$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** **1428**  
 SOLAR SYSTEM RESEARCH WITH THE SPACEWATCH 1.8-M TE LESCOPE  
 12/07/1998 - 11/30/2001 FY02: \$0 Total: \$382,450  
*Prin. Invest.:* D S MCMILLAN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7923** **UNIV OF ARIZONA** **1429**  
 HUBBLE SPACE TELESCOPE ASTRONOMY  
 12/14/1998 - 09/30/2001 FY02: \$0 Total: \$5,683,316  
*Prin. Invest.:* R THOMPSON  
*Tech. Officer:* GSFC/J JELETIC  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7966** **UNIV OF ARIZONA** **1430**  
 STUDY OF SOLAR AND HELIOSPHERIC ENERGETIC IONS VIA ENERGETIC  
 NEUTRAL ATOMS USING CELIAS/SOHO  
 12/15/1998 - 12/31/2001 FY02: \$0 Total: \$135,784  
*Prin. Invest.:* K HSIEH  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7994** **UNIV OF ARIZONA** **1431**  
 THE MARS LOWER AND UPPER ATMOSPHERE: DETAILED COUP LING  
 USING GENERAL CIRCULATION MODELS  
 01/06/1999 - 01/14/2003 FY02: \$0 Total: \$249,896  
*Prin. Invest.:* S BOUGHER  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8051** **UNIV OF ARIZONA** **1432**  
 GALILEO EUV OBSERVATIONS OF IO'S PLASMA TORUS AND JUPITER'S  
 ATMOSPHERE  
 01/13/1999 - 01/14/2001 FY02: \$0 Total: \$114,918  
*Prin. Invest.:* D HERBERT  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8095** **UNIV OF ARIZONA** **1433**  
 PRESERVATION AND ENHANCEMENT OF THE SPACEWATCH DAT A AR-  
 CHIVES  
 01/29/1999 - 01/31/2003 FY02: \$0 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** **1434**  
 COMBINED LIDAR AND RASSIVE SENSING TECHNIQUES FOR CHARACTER-  
 IZATION OF AEROSOL RADIATIVE EFFECTS  
 01/26/1999 - 01/31/2002 FY02: \$0 Total: \$314,862  
*Prin. Invest.:* J A REAGAN  
*Tech. Officer:* GSFC/M MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8152** **UNIV OF ARIZONA** **1435**  
 MARS GLOBAL SURVEYOR AEROBRAKING: THERMOSPHERE- IONOSPHERE  
 TRENDS & MTGCM INTERPRETATION  
 02/11/1999 - 03/31/2002 FY02: \$0 Total: \$125,300  
*Prin. Invest.:* S W BOUGHER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8157** **UNIV OF ARIZONA** **1436**  
 SUPPORT AN EXTENSION SPECIALIST IN GEOSPATIAL INFO RMATION  
 TECHNOLOGY FOR THE STATE OF ARIZONA  
 02/05/1999 - 01/31/2002 FY02: \$0 Total: \$399,349  
*Prin. Invest.:* D YOUNG  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8185** **UNIV OF ARIZONA** **1437**  
 ANALYSIS OF THE CRUSTAL MAGNETIC FIELD OF MARS  
 02/17/1999 - 02/28/2002 FY02: \$0 Total: \$124,200  
*Prin. Invest.:* L L HOOD  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8214** **UNIV OF ARIZONA** **1438**  
 INFLUENCE OF SUBGRID-SCALE HETEROGENEITY ON REMOTE LY  
 SENSED ESTIMATES OF THE AMAZONIAN SURFACE EN  
 03/01/1999 - 02/28/2003 FY02: \$0 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** **1439**  
 A COMPREHENSIVE THEORETICAL STUDY OF THE INNER 10 PARSECS AT  
 THE GALACTIC CENTER (ATP98)  
 02/26/1999 - 02/28/2002 FY02: \$0 Total: \$182,404  
*Prin. Invest.:* F MELIA  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8308** **UNIV OF ARIZONA** **1440**  
 QUANTITATIVE INTERPRETATION OF VOLCANIC FEATURES I N MOC IM-  
 AGES  
 03/03/1999 - 11/30/2001 FY02: \$0 Total: \$94,300  
*Prin. Invest.:* L KESZTHELYI  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8340** **UNIV OF ARIZONA** **1441**  
 COLORIMETRY OF THE GALILEAN SATELLITES  
 04/07/1999 - 03/31/2001 FY02: \$0 Total: \$74,784  
*Prin. Invest.:* D E GEISLER  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8341** **UNIV OF ARIZONA** **1442**  
 MODELS AND MODES OF ENABLING THE USE OF NASA EARTH SCIENCE  
 AND DATA IN DECISION MAKING  
 04/07/1999 - 12/31/2002 FY02: \$0 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** **1443**  
 ACCURATE SPECTROPHOTOMETRY OF THE PATHFINDER LANDI NG SITE  
 02/26/1999 - 02/28/2001 FY02: \$0 Total: \$145,000  
*Prin. Invest.:* P H SMITH  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8426** **UNIV OF ARIZONA** **1444**  
 MULTIWAVELENGTH DIAGNOSTICS OF GALAXY EVOLUTION AN D STAR  
 FORMATION LTSA98  
 04/26/1999 - 04/30/2004 FY02: \$0 Total: \$365,832  
*Prin. Invest.:* R C KENNICUTT  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8502** **UNIV OF ARIZONA** **1445**  
 SUPPORT OF ACTIVITIES AND OPERATION OF THE GLOBAL ENERGY AND  
 WATER CYCLE EXPERIMENT SCIENCE STE  
 05/11/1999 - 05/14/2003 FY02: \$0 Total: \$507,641  
*Prin. Invest.:* S ROROOSHIAN  
*Tech. Officer:* GSFC/R SCHIEFFER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8503** **UNIV OF ARIZONA** **1446**  
 AN INTEGRATED INFORMATION SYSTEM FOR MULTI-PURPOSE USER-  
 ADAPTIVE ACCESS TO LAND SURFACE HYDROLOGIC  
 05/11/1999 - 05/14/2003 FY02: \$0 Total: \$1,052,325  
*Prin. Invest.:* S SOROOSHIAN  
*Tech. Officer:* GSFC/E WOOD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8660** **UNIV OF ARIZONA** **1447**  
 VALIDATION OF MODLAND PRODUCTS WITH LIGHT AIRCRAFT AT LBA AND  
 COMM SITES WITH MQUALS.  
 08/31/1999 - 08/31/2001 FY02: \$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** **1448**  
 MEMBERSHIP TO THE AEROSOL RADIATIVE FORCING SCIENC E TEAM  
 07/16/1999 - 07/14/2002 FY02: \$0 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** **1449**  
 THE PLANET-B NEUTRAL MASS SPECTROMETER: THERMOSPHE RE-  
 IONOSPHERE STUDIES USING THE MTGCM  
 10/05/1999 - 10/14/2001 FY02: \$0 Total: \$50,000  
*Prin. Invest.:* S W BOUGHER  
*Tech. Officer:* GSFC/J E RICHARDS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8911** **UNIV OF ARIZONA** **1450**  
 COPERNICAN CRATERS AND THE PHANEROZOIC IMPACT FLUX  
 12/29/1999 - 01/31/2003 FY02: \$0 Total: \$83,850  
*Prin. Invest.:* A S MCEWEN  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8937** **UNIV OF ARIZONA** **1451**  
 NUMERICAL MODELING OF TECTONIC PROCESSES AND METOR ITE  
 IMPACTS ON THE GALILEAN SATELLITES  
 01/13/2000 - 01/14/2003 FY02: \$0 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** **1452**  
 CYCLODIAL LINEAMENTS AND TIDAL TECTONICS ON EUROPA  
 01/13/2000 - 04/14/2002 FY02: \$0 Total: \$105,000  
*Prin. Invest.:* R GREENBERG  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8949** **UNIV OF ARIZONA** **1453**  
 THEORETICAL STUDIES OF VOLATILE PROCESSES IN SOLAR SYSTEM  
 BODIES  
 01/19/2000 - 01/31/2003 FY02: \$0 Total: \$58,260  
*Prin. Invest.:* J I LUNINE  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

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**NAG 5 8952**                      **UNIV OF ARIZONA**                      **1454**  
 IO AND ITS PLASMA TORUS: ATMOSPHERE-MAGNETOSPHERE INTERACTIONS  
 01/21/2000 - 12/31/2002                      FY02: \$0                      Total: \$109,340  
*Prin. Invest.:* F HERBERT  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8970**                      **UNIV OF ARIZONA**                      **1455**  
 HYDROCARBONS IN JUPITER'S TROPOSPHERE  
 01/24/2000 - 01/14/2003                      FY02: \$0                      Total: \$101,000  
*Prin. Invest.:* D HUNTEN  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9072**                      **UNIV OF ARIZONA**                      **1456**  
 AN ALL-METAL CASSEGRAIN TELESCOPE FOR SPACE APPLICATIONS  
 02/15/2000 - 02/14/2003                      FY02: \$0                      Total: \$155,360  
*Prin. Invest.:* J HOLBERG  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9079**                      **UNIV OF ARIZONA**                      **1457**  
 ELECTRON TEMPERATURE IN THE IO PLASMA TORUS: THE KEY TO UNDERSTANDING TORUS ENERGY FLOW  
 02/23/2000 - 02/28/2003                      FY02: \$0                      Total: \$128,945  
*Prin. Invest.:* F L HERBERT  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9081**                      **UNIV OF ARIZONA**                      **1458**  
 NEO FOLLOWUP OBSERVATIONS TO THE NASA NEAR EARTH OBJECTS OBSERVATIONS PROGRAM  
 02/16/2000 - 02/14/2003                      FY02: \$0                      Total: \$142,664  
*Prin. Invest.:* S M LARSON  
*Tech. Officer:* GSFC/T H MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9100**                      **UNIV OF ARIZONA**                      **1459**  
 MICROMACHINING OF THZ WAVEGUIDE AND QUASI-OPTICAL COMPONENTS FOR SUB-ORBITAL AND SPACE-BORNE DETECTORS  
 02/24/2000 - 01/31/2003                      FY02: \$0                      Total: \$303,000  
*Prin. Invest.:* C K WALKER  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9112**                      **UNIV OF ARIZONA**                      **1460**  
 EFFECTS OF LITHOLOGIES ON IMPACT CRATERING: NUMERICAL MODELING OF KNOWN TERRESTRIAL CRATERS  
 02/28/2000 - 02/28/2002                      FY02: \$0                      Total: \$81,900  
*Prin. Invest.:* E PIERAZZO  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9174**                      **UNIV OF ARIZONA**                      **1461**  
 PLANNING, COORDINATION, MATERIALS PREPARATION & MARKET SURVEY FOR REGIONAL INFORMATIONAL WORKS  
 03/06/2000 - 12/31/2001                      FY02: \$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**                      **1462**  
 INVESTIGATION OF EXTREME TEMPERATURE VOLCANISM ON IO  
 03/08/2000 - 03/31/2003                      FY02: \$0                      Total: \$47,500  
*Prin. Invest.:* L KESZTHELYI  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9181**                      **UNIV OF ARIZONA**                      **1463**  
 ESTABLISHMENT OF ABSOLUTE SPECTROPHOTOMETRIC STANDARD STARS FROM 100 A TO 10,000 A - ADP99  
 03/07/2000 - 03/14/2002                      FY02: \$0                      Total: \$86,434  
*Prin. Invest.:* J HOLBERG  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9182**                      **UNIV OF ARIZONA**                      **1464**  
 ANALYSIS OF THE IUE LOW DISPERSION SPECTRA OF THE WHITE DWARF STARS ADP99  
 03/07/2000 - 03/14/2002                      FY02: \$0                      Total: \$90,528  
*Prin. Invest.:* J HOLBERG  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9198**                      **UNIV OF ARIZONA**                      **1465**  
 AN IN SITU GEOCHRONOLOGY SYSTEM BASED ON LASER-INDUCED BREAKDOWN SPECTROSCOPY & NOBLE GAS MASS SPECTROMETRY  
 03/09/2000 - 03/14/2003                      FY02: \$0                      Total: \$415,884  
*Prin. Invest.:* T SWINDLE  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9205**                      **UNIV OF ARIZONA**                      **1466**  
 A MULTI-WAVELENGTH STUDY OF THE INNER 50 PC-REGION AT THE GALACTIC CENTER (LTS99)  
 03/14/2000 - 03/14/2005                      FY02: \$0                      Total: \$89,590  
*Prin. Invest.:* F MELIA  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9208**                      **UNIV OF ARIZONA**                      **1467**  
 LIS VALIDATION STUDIES USING LIGHTNING AT THE KSC - ER  
 03/23/2000 - 03/31/2002                      FY02: \$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**                      **1468**  
 MEASURING MARTIAN ATMOSPHERIC WATER VAPOR & CARBON DIOXIDE  
 03/23/2000 - 03/21/2001                      FY02: \$0                      Total: \$45,000  
*Prin. Invest.:* A L SPRAGUE  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9293**                      **UNIV OF ARIZONA**                      **1469**  
 REMOTE SENSING FOR DEBRIS FLOODING HAZARD ASSESSMENT IN ARID REGIONS.  
 03/24/2000 - 03/31/2003                      FY02: \$0                      Total: \$150,000  
*Prin. Invest.:* V R BAKER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

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**NAG 5 9306** **UNIV OF ARIZONA** **1470**  
 QUASARS AS PROBES (L TSA 99)  
 03/20/2000 - 03/31/2005 FY02: \$0 Total: \$200,872  
*Prin. Invest.:* C D IMPEY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9325** **UNIV OF ARIZONA** **1471**  
 NGST AD HOC SCIENCE WORKING GROUP (ASWG) SUPPORT  
 03/22/2000 - 03/14/2001 FY02: \$0 Total: \$15,150  
*Prin. Invest.:* M MEYER  
*Tech. Officer:* GSFC/E P SMITH  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 9408** **UNIV OF ARIZONA** **1472**  
 A DATABASE OF THE WHITE DWARF STARS  
 04/11/2000 - 04/30/2003 FY02: \$0 Total: \$274,500  
*Prin. Invest.:* J HOLBERG  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9425** **UNIV OF ARIZONA** **1473**  
 PENETRATOR-BASED SAMPLE COLLECTION OF COMETS AND OTHER  
 SMALL BODIES  
 04/17/2000 - 04/30/2003 FY02: \$0 Total: \$432,791  
*Prin. Invest.:* W BOYNTON  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9435** **UNIV OF ARIZONA** **1474**  
 GEOCHEMICAL EVOLUTION OF THE EARTH, MOON, IGNEOUS METEORITES  
 & OTHER TERRESTRIAL PLANETARY BODIES  
 04/24/2000 - 12/31/2002 FY02: \$0 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** **1475**  
 A SOUTHERN HEMISPHERE NEO SURVEY  
 04/18/2000 - 03/31/2003 FY02: \$0 Total: \$213,323  
*Prin. Invest.:* S LARSON  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9549** **UNIV OF ARIZONA** **1476**  
 IMPROVING SATELLITE RAIN EST. ALGORITHMS USING A COMBO. OF TRMM  
 INSTANTANEOUS PRECIP. RETRIEVALS  
 06/19/2000 - 11/30/2002 FY02: \$0 Total: \$163,110  
*Prin. Invest.:* S SOROOSHIAN  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9577** **UNIV OF ARIZONA** **1477**  
 INFRARED EMISSION SPECTROSCOPY OF ASTROPHYSICAL MOLECULES  
 05/17/2000 - 04/30/2001 FY02: \$0 Total: \$20,000  
*Prin. Invest.:* D F BERNATH  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9609** **UNIV OF ARIZONA** **1478**  
 STUDY OF STAR AND PLANETARY SYSTEM FORMATION  
 05/18/2000 - 03/14/2003 FY02: \$0 Total: \$54,712  
*Prin. Invest.:* A CAMERON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9691** **UNIV OF ARIZONA** **1479**  
 A STUDY OF DUST IN AND AROUND GALAXIES  
 06/26/2000 - 11/14/2002 FY02: \$0 Total: \$181,283  
*Prin. Invest.:* D F ZARITSKY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9775** **UNIV OF ARIZONA** **1480**  
 CHARACTERIZATION OF THE MARTIAN SURFACE FOR FUTURE MISSIONS  
 06/30/2000 - 06/30/2003 FY02: \$0 Total: \$75,600  
*Prin. Invest.:* A S MCEWEN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9790** **UNIV OF ARIZONA** **1481**  
 IDENTIFICATION OF MARTIAN HYDROTHERMAL SITES: A GEOLOGIC  
 INVESTIGATION UTILIZING MULTIPLE DATASETS  
 07/11/2000 - 07/31/2003 FY02: \$0 Total: \$120,000  
*Prin. Invest.:* V R BAKER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9796** **UNIV OF ARIZONA** **1482**  
 REPRESENTING HETEROGENEOUS VEGETATION IN THE CPTC ETA MOD-  
 ELS  
 07/20/2000 - 09/30/2003 FY02: \$0 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** **1483**  
 SO/GSFC SUPER-LOTIS PROJECT COLLABORATION  
 07/19/2000 - 07/31/2001 FY02: \$0 Total: \$31,444  
*Prin. Invest.:* B PETERSON  
*Tech. Officer:* GSFC/N GEHRELS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9957** **UNIV OF ARIZONA** **1484**  
 XMM OBSERVATIONS OF ISOLATED ELLIPTICAL GALAXIES  
 09/13/2000 - 09/14/2002 FY02: \$0 Total: \$45,500  
*Prin. Invest.:* A I ZABLUDOFF  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10007** **UNIV OF ARIZONA** **1485**  
 ASSESSMENT OF GRANT PROGRAM UNDER CENTERS OF EXCELLENCE IN  
 APPLICATIONS OF REMOTE SENSING IN REGION  
 09/20/2000 - 09/30/2002 FY02: \$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** **1486**  
 SAR INVESTIGATIONS OF LATE PLEISTOCENE PALEOFLOODS PALEO-  
 LAKES, AND PALEOCLIMATE  
 11/28/2000 - 11/30/2003 FY02: \$0 Total: \$50,000  
*Prin. Invest.:* V BAKER  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



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**NAG 5 10162**                      **UNIV OF ARIZONA**                      **1487**  
 SURFACE CHANGES ON IO  
 12/20/2000 - 12/31/2003                      FY02: \$0                      Total: \$45,000  
*Prin. Invest.:* P GEISSLER  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10166**                      **UNIV OF ARIZONA**                      **1488**  
 OBSERVATIONS AND NUMERICAL MODELING OF TECTONIC PROCESSES  
 ON IO  
 01/04/2001 - 11/30/2003                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* E TURTLE  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10167**                      **UNIV OF ARIZONA**                      **1489**  
 TIDAL TECTONIC PROCESSES ON EUROPA: DISPLACEMENTS, STRESS  
 AND CYCLOIDS  
 01/04/2001 - 11/30/2004                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* R GREENBERG  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10174**                      **UNIV OF ARIZONA**                      **1490**  
 IMPROVING REGIONAL AND GLOBAL RAINFALL ESTIMATES USING THE  
 COMBINATIONS OF TRMM SATELLITE OBSERVATI  
 12/21/2000 - 12/31/2001                      FY02: \$0                      Total: \$77,500  
*Prin. Invest.:* S SOROOSHIAN  
*Tech. Officer:* GSFC/A J NEGRI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10205**                      **UNIV OF ARIZONA**                      **1491**  
 INFRARED & NEAR INFRARED SPECTROSCOPY OF ASTROPHYSICAL  
 MOLECULES  
 12/28/2000 - 12/31/2003                      FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* P BERNATH  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10245**                      **UNIV OF ARIZONA**                      **1492**  
 ACCRETION ONTO MAGNETIC WHITE DWARFS (FUSE 00)  
 02/12/2001 - 02/14/2002                      FY02: \$0                      Total: \$7,455  
*Prin. Invest.:* G SCHMIDT  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10264**                      **UNIV OF ARIZONA**                      **1493**  
 ANALYSIS OF ICE CORES FOR ESTIMATING ACCUMULATION PATTERNS  
 AND THE INFLUENCE OF ACCUMULATION ON ICE  
 01/09/2001 - 12/31/2001                      FY02: \$0                      Total: \$149,978  
*Prin. Invest.:* R BALES  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10267**                      **UNIV OF ARIZONA**                      **1494**  
 RETRIEVING BI-REFLECTANCE SPECTRA OF ROCKS ILLUMINATED BY  
 DIRECT SUNLIGHT & BRIGHT SKY: A RE-E  
 01/08/2001 - 12/31/2002                      FY02: \$0                      Total: \$114,200  
*Prin. Invest.:* P H SMITH  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10294**                      **UNIV OF ARIZONA**                      **1495**  
 EVOLUTION OF VOLATILES IN THE SOLAR SYSTEM  
 02/08/2001 - 02/14/2003                      FY02: \$0                      Total: \$30,000  
*Prin. Invest.:* J I LUNINE  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10315**                      **UNIV OF ARIZONA**                      **1496**  
 A FUSE SEARCH FOR NITROGEN AND CARBON IN HOT WHITE DWARFS -  
 FUSE 2000  
 01/26/2001 - 04/30/2002                      FY02: \$0                      Total: \$46,300  
*Prin. Invest.:* J B HOLBERG  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10332**                      **UNIV OF ARIZONA**                      **1497**  
 SUPPORT FOR SPACE IMAGERY CENTER NASA REGIONAL PLANETARY  
 IMAGE FACILITY  
 01/30/2001 - 01/31/2005                      FY02: \$0                      Total: \$25,000  
*Prin. Invest.:* D KRING  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10333**                      **UNIV OF ARIZONA**                      **1498**  
 SUB-MILLIMETER SPECTROSCOPY OF ASTROPHYSICALLY IMPORTANT  
 METAL-CONTAINING MOLECULES  
 01/30/2001 - 01/31/2002                      FY02: \$0                      Total: \$72,000  
*Prin. Invest.:* L ZIURYYS  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10346**                      **UNIV OF ARIZONA**                      **1499**  
 KUIPER BELT DYNAMICS  
 02/01/2001 - 02/14/2004                      FY02: \$0                      Total: \$40,000  
*Prin. Invest.:* R MALHOTRA  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10441**                      **UNIV OF ARIZONA**                      **1500**  
 AN INFRARED STUDY OF SPACECRAFT TARGETED COMETS  
 02/16/2001 - 02/29/2004                      FY02: \$0                      Total: \$49,400  
*Prin. Invest.:* H CAMPINS  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10442**                      **UNIV OF ARIZONA**                      **1501**  
 2MASS ASTEROIDS, COMETS & SATELLITES  
 02/16/2001 - 02/28/2003                      FY02: \$0                      Total: \$30,900  
*Prin. Invest.:* M SYKES  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10446**                      **UNIV OF ARIZONA**                      **1502**  
 INFRARED OBSERVATIONS OF SMALL BODIES  
 02/20/2001 - 03/31/2004                      FY02: \$0                      Total: \$79,400  
*Prin. Invest.:* R BROWN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10447**                      **UNIV OF ARIZONA**                      **1503**  
 SPACEWATCH SURVEY OF THE SOLAR SYSTEM  
 02/20/2001 - 01/31/2004                      FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* R MCMILLAN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

## ARIZONA

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**NAG 5 10450**                      **UNIV OF ARIZONA**                      **1504**  
 COUPLED PHYSICAL & CHEMICAL PROCESSES IN THE SOLAR NEBULA &  
 EXTRASOLAR PLANETS  
 02/20/2001 - 01/31/2004                      FY02: \$0                      Total: \$40,000  
*Prin. Invest.:* J LUNINE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10452**                      **UNIV OF ARIZONA**                      **1505**  
 MINERALOGIC & TRACE-ELEMENT STUDIES OF METEORITES & METEOR-  
 ITE IMPACTS  
 02/21/2001 - 08/31/2002                      FY02: \$0                      Total: \$180,000  
*Prin. Invest.:* W BOYNTON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10486**                      **UNIV OF ARIZONA**                      **1506**  
 THERMAL HISTORY OF PLANETARY MATERIALS: THEORY, EXPERIMENTS &  
 APPLICATIONS  
 03/05/2001 - 04/30/2004                      FY02: \$0                      Total: \$70,000  
*Prin. Invest.:* J GANGULY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10543**                      **UNIV OF ARIZONA**                      **1507**  
 SOUTHERN HEMISPHERE NEO SURVEY INSTRUMENTATION  
 03/14/2001 - 03/14/2003                      FY02: \$0                      Total: \$500,000  
*Prin. Invest.:* S LARSON  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10592**                      **UNIV OF ARIZONA**                      **1508**  
 IMPACTS & ENVIRONMENTAL CATASTROPHES: A STUDY OF THE EFFECTS  
 OF IMPACT EVENTS ON THE CLIMATE SYST  
 03/21/2001 - 03/31/2002                      FY02: \$0                      Total: \$60,000  
*Prin. Invest.:* E PIERAZZO  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10629**                      **UNIV OF ARIZONA**                      **1509**  
 THE CLASSIFICATION AND DETECTABILITY OF SUBSTELLAR- MASS OB-  
 JECTS  
 03/17/2001 - 03/31/2003                      FY02: \$0                      Total: \$45,000  
*Prin. Invest.:* A BURROWS  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10643**                      **UNIV OF ARIZONA**                      **1510**  
 CODES & DECODERS FOR BANDWIDTH-EFFICIENT COMMUNICATIONS IN  
 NEAR-EARTH MISSIONS.  
 03/21/2001 - 03/31/2003                      FY02: \$0                      Total: \$87,273  
*Prin. Invest.:* W RYAN  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10660**                      **UNIV OF ARIZONA**                      **1511**  
 IMPROVED MARS UPPER ATMOSPHERE CLIMATOLOGY  
 03/21/2001 - 03/31/2002                      FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* S BOUGHER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10700**                      **UNIV OF ARIZONA**                      **1512**  
 TEMPERATURE, GRAVITY AND COMPOSITION OF DAO WHITE DWARFS -  
 FUSE 2000  
 04/13/2001 - 10/14/2002                      FY02: \$0                      Total: \$18,300  
*Prin. Invest.:* J B HOLBERG  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10734**                      **UNIV OF ARIZONA**                      **1513**  
 INCORPORATION OF NOBLE GASES INTO ANALOGS FOR INTERSTELLAR  
 CARBONACEOUS AND METALLIC MATERIALS  
 04/18/2001 - 04/30/2002                      FY02: \$0                      Total: \$20,000  
*Prin. Invest.:* T SWINDLE  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10749**                      **UNIV OF ARIZONA**                      **1514**  
 CAPTURING PLANETARY SCIENCE DATA FROM NASA SUPPORT ED RE-  
 SEARCH  
 04/13/2001 - 04/14/2004                      FY02: \$0                      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**                      **1515**  
 THEORY OF BROWN DWARFS & GIANT PLANETS (ATP-2000)  
 04/23/2001 - 04/30/2004                      FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* A S BURROWS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10827**                      **UNIV OF ARIZONA**                      **1516**  
 THE SMALL SCALE STRUCTURE OF THE UNIVERSE (ATP 2000)  
 05/01/2001 - 05/14/2004                      FY02: \$0                      Total: \$88,244  
*Prin. Invest.:* M STEINMETZ  
*Tech. Officer:* GSFC/R OLIVERSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10843**                      **UNIV OF ARIZONA**                      **1517**  
 RECALIBRATION OF THE NEAR INFRARED CAMERA & MULTI- OBJECT  
 SPECTROMETER (NICMOS) & ANALYSIS OF  
 05/04/2001 - 06/14/2004                      FY02: \$0                      Total: \$1,127,294  
*Prin. Invest.:* R THOMPSON  
*Tech. Officer:* GSFC/J JELETIC  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10853**                      **UNIV OF ARIZONA**                      **1518**  
 OPERATION & OPTIMIZATION OF THE CATALINA SKY SURVEY FOR NEOS  
 05/02/2001 - 04/30/2004                      FY02: \$0                      Total: \$456,500  
*Prin. Invest.:* S LARSEN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10884**                      **UNIV OF ARIZONA**                      **1519**  
 ENERGETIC PARTICLES AND THE EARTH'S ENVIRONMENT IN SPACE  
 05/03/2001 - 04/30/2004                      FY02: \$0                      Total: \$96,451  
*Prin. Invest.:* J KOTA  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

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**NAG 5 10893**                      **UNIV OF ARIZONA**                      **1520**  
 MODELING SUPPORT FOR SEC OBSERVATIONS  
 05/10/2001 - 05/31/2002                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* J JOKIPII  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10961**                      **UNIV OF ARIZONA**                      **1521**  
 INSTRUMENT UPGRADE: OFFNER SPECTROMETER VISIBLE UPGRADE &  
 EXTENSION DESIGN TO 2.5 MICR  
 05/23/2001 - 06/30/2003                      FY02: \$0                      Total: \$74,200  
*Prin. Invest.:* U FINK  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10974**                      **UNIV OF ARIZONA**                      **1522**  
 WAVES, TURBULENCE AND ENERGETIC PARTICLES IN THE HELIOSPHERE  
 05/23/2001 - 05/31/2004                      FY02: \$0                      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**                      **1523**  
 THEORY OF ENERGETIC PARTICLE TRANSPORT IN HELIO- SPHERIC &  
 SOLAR PLASMAS  
 06/05/2001 - 06/14/2004                      FY02: \$0                      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**                      **1524**  
 MONITORING & PREDICTION OF WATER DISTRIBUTION/ AVAILABILITY IN  
 SEMI-ARID REGIONS  
 07/05/2001 - 06/14/2004                      FY02: \$0                      Total: \$525,000  
*Prin. Invest.:* S SOROOSHIAN  
*Tech. Officer:* GSFC/M JASINSKI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11108**                      **UNIV OF ARIZONA**                      **1525**  
 CONSTRAINING THE DARK MATTER HALOS OF GIANT ELLIPTICAL GALAX-  
 IES  
 07/13/2001 - 08/31/2006                      FY02: \$0                      Total: \$99,861  
*Prin. Invest.:* A I ZABLUDOFF  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11153**                      **UNIV OF ARIZONA**                      **1526**  
 STUDIES OF COSMOGONIC PROCESSES  
 08/02/2001 - 07/31/2004                      FY02: \$0                      Total: \$25,000  
*Prin. Invest.:* A CAMERON  
*Tech. Officer:* GSFC/J MBOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11163**                      **UNIV OF ARIZONA**                      **1527**  
 ASSIMILATION OF GPS METEOROLOGICAL DATA INTO WEATHER AND  
 CLIMATE ANALYSES.  
 08/07/2001 - 08/14/2002                      FY02: \$0                      Total: \$33,801  
*Prin. Invest.:* E KURINSKI  
*Tech. Officer:* GSFC/J JOINER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11166**                      **UNIV OF ARIZONA**                      **1528**  
 INTER-CALIBRATION AND UTILIZATION OF GROUND-BASED AND TES DATA  
 TO STUDY MARTIAN WATER VAPOR  
 08/07/2001 - 08/14/2003                      FY02: \$0                      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**                      **1529**  
 PALEOMAGNETIC INVESTIGATION OF POLAR REORIENTATION ON MARS  
 08/07/2001 - 08/14/2004                      FY02: \$0                      Total: \$48,728  
*Prin. Invest.:* L L HOOD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11169**                      **UNIV OF ARIZONA**                      **1530**  
 MONITORING THE GEOLOGICAL ACTIVITY OF MARS  
 08/07/2001 - 08/14/2004                      FY02: \$0                      Total: \$54,000  
*Prin. Invest.:* P E GEISSLER  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11183**                      **UNIV OF ARIZONA**                      **1531**  
 MGS RADIO SCIENCE ELECTRON DENSITY PROFILES AND IMPLICATIONS  
 FOR THE NEUTRAL ATMOSPHERE  
 08/13/2001 - 08/14/2002                      FY02: \$0                      Total: \$45,000  
*Prin. Invest.:* S W BOUGHER  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11188**                      **UNIV OF ARIZONA**                      **1532**  
 RETRIEVAL OF CLOUD PRESSURE FROM OMI MEASUREMENTS USING  
 ROTATIONAL RAMAN SCATTERING  
 08/07/2001 - 08/14/2003                      FY02: \$0                      Total: \$29,000  
*Prin. Invest.:* D FLITTNER  
*Tech. Officer:* GSFC/J JOINER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11195**                      **UNIV OF ARIZONA**                      **1533**  
 COOPERATIVE CENTER FOR ATMOSPHERIC SCIENCE AND TECHNOLOGY  
 08/30/2001 - 09/30/2004                      FY02: \$0                      Total: \$91,223  
*Prin. Invest.:* R LOUGHMAN  
*Tech. Officer:* GSFC/W HOEGY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11316**                      **UNIV OF ARIZONA**                      **1534**  
 USE OF AIRBORNE REMOTE SENSING FOR UNCERTAINTY ASSESSMENTS  
 IN REGIONAL EXTRAPOLATIONS OF GROUND  
 09/17/2001 - 12/14/2001                      FY02: \$0                      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**                      **1535**  
 LANDSAT RADIOMETRIC CALIBRATION: TOWARDS A 20 YEAR RECORD OF  
 CALIBRATED THEMATIC MAPPER CLASS DATA  
 09/14/2001 - 09/14/2004                      FY02: \$0                      Total: \$114,999  
*Prin. Invest.:* K THOME  
*Tech. Officer:* GSFC/B L MARKHAM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

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**NAG 5 11348**                      **UNIV OF ARIZONA**                      **1536**  
 STEWARD OBSERVATORY'S GSFC GCN/SUPERLOTIS PROJECT COLLABORATION  
 09/26/2001 - 07/31/2004                      FY02: \$0                      Total: \$23,063  
*Prin. Invest.:* B PETERSON  
*Tech. Officer:* GSFC/S D BARTHELOMY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11355**                      **UNIV OF ARIZONA**                      **1537**  
 ASU/MICHIGAN COLLABORATION: THE ABUNDANCE & ISOTOPIC COMPOSITION OF HG IN EXTRATERRESTRIALMATERIA  
 09/21/2001 - 02/28/2004                      FY02: \$0                      Total: \$16,842  
*Prin. Invest.:* D LAURETTA  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11381**                      **UNIV OF ARIZONA**                      **1538**  
 ESTIMATING GLOBAL RAINFALL AND STUDYING PRECIPITATION DIURNAL CYCLE USING THE COMBINATIONS OF TRMM  
 10/30/2001 - 12/31/2003                      FY02: \$61,912                      Total: \$61,912  
*Prin. Invest.:* S SOROOSHIAN  
*Tech. Officer:* GSFC/A J NEGR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11433**                      **UNIV OF ARIZONA**                      **1539**  
 LARGE FORMAT FAR-INFRARED DETECTOR ARRAYS  
 12/05/2001 - 04/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E T YOUNG  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11461**                      **UNIV OF ARIZONA**                      **1540**  
 SUPPORT RESEARCH AND SCIENCE REQUIREMENTS AND CAPABILITIES AND THE INSTRUMENT FUNCTIONS NEEDED  
 12/07/2001 - 12/14/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D H REIKE  
*Tech. Officer:* GSFC/D C MATHER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11471**                      **UNIV OF ARIZONA**                      **1541**  
 SUB-MILLIMETER SPECTROSCOPY OF ASTROPHYSICALLY IMPORTANT METAL-CONTAINING MOLECULES  
 12/14/2001 - 12/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L M ZIURYS  
*Tech. Officer:* GSFC/G STRINFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11493**                      **UNIV OF ARIZONA**                      **1542**  
 IMPACT CRATERING AND THE EVOLUTION OF THE TERRESTRIAL PLANETS  
 12/27/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* H J MELOSH  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11497**                      **UNIV OF ARIZONA**                      **1543**  
 COLLISIONAL AND DYNAMICAL PROCESSES OF PLANETARY EVOLUTION  
 12/28/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R GREENBERG  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11565**                      **UNIV OF ARIZONA**                      **1544**  
 GAS-GRAIN INTERACTIONS  
 02/08/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L L HOOD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11596**                      **UNIV OF ARIZONA**                      **1545**  
 SOHO'S OBSERVATION OF HELIOSPHERIC ENERGETIC NEUTRAL ATOMS. NEW SEC GRANT.  
 01/17/2002 - 01/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K HSIEH  
*Tech. Officer:* GSFC/T KUCERA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11661**                      **UNIV OF ARIZONA**                      **1546**  
 DYNAMICAL PROCESSES IN THE EARLY SOLAR SYSTEM  
 02/07/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R MALHOTRA  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11745**                      **UNIV OF ARIZONA**                      **1547**  
 MINERALOGIC AND TRACE-ELEMENT STUDIES OF METEORITE S  
 02/20/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W BOYNTON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11828**                      **UNIV OF ARIZONA**                      **1548**  
 SPACEWATCH SURVEY AND STUDY OF HAZARDOUS ASTEROIDS AND COMETS  
 03/06/2002 - 03/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R S MCMILLAN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11838**                      **UNIV OF ARIZONA**                      **1549**  
 FUNDING FOR "POWER AND BANDWIDTH-EFFICIENT COMMUNICATIONS IN NEAR-EARTH MISSIONS VIA MULTILEVEL LDP  
 03/07/2002 - 03/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W RYAN  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11957**                      **UNIV OF ARIZONA**                      **1550**  
 MODELS AND MODES OF ENABLING THE USE OF NASA EARTH SCIENCE AND DATA IN DECISION MAKING  
 04/02/2002 - 03/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S E MARSH  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11968**                      **UNIV OF ARIZONA**                      **1551**  
 A FUSE DETERMINATION OF THE GRAVITATIONAL REDSHIFT AND SPECTROSCOPIC MASS OF SIRIUS B  
 04/03/2002 - 04/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J B HOLBERG  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

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<b>NAG 5 11979</b>	<b>UNIV OF ARIZONA</b>	<b>1552</b>	<b>NAG 5 12459</b>	<b>UNIV OF ARIZONA</b>	<b>1560</b>
COSMOGENIC <sup>14</sup> C AND <sup>10</sup> BE IN METEORITES AND LUNAR SAMPLES			INTERDISCIPLINARY SCIENTIST INVESTIGATIONS IN ASTRONOBIOLOGY FOR		
04/08/2002 - 05/31/2005	FY02: \$0	Total: \$0	09/09/2002 - 09/14/2013	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> A JULL			<i>Prin. Invest.:</i> J I LUNINE		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GSFC/M GREENHOUSE		
<i>CASE Category:</i> 12 - CHEMISTRY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 12014</b>	<b>UNIV OF ARIZONA</b>	<b>1553</b>	<b>NAG 5 12461</b>	<b>UNIV OF ARIZONA</b>	<b>1561</b>
MODELING THE ATMOSPHERES OF URANUS AND SATURN			SIGNAL APPLICATION, CALIBRATION AND CORRECTION ALGORITHMS FOR		
04/22/2002 - 04/30/2005	FY02: \$0	Total: \$0	08/13/2002 - 08/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> K KARKOSCHKA			<i>Prin. Invest.:</i> D A REAGAN		
<i>Tech. Officer:</i> GSFC/J HILLMAN			<i>Tech. Officer:</i> GSFC/J D SPINHIRNE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 12059</b>	<b>UNIV OF ARIZONA</b>	<b>1554</b>	<b>NAG 5 12471</b>	<b>UNIV OF ARIZONA</b>	<b>1562</b>
NOBLE GAS STUDIES OF EARLY SOLAR SYSTEM HISTORY			ANALYSIS OF THE CRUSTAL MAGNETIC FIELD OF MARS		
04/19/2002 - 05/31/2005	FY02: \$0	Total: \$0	08/15/2002 - 08/14/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> T SWINDLE			<i>Prin. Invest.:</i> L L HOOD		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 12 - CHEMISTRY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 12086</b>	<b>UNIV OF ARIZONA</b>	<b>1555</b>	<b>NAG 5 12484</b>	<b>UNIV OF ARIZONA</b>	<b>1563</b>
FIRST NULLING & SIMULTANEOUS DIFFERENTIAL IMAGING SURVEY FOR			ASSIMILATION OF NASA SCIENCE RESULTS AND DATA INTO NATIONAL		
MASSIVE PLANETS			DECISION SUPPORT SYSTEMS		
04/30/2002 - 04/30/2005	FY02: \$0	Total: \$0	08/26/2002 - 08/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> L CLOSE			<i>Prin. Invest.:</i> C F HUTCHINSON		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GSFC/A TUYAHOV		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 12152</b>	<b>UNIV OF ARIZONA</b>	<b>1556</b>	<b>NAG 5 12619</b>	<b>UNIV OF ARIZONA</b>	<b>1564</b>
SUPPORT OF ACTIVITIES AND OPERATION OF THE GLOBAL ENERGY AND			IMPACT RECORDS ON ASTEROIDS: INTEGRATIVE EVALUATION OF THE		
WATER CYCLE EXPERIMENT SCIENCE STEERING			BOMBARDING POPULATION, COLLISIONAL PROC		
05/13/2002 - 05/14/2005	FY02: \$0	Total: \$0	09/26/2002 - 09/30/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> S SOROOSHIAN			<i>Prin. Invest.:</i> R GREENBERG		
<i>Tech. Officer:</i> GSFC/J KAYE			<i>Tech. Officer:</i> GSFC/T MORGAN		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 12272</b>	<b>UNIV OF ARIZONA</b>	<b>1557</b>	<b>NAG 8 1469</b>	<b>UNIV OF ARIZONA</b>	<b>1565</b>
SPECTROSCOPIC INVESTIGATIONS OF TITAN'S ATMOSPHERE AND SUR-			DEVELOPMENT OF SUPERIOR MATERIALS FOR LAYERED SOLID OXIDE		
FACE			ELECTROLYZERS BASED ON MECHANICAL		
06/27/2002 - 08/31/2004	FY02: \$0	Total: \$0	04/17/1998 - 01/31/2003	FY02: \$0	Total: \$268,750
<i>Prin. Invest.:</i> C GRIFFITH			<i>Prin. Invest.:</i> J R SRIDHAR		
<i>Tech. Officer:</i> GSFC/J HILLMAN			<i>Tech. Officer:</i> MSFC/P M DOTY		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NAG 5 12318</b>	<b>UNIV OF ARIZONA</b>	<b>1558</b>	<b>NAG 8 1520</b>	<b>UNIV OF ARIZONA</b>	<b>1566</b>
MID INFRARED INSTRUMENT (MIRI) PRINCIPAL INVESTIGATOR FOR THE			QUANTIFYING THE EFFECTS OF SUB-GRID TOPOGRAPHY & VEGETATION		
NEXT GENERATION SPACE TELESCOPE			ON SEASONAL SNOW COVER, RELATED SNOWMLT		
07/08/2002 - 07/31/2003	FY02: \$0	Total: \$0	05/29/1998 - 03/31/2002	FY02: \$0	Total: \$347,829
<i>Prin. Invest.:</i> G RIEKE			<i>Prin. Invest.:</i> Z YANG, R BALES, R E DICKINSON		
<i>Tech. Officer:</i> GSFC/M GREENHOUSE			<i>Tech. Officer:</i> MSFC/J ARNOLD		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 12433</b>	<b>UNIV OF ARIZONA</b>	<b>1559</b>	<b>NAG 8 1523</b>	<b>UNIV OF ARIZONA</b>	<b>1567</b>
OBSERVATIONAL AND MECHANISTIC MODEL STUDIES OF THE QUASI-			IMPROVING GCM MODELING THRU HYDROLOGICALLY REALISTIC SUB-		
DECADAL OSCILLATION			GRID REPRESENTATION OF LAND-ATMOSPHERE		
08/01/2002 - 07/31/2005	FY02: \$0	Total: \$0	05/26/1998 - 05/31/2001	FY02: \$0	Total: \$519,764
<i>Prin. Invest.:</i> L L HOOD			<i>Prin. Invest.:</i> S SOROOSHIAN, H GUPTA, X GAO		
<i>Tech. Officer:</i> GSFC/W WAGNER			<i>Tech. Officer:</i> MSFC/J ARNOLD		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		

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**NAG 8 1531**                      **UNIV OF ARIZONA**                      **1568**  
 INFLUENCE OF SUBGRID SCALE HETEROGENEITY ON REMOTELY SENSED  
 SURFACE TEMPERATURES  
 06/01/1998 - 12/31/2001                      FY02: \$0                      Total: \$600,000  
*Prin. Invest.:* W J SHUTTLEWORTH, J J TOTH  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 8 1654**                      **UNIV OF ARIZONA**                      **1569**  
 MARS ATMOSPHERE AND DUST IN OPTICAL AND RADIO (MATADOR)  
 01/19/2000 - 09/30/2002                      FY02: \$0                      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**                      **1570**  
 GROWTH OF ROD EUTECTICS  
 05/24/2000 - 11/30/2003                      FY02: \$0                      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**                      **1571**  
 A PHYSICALLY BASED INVESTIGATION OF TROPICAL CONVECTIVE RE-  
 GIMES  
 01/23/2001 - 01/29/2004                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* D J BOCCIPPPIO  
*Tech. Officer:* MSFC/J D ARNOLD  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 8 1775**                      **UNIV OF ARIZONA**                      **1572**  
 ATOM OPTICS IN CONTROLLED AND MICROGRAVITY ENVIRIO NMNETS  
 04/24/2001 - 04/30/2005                      FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* P MEYSTRE  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 9 923**                      **UNIV OF ARIZONA**                      **1573**  
 POLYCRYSTALLINE ZIRCONIA ELEC CELL STACK FOR CO2 ELECTROLYSIS  
 01/29/1997 - 05/31/2002                      FY02: \$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**                      **1574**  
 SIMULTANEOUS PRODUCTION OF OXYGEN AND METHANE USING ZIRCO-  
 NIA ELECTROLYSIS  
 11/03/1999 - 11/09/2001                      FY02: \$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**                      **1575**  
 ULTRA HIGH SPATIAL RESOLUTION HARD X-RAY DETECTORS  
 06/30/2000 - 06/30/2003                      FY02: \$0                      Total: \$99,919  
*Prin. Invest.:* H B  
*Tech. Officer:* JSC/L C SHACKELFORD  
*CASE Category:* 13 – PHYSICS

**NAG 9 1229**                      **UNIV OF ARIZONA**                      **1576**  
 DEFINITION PHASE STUDY REPORT FOR END TO END ISRU MARS FLIGHT  
 EXPERIMENT  
 05/10/2000 - 02/09/2001                      FY02: \$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**                      **1577**  
 SCANNING CHEMICAL MICROSCOPY USING SURFACE ENHANCE D RAMAN  
 SCATTERING  
 05/23/2001 - 02/28/2003                      FY02: \$0                      Total: \$222,000  
*Prin. Invest.:* D SARID  
*Tech. Officer:* JSC/D MCKAY  
*CASE Category:* 42 – ASTRONAUTICAL ENGR

**NAG 9 1378**                      **UNIV OF ARIZONA**                      **1578**  
 TESTING OF COMPACT & ROBUST HIGH INTENSITY WATER JACKETED  
 PLANT LIGHTING SYSTEM  
 08/24/2001 - 07/31/2004                      FY02: \$0                      Total: \$10,550  
*Prin. Invest.:* G GIACOMELLI  
*Tech. Officer:* JSC/D BARTA  
*CASE Category:* 55 – AGRICULTURE

**NAG10 255**                      **UNIV OF ARIZONA**                      **1579**  
 RESEARCH HYBRID SOLAR AND ARTIFICIAL LIGHTING FOR SPACE LIFE  
 SUPPORT  
 03/17/1999 - 03/15/2002                      FY02: \$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**                      **1580**  
 STUDIES OF ATMOSPHERIC ELECTRICITY AT THE KENNEDY SPACE CEN-  
 TER AND EASTERN RANGE  
 06/05/2000 - 09/15/2002                      FY02: \$0                      Total: \$222,638  
*Prin. Invest.:* E KRIDER  
*Tech. Officer:* KSC/I MADURA  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG10 302**                      **UNIV OF ARIZONA**                      **1581**  
 SAFELY REDUCE THE IMPACT OF LIGHTNING ON GROUND PROCESSING,  
 LAUNCH, FLIGHT AND LANDING ON OPERATION  
 06/22/2001 - 06/30/2006                      FY02: \$0                      Total: \$63,000  
*Prin. Invest.:* E KRIDER  
*Tech. Officer:* KSC/I MADURA  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG13 02001**                      **UNIV OF ARIZONA**                      **1582**  
 REMOTE SENSING TOOLS FOR MONITORING AND MANAGING A SENSITIVE,  
 ARID-ZONE RIPARIAN CORRIDOR: THE LOW  
 11/26/2001 - 09/23/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E P GLENN  
*Tech. Officer:* SSCIC DEL CASTILLO  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG13 02004**                      **UNIV OF ARIZONA**                      **1583**  
 ESTABLISHING A BASIS FOR CARBON MANAGEMENT POLICY AT THE STATE  
 LEVEL: CARBON DYNAMICS AT SITE, LANDS  
 12/10/2001 - 09/16/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C F HUTCHINSON  
*Tech. Officer:* SSC/R HARRIS  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

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**NAG13 02044**                      **UNIV OF ARIZONA**                      **1584**  
 RADIOMETRIC AND SPATIAL CHARACTERIZATION OF HIGH-S PATIAL RESO-  
 LUTION SENSORS  
 08/09/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K THOME  
*Tech. Officer:* SSC/IV ZANONI  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG13 99005**                      **UNIV OF ARIZONA**                      **1585**  
 NASA SOUTHWEST EARTH SCIENCE APPLICATIONS CENTER SAME  
 02/19/1999 - 08/31/2002                      FY02: \$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**                      **1586**  
 SAGE III SCIENCE INVESTIGATION SUPPORT - P.I. - B. HERMAN  
 02/28/1990 - 01/31/2005                      FY02: \$0                      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**                      **1587**  
 ACTIVE TROPOSPHERIC OZONE AND MOISTURE SOUNDER (ATOMS)  
 04/21/1999 - 09/30/2002                      FY02: \$0                      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**                      **1588**  
 PICASSO-CENA SCIENCE TEAM SUPPORT FOR AERSOL AND CLOUD  
 STUDIES  
 05/17/1999 - 05/16/2003                      FY02: \$0                      Total: \$257,302  
*Prin. Invest.:* J A REAGAN  
*Tech. Officer:* LARC/G GIBSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 2 00117**                      **UNIV OF ARIZONA**                      **1589**  
 RESEARCH PROJECT-DEVEL AND TEST ULTRA HIGH DENSITY FAST READ-  
 OUT OPTICAL STORAGE  
 10/31/2000 - 10/31/2003                      FY02: \$0                      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**                      **1590**  
 R & D TO SUPPORT GSFC'S SIMBIOS PROJECT ORIGINAL POP 11/30/01  
 12/21/2000 - 01/31/2002                      FY02: \$0                      Total: \$137,909  
*Prin. Invest.:* J ZALEWSKI  
*Tech. Officer:* GSFC/C R MCCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 02105**                      **UNIV OF ARIZONA**                      **1591**  
 NGST NIR CAM - PHASE A  
 07/17/2002 - 02/01/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M RIEKE  
*Tech. Officer:* GSFC/R C SMITH  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 31364**                      **UNIV OF ARIZONA**                      **1592**  
 EOS/MODIS INVESTIGATION FROM DR. HUETE  
 01/24/1992 - 06/14/2003                      FY02: \$0                      Total: \$3,943,109  
*Prin. Invest.:* A HUETE  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 31717**                      **UNIV OF ARIZONA**                      **1593**  
 EOS INVESTIGATION  
 01/03/1992 - 06/14/2003                      FY02: \$0                      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**                      **1594**  
 FABRICATION, TEST, AND DELIVERY OF PRIMARY MIRROR SYSTEM DEM-  
 ONSTRATOR.  
 07/17/1997 - 12/20/2002                      FY02: \$0                      Total: \$6,462,490  
*Prin. Invest.:* J H BURGE  
*Tech. Officer:* MSFC/D JACOBSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 2 1342**                      **UNIV OF ARIZONA**                      **1595**  
 INTERPLANETARY TRANSFER OF ENDOLITHIC BACTERIA IN IMPACT  
 EJECTA  
 05/23/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W NICHOLSON, P FAJARDO-CAVAZOS, H J MELOSH  
*Tech. Officer:* ARC/M FONDA, ARC/D DEVINCENZI  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5357**                      **UNIV OF ARIZONA**                      **1596**  
 ISRU TECHNOLOGIES FOR MARS LIFE SUPPORT  
 09/29/1999 - 09/30/2002                      FY02: \$0                      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**                      **1597**  
 DEVELOPMENT OF A SYSTEM FOR QUANTIFYING IN VIVO BO NE STRAINS  
 IN RODENTS IN NORMAL AND ALTERED GRAVI  
 03/31/2000 - 03/31/2001                      FY02: \$0                      Total: \$10,208  
*Prin. Invest.:* J SZIVEK  
*Tech. Officer:* ARC/J SCHONFELD  
*CASE Category:* 56 - MEDICL

**NCC 2 5385**                      **UNIV OF ARIZONA**                      **1598**  
 SOLID STATE SENSORS FOR AEROASSIST TECHNOLOGY APPLICATIONS  
 06/01/2000 - 09/30/2002                      FY02: \$0                      Total: \$73,300  
*Prin. Invest.:* K R SRIDHAR  
*Tech. Officer:* ARC/G A RAICHE, ARC/P F WERCINSKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5477**                      **UNIV OF ARIZONA**                      **1599**  
 FINDING THE TRUE COLOR OF MARTIAN ROCKS  
 01/29/2002 - 01/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P H SMITH  
*Tech. Officer:* ARC/CSTOKER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 2 5487**                      **UNIV OF ARIZONA**                      **1600**  
 FEASIBILITY STUDY FOR QUICK COLLING OF BIOLOGICAL SAMPLES ON A  
 NANOSATELLITE  
 03/19/2002 - 07/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K R SRIDHAR  
*Tech. Officer:* ARC/R D MACELROY, ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

## ARIZONA

## NASA'S UNIVERSITY PROGRAM

**NCC 2 5518** **UNIV OF ARIZONA** **1601**  
 TIDAL DISSIPATION IN THE GIANT PLANETS  
 08/21/2002 - 08/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A SHOWMAN  
*Tech. Officer:* ARC/R E YOUNG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 3 991** **UNIV OF ARIZONA** **1602**  
 OPTIMAL PLACING OF ROUGHNESS ELEMENTS FOR SEPARATI ON DELAY  
 IN LPT AIRFOILS  
 07/31/2002 - 09/20/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* A TUMIN  
*Tech. Officer:* GRC/D E ASHPIS  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NCC 5 355** **UNIV OF ARIZONA** **1603**  
 PROPOSAL FOR GRADUATE STUDENT SUPPORT UNDER CCAST. NOW  
 INCLUDES ADDITIONAL SUPP  
 08/04/1998 - 09/30/2001 FY02: \$0 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 SPEC-  
 TRAL EVALUATION OF THE ADVANCED LAND IMAG  
 03/03/2000 - 12/31/2002 FY02: \$2,500 Total: \$418,505  
*Prin. Invest.:* S F BIGGAR  
*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 - 09/30/2003 FY02: \$2,500 Total: \$288,124  
*Prin. Invest.:* A R HUETE  
*Tech. Officer:* GSFC/S G UNGER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 603** **UNIV OF ARIZONA** **1606**  
 USE OF AIRBORNE REMOTE SENSING FOR UNCERTAINTY ASS ESSMENTS  
 IN REGIONAL EXTRAPOLATIONS OF GROUND LB  
 12/06/2001 - 09/14/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* A R HUETE  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 8 96** **UNIV OF ARIZONA** **1607**  
 COMPARISON OF STRUCTURE AND SEGREGATION IN ALLOYS  
 06/07/1996 - 05/30/2003 FY02: \$0 Total: \$843,943  
*Prin. Invest.:* D R POIRIER  
*Tech. Officer:* MSFC/M HUBBARD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 8 160** **UNIV OF ARIZONA** **1608**  
 REMOTE SENSING INVESTIGATION OF THE ANCIENT MAYA LANDSCAPE  
 12/08/1998 - 12/07/2001 FY02: \$0 Total: \$234,787  
*Prin. Invest.:* T P CULBERT  
*Tech. Officer:* MSFC/T SEVER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 1 52176** **UNIV OF ARIZONA** **1609**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 08/25/1997 - 07/31/2001 FY02: \$0 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** **1610**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 09/14/1998 - 02/28/2002 FY02: \$0 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 ENGNR

**NGT 2 52268** **UNIV OF ARIZONA** **1611**  
 ISRU TECHNOLOGIES FOR HUMAN MARS EXPLORATION  
 08/10/2000 - 07/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* K R SRIDHAR  
*Tech. Officer:* ARC/IJ E FINN, ARC/M H KLISS  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NGT 5 111** **UNIV OF ARIZONA** **1612**  
 MINIATURE DOPPLER AEROSOL BACKSCATTER LIDAR FOR DETECTION OF  
 ATMOSPHERIC WINDS/STUDENT: JEREMY DOB  
 07/07/2000 - 08/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* J A REAGAN  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 13 - PHYSICS

**NGT 5 114** **UNIV OF ARIZONA** **1613**  
 CATASTROPHIC FLOODING ON ICELAND AND MARS (STUDENT : DEVON  
 BURR)  
 05/31/2001 - 06/30/2003 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* A S MCEWEN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 5 30140** **UNIV OF ARIZONA** **1614**  
 ECOSYSTEM DEGRADATION AND HOUSEHOLD VULNERABILITY IN THE  
 SEMI ARID REGION OF CHILE  
 08/27/1998 - 12/31/2002 FY02: \$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** **1615**  
 SYNTHETIC LAHAR HAZARD MODELING USING ORBITAL DEM DATA/NASA  
 EARTH SCI. SYSTEM\_PROGRAM/STUDENT: KLI  
 08/28/1998 - 03/31/2002 FY02: \$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** **1616**  
 SEASONAL ACCUMULATION & NITROGEN DEPOSITION MAPPING ON THE  
 GREENLAND ICESHEET/JOHNNY BURKHART  
 08/13/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* R C BALES  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



## NASA'S UNIVERSITY PROGRAM

## ARKANSAS

**NGT 5 40082 UNIV OF ARIZONA 1617**  
 ARIZONA SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2005 FY02: \$0 Total: \$649,132  
*Prin. Invest.:* M J DRAKE  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50190 UNIV OF ARIZONA 1618**  
 THEORETICAL & OBSERVATIONAL STUDY OF ORIGIN & EVOLUTION OF  
 PLANETS & PLANETARY SYSTEMS  
 06/05/1998 - 08/14/2001 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* R H BROWN  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50243 UNIV OF ARIZONA 1619**  
 PHYSICAL STUDIES OF NEA & TNO OBJECTS USING SPECTR OPHOTOM-  
 ETRY STUDENT: RONALD FEVIG  
 06/02/1999 - 06/30/2003 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* U FINK  
*Tech. Officer:* GSFC/K HOLLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50246 UNIV OF ARIZONA 1620**  
 DEVELOPMENT OF LASER MICROMACHINED COMPONENTS FOR SUBMIL-  
 LIMETER HETERODYNE RECEIVERS\_(STUDENT CHRIS  
 06/02/1999 - 06/30/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* C WALKER  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50282 UNIV OF ARIZONA 1621**  
 SUBMILLIMETER LABORATORY AND OBSERVATIONAL STUDIES OF MO-  
 LECULAR ION CHEMISTRY IN PHOTON-DOMINATE  
 06/20/2000 - 07/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* L ZIURYS  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50283 UNIV OF ARIZONA 1622**  
 THE EVOLUTION OF GALAXIES IN 0.54<Z<1.2 CLUSTERS  
 06/22/2000 - 07/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* D MCCARTHY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50289 UNIV OF ARIZONA 1623**  
 THE COLLISIONAL EVOLUTION OF THE ASTEROID BELT: RECONCILING  
 CONTRADICTORY EVIDENCE-STUDENT DOBRIE  
 06/26/2000 - 06/30/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* R GREENBERG  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50300 UNIV OF ARIZONA 1624**  
 NEUTRINO PROCESSES & R-PROCESS NUCLEOSYNTHESIS IN PROTO-  
 NEUTRON STAR WINDS/ STUDENT: TODD THOMPSON  
 06/28/2000 - 06/30/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* A BURROWS  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50303 UNIV OF ARIZONA 1625**  
 THE EFFECTS OF MICROGRAVITY ON THE DEVELOPMENT OF THE IMMUNE  
 SYSTEM/STUDENT: CHRIS C. WOODS  
 07/06/2000 - 06/30/2003 FY02: \$0 Total: \$41,748  
*Prin. Invest.:* D DELUCA  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50394 UNIV OF ARIZONA 1626**  
 A UNIQUE DIRECT-DETECTION SURVEY FOR MASSIVE EXTRA -SOLAR  
 PLANETS/STUDENT: MELANIE FREED  
 05/31/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L CLOSE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50400 UNIV OF ARIZONA 1627**  
 THE EVOLUTION OF DEBRIS DISKS AND STELLA ANGULAR MOMENTUM IN  
 PRE-MAIN SEQUENCE SOLAR SYSTEMS  
 06/12/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M MEYER  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50419 UNIV OF ARIZONA 1628**  
 INDEX INOMOGENEITY EFFECTS ON IMAGING SYSTEMS STUDENT: BRIAN  
 STAMPER  
 08/21/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J BURGE  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## ARKANSAS

**NAG 3 2798 ARKANSAS TECH UNIV 1629**  
 DEVELOPMENT OF A GENERIC CREEP-FATIGUE PREDICTION MODEL  
 08/06/2002 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* T GOSWAMI  
*Tech. Officer:* GRC/G R HALFORD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG13 99016 HENDRIX COLL 1630**  
 DETECTION OF SMALL MOLECULES IN HYBRID ROCKET MOTOR COMBUS-  
 TION BY NEAR IR ABSORPTION  
 05/24/1999 - 04/30/2002 FY02: \$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 1631**  
 EFFECTS OF RESISTANCE TRAINING  
 12/17/1998 - 07/31/2001 FY02: \$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 1632**  
 SYNTHESIS AND CHARACTERIZATION OF CROSS-LINKABLE W ATER-  
 BORNE CONDUCTING POLYMERS FOR CORROSION PROT  
 02/07/2000 - 01/18/2002 FY02: \$0 Total: \$115,000  
*Prin. Invest.:* T VISWANATHAN  
*Tech. Officer:* KSC/C J BRYAN  
*CASE Category:* 19 - PHYSICALSCIENCE, OTHER

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NCC 5 260** UNIV OF ARKANSAS - LITTLE ROCK 1633  
 ARKANSAS EPSCOR PROGRAM - THE ARKANSAS PLAN FOR ENHANCE-  
 MENT OF AERO- SPACE RESEARCH AND ECONOMIC  
 01/07/1998 - 07/31/2002 FY02: \$0 Total: \$1,800,000  
*Prin. Invest.:* M HUDSON  
*Tech. Officer:* HQ/D DETROYE  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 404** UNIV OF ARKANSAS - LITTLE ROCK 1634  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/14/1999 - 02/28/2002 FY02: \$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 1635  
 ARKANSAS NASA EPSCOR PROGRAM  
 09/28/2001 - 08/14/2004 FY02: \$0 Total: \$125,000  
*Prin. Invest.:* K HUDSON  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40119** UNIV OF ARKANSAS - LITTLE ROCK 1636  
 ARKANSAS SPACE GRANT COLL & FELLOWSHIP PROGRAM  
 03/14/2001 - 02/28/2005 FY02: \$0 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 1637  
 DESIGN OF HIGH TEMPERATURE PROBE FOR MASS SPECTROSCOPY OF  
 HYBRID ROCKET PLUME  
 07/13/1998 - 07/31/2001 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* C MEADORS  
*Tech. Officer:* SSC/A JOYCE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT13 52757** UNIV OF ARKANSAS - LITTLE ROCK 1638  
 GRADUATE RESEARCH STUDY - SIGNAL CORRELATION IN A HYBRID  
 ROCKET MOTOR  
 06/25/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* K HUDSON  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 02021** U OF ARKANSAS MAIN CAMP-FAYETTEVILLE 1639  
 MODELING BREAST CANCER TUMORS IN FREQUENCY DOMAIN USING THE  
 STEEPEST DESCENT MULTIPOLE METHOD(SDFMM)  
 12/19/2001 - 11/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* M EL-SHENAWEE  
*Tech. Officer:* LARC/J W JOHNSON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 9496** U OF ARKANSAS MAIN CAMP-FAYETTEVILLE 1640  
 THERMOLUMINESCENCE STUDIES OF METEORITES  
 04/21/2000 - 09/30/2001 FY02: \$0 Total: \$43,000  
*Prin. Invest.:* P BENOIT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10736** U OF ARKANSAS MAIN CAMP-FAYETTEVILLE 1641  
 THERMOLUMINESCENCE STUDIES OF METEORITES  
 04/18/2001 - 04/30/2002 FY02: \$0 Total: \$20,000  
*Prin. Invest.:* P BENOIT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NCC 2 5360** U OF ARKANSAS MAIN CAMP-FAYETTEVILLE 1642  
 GROWTH OF METHANOGENS ON CARBON MONOXIDE  
 12/10/1999 - 11/30/2003 FY02: \$0 Total: \$15,000  
*Prin. Invest.:* T KRAL  
*Tech. Officer:* ARC/M J LEON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 52243** U OF ARKANSAS MAIN CAMP-FAYETTEVILLE 1643  
 METHANOGENIC METABOLISM: IMPLICATIONS FOR MARS & EARLY EARTH  
 07/28/1998 - 11/30/2001 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* T A KRAL  
*Tech. Officer:* ARC/C P MCKAY  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NGT13 52753** U OF ARKANSAS MAIN CAMP-FAYETTEVILLE 1644  
 REMOTE SENSING TO DETECT MOISTURE AND SDS STRESS I N SOYBEAN  
 06/20/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S BAJAWA  
*Tech. Officer:* SSC/R P TRAVIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

## CALIFORNIA

**NAG 5 12576** AMERICAN RIVER COLL 1645  
 PATHWAYS CENTER FOR STUDENT SUCCESS  
 09/20/2002 - 09/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S GRIFFITH  
*Tech. Officer:* GSFC/D HALE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 1975** CALIFORNIA INST OF TECHNOLOGY 1646  
 GLOBAL FAILURE MODES IN HIGH TEMPERATURE COMPOSITE STRUC-  
 TURES  
 11/25/1997 - 05/14/2001 FY02: \$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 1647  
 CHEMISTRY AND TRANSPORT IN A MULTI-DIMENSIONAL MODEL  
 02/23/1999 - 12/31/2001 FY02: \$0 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 1648  
 ULTRADENSE SILICON CMOS-BASED MERGED MULTISPECTRAL  
 IMAGER/NONVOLATILE MEMORY DEVICE BASED ON INJECTN  
 08/24/2001 - 05/30/2004 FY02: \$0 Total: \$228,800  
*Prin. Invest.:* H A ATWATER  
*Tech. Officer:* LARC/C D ARMSTRONG  
*CASE Category:* 13 - PHYSICS

<b>NAG 1 02029</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1649</b>	<b>NAG 3 2686</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1658</b>
GLOBAL FAILURE MODES IN COMPOSITE STRUCTURES FOR HIGH ALTITUDES			IN-SITU INVESTIGATION OF ADVANCED STRUCTURAL COATING AND COMPOSITES		
01/07/2002 - 09/25/2002	FY02: \$0	Total: \$0	01/10/2002 - 09/30/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> W G KNAUS			<i>Prin. Invest.:</i> U USTUNDAG		
<i>Tech. Officer:</i> LARC/D R AMBUR			<i>Tech. Officer:</i> GRC/S C FARMER		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 1 02081</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1650</b>	<b>NAG 3 2737</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1659</b>
CHEMISTRY AND TRANSPORT IN A MULTI-DIMENSIONAL MODEL			INERTIAL EFFECTS IN SUSPENSION DYNAMICS. INERTIAL EFFECTS IN SUSPENSION DYNAMICS.		
04/10/2002 - 04/09/2003	FY02: \$0	Total: \$0	03/14/2002 - 10/30/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> Y L YUNG			<i>Prin. Invest.:</i> J F BRADY		
<i>Tech. Officer:</i> LARC/G L MADDREA			<i>Tech. Officer:</i> GRC/N R HALL		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 2 1346</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1651</b>	<b>NAG 5 3911</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1660</b>
EVOLUTION OF NEURAL CREST & PLACODES			MOLECULAR BEAM STUDIES OF STRATOSPHERIC PHOTOCHEMISTRY		
07/21/1999 - 07/14/2003	FY02: \$0	Total: \$380,459	02/26/1997 - 09/30/2002	FY02: \$0	Total: \$262,937
<i>Prin. Invest.:</i> M BRONNER-FRASER			<i>Prin. Invest.:</i> D OKUMURA		
<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY			<i>Tech. Officer:</i> GSFC/P J DECOLA		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 2 1368</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1652</b>	<b>NAG 5 4093</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1661</b>
TRANSCRIPTIONAL REGULATION & EVOLUTION OF BILATERAL BODY PLANS			RESEARCH IN GRAVITATION ASTROPHYSICS		
08/05/1999 - 01/31/2003	FY02: \$0	Total: \$554,324	03/10/1997 - 12/31/2001	FY02: \$0	Total: \$183,500
<i>Prin. Invest.:</i> E M DAVIDSON			<i>Prin. Invest.:</i> P LINDBLOM		
<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY			<i>Tech. Officer:</i> GSFC/H HASAN		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 2 1370</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1653</b>	<b>NAG 5 4191</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1662</b>
TRANSCRIPTION FACTOR EVOLUTION & LYMPHOCYTE ORIGINS			DYNAMICS OF PLANETARY ATMOSPHERES		
08/05/1999 - 09/30/2002	FY02: \$0	Total: \$385,362	06/27/1997 - 11/30/2001	FY02: \$0	Total: \$376,230
<i>Prin. Invest.:</i> E V ROTHENBERG			<i>Prin. Invest.:</i> D P INGERSOLL		
<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY			<i>Tech. Officer:</i> GSFC/J BERGSTRALH		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 2 1541</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1654</b>	<b>NAG 5 4319</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1663</b>
DISCOVERY AND DEFINITION OF THE MICROGRAVITY TRANSCRIPTOME WITH APPLICATION TO MUSCLE ATROPHY AND REGENERATION			EXPERIMENTAL AND ANALYTICAL STUDIES OF SOLAR SYSTEMS		
03/14/2002 - 02/28/2003	FY02: \$0	Total: \$0	04/04/1997 - 07/31/2002	FY02: \$0	Total: \$594,000
<i>Prin. Invest.:</i> E H DAVIDSON			<i>Prin. Invest.:</i> D S BURNETT		
<i>Tech. Officer:</i> ARC/M M AVERNER			<i>Tech. Officer:</i> GSFC/D NAVA		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 2 1573</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1655</b>	<b>NAG 5 4437</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1664</b>
ROBUSTNESS OF NETWORKED AGENTS			PARTICIPATION OF D.O. MUHLEMAN AS A CO-INVESTIGATOR/OBSERVER LASER ALTIMETER (MOLA) TEAM		
07/24/2002 - 11/30/2002	FY02: \$0	Total: \$0	04/28/1997 - 12/31/2002	FY02: \$0	Total: \$360,394
<i>Prin. Invest.:</i> J C DOYLE			<i>Prin. Invest.:</i> D O MUHLEMAN		
<i>Tech. Officer:</i> ARC/K TURNER, ARC/D WOLPERT			<i>Tech. Officer:</i> GSFC/D E SMITH		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 3 2166</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1656</b>	<b>NAG 5 5052</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1665</b>
INERTIAL EFFECTS IN SUSPENSION DYNAMICS			GLOBAL MAPPING OF THE INTERSTELLAR MEDIUM IN THE FAR-ULTRAVIOLET		
05/08/1998 - 02/10/2002	FY02: \$0	Total: \$370,000	01/24/1996 - 06/30/2001	FY02: \$0	Total: \$1,281,913
<i>Prin. Invest.:</i> J F BRADY			<i>Prin. Invest.:</i> C MARTIN		
<i>Tech. Officer:</i> GRC/F P CHIARAMONTE			<i>Tech. Officer:</i> GSFC/R H PLESS		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 3 2358</b>	<b>CALIFORNIA INST OF TECHNOLOGY</b>	<b>1657</b>			
GRANULAR MATERIAL FLOWS WITH INTERSTITIAL FLUID EFFECTS					
03/12/2000 - 11/30/2003	FY02: \$0	Total: \$126,185			
<i>Prin. Invest.:</i> M L HUNT					
<i>Tech. Officer:</i> GRC/J H AGUI					
<i>CASE Category:</i> 49 - ENGINEERING, OTHER					

## CALIFORNIA

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**NAG 5 5166 CALIFORNIA INST OF TECHNOLOGY 1666**  
 INTEGRATED-CIRCUIT READOUT FOR THE ACCESS SILICON ARRAY  
 03/26/1998 - 06/30/2001 FY02: \$0 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 1667**  
 ULTRA HEAVY AND HEAVY COSMIC-RAY MEASUREMENTS ON ACCESS  
 08/29/1998 - 02/28/2002 FY02: \$0 Total: \$119,067  
*Prin. Invest.:* R A MEWALDT  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 5216 CALIFORNIA INST OF TECHNOLOGY 1668**  
 A PROPOSAL FOR CONVERSION OF THE TRANS-IRON GALACTIC ELEMENT  
 RECORDER (TIGER) PI STONE  
 12/01/1998 - 11/30/2001 FY02: \$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 1669**  
 FIRST INCREMENTAL FUNDING FOR NAG5-5227 PI DR. EDWARD C. STONE  
 03/29/1999 - 05/31/2002 FY02: \$0 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 1670**  
 FIRST YEAR FUNDING FOR NAG5-5228 PI DR. EDWARD C STONE  
 03/29/1999 - 05/31/2002 FY02: \$0 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 1671**  
 HIGH SPECTRAL & SPATIAL RESOLUTION GE DETECTOR & READOUT  
 TECHNOLOGIES FOR NUCLEAR SPECTROSCOPIC IMG  
 05/31/2000 - 05/17/2003 FY02: \$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 1672**  
 HIGH ENERGY FOCUSING TELESCOPE HIGH ENERGY FOCUSING TELE-  
 SCOPE  
 06/02/2000 - 05/25/2003 FY02: \$0 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 1673**  
 GLOBAL MAPPING OF THE COSMIC UV BACKGROUND GLOBAL MAPPING  
 OF THE COSMIC UV BACKGROUND  
 09/29/2000 - 09/27/2002 FY02: \$0 Total: \$301,440  
*Prin. Invest.:* C MARTIN  
*Tech. Officer:* WFF/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5322 CALIFORNIA INST OF TECHNOLOGY 1674**  
 THE PRESIDENTIAL EARLY CAREER AWARD (PECA)  
 03/21/2001 - 10/31/2006 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* F HARRISON  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5338 CALIFORNIA INST OF TECHNOLOGY 1675**  
 DETERMINATION OF THE CONFIDENCE LIMIT ON HHT RESULTS  
 07/09/2001 - 09/30/2002 FY02: \$0 Total: \$30,992  
*Prin. Invest.:* T WU  
*Tech. Officer:* WFF/S LONG  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 5346 CALIFORNIA INST OF TECHNOLOGY 1676**  
 BASIC RESEARCH ON THE COMPOSITION OF HEAVY COSMIC RAYS - THE  
 TRANS-IRON GALACTIC ELEMENT RECORDER EX  
 01/16/2002 - 01/07/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* E STONE  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6263 CALIFORNIA INST OF TECHNOLOGY 1677**  
 PHOTOCHEMICAL STUDIES OF CHEMISTRY IN OUTER SOLAR  
 08/21/1997 - 12/31/2002 FY02: \$0 Total: \$401,012  
*Prin. Invest.:* D L YUNG  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6402 CALIFORNIA INST OF TECHNOLOGY 1678**  
 SHE ORIGIN AND EVOLUTION OF NEUTRON STARS\_(L TSA)  
 10/15/1997 - 10/31/2003 FY02: \$0 Total: \$418,000  
*Prin. Invest.:* S KULKARNI  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6816 CALIFORNIA INST OF TECHNOLOGY 1679**  
 SUBMILLIMETER WAVELENGTH SPECTROSCOPY AND IMAGING OF THE  
 PLANETS  
 01/07/1998 - 12/31/2001 FY02: \$0 Total: \$137,405  
*Prin. Invest.:* E SERABYN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6912 CALIFORNIA INST OF TECHNOLOGY 1680**  
 MO&DA OF THE ADVANCED COMPOSITION EXPLORER MISSION  
 01/30/1998 - 01/31/2003 FY02: \$0 Total: \$13,828,115  
*Prin. Invest.:* E STONE  
*Tech. Officer:* GSFC/B WORRALL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6981 CALIFORNIA INST OF TECHNOLOGY 1681**  
 BROWN DWARFS: DETECTION AND DETAILED STUDIES  
 02/06/1998 - 08/14/2001 FY02: \$0 Total: \$181,000  
*Prin. Invest.:* S KULKARNI  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7007 CALIFORNIA INST OF TECHNOLOGY 1682**  
 BLACK HOLE ASTROPHYSICS\_- ATP  
 02/11/1998 - 08/31/2001 FY02: \$0 Total: \$257,591  
*Prin. Invest.:* R BLANDFORD  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7034 CALIFORNIA INST OF TECHNOLOGY 1683**  
 ORIGIN AND EVOLUTION OF THE SPINS AND FIELDS OF WHITE DWARFS,  
 NEUTRON STARS AND BLACK HOLES - ATP  
 02/18/1998 - 08/14/2001 FY02: \$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 1684**  
 ADVANCED SPACE PARTICLE ANALYSIS SYSTEM  
 03/10/1998 - 09/30/2002 FY02: \$0 Total: \$376,096  
*Prin. Invest.:* J BEAUCHAMP  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7230 CALIFORNIA INST OF TECHNOLOGY 1685**  
 STUDY OF TROPOSPHERIC OZONE AND UV REFLECTIVITY USING TOMS  
 DATA  
 04/16/1998 - 05/31/2002 FY02: \$0 Total: \$222,474  
*Prin. Invest.:* Y L YUNG  
*Tech. Officer:* GSFC/E HILSEN RATH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7680 CALIFORNIA INST OF TECHNOLOGY 1686**  
 VARIABILITY OF CLOUDS OVER A SOLAR CYCLE YEAR 1 OF A 3 YEAR  
 GRANT  
 09/17/1998 - 12/31/2001 FY02: \$0 Total: \$242,005  
*Prin. Invest.:* Y L YUNG  
*Tech. Officer:* GSFC/M CHOU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8217 CALIFORNIA INST OF TECHNOLOGY 1687**  
 STAR FORMATION IN GIANT MOLECULAR CLOUDS... L TSA98  
 02/08/1999 - 02/14/2004 FY02: \$0 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 1688**  
 GEOCHEMICAL AND ISOTOPIC INVESTIGATIONS OF LUNAR & PLANETARY  
 MATERIALS  
 02/10/1999 - 02/14/2003 FY02: \$0 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 1689**  
 MILLISECOND PULSARS AND PLANETARY SYSTEMS  
 03/30/1999 - 09/30/2001 FY02: \$0 Total: \$145,000  
*Prin. Invest.:* S R KULKARNI  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8535 CALIFORNIA INST OF TECHNOLOGY 1690**  
 HIGH RESOLUTION, HIGH ENERGY FOCUSING OPTICS FOR THE NEXT  
 GENERATION GAMMA RAY EXPLORER.  
 07/08/1999 - 07/14/2002 FY02: \$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 1691**  
 NEW GRANT: YEAR 1 OF 2 FOR "A BEOWULF SYSTEM SOFTWARE  
 INITIATIVE"  
 05/27/1999 - 05/31/2001 FY02: \$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 1692**  
 VERY HIGH SPECTRAL & SPATIAL RESOLUTION GE DETECTOR &  
 READOUT ELECTRONICS FOR HARD X-RAY ASTRONOMY  
 08/20/1999 - 08/31/2002 FY02: \$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 1693**  
 SPECTROSCOPIC STUDIES OF PRE-BIOTIC CARBON CHEMISTRY  
 09/08/1999 - 02/28/2002 FY02: \$0 Total: \$106,520  
*Prin. Invest.:* G BLAKE  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 8922 CALIFORNIA INST OF TECHNOLOGY 1694**  
 PARTICIPATION OF THE NITRIC ACID CIMS INSTRUMENT IN THE SAGE III  
 OZONE LOSS & VALIDATION EXPERIMENT  
 01/06/2000 - 12/31/2002 FY02: \$0 Total: \$408,557  
*Prin. Invest.:* P WENNERBERG  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9307 CALIFORNIA INST OF TECHNOLOGY 1695**  
 CLOSEOUT OF "LABORATORY STUDIES OF THE PHOTOCHEMISTRY OF  
 PEROXYNITRIC ACID" ASSET FORTH IN THE ATT  
 03/22/2000 - 03/31/2002 FY02: \$0 Total: \$123,169  
*Prin. Invest.:* D O WENNERBERG  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9344 CALIFORNIA INST OF TECHNOLOGY 1696**  
 BALLOON-BORNE OBSERVATIONS OF THE POLARIZATION OF THE COSMIC  
 MICROWAVE BACKGROUND  
 03/27/2000 - 03/31/2003 FY02: \$0 Total: \$310,150  
*Prin. Invest.:* A LANGE  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9434 CALIFORNIA INST OF TECHNOLOGY 1697**  
 THE PHYSICAL & CHEMICAL STRUCTURE OF CIRCUMSTELLAR DISKS &  
 ENVELOPES  
 04/24/2000 - 04/14/2001 FY02: \$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 1698**  
 USE OF SATELLITE FIRE PRODUCTS AND MODELS TO INVESTIGATE THE  
 EFFECTS OF FIRE ON THE GLOBAL CARBON CYCLE  
 04/18/2000 - 04/30/2003 FY02: \$0 Total: \$283,253  
*Prin. Invest.:* J RANDERSON  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

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**NAG 5 9471 CALIFORNIA INST OF TECHNOLOGY 1699**  
 ATMOSPHERIC TRACE GAS ABUNDANCES & STABLE ISOTOPE RATIOS VIA  
 INFRARED LASER INDUCED FLUORESCENCE (IR  
 04/14/2000 - 04/30/2003 FY02: \$0 Total: \$323,343  
*Prin. Invest.:* G BLAKE  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9482 CALIFORNIA INST OF TECHNOLOGY 1700**  
 KNOWLEDGE DISCOVERY AND DATABASE TECHNOLOGIES FOR DIGITAL  
 SKY SURVEYS AND VIRTUAL OBSERVATORIES  
 04/21/2000 - 04/30/2002 FY02: \$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 1701**  
 INTERANNUAL VARIABILITY OF SNOW AND ICE AND IMPACT ON THE  
 CARBON CYCLE  
 04/25/2000 - 04/30/2003 FY02: \$0 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 1702**  
 DEVELOPMENT OF SUBMILLIMETER SIS MIXERS AND BROAD BAND HEMT  
 AMPLIFIERS  
 04/18/2000 - 04/30/2003 FY02: \$0 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 1703**  
 MILLIMETER-WAVE INTERFEROMETRY OF PROTO-PLANETARY DISKS  
 04/27/2000 - 04/30/2003 FY02: \$0 Total: \$170,000  
*Prin. Invest.:* S SARGENT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9601 CALIFORNIA INST OF TECHNOLOGY 1704**  
 MARTIAN ATMOSPHERIC CIRCULATION AND CLIMATE  
 05/17/2000 - 04/30/2003 FY02: \$0 Total: \$135,300  
*Prin. Invest.:* A P INGERSOL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9603 CALIFORNIA INST OF TECHNOLOGY 1705**  
 VIRTUAL OBSERVATORIES OF THE FUTURE  
 05/19/2000 - 05/14/2002 FY02: \$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 1706**  
 IMPLICATIONS OF MARTIAN NORTH-SOUTH POLAR DIFFEREN CES  
 05/12/2000 - 05/14/2003 FY02: \$0 Total: \$100,700  
*Prin. Invest.:* B C MURRAY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9687 CALIFORNIA INST OF TECHNOLOGY 1707**  
 IN SITU CHEMICAL IMAGER  
 06/05/2000 - 05/31/2001 FY02: \$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 1708**  
 COSMOLOGY & PARTICLE ASTROPHYSICS THEORY (ATP-98)  
 08/23/2000 - 04/30/2003 FY02: \$0 Total: \$190,107  
*Prin. Invest.:* M P KAMIONKOWSKI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9919 CALIFORNIA INST OF TECHNOLOGY 1709**  
 THE HOT PHASE OF THE VIOLENT ISM OF NEARBY DWARF IRREGULAR  
 GALAXIES  
 09/05/2000 - 09/30/2003 FY02: \$0 Total: \$46,300  
*Prin. Invest.:* F WALTER  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10047 CALIFORNIA INST OF TECHNOLOGY 1710**  
 MEASURING THE MAGNETIC FIELD AND RELATIVISTIC PART ICLES IN  
 RELIC RADIO GALAXIES  
 10/03/2000 - 09/30/2002 FY02: \$0 Total: \$27,000  
*Prin. Invest.:* F A HARRISON  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10189 CALIFORNIA INST OF TECHNOLOGY 1711**  
 PLANETARY ORIGIN, EVOLUTION AND STRUCTURE  
 01/03/2001 - 01/14/2004 FY02: \$0 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 1712**  
 IMPACT PROCESSES IN THE SOLAR SYSTEM  
 01/04/2001 - 12/31/2003 FY02: \$0 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 1713**  
 IMPACT CRATERING CALCULATIONS  
 01/02/2001 - 09/30/2001 FY02: \$0 Total: \$30,000  
*Prin. Invest.:* T AHRENS  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10293 CALIFORNIA INST OF TECHNOLOGY 1714**  
 APPLICATION OF ISOTOPIC AND CHEMICAL ANALYSES TO UNDERSTAND-  
 ING THE ORIGIN OF EXTRATERRESTRIAL  
 02/06/2001 - 02/14/2002 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* G J WASSERBURG  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 10317 CALIFORNIA INST OF TECHNOLOGY 1715</b>  LARGE-FORMAT, ANTENNA-COUPLED, MULTI-FREQUENCY, BOLOMETRIC (LAMB) FOCAL PLANE ARRAYS FOR MM &amp; SUB  02/07/2001 - 01/31/2004 FY02: \$0 Total: \$169,894  Prin. Invest.: A E LANGE  Tech. Officer: GSFC/E J WOLLACK  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 10587 CALIFORNIA INST OF TECHNOLOGY 1723</b>  MARS INTERNAL EVOLUTION CONSTRAINED BY MGS DATA  03/13/2001 - 03/14/2004 FY02: \$0 Total: \$60,000  Prin. Invest.: D STEVENSON  Tech. Officer: GSFC/J M BOYCE  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 10358 CALIFORNIA INST OF TECHNOLOGY 1716</b>  DEVELOPMENT OF SUPERCONDUCTING DETECTOR WITH MULTI PLEXED READOUTS-  02/01/2001 - 02/14/2004 FY02: \$0 Total: \$218,870  Prin. Invest.: J ZMUZINAS  Tech. Officer: GSFC/C STAHL  CASE Category: 13 - PHYSICS</p>	<p><b>NAG 5 10602 CALIFORNIA INST OF TECHNOLOGY 1724</b>  SUPPORT FOR THE 2001 GORDON RESEARCH CONFERENCE ON THE ORIGINS OF SOLAR SYSTEMS  03/21/2001 - 02/28/2002 FY02: \$0 Total: \$15,000  Prin. Invest.: D STEVENSON  Tech. Officer: GSFC/J BOYCE  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 10406 CALIFORNIA INST OF TECHNOLOGY 1717</b>  A NEOTECTONIC MAP OF THE EARTH: A PILOT STUDY OF SRTM DATA  04/02/2001 - 03/31/2003 FY02: \$0 Total: \$75,000  Prin. Invest.: K E SIEH  Tech. Officer: GSFC/H V FREY  CASE Category: 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 10618 CALIFORNIA INST OF TECHNOLOGY 1725</b>  PALEOMAGNETIC CONSTRAINTS ON PANSPERMIA AND THE ALH84001 MAGNETOFOSSILS  03/19/2001 - 03/31/2004 FY02: \$0 Total: \$72,000  Prin. Invest.: J L KIRSCHVINK  Tech. Officer: GSFC/M MEYER  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 10410 CALIFORNIA INST OF TECHNOLOGY 1718</b>  MINIATURE IRON BIOMINERAL DETECTOR FOR MARTIAN EXO BIOLOGY  04/10/2001 - 04/14/2004 FY02: \$0 Total: \$166,514  Prin. Invest.: J KIRSCHVINK  Tech. Officer: GSFC/B BETTS  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 10707 CALIFORNIA INST OF TECHNOLOGY 1726</b>  SOURCES OF LOW FREQUENCY GRAVITATIONAL WAVES (ATP 2000)  04/23/2001 - 04/30/2004 FY02: \$0 Total: \$128,000  Prin. Invest.: E PHINNEY  Tech. Officer: GSFC/R J OLIVERSEN  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 10423 CALIFORNIA INST OF TECHNOLOGY 1719</b>  EXPERIMENTAL STUDIES OF PHASE EQUILIBRIA OF METEORITES AND PLANETARY BODIES  02/20/2001 - 02/28/2004 FY02: \$0 Total: \$150,000  Prin. Invest.: E STOLPER  Tech. Officer: GSFC/J BOYCE  CASE Category: 12 - CHEMISTRY</p>	<p><b>NAG 5 10724 CALIFORNIA INST OF TECHNOLOGY 1727</b>  CIRRUS CLOUDS ON MARS: DATA ANALYSIS AND GCM MODELING  04/12/2001 - 04/14/2004 FY02: \$0 Total: \$60,000  Prin. Invest.: Y YUNG  Tech. Officer: GSFC/J BOYCE  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 10467 CALIFORNIA INST OF TECHNOLOGY 1720</b>  THE STRUCTURE OF YOUNG STELLAR SYSTEMS: ESTABLISHING INITIAL CONDITIONS FOR PLANET FORMATION  02/22/2001 - 02/28/2004 FY02: \$0 Total: \$45,000  Prin. Invest.: G BLAKE  Tech. Officer: GSFC/J BOYCE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 10761 CALIFORNIA INST OF TECHNOLOGY 1728</b>  UNDERSTANDING GAMMA-RAY BURSTS (ATP 2000)  04/23/2001 - 04/30/2004 FY02: \$0 Total: \$28,373  Prin. Invest.: R SARI  Tech. Officer: GSFC/R OLIVERSEN  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 10470 CALIFORNIA INST OF TECHNOLOGY 1721</b>  TEMPORAL VARIABILITY IN THE ACCRETION RATE OF INTERPLANETARY DUST USING THE ASA TRACER  02/27/2001 - 03/31/2004 FY02: \$0 Total: \$48,900  Prin. Invest.: K A FARLEY  Tech. Officer: GSFC/D SENSKE  CASE Category: 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 10804 CALIFORNIA INST OF TECHNOLOGY 1729</b>  CONCEPT STUDY FOR THE "THE HEAVY NUCLEI EXPLORER" (HNX) MISSION AO-99-OSS-05  04/30/2001 - 09/30/2002 FY02: \$0 Total: \$47,600  Prin. Invest.: D A MEWALDT  Tech. Officer: GSFC/J R BYRD  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 10558 CALIFORNIA INST OF TECHNOLOGY 1722</b>  BROWN DWARFS: DISCOVERY AND DETAILED STUDIES  03/13/2001 - 03/14/2003 FY02: \$0 Total: \$30,000  Prin. Invest.: S KULKARNI  Tech. Officer: GSFC/J M BOYCE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 10885 CALIFORNIA INST OF TECHNOLOGY 1730</b>  THE MULTI-WAVELENGTH EXTRAGALACTIC SKY (ADP 2000)  05/03/2001 - 05/14/2002 FY02: \$0 Total: \$48,148  Prin. Invest.: R J BRUNNER  Tech. Officer: GSFC/R J OLIVERSEN  CASE Category: 11 - ASTRONOMY</p>

## CALIFORNIA

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**NAG 5 10901 CALIFORNIA INST OF TECHNOLOGY 1731**  
 A MECHANISM FOR SOLAR FORDING OF CLIMATE: DID THE MAUNDER  
 MINIMUM CAUSE THE LITTLE ICE AGE?  
 05/07/2001 - 05/14/2004 FY02: \$0 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 1732**  
 A STUDY OF EXTREMELY RED GALAXIES  
 05/30/2001 - 05/31/2006 FY02: \$0 Total: \$64,879  
*Prin. Invest.:* D THOMPSON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11157 CALIFORNIA INST OF TECHNOLOGY 1733**  
 LABORATORY STUDIES OF THE PHOTOCHEMISTRY OF PEROXY NITRIC  
 ACID  
 08/01/2001 - 07/31/2004 FY02: \$0 Total: \$17,000  
*Prin. Invest.:* P O WENNERBERG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11214 CALIFORNIA INST OF TECHNOLOGY 1734**  
 OBSERVATIONAL AND MODELING STUDIES OF THE SOUTH PO LAR  
 RESIDUAL CAP  
 08/13/2001 - 08/14/2002 FY02: \$0 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 1735**  
 AEOLIAN TRANSPORT PROCESSES ON MARS: SURFACE OBSERVATIONS  
 AND MESOSCALE MODELING  
 08/17/2001 - 08/31/2003 FY02: \$0 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 1736**  
 THE EXPLORATION OF THE OUTER SOLAR SYSTEM  
 08/22/2001 - 09/30/2004 FY02: \$0 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 1737**  
 DAILY WEATHER MAPS FROM MARS ORBITER IMAGES  
 08/20/2001 - 08/31/2004 FY02: \$0 Total: \$71,900  
*Prin. Invest.:* A INGERSOLL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11388 CALIFORNIA INST OF TECHNOLOGY 1738**  
 WIRE OBSERVATIONS OF THE CIRCUMSTELLAR REGIONS OF EVOLVED  
 MASSIVE STARS.  
 11/30/2001 - 02/14/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* A MARSTON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11419 CALIFORNIA INST OF TECHNOLOGY 1739**  
 QUIESCENT EMISSION FROM TRANSIENT TYPE I X-RAY BURSTERS  
 12/18/2001 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* R E RUTLEDGE  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11423 CALIFORNIA INST OF TECHNOLOGY 1740**  
 TERAHERTZ (THZ) LABORATORY SPECTROSCOPY IN SUPPORT OF THE  
 SOFIA AND FIRST/HERSCHEL HETERODYNE RECEIVERS  
 12/03/2001 - 11/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* G A BLAKE  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11488 CALIFORNIA INST OF TECHNOLOGY 1741**  
 SPECTROSCOPIC STUDIES OF PRE-BIOTIC CARBON CHEMISTRY  
 12/31/2001 - 02/28/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* G A BLAKE  
*Tech. Officer:* GSFC/M A MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 11549 CALIFORNIA INST OF TECHNOLOGY 1742**  
 AEROSOL AND CCN CHARACTERIZATION IN CRYSTAL-FACE  
 01/14/2002 - 01/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* R FLAGAN  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11640 CALIFORNIA INST OF TECHNOLOGY 1743**  
 EXPERIMENTAL AND ANALYTICAL STUDIES OF SOLAR SYSTEM CHEMIS-  
 TRY  
 01/22/2002 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D BURNETT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11645 CALIFORNIA INST OF TECHNOLOGY 1744**  
 OPTICALLY THIN CIRCUMSTELLAR DUST AND GAS DISKS (L TSA 2001)  
 01/29/2002 - 01/31/2007 FY02: \$0 Total: \$0  
*Prin. Invest.:* L HILLENBRAND  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11657 CALIFORNIA INST OF TECHNOLOGY 1745**  
 IR CAVITY RINGDOWN STUDIES OF ATMOSPHERIC FREERADICAL  
 CHEMISTRY  
 01/25/2002 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M OKAMURA  
*Tech. Officer:* GSFC/M KURYLO  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11725 CALIFORNIA INST OF TECHNOLOGY 1746**  
 APPLICATION OF ISOTOPIC AND CHEMICAL ANALYSES TO UNDERSTAND-  
 ING THE ORIGIN OF EXTRATERRESTRIAL  
 02/11/2002 - 02/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* G WASSERBURG  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY



**NAG 5 11739 CALIFORNIA INST OF TECHNOLOGY 1747**  
 RETRIEVAL OF ATMOSPHERIC CO2 COLUMN FROM GROUND BASED NEAR  
 IR SPECTRA OF THE SUN  
 02/12/2002 - 02/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* P WENNBEG  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11851 CALIFORNIA INST OF TECHNOLOGY 1748**  
 A COMPREHENSIVE TECHNOLOGY DEVELOPMENT PROGRAM FOR THE  
 CONSTELLATION MISSION HARD X-RAY TELESCOPE  
 03/15/2002 - 03/14/2006 FY02: \$0 Total: \$0  
*Prin. Invest.:* F A HARRISON  
*Tech. Officer:* GSFC/D NGUYEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11932 CALIFORNIA INST OF TECHNOLOGY 1749**  
 A SUMMER RESEARCH PROGRAM ON SUMMER FACULTY FELLOW SHIPS  
 AT THE JET PROPULSION LABORATORY.  
 05/23/2002 - 04/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A ALBEE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11985 CALIFORNIA INST OF TECHNOLOGY 1750**  
 COSMOLOGY AND FUNDAMENTAL PHYSICS FROM SPACE: THEORETICAL  
 INVESTIGATIONS OF INFLATION,  
 04/12/2002 - 04/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M P KAMIONKOWSKI  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12000 CALIFORNIA INST OF TECHNOLOGY 1751**  
 DEVELOPMENT OF A DATA FEDERATION FACILITY FOR THE NVO.  
 04/17/2002 - 04/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R BRUNNER  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12032 CALIFORNIA INST OF TECHNOLOGY 1752**  
 BLACK HOLE ASTROPHYSICS OF AGN, X-RAY BINARIES AND GAMMA RAY  
 BURSTS  
 04/12/2002 - 04/15/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R D BLANDFORD  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12037 CALIFORNIA INST OF TECHNOLOGY 1753**  
 PROCESSES IN THE FORMATION AND EVOLUTION OF EXTRA SOLAR  
 PLANETS  
 04/12/2002 - 04/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* P M GOLDREICH  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12118 CALIFORNIA INST OF TECHNOLOGY 1754**  
 SUPPORT FOR THE ACTIVITIES RELATED TO THE NATIONAL VIRTUAL  
 OBSERVATORY SCIENCE DEFINITION TEAM  
 04/29/2002 - 04/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S G DJORGOVSKI  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12156 CALIFORNIA INST OF TECHNOLOGY 1755**  
 WATER AND THE MARTIAN POLAR ATMOSPHERE  
 05/13/2002 - 05/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M RICHARDSON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12247 CALIFORNIA INST OF TECHNOLOGY 1756**  
 MEASUREMENT OF COLUMN-AVERAGED CO2  
 06/26/2002 - 06/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* P WENNBEG  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12384 CALIFORNIA INST OF TECHNOLOGY 1757**  
 PARTICIPATION OF D.O. MUHLEMAN AS A CO-INVESTIGATOR ON THE  
 MARS OBSERVER LASER ALTIMETER (M  
 07/17/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D O MUHLEMAN  
*Tech. Officer:* GSFC/D E SMITH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 12492 CALIFORNIA INST OF TECHNOLOGY 1758**  
 FORECASTING SHOCKS AND ENERGETIC PARTICLE HAZARDS  
 08/27/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* C S COHEN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12564 CALIFORNIA INST OF TECHNOLOGY 1759**  
 CONSTRAINING MODES OF CRUSTAL DEFORMATION USING INTERFERO-  
 METRIC SYNTHETIC APERTURE RADAR  
 09/12/2002 - 09/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M SIMONS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1661 CALIFORNIA INST OF TECHNOLOGY 1760**  
 DISPERSION MICROSTRUCTURE AND PHEOLOGY IN CERAMICS PROCESS-  
 ING  
 05/16/2000 - 11/30/2003 FY02: \$0 Total: \$120,994  
*Prin. Invest.:* J BRADY  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1743 CALIFORNIA INST OF TECHNOLOGY 1761**  
 MEASUREMENT OF THERMOPHYSICAL PROPERTIES OF MOLTEN SILICON  
 AND GERMANIUM  
 09/27/2000 - 09/30/2003 FY02: \$0 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 1762**  
 MEASUREMENT OF THERMOPHYSICAL PROPERTIES OF MOLTEN SILICON  
 AND GERMANIUM  
 09/27/2000 - 09/30/2002 FY02: \$0 Total: \$596,500  
*Prin. Invest.:* W L JOHNSON  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

## CALIFORNIA

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**NAG 8 1763 CALIFORNIA INST OF TECHNOLOGY 1763**  
 THE CQ EXPERIMENT ENHANCED HEAT CAPACITY OF SUPERFLUID HELIUM IN A HEAT FLUX  
 05/01/2001 - 02/01/2006 FY02: \$0 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 1764**  
 BIOMIMETIC SELF-ASSEMBLY OF MESOSTRUCTURES IN MICROGRAVITY: THE NATURE OF CAPILLARY BOND  
 04/30/2001 - 04/29/2005 FY02: \$0 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 1765**  
 GENESIS DISCOVERY MISSION PHASE B  
 05/13/1998 - 05/31/2004 FY02: \$0 Total: \$514,510  
*Prin. Invest.:* D S BURNETT  
*Tech. Officer:* JSC/E K STANSBERRY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 5 98034 CALIFORNIA INST OF TECHNOLOGY 1766**  
 PHASE A STUDY FOR GALE X (GALAXY EVOLUTION EXPLORER) INVESTIGATION  
 12/05/1997 - 09/30/2004 FY02: \$0 Total: \$54,848,000  
*Prin. Invest.:* C MARTIN  
*Tech. Officer:* GSFC/F SNOW  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5431 CALIFORNIA INST OF TECHNOLOGY 1767**  
 ADJOINT ERROR ANALYSIS: IMPROVING THE ACCURACY & RELIABILITY OF LIFT & DRAG ESTIMATES  
 03/28/2001 - 06/30/2003 FY02: \$0 Total: \$29,335  
*Prin. Invest.:* N A PIERRE  
*Tech. Officer:* ARC/J J RENTHER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 5 626 CALIFORNIA INST OF TECHNOLOGY 1768**  
 HIGH PERFORMANCE CORNERSTONE TECHNOLOGIES FOR THE NATIONAL VIRTUAL OBSERVATORY  
 02/26/2002 - 02/25/2008 FY02: \$0 Total: \$0  
*Prin. Invest.:* T A PRINCE  
*Tech. Officer:* GSFC/J FISCHER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 5 30138 CALIFORNIA INST OF TECHNOLOGY 1769**  
 CRUCIAL DESERTIFICATION PROCESSES FOR MONITORING ARID LANDS  
 08/27/1998 - 11/30/2001 FY02: \$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 1770**  
 VOLCANIC HAZARDS ASSESSMENT USING REMOTE SENSING, BAJA, CALIFORNIA, MEXICO (STUDENT: JANE DMOCH)  
 08/14/2001 - 08/31/2004 FY02: \$0 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 1771**  
 THE SUBDUCTION ZONE EARTHQUAKE CYCLE AS CONSTRAINED BY SPACE GEODESY AND SEISMOLOGY/STUDENT: MATTHEW  
 08/15/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* M SIMONS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30452 CALIFORNIA INST OF TECHNOLOGY 1772**  
 CO AND H2O ISOTOPE STUDIES USING CAVITY-ENHANCED, OPTICAL HETERODYNE SPECTROSCOPY. STUDENT: DAV  
 08/20/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M OKUMURA  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50215 CALIFORNIA INST OF TECHNOLOGY 1773**  
 FROM EARTH TO ORBIT: UTILIZING THE DIGITIZED PALOMAR SKY SURVEY IN NASA MISSIONS\_ (STUDENT: ROY GAL)  
 07/22/1998 - 07/31/2001 FY02: \$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 1774**  
 CHEMICAL PROCESSES IN CIRCUMSTELLAR ACCRETION DISKS (STUDENT: JACQUELINE KESSLER)  
 05/27/1999 - 06/30/2002 FY02: \$0 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 1775**  
 OBSERVATIONS OF CMB ANISOTROPIES WITH THE ARCMINUTE COSMOLOGICAL BOLOMETRIC ARRAY RECEIVER (STUDENT: MA  
 06/04/1999 - 06/30/2002 FY02: \$0 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 1776**  
 BOLOMETRIC POLARIMETRY FOR COSMOLOGY  
 06/20/2000 - 06/30/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* A LANGE  
*Tech. Officer:* GSFC/L K SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50280 CALIFORNIA INST OF TECHNOLOGY 1777**  
 INVESTIGATION OF VACUUM ARC ION THRUSTER FOR SPACE PROPULSION APPLICATIONS--STUDENT: MICHA  
 06/20/2000 - 06/30/2003 FY02: \$0 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 1778**  
 DEVELOPMENT OF SUPERCONDUCTING CAVITY STABILIZED OSCILLATORS (SCSO) FOR FREQUENCY STANDARDS & PREC  
 07/06/2000 - 09/30/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* N YEH  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50339 CALIFORNIA INST OF TECHNOLOGY 1779**  
 GALAXY FORMATION AND EVOLUTION: MODELS FOR CURRENT AND  
 FUTURE OBSERVATIONS (STUDENT: MICH  
 05/04/2001 - 08/30/2004 FY02: \$0 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 1780**  
 A SUMMER RESEARCH PROGRAM OF NASA SUMMER FACULTY F  
 09/23/1997 - 08/31/2002 FY02: \$0 Total: \$1,365,527  
*Prin. Invest.:* A ALBEE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2327 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1781**  
 SUBSONIC GLIDEBACK ROCKET DEMONSTRATOR FLIGHT TESTING  
 09/08/2000 - 08/31/2001 FY02: \$1 Total: \$24,001  
*Prin. Invest.:* D DETURRIS  
*Tech. Officer:* LARC/T A TALAY  
*CASE Category:* 42 - AERONAUTICAL ENGR

**NAG 1 01099 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1782**  
 CONFIGURATION STUDIES OF PERSONAL AIR VEHICLE EXPLORATION  
 06/14/2001 - 01/13/2002 FY02: \$0 Total: \$49,996  
*Prin. Invest.:* D HALL  
*Tech. Officer:* LARC/M D MOORE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1386 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1783**  
 POTENTIAL BENEFITS FROM TMA AND SMS INTEGRATION  
 11/01/1999 - 12/31/2002 FY02: \$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 1784**  
 INTEGRATING NASA DRYDEN RESEARCH ENDEAVORS INTO THE  
 TEACHING-LEARNING OF MATHEMATICS IN THE K-12 C  
 02/22/2000 - 01/03/2002 FY02: \$0 Total: \$28,909  
*Prin. Invest.:* R A WARD  
*Tech. Officer:* DFRC/S YEE  
*CASE Category:* 21 - MATHEMATICS

**NAG 4 228 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1785**  
 INFLATABLE WING STRUCTURAL TEST, ANALYSIS, AND DESIGN  
 06/04/2002 - 09/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* J D MELLO  
*Tech. Officer:* DFRC/J MURRAY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 8674 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1786**  
 ADAPTIVE SAMPLING OF PHYTOPLANKTON RESPONSES TO EPISODIC  
 PHYSICAL FORCING IN THE NEARSHORE COASTAL  
 07/08/1999 - 07/14/2002 FY02: \$0 Total: \$283,638  
*Prin. Invest.:* M A MOLINE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NCC 1 02012 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1787**  
 STARBOOSTER DEMONSTRATOR CLUSTER CONFIGURATION  
 ANALYSIS/VERIFICATION PROGRAM  
 02/20/2002 - 02/19/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D J DETURRIS  
*Tech. Officer:* LARC/J W PAULSON  
*CASE Category:* 42 - AERONAUTICAL ENGR

**NCC 2 1149 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1788**  
 DEVELOPMENT OF MULTIDISCIPLINARY FLIGHT CONTROL DE SIGN PRO-  
 CESSSES USING CONDUIT  
 12/01/1999 - 12/31/2002 FY02: \$0 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 1789**  
 INNOVATIVE VERTICAL & SHORT TAKEOFF & LANDING CONC EPTS &  
 SUPPORTING TECHNOLOGIES  
 08/16/2000 - 10/31/2002 FY02: \$0 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 1790**  
 MARS AIRPLANE MISSION AND TECHNOLOGY DEVELOPMENT  
 09/27/2001 - 12/31/2002 FY02: \$0 Total: \$71,980  
*Prin. Invest.:* D W HALL, D J BIEZAD  
*Tech. Officer:* ARC/L G LEMKE, ARC/A GONZALES  
*CASE Category:* 42 - AERONAUTICAL ENGR

**NCC 2 5508 CALIFORNIA POLYTECHNIC STATE U-SAN LUIS 1791**  
 RUNWAY INDEPENDANT SHORT TAKEOFF AND LANDING (RI/S TOL) RE-  
 GIONAL JET PROJECT  
 08/01/2002 - 01/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D W HALL  
*Tech. Officer:* ARC/D A WARDWELL, ARC/C E HANGE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 171 CALIFORNIA ST. POLYTECHNIC U-POMONA 1792**  
 ENHANCEMENT OF RESEARCH & DESIGN CAPABILITIES  
 09/30/1999 - 09/30/2002 FY02: \$0 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 1793**  
 ESTABLISHMENT OF A NEW BUSINESS INCUBATOR  
 08/06/1998 - 11/04/2001 FY02: \$0 Total: \$830,000  
*Prin. Invest.:* V H GARNER, E L BARNES  
*Tech. Officer:* NMO/T J LLOYD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 7 11 CALIFORNIA ST. POLYTECHNIC U-POMONA 1794**  
 NEW BUSINESS INCUBATOR  
 01/11/2002 - 01/11/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* V GARNER  
*Tech. Officer:* NMO/M BATTAGLIA  
*CASE Category:* 49 - ENGINEERING, OTHER

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 4 225 CALIFORNIA ST. UNIV.-SAN BERNADINO 1795**  
FINITE ELEMENT MODEL (FEM) STUDIES OF EXISTING HDA S AND THE DEVELOPMENT OF NEW/HAD COMPOSITES  
04/29/2002 - 03/21/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D USHER  
*Tech. Officer:* DFRC/D GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 153 CALIFORNIA STATE UNIV - FRESNO 1796**  
THERMO-MECNANICAL CHARACTERISTICS OF COMPOSITE MATERIALS  
03/30/1998 - 09/31/2001 FY02: \$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 FY02: \$0 Total: \$184,914  
*Prin. Invest.:* S MAHANTY, T MCCLANAHAN  
*Tech. Officer:* DFRC/K GUPTA, DFRC/L VOEKLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 207 CALIFORNIA STATE UNIV - FRESNO 1798**  
REMOTE ACCESS TO NASA DRYDEN'S FLIGHT LOADS LABORATORY: A MIDDLE SCHOOL VIRTUAL LABORATORY  
08/16/2002 - 10/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* N BENGIAMIN  
*Tech. Officer:* DFRC/L HUDSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9433 CALIFORNIA STATE UNIV - FULLERTON 1799**  
SOLAR NEBULA THERMAL AND PHYSICAL EVOLUTION AS CON STRAINED BY PLANETARY, METEORITIC AND ASTRONOMIC  
04/21/2000 - 04/14/2002 FY02: \$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 - 01/31/2003 FY02: \$0 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 - 04/14/2004 FY02: \$0 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 EDUCATIONAL OUTREACH  
05/05/1998 - 07/01/2002 FY02: \$0 Total: \$157,244  
*Prin. Invest.:* D S WOOLUM  
*Tech. Officer:* JSC/E K STANSBERY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 1830 CALIFORNIA STATE UNIV - LONG BEACH 1803**  
MAGNETHOLOGICAL FLUIDS: RHEOLOGY AND NONEQUILBRIUM PAT-TERN FORMATION  
04/18/1996 - 05/16/2002 FY02: \$0 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 - 04/14/2003 FY02: \$0 Total: \$249,986  
*Prin. Invest.:* C T LEE  
*Tech. Officer:* GSFC/A J TUYAHOV  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12361 CALIFORNIA STATE UNIV - LONG BEACH 1805**  
CSU/NASA EDUCATION COLLABORATIVE  
08/12/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R WEST  
*Tech. Officer:* GSFC/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 329 CALIFORNIA STATE UNIV - LONG BEACH 1806**  
AUGMENTED LEARNING ENVIRONMENT FOR RENEWABLE TEACHING (ALERT)  
05/07/1998 - 08/14/2002 FY02: \$0 Total: \$450,000  
*Prin. Invest.:* E AMBOS  
*Tech. Officer:* GSFC/B MEESON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 4 173 CALIFORNIA STATE UNIV - LOS ANGELES 1807**  
PARTNERSHIP AN INQUIRY AERONAUTICAL SCIENCE DISTANCE LEARNING ED PROJECT  
09/16/1999 - 09/17/2002 FY02: \$0 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 1808**  
PARTNERSHIP INTEGRATION OF CONFIGURATION  
09/16/1999 - 12/31/2002 FY02: \$0 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 1809**  
PARTNERSHIP CONTROL HYPERSONIC VEHICLES  
09/15/1999 - 09/13/2002 FY02: \$0 Total: \$199,980  
*Prin. Invest.:* M MIRMIRANI  
*Tech. Officer:* DFRC/K GUPTA, DFRC/L VOELKER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 4 224 CALIFORNIA STATE UNIV - LOS ANGELES 1810**  
CONTROL OF HIGH-PERFORMANCE FLIGHT VEHICLES: A MULTIDISCIPLINARY APPROACH  
05/02/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* M MIRMIRANI  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 8889 CALIFORNIA STATE UNIV - LOS ANGELES 1811**  
 USE OF DECENTRALIZED CONTROL IN DESIGN OF A SEGMENTED SPACE  
 01/03/2000 - 12/31/2002 FY02: \$0 Total: \$1,000,000  
*Prin. Invest.:* H R BOUSSALIS  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8945 CALIFORNIA STATE UNIV - LOS ANGELES 1812**  
 ASYMMETRIES AND VARIATIONS IN JUPITER'S MAGNETO SPHERE  
 01/28/2000 - 01/14/2003 FY02: \$0 Total: \$128,600  
*Prin. Invest.:* K KHURANA  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9160 CALIFORNIA STATE UNIV - LOS ANGELES 1813**  
 UNIV PREPARATORY PROGRAM  
 03/06/2000 - 06/30/2003 FY02: \$0 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 1814**  
 EXCELLENCE IN SCIENCE AND MATH EDUCATION FOR HARD TO STAFF  
 URBAN SCHOOLS  
 03/03/2000 - 02/28/2003 FY02: \$0 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 1815**  
 DEVELOPMENT OF A REGIONAL-SCALE ECOSYSTEM PROCESS MODEL  
 FOR EVALUATING THE IMPACTS OF DEVELOPMENT A  
 12/08/1997 - 12/31/2001 FY02: \$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 1816**  
 APPLICATION OF REMOTE SENSING AND ECOSYSTEM MODELING TO  
 VINEYARD MANAGEMENT IN CA NAPA VALLEY  
 08/13/1999 - 11/01/2002 FY02: \$50,000 Total: \$368,986  
*Prin. Invest.:* L F JOHNSON  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 1186 CALIFORNIA STATE UNIV - MONTEREY BAY 1817**  
 REMOTE SENSING, ECOSYSTEM MODELING, & GEOSPATIAL ANALYSIS  
 FOR EARTH SYSTEMS SCIENCE & HEALTH  
 06/28/2000 - 06/30/2003 FY02: \$0 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 1818**  
 NASA EXPLORERS  
 02/24/1999 - 12/31/2001 FY02: \$0 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 1819**  
 PRECISE GROUND-BASED PHOTOMETRIC OBSERVATIONS AND SOLAR  
 TOTAL AND SPECTRAL IRRADIANCE OBSERVATIONS B  
 06/23/1997 - 10/31/2000 FY02: \$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 1820**  
 ACQUISITION AND ANALYSIS OF PRECISE GROUND-BASED PHOTOMETRIC  
 FULL-DISK IMAGES FOR THE UNDERSTANDING  
 03/25/1998 - 07/31/2003 FY02: \$0 Total: \$143,599  
*Prin. Invest.:* G A CHAPMAN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7778 CALIFORNIA STATE UNIV - NORTHRIDGE 1821**  
 A PROPOSAL TO CHARACTERIZE AND UNDERSTAND THE SOURCES OF  
 SOLAR TOTAL AND SPECTRAL IRRADIANCE VARIABILITY  
 10/28/1998 - 01/31/2003 FY02: \$0 Total: \$114,487  
*Prin. Invest.:* D A CHAPMAN  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7878 CALIFORNIA STATE UNIV - NORTHRIDGE 1822**  
 A PROPOSAL TO COMPARE GROUND-BASED PHOTOMETRIC IMAGES WITH  
 IRRADIANCE DATA FROM SOHO  
 12/01/1998 - 12/14/2002 FY02: \$0 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 1823**  
 MICROSTRIP ANTENNA DEVELOPMENT FOR SPACECRAFT APPLICATIONS  
 07/10/2000 - 08/31/2001 FY02: \$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 1824**  
 STUDY OF THE POWER INPUT TO THE SOLAR CORONA FROM INTERMIT-  
 TENT MAGNETIC FOOTPRINT MOTIONS  
 05/14/2001 - 05/31/2004 FY02: \$0 Total: \$62,896  
*Prin. Invest.:* A CADAVID  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 5 489 CALIFORNIA STATE UNIV - NORTHRIDGE 1825**  
 ANALYZING DATA SETS  
 04/06/2000 - 02/28/2004 FY02: \$0 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 1826**  
 FAILURE ANALYSIS PREVENTION, AND RELIABILITY MODELING FOR  
 SUB-MICRON ELECTRONICS TECHNOLOGY, A RESEARCH  
 08/29/2000 - 08/31/2002 FY02: \$0 Total: \$998,380  
*Prin. Invest.:* B BAVARIAN  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 4 200 CALIFORNIA STATE UNIV-BAKERSFIELD 1827**  
 METRIC ANALYSIS AND EVALUATION FOR NASA/DRYDEN FLIGHT RESEARCH  
 01/31/2000 - 02/06/2003 FY02: \$0 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 1828**  
 STEP PACE SCIENCE TECH PROJECT  
 02/17/1999 - 12/31/2001 FY02: \$0 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 1829**  
 SOUTHERN CALIFORNIA CENTER FOR MANAGING FIRE HAZARDS AT THE URBAN WILDLANDS INTERFACE  
 03/03/1999 - 02/28/2003 FY02: \$0 Total: \$1,587,523  
*Prin. Invest.:* C LEE  
*Tech. Officer:* JSC/C HILL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 1001 FOOTHILL-DE ANZA COMM COLL SYSTEM OFF 1830**  
 SCIENTIFIC-TECHNICAL & BUSINESS CAREERS TRAINING GRANT  
 07/07/1993 - 08/31/2001 FY02: \$0 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 COMM COLL SYSTEM OFF 1831**  
 EXPERIMENTAL INTERNSHIPS SUPPORTING ASTROBIOLOGY AND SPACE TECHNOLOGY & INFORMATION TECHNOLOGY  
 07/03/2001 - 06/30/2003 FY02: \$0 Total: \$836,324  
*Prin. Invest.:* V K SERMON  
*Tech. Officer:* ARC/G JAMES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9700 GLENDALE COMM COLL 1832**  
 CIMMARUSTI SCIENCE CENTER  
 07/18/2000 - 08/14/2004 FY02: \$0 Total: \$3,831,000  
*Prin. Invest.:* L SEROT  
*Tech. Officer:* GSFC/H KASS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 5510 HARVEY MUDD COLL 1833**  
 A SAMPLE LOADING AND MANIPULATION SYSTEMS (SLIMS) FOR THE CHEMIN XRD/XRF INSTRUMENT  
 09/11/2002 - 08/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J A KING  
*Tech. Officer:* ARC/D F BLAKE  
*CASE Category:* 12 - CHEMISTRY

**NAG 9 1452 LOMA LINDA UNIV 1834**  
 RESPONSE OF THYROID FUNCTIONAL TISSUE UNITS TO SPACE-LIKE RADIATION FIELDS  
 08/15/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L M GREEN  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 56 - MEDICAL

**NCC 9 118 LOMA LINDA UNIV 1835**  
 COOPERATIVE RESEARCH IN PROTON SPACE RADIATION  
 02/02/2001 - 12/31/2001 FY02: \$0 Total: \$3,661,000  
*Prin. Invest.:* G NELSON, J ARCHAMBEAU, J SLATER  
*Tech. Officer:* JSC/F CUCINOTTA  
*CASE Category:* 13 - PHYSICS

**NCC 9 149 LOMA LINDA UNIV 1836**  
 COOPERATIVE RESEARCH IN PROTON SPACE RADIATION  
 03/28/2002 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* J SLATER, D GRIDLEY  
*Tech. Officer:* JSC/F CUCINOTTA  
*CASE Category:* 13 - PHYSICS

**NAG 2 6062 NATIONAL HISPANIC UNIV 1837**  
 PRE COLL ACHIEVEMENT OF EXCELLENCE IN MATHEMATICS SCIENCE ENGINEERING AND TECHNOLOGY PROJECT DIS  
 08/21/2002 - 08/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J HAWKINS  
*Tech. Officer:* ARC/A CARDENAS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1343 NATIONAL HISPANIC UNIV 1838**  
 SCHOLARSHIP SUPPORT OF LATINO AND /OR NATIVE AMERICAN HIGH SCHOOL STUDENTS AND LATINO COLL PREPA  
 06/04/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* M PEREZ  
*Tech. Officer:* ARC/A CARDENAS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 6055 NATIONAL HISPANIC UNIV 1839**  
 A PROPOSAL TO ESTABLISH A TEACHER ENHANCEMENT PROGRAM FOR RURAL ELEMENTARY TEACHERS SERVING LARGE P  
 02/19/2002 - 02/28/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J S HAWKINS  
*Tech. Officer:* ARC/A CARDENAS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 664 NATIONAL HISPANIC UNIV 1840**  
 THE FUTURE MSET TEACHERS CENTER FOR EDUCATIONAL EXCELLENCE  
 08/12/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J HAWKINS  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11197 PASADENA CITY COLL 1841**  
 SMART: SCIENTISTS MENTORING ASTRONOMY RESEARCH TEAMS OF TOMORROW: A PROPOSAL FOR DOING RESEARCH  
 09/13/2001 - 12/31/2003 FY02: \$0 Total: \$60,000  
*Prin. Invest.:* J SEPIKAS  
*Tech. Officer:* GSFC/P J SAKIMOTO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9618 POMONA COLL 1842**  
 THERMAL AND MECHANICAL ANALYSIS OF SMALL, SHALLOW MAGMA RESERVOIRS ON MARS  
 05/18/2000 - 09/30/2002 FY02: \$0 Total: \$38,400  
*Prin. Invest.:* E GROSFILS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## NASA'S UNIVERSITY PROGRAM

CALIFORNIA

<b>NAG 5 10157</b>	<b>POMONA COLL</b>	<b>1843</b>	<b>NAG 5 12348</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1851</b>
VOLCANIC & TECTONIC HISTORY OF THE NEMESIS TESSERA REGION ON VENUS			ACCRETION DISK VISCOSITY (FUSE 2001)		
12/18/2000 - 12/31/2003	FY02: \$0	Total: \$24,800	08/20/2002 - 08/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> E GROSFILS			<i>Prin. Invest.:</i> J WOOD		
<i>Tech. Officer:</i> GSFC/D SENSKE			<i>Tech. Officer:</i> GSFC/GSONNEBORN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 10498</b>	<b>POMONA COLL</b>	<b>1844</b>	<b>NAG 5 12401</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1852</b>
THERMOMECHANICAL ANALYSIS OF SMALL, SHALLOW MAGMA RESERVOIRS ON MARS: IMPLICATIONS FOR RESERVOIR FAIL			PICOPLANKTON AND OTHER PHYTOPLANKTON FUNCTIONAL GROUPS: OPTICAL PROPERTIES AND REMOTE SENSING		
03/09/2001 - 03/14/2003	FY02: \$0	Total: \$30,000	07/24/2002 - 07/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> E GROSFILS			<i>Prin. Invest.:</i> J MUELLER		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GSFC/C TREES		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 2 6060</b>	<b>SAN BERNARDINO VALLEY COLL</b>	<b>1845</b>	<b>NAG13 99017</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1853</b>
STUDENT SUCCESS IN MESA PROPOSAL			REGIONAL CHANGE MONITORING OF HABITAT RESERVE SYSTEMS WITH VERY HIGH RESOLUTION REMOTELY SENSED		
08/14/2002 - 08/14/2003	FY02: \$0	Total: \$0	07/19/1999 - 10/31/2002	FY02: \$0	Total: \$430,000
<i>Prin. Invest.:</i> D AVILA			<i>Prin. Invest.:</i> D STOW		
<i>Tech. Officer:</i> ARC/A CARDENAS			<i>Tech. Officer:</i> JSC/R MCKELLIP		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 1 02082</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1846</b>	<b>NAS 5 00199</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1854</b>
A DIFFUSION BASED APPROACH TO THERMAL TOMOGRAPHY			R & D TO SUPPORT GSFC'S SIMBIOS PROJECT		
04/08/2002 - 04/07/2004	FY02: \$0	Total: \$0	01/26/2001 - 11/30/2002	FY02: \$0	Total: \$112,600
<i>Prin. Invest.:</i> R A KLINE			<i>Prin. Invest.:</i> J L MUELLER		
<i>Tech. Officer:</i> LARC/W P WINFREE, LARC/P A HOWELL			<i>Tech. Officer:</i> GSFC/C R CRANE		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 33 - OCEANOGRAPHY		
<b>NAG 5 8560</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1847</b>	<b>NAS 5 00202</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1855</b>
ENVIRONMENTAL CHANGE AND NATURAL HAZARD ASSESSMENT IN WESTERN TURKMENIS-TAN USING INTERFEROMETRIC SY			R & D TO SUPPORT GSFC'S SIMBIOS PROJECT		
07/14/1999 - 06/30/2003	FY02: \$0	Total: \$127,864	02/07/2001 - 11/30/2002	FY02: \$0	Total: \$171,476
<i>Prin. Invest.:</i> R MELLORS			<i>Prin. Invest.:</i> C C TREES		
<i>Tech. Officer:</i> GSFC/M Y WEI			<i>Tech. Officer:</i> GSFC/C R MCCLAIN		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 33 - OCEANOGRAPHY		
<b>NAG 5 9301</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1848</b>	<b>NCC 3 842</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1856</b>
OPERATIONAL MONITORING OF ALTERATION IN REGIONAL FOREST COVER USING MULTITEMPORAL REMOTE SENSING			DYNAMICS OF FLAME SPREAD IN MICROGRAVITY ENVIRONMENT		
03/20/2000 - 04/30/2003	FY02: \$0	Total: \$158,396	01/05/2001 - 11/30/2004	FY02: \$0	Total: \$115,000
<i>Prin. Invest.:</i> J FRANKLIN			<i>Prin. Invest.:</i> S BHATTACHARJEE		
<i>Tech. Officer:</i> GSFC/G GUTMAN			<i>Tech. Officer:</i> GRC/S L OLSON		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 5 10376</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1849</b>	<b>NCC13 00002</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1857</b>
PROBING SHOCKS & WINDS IN THE PECULIAR BINARY STAR VSAGITAE (FUSE 00)			AFFILIATED RESEARCH CENTER (ARC) PROGRAM AT SAN DIEGO STATE UNIV		
02/08/2001 - 02/14/2003	FY02: \$0	Total: \$44,100	02/11/2000 - 02/10/2005	FY02: \$0	Total: \$374,999
<i>Prin. Invest.:</i> J WOOD			<i>Prin. Invest.:</i> D STOWE		
<i>Tech. Officer:</i> GSFC/G SONNEBORN			<i>Tech. Officer:</i> SSC/A PEEK		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 11141</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1850</b>	<b>NGT 1 02018</b>	<b>SAN DIEGO STATE UNIV</b>	<b>1858</b>
FIRE, LAND COVER AND CLIMATE CHANGE: IMPACTS ON RIVER FLOWS IN SEMI-ARID SHRUBLAND WATERSHEDS			GRADUATE STUDENT RESEARCHER PROGRAM (GSRP)		
07/26/2001 - 07/31/2004	FY02: \$0	Total: \$76,249	07/10/2002 - 06/30/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> A HOPE			<i>Prin. Invest.:</i> P ETZEL, J L STOCKLUM		
<i>Tech. Officer:</i> GSFC/G GUTMAN			<i>Tech. Officer:</i> LARC/D D MAZANEK		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		

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**NGT 5 30335**                      **SAN DIEGO STATE UNIV**                      **1859**  
 LONG-TERM IMPACTS OF FIRE ON STREAMFLOW IN CALIFORNIA  
 MEDITERRANEAN-TYPE SHRUB LANDS: AN INTEGRATED  
 08/21/2000 - 08/31/2003                      FY02: \$0                      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**                      **1860**  
 ASSESSING THE EFFECTS OF VARIATIONS IN SOIL MOISTURE ON THE  
 SURFACE ENERGY BALANCE AND CARBON  
 08/13/2001 - 08/31/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* A HOPE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30439**                      **SAN DIEGO STATE UNIV**                      **1861**  
 HYDRO-ECOLOGICAL LINKAGES IN URBANIZING WATERSHEDS : A  
 PROCESS-BASED ASSESSMENT OF LAND-USE CHANGES  
 08/21/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C TAGUE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30444**                      **SAN DIEGO STATE UNIV**                      **1862**  
 LONG-TERM IMPACTS OF FREQUENT FIRE AND URBANIZATION ON NATIVE  
 VEGETATION IN CALIFORNIA MEDITERRANEAN-T  
 08/23/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J FRANKLIN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1285**                      **SAN FRANCISCO STATE UNIV**                      **1863**  
 FREE FLIGHT INFORMATION & AUTOMATION ISSUES  
 02/08/1999 - 02/14/2003                      FY02: \$0                      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**                      **1864**  
 THE SEASONAL AND INTERANNUAL VARIABILITY OF PHYTOPLANKTON IN  
 THE BERING SEA AS INFLUENCED BY SEA ICE  
 07/24/1998 - 07/31/2002                      FY02: \$0                      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**                      **1865**  
 A COUPLED ICE-OCEAN MODEL OF MESOSCALE PHYSICAL/BIOLOGICAL  
 INTERACTIONS IN THE SOUTHERN OCEAN  
 01/20/1999 - 01/31/2002                      FY02: \$0                      Total: \$115,840  
*Prin. Invest.:* D H ROBINSON  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 1128**                      **SAN FRANCISCO STATE UNIV**                      **1866**  
 CONSTRUCTION OF A LONG-TERM CLIMATOLOGY OF ANTARCTIC & ARCTIC  
 POLAR STRATOSPHERIC CLOUDS BY AN AUTOMATED  
 07/01/1999 - 12/31/2001                      FY02: \$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**                      **1867**  
 EFFECTS OF CENTRIFUGATION ON THE IMMUNE RESPONSE OF MACROPHAGES &  
 DIFFERENTIATION INTO OSTEOCLASTS  
 08/15/2001 - 07/31/2003                      FY02: \$0                      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**                      **1868**  
 MODELING THE ONSET EXTENT & DURATION OF HEATING IN THE  
 WINTER POLAR VORTEX, USING IMPACT, AVHRR  
 08/15/2001 - 07/31/2003                      FY02: \$0                      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**                      **1869**  
 AERONAUTICAL TELECOMMUNICATION NETWORK MODELING & SIMULATION  
 12/04/1998 - 11/30/2001                      FY02: \$0                      Total: \$59,973  
*Prin. Invest.:* H SHAHNASSER  
*Tech. Officer:* ARC/P R GRAMS, ARC/J WANG  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 6059**                      **SAN FRANCISCO STATE UNIV**                      **1870**  
 EDUCATIONAL OUTREACH TO ENCOURAGE AND INSPIRE THE PURSUIT OF  
 CAREERS IN SCIENCE AND ENGINEERING TO DIVERSITY  
 07/19/2002 - 07/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S UJLAKI, M SCOTT  
*Tech. Officer:* ARC/M E DUENAS  
*CASE Category:* 62 - PSYCHOLOGY SOCIAL ASPECTS

**NAG 1 2205**                      **SAN JOSE STATE UNIV**                      **1871**  
 CHARACTERIZING STRATOSPHERIC & TROPOSPHERIC AEROSOLS: THEORETICAL  
 STUDIES & ANALYSIS OF SATELLITE DATA (NRA)  
 06/15/1999 - 02/28/2003                      FY02: \$0                      Total: \$84,103  
*Prin. Invest.:* P HAMILL  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1421**                      **SAN JOSE STATE UNIV**                      **1872**  
 WEB-BASED INTEGRATION OF DATA BASES & APPLICATIONS FOR NATIONAL  
 AIRSPACE SYSTEM ANALYSIS  
 07/14/2000 - 07/14/2002                      FY02: \$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**                      **1873**  
 SHARED CONTROL AMONG AIR TRAFFIC CONTROL, FLIGHT DECK, &  
 DECISION AIDING SYSTEMS: PERFORMANCE PARAMETER STUDY  
 09/13/2000 - 08/31/2001                      FY02: \$0                      Total: \$150,943  
*Prin. Invest.:* K CORKER  
*Tech. Officer:* ARC/I C STATLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1454**                      **SAN JOSE STATE UNIV**                      **1874**  
 PROPOSAL STATEMENT OF WORK FOR THE MODELING & SYSTEM SAFETY &  
 STABILITY SUB-ELEMENT-ELEMENT SYSTEM  
 02/01/2001 - 02/28/2002                      FY02: \$10,000                      Total: \$105,028  
*Prin. Invest.:* K CORKER  
*Tech. Officer:* ARC/I STATLER, ARC/M M CONNORS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



<b>NAG 2 1528</b>	<b>SAN JOSE STATE UNIV</b>	<b>1875</b>	<b>NAG 5 11184</b>	<b>SAN JOSE STATE UNIV</b>	<b>1883</b>
THE VIRTUAL GLOVEBOX (VGX): A PROCEDURE IDENTIFICATION, TASK ANALYSIS & COMPUTER AIDED DESIGN			CLIMATOLOGY AND NUMERICAL SIMULATION OF CONDENSATE CLOUDS DETECTED BY MGS		
10/22/2001 - 01/31/2003	FY02: \$19,263	Total: \$19,263	09/05/2001 - 09/14/2004	FY02: \$0	Total: \$45,077
<i>Prin. Invest.:</i> K M CORKER			<i>Prin. Invest.:</i> S RAFKIN		
<i>Tech. Officer:</i> ARC/J D SMITH, ARC/R BOYLE			<i>Tech. Officer:</i> GSFC/J M BOYCE		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 2 1550</b>	<b>SAN JOSE STATE UNIV</b>	<b>1876</b>	<b>NAG 5 11185</b>	<b>SAN JOSE STATE UNIV</b>	<b>1884</b>
REQUIREMENTS SPECIFICATION FOR REAL AND FAST TIME SCENARIOS FOR SIMULATED EVALUATION OF ADVANCED AIR			AVP GRADUATE STUDIES AND RESEARCH		
04/12/2002 - 04/14/2003	FY02: \$0	Total: \$0	08/21/2001 - 08/31/2003	FY02: \$0	Total: \$34,300
<i>Prin. Invest.:</i> K CORKER			<i>Prin. Invest.:</i> A BRIDGER		
<i>Tech. Officer:</i> ARC/S LOZITO, ARC/R ASHFORD			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 2 1563</b>	<b>SAN JOSE STATE UNIV</b>	<b>1877</b>	<b>NAG 5 12302</b>	<b>SAN JOSE STATE UNIV</b>	<b>1885</b>
HUMAN SYSTEM PERFORMANCE MODELING FOR PREDICTION OF ERGONOMIC BEHAVIOR: ADVANCED AND INTEGRATED VI			CONTINUED STUDIES OF STATIONARY PLANETARY-SCALE WAVES IN MARS' ATMOSPHERE		
05/30/2002 - 09/30/2003	FY02: \$0	Total: \$0	06/20/2002 - 06/30/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> K CORKER			<i>Prin. Invest.:</i> A BRIDGER		
<i>Tech. Officer:</i> ARC/D FOYLE			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 2 6056</b>	<b>SAN JOSE STATE UNIV</b>	<b>1878</b>	<b>NAG 8 1735</b>	<b>SAN JOSE STATE UNIV</b>	<b>1886</b>
DEVELOPMENT OF THE NASA AMES TEACHER INST			URBAN EFFECT ON THUNDERSTORMS		
06/05/2002 - 02/28/2003	FY02: \$0	Total: \$0	08/04/2000 - 12/31/2001	FY02: \$0	Total: \$50,000
<i>Prin. Invest.:</i> E M LANDESMAN			<i>Prin. Invest.:</i> R BORNSTEIN		
<i>Tech. Officer:</i> ARC/L K COE, ARC/D G JAMES			<i>Tech. Officer:</i> MSFC/D QUATTROCHI		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 4372</b>	<b>SAN JOSE STATE UNIV</b>	<b>1879</b>	<b>NCC 2 1015</b>	<b>SAN JOSE STATE UNIV</b>	<b>1887</b>
RADIO OCCULTATION INVESTIGATION OF THE RINGS OF SATURN			INTEGRATING LEGACY APPLICATIONS WITHIN A MIDDLEWARE ENVIRONMENT		
04/25/1997 - 02/28/2002	FY02: \$0	Total: \$142,400	02/01/1998 - 07/31/2001	FY02: \$0	Total: \$189,814
<i>Prin. Invest.:</i> D A MAROUF			<i>Prin. Invest.:</i> R FATOOHI, D HARKEY		
<i>Tech. Officer:</i> GSFC/J GRANT			<i>Tech. Officer:</i> ARC/M E LIVINGSTON, ARC/D KAWAK		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 5 9500</b>	<b>SAN JOSE STATE UNIV</b>	<b>1880</b>	<b>NCC 2 1045</b>	<b>SAN JOSE STATE UNIV</b>	<b>1888</b>
NUMERICAL SIMULATION OF MARS' CONVECTIVE BOUNDARY LAYER AND DUST DEVILS			AIRBORNE MEASUREMENT RESEARCH		
05/09/2000 - 05/31/2003	FY02: \$0	Total: \$114,200	06/30/1998 - 06/30/2003	FY02: \$0	Total: \$141,145
<i>Prin. Invest.:</i> S C RAFKIN			<i>Prin. Invest.:</i> J GOODMAN		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> ARC/PBUI		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 9751</b>	<b>SAN JOSE STATE UNIV</b>	<b>1881</b>	<b>NCC 2 1060</b>	<b>SAN JOSE STATE UNIV</b>	<b>1889</b>
MESOSCALE & LES MODELING OF THE MARTIAN ATMOSPHERE WIND STREAKS AND DUST DEVILS			SOLAR WIND STUDIES & AI TECHNOLOGIES		
06/27/2000 - 06/30/2003	FY02: \$0	Total: \$102,100	08/11/1998 - 10/31/2001	FY02: \$0	Total: \$370,550
<i>Prin. Invest.:</i> S RAFKIN			<i>Prin. Invest.:</i> P J HAMILI		
<i>Tech. Officer:</i> GSFC/D BOGAN			<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 9766</b>	<b>SAN JOSE STATE UNIV</b>	<b>1882</b>	<b>NCC 2 1071</b>	<b>SAN JOSE STATE UNIV</b>	<b>1890</b>
LARGE-SCALE WAVE ACTIVITY IN A MARS GENERAL CIRCULATION MODEL: CHARACTERIZATION & COMPARISON WITH			ASSESSMENT OF DISTRIBUTED OBJECT MIDDLEWARE		
06/29/2000 - 06/30/2003	FY02: \$0	Total: \$62,900	11/16/1998 - 04/30/2001	FY02: \$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> 11 - ASTRONOMY			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 5 9766</b>	<b>SAN JOSE STATE UNIV</b>	<b>1882</b>	<b>NCC 2 1095</b>	<b>SAN JOSE STATE UNIV</b>	<b>1891</b>
LARGE-SCALE WAVE ACTIVITY IN A MARS GENERAL CIRCULATION MODEL: CHARACTERIZATION & COMPARISON WITH			HUMAN FACTORS RESEARCH, TECHNOLOGY & SAFETY		
06/29/2000 - 06/30/2003	FY02: \$0	Total: \$62,900	03/11/1999 - 04/30/2002	FY02: \$0	Total: \$6,678,686
<i>Prin. Invest.:</i> A BRIDGER			<i>Prin. Invest.:</i> K P JORDAN		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> ARC/R K DISMUKES, ARC/C H NULL		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

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## NASA'S UNIVERSITY PROGRAM

**NCC 2 1096**                      **SAN JOSE STATE UNIV**                      **1892**  
EFFECTS OF CHRONIC EXPOSURE TO HYPER GRAVITY ON DIFFERENT  
STRAINS OF YOUNG & MATURE RATS  
03/11/1999 - 07/31/2002                      FY02: \$0                      Total: \$169,868  
*Prin. Invest.:* R A FOX  
*Tech. Officer:* ARC/N G DAUNTON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 1097**                      **SAN JOSE STATE UNIV**                      **1893**  
FLIGHT MANAGEMENT & AIR TRAFFIC MODELING  
03/19/1999 - 10/31/2002                      FY02: \$0                      Total: \$1,843,773  
*Prin. Invest.:* K P JORDAN  
*Tech. Officer:* ARC/M B TISCHLER, ARC/B D MCNALLY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1106**                      **SAN JOSE STATE UNIV**                      **1894**  
EXPERIMENTAL STUDIES OF THE DISTRIBUTION OF & INTERACTION  
BETWEEN REACTIVE TRACE CHEMICALS WITH DYN  
04/12/1999 - 03/31/2003                      FY02: \$0                      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**                      **1895**  
THE INFLUENCE OF THE ATMOSPHERE ON POLARIZED BIDIRECTIONAL  
REFLECTANCE DATA OF BOREALWETLANDS  
08/17/1999 - 12/31/2001                      FY02: \$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**                      **1896**  
FLIGHT HUMAN FACTORS  
02/02/2000 - 01/31/2003                      FY02: \$0                      Total: \$3,034,917  
*Prin. Invest.:* K JORDON  
*Tech. Officer:* ARC/R J DISMUKES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1168**                      **SAN JOSE STATE UNIV**                      **1897**  
PLANETARY ATMOSPHERIC STRUCTURE FROM SPACECRAFT DATA  
03/29/2000 - 12/31/2001                      FY02: \$0                      Total: \$113,429  
*Prin. Invest.:* A BRIDGER  
*Tech. Officer:* ARC/R E YOUNG  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1248**                      **SAN JOSE STATE UNIV**                      **1898**  
RINGS NODE DATA ARCHIVE MANAGEMENT  
03/27/2001 - 03/31/2003                      FY02: \$0                      Total: \$96,360  
*Prin. Invest.:* P J HAMIL  
*Tech. Officer:* ARC/J N CUZZI  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1284**                      **SAN JOSE STATE UNIV**                      **1899**  
A PROPOSAL TO SUPPORT FUTURE FLIGHT RESEARCH AT NASA AMES  
RESEARCH CENTER  
09/17/2001 - 11/30/2002                      FY02: \$0                      Total: \$16,098  
*Prin. Invest.:* M S PATANKAR  
*Tech. Officer:* ARC/N S DORGI, ARC/B SULLIVAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1285**                      **SAN JOSE STATE UNIV**                      **1900**  
ARTIFICIAL INTELLIGENCE STUDIES OF SPACE SCIENCE DATA  
09/27/2001 - 09/30/2003                      FY02: \$0                      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**                      **1901**  
RESEARCH COLLABORATIVE WITH COMPUTATIONAL SCIENCES DIVISION  
(CSD)  
09/28/2001 - 09/30/2002                      FY02: \$0                      Total: \$93,000  
*Prin. Invest.:* J MURPHY  
*Tech. Officer:* ARC/N MUSCETTOLA, ARC/D CLANCY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 2 1289**                      **SAN JOSE STATE UNIV**                      **1902**  
SYSTEMS SAFETY RESEARCH  
02/01/2002 - 01/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K JORDAN  
*Tech. Officer:* ARC/K DISMUKES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1294**                      **SAN JOSE STATE UNIV**                      **1903**  
RESEARCH COLLABORATIVE WITH NASA - ARC  
11/01/2001 - 01/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* N IBRAHIM  
*Tech. Officer:* ARC/G S HUBBARD  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 2 1302**                      **SAN JOSE STATE UNIV**                      **1904**  
HUMAN INFORMATION MANAGEMENT  
02/01/2002 - 01/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K JORDAN  
*Tech. Officer:* ARC/R K DISMUKES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1305**                      **SAN JOSE STATE UNIV**                      **1905**  
AVIATION MONITORING AND MODELING SUB ELEMENT SYSTEM WIDE  
ACCIDENT PREVENTION; NASA AVIATION SAFETY  
02/26/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K CORKER  
*Tech. Officer:* ARC/I STATLER, ARC/M M CONNORS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1307**                      **SAN JOSE STATE UNIV**                      **1906**  
SJSU/NASA COORDINATION OF AIR MIDAS SAFETY DEVELOPMENT HUMAN  
ERROR MODELING; NASA AVIATION SAFETY P  
02/26/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K CORKER  
*Tech. Officer:* ARC/D C FOYLE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 1313**                      **SAN JOSE STATE UNIV**                      **1907**  
SYSTEM WIDE ACCIDENT PREVENTION HUMAN FACTORS ANALYSIS  
EVALUATION PROVIDED TO THE NASA AVIATION SAFETY P  
02/28/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K CORKER  
*Tech. Officer:* ARC/B BEARD, ARC/D FOYLE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

<p><b>NCC 2 1314</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1908</b>  DISTRIBUTIONA ND SOURCES OF REACTIVE TRACE GASES A ND AEROSOL  IN THE TROPOSPHERE OF THE WESTERN PACI  02/20/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> P HAMILL, W VIEZEE  <i>Tech. Officer:</i> ARC/H SINGH, ARC/R S HIRSKIND  <i>CASE Category:</i> 31 – ATMOSPHERIC SCIENCE</p>	<p><b>NCC 2 5347</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1916</b>  VOLATILE OXYGENATED HYDROCARBONS - ANALYTICAL SYST EM DEVEL-  OPMENT &amp; TROPOSPHERIC ATMOSPHERIC CHEMIST  09/01/1999 - 01/31/2002                      FY02: \$0                      Total: \$30,000  <i>Prin. Invest.:</i> P A HAMMILL  <i>Tech. Officer:</i> ARC/H B SINGH, ARC/E P CONDON  <i>CASE Category:</i> 31 – ATMOSPHERIC SCIENCE</p>
<p><b>NCC 2 1365</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1909</b>  FLIGHT MANAGEMENT AND AIR - TRAFFIC MODELING  09/12/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> K JORDAN  <i>Tech. Officer:</i> ARC/M TISCHLER  <i>CASE Category:</i> 41 – AERONAUTICAL ENGNR</p>	<p><b>NCC 2 5402</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1917</b>  IDENTIFICATION &amp; CHARACTERIZATION OF NON-INVENTORI ED TERRES-  TRIAL IMPACT CRATERS  10/05/2000 - 09/30/2001                      FY02: \$0                      Total: \$10,000  <i>Prin. Invest.:</i> P MESSINA  <i>Tech. Officer:</i> ARC/H L D'ANTONI, ARC/E P CONDON  <i>CASE Category:</i> 32 – GEOLOGICAL SCIENCE</p>
<p><b>NCC 2 1368</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1910</b>  RESEARCH COLLABORATIVE WITH COMPUTATIONAL SCIENCES DIVISION  09/24/2002 - 09/30/2004                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> N IBRAHIM  <i>Tech. Officer:</i> ARC/D CLANCY, ARC/S LAU  <i>CASE Category:</i> 49 – ENGINEERING, OTHER</p>	<p><b>NCC 2 5435</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1918</b>  AVP GRADUATE STUDIES &amp; RESEARCH  05/15/2001 - 04/30/2002                      FY02: \$0                      Total: \$8,293  <i>Prin. Invest.:</i> P HAMILL  <i>Tech. Officer:</i> ARC/K ZAHNLE  <i>CASE Category:</i> 11 – ASTRONOMY</p>
<p><b>NCC 2 5311</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1911</b>  EXTOMYCORRHIZAE ECOLOGY IN YELLOWSTONE PARK  03/17/1999 - 01/31/2002                      FY02: \$0                      Total: \$78,220  <i>Prin. Invest.:</i> C A BRINEGAR  <i>Tech. Officer:</i> ARC/K W CULLINGS, ARC/M L FONDA  <i>CASE Category:</i> 51 – BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NCC 2 5450</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1919</b>  ANALYSIS OF SATELLITE DATA AND PREPARATION OF REPO RTS ON A  SRATOSPHERIC AEROSOL CLIMATOLOGY  07/30/2001 - 04/30/2002                      FY02: \$0                      Total: \$6,765  <i>Prin. Invest.:</i> P A HAMILL  <i>Tech. Officer:</i> ARC/P B RUSSELL  <i>CASE Category:</i> 31 – ATMOSPHERIC SCIENCE</p>
<p><b>NCC 2 5330</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1912</b>  INVESTIGATION OF MARS' ATMOSPHERIC CONDITIONS IN C ONNECTION  WITH AEROBRAKING &amp; AEROCAPTURE ACTIVITI  07/08/1999 - 06/30/2002                      FY02: \$0                      Total: \$41,002  <i>Prin. Invest.:</i> A C BRIDGER  <i>Tech. Officer:</i> ARC/R M HABERLE  <i>CASE Category:</i> 31 – ATMOSPHERIC SCIENCE</p>	<p><b>NCC 2 5451</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1920</b>  EXTREME ATMOSPHERIC ENVIRONMENTS AND HABITABLE CLI MATES  07/30/2001 - 07/31/2003                      FY02: \$0                      Total: \$46,000  <i>Prin. Invest.:</i> J L HOLLINGSWORTH  <i>Tech. Officer:</i> ARC/R E YOUNG  <i>CASE Category:</i> 31 – ATMOSPHERIC SCIENCE</p>
<p><b>NCC 2 5336</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1913</b>  AN INVESTIGATION OF CYCLO-FRONTO-CENESIS MARS' ATM OSPHERE  07/20/1999 - 07/14/2001                      FY02: \$0                      Total: \$169,405  <i>Prin. Invest.:</i> J L HOLLINGSWORT  <i>Tech. Officer:</i> ARC/R M HABERLE  <i>CASE Category:</i> 31 – ATMOSPHERIC SCIENCE</p>	<p><b>NCC 2 5452</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1921</b>  ANALYSIS OF THE INTERACTION OF HALOGENATED AND OR GANIC  GASES WITH ATMOSPHERIC PARTICULATES  08/03/2001 - 07/31/2003                      FY02: \$0                      Total: \$10,175  <i>Prin. Invest.:</i> P J HAMILL  <i>Tech. Officer:</i> ARC/L T IRACI, ARC/A TABAZADEH  <i>CASE Category:</i> 12 – CHEMISTRY</p>
<p><b>NCC 2 5338</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1914</b>  FAR INFRARED EMISSION FROM GALACTIC &amp; EXTRAGALACTIC INTERSTEL-  LAR GAS  07/23/1999 - 07/31/2001                      FY02: \$0                      Total: \$48,434  <i>Prin. Invest.:</i> M J KAUFMAN  <i>Tech. Officer:</i> ARC/D J HOLLEN  <i>CASE Category:</i> 11 – ASTRONOMY</p>	<p><b>NCC 2 5460</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1922</b>  IONIZED, NEUTRAL &amp; MOLECULAR GAS DIAGNOSTICS IN GA LAXIES:  MODELS FOR SIRT F  09/17/2001 - 08/31/2003                      FY02: \$0                      Total: \$19,666  <i>Prin. Invest.:</i> M J KAUFMAN  <i>Tech. Officer:</i> ARC/D J HOLLENBACH, ARC/R E YOUNG  <i>CASE Category:</i> 11 – ASTRONOMY</p>
<p><b>NCC 2 5344</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1915</b>  ASTROBIOLOGOY RAPID RATES OF CHANGE  08/12/1999 - 07/31/2002                      FY02: \$0                      Total: \$30,000  <i>Prin. Invest.:</i> E P METZGER  <i>Tech. Officer:</i> ARC/H L D'ANTONI  <i>CASE Category:</i> 59 – LIFE SCIENCE, OTHER</p>	<p><b>NCC 2 5465</b>                      <b>SAN JOSE STATE UNIV</b>                      <b>1923</b>  COMPOSITION &amp; DYNAMICS OF SATURN'S RINGS  09/26/2001 - 08/14/2002                      FY02: \$0                      Total: \$10,000  <i>Prin. Invest.:</i> P A HAMILL  <i>Tech. Officer:</i> ARC/J N CUZZI, ARC/J J LISSAUER  <i>CASE Category:</i> 11 – ASTRONOMY</p>

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NCC 2 5468**                    **SAN JOSE STATE UNIV**                    **1924**  
 THE RUNAWAY GREENHOUSE EFFECT ON EARTH & OTHER PLANETS  
 10/16/2001 - 09/30/2002                    FY02: \$15,000                    Total: \$15,000  
*Prin. Invest.:* P A HAMILL  
*Tech. Officer:* ARC/P PILEWSKIE, ARC/W J GORE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5476**                    **SAN JOSE STATE UNIV**                    **1925**  
 EARTH SCIENCE APPLICATIONS OF NEURAL NETWORKS  
 11/23/2001 - 11/30/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* E F METZGER  
*Tech. Officer:* ARC/H L D'ANTONIO, ARC/J BRASS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 5498**                    **SAN JOSE STATE UNIV**                    **1926**  
 THE EFFECT OF CLOUD CRYSTALLIZATION PROCESSES ON CLIMATE CHANGE & OZONE  
 07/01/2002 - 06/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* P HAMILL  
*Tech. Officer:* ARC/A TABAZADEH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5521**                    **SAN JOSE STATE UNIV**                    **1927**  
 EJECTA FROM CRATERS IN THE SATURNIAN SYSTEM  
 09/04/2002 - 09/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* P HAMILL  
*Tech. Officer:* ARC/K ZAHNLE, ARC/J LISSAUAR  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 6042**                    **SAN JOSE STATE UNIV**                    **1928**  
 STELLAR 2000  
 03/03/2000 - 04/30/2001                    FY02: -\$18,985                    Total: \$176,515  
*Prin. Invest.:* M M AVERNER  
*Tech. Officer:* ARC/R D MACELROY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT 2 52262**                    **SAN JOSE STATE UNIV**                    **1929**  
 SUMMER FACULTY RESEARCH FELLOWSHIP PROGRAM  
 03/31/2000 - 04/30/2003                    FY02: \$0                    Total: \$774,968  
*Prin. Invest.:* B STONE  
*Tech. Officer:* ARC/M MOORE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12113**                    **SANTA ANA COLL-RANCHO SANTA ANA COMM COLL**                    **1930**  
 PARTNERSHIP OF THE DISCOVERY SCIENCE CENTER AND SANTA ANA COLL  
 05/03/2002 - 04/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* P BOSTIC  
*Tech. Officer:* HQ/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9736**                    **SANTA CLARA UNIV**                    **1931**  
 DISTRIBUTED SPACE SYSTEM TECHNOLOGY DEMONSTRATIONS WITH THE EMERALD NANOSATELLITE  
 06/22/2000 - 06/30/2003                    FY02: \$0                    Total: \$80,000  
*Prin. Invest.:* C A KITTS  
*Tech. Officer:* GSFC/K LUU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1156**                    **SANTA CLARA UNIV**                    **1932**  
 EVALUATING BEHAVIORAL-BASED APPROACHES TO CHANGING SAFETY CULTURE IN AVIATION MAINTENANCE  
 02/25/2000 - 01/31/2002                    FY02: \$45,000                    Total: \$370,524  
*Prin. Invest.:* J TAYLOR  
*Tech. Officer:* ARC/B KANKI  
*CASE Category:* 62 - PSYCHOLOGY SOCIAL ASPECTS

**NCC 2 1195**                    **SANTA CLARA UNIV**                    **1933**  
 SHARP DEMONSTRATION FLIGHT: VIDEO BROADCAST SYSTEM FOR RESEARCH IN INTELLIGENT FLIGHT CHARACTERIZATION  
 08/24/2000 - 09/30/2001                    FY02: \$0                    Total: \$13,300  
*Prin. Invest.:* C A KITTS  
*Tech. Officer:* ARC/P KOLODZIEJ, ARC/S M JOHNSON  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 2 1320**                    **SANTA CLARA UNIV**                    **1934**  
 CONSTRUCTIVE RESEARCH PROJECTS EVALUATING AVIATION MAINTENANCE RESOURCE MANAGEMENT  
 03/12/2002 - 02/28/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J C TAYLOR  
*Tech. Officer:* ARC/B KANKI, ARC/M CONNORS  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 5 9495**                    **SONOMA STATE UNIV**                    **1935**  
 SWIFT: A PANCHROMATIC GAMMA RAY BURST MIDEX MISSION  
 04/19/2000 - 01/31/2007                    FY02: \$0                    Total: \$487,078  
*Prin. Invest.:* L R COMINSKY  
*Tech. Officer:* GSFC/A PARSONS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9782**                    **SONOMA STATE UNIV**                    **1936**  
 SWIFT PUBLIC RELATIONS - PART 1  
 07/06/2000 - 02/28/2002                    FY02: \$0                    Total: \$39,970  
*Prin. Invest.:* L R COMINSKY  
*Tech. Officer:* GSFC/N GEHRELS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11328**                    **SONOMA STATE UNIV**                    **1937**  
 SWIFT AND GLAST PRESS OFFICER FUNDS- FY02  
 09/18/2001 - 09/30/2006                    FY02: \$0                    Total: \$11,600  
*Prin. Invest.:* L R COMINSKY  
*Tech. Officer:* GSFC/A M PARSONS  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 429**                    **SONOMA STATE UNIV**                    **1938**  
 SPACE MYSTERIES: INQUIRY-DRIVEN WEB EXPLORATIONS THAT TEACH PHYSICAL SCIENCE & MATHEMATICS STANDARD  
 09/29/1999 - 09/30/2003                    FY02: \$0                    Total: \$462,992  
*Prin. Invest.:* L COMINSKY  
*Tech. Officer:* GSFC/D GABRYS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2144**                    **STANFORD UNIV**                    **1939**  
 BLENDED-WING-BODY DESIGN FOR ENHANCED ENVIRONMENTAL ACCEPTABILITY  
 03/23/1999 - 12/31/2001                    FY02: \$0                    Total: \$351,455  
*Prin. Invest.:* I KROO  
*Tech. Officer:* LARC/R R ANTCLIFF  
*CASE Category:* 41 - AERONAUTICAL ENGR

<p><b>NAG 2 1079</b>                      <b>STANFORD UNIV</b>                      <b>1940</b>  INFRARED SIGNATURE MASKING BY AIR PLASMA RADIATION  08/23/1996 - 10/31/2000                      FY02: \$0                      Total: \$221,719  Prin. Invest.: C H KRUGER, C O LAUX  Tech. Officer: ARC/W M HUO  CASE Category: 13 - PHYSICS</p>	<p><b>NAG 2 1539</b>                      <b>STANFORD UNIV</b>                      <b>1948</b>  INTELLIGENT DISTRIBUTED COMBUSTION FOR ADVANCED GAS TURBINE ENGINES  02/22/2002 - 12/31/2002                      FY02: \$0                      Total: \$0  Prin. Invest.: C F EDWARDS, J C GERDES, C T BOWMAN  Tech. Officer: ARC/N MANSOUR  CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 2 1219</b>                      <b>STANFORD UNIV</b>                      <b>1941</b>  ACTIVE CONTROL OF COMBUSTION INSTABILITY IN AIR-BR EATHING PROPULSION SYSTEMS - A COMPUTATIONAL &amp; ..  05/19/1998 - 04/30/2002                      FY02: \$0                      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</p>	<p><b>NAG 2 1557</b>                      <b>STANFORD UNIV</b>                      <b>1949</b>  AIR TRAFFIC POLLUTANT PREDICTION  05/01/2002 - 05/30/2003                      FY02: \$0                      Total: \$0  Prin. Invest.: P A DURBIN  Tech. Officer: ARC/R M MIRAFLORE, ARC/L TOBIAS  CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 2 1337</b>                      <b>STANFORD UNIV</b>                      <b>1942</b>  ENVIRONMENTAL MONITORING FOR SITUATION ASSESSMENT USING MOBILE &amp; FIXED SENSORS  07/13/1999 - 07/14/2003                      FY02: \$0                      Total: \$365,973  Prin. Invest.: R E FIKES  Tech. Officer: ARC/J A KURIEN, ARC/S LAU  CASE Category: 22 - COMPUTER SCIENCE</p>	<p><b>NAG 2 1564</b>                      <b>STANFORD UNIV</b>                      <b>1950</b>  HYBRID, HEIRARCHICAL CONTROL MODELS OF THE NATIONAL AIRSPACE SYSTEM  06/02/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  Prin. Invest.: C TOMLIN  Tech. Officer: ARC/L TOBIAS, ARC/C QUINN  CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 2 1354</b>                      <b>STANFORD UNIV</b>                      <b>1943</b>  ROLE OF ADRENERGIC RECEPTORS IN ADAPTATION TO MICROGRAVITY: GENE TARGETED MICE AS A MODEL OF MICRO  07/21/1999 - 07/14/2003                      FY02: \$0                      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)</p>	<p><b>NAG 3 1843</b>                      <b>STANFORD UNIV</b>                      <b>1951</b>  DROP BREAKUP IN FLOW THROUGH FLUID BEDS AS MODEL STOCHASTIC STRONG FLOWS  05/20/1996 - 04/18/2001                      FY02: \$0                      Total: \$480,000  Prin. Invest.: E G SHAQTEH  Tech. Officer: GRC/B S SINGH  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 2 1373</b>                      <b>STANFORD UNIV</b>                      <b>1944</b>  HIGH SPEED JET NOISE PREDICTION USING LARGE EDDY SIMULATIONS  08/11/1999 - 12/31/2001                      FY02: \$0                      Total: \$99,478  Prin. Invest.: S K LELE, B I VASHI  Tech. Officer: ARC/D KWAK  CASE Category: 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 3 1943</b>                      <b>STANFORD UNIV</b>                      <b>1952</b>  PROBLEMS IN MICROGRAVITY FLUID MECHANICS: THERMO CAPILLARY INSTABILITIES &amp; G-JITTER CONVECTION  09/03/1996 - 02/28/2001                      FY02: \$0                      Total: \$385,000  Prin. Invest.: G M HOMSY  Tech. Officer: GRC/J C DUH  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 2 1397</b>                      <b>STANFORD UNIV</b>                      <b>1945</b>  EVALUATION OF CHEMICAL KINETICS AND PHOTOCHEMICAL DATA FOR USE IN STRATOSPHERIC MODELING  02/17/2000 - 12/31/2002                      FY02: \$0                      Total: \$122,532  Prin. Invest.: C T BOWMAN  Tech. Officer: ARC/E CONDON  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 3 2398</b>                      <b>STANFORD UNIV</b>                      <b>1953</b>  ANISOTROPIC COLLOIDAL SELF ASSEMBLY ANISOTROPIC COLLOIDAL SELF ASSEMBLY  04/19/2000 - 11/30/2003                      FY02: \$0                      Total: \$170,000  Prin. Invest.: A P GAST  Tech. Officer: GRC/J H AGUI  CASE Category: 49 - ENGINEERING, OTHER</p>
<p><b>NAG 2 1464</b>                      <b>STANFORD UNIV</b>                      <b>1946</b>  2-D SELF-CALIBRATING PSEUDOLITE ARRAYS FOR COOPERATIVE ROVER/AERIAL VEHICLE NAVIGATION  03/23/2001 - 03/14/2003                      FY02: \$0                      Total: \$160,149  Prin. Invest.: S M ROCK  Tech. Officer: ARC/R MORRIS, ARC/S LAU  CASE Category: 22 - COMPUTER SCIENCE</p>	<p><b>NAG 3 2446</b>                      <b>STANFORD UNIV</b>                      <b>1954</b>  MICROGRAVITY FLUID MECHANICS: G-JITTER CONVECTION AND THE MECHANICS OF FLUIDIZED BEDS  05/26/2000 - 11/30/2003                      FY02: \$0                      Total: \$0  Prin. Invest.: G M HOMSY  Tech. Officer: GRC/F P CHIARAMONTE  CASE Category: 49 - ENGINEERING, OTHER</p>
<p><b>NAG 2 1478</b>                      <b>STANFORD UNIV</b>                      <b>1947</b>  COMPACT LASER-BASED SENSORS FOR MONITORING &amp; CONTROL OF GAS TURBINE COMUSTORS  04/20/2001 - 04/30/2003                      FY02: \$0                      Total: \$180,000  Prin. Invest.: R K HANSON  Tech. Officer: ARC/N N MANSOUR, ARC/A A WRAY  CASE Category: 46 - MECHANICAL ENGR</p>	<p><b>NAG 3 2579</b>                      <b>STANFORD UNIV</b>                      <b>1955</b>  IP INFRASTRUCTURE FOR DISTRIBUTED SPACE SYSTEM  04/13/2001 - 01/30/2004                      FY02: \$0                      Total: \$157,710  Prin. Invest.: A FOX  Tech. Officer: GRC/K BHASIN  CASE Category: 45 - ELECTRICAL ENGR</p>

CALIFORNIA

NASA'S UNIVERSITY PROGRAM

**NAG 3 2615**                      **STANFORD UNIV**                      **1956**  
 HIGH REGRESSION RATE HYBRID COMBUSTION HIGH REGRESSION RATE  
 HYBRID COMBUSTION  
 06/19/2001 - 12/31/2001                      FY02: \$0                      Total: \$46,500  
*Prin. Invest.:* B J CANTWELL  
*Tech. Officer:* GRC/D M VENTO  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 3 2724**                      **STANFORD UNIV**                      **1957**  
 DROP BREAKUP AND DNAADVECTION IN FIXED BEDS OF FIBERS: HAIRPIN  
 DYNAMICS IN ORDERED AND DISORDERED  
 03/07/2002 - 11/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D SHAQFEH  
*Tech. Officer:* GRC/G ZIMMERLI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2738**                      **STANFORD UNIV**                      **1958**  
 MEASUREMENT OF FLOWFIELD DISTORTION AND PARTICLE EQUATION OF  
 MOTION IN TURBULENT GAS FLOWS.  
 03/15/2002 - 11/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J K EATON  
*Tech. Officer:* GRC/M M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2812**                      **STANFORD UNIV**                      **1959**  
 AN INVESTIGATION OF THE AMBIENT NOISE FLOOR MEASUREMENTS AND  
 TRENDS  
 09/27/2002 - 12/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P ENGE  
*Tech. Officer:* GRC/J E HOLLANSWORTH  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 3441**                      **STANFORD UNIV**                      **1960**  
 DIGITAL TOPOGRAPHY PROPOSAL: LONG TERM MONITORING OF EARTH  
 SURFACE CHANGE WITH ERS-1 AND ERS-2....  
 01/11/1997 - 10/14/2001                      FY02: \$0                      Total: \$164,472  
*Prin. Invest.:* H ZEBKER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3732**                      **STANFORD UNIV**                      **1961**  
 TOPOGRAPHIC MAPPING IN THE ANTARCTIC ENVIRONMENT U INTERFER-  
 OMETRY  
 02/14/1997 - 02/28/2001                      FY02: \$0                      Total: \$170,406  
*Prin. Invest.:* D ZEBKER  
*Tech. Officer:* GSFC/R H THOMAS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3906**                      **STANFORD UNIV**                      **1962**  
 RADAR STUDIES OF LUNAR AND PLANETARY SURFACES  
 02/21/1997 - 10/31/2003                      FY02: \$0                      Total: \$302,850  
*Prin. Invest.:* G TYLER  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 5200**                      **STANFORD UNIV**                      **1963**  
 INVESTIGATION OF THE CORONA/CHROMOSPHERE INTERFACE WITH THE  
 CHROMOSPHERIC/CORONAL SPECTROHELIOGRAPH  
 05/28/1998 - 05/31/2003                      FY02: \$0                      Total: \$466,460  
*Prin. Invest.:* A B WALKER  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5300**                      **STANFORD UNIV**                      **1964**  
 INVESTIGATION OF CHROMOSPHERIC AND CORONAL STRUCTURES WITH  
 ADVANCED TECHNOLOGY SOLAR IMAGER  
 07/18/2000 - 07/17/2003                      FY02: \$0                      Total: \$638,954  
*Prin. Invest.:* B C WALKER  
*Tech. Officer:* HQ/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6148**                      **STANFORD UNIV**                      **1965**  
 SURFACE DEFORMATION AND TOPOGRAPHIC MEASUREMENTS FROM THE  
 PRESENCE OF VEGETATION  
 08/21/1997 - 08/31/2001                      FY02: \$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**                      **1966**  
 INVERSION OF TIME DEPENDENT SPACE GEODETIC DATA  
 08/01/1997 - 06/30/2001                      FY02: \$0                      Total: \$306,043  
*Prin. Invest.:* P SEGALL  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6615**                      **STANFORD UNIV**                      **1967**  
 LAND-USE AND LAND-COVER CHANGE IN SONORA, MEXICO  
 11/17/1997 - 05/14/2001                      FY02: \$0                      Total: \$334,383  
*Prin. Invest.:* P MATSON  
*Tech. Officer:* GSFC/A JANETOS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 7144**                      **STANFORD UNIV**                      **1968**  
 STUDIES OF THE IMPULSIVE PHASE OF SOLAR FLARE: BASIC MECHANISM  
 AND PARAMETER DISTRIBUTIONS  
 04/20/1998 - 10/14/2001                      FY02: \$0                      Total: \$229,184  
*Prin. Invest.:* V PETROSIAN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7208**                      **STANFORD UNIV**                      **1969**  
 CHEMICAL AND ISOTOPIC ANALYSIS OF TRACE ORGANIC MATTER ON  
 METEORITES AND INTERSTELLAR DUST USING  
 03/25/1998 - 07/31/2001                      FY02: \$0                      Total: \$239,000  
*Prin. Invest.:* R ZARE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7464**                      **STANFORD UNIV**                      **1970**  
 A TRANSITION EDGE MICROCALORIMETER SPECTROMETER FOR THE  
 EUV AND FUV  
 11/30/1998 - 12/31/2002                      FY02: \$0                      Total: \$232,708  
*Prin. Invest.:* A C WALKER, JR.  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7835**                      **STANFORD UNIV**                      **1971**  
 THE INTERFACE OF TRANSITION REGION AND CORONAL PLASMAS WITH  
 THE CHROMOSPHERIC NETWORK  
 12/14/1998 - 12/14/2002                      FY02: \$0                      Total: \$241,451  
*Prin. Invest.:* D B GALARCE  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

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<p><b>NAG 5 8025</b>                      <b>STANFORD UNIV</b>                      <b>1972</b>  SEPS/CEPPAD SCIENCE INVESTIGATION  01/12/1999 - 12/31/2001                      FY02: \$0                      Total: \$160,000  <i>Prin. Invest.:</i> M WALT  <i>Tech. Officer:</i> GSFC/R HOFFMAN  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 5 9040</b>                      <b>STANFORD UNIV</b>                      <b>1980</b>  VALIDATION &amp; IMPROVEMENT OF SRTM PERFORMANCE OVER RUGGED TERRAIN.  02/10/2000 - 02/14/2003                      FY02: \$0                      Total: \$100,000  <i>Prin. Invest.:</i> H A ZEBKER  <i>Tech. Officer:</i> GSFC/H V FREY  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 8563</b>                      <b>STANFORD UNIV</b>                      <b>1973</b>  URBANIZATION, LAND USE AND BIOLOGICAL RESOURCES  05/24/1999 - 05/31/2002                      FY02: \$0                      Total: \$47,001  <i>Prin. Invest.:</i> M L IMHOFF  <i>Tech. Officer:</i> GSFC/M L IMHOFF  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9087</b>                      <b>STANFORD UNIV</b>                      <b>1981</b>  SUPERCONDUCTING WIDE-BAND FAST SPECTROPHOTOMETERS  02/17/2000 - 06/30/2002                      FY02: \$0                      Total: \$621,440  <i>Prin. Invest.:</i> B CABRERA  <i>Tech. Officer:</i> GSFC/P CRANE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8600</b>                      <b>STANFORD UNIV</b>                      <b>1974</b>  X-RAY AND MICROWAVE MODELS IN SUPPORT OF HESSI SOLAR FLARE OBSERVATIONS  06/14/1999 - 06/14/2003                      FY02: \$0                      Total: \$135,080  <i>Prin. Invest.:</i> V PETROSIAN  <i>Tech. Officer:</i> GSFC/G D HOLMAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 9494</b>                      <b>STANFORD UNIV</b>                      <b>1982</b>  UPLINK MICRO-RADIO INSTRUMENT DEVELOPMENT  04/18/2000 - 04/30/2004                      FY02: \$0                      Total: \$147,682  <i>Prin. Invest.:</i> L TYLER  <i>Tech. Officer:</i> GSFC/B BETTS  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 8645</b>                      <b>STANFORD UNIV</b>                      <b>1975</b>  STUDYING THE EFFECTS OF CA, MG, AND K ON AEROSOL SIZE &amp; COMPOSITION, NOY &amp; RADIATIVE TRANSFER  07/13/1999 - 07/31/2002                      FY02: \$0                      Total: \$317,184  <i>Prin. Invest.:</i> M Z JACOBSON  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9556</b>                      <b>STANFORD UNIV</b>                      <b>1983</b>  RESEARCH INTO RADIO OCCULTATION METHODS FOR STUDY OF PLANETARY ATMOSPHERES  05/04/2000 - 04/30/2003                      FY02: \$0                      Total: \$150,000  <i>Prin. Invest.:</i> G TYLER  <i>Tech. Officer:</i> GSFC/D BOGAN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 8714</b>                      <b>STANFORD UNIV</b>                      <b>1976</b>  VARIATIONS OF THE SOLAR MAGNETIC FIELDS  08/03/1999 - 02/28/2003                      FY02: \$0                      Total: \$70,500  <i>Prin. Invest.:</i> P H SCHERRER  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 9737</b>                      <b>STANFORD UNIV</b>                      <b>1984</b>  DISTRIBUTED SPACE SYSTEM TECHNOLOGY DEMONSTRATIONS WITH THE EMERALD NANOSATELLITE  06/22/2000 - 06/30/2002                      FY02: \$0                      Total: \$130,000  <i>Prin. Invest.:</i> DEBRA  <i>Tech. Officer:</i> GSFC/K LUU  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 5 8802</b>                      <b>STANFORD UNIV</b>                      <b>1977</b>  "ORION: A LOW-COST DEMONSTRATION OF FORMATION FLYING"  12/16/1999 - 07/31/2001                      FY02: \$0                      Total: \$654,512  <i>Prin. Invest.:</i> R BYER  <i>Tech. Officer:</i> GSFC/J O BRISTOW  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 5 9760</b>                      <b>STANFORD UNIV</b>                      <b>1985</b>  MEASURING HUMAN IMPACTS ON BIODIVERSITY &amp; CARRYING CAPACITY OF ECO-SYSTEMS: COMBINING REMOTELY-SENSE  06/29/2000 - 08/31/2003                      FY02: \$0                      Total: \$102,105  <i>Prin. Invest.:</i> P EHRlich  <i>Tech. Officer:</i> GSFC/M L IMHOFF  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8866</b>                      <b>STANFORD UNIV</b>                      <b>1978</b>  A COUPLED ICE-OCEAN MODEL OF MESOSCALE PHYSICAL/ BIOLOGICAL INTERACTIONS IN THE ROSS SEA  12/08/1999 - 12/31/2001                      FY02: \$0                      Total: \$169,598  <i>Prin. Invest.:</i> K ARRIGO  <i>Tech. Officer:</i> GSFC/J MARRA  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9784</b>                      <b>STANFORD UNIV</b>                      <b>1986</b>  STRUCTURE OF SOLAR VELOCITY AND MAGNETIC FIELDS  07/06/2000 - 06/30/2003                      FY02: \$0                      Total: \$169,744  <i>Prin. Invest.:</i> P T SCHERRER  <i>Tech. Officer:</i> GSFC/W J WAGNER  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 8878</b>                      <b>STANFORD UNIV</b>                      <b>1979</b>  SOLAR OSCILLATIONS INVESTIGATION-MISSION OBSERVATIONS AND DATA ANALYSIS - CONTINUATION OF NAG5-3077  01/04/2000 - 06/30/2001                      FY02: \$0                      Total: \$4,499,996  <i>Prin. Invest.:</i> P SCHERRER  <i>Tech. Officer:</i> GSFC/J GURMAN  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 5 9842</b>                      <b>STANFORD UNIV</b>                      <b>1987</b>  COMPOSITION, PALEOENVIRONMENTAL DISTRIBUTION, AND PALEOECOLOGICAL OF ARCHEAN BACTERIAL COMMUNITIES  07/31/2000 - 07/31/2003                      FY02: \$0                      Total: \$171,673  <i>Prin. Invest.:</i> D R LOWE  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 11 - ASTRONOMY</p>

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**NAG 5 9853**                      **STANFORD UNIV**                      **1988**  
 ANTARCTIC ICE SHEET PENETRATION DEPTHS, GRAIN SIZE & ACCUMULATION RATES FROM INSAR & SAR ANALYSIS OF  
 07/31/2000 - 03/31/2003                      FY02: \$45,813                      Total: \$130,645  
*Prin. Invest.:* H ZEBKER  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9887**                      **STANFORD UNIV**                      **1989**  
 CHEMICAL AND ISOTOPIC SYSTEMATICS OF EARLY SOLAR SYSTEM PRECURSORS & PRODUCTS  
 08/21/2000 - 08/31/2001                      FY02: \$0                      Total: \$42,000  
*Prin. Invest.:* T IRELAND  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10483**                      **STANFORD UNIV**                      **1990**  
 SOLAR OSCILLATIONS INVESTIGATION - MICHELSON DOPPLER IMAGER FOR THE SOHO SOLAR MAXIMUM MISSION  
 03/05/2001 - 03/14/2003                      FY02: \$0                      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**                      **1991**  
 THE 15TH NATIONAL CONFERENCE OF THE BLACK PHYSICS STUDENTS  
 03/09/2001 - 03/14/2002                      FY02: \$0                      Total: \$84,800  
*Prin. Invest.:* B CABRERA  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 10534**                      **STANFORD UNIV**                      **1992**  
 MONITORING & MODELING LAND-USE CHANGE: INTERGRATING REMOTE SENSING WITH SOCIOECONOMIC DRIVERS  
 03/12/2001 - 02/28/2004                      FY02: \$0                      Total: \$115,238  
*Prin. Invest.:* K SETO  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10544**                      **STANFORD UNIV**                      **1993**  
 UNDERSTANDING ORGANICS IN METEORITES & THE PRE-BIOTIC ENVIRONMENT  
 03/09/2001 - 07/31/2004                      FY02: \$0                      Total: \$45,000  
*Prin. Invest.:* R ZARE  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10576**                      **STANFORD UNIV**                      **1994**  
 INFERENCE OF SURFACE PROPERTIES FROM MARS GLOBAL SURVEYOR 3.6 CM WAVELENGTH OBLIQUE SCATTERING  
 03/21/2001 - 02/28/2004                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* G TYLER  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10719**                      **STANFORD UNIV**                      **1995**  
 ORION: A LOW-COST DEMONSTRATION OF FORMATION FLYING  
 04/24/2001 - 10/31/2002                      FY02: \$0                      Total: \$298,830  
*Prin. Invest.:* R L BYER  
*Tech. Officer:* GSFC/S P HUGHES  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 10799**                      **STANFORD UNIV**                      **1996**  
 CONCEPT STUDY FOR THE "SATELLITE TEST OF THE EQUIVALENCE PRINCIPLE" (STEP) MISSION AO-99-OSS-0  
 05/01/2001 - 05/31/2002                      FY02: \$0                      Total: \$285,990  
*Prin. Invest.:* C EVERITT  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10976**                      **STANFORD UNIV**                      **1997**  
 INVESTIGATION OF HELIOSEISMIC WAVES AND MAGNETIC VARIATIONS ASSOCIATED WITH SOLAR FLARES  
 05/29/2001 - 05/31/2002                      FY02: \$0                      Total: \$27,684  
*Prin. Invest.:* V PETROSIAN  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 11264**                      **STANFORD UNIV**                      **1998**  
 MODELLING CHANGE IN THE SOUTHERN OCEAN: BIOCHEMISTRY OF CARBON UPTAKE AND EXPORT IN THE ROSS SEA,  
 08/31/2001 - 09/30/2004                      FY02: \$0                      Total: \$80,683  
*Prin. Invest.:* K ARRIGO  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11439**                      **STANFORD UNIV**                      **1999**  
 DEVELOPMENT OF TRANSITION-EDGE SENSOR ARRAYS FOR INFRARED/VISIBLE/UV IMAGING APPLICATIONS  
 12/05/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B CABRERA  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11573**                      **STANFORD UNIV**                      **2000**  
 CONTINUED SCIENTIFIC ANALYSIS OF SEPS DATA DURING CY 2002, 2003 & 2004  
 01/07/2002 - 01/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M WALT  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11821**                      **STANFORD UNIV**                      **2001**  
 PRECIPITATION OF ENERGETIC RADIATION BELT ELECTRONS BY LIGHTNING-GENERATED WHISTLERS  
 03/01/2002 - 02/28/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* U S INAN  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11918**                      **STANFORD UNIV**                      **2002**  
 STUDIES OF PARTICLE ACCELERATION, TRANSPORT AND RADIATION IN THE IMPULSIVE PHASE OF SOLAR FLARES  
 04/03/2002 - 03/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* V PETROSIAN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 11955**                      **STANFORD UNIV**                      **2003**  
 DESIGNS FOR A VIRTUAL SOLAR OBSERVATORY  
 04/11/2002 - 04/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P H SCHERRER  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 11 - ASTRONOMY



<b>NAG 5 11972</b>	<b>STANFORD UNIV</b>	<b>2004</b>	<b>NAG 8 1692</b>	<b>STANFORD UNIV</b>	<b>2012</b>
HIGH RESOLUTION X-RAY PROPERTIES OF BL LACS: AN XM M SURVEY			"SOLID STATE ELECTROCHEMICAL OXYGEN CONVERSION FOR MARTIAN & LUNAR ENVIRONMENTS..."		
04/26/2002 - 04/30/2003	FY02: \$0	Total: \$0	06/02/2000 - 07/09/2002	FY02: \$0	Total: \$100,000
<i>Prin. Invest.:</i> G MADEJSKI			<i>Prin. Invest.:</i> G M HOMSY		
<i>Tech. Officer:</i> GSFC/R MUTSHOTZKY			<i>Tech. Officer:</i> MSFC/P DOTY		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 12 - CHEMISTRY		
<b>NAG 5 12111</b>	<b>STANFORD UNIV</b>	<b>2005</b>	<b>NAG 8 1772</b>	<b>STANFORD UNIV</b>	<b>2013</b>
SPATIAL AND SPECTRAL STRUCTURE OF FLARES FROM HESS I			THE EFFECTS OF LARGE-SCALE ONE-DIMENSIONAL CONFINEMENT ON THE SPECIFIC HEAT OF HELIUM...		
04/29/2002 - 04/30/2005	FY02: \$0	Total: \$0	05/04/2001 - 04/30/2003	FY02: \$0	Total: \$150,000
<i>Prin. Invest.:</i> V PETROSIAN			<i>Prin. Invest.:</i> J A LIPA		
<i>Tech. Officer:</i> GSFC/T KUCERA			<i>Tech. Officer:</i> MSFC/D HUBBARD		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 12315</b>	<b>STANFORD UNIV</b>	<b>2006</b>	<b>NAG 8 1777</b>	<b>STANFORD UNIV</b>	<b>2014</b>
DEVELOPMENT OF VETO FOR CONSTELLATION-X TES X-RAY DETECTOR ARRAY			TEST OF FUNDAMENTAL PHYSICS THROUGH STUDIES OF SUPERFLUID HELIUM THREE		
07/17/2002 - 06/30/2004	FY02: \$0	Total: \$0	04/27/2001 - 09/30/2005	FY02: \$0	Total: \$100,000
<i>Prin. Invest.:</i> B CABRERA			<i>Prin. Invest.:</i> D D OSHEROFF		
<i>Tech. Officer:</i> GSFC/C K STAHL			<i>Tech. Officer:</i> MSFC/D HUBBARD		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 12452</b>	<b>STANFORD UNIV</b>	<b>2007</b>	<b>NAG 8 1843</b>	<b>STANFORD UNIV</b>	<b>2015</b>
HELIOTOMOGRAPHY TOOLS FOR STUDYING INTERIOR SOURCE S OF SOLAR ACTIVITY			PRODUCTION AND IN-FLIGHT REGENERATION OF ACTIVE BIOLOGICAL MEMBRANES		
08/15/2002 - 08/14/2005	FY02: \$0	Total: \$0	10/04/2001 - 11/30/2004	FY02: \$135,000	Total: \$135,000
<i>Prin. Invest.:</i> P H SCHERRER			<i>Prin. Invest.:</i> C FRANK, G G FULLER, J R SWARTZ		
<i>Tech. Officer:</i> GSFC/W WAGNER			<i>Tech. Officer:</i> MSFC/B GUYNES		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 8 1151</b>	<b>STANFORD UNIV</b>	<b>2008</b>	<b>NAG 8 1864</b>	<b>STANFORD UNIV</b>	<b>2016</b>
LASER SCATTERING TOMOGRAPHY			STUDY OF BIOCHEMICAL PROCESSES AT THE SINGULAR MOLECULAR LEVEL		
08/18/1995 - 04/30/2001	FY02: \$0	Total: \$730,000	05/01/2002 - 01/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R S FEIGELSON			<i>Prin. Invest.:</i> S CHU		
<i>Tech. Officer:</i> MSFC/D A REISS			<i>Tech. Officer:</i> MSFC/D HUBBARD		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 8 1431</b>	<b>STANFORD UNIV</b>	<b>2009</b>	<b>NAS 1 00104</b>	<b>STANFORD UNIV</b>	<b>2017</b>
R/S HIGH RESOLUTION STUDY OF THE CRITICAL REGION OF OXYGEN USING MAGNETIC LEVITATION			AWARD CONTRACT RESULTING FROM NRA-99-OES-07		
03/05/1998 - 01/31/2003	FY02: \$0	Total: \$432,455	05/25/2000 - 05/24/2003	FY02: \$0	Total: \$520,922
<i>Prin. Invest.:</i> J A LIPA			<i>Prin. Invest.:</i> R L BYER		
<i>Tech. Officer:</i> MSFC/D HUBBARD			<i>Tech. Officer:</i> LARC/F PERI		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 8 1439</b>	<b>STANFORD UNIV</b>	<b>2010</b>	<b>NAS 1 98139</b>	<b>STANFORD UNIV</b>	<b>2018</b>
R/S FUNDAMENTAL PHYSICS EXPERIMENTS WITH SUPER- CONDUCTING CAVITY-STABILIZED OSCILLATORS ON SPACE			SAL: SYMBOLIC ANALYSIS LABORATORY		
02/01/1998 - 01/31/2003	FY02: \$0	Total: \$827,542	10/30/1998 - 10/29/2001	FY02: \$0	Total: \$575,251
<i>Prin. Invest.:</i> J A LIPA			<i>Prin. Invest.:</i> D L DILL		
<i>Tech. Officer:</i> MSFC/J W POE			<i>Tech. Officer:</i> LARC/P S MINER		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 8 1457</b>	<b>STANFORD UNIV</b>	<b>2011</b>	<b>NAS 5 00147</b>	<b>STANFORD UNIV</b>	<b>2019</b>
R/S INVESTIGATION OF THE CRYSTAL GROWTH OF DIELECTRIC MATERIALS BY THE BRIDGMAN TECHNIQUE			GAMMA RAY LARGE AREA SPACE TELESCOPE (GLAST)		
02/01/1998 - 04/30/2002	FY02: \$0	Total: \$484,450	05/03/2000 - 03/31/2006	FY02: \$250,000	Total: \$2,296,552
<i>Prin. Invest.:</i> R S FEIGELSON			<i>Prin. Invest.:</i> P MICHELSON		
<i>Tech. Officer:</i> MSFC/C TALLEY			<i>Tech. Officer:</i> GSFC/S LAMBROSS		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAS 8 39225**                      **STANFORD UNIV**                      **2020**  
GRAVITY PROBE B SCIENCE MISSION INTERIM CONTRACT  
01/18/1995 - 09/30/2004                      FY02: \$0                      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**                      **2021**  
THE STRUCTURE, FACIES & DEPOSITION OF SILICEOUS S INTER AROUND  
THERMAL SPRINGS: IMPLICATIONS FOR...  
07/03/1991 - 12/31/2001                      FY02: \$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**                      **2022**  
STUDIES OF PLANETARY RING SYSTEMS  
06/26/1995 - 05/31/2002                      FY02: \$0                      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**                      **2023**  
DEVELOPMENT OF 3-D BIOMEDICAL COMPUTATION  
01/07/1998 - 05/31/2003                      FY02: \$0                      Total: \$3,586,724  
*Prin. Invest.:* S A SCHENDEL  
*Tech. Officer:* ARC/J W HINES, ARC/R D BOYLE  
*CASE Category:* 56 - MEDICL

**NCC 2 1151**                      **STANFORD UNIV**                      **2024**  
CENTER FOR TURBULENCE RESEARCH  
01/07/2000 - 01/31/2003                      FY02: \$0                      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**                      **2025**  
MULTIPLE COOPERATING ROBOTS  
01/20/2000 - 06/30/2003                      FY02: \$0                      Total: \$569,999  
*Prin. Invest.:* S ROCK  
*Tech. Officer:* ARC/M G BUALAT  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1175**                      **STANFORD UNIV**                      **2026**  
THE DEVELOPMENT OF A SOLID WASTE TREATMENT TECHNOLOGY FOR  
THE NEAR TERM HUMAN EXPLORATION OF MARS  
04/27/2000 - 09/30/2002                      FY02: \$0                      Total: \$228,710  
*Prin. Invest.:* M REINHARD  
*Tech. Officer:* ARC/M T FLYNN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 2 1208**                      **STANFORD UNIV**                      **2027**  
DOES MECHANICAL STIMULATION ALTER GENE EXPRESION I N C.E.L-  
EGANS  
11/24/2000 - 11/14/2002                      FY02: \$0                      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 1300**                      **STANFORD UNIV**                      **2028**  
HIGH REGRESSION RATE FUELS FOR HYBRID COMBUSTION  
01/29/2002 - 01/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B J CANTWELL  
*Tech. Officer:* ARC/G ZILLAC  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 2 1345**                      **STANFORD UNIV**                      **2029**  
STUDIES OF PLANETARY RING SYSTEMS  
06/05/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G L TYLER  
*Tech. Officer:* ARC/J CUZZI, ARC/J LISSAUER  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5261**                      **STANFORD UNIV**                      **2030**  
INVESTIGATION OF ATTENTIONAL BOTTLENECKS USING FUNCTIONAL  
MAGNETIC RESONANCE IMAGING  
06/17/1998 - 02/28/2001                      FY02: \$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**                      **2031**  
EXPLORING CARBON NANOTUBES FOR FUTURE 1NM NANOLIT HOGRAPHY  
06/12/1998 - 05/31/2001                      FY02: \$0                      Total: \$70,000  
*Prin. Invest.:* H DAI  
*Tech. Officer:* ARC/T R GOVINDAN  
*CASE Category:* 12 - CHEMISTRY

**NCC 2 5278**                      **STANFORD UNIV**                      **2032**  
ARCHITECTURE FOR ACCESS & MUNIPULATION OF HETEROGENEOUS  
INFORMATION  
07/16/1998 - 03/31/2002                      FY02: \$0                      Total: \$190,000  
*Prin. Invest.:* H GARCIA-MOLINA  
*Tech. Officer:* ARC/M GERALD-YAMASAKI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5335**                      **STANFORD UNIV**                      **2033**  
SHARP SOUNDING ROCKET EMPEMENT & ENTRY SIMULATIO N  
07/23/1999 - 12/31/2000                      FY02: \$0                      Total: \$122,275  
*Prin. Invest.:* B CANTWELL, R TWIGGS  
*Tech. Officer:* ARC/P KOLODZIEJ, ARC/D J RASKY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5350**                      **STANFORD UNIV**                      **2034**  
SIMULATION-BASED PROTOYPING OF SOLID-STATE QUANTUM COMPUT-  
ERS  
09/15/1999 - 03/31/2001                      FY02: \$0                      Total: \$60,000  
*Prin. Invest.:* K CHO  
*Tech. Officer:* ARC/T R GOVINDAN  
*CASE Category:* 13 - PHYSICS

**NCC 2 5359**                      **STANFORD UNIV**                      **2035**  
INVESTIGATON OF CONVOLUTION SEGMENT PAIR DYADS IN BACTERIAL  
GENOMES  
10/26/1999 - 10/14/2001                      FY02: \$0                      Total: \$115,500  
*Prin. Invest.:* R B LAUGHLIN  
*Tech. Officer:* ARC/M L FONDA  
*CASE Category:* 13 - PHYSICS

**NCC 2 5363**                      **STANFORD UNIV**                      **2036**  
DEVELOPMENT OF FUNDAMENTAL TECHNOLOGIES FOR FLUID FLOW  
CALCULATIONS  
01/25/2000 - 03/31/2002                      FY02: \$0                      Total: \$187,415  
*Prin. Invest.:* T HUGHES  
*Tech. Officer:* ARC/T J BARTH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<p><b>NCC 2 5371</b>                      <b>STANFORD UNIV</b>                      <b>2037</b>            FABRICATION OF SILICON SUBSTRATES FOR CONTROLLED SYNTHESIS OF CARBON NANOTUBES            03/23/2000 - 02/28/2001                      FY02: \$0                      Total: \$45,050  <i>Prin. Invest.:</i> Z SHEN  <i>Tech. Officer:</i> ARC/M MEYYAPPAN  <i>CASE Category:</i> 13 – PHYSICS</p>	<p><b>NCC 2 5457</b>                      <b>STANFORD UNIV</b>                      <b>2045</b>            DEVELOPMENT OF FUNDAMENTAL TECHNOLOGIES FOR COMPLEX MULTISCALE FLUID FLOW CALCULATIONS            08/17/2001 - 08/14/2002                      FY02: \$0                      Total: \$50,000  <i>Prin. Invest.:</i> T J HUGHES  <i>Tech. Officer:</i> ARC/N MANSOUR, ARC/T BARTH  <i>CASE Category:</i> 41 – AERONAUTICAL ENGR</p>
<p><b>NCC 2 5377</b>                      <b>STANFORD UNIV</b>                      <b>2038</b>            DEVELOPMENT AND APPLICATION OF NOVEL DIAGNOSTICS FOR ARC-JET CHARACTERIZATION            04/03/2000 - 09/30/2002                      FY02: \$0                      Total: \$189,896  <i>Prin. Invest.:</i> R K HANSON  <i>Tech. Officer:</i> ARC/G A RAICHE, ARC/J H GRINSTEAD  <i>CASE Category:</i> 41 – AERONAUTICAL ENGR</p>	<p><b>NCC 2 5467</b>                      <b>STANFORD UNIV</b>                      <b>2046</b>            MOLECULAR DYNAMICS ON MASSIVELY PARALLEL COMPUTERS : TOWARDS BIOLOGICAL TIME SCALES            09/28/2001 - 09/30/2003                      FY02: \$0                      Total: \$60,133  <i>Prin. Invest.:</i> E F DARVE  <i>Tech. Officer:</i> ARC/N N MANSOUR  <i>CASE Category:</i> 22 – COMPUTER SCIENCE</p>
<p><b>NCC 2 5400</b>                      <b>STANFORD UNIV</b>                      <b>2039</b>            SIMULATION-BASED DESIGN OF SMART NANOTUBE COMPOSITE MATERIALS            09/25/2000 - 09/30/2002                      FY02: \$0                      Total: \$81,549  <i>Prin. Invest.:</i> K J CHO  <i>Tech. Officer:</i> ARC/H PARTIDGE, ARC/M MEYYAPPAN  <i>CASE Category:</i> 12 – CHEMISTRY</p>	<p><b>NCC 2 5475</b>                      <b>STANFORD UNIV</b>                      <b>2047</b>            COMPUTATIONAL TECHNIQUES IN MULTIDIMENSIONAL NMR METHOD FOR HIGH-THROUGHPUT DETECTION OF METABOLITE            11/19/2001 - 11/30/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> R B LAUGHLIN  <i>Tech. Officer:</i> ARC/S LIANG  <i>CASE Category:</i> 51 – BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NCC 2 5422</b>                      <b>STANFORD UNIV</b>                      <b>2040</b>            DESIGN OF PREDICTIVE MODELS OF MARS            03/09/2001 - 02/28/2003                      FY02: \$0                      Total: \$45,000  <i>Prin. Invest.:</i> C TOMLIN  <i>Tech. Officer:</i> ARC/G MEYER, ARC/R BACH  <i>CASE Category:</i> 49 – ENGINEERING, OTHER</p>	<p><b>NCC 2 5478</b>                      <b>STANFORD UNIV</b>                      <b>2048</b>            MARS EXPLORATION ROVER (MER) WORK PRACTICE SUPPORT TOOL DESIGN            01/31/2002 - 01/31/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> L J LEIFER  <i>Tech. Officer:</i> ARC/J TRIMBLE  <i>CASE Category:</i> 22 – COMPUTER SCIENCE</p>
<p><b>NCC 2 5434</b>                      <b>STANFORD UNIV</b>                      <b>2041</b>            NONINVASIVE INVESTIGATION OF BONE ADAPTATION IN HUMANS TO CUMULATIVE DAILY MECHANICAL LOADING            04/26/2001 - 04/30/2003                      FY02: \$0                      Total: \$61,145  <i>Prin. Invest.:</i> N J PELC  <i>Tech. Officer:</i> ARC/R T WHALEN, ARC/S B ARNAUD  <i>CASE Category:</i> 56 – MEDICAL</p>	<p><b>NCC 2 5488</b>                      <b>STANFORD UNIV</b>                      <b>2049</b>            NANOPORE SEQUENCING SOFTWARE DEVELOPMENT            03/22/2002 - 03/14/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> R W DAVIS  <i>Tech. Officer:</i> ARC/H PARTRIDGE, ARC/M MEYYAPPAN  <i>CASE Category:</i> 12 – CHEMISTRY</p>
<p><b>NCC 2 5439</b>                      <b>STANFORD UNIV</b>                      <b>2042</b>            SIMULATION BASED PROTOTYPED OF SOLID-STATE QUANTUM COMPUTERS: A PATHWAY FOR REVOLUTIONARY COMPUTING            07/17/2001 - 07/31/2002                      FY02: \$0                      Total: \$42,719  <i>Prin. Invest.:</i> K CHO  <i>Tech. Officer:</i> ARC/H PATRIDGE, ARC/T R GORINDAN  <i>CASE Category:</i> 13 – PHYSICS</p>	<p><b>NCC 2 5489</b>                      <b>STANFORD UNIV</b>                      <b>2050</b>            BREAST TISSUE PHYSIOLOGIC SIGNATURE CHARACTERIZATION USING THE NASA SMART PROBE            07/11/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> S S JEFFREY  <i>Tech. Officer:</i> ARC/R MAH, ARC/R PAPASIN  <i>CASE Category:</i> 56 – MEDICAL</p>
<p><b>NCC 2 5444</b>                      <b>STANFORD UNIV</b>                      <b>2043</b>            THREE DIMENSIONAL NUMERICAL SIMULATION OF NASA STUDIED MFBYPASS SCRAMJET ENGINES            07/12/2001 - 05/31/2003                      FY02: \$0                      Total: \$35,000  <i>Prin. Invest.:</i> R W MACCORMICK  <i>Tech. Officer:</i> ARC/U B MANTA  <i>CASE Category:</i> 41 – AERONAUTICAL ENGR</p>	<p><b>NCC 2 5495</b>                      <b>STANFORD UNIV</b>                      <b>2051</b>            COLLECTIVE CONTROL FOR AERONAUTICAL SYSTEMS            06/06/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> I KROO  <i>Tech. Officer:</i> ARC/K TURNER, ARC/S LAU  <i>CASE Category:</i> 22 – COMPUTER SCIENCE</p>
<p><b>NCC 2 5446</b>                      <b>STANFORD UNIV</b>                      <b>2044</b>            FABRICATION OF SILICON SUBSTRATES FOR CONTROLLED SYNTHESIS OF CARBON NANOTUBES            07/16/2001 - 05/14/2003                      FY02: \$0                      Total: \$49,120  <i>Prin. Invest.:</i> Z X SHEN  <i>Tech. Officer:</i> ARC/H PATRIDGE, ARC/M MEYYAPPAN  <i>CASE Category:</i> 12 – CHEMISTRY</p>	<p><b>NCC 2 5497</b>                      <b>STANFORD UNIV</b>                      <b>2052</b>            FUNCTIONALITY AND EVOLUTIONARY HISTORY OF THE CHAPERONINS IN THERMOPHILIC ARCHAEA A BIOINFORMATICAL            06/21/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> S KARLIN  <i>Tech. Officer:</i> ARC/J TRENT, ARC/M H KLISS  <i>CASE Category:</i> 51 – BIOLOGY (EXCLUDING ENVIR)</p>

CALIFORNIA

NASA'S UNIVERSITY PROGRAM

**NCC 2 5502**                      **STANFORD UNIV**                      **2053**  
 HIGH PERFORMANCE SCALABLE PARALLEL CODE FOR MOLECU ALR  
 SIMULATION IN ASTROBIOLOGY AND FUNDAMENTAL BI  
 07/17/2002 - 09/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E F DARVE  
*Tech. Officer:* ARC/N MANSOUR, ARC/A WRAY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5522**                      **STANFORD UNIV**                      **2054**  
 DIODE LASER SENSORS FOR ARC JET CHARACTERIZATION  
 09/10/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R K HANSON  
*Tech. Officer:* ARC/G RAICHE  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 640**                      **STANFORD UNIV**                      **2055**  
 ATTENUATION OF GAS TURBULENCE BY A NEARIT STATIONA RY DISPER-  
 SION OF FINE PARTICLES  
 08/18/1998 - 12/31/2002                      FY02: \$0                      Total: \$375,000  
*Prin. Invest.:* J K EATON  
*Tech. Officer:* GRC/F CHARIMONTE  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 8 197**                      **STANFORD UNIV**                      **2056**  
 ACTIVE SENSING MONITORING OF CRYOGENIC COMPOSITE STRUCTURES  
 FOR SPACE TRANSPORTATION APPLICATIONS.  
 03/09/2000 - 03/05/2002                      FY02: \$0                      Total: \$290,000  
*Prin. Invest.:* F CHANG  
*Tech. Officer:* MSFC/A KELLEY  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 1 02021**                      **STANFORD UNIV**                      **2057**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 07/24/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R TWIGGS, F J LI  
*Tech. Officer:* LARC/R BRAUN  
*CASE Category:* 41 - AERONAUTICAL ENGNER

**NGT 2 52246**                      **STANFORD UNIV**                      **2058**  
 ADVANCED LIFE SUPPORT POWER REDUCTION  
 08/20/1998 - 09/30/2001                      FY02: \$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**                      **2059**  
 AN ALTERNATIVE TO PNEUMATIC CONTROL TECHNIQUES FOR ROLL-YAW  
 CONTROL OF FLIGHT VEHICLES  
 07/28/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* S M ROCK  
*Tech. Officer:* ARC/R D MEHTA, ARC/J C ROSS  
*CASE Category:* 41 - AERONAUTICAL ENGNER

**NGT 2 52282**                      **STANFORD UNIV**                      **2060**  
 VESTIBULO-OCULAR REFLEXES IN NORMAL AND OTOCONIA-D EFICIENT  
 HEAD TILT (HET) MICE  
 08/09/2001 - 07/31/2002                      FY02: \$0                      Total: \$21,000  
*Prin. Invest.:* J RAYMOND  
*Tech. Officer:* ARC/R D BOYLE, ARC/T INTRAVALIA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 92**                      **STANFORD UNIV**                      **2061**  
 RADIO DIAGNOSTICS OF AURORAL HISS AND ASSOCIATED PLASMA  
 DENSITY STRUCTURES/STUDENT: MARIA SALVATI  
 06/09/1999 - 09/14/2002                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* U UMRAN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 5 30204**                      **STANFORD UNIV**                      **2062**  
 LAND-USE CHANGE, AGRICULTURAL RUNOFF, & GREENHOUSE GASES IN  
 TWO ESTUARIES OF SOUTHERN SONORA MEXICO  
 08/19/1999 - 08/31/2002                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* P MATSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30216**                      **STANFORD UNIV**                      **2063**  
 PHYSIO-CHEMICAL AND BIOLOGICAL CONTROL OVER THE FA TE OF  
 NITROGEN AND PHOSPHORUS IN TROPICAL SOIL  
 08/24/1999 - 08/31/2002                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* P M VITOUSEK  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30342**                      **STANFORD UNIV**                      **2064**  
 HYDROLIC APPLICATIONS OF SATELLITE RADAR INTERFERO METRY: LAND  
 SUBSIDENCE OVER EXPLOITED AQUIFER SYS  
 08/21/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* H ZEBKER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30360**                      **STANFORD UNIV**                      **2065**  
 THE COCCIDIOIDES IMMITS FUNGUS: EXPOSURE MODELING & PUBLIC  
 POLICY THROUGH FAVORED SOIL HABITAT  
 08/23/2000 - 08/31/2001                      FY02: \$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**                      **2066**  
 RESOLVING THE RED SEA PARADOX: INTERANNUAL TO DEC ADAL VARI-  
 ABILITY IN PRIMARY PRODUCTION AND CORA  
 08/14/2001 - 08/31/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* K ARRIGO  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50254**                      **STANFORD UNIV**                      **2067**  
 MULTI-SPECTRAL OBSERVATIONS OF THE SOLAR CORONA, CHROMO-  
 SPHERE AND TRANSITION REGION  
 06/10/1999 - 06/30/2003                      FY02: \$0                      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**                      **2068**  
 NONLINEAR BEAM-PLASMA COUPLING OF THUNDERSTORM- GENERATED  
 RELATIVISTIC ELECTRONS TO THE MAGNETOSPHE  
 05/10/2001 - 06/30/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* U S INAN  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<p><b>NGT 5 50358</b>                      <b>STANFORD UNIV</b>                      <b>2069</b>  IP INFRASTRUCTURE FOR DISTRIBUTED SPACE SYSTEMS  05/14/2001 - 05/14/2004                      FY02: \$0                      Total: \$22,000  <i>Prin. Invest.:</i> A FOX  <i>Tech. Officer:</i> HQ/K BLANDING  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 1 2191</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2077</b>  MODELG ISOTOPE FRACTIONATION IN STRATOSP CO2/N2O/  CH4&amp;O3,INVEST STRATOS CHEM/TRANSPORT, STRAT/TROPOS  05/17/1999 - 03/30/2003                      FY02: \$0                      Total: \$282,801  <i>Prin. Invest.:</i> K A BOERING  <i>Tech. Officer:</i> LARC/G L MADDREA, LARC/L R POOLE  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 5191</b>    <b>THE SCRIPPS REASERCH INST (TSRI) -LA JOLLA</b>    <b>2070</b>  SATELLITE REMOTE SENSING STUDIES OF BIOLOGICAL AND BIO-  GEOCHEMICAL PROCESSES IN THE OCEAN  04/21/1998 - 03/31/2001                      FY02: \$0                      Total: \$38,852  <i>Prin. Invest.:</i> M VERNET  <i>Tech. Officer:</i> GSFC/F E HOGE  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 1 02083</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2078</b>  MODELG ISOTOPE FRACTIONATION IN STRATOSP CO2/N2O/  CH4&amp;O3: INVEST STRATOS CHEM/TRANSPORT,STRAT/TROPO  04/09/2002 - 04/08/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> K A BOERING  <i>Tech. Officer:</i> LARC/G L MADDREA  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 9386</b>    <b>THE SCRIPPS REASERCH INST (TSRI) -LA JOLLA</b>    <b>2071</b>  EVOLUTION OF CATALYTIC RNA IN THE LABORATORY  04/07/2000 - 03/31/2003                      FY02: \$0                      Total: \$560,461  <i>Prin. Invest.:</i> G JOYCE  <i>Tech. Officer:</i> HQ/M MEYER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 2 1351</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2079</b>  EARLY GRAVITROPIC EVENTS IN ROOTS OF ARABIDOPSIS: CA2+ &amp; H+  FLUXES IN THE COLUMELLA CELLS  07/21/1999 - 07/31/2003                      FY02: \$0                      Total: \$346,437  <i>Prin. Invest.:</i> L J FELDMAN  <i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAG 5 9604</b>    <b>THE SCRIPPS REASERCH INST (TSRI) -LA JOLLA</b>    <b>2072</b>  A REGIONAL REAL-TIME, INTERACTIVE, GIS-BASED COMPUTATIONAL  ENVIRONMENT FOR NASA'S DIRECT BROADCAST  05/31/2000 - 05/31/2003                      FY02: \$0                      Total: \$450,000  <i>Prin. Invest.:</i> J J SIMPSON  <i>Tech. Officer:</i> GSFC/J DODGE  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 2 1359</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2080</b>  COMPARATIVE ANALYSIS OF SEGMENTATION, DURING EMBRYOGENESIS,  POSTEMBRYONIC GROWTH &amp; REGENERATION, AM  07/23/1999 - 07/31/2003                      FY02: \$0                      Total: \$458,243  <i>Prin. Invest.:</i> D A WEISBLAT  <i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAG 5 12160</b>    <b>THE SCRIPPS REASERCH INST (TSRI) -LA JOLLA</b>    <b>2073</b>  THE USE OF INSOLUBLE AGGREGATES IN TEMPLATE LIGATION  05/10/2002 - 05/14/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> M GHADIRI  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 2 1361</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2081</b>  HEMICHORDATES &amp; THE ORIGIN OF CHORDATES  07/27/1999 - 08/31/2002                      FY02: \$0                      Total: \$446,868  <i>Prin. Invest.:</i> J C GERHART  <i>Tech. Officer:</i> ARC/M M AVERNER, ARC/G C JAHNS  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAG 8 1834</b>    <b>THE SCRIPPS REASERCH INST (TSRI) -LA JOLLA</b>    <b>2074</b>  CRYSTALLIZATION OF INTEGRAL MEMBRANE PROTEINS USING MOLECULAR  BIOLOGY  09/19/2001 - 11/30/2004                      FY02: \$0                      Total: \$52,000  <i>Prin. Invest.:</i> G A CHANG  <i>Tech. Officer:</i> MSFC/B GUYNES  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 2 1398</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2082</b>  SUPERCONDUCTING BOLOMETERS OF INFRARED AND MILLIMETER  WAVELENGTHS  03/16/2000 - 03/14/2003                      FY02: \$0                      Total: \$155,000  <i>Prin. Invest.:</i> P L RICHARDS  <i>Tech. Officer:</i> ARC/C MCCREIGHT  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NCC 2 1055</b>    <b>THE SCRIPPS REASERCH INST (TSRI) -LA JOLLA</b>    <b>2075</b>  SELF-REPRODUCING MOLECULAR SYSTEMS &amp; DARWINIAN CHEMISTRY  08/27/1998 - 06/30/2003                      FY02: \$0                      Total: \$3,263,033  <i>Prin. Invest.:</i> R GHADIRI  <i>Tech. Officer:</i> ARC/L J CAROFF, ARC/S CHANG  <i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER</p>	<p><b>NAG 2 1479</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2083</b>  DETERMINISTIC &amp; PROBABILISTIC HYBRID CONTROL OF A TM  05/01/2001 - 04/30/2003                      FY02: \$0                      Total: \$40,000  <i>Prin. Invest.:</i> S S SASTRY  <i>Tech. Officer:</i> ARC/G MEYER, ARC/M J BONDI  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 11944</b>                      <b>UNIV. OF CALIFORNIA</b>                      <b>2076</b>  PROPOSAL FOR OPERATION OF THE EFW INSTRUMENTS ON THE  CLUSTER SATELLITES AND FOR DATA ANALYSES  04/08/2002 - 03/31/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> F S MOZER  <i>Tech. Officer:</i> GSFC/M GOLDSTEIN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 2 1483</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2084</b>  STABLE ISOTOPE MEASUREMENTS OF CO2 &amp; NO2 FOR SOLVING  CONSTRAINTS ON OBSERVED OZONE CHANGES DUE TO CH  06/04/2001 - 09/30/2002                      FY02: \$0                      Total: \$25,000  <i>Prin. Invest.:</i> K A BOERING  <i>Tech. Officer:</i> ARC/R S HIPSKIN, ARC/C SCOFIELD  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>

## CALIFORNIA

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**NAG 2 1523**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2085**  
 BIOGEOCHEMICAL MARS-LIKE ENVIRONMENTS (BIOMES)  
 09/17/2001 - 08/31/2003                    FY02: \$0                    Total: \$250,000  
*Prin. Invest.:* J F BANFIELD  
*Tech. Officer:* ARC/R GRYMES, ARC/W DOLCI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1567**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2086**  
 FROM LOW LEVEL PROTOCOLS TO MODELS OF THE NATIONAL AIRSPACE  
 SYSTEM A HYBRID SYSTEMS APPROACH  
 06/14/2002 - 06/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* S S SASTRY, E A LEE  
*Tech. Officer:* ARC/L TOBIAS, ARC/C QUINN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2026**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2087**  
 A FUNDAMENTAL STUDY OF SMOLDERING COMBUSTION IN MICROGRAVITY  
 03/14/1997 - 09/15/2002                    FY02: \$0                    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**                    **2088**  
 LOW EMISSION, HIGH PERFORMANCE GAS TURBINE ENGINES EXPERIMENT AND MODEL RESEARCH AND DEVELOPMENT  
 03/04/1998 - 05/31/2002                    FY02: \$0                    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**                    **2089**  
 MICROGRAVITY EFFECTS ON NEAR - BUBBLE MICROSCALE TRANSPORT DURING BOILING OF BINARY FLUID MIXTURES  
 02/26/1998 - 12/31/2001                    FY02: \$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**                    **2090**  
 WEAKLY NONLINEAR DESCRIPTION OF PARAMETRIC INSTABILITIES  
 06/09/1998 - 12/31/2002                    FY02: \$0                    Total: \$419,500  
*Prin. Invest.:* E KNOBLOCK  
*Tech. Officer:* GRC/J R SKARDA  
*CASE Category:* 13 - PHYSICS

**NAG 3 2221**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2091**  
 NUMERICAL STUDY OF BUOYANCY AND DIFFERENTIAL DIFFUSION EFFECTS ON THE STRUCTURE AND DYNAMICS OF THERMAL BLENDS  
 12/29/1998 - 11/11/2001                    FY02: \$0                    Total: \$173,490  
*Prin. Invest.:* J CHEN  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 696**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2092**  
 A PROPOSAL TO FLY THE EUV/FUV SPECTROMETER ON ORFEUS FOR ASTRO-SPAS I & II  
 12/18/1992 - 02/28/2001                    FY02: \$0                    Total: \$2,839,678  
*Prin. Invest.:* M V HURWITZ  
*Tech. Officer:* GSFC/W B JOHNSN  
*CASE Category:* 13 - PHYSICS

**NAG 5 3499**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2093**  
 COSMOLOGICAL STUDIES OF THE COSMIC MICROWAVE BACKGROUND  
 11/27/1996 - 11/30/2001                    FY02: \$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**                    **2094**  
 ADDING THE MARS '96 GAMMA-RAY BURST EXPERIMENT TO RY NETWORK  
 11/27/1996 - 11/30/2001                    FY02: \$0                    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**                    **2095**  
 A MULTI-WAVELENGTH STUDY OF A COMPLETE SAMPLE OF NEUTRAL HYDROGEN  
 01/04/1997 - 12/14/2002                    FY02: \$0                    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**                    **2096**  
 MISSION OPERATIONS AND DATA ANALYSIS FOR THE FAST AURORAL SNAPSHOT EXPLORER (FAST) MISSION  
 01/25/1997 - 05/31/2002                    FY02: \$0                    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**                    **2097**  
 PHOTOCATHODE, MICROCHANNEL PLATE AND DELAY LINE TELEVISION UV-VISIBLE DETECTOR SYSTEMS  
 02/21/1997 - 06/14/2001                    FY02: \$0                    Total: \$785,100  
*Prin. Invest.:* D H SIEGMUND  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3941**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2098**  
 DEVELOPMENT OF DATA ANALYSIS, COMPRESSION AND VISUALIZATION OF LARGE DATA SETS IN ASTROPHYSICS AND COSMOLOGY  
 03/03/1997 - 02/28/2001                    FY02: \$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**                    **2099**  
 SILICON DIFFRACTION GRATINGS FOR ULTRAVIOLET APPLICATIONS  
 03/25/1997 - 03/31/2003                    FY02: \$0                    Total: \$468,848  
*Prin. Invest.:* D V HURWITZ  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4992**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2100**  
 HISTORICAL STUDIES ON EXTRATERRESTRIAL MATERIALS  
 06/27/1997 - 12/31/2002                    FY02: \$0                    Total: \$832,000  
*Prin. Invest.:* D NISHIZUMI  
*Tech. Officer:* GSFC/J F BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 5102**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2101**  
 ASTROPHYSICAL GAMMA-RAY SPECTROSCOPY WITH THE HIGH RESOLUTION GAMMA-RAY (HIREGS)  
 02/11/1997 - 10/31/2000                    FY02: \$0                    Total: \$1,492,600  
*Prin. Invest.:* R W LIN  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5146**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2102**  
 DEVELOPMENT OF GAS MICROSTRUCTURE DETECTORS (GMSD) FOR GAMMA-RAY TELESCOPES  
 07/02/1997 - 07/02/2001                    FY02: \$0                    Total: \$248,130  
*Prin. Invest.:* C HAILEY  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5197**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2103**  
 PECASE PROGRAM FUNDING FOR THE FIRST YEAR OF RESEARCH; SELECTED  
 05/21/1998 - 05/31/2001                    FY02: \$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**                    **2104**  
 FUNDING FOR PHASE A OF THE CHIPS PROJECT P. I. - DR. M HURWITZ  
 10/08/1998 - 10/31/2003                    FY02: \$933,979                    Total: \$9,711,787  
*Prin. Invest.:* M HURWITZ  
*Tech. Officer:* GSFC/D PIERCE  
*CASE Category:* 13 - PHYSICS

**NAG 5 5231**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2105**  
 TECHNOLOGY DEVELOPMENT FOR THE EXTREMELY-HEAVY GALACTIC COSMIC-RAY COMPOSITION OBSERVER (ECCO)  
 05/17/1999 - 11/30/2003                    FY02: \$0                    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**                    **2106**  
 DEVELOPMENT OF GERMANIUM DETECTORS WITH LESS THAN 3D SPATIAL RESOLUTION FOR NUCLEAR GAMMA-RAY ASTRO  
 06/12/2000 - 09/30/2002                    FY02: \$0                    Total: \$373,500  
*Prin. Invest.:* R P LIN  
*Tech. Officer:* WFF/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5312**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2107**  
 SOUNDING ROCKET EXPERIMENT TO EXPLORE ELECTRODYNAMICS COUPLING PULSATIONS IN THE CUSP  
 02/06/2001 - 02/05/2003                    FY02: \$0                    Total: \$42,000  
*Prin. Invest.:* G T DELORY  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5350**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2108**  
 THE NUCLEAR COMPTON TELESCOPE A BALLOON-BORNE GAMMA-RAY SPECTROMETER, POLARIMETER, & IMAGER  
 01/16/2002 - 11/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* S BOGGS  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 5355**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2109**  
 SPEAR-RESEARCH CARRIER: SPECTROSCOPY OF PLASMA EVOLUTION FROM ASTROPHYSICAL RADIATION  
 02/05/2002 - 02/03/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J EDELSTEIN  
*Tech. Officer:* GSFC/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6103**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2110**  
 NEW DIRECTIONS IN COMETARY SPECTROSCOPY  
 07/24/1997 - 07/31/2001                    FY02: \$0                    Total: \$83,000  
*Prin. Invest.:* D SPINRAD  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6551**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2111**  
 ORIGIN AND EVOLUTION OF WHITE DWARF STARS: THE EARLY YEARS (L TSA)  
 11/21/1997 - 11/30/2001                    FY02: \$0                    Total: \$389,900  
*Prin. Invest.:* S VENNES  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6552**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2112**  
 FOREGROUND ANALYSIS & REMOVAL FOR FUTURE CMB EXPERIMENTS (L TSA)  
 11/21/1997 - 11/30/2002                    FY02: \$0                    Total: \$426,800  
*Prin. Invest.:* G F SMOOT  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6748**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2113**  
 DETERMINATION OF THE PROPERTIES OF HE IN THE LOCAL INTERSTELLAR MEDIUM FROM THE EUVE ALL-SKY SURVEY  
 01/12/1998 - 12/31/2000                    FY02: \$0                    Total: \$65,555  
*Prin. Invest.:* B FLYNN  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6890**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2114**  
 VLA MONITORING OF JUPITER IN 3-D AT  $\approx 6.90$  CM: 1981 - 1996  
 01/21/1998 - 12/31/2002                    FY02: \$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**                    **2115**  
 ANALYSIS OF DATA FROM THE 3-D PLASMA AND ENERGETIC PARTICLE EXPERIMENT ON THE GGS WIND SPACECRAFT  
 02/04/1998 - 01/31/2002                    FY02: \$0                    Total: \$2,408,000  
*Prin. Invest.:* R P LIN  
*Tech. Officer:* GSFC/K OBILVIE  
*CASE Category:* 13 - PHYSICS

**NAG 5 6932**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2116**  
 GRANT  
 01/29/1998 - 01/31/2001                    FY02: -\$3                    Total: \$86,997  
*Prin. Invest.:* C W CARLSON  
*Tech. Officer:* GSFC/M HESSE  
*CASE Category:* 13 - PHYSICS

## CALIFORNIA

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**NAG 5 7265**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2117**  
 GALACTIC BLACK HOLES AND POSITRON ANNIHILATION RADIATION  
 04/29/1998 - 11/30/2002                    FY02: \$0                    Total: \$102,000  
*Prin. Invest.:* D M SMITH  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7457**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2118**  
 CARBON IN THE UNIVERSE: PAHS AND CLUSTERS  
 09/18/1998 - 06/30/2001                    FY02: \$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**                    **2119**  
 "SEISMIC HAZARD ASSESSMENT OF THE HAYWARD FAULT, CA, FROM GPS  
 AND INSAR MEASUREMENT" (SE  
 08/04/1998 - 07/31/2002                    FY02: \$0                    Total: \$224,000  
*Prin. Invest.:* R BURGMANN  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7615**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2120**  
 ADVANCE THE STATE OF THE ART IN MICROCHANNEL PLATE TECHNOLOGY TO SIGNIFICANTLY IMPROVE DETECTION  
 08/24/1998 - 08/31/2002                    FY02: \$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**                    **2121**  
 DIRECT IMMERSION PROCESS FOR MCP PERFORMANCE IMPROVEMENTS  
 12/08/1998 - 12/31/2002                    FY02: \$0                    Total: \$293,258  
*Prin. Invest.:* D EDELSTEIN  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7833**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2122**  
 STUDIES OF DUST EMISSION AS MEASURED BY DIRBE AND IRAS ADP 98  
 12/14/1998 - 12/14/2001                    FY02: \$0                    Total: \$234,369  
*Prin. Invest.:* M DAVIS  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7936**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2123**  
 PROBING THE MORPHOLOGY, DYNAMICS AND INTERFACES OF THE INTERSTELLAR MEDIUM (LISA 98)  
 12/23/1998 - 12/31/2002                    FY02: \$0                    Total: \$230,000  
*Prin. Invest.:* M COHEN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7951**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2124**  
 CMES AND SOLAR MAGNETIC FIELD EVOLUTION: A SOHO GI PROPOSAL  
 12/21/1998 - 12/31/2001                    FY02: \$0                    Total: \$248,800  
*Prin. Invest.:* J G LUHMANN  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8078**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2125**  
 016LYSIS OF DATA FROM ELECTRIC FIELD EXPERIMENT ON POLAR 11  
 01/22/1999 - 04/30/2002                    FY02: \$0                    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 - 02/14/2003                    FY02: \$0                    Total: \$115,000  
*Prin. Invest.:* G H FISHER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8468**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2127**  
 THE PHYSICS OF ACTIVE REGIONS  
 05/04/1999 - 04/30/2002                    FY02: \$0                    Total: \$293,850  
*Prin. Invest.:* G H FISHER  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8510**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2128**  
 EVALUATING MODEL PREDICTIONS OF CO<sub>2</sub> & WATER VAPOR EXCHANGE WITH FLUX MEASUREMENTS IN A PONDEROSA  
 06/02/1999 - 06/30/2001                    FY02: \$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**                    **2129**  
 AN ADVANCED PHOTON COUNTING UV IMAGING DETECTOR  
 07/08/1999 - 07/14/2002                    FY02: \$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**                    **2130**  
 THE ROLE OF MULTI-SCALE LAND SURFACE HETEROGENEITY IN PRECIPITATION RECYCLING AND LAND ATMOSPHERIC  
 08/17/1999 - 08/14/2002                    FY02: \$0                    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**                    **2131**  
 FLUXNET: UNIFYING A GLOBAL ARRAY OF TOWER FLUX NETWORKS FOR VALIDATING EOS TERRESTRIAL CARBON, WATER  
 08/12/1999 - 04/30/2002                    FY02: \$0                    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**                    **2132**  
 DETECTING EXTRASOLAR PLANETS  
 10/07/1999 - 06/30/2002                    FY02: \$0                    Total: \$466,247  
*Prin. Invest.:* D W MARCY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8984**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2133**  
 CORONAL HEATING DURING STELLAR FLARES & THE SEARCH FOR PROTON BEAMS - FUSE  
 02/03/2000 - 01/31/2002                    FY02: \$0                    Total: \$63,300  
*Prin. Invest.:* G H FISHER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY



<p><b>NAG 5 9091</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2134</b>  RESEARCH IN FUV INTERFEROMETRIC SPECTROSCOPY III  02/17/2000 - 02/14/2003                    FY02: \$0                    Total: \$294,200  <i>Prin. Invest.:</i> J EDELSTEIN  <i>Tech. Officer:</i> GSFC/P CRANE  <i>CASE Category:</i> 11 – ASTRONOMY</p>	<p><b>NAG 5 9398</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2143</b>  BALLOON BORNE OBSERVATIONS OF THE POLARIZATION ANI SOTROPY  OF THE COSMIC MICROWAVE BACKGROUND RADIAT  04/06/2000 - 03/31/2003                    FY02: \$0                    Total: \$336,178  <i>Prin. Invest.:</i> P L RICHARDS  <i>Tech. Officer:</i> GSFC/G STRINGFELLOW  <i>CASE Category:</i> 11 – ASTRONOMY</p>
<p><b>NAG 5 9115</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2135</b>  PHASE-A AND BRIDGE PHASE STUDY OF STEREO/WAVES ACCOMODATION  03/02/2000 - 12/31/2002                    FY02: \$0                    Total: \$191,725  <i>Prin. Invest.:</i> S BALE  <i>Tech. Officer:</i> GSFC/M L KAISER  <i>CASE Category:</i> 11 – ASTRONOMY</p>	<p><b>NAG 5 9503</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2144</b>  ADDING NEAR TO THE 3RD INTERPLANETARY NETWORK OF GAMMA-RAY  BURST DETECTORS  04/24/2000 - 04/30/2001                    FY02: \$0                    Total: \$65,000  <i>Prin. Invest.:</i> K C HURLEY  <i>Tech. Officer:</i> GSFC/T MORGAN  <i>CASE Category:</i> 11 – ASTRONOMY</p>
<p><b>NAG 5 9130</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2136</b>  CORONAL STRUCTURE IN THE RS CVN BINARY AR LACERTAE ADP99  02/28/2000 - 02/28/2002                    FY02: \$0                    Total: \$35,000  <i>Prin. Invest.:</i> O H SIEGMUND  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 – ASTRONOMY</p>	<p><b>NAG 5 9514</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2145</b>  BIOSPHERE-ATMOSPHERE INTERACTIONS  04/25/2000 - 04/30/2003                    FY02: \$0                    Total: \$516,667  <i>Prin. Invest.:</i> I FUNG  <i>Tech. Officer:</i> GSFC/D WICKLAND  <i>CASE Category:</i> 39 – ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 9149</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2137</b>  ADVANCED MCP UV VISIBLE DETECTOR SYSTEMS  03/03/2000 - 03/14/2003                    FY02: \$0                    Total: \$250,000  <i>Prin. Invest.:</i> O SIEGMUND  <i>Tech. Officer:</i> GSFC/P CRANE  <i>CASE Category:</i> 11 – ASTRONOMY</p>	<p><b>NAG 5 9523</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2146</b>  QTHE FEASIBILITY OF DETECTING ELECTRIC FIELDS ON THE MARS 03  PROMISE ELEEELECTRICAL SUBPACKAGE  07/31/2000 - 07/31/2001                    FY02: \$0                    Total: \$27,000  <i>Prin. Invest.:</i> G T DELORY  <i>Tech. Officer:</i> GSFC/W M FARRELL  <i>CASE Category:</i> 31 – ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 9210</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2138</b>  SWIFT PHASE B AND C/D  03/10/2000 - 08/14/2003                    FY02: \$0                    Total: \$135,000  <i>Prin. Invest.:</i> K HURLEY  <i>Tech. Officer:</i> GSFC/N GEHRELS  <i>CASE Category:</i> 11 – ASTRONOMY</p>	<p><b>NAG 5 9626</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2147</b>  NEW SOLAR MAX GRANT STUDIES OF GEOTAIL ELECTRIC FIELDS &amp;  PLASMA FIELDS  05/22/2000 - 09/30/2001                    FY02: \$0                    Total: \$95,034  <i>Prin. Invest.:</i> F MOZER  <i>Tech. Officer:</i> GSFC/D FAIRFIELD  <i>CASE Category:</i> 19 – PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 9231</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2139</b>  DEVELOPMENT OF A LONG-TERM INVENTORY OF FIRE BURNE D AREAS &amp;  EMISSIONS OF NORTH AMERICA'S BOREAL AN  03/22/2000 - 04/30/2003                    FY02: \$0                    Total: \$113,749  <i>Prin. Invest.:</i> P GONG  <i>Tech. Officer:</i> GSFC/G GUTMAN  <i>CASE Category:</i> 39 – ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9629</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2148</b>  CASSANDRA: A STORM BASED MODEL FOR FORECASTING THE INITIATION  &amp; RUNOUT OF DEBRIS FLOWS  05/30/2000 - 05/31/2003                    FY02: \$0                    Total: \$100,000  <i>Prin. Invest.:</i> W E DIETRICH  <i>Tech. Officer:</i> GSFC/H V FREY  <i>CASE Category:</i> 32 – GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 9305</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2140</b>  DATA CALIBRATION AND SCIENTIFIC DEFINITION OF THE NEAR, LUNAR  PROSPECTORAND MGS MAGNETOMETERS  03/20/2000 - 02/28/2003                    FY02: \$0                    Total: \$65,641  <i>Prin. Invest.:</i> R LIN  <i>Tech. Officer:</i> GSFC/M H ACUNA  <i>CASE Category:</i> 42 – ASTRONAUTICAL ENGR</p>	<p><b>NAG 5 9650</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2149</b>  NEW ISTP SOLAR MAX GRANT: DUAL SPACECRAFT OBSERVA TIONS OF  DAYSIDE RECONNECTION  05/30/2000 - 05/31/2002                    FY02: \$0                    Total: \$70,000  <i>Prin. Invest.:</i> C CARLSON  <i>Tech. Officer:</i> GSFC/M ACUNA  <i>CASE Category:</i> 19 – PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 9317</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2141</b>  ENHANCEMENT OF THE GLOBAL SYSTEMS SCIENCE STUDENT GUIDE  SERIES FOR THE DIGITAL EARTH INITIATIVE  03/22/2000 - 03/31/2003                    FY02: \$0                    Total: \$219,956  <i>Prin. Invest.:</i> A GOULD  <i>Tech. Officer:</i> GSFC/N KHAZENIE  <i>CASE Category:</i> 39 – ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9864</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2150</b>  GEOLOGICAL ANALYSIS OF MARTIAN CRUSTAL MAGNETIC AMOMALIES  08/25/2000 - 08/14/2003                    FY02: \$0                    Total: \$21,653  <i>Prin. Invest.:</i> M RICHARDS  <i>Tech. Officer:</i> GSFC/P TAYLOR  <i>CASE Category:</i> 32 – GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 9384</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2142</b>  MOLECULAR CARBON IN THE GALAXY  04/04/2000 - 03/31/2003                    FY02: \$0                    Total: \$310,720  <i>Prin. Invest.:</i> R J SAYKALLY  <i>Tech. Officer:</i> GSFC/G STRINGFELLOW  <i>CASE Category:</i> 13 – PHYSICS</p>	

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9975 UNIV OF CALIFORNIA - BERKELEY 2151**  
 CLUSTER ELECTRIC FIELD DATA ANALYSIS  
 09/14/2000 - 03/31/2002 FY02: \$0 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 2152**  
 CLUSTER ION COMPOSITION (CIS) EXPERIMENT  
 12/27/2000 - 12/31/2003 FY02: \$0 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 2153**  
 ELECTRON DYNAMICS IS SHOCK RAMPS  
 01/30/2001 - 01/14/2003 FY02: \$0 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 2154**  
 THE SCIENCE EDUCATION GATEWAY II  
 02/01/2001 - 01/31/2004 FY02: \$0 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 2155**  
 A SEARCH FOR TRACE ELEMENTS IN ULTRAMASSIVE WHITE DWARF  
 PHOTOSPHERES (FUZE 00)  
 02/12/2001 - 12/31/2001 FY02: \$0 Total: \$39,800  
*Prin. Invest.:* J DUPIUS  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10411 UNIV OF CALIFORNIA - BERKELEY 2156**  
 DEVELOPMENT OF CALORIMETRIC AEROGEL FOR CAPTURE OF INTER-  
 PLANETARY & INTERSTELLAR GRAINS IN LOW EARTH  
 04/10/2001 - 04/15/2002 FY02: \$0 Total: \$52,500  
*Prin. Invest.:* A WESTPHAL  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10428 UNIV OF CALIFORNIA - BERKELEY 2157**  
 3-D PLASMA AND ENERGETIC PARTICLES INVESTIGATION ON THE WIND  
 SPACECRAFT  
 02/23/2001 - 02/28/2003 FY02: \$0 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 2158**  
 CHONDRITIC METEORITES AND PLANETESMIALS  
 02/16/2001 - 01/31/2002 FY02: \$0 Total: \$25,000  
*Prin. Invest.:* F SHU  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10466 UNIV OF CALIFORNIA - BERKELEY 2159**  
 UVI DATA ANALYSIS  
 03/08/2001 - 03/14/2003 FY02: \$0 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 2160**  
 DUAL-SPACECRAFT INVESTIGATION OF SUBSTANTIAL SOLAR WIND  
 PLASMA ENTRY ACROSS THE TAIL FLANK MAGENTOPA  
 02/27/2001 - 02/28/2004 FY02: \$0 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 2161**  
 THE STRUCTURE AND DYNAMICS OF GIANT HERBIG-HARO FLOWS  
 03/20/2001 - 03/31/2003 FY02: \$0 Total: \$35,000  
*Prin. Invest.:* W WELCH  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10664 UNIV OF CALIFORNIA - BERKELEY 2162**  
 NUMERICAL SIMULATION OF 3D COMPACT EDDIES IN A PRO TOPLANETARY  
 ACCRETION DISK; THEIR ROBUSTNESS AND  
 03/21/2001 - 02/28/2004 FY02: \$0 Total: \$50,000  
*Prin. Invest.:* P MARCUS  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10673 UNIV OF CALIFORNIA - BERKELEY 2163**  
 ESTIMATING SOIL MOISTURE CHANGES USING RADARSAT & IT'S APPLICA-  
 TION IN HYDROLOGICAL MODELING  
 03/27/2001 - 03/14/2003 FY02: \$0 Total: \$57,988  
*Prin. Invest.:* X LIANG  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10710 UNIV OF CALIFORNIA - BERKELEY 2164**  
 BEPOSAX GRBS (ADP 2000)  
 04/23/2001 - 04/30/2002 FY02: \$0 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 2165**  
 ADVANCED ADIABATIC DEMAGNETIZATION REFRIGERATORS FOR CON-  
 TINUOUS COOLING FROM 10K TO 50MK  
 04/20/2001 - 04/30/2004 FY02: \$0 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 2166**  
 MATADOR IDPU & DCE TESTS  
 04/12/2001 - 03/14/2003 FY02: \$0 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 2167**  
 CONCEPT STUDY FOR THE "STUDY OF GALACTIC PLASMA EVOLUTION  
 WITH SPEAR" (SPEAR) MISSION AO-99-OSS-0  
 04/30/2001 - 04/30/2002 FY02: \$0 Total: \$251,179  
*Prin. Invest.:* D EDELSTEIN  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 10803</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2168</b>  CONCEPT STUDY FOR THE "THE HEAVY NUCLEI EXPLORER" (HNX)  MISSION AO-99-OSS-05  04/30/2001 - 04/30/2002                      FY02: \$0                      Total: \$57,700  <i>Prin. Invest.:</i> D WESTPHAL  <i>Tech. Officer:</i> GSFC/J R BYRD  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11333</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2176</b>  X-RAY SPECTROSCOPY OF LOW-LUMINOSITY ACTIVE GALACTIC NUCLEI  WITH XMM  10/26/2001 - 08/31/2003                      FY02: \$5,102                      Total: \$5,102  <i>Prin. Invest.:</i> E QUATAERT  <i>Tech. Officer:</i> GSFC/R MUSHOTZKY  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10839</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2169</b>  3-D MHD TURBULENT DYNAMOS (ATP 2000)  05/10/2001 - 06/30/2004                      FY02: \$0                      Total: \$80,000  <i>Prin. Invest.:</i> G H FISHER  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11394</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2177</b>  HIGH RESOLUTION CROSS-STRIP DETECTOR READ-OUT TECHNOLOGIES  FOR SPACE ASTROPHYSICS APPLICATIONS  12/03/2001 - 11/30/2004                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> O H SIEGMUND  <i>Tech. Officer:</i> GSFC/P CRANE  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 10851</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2170</b>  CONTINUING THE CHALLENGE OF EUV ASTRONOMY: CURRENT ANALYSIS  AND PROSPECTS FOR THE FUTURE  04/30/2001 - 04/30/2002                      FY02: \$0                      Total: \$30,003  <i>Prin. Invest.:</i> J DUPUIS  <i>Tech. Officer:</i> GSFC/D GOLOMBEK  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11416</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2178</b>  MO&amp;DA OF THE ULTRA-VIOLET IMAGING (UVI) EXPERIMENT FOR THE  POLAR EXTENDED MISSION.  01/15/2002 - 12/31/2004                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> G PARKS  <i>Tech. Officer:</i> GSFC/R HOFFMAN  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 10866</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2171</b>  ENRICHMENTS OF 3HE IN PLANETARY NEBULAE  05/08/2001 - 05/14/2003                      FY02: \$0                      Total: \$24,000  <i>Prin. Invest.:</i> I ROTH  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11422</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2179</b>  SQUID READOUT MULTIPLEXER FOR SUPERCONDUCTING TES BOLOM-  ETER ARRAYS  12/03/2001 - 11/30/2004                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> A LEE  <i>Tech. Officer:</i> GSFC/G STRINGFELLOW  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 10925</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2172</b>  CORONAL MODELS AND APPLICATIONS FOR LWS  05/11/2001 - 05/14/2004                      FY02: \$0                      Total: \$80,534  <i>Prin. Invest.:</i> J G LUHMANN  <i>Tech. Officer:</i> GSFC/W WAGNER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 11451</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2180</b>  ADDING HETE-II AND '01 MARS ODYSSEY TO THE IPN  12/27/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> K C HURLEY  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 11055</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2173</b>  EFFECT OF IMF BY COMPONENT ON THERMOSPHERIC COMPOSITION  06/18/2001 - 06/30/2004                      FY02: \$0                      Total: \$100,399  <i>Prin. Invest.:</i> T IMMEL  <i>Tech. Officer:</i> GSFC/M MELLOTT  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 11651</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2181</b>  FLUXNET, A GLOBAL NETWORK OF CARBON, WATER AND ENERGY FLUX  MEASUREMENT SITES  01/28/2002 - 01/31/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> D BALDOCCHI  <i>Tech. Officer:</i> GSFC/D WICKLAND  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 11179</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2174</b>  ORIGINS OF RECENT EROSIONAL FEATURES ON MARS: QUANTITATIVE  ANALYSIS OF MOC AND MOLA DATA, PHYSICAL  08/14/2001 - 08/14/2004                      FY02: \$0                      Total: \$55,000  <i>Prin. Invest.:</i> W DIETRICH  <i>Tech. Officer:</i> GSFC/J M BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11689</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2182</b>  MULTI-EPOCH XMM OBSERVATIONS OF NGC4258  02/13/2002 - 02/14/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> A V FILIPPENKO  <i>Tech. Officer:</i> GSFC/R MUSHOTZKY  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 11200</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2175</b>  INFERENCE OF REGIONAL CARBON EXCHANGE PROCESSES &amp; THEIR  VARIABILITY SINCE 1980  08/10/2001 - 08/14/2004                      FY02: \$0                      Total: \$287,077  <i>Prin. Invest.:</i> I FUNG  <i>Tech. Officer:</i> GSFC/D WICKLAND  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 11733</b>                      <b>UNIV OF CALIFORNIA - BERKELEY</b>                      <b>2183</b>  ANALYSIS OF DATA FROM THE ELECTRIC FIELD EXPERIMENT ON THE  POLAR SATELLITE.  02/25/2002 - 01/31/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> F MOZER  <i>Tech. Officer:</i> GSFC/R HOFFMAN  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>

## CALIFORNIA

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**NAG 5 11769**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2184**  
 CHARTING PLANET FORMATION WITH DIRECT IMAGING AND STELLAR  
 KINEMATICS  
 02/26/2002 - 02/28/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* P KALAS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11781**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2185**  
 ELECTRIC FIELD SENSORS FOR PLANETARY SUBSURFACE SOUNDING  
 02/26/2002 - 02/29/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G DELORY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11804**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2186**  
 3D PLASMA AND ENERGETIC PARTICLES INVESTIGATION ON THE WIND  
 SPACECRAFT; OPERATIONS AND DATA ANALYSIS  
 03/27/2002 - 03/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R LIN  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11901**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2187**  
 ADVANCED HIGH-SENSITIVE-COSMOGENIC NUCLIDE MEASUREMENTS  
 FOR SAMPLE RETURN  
 04/04/2002 - 03/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* K NISHIZUMI  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11902**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2188**  
 ROBUST EXTRACTION AND SUBSEQUENT HANDLING OF HYPER VELOCITY  
 GRAINS CAPTURED IN AEROGEL COLLECT  
 04/04/2002 - 03/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* A J WESTPHAL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11910**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2189**  
 AN ISOTOPIC APPROACH FOR DETERMINING THE INDUSTRIAL FRACTION  
 OF TOTAL CH3BR SOURCE TO THE A  
 04/19/2002 - 04/30/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* A GOLDSTEIN  
*Tech. Officer:* GSFC/M KURYLO  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11914**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2190**  
 THE PHYSICS OF ACTIVE REGIONS  
 03/21/2002 - 04/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G H FISHER  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 11987**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2191**  
 CLUSTER-II/GEOTAIL INVESTIGATION OF THE LARGE-SCALE NATURE OF  
 RECONNECTION  
 04/18/2002 - 04/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* T PHAN  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12004**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2192**  
 CORRELATIVE STUDIES OF IONS AND FIELDS MEASURED BY THE CLUS-  
 TER SPACECRAFT  
 04/12/2002 - 04/14/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J P MCFADDEN  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12031**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2193**  
 FORMATION AND COLLIMATION OF PULSAR WINDS  
 04/12/2002 - 04/14/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J ARONS  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12039**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2194**  
 A SURVEY OF THE SPATIAL, TEMPORAL, AND STATISTICAL PROPERTIES OF  
 HIGH-ALTITUDE AURORAL ZONE ELECTRIC  
 04/12/2002 - 04/14/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J BONNELL  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12042**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2195**  
 THE FORMATION OF HIGH MASS STARS  
 04/17/2002 - 04/14/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R I KLEIN  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12043**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2196**  
 ACCRETION ONTO MASSIVE BLACK HOLES IN LOW-LUMINOSITY GALAC-  
 TIC NUCLEI  
 04/17/2002 - 04/14/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* E QUATAERT  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12047**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2197**  
 ELECTRODYNAMIC COUPLING OF FAST MAGNETOTAIL FLOWS AND THE  
 HIGH LATITUDE NIGHTSIDE IONOSPHERE  
 04/17/2002 - 08/30/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* V ANGELOPOULOS  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12062**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2198**  
 THERMAL RADIO MAPS OF JUPITER  
 04/18/2002 - 04/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* I DEPATER  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12090**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2199**  
 JUPITER ANALOGS AND ROCKY PLANETS: TOWARD 1M/S PRECISION  
 05/02/2002 - 06/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G W MARCY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12167**            **UNIV OF CALIFORNIA - BERKELEY**            **2200**  
 CHONDRITIC METEORITES AND PLANETESIMALS  
 05/14/2002 - 05/14/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* A GLASSGOLD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12173**            **UNIV OF CALIFORNIA - BERKELEY**            **2201**  
 THE FORMATION AND EVOLUTION OF DARK MATTER HALOS  
 05/15/2002 - 04/14/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* C M MA  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12193**            **UNIV OF CALIFORNIA - BERKELEY**            **2202**  
 MULTI-WAVELENGTH VISIBILITY OBSERVATIONS OF CIRCUM STELLER  
 MATERIAL WITH THE KECK INTERFEROMETE  
 05/23/2002 - 05/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* C TOWNES  
*Tech. Officer:* GSFC/D DANCHI  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12232**            **UNIV OF CALIFORNIA - BERKELEY**            **2203**  
 A FAR UV STUDY OF HV ATOMIC AND MOLECULAR GAS ASSO CIATED WITH  
 THE EVOLVED SHAJN 147 SNR.  
 06/06/2002 - 06/14/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* B Y WELSH  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12324**            **UNIV OF CALIFORNIA - BERKELEY**            **2204**  
 THE HALO'S O VI INTENSITY (FUSE 01)  
 08/12/2002 - 09/30/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* O W SIEGMUND  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12424**            **UNIV OF CALIFORNIA - BERKELEY**            **2205**  
 INVESTIGATING OVI EMISSION IN THE ERIDANUS SUPER BUBBLE (FUSE  
 2001)  
 08/06/2002 - 08/14/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* O W SIEGMUND  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12437**            **UNIV OF CALIFORNIA - BERKELEY**            **2206**  
 THE SUNYAEV-ZEL'DOVICH EFFECT(S)  
 08/05/2002 - 04/14/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* M WHITE  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12453**            **UNIV OF CALIFORNIA - BERKELEY**            **2207**  
 MULTI-SPACECRAFT AND SIMULATION STUDY OF ENERGY TRANSPORT BY  
 ALFVEN WAVESIN THE HIGH-LATITUDE  
 08/15/2002 - 08/14/2004            FY02: \$0            Total: \$0  
*Prin. Invest.:* C CHASTON  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12483**            **UNIV OF CALIFORNIA - BERKELEY**            **2208**  
 A MULTISPACECRAFT INVESTIGATION OF SHOCK STRUCTURE AND UP-  
 STREAM WAVES  
 08/26/2002 - 08/31/2004            FY02: \$0            Total: \$0  
*Prin. Invest.:* S D BALE  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12541**            **UNIV OF CALIFORNIA - BERKELEY**            **2209**  
 SUDDEN OAK DEATH IN CALIFORNIA: SPATIAL ANALYSIS F OR TESTING  
 HYPOTHESES OF DISEASE SPREAD  
 08/29/2002 - 08/31/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* N KELLY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12590**            **UNIV OF CALIFORNIA - BERKELEY**            **2210**  
 SCIENCE OPERATION AND DATA ANALYSIS FOR THE FAST A URORAL  
 SNAPSHOT EXPLORER (FAST) MISSION.  
 09/20/2002 - 03/14/2004            FY02: \$0            Total: \$0  
*Prin. Invest.:* D W CARLSON  
*Tech. Officer:* GSFC/R PFAFF  
*CASE Category:* 11 - ASTRONOMY

**NAG 6 10**                **UNIV OF CALIFORNIA - BERKELEY**            **2211**  
 SOUNDING ROCKET RESEARCH PROGRAM  
 11/01/1980 - 12/31/2001            FY02: \$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**            **2212**  
 R/S SUPERFLUID GYROSCOPES FOR SPACE  
 03/02/1998 - 01/31/2003            FY02: \$0            Total: \$405,750  
*Prin. Invest.:* R E PACKARD  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 8 1458**            **UNIV OF CALIFORNIA - BERKELEY**            **2213**  
 R/S EXPLOITING THE TEMPERATURE DEPENDENCE OF MAGNETIC SUS-  
 CEPTIBILITY TO CONTROL CONVECTION  
 02/15/1998 - 08/31/2002            FY02: \$0            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**            **2214**  
 GENESIS DISCOVERY MISSION  
 08/19/1998 - 05/31/2004            FY02: \$0            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**            **2215**  
 NEXT GENERATION TECHNOLOGIES FOR THE IN SITU DETEC TION OF NOX  
 RADICALS AND RESERVOIRS FROM AIRCRAFT  
 02/10/1999 - 02/09/2002            FY02: \$0            Total: \$762,187  
*Prin. Invest.:* R COHEN  
*Tech. Officer:* LARC/J HILL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## CALIFORNIA

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**NAS 5 00133**            **UNIV OF CALIFORNIA - BERKELEY**            **2216**  
 STEREO PHASE A CONCEPT STUDY FOR INSITU\_POP5-22-00 MEASURE-  
 MENTS OF PARTICLES & CME TRANSIENTS (IMPACT  
 02/22/2000 - 11/30/2005            FY02: \$493,000            Total: \$2,198,985  
*Prin. Invest.:* J LUHMAN, E STONE  
*Tech. Officer:* GSFC/A HARPER  
*CASE Category:* 13 - PHYSICS

**NAS 5 02099**            **UNIV OF CALIFORNIA - BERKELEY**            **2217**  
 TIME HISTORY OF EVENTS & MACROSCALE INTERACTIONS DURING  
 SUBSTORMS (THEMIS) MISSION PHASE A EFFORT  
 06/25/2002 - 03/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* V ANGELOPOULOS  
*Tech. Officer:* GSFC/C SAVINELL  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 98033**            **UNIV OF CALIFORNIA - BERKELEY**            **2218**  
 PHASE A CONCEPT STUDY FOR HESSI INVESTIGATION  
 11/19/1997 - 10/19/2003            FY02: \$576,786            Total: \$43,523,000  
*Prin. Invest.:* R P LIN  
*Tech. Officer:* GSFC/F SNOW  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 99242**            **UNIV OF CALIFORNIA - BERKELEY**            **2219**  
 FAST FLIGHT OPERATIONS  
 10/01/1999 - 08/02/2003            FY02: \$0            Total: \$489,892  
*Prin. Invest.:* C W CARLSON  
*Tech. Officer:* GSFC/R PFAFF  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1125**            **UNIV OF CALIFORNIA - BERKELEY**            **2220**  
 THE EXTRACTION OF POINT SOURCES FROM THE NIRS SPECTROMETER  
 ABOARD THE INFRARED TELESCOPE IN SPACE  
 06/14/1999 - 05/31/2003            FY02: \$0            Total: \$28,000  
*Prin. Invest.:* M COHEN  
*Tech. Officer:* ARC/D GOORVITCH  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1171**            **UNIV OF CALIFORNIA - BERKELEY**            **2221**  
 3DOF HAPTIC SIMULATION AND PSYCHOPHYSICAL EXPERIMENTS  
 04/11/2000 - 11/30/2001            FY02: \$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**            **2222**  
 2-DOF HAPTIC SIMULATION & PSYCHOPHYSICAL EXPERIMENTS  
 05/03/2001 - 03/31/2003            FY02: \$0            Total: \$70,000  
*Prin. Invest.:* H KAZEROONI  
*Tech. Officer:* ARC/B ADELSTEIN, ARC/S R ELLIS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 1347**            **UNIV OF CALIFORNIA - BERKELEY**            **2223**  
 ENHANCED NANOMANIPULATION THROUGH HAPTIC AUGMENTATION  
 06/05/2002 - 05/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* H KAZEROONI  
*Tech. Officer:* ARC/B A ADELSTEIN, ARC/S ELLIS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 5334**            **UNIV OF CALIFORNIA - BERKELEY**            **2224**  
 A STUDY OF THE STATIC & DYNAMIC AERODYNAMICS CHARACTERISTICS  
 OF BLUNT PLANETARY PROBES  
 07/19/1999 - 06/30/2002            FY02: \$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**            **2225**  
 TOW-TANK STUDIES OF HELICOPTER VORTEX WAKE  
 07/14/2000 - 09/30/2002            FY02: \$0            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**            **2226**  
 MASSIVE STAR FORMATION  
 01/26/2001 - 02/14/2003            FY02: \$0            Total: \$58,000  
*Prin. Invest.:* C F MCKEE  
*Tech. Officer:* ARC/D J HOLLENBACH, ARC/G LAUGHLIN  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5455**            **UNIV OF CALIFORNIA - BERKELEY**            **2227**  
 LONG TERM EXTREME ENVIRONMENT AND MARS ANALOG STUDIES IN  
 THE ATACAMA DESERT  
 08/09/2001 - 07/31/2003            FY02: \$0            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**            **2228**  
 TOW-TANK STUDIES OF AIRCRAFT WAKE VORTEX INSTABILITY  
 09/26/2001 - 10/31/2003            FY02: \$0            Total: \$30,000  
*Prin. Invest.:* O SAVAS  
*Tech. Officer:* ARC/D A DURSTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5492**            **UNIV OF CALIFORNIA - BERKELEY**            **2229**  
 EVOLUTION OF GAS AND DUST IN PROTOPLANETARY DISKS  
 05/21/2002 - 05/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* C F MCKEE  
*Tech. Officer:* ARC/D HOLLENBACH, ARC/K R BELL  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5507**            **UNIV OF CALIFORNIA - BERKELEY**            **2230**  
 MEASUREMENTS OF ROTOR FLOW FIELDS AND FORCES IN A WATER  
 FACILITY AT LOW AND MODERATE REYNOLDS NUMBER  
 08/01/2002 - 09/30/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* O SAVAS  
*Tech. Officer:* ARC/F X CARADONNA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 803**            **UNIV OF CALIFORNIA - BERKELEY**            **2231**  
 FLAMMABILITY DIAGRAMS OF COMBUSTIBLE MATERIALS IN MICROGRAVITY  
 05/31/2000 - 04/30/2004            FY02: \$0            Total: \$127,000  
*Prin. Invest.:* D FERNANDEZ-PELLO  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 46 - MECHANICAL ENGR

<p><b>NCC 3 833</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2232</b>  MICROGRAVITY PRODUCTION OF NANOPARTICLES OF NOVEL MATERIALS  USING PLASMA SYNBTHESIS  12/13/2000 - 10/31/2004                    FY02: \$0                    Total: \$80,000  <i>Prin. Invest.:</i> M FRENKLACH  <i>Tech. Officer:</i> GRC/N D PILTCH  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NGT 2 52258</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2240</b>  HIGH-RESOLUTION GROUND-BASED MAPPING OF TITAN'S SU RFACE &amp;  HAZE LAYER  08/11/1999 - 07/31/2002                    FY02: \$0                    Total: \$66,000  <i>Prin. Invest.:</i> I DEPATER  <i>Tech. Officer:</i> ARC/C P MCKAY  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NCC 3 874</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2233</b>  TWO DIMENSIONAL SMOLDERING &amp; ITS TRANSITON TO FLAM ING IN  MICROGRAVITY  03/14/2001 - 11/30/2004                    FY02: \$0                    Total: \$120,000  <i>Prin. Invest.:</i> C F PELLO  <i>Tech. Officer:</i> GRC/D L URBAN  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NGT 2 52278</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2241</b>  COMPUTATIONAL INVESTIGATIONS OF MASSIVE STAR FORMA TION  06/19/2001 - 06/14/2003                    FY02: \$0                    Total: \$22,000  <i>Prin. Invest.:</i> C F MCKEE  <i>Tech. Officer:</i> ARC/D J HOLLENBACH  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NCC 3 896</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2234</b>  CARBON MONOXIDE AND SOOT FORMATION IN INVERSE DIFF USION  FLAMES  06/06/2001 - 04/30/2003                    FY02: \$0                    Total: \$30,000  <i>Prin. Invest.:</i> C FERNANDEZ-PELLO  <i>Tech. Officer:</i> GRC/K R SACKSTEDER  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NGT 2 52290</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2242</b>  C AND N CYCLING AS INDICATORS OF BIOLOGICAL THRESH OLDS IN THE  ATACAMA DSERT CHILE  06/18/2002 - 06/14/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> R G AMUNDSON  <i>Tech. Officer:</i> ARC/C MCKAY, ARC/B F SMITH  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NCC 5 138</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2235</b>  EXTENDED EUVE MISSION  08/21/1996 - 10/01/2001                    FY02: \$0                    Total: \$8,784,582  <i>Prin. Invest.:</i> R MALINA  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NGT 5 30110</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2243</b>  A STUDY OF MEV TERRESTRIAL X-RAY BURSTS  05/11/1998 - 07/31/2001                    FY02: \$0                    Total: \$66,000  <i>Prin. Invest.:</i> R P LIN, MILLAN  <i>Tech. Officer:</i> GSFC/D EVANS  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NCC 5 253</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2236</b>  THE SUN-EARTH CONNECTION EDUCATION FORUM.  10/30/1997 - 11/14/2002                    FY02: \$0                    Total: \$3,844,651  <i>Prin. Invest.:</i> I HAWKINS  <i>Tech. Officer:</i> GSFC/J THIEMAN  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NGT 5 30141</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2244</b>  PHOSPHORUS CYCLING OF LAND USE GRADIENT ON TWO SOIL TEX-  TURES IN A LOWLAND TROPICAL FOREST  08/27/1998 - 02/28/2002                    FY02: \$0                    Total: \$66,000  <i>Prin. Invest.:</i> W L SILVER, MCGRODDY  <i>Tech. Officer:</i> GSFC/M Y WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NCC 5 352</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2237</b>  SOIL BIOGEOCHEMISTRY OF CARBON, NUTRIENTS, &amp; TRACE GASES IN  THE AMAZON REGION OF BRAZIL: FIELD &amp; MOD  07/28/1998 - 12/31/2002                    FY02: \$0                    Total: \$218,967  <i>Prin. Invest.:</i> W SILVER  <i>Tech. Officer:</i> GSFC/D E WICKLAND  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NGT 5 30183</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2245</b>  MEASUREMENT &amp; MODELING OF CARBON, WATER &amp; ENERGY OVER A  CALIFORNIA OAK SAVANNA: LINKING THE BIOPHYS  08/19/1999 - 08/31/2002                    FY02: \$0                    Total: \$66,000  <i>Prin. Invest.:</i> T L BENNING  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NCC 5 492</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2238</b>  EO-1 &amp; LANDSAT IMAGERY FOR MONITORING CALIFORNIA'S CONIFER  FOREST &amp; HARDWOOD RANGELAND  04/12/2000 - 09/30/2003                    FY02: \$2,500                    Total: \$128,222  <i>Prin. Invest.:</i> P GONG  <i>Tech. Officer:</i> GSFC/S G UNGAR  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NGT 5 30219</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2246</b>  ATMOSPHERIC NO2: LASER-INDUCED FLUORESCENCE DETECT ION AT  THE PART PER TRILLION LEVEL FROM AIRCRAFT  08/24/1999 - 08/31/2002                    FY02: \$0                    Total: \$66,000  <i>Prin. Invest.:</i> R C COHEN  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI,OTHER</p>
<p><b>NGT 2 52233</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2239</b>  CHARACTERICATION OF MICROBIAL DIVERISTY IN YELLOWSTONE FUMA-  ROLES: THE SEARCH FOR PRIMITIVE LIFE IN.  08/26/1997 - 07/31/2001                    FY02: \$0                    Total: \$66,000  <i>Prin. Invest.:</i> N R PACE  <i>Tech. Officer:</i> ARC/D J DES MARAIS  <i>CASE Category:</i> 54 - ENVIRONMENTAL BIOLOGY</p>	<p><b>NGT 5 30351</b>                    <b>UNIV OF CALIFORNIA - BERKELEY</b>                    <b>2247</b>  THE IMPLICATIONS OF MICROBIAL DECOMPOSTION ON THE DISTRIBUTION  OF STABLEC &amp; N ISOTOPES IN TERRESTRIA  08/24/2000 - 08/31/2003                    FY02: \$0                    Total: \$44,000  <i>Prin. Invest.:</i> I CHAPELA  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NGT 5 30361**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2248**  
 INTEGRATING REMOTELY SENSED AFFORESTATION POTENTIAL WITH  
 CREDIT TRADING & TECHNICAL LEARNING IN MOD  
 08/24/2000 - 08/31/2003                    FY02: \$0                    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**                    **2249**  
 THE GLOBAL IRON GEOCHEMICAL CYCLE: CHARACTERIZING AEOLIAN  
 IRON SOURCES TO THE OCEAN AND THE EFFECT  
 08/13/2001 - 08/31/2004                    FY02: \$0                    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**                    **2250**  
 GLOBAL TRENDS IN SOIL ORGANIC CARBON RESIDENCE TIME/JONATHAN  
 SANDERMAN  
 08/13/2001 - 08/31/2004                    FY02: \$0                    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**                    **2251**  
 ECOSYSTEM LEVEL IMPACTS OF CLIMATE WARMING & LOSS OF BIODI-  
 VERSITY IN MONTANE MEADOW HABITAT/STUDENT  
 08/14/2001 - 08/31/2004                    FY02: \$0                    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**                    **2252**  
 ANOMALOUS FRACTIONATION OF TROPOSPHERIC CO2 AS A POTENTIAL  
 TRACER OF BIOSPHERE PRODUCTIVITY  
 09/07/2001 - 09/14/2004                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* K BOERING  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30463**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2253**  
 INTERACTIONS OF IRON BIOGEOCHEMISTRY WITH NITROGEN CYCLING  
 IN TROPICAL FOREST - STUDENT NAME: ERIC  
 08/21/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M FIRESTONE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30473**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2254**  
 QUANTIFYING EVAPOTRANSPIRATION IN CALIFORNIA FOREST ECOSYS-  
 TEMS: REMOTE SENSING VS. FLUX MEASUREMENTS  
 08/21/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* Y QUI  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50061**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2255**  
 ION OUTFLOW FROM THE AURORAL IONOSPHERE  
 08/04/1997 - 12/31/2000                    FY02: -\$22                    Total: \$65,978  
*Prin. Invest.:* CHARLES  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50188**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2256**  
 DIAMONDS IN GIANT PLANETS? EXPERIMENTS ON "PLANETARY ICES" AT  
 HIGH PRESSURES AND TEMPERATURES  
 05/27/1998 - 12/31/2001                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* R JEANLOZ  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50189**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2257**  
 DETERMINATION OF COSMOLOGICAL PARAMETERS THROUGH COSMIC  
 MICROWAVE BACKGROUND OBSERVATIONS WITH THE  
 05/27/1998 - 06/30/2001                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* G SMOOT  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50195**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2258**  
 BALLOON-BORNE OBSERVATIONS OF THE ANISOTROPY OF THE COSMIC  
 MICROWAVE BACKGROUND ON ANGULAR SCALES  
 06/04/1998 - 06/30/2002                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* P L RICHARDS  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50196**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2259**  
 FRAGMENTATION IN COLLAPSING NON-ISOTHERMAL MOLECULAR  
 CLOUDS  
 06/04/1998 - 09/30/2001                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* C F MCKEE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50216**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2260**  
 ABOVEGROUND AND BELOWGROUND PLANT SPECIES FUNCTIONAL  
 TRAITS AND THEIR RELATION TO ECOSYSTEM FUNCTION  
 09/15/1998 - 08/31/2001                    FY02: \$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**                    **2261**  
 REGIONAL CHANGES IN EXTREME EVENT FREQUENCIES WITHIN THE  
 UNITED STATES (STUDENT: DIANA DERUBERTIS)  
 09/29/1998 - 08/31/2001                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* O E GRANGER, D DERUBERTIS  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50245**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2262**  
 INFRARED SPECTROSCOPY OF STAR FORMATION IN SUPERSTAR CLUS-  
 TERS WITH KECK/NIRSPEC (STUDENT: ANDRE)  
 06/02/1999 - 06/30/2002                    FY02: \$0                    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**                    **2263**  
 X-RAY SPECTROSCOPY OF EVOLVED SUPERNOVA REMNANTS  
 06/07/1999 - 06/30/2002                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* C F MCKEE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 11 - ASTRONOMY



**NGT 5 50331**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2264**  
 EFFECTS OF OXIC-ANOXIC DYNAMICS ON METHANE EFFLUX & STABLE  
 ISOTOPE COMPOSITION IN HUMID TROPICA  
 08/17/2000 - 08/31/2003                    FY02: \$0                    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**                    **2265**  
 LUNAR MAGNETIC AND ELECTRIC FIELDS (STUDENT: JASPER HALEKAS)  
 05/04/2001 - 06/30/2004                    FY02: \$0                    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**                    **2266**  
 DETERMINATION OF EVOLUTIONARY PARAMETERS IN POPULATIONS OF  
 THERMOPHILIC ARCHAEA/STUDENT: RACHEL WHITA  
 05/14/2001 - 06/30/2004                    FY02: \$0                    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**                    **2267**  
 AN ELECTRON EDM MEASUREMENT UTILIZING A SLOW-BEAM ATOMIC  
 FOUNTAIN/STUDENT: JASON AMINI  
 06/12/2001 - 06/30/2004                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* S FREEDMAN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50393**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2268**  
 SUPPORT FOR RESEARCH ON THE NUCLEAR COMPTON TELE-  
 SCOPE/STUDENT: SUSAN AMROSE  
 05/23/2002 - 06/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* S BOGGS  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50424**                    **UNIV OF CALIFORNIA - BERKELEY**                    **2269**  
 VEGETATION CHANGE IN MONTANE MEADOWS ON THE KERN PLATEAU,  
 SIERRA NEVADA, CA (STUDENT: HEATHER SWART  
 08/14/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* C M D'ANTONIO  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2215**                    **UNIV OF CALIFORNIA - DAVIS**                    **2270**  
 AERO-MECHANICAL DESIGN METHODOLOGY FOR SUBSONIC CIVIL TRANS-  
 PORT HIGH-LIFT SYSTEMS  
 07/20/1999 - 12/31/2000                    FY02: \$0                    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**                    **2271**  
 FURTHER DEVELOPMENT IN AERO-MECHANICAL DESIGN METHODOLO-  
 GIES FOR HIGH-LIFT SYSTEMS  
 04/11/2001 - 09/30/2002                    FY02: \$0                    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**                    **2272**  
 MODELING AND DESIGN ANALYSIS METHODOLOGY FOR TAYLORED COM-  
 POSITE AIRCRAFT STRUCTURES  
 09/21/2001 - 01/20/2004                    FY02: \$0                    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**                    **2273**  
 CNS CONTROL OF RHYTHMS & HOMEOSTASIS DURING SPACE FLIGHT  
 12/21/1994 - 12/31/2000                    FY02: \$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 1404**                    **UNIV OF CALIFORNIA - DAVIS**                    **2274**  
 EFFECTS OF GRAVITY ON INSECT CIRCADIAN RHYTHMICITY  
 04/21/2000 - 06/30/2003                    FY02: \$0                    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 1451**                    **UNIV OF CALIFORNIA - DAVIS**                    **2275**  
 EFFECTS OF HYPERGRAVITY ON RAT CIRCADIAN CLOCK GENES, REGU-  
 LATION & EXPRESSION  
 12/19/2000 - 12/14/2002                    FY02: \$0                    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**                    **2276**  
 FIRST INTERNATIONAL CONFERENCE ON COMPUTATIONAL FLUID DYNAM-  
 ICS  
 03/05/2001 - 01/31/2002                    FY02: \$0                    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**                    **2277**  
 EFFECTS OF THE HYPERGRAVITY ON EXPRESSION OF GENES INVOLVED  
 IN REGULATION OF FEEDING  
 07/05/2001 - 06/30/2003                    FY02: \$88,697                    Total: \$177,395  
*Prin. Invest.:* B A HORWITZ  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1558**                    **UNIV OF CALIFORNIA - DAVIS**                    **2278**  
 SECOND INTERNATIONAL CONFERENCE ON COMPUTATIONAL FLUID  
 DYNAMICS  
 05/07/2002 - 04/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J J CHATTOT  
*Tech. Officer:* ARC/E TU, ARC/W R VANDALSEM  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2153**                    **UNIV OF CALIFORNIA - DAVIS**                    **2279**  
 EXPERIMENTAL STUDIES OF MULTIPHASE MATERIALS USING NUCLEAR  
 MAGNETIC RESONANCE  
 05/13/1998 - 06/30/2002                    FY02: \$0                    Total: \$242,250  
*Prin. Invest.:* B L POWELL, S DUGAN, R PHILLIPS  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 43 - CHEMICAL ENGR

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 7441**                    **UNIV OF CALIFORNIA - DAVIS**                    **2280**  
 GEOMETRIC PARAMETERIZATION OF RAINFALL FIELDS  
 06/02/1998 - 06/14/2002                    FY02: \$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**                    **2281**  
 ION IMAGING STUDIES OF VUV PHOTODISSOCIATION OF CO METARY  
 PARENT MOLECULES  
 02/17/1999 - 03/31/2002                    FY02: \$0                    Total: \$309,885  
*Prin. Invest.:* W JACKSON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8391**                    **UNIV OF CALIFORNIA - DAVIS**                    **2282**  
 X-RAY PROPERTIES OF DEEP-RADIO-SELECTED QUASARS (A DP98)  
 03/05/1999 - 03/14/2002                    FY02: \$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**                    **2283**  
 THE FORMATION OF GALAXY CLUSTERS (LTS 98)  
 05/10/1999 - 05/14/2004                    FY02: \$0                    Total: \$269,295  
*Prin. Invest.:* S STANFORD  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9025**                    **UNIV OF CALIFORNIA - DAVIS**                    **2284**  
 "ERROR CONTROL CODING TECHNIQUES FOR SPACE & SATEL LITE  
 COMMUNICATIONS"  
 02/09/2000 - 02/28/2001                    FY02: \$0                    Total: \$70,000  
*Prin. Invest.:* S LIN  
*Tech. Officer:* GSFC/W H MILLER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 9360**                    **UNIV OF CALIFORNIA - DAVIS**                    **2285**  
 NEW EOS DATA PRODUCTS TO IMPROVE BIOGEOCHEMICAL ESTIMATES  
 04/06/2000 - 04/30/2003                    FY02: \$0                    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**                    **2286**  
 X-RAY PROPERTIES OF DEEP-RADIO-SELECTED QUASARS (A DP98)  
 05/02/2000 - 05/31/2002                    FY02: \$0                    Total: \$50,000  
*Prin. Invest.:* N ARAV  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9947**                    **UNIV OF CALIFORNIA - DAVIS**                    **2287**  
 X-RAYS FROM RADIO-LOUD BROAD ABSORPTION LINE QSOS  
 09/06/2000 - 09/14/2002                    FY02: \$0                    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**                    **2288**  
 ERROR CONTROL CODING TECHNIQUES FOR SPACE AND SATE LLITE  
 COMMUNICATIONS  
 02/27/2001 - 02/28/2003                    FY02: \$0                    Total: \$70,000  
*Prin. Invest.:* S LIN  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10591**                    **UNIV OF CALIFORNIA - DAVIS**                    **2289**  
 BIOGEOCHEMICAL CHARACTERIZATION OF LATE ARCHEAN FE NESTRATE  
 MICROBIALITESFROM THEGAMOHAAN FORMATION  
 03/20/2001 - 03/31/2004                    FY02: \$0                    Total: \$89,200  
*Prin. Invest.:* D Y SUMNER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11098**                    **UNIV OF CALIFORNIA - DAVIS**                    **2290**  
 ANALYSIS & INTERPRETATION OF CMB DATA (LTSA 2000)  
 07/12/2001 - 07/14/2006                    FY02: \$0                    Total: \$76,646  
*Prin. Invest.:* L KNOX  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11260**                    **UNIV OF CALIFORNIA - DAVIS**                    **2291**  
 WESTERN CENTER FOR ESTUARINE ECOSYSTEM INDICATOR RESEARCH  
 08/20/2001 - 08/31/2005                    FY02: \$0                    Total: \$76,055  
*Prin. Invest.:* S USTIN  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11607**                    **UNIV OF CALIFORNIA - DAVIS**                    **2292**  
 UNIFICATION OF QUASAR AND SEYFERT OUTFLOWS (LTSA 2 001)  
 01/28/2002 - 01/31/2007                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* N ARAV  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12124**                    **UNIV OF CALIFORNIA - DAVIS**                    **2293**  
 VELOCITY IMAGING STUDIES OF COMETARY MOLECULES  
 04/30/2002 - 04/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* W M JACKSON  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12373**                    **UNIV OF CALIFORNIA - DAVIS**                    **2294**  
 A DETAILED STUDY OF TWO OPTICALLY-SELECTED, HIGH-R EDSHIFT  
 CLUSTERS OF GALAXIES  
 08/07/2002 - 09/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* L M LUBIN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1048**                    **UNIV OF CALIFORNIA - DAVIS**                    **2295**  
 MESOSCOPIC INSTRUMENTATION MINITURE FTIR FOR ENVIRONMENTAL  
 MONITORING  
 08/13/1998 - 08/04/2002                    FY02: \$0                    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**                    **2296**  
 USING REMOTE SENSING TO MONITOR THE IMPACTS OF FLOOD-  
 IRRIGATION OF MEADOWS IN EAST WALKER RIVER  
 08/25/1999 - 11/01/2002                    FY02: \$67,609                    Total: \$412,801  
*Prin. Invest.:* K W TATE  
*Tech. Officer:* SSCR/MCKELLIP  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 1 01007**                      **UNIV OF CALIFORNIA - DAVIS**                      **2297**  
 SIMULATION OF FOREBODY FLOWS AT HIGH-ANGLE-OF- ATTACH DYNAMIC  
 CONDITIONS  
 12/27/2000 - 01/31/2002                      FY02: \$0                      Total: \$55,752  
*Prin. Invest.:* C P VAN DAM  
*Tech. Officer:* LARC/C M FREMAUX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 02010**                      **UNIV OF CALIFORNIA - DAVIS**                      **2298**  
 DEVELOPMENT OF A DESIGN METHODOLOGY FOR RECONFIGUR ABLE  
 FLIGHT CONTROL SYSTEMS  
 02/12/2002 - 09/30/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R A HESS  
*Tech. Officer:* LARC/J B DAVIDSON, LARC/J G BATTERSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 02028**                      **UNIV OF CALIFORNIA - DAVIS**                      **2299**  
 AERODYNAMIC SIMULATION OF AIRCRAFT AT DYNAMIC FLOW CONDITIONS  
 06/19/2002 - 06/18/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C P VAN DAM  
*Tech. Officer:* LARC/C M FREMAUX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1011**                      **UNIV OF CALIFORNIA - DAVIS**                      **2300**  
 EFFICIENT PARALLEL ALGORITHMS FOR INVISCID & VISCO US FLOW  
 SIMULATION  
 01/27/1998 - 01/31/2002                      FY02: \$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**                      **2301**  
 EYE MOVEMENT VISUAL PERCEPTION& CONTROL  
 07/23/1999 - 02/28/2002                      FY02: \$0                      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**                      **2302**  
 MODELING ROTORCRAFT INTERACTION WITH ATMOSPHERIC TURBU-  
 LENCE IN LOW-SPEED AND HOVERING FLIGHT  
 06/07/2000 - 07/31/2003                      FY02: \$0                      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**                      **2303**  
 GRAVITATIONAL BIOLOGY: COMPARISON OF MAMMALIAN ADA PTATIONS  
 TO GROUND-BASED MODELS  
 07/31/2001 - 01/31/2003                      FY02: \$0                      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 1352**                      **UNIV OF CALIFORNIA - DAVIS**                      **2304**  
 GRAVITY & THE INSECT CIRCADIAN TIMING SYSTEM  
 07/01/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T M HOBAN-HIGGINS  
*Tech. Officer:* ARC/B E GIRTIN, ARC/R BERHOLD  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5313**                      **UNIV OF CALIFORNIA - DAVIS**                      **2305**  
 DEVELOPING & VALIDATING ROTORCRAFT SIMULATION MODE LS  
 04/02/1999 - 12/31/2000                      FY02: \$0                      Total: \$58,981  
*Prin. Invest.:* J DONGARRA  
*Tech. Officer:* ARC/S DAINI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5387**                      **UNIV OF CALIFORNIA - DAVIS**                      **2306**  
 DEVELOPMENT & APPLICATION OF A DATA MANAGEMENT TEC HNIQUE  
 WITHIN A DISTRIBUTED COMPUTING ENVIRONMENT  
 06/23/2000 - 06/30/2002                      FY02: \$0                      Total: \$95,000  
*Prin. Invest.:* M HAFEZ, J S DACLES-MARIANI  
*Tech. Officer:* ARC/D KWAK  
*CASE Category:* 22 - COMPUTERSCIENCE

**NCC 2 5406**                      **UNIV OF CALIFORNIA - DAVIS**                      **2307**  
 PREDICTION OF THE AERODYNAMIC CHARACTERISTICS OF A HELICOPTER  
 ROTOR AIRFOIL WITHACTIVELY-CONTROLLED  
 10/27/2000 - 10/31/2001                      FY02: \$0                      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**                      **2308**  
 COMPUTER AIDED FLIGHT SIMULATOR ASSESSMENT  
 03/09/2001 - 02/28/2002                      FY02: \$0                      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**                      **2309**  
 METACOMPUTATIONS & SIMULATIONS OF SEPARATED FLOWS WITH AP-  
 PPLICATIONS TO AEROSPACE & BIOFLUID DYNAMICS  
 03/08/2001 - 02/28/2003                      FY02: \$0                      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**                      **2310**  
 DATA COMPRESSION VIA WAVELETS  
 08/14/2001 - 07/31/2002                      FY02: \$0                      Total: \$95,000  
*Prin. Invest.:* M HAFEZ  
*Tech. Officer:* ARC/D KWAK, ARC/C KIRIS  
*CASE Category:* 21 - MATHEMATICS

**NCC 2 5485**                      **UNIV OF CALIFORNIA - DAVIS**                      **2311**  
 A CFD BASED METHODOLOGY TO AUTOMATE THE GENERATION OF C81  
 AIRFOIL TABLES  
 03/01/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C P VAN DAM  
*Tech. Officer:* ARC/R STRAWN, ARC/C TUNG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5512**                      **UNIV OF CALIFORNIA - DAVIS**                      **2312**  
 INTELLIGENT FLIGHT CONTROL  
 08/08/2002 - 11/30/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M HAFEZ  
*Tech. Officer:* ARC/K G BURLET, ARC/G POWER  
*CASE Category:* 41 - AERONAUTICAL ENGR

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**NCC 3 353**                      **UNIV OF CALIFORNIA - DAVIS**                      **2313**  
 ELECTROHYDRODYNAMIC POOLING IN REDUCED GRAVITY  
 06/29/1994 - 08/31/2003                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* B D SHAW  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 668**                      **UNIV OF CALIFORNIA - DAVIS**                      **2314**  
 THE IMPACT OF BUOYANCY AND FLAME STRUCTURE ON SOOT , RADIATION AND NOX EMISSIONS FROM A TURBULENT DI  
 02/12/1999 - 11/30/2002                      FY02: \$0                      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**                      **2315**  
 COMBUSTION OF HAN-BASED MONOPROPELLANT IN REDUCED GRAVITY  
 03/08/1999 - 01/03/2003                      FY02: \$0                      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**                      **2316**  
 FLAME PROPAGATION IN LOW INTENSITY TURBULENCE UNDER MICROGRAVITY CONDITIONS  
 01/05/2001 - 11/30/2004                      FY02: \$0                      Total: \$90,000  
*Prin. Invest.:* R C ALDRIDGE  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 859**                      **UNIV OF CALIFORNIA - DAVIS**                      **2317**  
 MECHANISM OF CREEP OF CU-CR-NB ALLOYS MECHANISM OF CREEP OF CU-CR-NB ALLOYS  
 02/08/2001 - 01/14/2003                      FY02: \$0                      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**                      **2318**  
 ELECTRIC FIELD EFFECTS IN SELF-PROPAGATING HIGH TEMPERATURE COMBUSTION SYNTHESIS UNDER MICROGRAVITY  
 03/19/2001 - 11/30/2004                      FY02: \$0                      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**                      **2319**  
 COMBUSTION EXPERIMENTS IN REDUCED GRAVITY WITH TWO COMPONENT MISCIBLE DROPLETS  
 05/01/2001 - 02/28/2003                      FY02: \$0                      Total: \$170,650  
*Prin. Invest.:* B D SHAW  
*Tech. Officer:* GRC/D L DIETRICH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 4 151**                      **UNIV OF CALIFORNIA - DAVIS**                      **2320**  
 SUPERSONIC FLIGHT EXPERIMENTATION USING INFRARED THERMOGRAPHY  
 01/30/2001 - 02/28/2002                      FY02: \$14,673                      Total: \$41,472  
*Prin. Invest.:* C VAN DAM  
*Tech. Officer:* DFRC/D W BANKS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 4 155**                      **UNIV OF CALIFORNIA - DAVIS**                      **2321**  
 QUANTITATIVE VISUALIZATION OF AIRCRAFT SURFACE FLOWS USING INFRARED THERMOGRAPHY  
 05/09/2002 - 11/30/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D VANDAM  
*Tech. Officer:* DFRC/D W BANKS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 30187**                      **UNIV OF CALIFORNIA - DAVIS**                      **2322**  
 FORMATION, DETECTION & QUANTIFICATION OF OXIDIZED HALOGEN SPECIES IN AEROSOLS FROM THE MARINE BOUND  
 08/19/1999 - 08/31/2002                      FY02: \$0                      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**                      **2323**  
 ECOLOGICAL & ECONOMIC INFLUENCES ON SMALL-SCALE TROPICAL RAINFOREST SUCCESSION: REMOTE SENSING  
 08/24/2000 - 08/31/2003                      FY02: \$0                      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**                      **2324**  
 HYPERSPECTRAL REMOTE SENSING OF CORAL REEFS IN THE HAWAIIAN ISLANDS STUDENT: JAMES GOODMAN  
 08/13/2001 - 08/31/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* S USTIN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30411**                      **UNIV OF CALIFORNIA - DAVIS**                      **2325**  
 EVALUATION OF BRDF MODELING STRATEGIES FOR BIOPHYSICAL PARAMETER RETRIEVAL THROUGH INVERSION, .../STUD  
 08/15/2001 - 08/31/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* S USTIN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30451**                      **UNIV OF CALIFORNIA - DAVIS**                      **2326**  
 EFFECTS OF GLOBAL CLIMATE CHANGE ON CALIFORNIA SALTY MARSHES: INTEGRATING REMOTE SENSING AND SPATIAL  
 08/19/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S L USTIN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50230**                      **UNIV OF CALIFORNIA - DAVIS**                      **2327**  
 UTILIZING SCIGN VELOCITY SOLUTIONS TO MODEL LITHOSPHERIC PROCESSES IN THE WESTERN TRANSVERSE RANGE  
 05/24/1999 - 06/30/2002                      FY02: \$0                      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**                      **2328**  
 NEW APPROACHES TO CALCULATING GRAVITATIONAL RADIATION & RADIATION REACTION/STUDENT: JAMES R VAN MET  
 06/20/2000 - 06/30/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* S CARLIP  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50388**                      **UNIV OF CALIFORNIA - DAVIS**                      **2329**  
 COSMOLOGY FROM GALAXY CLUSTER PECULIAR VELOCITIES (STUDENT:ALAN PEEL)  
 06/03/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L KNOX  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2104**                      **UNIV OF CALIFORNIA - IRVINE**                      **2330**  
 EXPERIMENTAL INVESTIGATION OF SUPERSONIC COPLANAR JETS WITHIN EJECTORS  
 09/02/1998 - 07/31/2001                      FY02: -\$1                      Total: \$103,889  
*Prin. Invest.:* D PAMAMOSCHOU  
*Tech. Officer:* LARC/J M SEINER, LARC/M K PONTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2308**                      **UNIV OF CALIFORNIA - IRVINE**                      **2331**  
 DEVELOPMENT OF CHEMISTRY-TRANSPORT MODELS IN SUPPORT OF CLIMATE STUDIES AND ASSESSMENTS  
 06/15/2000 - 03/14/2003                      FY02: \$0                      Total: \$182,979  
*Prin. Invest.:* M J PRATHER  
*Tech. Officer:* LARC/G L MADDREA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 01001**                      **UNIV OF CALIFORNIA - IRVINE**                      **2332**  
 REGIONAL CHEMISTRY FROM GLOBAL CTMS W/EC-MODELED MET-FIELDS FOR THE TRACE-P MISSION  
 03/08/2001 - 03/14/2003                      FY02: \$0                      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**                      **2333**  
 COMPACT AIRBORNE SYS FOR SO2 & DMS MEAS FOR USE OF FUTURE GTE MISSIONS ABOARD P-3 OR DC-8  
 03/01/2001 - 03/31/2003                      FY02: \$0                      Total: \$81,988  
*Prin. Invest.:* E S SALTZMAN  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 02050**                      **UNIV OF CALIFORNIA - IRVINE**                      **2334**  
 EXTENDING THE CAPABILITY OF CAPTSD TO ACCURATELY AND RELIABILITY PREDICT BUFFET AND NONLINEAR  
 02/07/2002 - 01/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* F LIU  
*Tech. Officer:* LARC/D M SCHUSTER, LARC/J W EDWARDS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02115**                      **UNIV OF CALIFORNIA - IRVINE**                      **2335**  
 MLPG FOR THE ANALYSIS OF BUILT-UP STRUCTURES  
 09/16/2002 - 04/15/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S N ATLURI  
*Tech. Officer:* LARC/I S RAJU, LARC/J B RANSOM  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 2 1555**                      **UNIV OF CALIFORNIA - IRVINE**                      **2336**  
 COLLABORATIVE SOFTWARE ENGINEERING TOLLS WORKSHOP AND FOLLOW UP  
 04/19/2002 - 10/14/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D REDMIRE  
*Tech. Officer:* ARC/J PENIX, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2024**                      **UNIV OF CALIFORNIA - IRVINE**                      **2337**  
 IGNITION AND FLAME SPREAD ABOVE LIQUID FUEL POOLS: GRAVITY EFFECTS  
 03/01/1997 - 06/30/2002                      FY02: \$0                      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**                      **2338**  
 APPLICATIONS OF ELECTRIC FIELD IN MICROGRAVITY COMBUSTION  
 02/01/1999 - 11/29/2002                      FY02: \$0                      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**                      **2339**  
 MIXING ENHANCEMENT AND NOISE REDUCTION IN HIGH-SPEED JETS  
 03/07/2000 - 04/30/2003                      FY02: \$0                      Total: \$128,331  
*Prin. Invest.:* D PAMAMOSCHOU  
*Tech. Officer:* GRC/K Q ZAMAN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2389**                      **UNIV OF CALIFORNIA - IRVINE**                      **2340**  
 SUPERFLUID CONTACT LINE DYNAMICS SUPERFLUID CONTACT LINE DYNAMICS  
 04/13/2000 - 11/30/2003                      FY02: \$0                      Total: \$145,000  
*Prin. Invest.:* P TABOREK  
*Tech. Officer:* GRC/R WILKINSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2775**                      **UNIV OF CALIFORNIA - IRVINE**                      **2341**  
 IGNITION AND FLAME SPREAD ABOVE LIQUID FUEL POOLS: GRAVITY EFFECTS  
 05/02/2002 - 12/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D A SIRIGNANO  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 4 217**                      **UNIV OF CALIFORNIA - IRVINE**                      **2342**  
 ROBUST FLIGHT CONTROL WITH GOOD HANDLING QUALITIES ROBUST FLIGHT CONTROL WITH GOOD HANDLING QUALITIES  
 01/17/2001 - 09/30/2001                      FY02: \$0                      Total: \$30,000  
*Prin. Invest.:* K D MEASE  
*Tech. Officer:* DFRC/C O LEE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 5149**                      **UNIV OF CALIFORNIA - IRVINE**                      **2343**  
 DEVELOPMENT OF EMPIRICAL MODE DECOMPOSITION METHOD & HILBERT SPECTRAL ANALYSIS FOR ENGR APPLICATIONS  
 09/09/1997 - 02/28/2003                      FY02: \$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 7301**                      **UNIV OF CALIFORNIA - IRVINE**                      **2344**  
 ASSESSING ROLE OF FIRE & SOIL DRAINAGE IN DETERMINING NET CARBON FLUXES IN BOREAL ECOSYSTEMS  
 05/27/1998 - 04/30/2001                      FY02: \$0                      Total: \$162,372  
*Prin. Invest.:* S TRUMBORE  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

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**NAG 5 8685**                    **UNIV OF CALIFORNIA - IRVINE**                    **2345**  
 PHOTOCHEMICAL APPLICATIONS OF AEROSOL CLIMATOLOGIE S  
 07/16/1999 - 07/14/2002                    FY02: \$0                    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**                    **2346**  
 CONTINUED MONITORING & TRENDS OF SELECTED TRACE GASES AT  
 REMOTE LOCATIONS BETWEEN 71 DEGREES  
 01/13/2000 - 02/28/2003                    FY02: \$0                    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**                    **2347**  
 RESOURCE MANAGEMENT IN TIGHTLY COUPLED MULTIPROCES SORS.  
 07/03/2000 - 07/14/2003                    FY02: \$0                    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**                    **2348**  
 "STABLE ISOTOPES AND RADIOCARBON IN ATMOSPHERIC HYDROCAR-  
 BONS AND THEIR SOURCES"  
 09/21/2000 - 11/30/2001                    FY02: \$0                    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**                    **2349**  
 EFFECTS OF LAND-USE ON CLIMATE AND WATER RESOURCES :APPLICA-  
 TION OF A LAND-USE MANAGEMENT  
 12/08/2000 - 09/30/2003                    FY02: \$0                    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**                    **2350**  
 INFLUENCE OF MINERAL DUST AEROSOL ON THE CHEMICAL COMPOSI-  
 TION OF THE ATMOSPHERE  
 03/14/2001 - 03/14/2004                    FY02: \$0                    Total: \$99,603  
*Prin. Invest.:* ZENDER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10748**                    **UNIV OF CALIFORNIA - IRVINE**                    **2351**  
 X-RAY ISOPHOTE SHAPES AND THE DARK MATTER HALO OF NGC 3923  
 04/18/2001 - 09/30/2002                    FY02: \$0                    Total: \$32,700  
*Prin. Invest.:* D BUOTE  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10758**                    **UNIV OF CALIFORNIA - IRVINE**                    **2352**  
 FE K-ALPHA EMISSION IN THE BRIGHT ELLIPTICAL GALAXY NGC 1399  
 04/18/2001 - 09/30/2002                    FY02: \$0                    Total: \$31,500  
*Prin. Invest.:* D BUOTE  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11272**                    **UNIV OF CALIFORNIA - IRVINE**                    **2353**  
 ADDING NEW CAPABILITY TO CHEMISTRY-CLIMATE ASSESSM ENTS  
 THROUGH THE GLOBAL MODELLING INIATIVE  
 08/22/2001 - 08/31/2004                    FY02: \$0                    Total: \$45,000  
*Prin. Invest.:* M PRATHER  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL,OTHER

**NAG 5 11429**                    **UNIV OF CALIFORNIA - IRVINE**                    **2354**  
 MEASUREMENTS AND INTERPRETATIONS OF MIXING AND STA BLE ISO-  
 TOPE RATIOS OF ATMOSPHERIC TRACE GASES CH4  
 12/03/2001 - 11/30/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* S TYLER  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11646**                    **UNIV OF CALIFORNIA - IRVINE**                    **2355**  
 OPTIMAL LAND INITIALIZATION FOR SEASONAL CLIMATE PREDICTIONS  
 02/01/2002 - 02/28/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J S FAMIGLIETTI  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11718**                    **UNIV OF CALIFORNIA - IRVINE**                    **2356**  
 SOIL MOISTURE VARIABILITY AND IT'S ROLE IN LAND-AT MOSPHERE  
 INTERACTION DURING SGP97  
 03/14/2002 - 06/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J S FAMIGLIETTI  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11753**                    **UNIV OF CALIFORNIA - IRVINE**                    **2357**  
 "A CATCHMENT-BASED GLOBAL RIVER ROUTING SCHEME FOR CLIMATE  
 MODELS AND ASSIMILATION OF STEAMFLOW A  
 02/25/2002 - 02/28/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J S FAMIGLIETTI  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 12344**                    **UNIV OF CALIFORNIA - IRVINE**                    **2358**  
 INITIALIZATION OF NSIPP LAND SURFACE MODEL SOIL WA TER STATES  
 FOR IMPROVED SEASONAL-TO-INTERANNUAL P  
 07/29/2002 - 07/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J FAMIGIETTI  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1437**                    **UNIV OF CALIFORNIA - IRVINE**                    **2359**  
 RESEARCH/3HE-4HE MIXTURES AND DROPLETS STABILIZED IN CESIATED  
 CONTAINERS  
 03/23/1998 - 01/31/2003                    FY02: \$0                    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**                    **2360**  
 GROWTH PROCESSES AND DEFECT STRUCTURE OF MACRO- MOLECULAR  
 CRYSTALS.  
 03/04/1999 - 11/30/2002                    FY02: \$0                    Total: \$368,900  
*Prin. Invest.:* A J MALKIN  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1572**                    **UNIV OF CALIFORNIA - IRVINE**                    **2361**  
 R/S STABILIZATION AND PRESERVATION OF CRYSTALS FOR X-RAY DIFFRACTION EXPERIMENTS  
 02/18/1999 - 11/30/2002                    FY02: \$37,000                    Total: \$444,150  
*Prin. Invest.:* F JURNAK  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1149**                    **UNIV OF CALIFORNIA - IRVINE**                    **2362**  
 MECHANISMS OF MICROACTIVITY EFFECT ON VASCULAR FUNCTIONS  
 09/15/1999 - 11/14/2002                    FY02: \$0                    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**                    **2363**  
 OPCGA PHASE C/D FLIGHT HARDWARE DEVELOPMENT  
 02/16/2000 - 07/31/2004                    FY02: \$250,000                    Total: \$6,217,171  
*Prin. Invest.:* A MCPHERSON  
*Tech. Officer:* MSFC/S ROBBINS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAS 8 00019**                    **UNIV OF CALIFORNIA - IRVINE**                    **2364**  
 ENHANCED GASEOUS NITROGEN DEWAR  
 03/30/2000 - 11/19/2004                    FY02: \$0                    Total: \$920,000  
*Prin. Invest.:* A MCPHERSON  
*Tech. Officer:* MSFC/S ROBBINS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 1 413**                    **UNIV OF CALIFORNIA - IRVINE**                    **2365**  
 WHOLE AIR SAMPLING FROM THE DC-8 AND P3-B AIRCRAFT DURING TRACE-P  
 09/21/2000 - 06/30/2003                    FY02: \$0                    Total: \$616,693  
*Prin. Invest.:* D R BLAKE  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5378**                    **UNIV OF CALIFORNIA - IRVINE**                    **2366**  
 OPTIMIZATION OF PERCEPTUAL TRANSPARENCY IN SYNTHETIC VISION DISPLAYS  
 04/05/2000 - 03/31/2002                    FY02: \$0                    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**                    **2367**  
 LABORATORY MODELS OF PROTOCELLS  
 10/17/2000 - 10/31/2002                    FY02: \$0                    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**                    **2368**  
 MEASURING THE EFFECTS OF LOGGING ON THE CO2 AND ENERGY EXCHANGE OF A PRIMARY FOREST IN TAPAJOS N  
 06/24/1998 - 12/31/2002                    FY02: \$0                    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**                    **2369**  
 CARBON DYNAMICS IN VEGETATION AND SOILS ALONG THE EASTERN LBA TRANSECT  
 06/16/1998 - 12/31/2002                    FY02: \$0                    Total: \$884,733  
*Prin. Invest.:* S TRUMBORE  
*Tech. Officer:* GSFC/D DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30203**                    **UNIV OF CALIFORNIA - IRVINE**                    **2370**  
 LOW LATITUDE NONLINEAR BEHAVIOR OF ROSSBY WAVES COMPOSED OF A SPECTRUM OF PHASE SPEEDS/STUDENT  
 08/19/1999 - 08/31/2002                    FY02: \$0                    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**                    **2371**  
 AN INVESTIGATION OF THE RELATIONSHIP BETWEEN CARBON STORAGE AND METHANE EMISSION IN RICE PADDIES/ST  
 08/15/2001 - 08/31/2004                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* S TYLER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30443**                    **UNIV OF CALIFORNIA - IRVINE**                    **2372**  
 UNCERTAINTY IN SOIL MOISTURE INITIALIZATION AND IMPACTS ON SEASONAL-TO- INTERANNUAL PREDICTION  
 08/23/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J FAMILIETTI  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50226**                    **UNIV OF CALIFORNIA - IRVINE**                    **2373**  
 SIGMA D MEASUREMENT OF METHANE AND MOLECULAR HYDROGEN IN THE ATMOSPHERE  
 09/29/1998 - 08/31/2001                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* R J RICE, RICE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50317**                    **UNIV OF CALIFORNIA - IRVINE**                    **2374**  
 SIMULATED MICROGRAVITY ALTERS VASCULAR CONTRACTILITY: ROLE OF CALCIUM DEPENDENT PKC-MEDIATED NON-  
 07/11/2000 - 06/30/2003                    FY02: \$0                    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**                    **2375**  
 METHYL HALIDE EMISSIONS: THE ATMOSPHERIC IMPACT OF AGRICULTURE  
 08/17/2000 - 08/31/2003                    FY02: \$0                    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**                    **2376**  
 STRATOSPHERIC AEROSOL MICROPHYSICS AND PHYSICAL CHEMISTRY: MODELING AND OBSERVATIONS  
 04/01/1997 - 03/31/2001                    FY02: \$0                    Total: \$356,960  
*Prin. Invest.:* R P TURCO  
*Tech. Officer:* LARC/G MADDERA, LARC/M M POTEAT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

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**NAG 1 2097 UNIV OF CALIFORNIA - LOS ANGELES 2377**  
 AIRCRAFT AEROSOLS AND CONTRAILS: MICROPHYSICAL PROCESS AND EVOLUTION  
 09/10/1998 - 09/09/2001 FY02: \$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 2378**  
 DEVELOPMENT OF MLPG AND LBIE METHODS FOR NONLINEAR PROBLEMS OF FRACTURE  
 03/01/2000 - 12/14/2000 FY02: \$0 Total: \$65,000  
*Prin. Invest.:* S N ATLURI  
*Tech. Officer:* LARC/I S RAJU  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 01082 UNIV OF CALIFORNIA - LOS ANGELES 2379**  
 MESHLESS (MLPG AND LBIE) METHODS FOR NONLINEAR ANALYSES  
 05/22/2001 - 05/31/2002 FY02: \$0 Total: \$65,005  
*Prin. Invest.:* S N ATTURE  
*Tech. Officer:* LARC/J S RAJA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02036 UNIV OF CALIFORNIA - LOS ANGELES 2380**  
 ANAL OF ACOUSTIC EMISSION WAVES FROM IMPACT & FATI QUE DAMAGE COMPOSITES FOR INTEGRD IVHM TECHNOL DE  
 01/14/2002 - 12/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* A K MAL  
*Tech. Officer:* LARC/W H PROSSER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 02043 UNIV OF CALIFORNIA - LOS ANGELES 2381**  
 MLPG (MESHLESS LOCAL PETROV GALERKIN) FO THE ANALYSIS OF BUILT-UP STRUCTURES  
 01/31/2002 - 09/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* S N ATLURI  
*Tech. Officer:* LARC/I S RAJU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1193 UNIV OF CALIFORNIA - LOS ANGELES 2382**  
 MECHANICAL SIGNAL TRANSDUCTION IN COUNTERMEASURES OF PHYSIOLOGICAL SCIENCE  
 03/25/1998 - 04/30/2002 FY02: \$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 2383**  
 HYPERGRAVITY-INDUCED MODIFICATIONS IN SPATIO-TEMPO RAL CODING AMONG UTRICULAR PRIMARY AFFERENT NEURO  
 05/22/1998 - 12/31/2002 FY02: \$0 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 2384**  
 SCALABLE NUMERICAL ALGORITHMS ON NON-HETROGENEOUS COMPUTING ENVIRONMENTS WITH DYNAMIC ROUTING & LOAD  
 07/17/1998 - 06/30/2001 FY02: \$0 Total: \$120,000  
*Prin. Invest.:* T F CHAN  
*Tech. Officer:* ARC/T J BARTH  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1484 UNIV OF CALIFORNIA - LOS ANGELES 2385**  
 MANAGEMENT OF AIR CEHICLE SYSTEMS  
 05/14/2001 - 05/14/2003 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* J L SPEYER  
*Tech. Officer:* ARC/L TOBIAS, ARC/Y C JUNG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**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 FY02: \$0 Total: \$308,200  
*Prin. Invest.:* J RUDNICK  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2108 UNIV OF CALIFORNIA - LOS ANGELES 2387**  
 DIFFUSING LIGHT PHOTOGRAPHY OF CONTAINERLESS RIPPL E TURBULENCE  
 03/01/1998 - 05/30/2002 FY02: \$0 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 2388**  
 EVALUATION AND IMPROVEMENT OF JET NOISE MODELS AND EXPERIMENTAL TECHNIQUESUSING HIGH FIDELITY SIMU  
 03/07/2000 - 09/30/2001 FY02: \$0 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 2389**  
 TRANSITION FROM POOL TO FLOW BOILING - THE EFFECT OF REDUCED GRAVITY  
 04/18/2000 - 11/30/2003 FY02: \$0 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 2390**  
 A MECHANISTIC STUDY OF NUCLEATE BOILING HEAT TRANS FER UNDER MICROGRAVITY CONDITIONS  
 06/21/2000 - 05/15/2005 FY02: \$0 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 2391**  
 THE MELTING OF AQUEOUS FOAMS THE MELTING OF AQUEOUS FOAMS  
 08/01/2000 - 05/31/2005 FY02: \$0 Total: \$328,000  
*Prin. Invest.:* D J DURIAN  
*Tech. Officer:* GRC/F P CHARIAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2735 UNIV OF CALIFORNIA - LOS ANGELES 2392**  
 DIFFUSING LIGHT PHOTORAPHY OF CONTAINERLESS RIPPLE  
 03/15/2002 - 01/07/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* S J PUTTERMAN  
*Tech. Officer:* GRC/W DUVAL  
*CASE Category:* 49 - ENGINEERING, OTHER



<p><b>NAG 5 3764</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2393</b>  SOURCE DETERMINATION FOR SUBSTORM-RELATED ION INJE  02/13/1997 - 04/14/2001      FY02: \$0      Total: \$165,000  <i>Prin. Invest.:</i> R J STRANGEWAY  <i>Tech. Officer:</i> GSFC/J BOHLIN  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 5 6265</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2402</b>  ASSYM. AURORAL PROCESSES  08/21/1997 - 06/30/2001      FY02: \$0      Total: \$246,911  <i>Prin. Invest.:</i> D M THORNE  <i>Tech. Officer:</i> GSFC/J BERGSTRALH  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 3863</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2394</b>  THERMAL AND DYNAMICAL PROCESSES IN THE EVOLUTION O SATELLITES  02/14/1997 - 11/30/2002      FY02: \$0      Total: \$396,000  <i>Prin. Invest.:</i> G SCHUBERT  <i>Tech. Officer:</i> GSFC/P G ROGERS  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 6689</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2403</b>  THEORETICAL TECHNOLOGY RESEARCH FOR THE INTERNATIO NAL SO-  LAR TERRESTRIAL PHYSICS (ISTP) PROGRAM.  12/01/1997 - 09/30/2001      FY02: \$0      Total: \$1,514,500  <i>Prin. Invest.:</i> M ABDALLA  <i>Tech. Officer:</i> GSFC/S CURTIS  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 3956</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2395</b>  VENUS TECTONICS AND EVOLUTION  03/12/1997 - 02/14/2003      FY02: \$0      Total: \$183,780  <i>Prin. Invest.:</i> W M KAULA  <i>Tech. Officer:</i> GSFC/P G ROGERS  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 6965</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2404</b>  PICK-UP ION INSTABILITIES AT PLANETARY MAGNETOSPHE RES  03/03/1998 - 03/31/2001      FY02: \$0      Total: \$96,968  <i>Prin. Invest.:</i> R J STRANGEWAY  <i>Tech. Officer:</i> GSFC/D EVANS  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 4117</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2396</b>  DYNAMICAL STUDIES OF PLANETARY AND SATELLITE ATMOS  02/28/1997 - 01/31/2002      FY02: \$0      Total: \$304,781  <i>Prin. Invest.:</i> P SCHUBERT  <i>Tech. Officer:</i> GSFC/J BERGSTRALH  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 6975</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2405</b>  THE ROLE OF COMPANION STARS IN PLANETARY FORMATION  03/25/1998 - 06/30/2002      FY02: \$0      Total: \$116,600  <i>Prin. Invest.:</i> A GHEZ  <i>Tech. Officer:</i> HQ/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 4215</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2397</b>  PRISTINE IGNEOUS ROCKS AND THE EARLY DIFFERENTIATI MATERIALS  03/19/1997 - 12/14/2001      FY02: \$0      Total: \$744,000  <i>Prin. Invest.:</i> D H WARREN  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 12 - CHEMISTRY</p>	<p><b>NAG 5 7555</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2406</b>  REAL-TIME FORECASTING AND RAPID POST-EVENT ASSESSM ENT OF  EROSIONAL AND DEPOSITIONAL FLOOD DAMAGE  06/25/1998 - 08/31/2002      FY02: \$0      Total: \$330,915  <i>Prin. Invest.:</i> L C SMITH  <i>Tech. Officer:</i> GSFC/E T ENGMAN  <i>CASE Category:</i> 32 - GEOLOGICALSCIENCE</p>
<p><b>NAG 5 4270</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2398</b>  ELECTRON PRECIPITATION FROM THE INNER MAGNETOSPHER THE  MIDDLE ATMOSPHERE  04/04/1997 - 04/30/2001      FY02: \$0      Total: \$216,557  <i>Prin. Invest.:</i> D M THORNE  <i>Tech. Officer:</i> GSFC/M M MELLOTT  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 5 7721</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2407</b>  POLAR MAGNETIC FIELD EXPERIMENT  09/23/1998 - 09/30/2001      FY02: \$0      Total: \$1,377,000  <i>Prin. Invest.:</i> C T RUSSELL  <i>Tech. Officer:</i> GSFC/R HOFFMAN  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 4339</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2399</b>  THE ROLE OF THIN CURRENT SHEETS IN PLASMA SHEET CO DISRUPTION  04/12/1997 - 10/31/2001      FY02: \$0      Total: \$324,270  <i>Prin. Invest.:</i> D L PRITCHETT  <i>Tech. Officer:</i> GSFC/J D BOHLIN  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 5 7738</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2408</b>  RADIATIVE TRANSFER AND REMOTE SENSING IN AEROSOLA TMSOPHERE.  10/02/1998 - 09/30/2002      FY02: \$0      Total: \$245,000  <i>Prin. Invest.:</i> K LIU  <i>Tech. Officer:</i> GSFC/M I MISHCHENKO  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 4688</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2400</b>  TOWARD OTHER SOLAR SYSTEMS: GAS, DUST, BROWN DWARF  06/17/1997 - 04/30/2002      FY02: \$0      Total: \$147,000  <i>Prin. Invest.:</i> D M ZUCKERMAN  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 7899</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2409</b>  QUASI-CONTINUOUS ROSAT MONITORING OF THE EXTREME N ARROW-  LINE SEYFERT 1 GALAXY IRAS 13224-3809 ADP 9  01/03/1999 - 12/31/2000      FY02: \$0      Total: \$38,000  <i>Prin. Invest.:</i> R A EDELSON  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 4766</b>      <b>UNIV OF CALIFORNIA - LOS ANGELES</b>      <b>2401</b>  CHONDRITIC METEORITES: NEBULAR AND PARENT-BODY FO  06/05/1997 - 05/31/2002      FY02: \$0      Total: \$253,000  <i>Prin. Invest.:</i> D E RUBIN  <i>Tech. Officer:</i> GSFC/D NAVA  <i>CASE Category:</i> 11 - ASTRONOMY</p>	

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 7907**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2410**  
 STUDY OF TOTAL SOLAR AND SPECTRAL IRRADIANCE VARIATIONS BASED  
 ON THE SOHO/VIRGO AND MDI MEASUREMENT  
 12/04/1998 - 05/14/2001      FY02: \$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**      **2411**  
 EVOLUTION OF DUST AROUND MAIN SEQUENCE STARS (LISA - 98)  
 01/06/1999 - 12/14/2002      FY02: \$0      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**      **2412**  
 THE GALILEAN MOONS OF JUPITER: INFERRING INTERNAL PROPERTIES  
 OF NEW WORLDS FROM THEIR INTERACTIONS  
 01/08/1999 - 11/30/2001      FY02: \$0      Total: \$178,006  
*Prin. Invest.:* D G KIVELSON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7962**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2413**  
 DYNAMICS OF THE R=10-30 RE MAGNETOTAIL DURING GEOMAGNETIC  
 DISTURBANCES  
 12/23/1998 - 12/14/2002      FY02: \$0      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**      **2414**  
 CALIBRATION AND COMPARISON BETWEEN MDI, GOLF, AND MT. WILSON  
 DATA 11  
 01/05/1999 - 12/31/2001      FY02: \$0      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**      **2415**  
 SOME STUDIES OF STRUCTURE AND DYNAMICS OF JUPITER'S MAGNETO-  
 SPHERE  
 01/15/1999 - 11/30/2001      FY02: \$0      Total: \$123,696  
*Prin. Invest.:* D K KHURANA  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8059**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2416**  
 MULTIPLE SCALE STRUCTURE OF AURORAL ARCS  
 01/14/1999 - 01/31/2003      FY02: \$0      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**      **2417**  
 THE PHYSICAL NATURE OF THE ELECTRON CYCLOTRON MASE R INSTA-  
 BILITY IN THE AKR SOURCE REGION  
 01/14/1999 - 01/31/2003      FY02: \$0      Total: \$177,301  
*Prin. Invest.:* P L PRITCHETT  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8065**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2418**  
 NON-ADIABATIC PLASMA PROCESSES IN THE JOVIAN MAGNETOSPHERE  
 AND COUPLING TO THE ATMOSPHERE  
 01/11/1999 - 06/30/2002      FY02: \$0      Total: \$105,000  
*Prin. Invest.:* D M THORNE  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8066**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2419**  
 ANALYSIS AND INTERPRETATION OF JOVIAN ATMOSPHERE AND SATEL-  
 LITE DATA FROM THE GALILEO MISSION  
 01/12/1999 - 12/31/2001      FY02: \$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**      **2420**  
 ELECTRON DYNAMICS IN THE MAGNETOTAIL  
 01/21/1999 - 12/31/2001      FY02: \$0      Total: \$230,315  
*Prin. Invest.:* D SCHRIVER  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8335**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2421**  
 EVOLUTION OF DUST AROUND YOUNG MAIN SEQUENCE STARS  
 02/24/1999 - 02/28/2003      FY02: \$0      Total: \$65,400  
*Prin. Invest.:* D JURA  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8470**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2422**  
 BIOMARKERS FOR MARS EXPLORATION  
 05/06/1999 - 07/31/2003      FY02: \$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**      **2423**  
 STUDY OF THE TERRESTRIAL EFFECTS OF SOLAR IRRADIANCE VARI-  
 ATIONS FROM EUV TO INFRARED: A NEW APPROACH  
 05/10/1999 - 04/30/2002      FY02: \$0      Total: \$175,541  
*Prin. Invest.:* J M PAP  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8530**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2424**  
 MINING LUNAR PROSPECTOR'S GRAVITY DATA FOR INSIGHTS INTO THE  
 MECHANICAL AND THERMAL EVOLUTION OF THE  
 06/15/1999 - 06/30/2002      FY02: \$0      Total: \$76,000  
*Prin. Invest.:* G SCHUBERT  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8540**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2425**  
 PRIOR GRANT NAG5-3252 CONTINUATION OF MAP SCIENCE SUPPORT  
 ACTIVITIES BEING IMPLEMENTED BY THE MAP  
 08/19/1999 - 08/14/2004      FY02: \$0      Total: \$216,263  
*Prin. Invest.:* E L WRIGHT  
*Tech. Officer:* GSFC/C BENNETT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8694**            **UNIV OF CALIFORNIA - LOS ANGELES**            **2426**  
 DECENTRALIZED ESTIMATION & CONTROL OF DISTRIBUTED SPACECRAFT  
 07/29/1999 - 07/31/2001            FY02: \$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**            **2427**  
 HIGH RESOLUTION SOLAR TRANSMISSION MEASUREMENTS FOR THE  
 DETECTION OF AEROSOLS AND CLOUDS  
 09/15/1999 - 09/30/2003            FY02: \$78,198            Total: \$276,524  
*Prin. Invest.:* A ELDERING  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8879**            **UNIV OF CALIFORNIA - LOS ANGELES**            **2428**  
 PRECISE RELATIVE STATE ESTIMATION & CONTROL OF DISTRIBUTED  
 SATELLITE NETWORKS  
 11/15/1999 - 11/14/2001            FY02: \$0            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**            **2429**  
 MAGNETIC FLUCTUATIONS IN THE JOVIAN MAGNETOSPHERE  
 01/13/2000 - 01/14/2002            FY02: \$0            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**            **2430**  
 INTERACTION OF LAND SURFACE COVER/CHARACTERISTICS & SURFACE  
 HYDROCLIMATOLOGY AT SEASONAL/INTERANNUAL  
 02/03/2000 - 07/31/2001            FY02: -\$11,308            Total: \$206,511  
*Prin. Invest.:* Y XUE  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9023**            **UNIV OF CALIFORNIA - LOS ANGELES**            **2431**  
 DETERMINING THE LONG TERM VARIABILITY AND CHARACTERISTIC TIME  
 SCALES OF AGN - ADP 99  
 02/22/2000 - 02/28/2001            FY02: \$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**            **2432**  
 GLOBAL SURFACE GEOCHEMISTRY & THE DIFFERENTIATION, BULK COM-  
 POSITION, & ORIGIN OF THE MOON  
 02/04/2000 - 02/14/2003            FY02: \$0            Total: \$45,000  
*Prin. Invest.:* P H WARREN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9071**            **UNIV OF CALIFORNIA - LOS ANGELES**            **2433**  
 CONSEQUENCES OF HIGH-LATITUDE RECONNECTION  
 02/15/2000 - 02/14/2003            FY02: \$0            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**            **2434**  
 PARTICLE TRANSPORT IN THE IO TORUS AND NEAR THE MOONS IO AND  
 EUROPA  
 02/15/2000 - 03/31/2003            FY02: \$0            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**            **2435**  
 MHD TURBULENCE SIMULATION OF THE DYNAMICS OF THE MAGNETOTAIL  
 02/23/2000 - 02/28/2003            FY02: \$0            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**            **2436**  
 ANALYSIS AND VALIDATION OF THE UARS/ACRIM II DATA  
 03/10/2000 - 10/14/2001            FY02: \$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**            **2437**  
 THE INTERPLANETARY MAGNETIC FIELD AND THE MAGNETOSPHERIC  
 CURRENT SYSTEMS  
 03/15/2000 - 02/28/2003            FY02: \$0            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**            **2438**  
 SEQUENTIAL ESTIMATION & PREDICTABILITY STUDIES FOR THE ATMOS-  
 PHERE & OCEANS  
 04/10/2000 - 04/14/2003            FY02: \$0            Total: \$220,000  
*Prin. Invest.:* M GHIL  
*Tech. Officer:* GSFC/S COHN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9358**            **UNIV OF CALIFORNIA - LOS ANGELES**            **2439**  
 SENSITIVITY OF PRECIPITATION IN COUPLED LAND-ATMOSPHERE MOD-  
 ELS  
 04/06/2000 - 06/30/2003            FY02: \$0            Total: \$150,000  
*Prin. Invest.:* D J NEELIN  
*Tech. Officer:* GSFC/K BERGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9441**            **UNIV OF CALIFORNIA - LOS ANGELES**            **2440**  
 THE METEORITIC COMPONENT IN IMPACT DEPOSITS  
 04/13/2000 - 04/14/2003            FY02: \$0            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**            **2441**  
 DEVELOPMENT OF GLOBAL MAGNETOSPHERIC FIELD MODELS OF JUPI-  
 TER  
 05/15/2000 - 05/14/2003            FY02: \$0            Total: \$160,528  
*Prin. Invest.:* K K KHURANA  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 13 - PHYSICS

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9573** UNIV OF CALIFORNIA - LOS ANGELES 2442  
TOWARD OTHER PLANETARY SYSTEMS: IMAGING OF MASSIVE PLANETS  
AND DUSTY DEBRISDISKS  
05/08/2000 - 04/30/2002 FY02: \$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 2443  
REMOTE SENSING OF THE OPTICAL & MICROPHYSICAL PROPERTIES OF  
CIRRUS CLOUDS USING MODIS CHANNELS  
05/30/2000 - 08/31/2002 FY02: \$0 Total: \$80,000  
*Prin. Invest.:* K N LIU  
*Tech. Officer:* GSFC/M KING  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9713** UNIV OF CALIFORNIA - LOS ANGELES 2444  
INFLUENCE OF LAND SURFACE PROCESSES/LAND COVER CHANGES IN  
AMAZON ON REGIONAL HYDROLOGICAL METEOROLOGY  
07/06/2000 - 03/14/2003 FY02: \$0 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 2445  
SOLAR MAX EXTENDED SCIENCE PROGRAM  
06/30/2000 - 06/30/2002 FY02: \$0 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 2446  
ISOTOPIC INVESTIGATIONS OF NEBULAR AND PARENT BODY PROCESSES  
WITH HIGH SENSITIVITY ION MICROPROBE  
07/11/2000 - 07/14/2003 FY02: \$0 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 2447  
THE LOCAL DISTANCE SCALE: APPLICATION OF THE TIP OF THE RED  
GIANT BRANCH DISTANCE INDICATOR - LTSA  
08/23/2000 - 08/31/2003 FY02: \$0 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 2448  
OCEAN CARBON FLUX: TRANSPORT, & BURIAL WITHIN THE WESTERN &  
EASTERN U.S. COASTAL ZONES  
08/07/2000 - 06/30/2003 FY02: \$0 Total: \$208,200  
*Prin. Invest.:* J MCWILLIAMS  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10032** UNIV OF CALIFORNIA - LOS ANGELES 2449  
AN XMM LONG-LOOK AT NGC5548  
09/26/2000 - 09/30/2002 FY02: \$0 Total: \$46,500  
*Prin. Invest.:* R EDELSON  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10282** UNIV OF CALIFORNIA - LOS ANGELES 2450  
MAGNETOHYDRODYNAMIC MODELING OF THE JOVIAN MAGNETO SPHERE  
01/23/2001 - 01/31/2004 FY02: \$0 Total: \$89,771  
*Prin. Invest.:* R WALKER  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10287** UNIV OF CALIFORNIA - LOS ANGELES 2451  
KINETIC PHYSICS OF THE STRESSED NEAR-EARTH PLASMA SHEET  
01/23/2001 - 01/31/2004 FY02: \$0 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 2452  
SEARCH FOR MOLECULAR HYDROGEN AROUND VEGA-TYPE STARS  
02/08/2001 - 02/14/2003 FY02: \$0 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 2453  
UCLA CLUSTER-II MISSION PARTICIPATION  
02/15/2001 - 03/31/2002 FY02: \$0 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 2454  
COSMOCHEMICAL STUDIES: METEORITES AND THEIR PARENT ASTEROIDS  
02/15/2001 - 01/31/2002 FY02: \$0 Total: \$155,000  
*Prin. Invest.:* J WASSON  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10473** UNIV OF CALIFORNIA - LOS ANGELES 2455  
MAGNETOSPHERE-IONOSPHERE COUPLING IN THE AURORAL ZONE  
02/27/2001 - 02/28/2003 FY02: \$0 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 2456  
ACQUISITION OF A NEW ELECTRON MICROPROBE AT UCLA  
03/01/2001 - 02/28/2003 FY02: \$0 Total: \$168,000  
*Prin. Invest.:* P WARREN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10609** UNIV OF CALIFORNIA - LOS ANGELES 2457  
DETECTION AND MODELING OF MECHANICAL ICE BREAKUP IN LARGE  
POLAR RIVERS WITH SAR INTERFEROMETRY  
03/15/2001 - 03/14/2004 FY02: \$0 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 2458  
LOCAL INVERSIONS OF THE MARTIAN GRAVITY FIELD AND INTERPRETA-  
TIONS OF REGIONAL TECTONICS  
03/16/2001 - 03/14/2003 FY02: \$0 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**      **2459**  
 ADAPTIVE OPTICS IMAGING OF MASSIVE PLANETARY COMPANIONS TO  
 YOUNG STARS  
 03/22/2001 - 06/30/2004      FY02: \$0      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**      **2460**  
 APPLICATIONS AND VALIDATION OF THE SRTM DEM IN THE AMAZON  
 BASIN: HYDROLOGICAL AND GEOMORPHOLOGICAL  
 03/30/2001 - 02/28/2003      FY02: \$0      Total: \$150,000  
*Prin. Invest.:* D E ALSDORF  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICALSCIENCE

**NAG 5 10834**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2461**  
 SOLAR CYCLE VARIATION AND MULTI-POINT STUDIES OF ICME PROPERTIES  
 04/27/2001 - 04/30/2004      FY02: \$0      Total: \$77,870  
*Prin. Invest.:* C T RUSSELL  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10905**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2462**  
 TIME DEPENDENCE OF SOLAR MAGNETIC FIELDS  
 05/22/2001 - 05/31/2004      FY02: \$0      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**      **2463**  
 MARS POLAR PROPERTIES AND CLIMATE HISTORY  
 05/24/2001 - 06/30/2004      FY02: \$0      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**      **2464**  
 SOLAR EFFECTS ON GLOBAL CLIMATE DUE TO COSMIC RAYS AND SOLAR  
 ENERGETIC PARTICLES  
 05/15/2001 - 05/14/2004      FY02: \$0      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**      **2465**  
 TECTONICS AND VOLCANISM IN AFAR USING RADARSAT INTERFEROMETRY  
 DATA  
 07/10/2001 - 06/30/2004      FY02: \$0      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**      **2466**  
 DYNAMICAL STUDIES OF PLANETARY AND SATELLITE ATMOSPHERES  
 08/09/2001 - 08/14/2003      FY02: \$0      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**      **2467**  
 MAGNETOSPHERE-IONOSPHERE COUPLING IN THE JOVIAN AUORAL  
 ZONE  
 08/13/2001 - 08/31/2004      FY02: \$0      Total: \$80,000  
*Prin. Invest.:* R THORNE  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11324**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2468**  
 POLAR MAGNETIC FIELD EXPERIMENT  
 11/20/2001 - 11/30/2004      FY02: \$0      Total: \$0  
*Prin. Invest.:* C RUSSELL  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11363**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2469**  
 APPLICATIONS OF REMOTELY SENSED LAND SURFACE DATA FOR SEASONAL  
 AND LONG-TERM HYDROCLIMATE PREDICTION  
 09/28/2001 - 09/30/2003      FY02: \$0      Total: \$206,667  
*Prin. Invest.:* J KIM  
*Tech. Officer:* GSFC/M JACKSON  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 11384**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2470**  
 FAULT-TOLERANT NAVIGATION AND GUIDANCE OF SATELLITE CLUSTERS  
 11/20/2001 - 11/30/2004      FY02: \$0      Total: \$0  
*Prin. Invest.:* J L SPEYER  
*Tech. Officer:* GSFC/R CARPENTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 11541**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2471**  
 SUPPORT FOR 65TH ANNUAL MEETING OF THE METEORITICAL SOCIETY,  
 LOS ANGELES JULY 2002  
 01/04/2002 - 12/31/2002      FY02: \$0      Total: \$0  
*Prin. Invest.:* P WARREN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11556**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2472**  
 PRISTINE IGNEOUS ROCKS & EARLY DIFFERENTIATION OF PLANETARY  
 MATERIALS  
 01/09/2002 - 01/14/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* P WARREN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11583**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2473**  
 ICME'S TESTING THE FLUXROPE PARADIGM  
 01/16/2002 - 01/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* C T RUSSELL  
*Tech. Officer:* GSFC/T KUCERA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11691**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2474**  
 PLANETARY AND SATELLITE STRUCTURE, DYNAMICS AND EVOLUTION  
 01/31/2002 - 01/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* G SCHUBERT  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11704**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2475**  
 THEORETICAL INVESTIGATIONS FOR THE INTERNATIONAL SOLAR-  
 TERRESTRIAL PHYSICS PROGRAM  
 02/06/2002 - 02/14/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* A ABDALLA  
*Tech. Officer:* GSFC/S A CURTIS  
*CASE Category:* 13 - PHYSICS

**NAG 5 11708**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2476**  
 GLOBAL SOLAR OSCILLATIONS AND MAGNETISM FROM SOHO.  
 02/14/2002 - 02/28/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* R ULRICH  
*Tech. Officer:* GSFC/T KUCERA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11823**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2477**  
 QUIET EVENING AURORAL ARC AS AN EXEMPLAR OF AN ARC-CURRENT  
 SYSTEM  
 03/07/2002 - 03/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* P L PRITCHETT  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11826**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2478**  
 MECHANISMS RESPONSIBLE FOR THE EARTH'S DIFFUSE AURORA  
 03/07/2002 - 03/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* R M THORNE  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11858**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2479**  
 OCCURRENCE CHARACTERISTICS OF AURORAL POLEWARD BOUNDARY  
 INTENSIFICATIONS  
 03/08/2002 - 03/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* L R LYONS  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11859**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2480**  
 INTERACTIONS OF ICY GALILEAN SATELLITES WITH JUPITER'S MAGNETO-  
 SPHERE  
 03/08/2002 - 03/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* K K KHURANA  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11898**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2481**  
 STATISTICAL EXAMINATION OF THE SIGNIFICANCE OF THE APPARENT  
 ASSOCIATION BETWEEN SOLAR WIND TRIGGERS  
 03/25/2002 - 03/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* R L MCPHERRON  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11922**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2482**  
 RELATIVISTIC ELECTRON VARIABILITY DURING GEOMAGNETIC STORMS  
 03/26/2002 - 04/30/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* R M THORNE  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11923**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2483**  
 ON THE CONSEQUENCES OF THIN CURRENT SHEETS IN THE MAGNETO-  
 TAIL  
 03/26/2002 - 03/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* M ASHOUR-ABDALLA  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11960**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2484**  
 PHOTOCHEMICAL PROCESSES IN COSMIC ICY SYSTEMS  
 04/04/2002 - 04/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* C R WU  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11989**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2485**  
 CONSEQUENCES OF ALFVEN WAVES & PARALLEL POTENTIAL DROPS IN  
 THE AURORAL ZONE  
 04/10/2002 - 03/31/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* D SCHRIVER  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12006**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2486**  
 RING CURRENT MODELING AND ION PRECIPITATION DURING SOLAR  
 MAXIMUM STORMS  
 04/11/2002 - 04/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* R M THORNE  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12007**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2487**  
 THE GEO-EFFECTIVENESS OF SOLAR WIND PRESSURE FRONT S  
 04/11/2002 - 04/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* E ZESTAV  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12022**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2488**  
 ION CYCLOTRON WAVE MASS SPECTROMETRY OF THE IONOSPHERE  
 04/18/2002 - 04/30/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* C T RUSSELL  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12058**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2489**  
 COSMOCHEMICAL STUDIES: METEORITES AND THEIR PARENT ASTEROIDS  
 04/19/2002 - 04/30/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* J WASSON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 12106**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2490**  
 MAGNETOSPHERIC CURRENT SYSTEM DURING DISTURBED TIMES  
 05/09/2002 - 05/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* M EL-ALAOUI  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12107**      **UNIV OF CALIFORNIA - LOS ANGELES**      **2491**  
 GEOSPACE MODELING WITH ADAPTIVE MESH REFINEMENT  
 05/09/2002 - 05/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* J RAEDER  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<b>NAG 5 12131</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2492</b>	<b>NAS 5 02100</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2501</b>
UCLA CLUSTER II MISSION PARTICIPATION			TIME HISTORY OF EVENTS & MACROSCALE INTERACTION DURING SUB-		
04/30/2002 - 03/31/2005	FY02: \$0	Total: \$0	STORMS (THEMIS) MISSION PHASE A EFFORT		
<i>Prin. Invest.:</i> D G KIVELSON			07/03/2002 - 03/31/2003	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> GSFC/M ACUNA			<i>Prin. Invest.:</i> E WRIGHT		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>Tech. Officer:</i> GSFC/C SAVINELLI		
			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 12177</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2493</b>	<b>NAS 9 02036</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2502</b>
THE IMPORTANCE OF SOLAR ENERGETIC ION			ADVANCED SECONDARY ION MASS SPECTROMETER FOR SOLAR WIND		
05/13/2002 - 05/14/2005	FY02: \$0	Total: \$0	ANALYSIS		
<i>Prin. Invest.:</i> R RICHARD			04/09/2002 - 09/30/2004	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> GSFC/J SPANN			<i>Prin. Invest.:</i> K D MCKEEGAN		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>Tech. Officer:</i> JSC/E STANSBERRY		
			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 12215</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2494</b>	<b>NCC 2 1050</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2503</b>
PARENT-BODY MODIFICATION OF CHONDRITIC METEORITES			ASTROBIOLOGY UCLA AN INTEGRATED MULTIDISCIPLINARY APPROACH		
05/16/2002 - 05/31/2003	FY02: \$0	Total: \$0	TO RESEARCH & EDUCATION		
<i>Prin. Invest.:</i> A E RUBIN			08/19/1998 - 06/30/2003	FY02: \$0	Total: \$2,523,373
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Prin. Invest.:</i> B RUNNEGAR		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>Tech. Officer:</i> ARC/R A GRYMES, ARC/W W DOLCI		
			<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER		
<b>NAG 5 12357</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2495</b>	<b>NCC 2 1364</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2504</b>
PALEOBIOCHEMICAL STUDIES OF ANCIENT LIFE			CENTER FOR CELL MIMETIC SPACE EXPLORATION CMISE		
07/02/2002 - 06/30/2005	FY02: \$0	Total: \$0	09/23/2002 - 08/31/2007	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> W J SCHOPF			<i>Prin. Invest.:</i> C HO		
<i>Tech. Officer:</i> GSFC/M MEYER			<i>Tech. Officer:</i> ARC/H PARTRIDGE, ARC/M MEYYPAPPAN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 12528</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2496</b>	<b>NCC 3 690</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2505</b>
CONSTRAINING OCEANIC SOURCES & SINKS OF CO2 BY INV ERSE			ACOUSTICALLY FORCED CONDENSED PHASE FUEL COMBUSTION UNDER		
MODELING: A FIRSTSTEP TOWARD ASSIMILATION OF			MICROGRAVITY CONDITIONS		
08/26/2002 - 08/31/2005	FY02: \$0	Total: \$0	03/22/1999 - 12/29/2002	FY02: \$0	Total: \$359,059
<i>Prin. Invest.:</i> N GRUBER			<i>Prin. Invest.:</i> O I SMITH		
<i>Tech. Officer:</i> GSFC/C TREES			<i>Tech. Officer:</i> GRC/K SACKSTEDER		
<i>CASE Category:</i> 33 - OCEANOGRAPHY			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 9 1020</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2497</b>	<b>NCC 4 121</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2506</b>
GENESIS DISCOVERY MISSION			FLIGHT SYSTEMS RESEARCH CENTER		
07/16/1998 - 03/04/2002	FY02: \$0	Total: \$213,600	02/17/1999 - 10/30/2002	FY02: \$0	Total: \$3,869,530
<i>Prin. Invest.:</i> K D MCKEEGAN			<i>Prin. Invest.:</i> A V BALAKRISHNAN		
<i>Tech. Officer:</i> JSC/E K STANSBERRY			<i>Tech. Officer:</i> SSC/K W HIFF, SSC/R R MEYER		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 9 1252</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2498</b>	<b>NCC 4 153</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2507</b>
OPTICAL BIOSENSORS FOR IN FLIGHT MEASUREMENT OF HORMONES			FLIGHT SYSTEMS RESEARCH CENTER FLIGHT SYSTEMS RESEARCH		
LEVELS			CENTER		
08/15/2000 - 07/31/2003	FY02: \$0	Total: \$87,744	02/28/2002 - 10/31/2002	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> B			<i>Prin. Invest.:</i> A BALAKRISHNAN		
<i>Tech. Officer:</i> JSC/C W LLOYD			<i>Tech. Officer:</i> DFRC/K ILIFF		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAS 4 00051</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2499</b>	<b>NCC 5 301</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2508</b>
FORMATION FLIGHT TECHNOLOGY			EARTH PARTNERS' PRIVATE NETWORK		
09/18/2000 - 09/30/2003	FY02: \$0	Total: \$460,000	04/03/1998 - 12/31/2002	FY02: \$0	Total: \$2,443,600
<i>Prin. Invest.:</i> J L SPEYER			<i>Prin. Invest.:</i> R MUNTZ		
<i>Tech. Officer:</i> DFRC/G L SPEYER			<i>Tech. Officer:</i> GSFC/M MAIDEN		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAS 5 00247</b>	<b>UNIV OF CALIFORNIA - LOS ANGELES</b>	<b>2500</b>			
DESIGN, FABRICATION, & DELIVERY OF MAGNETOMETER SYSTEM FOR					
THE ST-5 MISSION.					
02/13/2001 - 08/01/2002	FY02: \$0	Total: \$230,000			
<i>Prin. Invest.:</i> R J STRANGWAY					
<i>Tech. Officer:</i> GSFC/A RUSSO					
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR					

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NCC 5 385**            **UNIV OF CALIFORNIA - LOS ANGELES**            **2509**  
 REMOTE SENSING OF CIRRUS CLOUDS AND RADIATION EFFECTS IN THE  
 EVOLUTION OF CIRRUS CLOUDS  
 04/01/1999 - 04/14/2002            FY02: \$0            Total: \$75,000  
*Prin. Invest.:* K N LIU  
*Tech. Officer:* GSFC/W LAU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 624**            **UNIV OF CALIFORNIA - LOS ANGELES**            **2510**  
 HIGH-PERFORMANCE ADAPTIVE SIMULATION FRAMEWORK FOR SPACE-  
 WEATHER MODELING (SWMF)  
 04/30/2002 - 04/29/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* C MECHOSO  
*Tech. Officer:* GSFC/J FISCHER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 1 01039**        **UNIV OF CALIFORNIA - LOS ANGELES**            **2511**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) YR.2  
 08/29/2001 - 06/30/2003            FY02: \$0            Total: \$12,000  
*Prin. Invest.:* G CARMEN  
*Tech. Officer:* LARC/R G BRYANT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52240**        **UNIV OF CALIFORNIA - LOS ANGELES**            **2512**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/10/2000 - 06/30/2001            FY02: \$0            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**            **2513**  
 EFFECT OF SIMULATED MICROGRAVITY ON NT-3 EXPRESSION IN PRO-  
 PRIORCEPTIVE AFFERENT NEURONS IN RATS  
 07/14/2000 - 08/31/2002            FY02: \$0            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 2 52289**        **UNIV OF CALIFORNIA - LOS ANGELES**            **2514**  
 MARTIAN IMPACT CRATER LAKES: GEOPHYSICAL MODELING AND IN SITU  
 INVESTIGATION OF TERRESTRIAL ANALOGS  
 06/13/2002 - 06/14/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* D A PAIGE  
*Tech. Officer:* ARC/C P MCKAY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 5 112**            **UNIV OF CALIFORNIA - LOS ANGELES**            **2515**  
 DECENTRALIZED CONTROL OF DISTRIBUTED SATELLITE NETWORKS,  
 GSRP TRAINING GRANT. STUDENT: GENE BELAN  
 08/18/2000 - 08/31/2003            FY02: \$0            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**            **2516**  
 COMBINING SPACE AND GROUND BASED PLASMASPHERIC OBSERVA-  
 TIONS FOR UNDERSTANDING PLASMA MASS DENSITY  
 06/04/2001 - 08/31/2004            FY02: \$0            Total: \$22,000  
*Prin. Invest.:* M MOLDWIN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 30338**        **UNIV OF CALIFORNIA - LOS ANGELES**            **2517**  
 ESTIMATION OF THE TERRESTRIAL CARBON POOL & HYDROLOGIC  
 SENSITIVITY OF THE WEST SIBERIAN LOWLAND/STU  
 08/21/2000 - 08/31/2003            FY02: \$0            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**            **2518**  
 AN INVEST. OF CLOUD FEATURES IN HIGH-RESOL. INFRARED EMISSION  
 SPECTRA: UNDERSTANDING RADIATIVE EFF  
 08/13/2001 - 08/31/2004            FY02: \$0            Total: \$22,000  
*Prin. Invest.:* A ELDERING  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30435**        **UNIV OF CALIFORNIA - LOS ANGELES**            **2519**  
 MODELING OF ARCTIC RIVER ICE BREAKUP USING SAR IMAGERY.  
 STUDENT: TAMLIN M. PAVELSKY  
 08/16/2002 - 08/31/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* L SMITH  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50187**        **UNIV OF CALIFORNIA - LOS ANGELES**            **2520**  
 A SEARCH FOR GIANT PLANETS ORBITING NEARBY STARS  
 05/27/1998 - 06/30/2001            FY02: \$0            Total: \$65,625  
*Prin. Invest.:* B ZUCKERMAN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50220**        **UNIV OF CALIFORNIA - LOS ANGELES**            **2521**  
 HEALTH MGMT SYSTEM DESIGN & INTELLIGENT CONTROL OF FUTURE  
 MINIATURE AUTONOMOUS SPACECRAFTS UTIL  
 09/23/1998 - 09/30/2001            FY02: \$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**            **2522**  
 PROXIMO-DISTAL PATTERNING IN MOLLUSCS AND ANNELIDS: IMPLICATIONS  
 FOR LIMB EVOLUTION-STUDENT: SHANNON  
 07/07/2000 - 06/30/2003            FY02: \$0            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**            **2523**  
 A STUDY OF UNRESOLVED ISSUES REGARDING STRATOSPHERIC AERO-  
 SOL FORMATION, EVOLUTION & COMPOSITION BY  
 08/17/2000 - 08/31/2003            FY02: \$0            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**            **2524**  
 CASSINI MEASUREMENT OF MAGNETIC FIELDS WITHIN 2 SOLAR RADII  
 STUDENT: ELIZABETH JENSEN  
 05/23/2001 - 08/30/2004            FY02: \$0            Total: \$22,000  
*Prin. Invest.:* C RUSSELLI  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



**NGT 5 50395**            **UNIV OF CALIFORNIA - LOS ANGELES**            **2525**  
 DETECTION OF YOUNG SUBSTELLAR OBJECTS USING FLITEC AM STU-  
 DENT: AMANDA MAINZER  
 06/05/2002 - 06/30/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* I MCLEAN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 5116**            **UNIV OF CALIFORNIA - RIVERSIDE**            **2526**  
 THE TIGRE INSTRUMENT FOR INTERMEDIATE - ENERGY GAMMA-RAY  
 ASTRONOMY FROM 0.3 TO 100MEV  
 04/09/1997 - 04/30/2002            FY02: \$0            Total: \$1,761,528  
*Prin. Invest.:* A D ZYCH  
*Tech. Officer:* GSFC/H C NEEDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5118**            **UNIV OF CALIFORNIA - RIVERSIDE**            **2527**  
 AN ARCSECOND RESOLUTION: AXGAM  
 04/09/1997 - 06/30/2001            FY02: \$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**            **2528**  
 ULDB COMPTON TELESCOPE MISSION ULDB COMPTON TELESCOPE MIS-  
 SION  
 09/17/1998 - 06/30/2002            FY02: \$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**            **2529**  
 A HIGH RESOLUTION ALL-SKY X-RAY & GAMMA-RAY MONITOR (AXGAM)  
 05/31/2000 - 05/17/2003            FY02: \$0            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**            **2530**  
 SPACE-TIME DYNAMICS OF SOIL MOISTURE & TEMPERATURE -SCALE  
 ISSUES  
 07/15/1999 - 11/30/2001            FY02: -\$104,082            Total: \$166,258  
*Prin. Invest.:* B P MOHANTY  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9812**            **UNIV OF CALIFORNIA - RIVERSIDE**            **2531**  
 NON-ENZYMATIC OLIGOMERIZATION OF MONONUCLEOTIDES USING NON-  
 STANDARD OLIGONUCLEOTIDE TEMPLATES  
 07/19/2000 - 07/14/2003            FY02: \$0            Total: \$135,940  
*Prin. Invest.:* C Y SWITZER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10932**            **UNIV OF CALIFORNIA - RIVERSIDE**            **2532**  
 PARTICLE ACCELERATION AND TRANSPORT  
 05/30/2001 - 06/30/2004            FY02: \$0            Total: \$123,311  
*Prin. Invest.:* G ZANK  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11393**            **UNIV OF CALIFORNIA - RIVERSIDE**            **2533**  
 COMPOSITION AND ABUNDANCE RATIOS OF ANOMALOUS AND GALACTIC  
 COSMIC RAYS: IMPLICATIONS OF ACE OBSERVAT  
 11/13/2001 - 12/31/2001            FY02: \$0            Total: \$0  
*Prin. Invest.:* G P ZANK  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11604**            **UNIV OF CALIFORNIA - RIVERSIDE**            **2534**  
 THE HELIOSPERIC TERMINATION SHOCK STRUCTURE  
 01/22/2002 - 01/31/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* J LE ROUX  
*Tech. Officer:* GSFC/T KUCERA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11621**            **UNIV OF CALIFORNIA - RIVERSIDE**            **2535**  
 THE INTERACTION OF THE SUN AND THE GALAXY  
 01/22/2002 - 01/31/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* G ZANK  
*Tech. Officer:* GSFC/T KUCERA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 12382**            **UNIV OF CALIFORNIA - RIVERSIDE**            **2536**  
 OUTREACH PROJECT FOR XMM  
 07/25/2002 - 03/31/2004            FY02: \$0            Total: \$0  
*Prin. Invest.:* C FOSTER  
*Tech. Officer:* GSFC/NWHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12390**            **UNIV OF CALIFORNIA - RIVERSIDE**            **2537**  
 POSTLAUNCH: STATEMENT OF WORK U.S. OPTICAL MONITOR TEAM  
 07/25/2002 - 07/31/2004            FY02: \$0            Total: \$0  
*Prin. Invest.:* F CORDOVA  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 1 2044**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2538**  
 RADIATIVE CHARACTER'S OF THE SURFACE & CLOUDS IN THE ARCTIC  
 USING RESEARCH AIRCRAFT--NRA-94-MTPE-04  
 04/03/1998 - 03/31/2003            FY02: \$0            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 1 02028**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2539**  
 MODELING COMPRESSIBILITY EFFECTS IN HIGH-SPEED TURBULENT  
 FLOWS  
 12/27/2001 - 11/30/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* S SARKA  
*Tech. Officer:* LARC/T B GATSKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02092**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2540**  
 ULTRASONIC MEASUREMENT OF INTRACRANIAL PRESSURE WAVEFORMS  
 05/01/2002 - 05/14/2004            FY02: \$0            Total: \$0  
*Prin. Invest.:* A R HARGENS, T UENO  
*Tech. Officer:* LARC/F H FARMER, LARC/W T YOST  
*CASE Category:* 56 - MEDICL

**NAG 2 1313**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2541**  
 THE DEVELOPMENT OF PILOT EXPERTISE IN THE AIRBUS A 320 AIRCRAFT  
 04/01/1999 - 06/30/2002            FY02: \$0            Total: \$297,084  
*Prin. Invest.:* E L HUTCHINS  
*Tech. Officer:* ARC/S M CASNER  
*CASE Category:* 41 - AERONAUTICAL ENGR

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 2 1376**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2542**  
 EVOLUTION OF NEURAL CREST & PLACODES: AMPHIOXUS A S A MODEL  
 FOR THE ANCESTROOF THE VERTEBRATES  
 08/17/1999 - 06/30/2003                    FY02: \$0                    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 2117**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2543**  
 DYNAMICS OF ACCELERATED INTERFACES: PARAMETRIC EXC ITATION  
 AND FLUID SLOSHINGIN CLOSED CONTAINERS A  
 01/28/1998 - 12/18/2002                    FY02: \$0                    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**                    **2544**  
 VIBRATORY DYNAMICS AND TRANSPORT OF GRANULAR MEDIA AT VARI-  
 OUS G LEVELS  
 06/19/2000 - 11/30/2003                    FY02: \$0                    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**                    **2545**  
 STRETCHED DIFFUSION FLAMES IN VON KARMAN SWIRLING FLOWS  
 03/15/2001 - 11/30/2004                    FY02: \$0                    Total: \$9,900  
*Prin. Invest.:* F WILLIAMS  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 4023**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2546**  
 ADVANCED GLOBAL ATMOSPHERIC GASES EXPERIMENT (AGAG  
 03/25/1997 - 12/31/2002                    FY02: \$0                    Total: \$2,337,919  
*Prin. Invest.:* R F WEISS  
*Tech. Officer:* GSFC/M J KURYLO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4546**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2547**  
 NASA SPECIALIZED CENTER OF RESEARCH AND TRAINING I THE CHEM-  
 ISTRY OF EARLY SELF-REPLICATING SYSTEMS  
 05/06/1997 - 03/31/2003                    FY02: \$0                    Total: \$4,716,000  
*Prin. Invest.:* P L BADA  
*Tech. Officer:* HQ/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 4574**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2548**  
 METEORITIC SULFUR ISOTOPIC ANALYSIS  
 07/07/1997 - 02/28/2002                    FY02: \$0                    Total: \$172,000  
*Prin. Invest.:* D H THIEMENS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4775**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2549**  
 AN INTEGRATED SYSTEM FOR WATER BUDGET CLOSURE OVER MASS: A  
 TRMM VALIDATION EFFORT  
 07/15/1997 - 06/30/2001                    FY02: \$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**                    **2550**  
 MICRO-DETECTION SYSTEM FOR DETERMINATION OF THE BI OF AMINO  
 ACIDS  
 06/23/1997 - 05/31/2001                    FY02: \$0                    Total: \$130,000  
*Prin. Invest.:* P L BADA  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 5266**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2551**  
 CRYOGENIC WHOLE AIR SAMPLING OF CARBON DIOXIDE IN THE UPPER  
 ATMOSPHERE  
 06/01/2000 - 05/24/2003                    FY02: \$0                    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**                    **2552**  
 BALLOON-BORNE HIGH ENERGY X-RAY IMAGING SPECTROMETER (HEXIS)  
 BASED ON CZT TECHNOLOGY  
 05/31/2000 - 05/17/2003                    FY02: \$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**                    **2553**  
 FULL FUNDING FOR THE 1ST YEAR, GRANT AMOUNT IS 70K , PI:LINGEN-  
 FELTER TITLE: NEW THEORETICAL STUD  
 05/30/2001 - 02/28/2004                    FY02: \$0                    Total: \$70,000  
*Prin. Invest.:* D LINGENFELTER  
*Tech. Officer:* WFF/B MERRITT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5349**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2554**  
 POSITION-SENSITIVE CZT DETECTORS FOR GAMMA-RAY AST ROPHYSICS  
 01/16/2002 - 01/07/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J MATTESON  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5386**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2555**  
 IDENTIFICATION OF THE IMPORTANT PARAMETERS DESCRIB ING THE  
 SHEAR STRESS ACTING ON THE BLOOD VESSEL  
 09/12/2002 - 12/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D HUANG  
*Tech. Officer:* WFF/S LONG  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6149**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2556**  
 OCEAN TIDE LOADING COMPUTATION  
 08/21/1997 - 08/31/2001                    FY02: \$0                    Total: \$41,810  
*Prin. Invest.:* D C AGNEW  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6202**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2557**  
 EFFECTS OF WHITECAPS ON SATELLITE-DERIVED OCEAN COLOR  
 10/02/1997 - 12/31/2000                    FY02: \$0                    Total: \$490,000  
*Prin. Invest.:* R FROUIN  
*Tech. Officer:* GSFC/J A YODER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

<p><b>NAG 5 6375</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2558</b>            BIOGEOCHEMICAL RESPONSE TO MESOSCALE PHYSICAL FORC ING IN            THE CALIFORNIA CURRENT SYSTEM            10/03/1997 - 03/31/2001                    FY02: \$0                    Total: \$424,978  <i>Prin. Invest.:</i> P MILLER  <i>Tech. Officer:</i> GSFC/J A YODER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 7096</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2566</b>            ANOMALOUS HEAT BUDGETS IN INTERIOR PACIFIC OCEAN ON SEASONAL            TO INTERANNUAL TIMESCALES            05/27/1998 - 09/30/2002                    FY02: \$0                    Total: \$379,886  <i>Prin. Invest.:</i> W WHITE  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 33 - OCEANOGRAPHY</p>
<p><b>NAG 5 6414</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2559</b>            MODELING UV-B EFFECTS ON PRIMARY PRODUCTION THROUGH OUT THE            SOUTHERN OCEAN USING MULTI-SENSOR SA            10/29/1997 - 10/31/2001                    FY02: \$0                    Total: \$396,868  <i>Prin. Invest.:</i> D LUBIN  <i>Tech. Officer:</i> GSFC/K ARRIGO  <i>CASE Category:</i> 54 - ENVIRONMENTAL BIOLOGY</p>	<p><b>NAG 5 7100</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2567</b>            OPTICAL MEASUREMENTS AND MODELING TO ESTIMATE CONC ENTRA-            TIONS AND FLUXES OF ORGANIC MATTER IN THE SO            06/04/1998 - 05/31/2001                    FY02: \$0                    Total: \$469,864  <i>Prin. Invest.:</i> D STRAMSKI  <i>Tech. Officer:</i> GSFC/J W CAMPBELL  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 6466</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2560</b>            OPTICAL AND ANCILLARY MEASUREMENTS AT HIGH LATITUD ES IN            SUPPORT OF THE MODIS OCEAN VALIDATION            11/04/1997 - 09/30/2002                    FY02: \$0                    Total: \$224,288  <i>Prin. Invest.:</i> D STRAMSKI  <i>Tech. Officer:</i> GSFC/D STARR  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 5 7119</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2568</b>            ANALYSIS OF SKY FLUCTUATIONS FROM HEXTE III; EXAMI NATION OF THE            CYCLOTRON LINES IN THE SPECTRUM OF            04/16/1998 - 03/31/2001                    FY02: \$0                    Total: \$26,128  <i>Prin. Invest.:</i> D E GRIBER  <i>Tech. Officer:</i> GSFC/K SWANK  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 6497</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2561</b>            PREDICTABILITY OF THE CALIFORNIA CURRENT SYSTEM            10/08/1997 - 10/14/2001                    FY02: \$0                    Total: \$633,198  <i>Prin. Invest.:</i> D MILLER  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 7362</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2569</b>            ASCA PROPOSAL - ASCA AND HST OBSERVATIONS OF BL LA C 0236+164            AND THE INTERVENING SYSTEM            05/05/1998 - 04/30/2002                    FY02: \$0                    Total: \$14,000  <i>Prin. Invest.:</i> R D COHEN  <i>Tech. Officer:</i> GSFC/N WHITE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 6559</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2562</b>            SEASONAL TO DECADEAL-SCALE VARIABILITY IN SATELLITE OCEAN COLOR            AND SEA SURFACE TEMPERATURE FOR THE            10/27/1997 - 04/30/2001                    FY02: \$0                    Total: \$352,860  <i>Prin. Invest.:</i> B MITCHELL  <i>Tech. Officer:</i> GSFC/J YODER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 7612</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2570</b>            IMPROVED SPECTRAL CHARACTERIZATION OF THE GEOMAGNETIC FIELD            (SENH98-0124)            07/24/1998 - 05/31/2002                    FY02: \$0                    Total: \$224,000  <i>Prin. Invest.:</i> R L PARKER  <i>Tech. Officer:</i> GSFC/H B FREY  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 6668</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2563</b>            SOUTHERN OCEAN SEASONAL NET PRODUCTION FROM ATMOSPHERE            AND OCEAN DATASETS            11/26/1997 - 06/30/2001                    FY02: \$0                    Total: \$311,173  <i>Prin. Invest.:</i> R F KEELING  <i>Tech. Officer:</i> GSFC/J CAMPBELL  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 7614</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2571</b>            FUNDING FOR "EARTH CONDUCTIVITY FROM SATELLITE MAGNETIC            DATA" (SENH98-0123)            07/24/1998 - 07/14/2002                    FY02: \$0                    Total: \$254,000  <i>Prin. Invest.:</i> C G CONSTABLE  <i>Tech. Officer:</i> GSFC/H V FREY  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 6931</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2564</b>            EQUATOR-S: MISSION OPERATIONS &amp; DATA ANALYSIS PHASE            02/02/1998 - 01/31/2001                    FY02: \$0                    Total: \$120,202  <i>Prin. Invest.:</i> C E MCILWAIN  <i>Tech. Officer:</i> GSFC/M HESSE  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 5 7637</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2572</b>            CO2 BUDGET AND ATMOSPHERIC RECTIFICATION OVER NORTH AMERICA            (CO2BAR)            11/30/1998 - 11/30/2002                    FY02: \$0                    Total: \$65,000  <i>Prin. Invest.:</i> R F KEELING  <i>Tech. Officer:</i> GSFC/D E WICKLANS  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 6947</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2565</b>            NUMERICAL AND ANALYTICAL STUDIES OF THE SHOCKED SOLAR WIND            INTERACTION WITH THE DAYSIDE MANTLE OF V            02/26/1998 - 03/31/2002                    FY02: \$0                    Total: \$235,914  <i>Prin. Invest.:</i> K QUEST  <i>Tech. Officer:</i> GSFC/D EVANS  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 7653</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2573</b>            QUANTITATIVE ASSESSMENT OF THE INTEGRATED RESPONSE IN GLOBAL            HEAT AND MOISTURE BUDGETS TO CHANGIN            08/25/1998 - 08/31/2001                    FY02: \$0                    Total: \$210,000  <i>Prin. Invest.:</i> W WHITE  <i>Tech. Officer:</i> HQ/D EVANS  <i>CASE Category:</i> 11 - ASTRONOMY</p>

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**NAG 5 8167**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2574**  
 FRAGMENTARY SOLAR SYSTEM HISTORY  
 02/10/1999 - 01/31/2003                    FY02: \$0                    Total: \$359,000  
*Prin. Invest.:* D MARTI  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 8172**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2575**  
 ISOTOPIC, CHEMICAL AND MINERALOGICAL INVESTIGATION S OF EXTRA-  
 TERRESTRIAL MATERIALS  
 02/24/1999 - 02/28/2003                    FY02: \$0                    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**                    **2576**  
 ADVANCED GLOBAL ATMOSPHERIC GASES EXPERIMENT (AGAG E)  
 02/12/1999 - 12/31/2002                    FY02: \$0                    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**                    **2577**  
 ANTARCTIC ULTRAVIOLET RADIATION CLIMATOLOGY FROM THE TOTAL  
 ZONE MAPPING SPECTROMETER  
 02/19/1999 - 02/28/2003                    FY02: \$0                    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**                    **2578**  
 A SEARCH FOR EXTRASOLAR PLANETS IN OPEN CLUSTERS  
 03/05/1999 - 02/28/2002                    FY02: \$0                    Total: \$133,400  
*Prin. Invest.:* D GUIRRENBAC  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 8292**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2579**  
 SEASONAL ATMOSPHERIC AND OCEANIC PREDICTIONS  
 02/25/1999 - 02/28/2003                    FY02: \$0                    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**                    **2580**  
 BAYESIAN HIERARCHICAL AIR-SEA INTERACTION MODELLIN G: APPLICA-  
 TION TO THE LABRADOR SEA  
 04/13/1999 - 05/31/2002                    FY02: \$0                    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**                    **2581**  
 THE APPLICATION OF JASON-1 MEASUREMENTS TO ESTIMAT E THE  
 GLOBAL NEAR SURFACE OCEAN CIRCULATION F  
 03/01/1999 - 03/31/2003                    FY02: \$0                    Total: \$354,000  
*Prin. Invest.:* P P NIILER  
*Tech. Officer:* GSFC/C KOBLINSKY  
*CASE Category:* 33 – OCEANOGRAPHY

**NAG 5 8498**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2582**  
 THE HIGH ENERGY X-RAY IMAGING SURVEY (HEXIS)  
 05/27/1999 - 05/31/2002                    FY02: \$0                    Total: \$755,000  
*Prin. Invest.:* R E ROTHSCHILD  
*Tech. Officer:* GSFC/L KALUZIENSKI  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 5 8504**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2583**  
 RECONSTRUCTION OF THE PLASMA DISTRIBUTION IN CORON A AND  
 HELIOSPHERER  
 05/11/1999 - 04/30/2003                    FY02: \$0                    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**                    **2584**  
 ORGANIC CONSTITUENTS OF SHORT-PERIOD COMETS  
 06/04/1999 - 05/31/2003                    FY02: \$0                    Total: \$144,722  
*Prin. Invest.:* M N FOMENKOVA  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 8623**                    **UNIV OF CALIFORNIA - SAN DIEGO**                    **2585**  
 NUMERICAL CLIMATE OBSERVING NETWORK DESIGN STUDY  
 08/09/1999 - 08/31/2003                    FY02: \$0                    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**                    **2586**  
 ADVANCED CADMIUM-ZINC-TELLURIDE DETECTORS FOR RESE ARCH IN  
 ASTROPHYSICS  
 08/17/1999 - 08/14/2003                    FY02: \$0                    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**                    **2587**  
 DYNAMIC HUMAN-CENTERED INTERFACES: MONITORING ATTE NTIONAL  
 PROCESSES IN CONTROL OF CRITICAL SYSTEMS  
 08/26/1999 - 08/31/2001                    FY02: \$0                    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**                    **2588**  
 ROUTINE HIGH-RESOLUTION, ATMOSPHERIC FORCAST/ANALY SIS MODEL-  
 ING SYSTEMS FOR THE PACIFIC DISASTER CE  
 08/30/1999 - 08/31/2001                    FY02: \$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**                    **2589**  
 ESTIMATING THE OCEAN FLOW FIELD FROM COMBINED SEA SURFACE  
 TEMPERATURE AND SEASURFACE HEIGHT DATA  
 01/04/2000 - 01/14/2002                    FY02: \$0                    Total: \$161,672  
*Prin. Invest.:* D STAMMER  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 – ENVIRONMENTALSCI, OTHER

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<p><b>NAG 5 9005</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2590</b>  ANALYSIS AND INTERPRETATION OF NEAR XGRS DATA  01/27/2000 - 01/31/2002                    FY02: \$0                    Total: \$15,000  <i>Prin. Invest.:</i> J R ARNOLD  <i>Tech. Officer:</i> GSFC/T MORGAN  <i>CASE Category:</i> 11 – ASTRONOMY</p>	<p><b>NAG 5 9566</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2598</b>  EMERGENCE OF RNA AND EARLY LIFE; EXPERIMENTAL MODE LING AND  GEOCHEMICAL CONSTRAINTS  05/05/2000 - 05/14/2001                    FY02: \$0                    Total: \$80,000  <i>Prin. Invest.:</i> G ARRHENIUS  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 51 – BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAG 5 9036</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2591</b>  MEASUREMENT OF ELECTRIC FIELDS WITH MULTIPLE SPREAD ELECTRON  BEAMS  02/10/2000 - 02/14/2002                    FY02: \$0                    Total: \$92,500  <i>Prin. Invest.:</i> C MCILWAIN  <i>Tech. Officer:</i> GSFC/J SHARBER  <i>CASE Category:</i> 11 – ASTRONOMY</p>	<p><b>NAG 5 9623</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2599</b>  TOPOGRAPHIC RECOVERY FROM SPACEBORN RADAR &amp; LASED RANGING:  VALIDATION &amp; INVESTIGATION OF PLATE BOUN  06/12/2000 - 05/31/2003                    FY02: \$0                    Total: \$80,000  <i>Prin. Invest.:</i> D T SANDWELL  <i>Tech. Officer:</i> GSFC/H V FREY  <i>CASE Category:</i> 32 – GEOLOGICALSCIENCE</p>
<p><b>NAG 5 9122</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2592</b>  PROBING THE SPECTRAL EVOLUTION OF PARTICLES IN THE BLAZAR MKN  421_ ADP99  03/07/2000 - 10/31/2001                    FY02: \$0                    Total: \$49,592  <i>Prin. Invest.:</i> D FOSSATI  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 – ASTRONOMY</p>	<p><b>NAG 5 9659</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2600</b>  MICRO-DETECTION SYSTEM FOR DETERMINATION OF THE BIOTIC OR  ABIOTIC ORIGINOF AMINO ACIDS  05/31/2000 - 05/31/2002                    FY02: \$0                    Total: \$100,000  <i>Prin. Invest.:</i> J L BADA  <i>Tech. Officer:</i> GSFC/B BETTS  <i>CASE Category:</i> 11 – ASTRONOMY</p>
<p><b>NAG 5 9224</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2593</b>  COSMOLOGICAL PARAMETERS FROM THE LYMAN-ALPHA FOREST (L TSA  99)  03/14/2000 - 03/14/2003                    FY02: \$0                    Total: \$87,973  <i>Prin. Invest.:</i> D TYTLER  <i>Tech. Officer:</i> GSFC/R OLIVERSEN  <i>CASE Category:</i> 11 – ASTRONOMY</p>	<p><b>NAG 5 9679</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2601</b>  ISOTOPIC FRACTIONATION PROCESSES DURING PRE-SOLAR GRAIN FOR-  MATION  06/15/2000 - 06/14/2001                    FY02: \$0                    Total: \$35,000  <i>Prin. Invest.:</i> M H THIEMENS  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 – ASTRONOMY</p>
<p><b>NAG 5 9247</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2594</b>  THERMAL &amp; NONTHERMAL COMPONENTS IN THE SPECTRA OF A2319 &amp;  A1367 FROM RXTE &amp; SAX OBSERVATIONS (ADP 99)  03/14/2000 - 03/14/2002                    FY02: \$0                    Total: \$49,739  <i>Prin. Invest.:</i> Y REPHAELI  <i>Tech. Officer:</i> GSFC/R OLIVERSEN  <i>CASE Category:</i> 11 – ASTRONOMY</p>	<p><b>NAG 5 9721</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2602</b>  A PHYSICALLY BASED APPROACH TO CONSTRUCTION OF A CLIMATE-  QUALITY SST RECORD FROM COMPLEMENTARY SP  06/22/2000 - 06/30/2003                    FY02: \$0                    Total: \$270,000  <i>Prin. Invest.:</i> J J SIMPSON  <i>Tech. Officer:</i> GSFC/J DODGE  <i>CASE Category:</i> 39 – ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 9314</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2595</b>  3-D GLOBAL KINETIC SIMULATIONS OF SOLAR WIND INTER ACTION WITH  ASTEROIDS:DETERMINATION OF MAGNETIC P  03/23/2000 - 09/14/2001                    FY02: \$0                    Total: \$89,723  <i>Prin. Invest.:</i> N OMIDI  <i>Tech. Officer:</i> GSFC/T MORGAN  <i>CASE Category:</i> 99 – MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 9788</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2603</b>  OCEAN CARBON FLUX: TRANSPORTS &amp; BURIAL WITHIN THE WESTERN &amp;  EASTERN U.S. COASTAL ZONES  07/28/2000 - 07/31/2003                    FY02: \$0                    Total: \$191,250  <i>Prin. Invest.:</i> A MILLER  <i>Tech. Officer:</i> GSFC/E LINSTROM  <i>CASE Category:</i> 39 – ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 9423</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2596</b>  TOMOGRAPHIC ANALYSIS AND VISUALIZATION OF REMOTELY -SENSED  HELIOSPHERIC DATA  04/13/2000 - 04/30/2003                    FY02: \$0                    Total: \$197,400  <i>Prin. Invest.:</i> B V JACKSON  <i>Tech. Officer:</i> GSFC/P HUNTER  <i>CASE Category:</i> 99 – MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 9825</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2604</b>  RXTE OBSERVATIONS OF AGN (ADP 99)  08/15/2000 - 08/14/2001                    FY02: \$0                    Total: \$20,000  <i>Prin. Invest.:</i> P R BLANCO  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 – ASTRONOMY</p>
<p><b>NAG 5 9506</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2597</b>  THE PIXON METHOD FOR DATA COMPRESSION, IMAGE CLASS IFICATION,  AND IMAGE RECONSTRUCTION  04/26/2000 - 04/30/2002                    FY02: \$0                    Total: \$100,000  <i>Prin. Invest.:</i> R P PUETTER  <i>Tech. Officer:</i> GSFC/J BREDEKAMP  <i>CASE Category:</i> 99 – MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 10065</b>                    <b>UNIV OF CALIFORNIA - SAN DIEGO</b>                    <b>2605</b>  INVESTIGATING THE GROUNDING ZONE &amp; TIDAL RESPONSE OF THE  AMERY ICE SHELF, EAST ANTARCTICA, USING  11/20/2000 - 11/30/2003                    FY02: \$0                    Total: \$63,619  <i>Prin. Invest.:</i> D SANDWELL  <i>Tech. Officer:</i> GSFC/K PARTINGTON  <i>CASE Category:</i> 99 – MULTI INTERDISCIPL, OTHER</p>

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**NAG 5 10276**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2606**  
 SEASONAL TO DECADAL-SCALE VARIABILITY IN SATELLITE OCEAN COLOR  
 & SEA SURFACE TEMPERATURE FOR CALIFOR  
 01/19/2001 - 04/30/2002            FY02: \$0            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**            **2607**  
 ISOTOPIC FRACTIONATION PROCESSES DURING PRE-SOLAR GRAIN FOR-  
 MATION  
 02/27/2001 - 04/30/2004            FY02: \$0            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**            **2608**  
 PENETRATION OF UV RADIATION IN THE EARTH'S OCEANS (YR 1 OF 3)  
 03/21/2001 - 03/31/2004            FY02: \$0            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**            **2609**  
 NITROGEN, CARBON AND PHOSPHATE IN THE OLDEST PRESE RVED  
 CRUST OF THE EARTH  
 03/21/2001 - 03/31/2004            FY02: \$0            Total: \$125,500  
*Prin. Invest.:* G ARRHENIUS  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10669**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2610**  
 NATIONAL SUMMIT ON INNOVATION WEBCAST  
 03/23/2001 - 03/31/2002            FY02: \$0            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**            **2611**  
 A UNIFORM STUDY OF X-RAY PULSAR MAGNETIC FIELDS  
 04/09/2001 - 04/14/2003            FY02: \$0            Total: \$67,669  
*Prin. Invest.:* W HEINDL  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10737**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2612**  
 TIME SERIES OF CONTINUOUS MEASUREMENTS OF ATMOSPHE RIC O2  
 AND CO2 CONCENTRATIONS FOR ELUCIDATING  
 04/20/2001 - 04/30/2004            FY02: \$0            Total: \$238,308  
*Prin. Invest.:* R KEELING  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 10871**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2613**  
 NONTHERMAL PHENOMENA IN CLUSTERS OF GALAXIES (L TSA 2000)  
 05/10/2001 - 05/31/2006            FY02: \$0            Total: \$58,954  
*Prin. Invest.:* Y REPHAELI  
*Tech. Officer:* GSFC/R OLIVERSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10874**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2614**  
 SOLAR WIND FLOWS FROM ACTIVE REGIONS  
 05/14/2001 - 02/28/2003            FY02: \$0            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**            **2615**  
 STATE TRANSITIONS AND QPOS IN X-RAY TRANSIENTS (ADP 00)  
 05/03/2001 - 11/30/2002            FY02: \$0            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**            **2616**  
 THE RESPONSE TO CZT DETECTORS TO X-RAYS  
 06/06/2001 - 06/14/2002            FY02: \$0            Total: \$51,827  
*Prin. Invest.:* R E ROTHSCHILD  
*Tech. Officer:* GSFC/F HERRERO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10993**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2617**  
 KINETIC INTERACTION OF THE PLASMA MANTLES OF UNMAGNETIZED  
 PLANETS WITH THE SOLAR WIND  
 05/31/2001 - 05/31/2002            FY02: \$0            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**            **2618**  
 MODEL HELIOSPHERIC DISTURBANCE PROPAGATION USING REMOTE  
 SENSING OBSERVATIONS  
 07/18/2001 - 07/14/2002            FY02: \$0            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**            **2619**  
 USE OF ATMOSPHERIC CO2, VEGATATIVE INDEX, AND DAIL Y CLIMATIC  
 DATA IN A COORDINATED DIAGNOSTIC INVE  
 08/13/2001 - 08/31/2004            FY02: \$0            Total: \$241,182  
*Prin. Invest.:* C KEELING  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11554**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2620**  
 FRAGMENTARY SOLAR SYSTEM HISTORY  
 01/09/2002 - 01/14/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* K MARTI  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11563**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2621**  
 GEOPHYSICAL INVESTIGATIONS OF THE TERRESTRIAL PLAN ETS  
 01/17/2002 - 02/28/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* C L JOHNSON  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

<p><b>NAG 5 11599</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2622</b>  EVALUATION OF HYDROLOGIC REMOTE SENSING OBSERVATIONS FOR IMPROVED WEATHER PREDICTION.  01/28/2002 - 01/31/2005      FY02: \$0      Total: \$0  Prin. Invest.: J ROADS  Tech. Officer: GSFC/P R HOUSER  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 11765</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2630</b>  STUDYING THE OCEAN FLOW FIELD FROM COMBINED ANALYSIS OF SEA SURFACE HEIGHT, SEA SURFACE TEMPERATURE  02/21/2002 - 02/28/2005      FY02: \$0      Total: \$0  Prin. Invest.: D STAMMER  Tech. Officer: GSFC/E LINDSTROM  CASE Category: 33 - OCEANOGRAPHY</p>
<p><b>NAG 5 11637</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2623</b>  RADIATION STUDIES IN SUPPORT OF THE CRYSTAL-FACE PROJECT  01/23/2002 - 01/31/2004      FY02: \$0      Total: \$0  Prin. Invest.: F P VALERO  Tech. Officer: GSFC/D ANDERSON  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 11768</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2631</b>  ISOTOPIC, CHEMICAL &amp; MINERALOGICAL INVESTIGATIONS OF EXTRATERRESTRIAL MATERIALS  02/22/2002 - 02/28/2005      FY02: \$0      Total: \$0  Prin. Invest.: G W LUGMAIR  Tech. Officer: GSFC/J BOYCE  CASE Category: 12 - CHEMISTRY</p>
<p><b>NAG 5 11660</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2624</b>  METEORITIC SULPHUR AND OXYGEN ISOTOPIC ANALYSIS  02/05/2002 - 02/28/2005      FY02: \$0      Total: \$0  Prin. Invest.: M H THIEMENS  Tech. Officer: GSFC/D NAVA  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11824</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2632</b>  THREE DIMENSIONAL HYBRID SIMULATION OF RECONNECTION AT THE DAYSIDE MAGNETOPAUSE  03/01/2002 - 03/14/2005      FY02: \$0      Total: \$0  Prin. Invest.: K B QUEST  Tech. Officer: GSFC/J SHARBER  CASE Category: 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 11682</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2625</b>  ORBITAL, ROTATIONAL, AND CLIMATIC INTERACTIONS ON MARS.  01/31/2002 - 02/14/2005      FY02: \$0      Total: \$0  Prin. Invest.: J A ORCUTT  Tech. Officer: GSFC/B BILLS  CASE Category: 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 11906</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2633</b>  DETERMINATION OF THE MASS AND ENERGY CONTENT OF CMES IN THE INNER HELIOSPHERE  04/12/2002 - 04/14/2005      FY02: \$0      Total: \$0  Prin. Invest.: P P HICK  Tech. Officer: GSFC/W WAGNER  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 11716</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2626</b>  PARAMETERIZATION OF CLOUD WATER VARIABILITY FROM EOS OBSERVATIONS AND ITS IMPACT ON GCM CLIMATE  02/28/2002 - 02/28/2005      FY02: \$0      Total: \$0  Prin. Invest.: A VOGELMANN  Tech. Officer: GSFC/P R HOUSER  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 12139</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2634</b>  INTEGRATION OF A MICRO-CHIP ACID CHIRALITY DETECTOR INTO THE MOD INSTRUMENT CONCEPT  05/06/2002 - 04/30/2004      FY02: \$0      Total: \$0  Prin. Invest.: J L BADA  Tech. Officer: GSFC/M MEYER  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 11731</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2627</b>  "IMPACT OF SYNOPTIC FORCING ON EXTRATROPICAL CLOUDINESS AND CLIMATE VARIABILITY"  02/14/2002 - 02/28/2005      FY02: \$0      Total: \$0  Prin. Invest.: J NORRIS  Tech. Officer: GSFC/P R HOUSER  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 12190</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2635</b>  MEASUREMENT OF ELECTROMAGNETIC FIELDS VIA FLIGHT TIMES FROM SPREAD-BEAM ELECTRON SOURCES  05/14/2002 - 05/14/2003      FY02: \$0      Total: \$0  Prin. Invest.: C E MCHWAIN  Tech. Officer: GSFC/J SPANN  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 11738</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2628</b>  A GLOBAL RAPID INTEGRATED MONITORING SYSTEM FOR WATER CYCLE AND WATER RESOURCE ASSESSMENT (GLOBAL  02/12/2002 - 02/14/2005      FY02: \$0      Total: \$0  Prin. Invest.: J ROADS  Tech. Officer: GSFC/P R HOUSER  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 12281</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2636</b>  LITHOSPHERIC THICKNESS ON VENUS FROM MAGELLAN GRAVITY AND TOPOGRAPHY DATA  06/10/2002 - 03/31/2003      FY02: \$0      Total: \$0  Prin. Invest.: C L JOHNSON  Tech. Officer: GSFC/D SENSKE  CASE Category: 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 11754</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2629</b>  COLLISIONLESS INTERACTION OF THE SOLAR WIND WITH THE EARTH'S MAGNETOSPHERE: THE GLOBAL NATURE  02/27/2002 - 03/31/2005      FY02: \$0      Total: \$0  Prin. Invest.: H KARIMABADI  Tech. Officer: GSFC/J M GREBOWSKY  CASE Category: 13 - PHYSICS</p>	<p><b>NAG 5 12312</b>      <b>UNIV OF CALIFORNIA - SAN DIEGO</b>      <b>2637</b>  SOFTWARE FOR CONSTRAINED OPTIMIZATION  06/26/2002 - 08/31/2003      FY02: \$0      Total: \$0  Prin. Invest.: P E GILL  Tech. Officer: GSFC/S P HUGHES  CASE Category: 41 - AERONAUTICAL ENGR</p>

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 12345**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2638**  
 VARIATIONS IN THE HOT ISM (FUSE 00)  
 08/06/2002 - 09/30/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* C HOWK  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12388**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2639**  
 TOPOGRAPHY, TOPEX AND TIDES  
 07/17/2002 - 07/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* S G LLEWELLYN SMITH  
*Tech. Officer:* GSFC/S HAKKINEN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 12397**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2640**  
 REMOTE SENSING OF PARTICULATE ORGANIC CARBON POOLS IN THE  
 HIGH-LATITUDE OCEANS  
 07/23/2002 - 07/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* D STRAMSKI  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12465**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2641**  
 QUANTITATIVE ASSESSMENT OF THE INTEGRATED RESPONSE IN GLOBAL  
 HEAT AND MOISTURE BUDGETS TO CHANGIN  
 08/15/2002 - 08/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* W B WHITE  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12535**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2642**  
 INFLUENCE OF IRON AVAILABILITY ON PHYTOPLANKTON PR ODUCTIVITY  
 AND COMM STRUCTURE IN THE SOURTHE  
 09/11/2002 - 09/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* K BARBEAU  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1516**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2643**  
 VARIABILITY AND PREDICTABILITY OF LAND-ATMOSPHERE OBSERVA-  
 TIONAL AND MODELING STUDIES  
 05/12/1998 - 04/30/2002      FY02: \$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**      **2644**  
 CARTILAGE TISSUE ENGINEERING: CIRCUMFERENTIAL SEEDING OF  
 CHONDROCYTES USING ROTATING BIOREACTORS  
 01/12/1999 - 11/30/2002      FY02: \$0      Total: \$402,550  
*Prin. Invest.:* R L SAH  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 56 - MEDICL

**NAG 8 1589**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2645**  
 NOVEL STRATEGY FOR TRI-DIMENSIONAL IN VITRO BONE INDUCTION  
 02/25/1999 - 11/30/2002      FY02: \$0      Total: \$333,650  
*Prin. Invest.:* J A FRANGOS  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1875**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2646**  
 FEEDBACK MECHANISMS AFFECTING INTERANNUAL VARIABILITY OF THE  
 TROPICAL ENERGY BALANCE  
 07/16/2002 - 07/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* J O ROADS  
*Tech. Officer:* MSFC/P ROBERTSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 9 1002**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2647**  
 DETERMIN OXYGEN BLANK & SUITABILITY CVD DIAMOND  
 04/30/1998 - 05/31/2002      FY02: \$0      Total: \$394,000  
*Prin. Invest.:* M H THIEMENS  
*Tech. Officer:* JSC/E K STANSBERY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1425**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2648**  
 EXERCISE WITHIN LBNP AS AN ARTIFICIAL GRAVITY COUNTER MEASURE  
 05/24/2002 - 05/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* A HARGENS  
*Tech. Officer:* JSC/C LLYOD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 98141**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2649**  
 A STUDY OF CLOUD RADIATIVE FORCING AND FEEDBACK (CERES)  
 10/30/1998 - 10/29/2003      FY02: \$0      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**      **2650**  
 SIMBIOS II - SATELLITE OCEAN COLOR VALIDATION USING  
 01/23/2001 - 11/30/2002      FY02: \$0      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**      **2651**  
 SIMBIOS II-BIO OPTICAL MEASUREMENT AND MODELING OF THE NORTH  
 PACIFIC & SOUTHERN OCEANS  
 01/23/2001 - 11/30/2002      FY02: \$0      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**      **2652**  
 HIGH ENERGY X-RAY TIMING EXPERIMENT FOR XTE PROJECT  
 11/01/1989 - 12/15/2002      FY02: \$0      Total: \$30,488,322  
*Prin. Invest.:* R E ROTHSCHILD  
*Tech. Officer:* GSFC/W D DAVIS  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 97121**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2653**  
 PULSE SHAPE DISCRIMINATOR FOR INTEGRAL SPECTROMETER (LETTER  
 CONTRACT)  
 01/24/1997 - 01/31/2003      FY02: \$0      Total: \$5,706,068  
*Prin. Invest.:* J L MATTESON, R P LIN  
*Tech. Officer:* GSFC/J P MURPHY  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 99006**      **UNIV OF CALIFORNIA - SAN DIEGO**      **2654**  
 GLAS SCIENCE TEAM LEADER.  
 11/25/1998 - 12/01/2002      FY02: \$0      Total: \$900,000  
*Prin. Invest.:* J B MINSTER  
*Tech. Officer:* GSFC/G SMITH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE



<b>NAS 5 99120</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2655</b>		
TRIANA SCIENCE INVESTIGATION				
12/09/1998 - 04/30/2003	FY02: \$0	Total: \$25,585,524		
<i>Prin. Invest.:</i> F VALCRO				
<i>Tech. Officer:</i> GSFC/J WATZIM, GSFC/C TOOLEY				
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE				
<b>NAS 9 98124</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2656</b>		
EFFECT OF EVA & LONG-TERM EXPOSURE TO MICROGRAVITY ON PULMONARY FUNCTION				
03/02/1999 - 06/30/2003	FY02: \$0	Total: \$1,344,412		
<i>Prin. Invest.:</i> J B WEST				
<i>Tech. Officer:</i> JSC/S M MCCULLUM				
<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER				
<b>NCC 2 1133</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2657</b>		
LOWER BODY NEGATIVE PRESSURE AS A COUNTERMEASURE FOR SPACEFLIGHT DECONDITIONING				
08/02/1999 - 09/30/2002	FY02: \$0	Total: \$632,363		
<i>Prin. Invest.:</i> A R HARGENS				
<i>Tech. Officer:</i> ARC/E M HOLTON				
<i>CASE Category:</i> 56 - MEDICL				
<b>NCC 2 1196</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2658</b>		
NON-INVASIVE INTRACRANIAL PRESSURE MEASUREMENT FOR SPACE FLIGHT - SPACE PHYSIOLOGY & COUNTERMEASURE				
09/29/2000 - 04/30/2003	FY02: \$0	Total: \$117,000		
<i>Prin. Invest.:</i> C ROGERS				
<i>Tech. Officer:</i> ARC/E M HOLTON, ARC/B P DALTON				
<i>CASE Category:</i> 56 - MEDICL				
<b>NCC 2 5448</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2659</b>		
ADVANCE ALGORITHMS FOR MOLECULAR-LEVEL COMPUTER MODELING OF PROTOCELLULAR SYSTEMS				
08/03/2001 - 01/31/2002	FY02: \$0	Total: \$47,656		
<i>Prin. Invest.:</i> V GALLINSKY				
<i>Tech. Officer:</i> ARC/M H NEW				
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER				
<b>NCC 2 5520</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2660</b>		
DUST PROPERTIES IN COMETS AND PROTOPLANETARY DISKS				
08/29/2002 - 08/31/2003	FY02: \$0	Total: \$0		
<i>Prin. Invest.:</i> D E HARKER				
<i>Tech. Officer:</i> ARC/D H WOODEN, ARC/K R BELL				
<i>CASE Category:</i> 11 - ASTRONOMY				
<b>NCC 3 693</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2661</b>		
HIGH-PRESSURE COMBUSTION OF BINARY FUEL SPRAYS HIGH-PRESSURE COMBUSTION OF BINARY FUEL SPRAYS				
03/25/1999 - 01/03/2003	FY02: \$0	Total: \$124,022		
<i>Prin. Invest.:</i> F A WILLIAMS				
<i>Tech. Officer:</i> GRC/D L DIETRICH				
<i>CASE Category:</i> 49 - ENGINEERING, OTHER				
<b>NCC 3 695</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2662</b>		
DYNAMICS OF DROPLETS EXTINCTION IN SLOW CONVECTIVE FLOWS				
03/25/1999 - 01/13/2003	FY02: \$0	Total: \$23,203		
<i>Prin. Invest.:</i> F A WILLIAMS				
<i>Tech. Officer:</i> GRC/D L URBAN				
<i>CASE Category:</i> 49 - ENGINEERING, OTHER				
<b>NCC 3 769</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2663</b>		
SCIENTIFIC SUPPORT FOR A PROPOSED SPACE SHUTTLE DROPLET BURNING EXPERIMENT				
02/08/2000 - 12/13/2002	FY02: \$0	Total: \$242,437		
<i>Prin. Invest.:</i> F A WILLIAMS				
<i>Tech. Officer:</i> GRC/D L URBAN				
<i>CASE Category:</i> 49 - ENGINEERING, OTHER				
<b>NCC 3 819</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2664</b>		
INTEGRAL DAMPING OF A TRAILING EDGE BLOWING FAN BLADE				
07/13/2000 - 02/28/2001	FY02: -\$31	Total: \$39,969		
<i>Prin. Invest.:</i> D KOSMATKA				
<i>Tech. Officer:</i> GRC/O MEHMED				
<i>CASE Category:</i> 49 - ENGINEERING, OTHER				
<b>NCC 3 902</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2665</b>		
STRUCTURAL ANALYSIS OF AN INTEGRAL DAMPED FAN STRUCTURAL ANALYSIS OF AN INTEGRAL DAMPED FAN				
07/13/2001 - 04/30/2002	FY02: \$0	Total: \$79,194		
<i>Prin. Invest.:</i> D KOSMATKA				
<i>Tech. Officer:</i> GRC/O MEHMED				
<i>CASE Category:</i> 46 - MECHANICAL ENGR				
<b>NCC 5 230</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2666</b>		
CORRELATED NOISE IN GPS TIME SERIES AND ITS EFFECT MODELS				
08/22/1997 - 08/31/2001	FY02: \$0	Total: \$92,292		
<i>Prin. Invest.:</i> D C AGNEW				
<i>Tech. Officer:</i> GSFC/H V FREY				
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE				
<b>NCC 5 257</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2667</b>		
EARTHKAM (EARTH KNOWLEDGE ACQUIRED BY MIDDLE SCHOOL STUDENTS)				
11/25/1997 - 10/31/2001	FY02: \$0	Total: \$2,274,999		
<i>Prin. Invest.:</i> D K RIDE				
<i>Tech. Officer:</i> HQ/P MOUNTJOY				
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER				
<b>NCC 5 540</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2668</b>		
EARTHKAM BRIDGE FUNDING REQUEST				
02/20/2001 - 01/31/2002	FY02: \$0	Total: \$500,000		
<i>Prin. Invest.:</i> S RIDE				
<i>Tech. Officer:</i> GSFC/P L MOUNTJOY				
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER				
<b>NCC 5 585</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2669</b>		
INTERNATIONAL SPACE STATION MIDDLE SCHOOL EDUC./ ISS EARTHKAM				
08/31/2001 - 08/31/2006	FY02: \$0	Total: \$320,196		
<i>Prin. Invest.:</i> S RIDE				
<i>Tech. Officer:</i> GSFC/P MOUNTJOY				
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER				
<b>NCC 9 105</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2670</b>		
CHARACTERIZATION OF AUTONOMIC FUNCTION				
02/28/2000 - 02/20/2003	FY02: \$0	Total: \$42,668		
<i>Prin. Invest.:</i> P J MILLS				
<i>Tech. Officer:</i> JSC/J MECK				
<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER				
<b>NCC 9 106</b>	<b>UNIV OF CALIFORNIA - SAN DIEGO</b>	<b>2671</b>		
CHARACTERIZATION OF AUTONOMIC FUNCTION				
04/07/2000 - 03/31/2003	FY02: \$0	Total: \$243,188		
<i>Prin. Invest.:</i> M G ZEIGLER				
<i>Tech. Officer:</i> JSC/J MECK				
<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER				

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NGT 2 52251**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2672**  
 ACHIEVING APPLICATION PERFORMANCE ON THE INFORMATION POWER GRID  
 09/18/1998 - 03/31/2001            FY02: \$0            Total: \$66,000  
*Prin. Invest.:* F BERMAN  
*Tech. Officer:* ARC/C H SCHULBACK  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 4 52429**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2673**  
 CONTROL ORIENTED MODELING AND VALIDATION OF AEROSOL ELASTIC SYSTEMS  
 07/20/2001 - 06/30/2003            FY02: \$0            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**            **2674**  
 THE INFLUENCES OF LIGHT ON PHYTOPLANKTON FLUORESCENCE AND PRODUCTIVITY (STUDENT: JESSICA NOLAN)  
 05/30/2000 - 08/31/2003            FY02: \$0            Total: \$44,000  
*Prin. Invest.:* B G MITCHELL  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 33 - OCEANOGRAPHY

**NGT 5 30368**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2675**  
 NEAR-FIELD FAULT DEFORMATION IN SOUTHERN CALIFORNIA AND BAJA MEXICO FROM THE GLOBAL POSITIONING  
 08/13/2001 - 08/31/2004            FY02: \$0            Total: \$22,000  
*Prin. Invest.:* M A TOLBERT  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30446**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2676**  
 CONCEPTUAL MODELING OF THE CLIMATIC ROLE OF AIRBORNE MINERAL DUST (STUDENT: KAREN M. SHELL)  
 08/23/2002 - 08/31/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* R SOMERVILLE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40007**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2677**  
 SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATIONAL COLLEGE AND FELLOWSHIP PROGRAM.  
 01/24/1997 - 01/31/2001            FY02: \$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**            **2678**  
 CALIFORNIA SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 02/12/2001 - 04/30/2005            FY02: \$0            Total: \$460,750  
*Prin. Invest.:* J ARNOLD  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50183**            **UNIV OF CALIFORNIA - SAN DIEGO**            **2679**  
 THREE ASTROPHYSICAL GRILLS: THE ORIGINS OF DARK MATTER, GAMMA-RAY BURSTS, AND HEAVY ELEMENTS  
 05/27/1998 - 06/30/2001            FY02: \$0            Total: \$66,000  
*Prin. Invest.:* G M FULLER  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NAG 9 1261**            **UNIV OF CALIFORNIA - SAN FRANCISCO**            **2680**  
 TELOMERE REPAIR & CHROMOSOME INSTABILITY AFTER HIGH LINEAR ENERGY TRANSFER PARTICLE RADIATION  
 09/25/2000 - 07/31/2003            FY02: \$0            Total: \$291,425  
*Prin. Invest.:* J P MURNANE, B FOULADI  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 56 - MEDICAL

**NAS 9 99055**            **UNIV OF CALIFORNIA - SAN FRANCISCO**            **2681**  
 LIFE SCIENCE FLIGHT EXPERIMENT  
 01/29/1999 - 12/31/2002            FY02: \$58,410            Total: \$413,410  
*Prin. Invest.:* T LANG  
*Tech. Officer:* JSC/D BAUMANN  
*CASE Category:* 56 - MEDICAL

**NCC 2 1126**            **UNIV OF CALIFORNIA - SAN FRANCISCO**            **2682**  
 MEMBRANE-BASED FUNCTIONS IN THE ORIGINS OF CELLULAR LIFE  
 06/14/1999 - 12/31/2002            FY02: \$0            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**            **2683**  
 DO INTEGRINS MEDIATE THE SKELETAL RESPONSES TO ALTERED LOADING IN VIVI? (SUBPROJECT A)  
 08/28/2000 - 09/30/2003            FY02: \$0            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 5295**            **UNIV OF CALIFORNIA - SAN FRANCISCO**            **2684**  
 TOWARDS A PHYLOGENY OF BIOLOGICAL FUNCTIONS  
 09/25/1998 - 03/31/2001            FY02: \$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**            **2685**  
 RESEARCH IN COMPUTATIONAL ASTROBIOLOGY  
 07/07/2000 - 06/30/2001            FY02: \$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**            **2686**  
 COMPUTER MODELING OF NUCLEIC ACID INTERACTIONS FOR IN VIVO DNA SEQUENCE DETECTION  
 11/30/2000 - 11/30/2001            FY02: \$0            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**            **2687**  
 RESEARCH IN COMPUTATIONAL ASTROBIOLOGY  
 08/08/2001 - 07/31/2002            FY02: \$0            Total: \$56,780  
*Prin. Invest.:* M A WILSON  
*Tech. Officer:* ARC/M NEW, ARC/A POHORILLO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 2 5509**            **UNIV OF CALIFORNIA - SAN FRANCISCO**            **2688**  
 RESEARCH IN COMPUTATIONAL ASTROBIOLOGY  
 08/02/2002 - 07/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* M A WILSON  
*Tech. Officer:* ARC/M H NEW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01003 UNIV OF CALIFORNIA - SANTA BARBARA 2689**  
 BIOMIMETIC, SELF-HEALING NANOCOMPOSITES FOR AEROSPACE APPLI-  
 CATIONS: 1.UCSB COMPONENTS  
 12/29/2000 - 09/30/2003 FY02: \$0 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 2690**  
 MODELING & PREDICTION OF WILDFIRE HAZARD IN SOUTHERN CALIFOR-  
 NIA, INTEGRATION OF MODELS WITH.....  
 07/21/1997 - 06/30/2001 FY02: \$0 Total: \$245,000  
*Prin. Invest.:* D A ROBERTS, S L USTIN, R CHURCH  
*Tech. Officer:* ARC/G A SHELTON, ARC/J A BRASS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2115 UNIV OF CALIFORNIA - SANTA BARBARA 2691**  
 INTERACTION FORCES AND THE FLOW-INDUCED COALESCENCE OF  
 DROPS AND BUBBLES  
 02/19/1998 - 12/31/2002 FY02: \$0 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 2692**  
 POOL BOILING CRISIS FROM FLAT PLATES: MECHANISM(S) AND EN-  
 HANCEMENT  
 02/26/1998 - 12/31/2001 FY02: \$0 Total: \$481,850  
*Prin. Invest.:* T G THEOFANOUS, Y BUYEVIAH  
*Tech. Officer:* GRC/J B MCQUILLIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2414 UNIV OF CALIFORNIA - SANTA BARBARA 2693**  
 DIRECT NUMERICAL SIMULATION OF TURBULENT FLOWS WITH PHASE  
 CHANGE IN MICROGRAVITY  
 06/02/2000 - 11/30/2003 FY02: \$0 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 2694**  
 GRADIENT DRIVEN FLUCTUATIONS GRADIENT DRIVEN FLUCTUATIONS  
 04/20/2000 - 11/30/2003 FY02: \$0 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 2695**  
 THE DYNAMICS OF PARTICULATE DEPOSITIONED RESUSPENSION PRO-  
 CESSSES AT MODERATE TO HIGH REYNOLDS NUMBER  
 06/20/2000 - 11/30/2003 FY02: \$0 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 2696**  
 THE DYNAMICS OF MISCIBLE INTERFACES: SIMULATIONS THE DYNAMICS  
 OF MISCIBLE INTERFACES: SIMULATIONS  
 10/11/2000 - 12/31/2001 FY02: \$0 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 2697**  
 PROBLEMS IN MICROGRAVITY FLUID MECHANICS: G-JITTE R CONVECTION  
 12/19/2000 - 11/30/2003 FY02: \$0 Total: \$150,250  
*Prin. Invest.:* G M HOMSY  
*Tech. Officer:* GRC/F P CHIARAMONTE III  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2761 UNIV OF CALIFORNIA - SANTA BARBARA 2698**  
 THE LIMITS OF COOLABILITY IN THERMAL SYSTEMS FOR SPACE APPLI-  
 CATIONS  
 04/03/2002 - 11/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D THEOFANOUS  
*Tech. Officer:* GRC/J B MCQUILLIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2785 UNIV OF CALIFORNIA - SANTA BARBARA 2699**  
 THE DYNAMICS OF MISCIBLE INTERFACES: A SPACE FLIGHT EXPERIMENT  
 06/01/2002 - 12/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* E H MEIBURG  
*Tech. Officer:* GRC/M M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3620 UNIV OF CALIFORNIA - SANTA BARBARA 2700**  
 "REMOTE SENSING INFORMATION SCIENCES RESEARCH GROU  
 02/07/1997 - 06/30/2001 FY02: \$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 2701**  
 SOLAR SYSTEM PHYSICS  
 02/25/1997 - 04/30/2003 FY02: \$0 Total: \$335,750  
*Prin. Invest.:* S J PEALE  
*Tech. Officer:* GSFC/D G SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4629 UNIV OF CALIFORNIA - SANTA BARBARA 2702**  
 PARAMETERIZATION OF CLOUD 3-D EFFECTS ON SURFACE SGET ESTI-  
 MATED FROM SATELLITE MEASUREMENTS  
 05/21/1997 - 11/30/2001 FY02: \$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 2703**  
 HYDROLOGY, HYDROCHEMICAL MODELING AND REMOTE SENSING SNOW-  
 COVERED ALPINE DRAINAGE BASINS  
 06/19/1997 - 12/31/2001 FY02: \$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 2704**  
 PROGRAM IS PART OF A LONG TERM EFFORT ICSS IS DEVELOPING GRADUATE  
 STUDENTS, EARLY ON IN THEIR ACADEMIC LI  
 06/27/1997 - 12/31/2000 FY02: \$0 Total: \$225,000  
*Prin. Invest.:* C GAUTIER  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 6120 UNIV OF CALIFORNIA - SANTA BARBARA 2705**  
 THE EOS AMAZON PROJECT  
 08/13/1997 - 06/30/2003 FY02: \$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 2706**  
 DEVELOPMENT AND APPLICATION OF THE NEXT GENERATION FOR THE  
 UNDERSTANDING OF MARINE PROCESSES ON REGI  
 09/10/1997 - 08/31/2001 FY02: \$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 2707**  
 BIO-OPTICS IN THE WESTERN ANTARCTIC PENINSULA REGI ON  
 10/16/1997 - 06/30/2002 FY02: \$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 2708**  
 INVESTIGATION OF SNOW PROPERTIES USING MODIS AND A STER DATA  
 10/24/1997 - 09/30/2001 FY02: \$0 Total: \$310,053  
*Prin. Invest.:* J SHI  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6911 UNIV OF CALIFORNIA - SANTA BARBARA 2709**  
 A REQUEST FOR SCIENCE READINESS FUNDS FOR THE OPTI CAL  
 MONITOR PROGRAM OFHTE X-RAY MULTI-MIRROR MISS  
 01/28/1998 - 10/31/2001 FY02: \$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 2710**  
 DETAILED THEORETICAL MODELING OF THE SPECTRUM AND POLARIZA-  
 TION OF ACCRETION DISKS IN ACTIVE GA  
 02/25/1998 - 02/28/2003 FY02: \$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 2711**  
 PROBABILITY OF DETECTING PLANETS WITH MICROLENSING  
 03/16/1998 - 03/14/2003 FY02: \$0 Total: \$121,100  
*Prin. Invest.:* S J PEALE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7714 UNIV OF CALIFORNIA - SANTA BARBARA 2712**  
 POSTLAUNCH: STATEMENT OF WORK U.S. OPTICAL MONITOR TEAM  
 10/05/1998 - 07/31/2002 FY02: \$0 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 2713**  
 OUTREACH PROJECT  
 01/19/1999 - 07/31/2002 FY02: \$0 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 2714**  
 ATMOSPHERIC EXCITATION OF PLANETARY NORMAL MODES  
 01/13/1999 - 12/31/2001 FY02: \$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 2715**  
 PLUMES AND BLOOMS: MODELING THE CASE II WATERS OF THE SANTA  
 BARBARA CHANNEL  
 04/01/1999 - 03/31/2001 FY02: \$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 2716**  
 MESOSCALE EFFECTS OF CLIMATE AND LAND-COVER CHANGE ON RIVER-  
 BASIN HYDROLOGY IN AMAZONIA  
 04/01/1999 - 03/31/2003 FY02: \$0 Total: \$300,000  
*Prin. Invest.:* T DUNNE  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8616 UNIV OF CALIFORNIA - SANTA BARBARA 2717**  
 EVALUATING USAGE OF SAR IN MEASURING SNOW PROPERTI ES  
 06/14/1999 - 06/30/2002 FY02: \$0 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 2718**  
 ROTATIONAL INSTABILITIES AND NUCLEOSYNTHESIS IN ACCRETING NEU-  
 TRON STARS.  
 08/31/1999 - 06/30/2003 FY02: \$0 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 2719**  
 NANOSCALE BOLOMETERS AND EVAPORATIVE ELECTRONIC REFRIGERA-  
 TION  
 07/09/1999 - 07/14/2002 FY02: \$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 2720**  
 ATMOSPHERIC MINERAL DUST AND CHLOROPHYLL BLOOMS  
 07/19/1999 - 07/14/2002 FY02: \$0 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 2721**  
 APPLICATIONS AND VALIDATION OF THE SRTM DEM IN THE AMAZON:  
 HYDROLOGICAL AND GEOMORPHOLOGICAL ANALYSI  
 02/14/2000 - 05/31/2001 FY02: \$0 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 2722  
 BALLOON BORNE MILLIMETER WAVELENGTH SKY STUDIES & TECHNOLOGICAL DEVELOPMENT  
 02/15/2000 - 02/14/2002 FY02: \$0 Total: \$738,482  
*Prin. Invest.:* P LUBIN  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9251** UNIV OF CALIFORNIA - SANTA BARBARA 2723  
 BALLOON BORNE OBSERVATIONS OF THE POLARIZATION OF THE COSMIC MICROWAVE BACKGROUND  
 03/31/2000 - 03/31/2003 FY02: \$0 Total: \$350,530  
*Prin. Invest.:* J E RUHL  
*Tech. Officer:* GSFC/J FROGEL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9671** UNIV OF CALIFORNIA - SANTA BARBARA 2724  
 THE ROLE OF NORTH AFRICAN MINERAL AEROSOLS IN CLIMATE AND BIOGEOCHEMISTRY  
 06/12/2000 - 05/31/2003 FY02: \$0 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 2725  
 GLOBALLY CONSISTENT TOPOGRAPHIC CHARACTERIZATION OF LARGE RIVER FLOODPLAINS BASED ON THE SRT  
 07/21/2000 - 07/31/2003 FY02: \$0 Total: \$134,998  
*Prin. Invest.:* L K MERTES  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9818** UNIV OF CALIFORNIA - SANTA BARBARA 2726  
 DEVELOPMENT AND APPLICATION OF THE NEXT GENERATION OF OCEAN COLOR MODELS FOR THE UNDERSTANDING OF MA  
 07/26/2000 - 08/31/2002 FY02: \$0 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 2727  
 HYDROLOGY, HYDROCHEMICAL MODELING & REMOTE SENSING IN SEASONALLY SNOW-COVERED ALPINE DRAINAGE  
 08/07/2000 - 07/31/2003 FY02: \$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 2728  
 DISTORTIONS OF THE CMB FROM VARIOUS PROCESSES OF THE EARLY UNIVERSE  
 09/08/2000 - 09/30/2001 FY02: \$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 2729  
 SPECTROSCOPY OF DIPS AND FLARES IN CIR X-1  
 09/13/2000 - 09/14/2003 FY02: \$0 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 2730  
 REMOTE SENSING ASSESSMENT OF BIOGEOCHEMICAL PROCESSES IN THE SARGASSO SEA  
 01/04/2001 - 05/30/2002 FY02: \$0 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 2731  
 QUANTUM LTD.-TERAHERTZ DETECTION WITHOUT LIQUID CRYOGENS PROPOSAL #1138  
 01/31/2001 - 01/31/2004 FY02: \$0 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 2732  
 REMOTE SENSING INFORMATION SCIENCE RESEARCH  
 02/26/2001 - 09/30/2002 FY02: \$0 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 2733  
 TECTONIC-CLIMATE INTERACTIONS IN ACTIVE OROGENIC BELTS: QUANTIFICATION OF DYNAMIC TOPOGRAPHY WITH  
 03/30/2001 - 02/14/2003 FY02: \$0 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 2734  
 ESTIMATING SOIL MOISTURE CHANGES USING RADARSAT & ITS APPLICATION IN HYDROLOGICAL MODELING  
 03/27/2001 - 03/14/2004 FY02: \$0 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 2735  
 MULTI-MEDIA FLUID MECHANICS: FLUIDS IN MICROGRAVITY  
 08/16/2001 - 08/31/2003 FY02: \$0 Total: \$150,000  
*Prin. Invest.:* G HOMSY  
*Tech. Officer:* GSFC/D SPEARS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11385** UNIV OF CALIFORNIA - SANTA BARBARA 2736  
 FULLERENES: A NEW CARRIER-PHASE FOR NOBLE GASES IN METEORITES  
 11/05/2001 - 10/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* L BECKER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11426** UNIV OF CALIFORNIA - SANTA BARBARA 2737  
 NANOBOLMETERS AND SINGLE-ELECTRON READOUT AMPLIFICATION  
 12/03/2001 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* A CLELAND  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## CALIFORNIA

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**NAG 5 11560 UNIV OF CALIFORNIA - SANTA BARBARA 2738**  
 INTERSTELLAR ORGANIC MOLECULES AND THE ORIGIN OF LIFE: THE  
 ROLE OF EXOGENOUS DELIVERY  
 01/15/2002 - 11/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* L R BECKER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11666 UNIV OF CALIFORNIA - SANTA BARBARA 2739**  
 PLANETARY SYSTEM PHYSICS  
 01/25/2002 - 04/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* S J PEALE  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11709 UNIV OF CALIFORNIA - SANTA BARBARA 2740**  
 MULTI-SCALE CONVERGENCE OF COLD-LAND PROCESS REPRESENTATION  
 IN LAND-SURFACE MODELS MICROWAVE REMOTE SENSING  
 02/06/2002 - 02/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J SHI  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11887 UNIV OF CALIFORNIA - SANTA BARBARA 2741**  
 UCSB ARCADE BALLOON PROGRAM  
 04/03/2002 - 04/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* P M LUBIN  
*Tech. Officer:* GSFC/A J KOGUT  
*CASE Category:* 13 - PHYSICS

**NAG 5 12053 UNIV OF CALIFORNIA - SANTA BARBARA 2742**  
 LARGE APERTURE BALLOON BORNE MILLIMETER AND SUBMILLIMETER  
 OBSERVATIONS AND TECHNOLOGY DEVELOPMENT  
 04/22/2002 - 02/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* P LUBIN  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12087 UNIV OF CALIFORNIA - SANTA BARBARA 2743**  
 DYNAMICS & ORIGIN OF EXTRA-SOLAR PLANETARY SYSTEMS & MICRO-  
 LENSING DETECTION OF EXTRA-SOLAR PLANETS  
 04/30/2002 - 04/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S PEALE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12150 UNIV OF CALIFORNIA - SANTA BARBARA 2744**  
 UNBIASED, IN-SITU LIFE DETECTION TECHNOLOGY BASED ON TERAHERTZ  
 CIRCULAR DICHROISM SPECTROSCOPY  
 05/10/2002 - 05/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* K PLAXCO  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12400 UNIV OF CALIFORNIA - SANTA BARBARA 2745**  
 BEYOND CHLOROPHYLL: USING OCEAN TO STUDY ORGANIC MATTER  
 CYCLING IN THE OCEAN  
 07/23/2002 - 07/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* N NELSON  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1429 UNIV OF CALIFORNIA - SANTA BARBARA 2746**  
 R/S BOUNDARY EFFECTS ON TRANSPORT PROPERTIES AND DYNAMIC  
 FINITE-SIZE SCALING NEAR THE SUPERFLUID  
 02/23/1998 - 01/31/2003 FY02: \$85,000 Total: \$713,121  
*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 2747**  
 RESEARCH ENTITLED, THE SUPERFLUID TRANSITION OF HELIUM UNDER  
 UNUSUAL CONDITIONS  
 04/26/2001 - 04/29/2005 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* G AHLERS  
*Tech. Officer:* GSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 9 1329 UNIV OF CALIFORNIA - SANTA BARBARA 2748**  
 QUANTITATIVE MODELING OF HUMAN SACADIC TARGETING DURING VISUAL  
 RESEARCH  
 06/29/2001 - 12/23/2002 FY02: \$0 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 2749**  
 IMPLEMENTATION OF PREDICTIVE SOIL MODELING IN THE NATIONAL  
 COOPERATIVE SOIL SURVEY  
 08/27/1999 - 11/01/2002 FY02: \$40,000 Total: \$275,149  
*Prin. Invest.:* O CHADWICK  
*Tech. Officer:* JSC/R MCKELLIP  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAS 5 00196 UNIV OF CALIFORNIA - SANTA BARBARA 2750**  
 SIMBIOS II-OPTIMIZATION OF OCEAN COLOR ALGORITHMS: APPLICATION  
 TO SATELLITE & IN SITU DATA MERGING.  
 01/10/2001 - 11/30/2002 FY02: \$0 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 2751**  
 SIMBIOS II - THE BERMUDA BIO-OPTICS PROJECT (BBPO) YEARS 9 THRU  
 11.  
 01/26/2001 - 11/30/2002 FY02: \$0 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 2752**  
 SIMBIOS II - PLUMES & BLOOMS: OBSERVATIONS, ANALYSIS & MODELING  
 FOR SIMBIOS.  
 01/26/2001 - 11/30/2002 FY02: \$0 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 2753**  
 EOS INVESTIGATION  
 12/23/1991 - 06/14/2003 FY02: \$0 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 2754**  
 EOS INVESTIGATION - ATMOSPHERIC INFRARED SOUNDER (AIRS) TEAM  
 MEMBER INVESTIGATION  
 03/04/1992 - 06/14/2003 FY02: \$0 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 2755**  
 EOS INVESTIGATION/HIRIS TEAM MEMBER  
 09/17/1992 - 12/14/2001 FY02: \$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 2756**  
 EOS INVESTIGATION/HIRIS TEAM MEMBER  
 02/25/1992 - 12/14/2001 FY02: \$0 Total: \$331,783  
*Prin. Invest.:* J M MELACK  
*Tech. Officer:* GSFC/T BRAKE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 1290 UNIV OF CALIFORNIA - SANTA BARBARA 2757**  
 MECHANICAL PROPERTIES OF LIGHTWEIGHT CERAMIC ABLAT OR MATE-  
 RIALS  
 10/25/2001 - 10/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* F MILSTEIN  
*Tech. Officer:* ARC/C CZALAI  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 2 5368 UNIV OF CALIFORNIA - SANTA BARBARA 2758**  
 INTRA-AND INTERSUBBAND ELECTRON-ELECTRON-PHONON SC ATTER-  
 ING IN QUANTUM CONFINED STRUCTURES FOR ....  
 02/28/2000 - 02/28/2001 FY02: \$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 2759**  
 MULTI-SCALE ANALYSIS OF INUNDATION WITH MICROWAVE AND OPTICAL  
 REMOTE SENSING IN THE AMAZON BASIN:  
 06/16/1998 - 12/31/2002 FY02: \$0 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 2760**  
 LAND-COVER CONVERSION IN AMAZONIA, THE ROLE OF ENVIRONMENT  
 AND SUBSTRATE COMPOSITION IN MODIFYING SO  
 06/12/1998 - 12/31/2002 FY02: \$0 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 2761**  
 THE EARTH SYSTEM SCIENCE WORKBENCH: A SCALABLE INFRASTRUC-  
 TURE FOR ESIP'S  
 04/09/1998 - 12/31/2002 FY02: \$0 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 2762**  
 HYPERION APPLICATIONS & VALIDATION FOR FIRE HAZARD ASSESSMENT  
 IN THE SANTA MONICA MOUNTAINS, CALIF  
 04/19/2000 - 09/30/2002 FY02: \$0 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 2763**  
 HYPERSPECTRAL ANALYSIS OF LAND-COVER IN RONDONIA  
 09/20/2001 - 09/30/2004 FY02: \$0 Total: \$20,864  
*Prin. Invest.:* D A ROBERTS  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 4 52407 UNIV OF CALIFORNIA - SANTA BARBARA 2764**  
 GSRP ANALYSIS OF ADAPTIVE CONTROL OF AEROELASTIC STRUCTURES  
 USING MULTIDISCIPLINARY STARS PROGRAMS  
 06/18/1998 - 07/31/2001 FY02: \$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 2765**  
 DEVELOPMENT OF THE EIGENVECTOR ORIENTATION METHOD FOR FLUT-  
 TER PREDICTIONS  
 06/02/2000 - 07/01/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* H T YANG  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 4 52427 UNIV OF CALIFORNIA - SANTA BARBARA 2766**  
 DETERMINING MECHANICAL PROPERTIES OF NANO MATERIAL S USING  
 NANOINDENTATION AND A FINITE ELEMENT METH  
 06/20/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* H T YANG  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 4 52428 UNIV OF CALIFORNIA - SANTA BARBARA 2767**  
 DETERMINING MECHANICAL PROPERTIES OF NANO MATERIAL S USING  
 NANOINDENTATION AND A FINITE ELEMENT METH  
 07/20/2001 - 06/30/2002 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* H YANG  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 30173 UNIV OF CALIFORNIA - SANTA BARBARA 2768**  
 MASS BALANCE OF SEDIMENT TRANSPORT ACROSS COASTAL MARGIN  
 FILTERS AT THE BASE OF THE TRANSVERSE RANGE  
 09/22/1998 - 08/31/2001 FY02: \$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 2769**  
 A TOP-DOWN APPROACH TO UNDERSTANDING & PREDICTING DIMETHYL-  
 SULFIDE VARIABILITY IN THE SARGASSO SEA  
 08/18/1999 - 08/31/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* D A SIEGEL, TOOLE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## CALIFORNIA

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**NGT 5 30201 UNIV OF CALIFORNIA - SANTA BARBARA 2770**  
 MONITORING POPULATION AND THE EXTENT OF HUMAN SETTLEMENT IN  
 THE BRAZILIAN AMAZON WITH SYNTH  
 08/24/1999 - 08/31/2002 FY02: \$0 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 2771**  
 REGIONAL BIOGEOCHEMISTRY OF LAND USE CHANGE IN THE HUMID  
 TROPICS: DETECTION & MODELING OF THE  
 08/14/2000 - 08/31/2003 FY02: \$0 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 2772**  
 INTERACTIONS OF LAND COVER CHANGE & TOPOGRAPHY IN THE HYDRO-  
 LOGIC RESPONSE OF MESOSCALE TROPIC  
 08/14/2000 - 08/31/2003 FY02: \$0 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 2773**  
 THE ROLE OF TOPOGRAPHY & PROXIMITY TO BEDROCK IN DETERMINING  
 NUTRIENT SUPPLY TO A SEASONAL AMAZON  
 08/22/2000 - 08/31/2003 FY02: \$0 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 2774**  
 REMOTE SENSING OF ANTHROPOGENIC BIOMASS BURNING & FOREST  
 DEGRADATION IN MADAGASCAR: THE DEVELOPMENT  
 08/14/2001 - 08/31/2004 FY02: \$0 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 2775**  
 SATELLITE DETECTION OF TRICHODESMIUM SPP. AND ITS RELATION TO  
 ATMOSPHERIC DUST DEPOSITIONS  
 08/15/2001 - 08/31/2004 FY02: \$0 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 2776**  
 ROLES OF REGIONAL CLIMATOLOGY IN THE NORTH AFRICAN DESERT  
 DUST. STUDENT: MASARU YOSHIOKA  
 08/14/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* N MAHOWALD  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30436 UNIV OF CALIFORNIA - SANTA BARBARA 2777**  
 ASSESSMENT OF AIRBORNE FINE SPATIAL RESOLUTION HYPERSPEC-  
 TRAL IMAGERY FOR THE MONITORING OF TROPICAL  
 08/20/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D M CLARK  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30440 UNIV OF CALIFORNIA - SANTA BARBARA 2778**  
 SATELLITE MEASUREMENT OF SURFACE OCEAN MIXING AND VENTILA-  
 TION USING OPEN OCEAN COLORED DISSOLVED ORGA  
 08/21/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* S A SIEGEL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50269 UNIV OF CALIFORNIA - SANTA BARBARA 2779**  
 B2K, AN EXPERIMENT TO MEASURE THE POLARIZATION OF THE CMB  
 06/22/2000 - 06/30/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* J RUHL  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50327 UNIV OF CALIFORNIA - SANTA BARBARA 2780**  
 MAPPING WILDLAND FUELS USING COMBINED HYPERSPECTRAL & SYN-  
 THETIC APERTURE RADAR FOR FIRE HAZARD  
 08/17/2000 - 08/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* D A ROBERTS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 1580 UNIV OF CALIFORNIA - SANTA CRUZ 2781**  
 NANO/BIO/INFO TECHNOLOGY FUSION/ COLLABORATIVE RESEARCH PRO-  
 POSAL  
 09/04/2002 - 10/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* W E BERRY  
*Tech. Officer:* ARC/H PARTRIDGE, ARC/M MEYYPAN  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 4445 UNIV OF CALIFORNIA - SANTA CRUZ 2782**  
 PHOTON-WEIGHTED MIDPOINT EXPOSURE METER FOR KECK/H RE-  
 SEARCH  
 04/25/1997 - 04/30/2001 FY02: \$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 2783**  
 FORMATION AND EARLY EVOLUTION OF SOLAR AND EXTRA-S  
 04/30/1997 - 03/31/2001 FY02: \$0 Total: \$112,776  
*Prin. Invest.:* D H BODENHEIMER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8128 UNIV OF CALIFORNIA - SANTA CRUZ 2784**  
 THREE DIMENSIONAL MODELS FOR GAMMA-RAY BURSTS AND SUPERNO-  
 VAE\_ (ATP98)  
 02/05/1999 - 02/14/2003 FY02: \$0 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 2785**  
 THE GROWTH OF PROTOGIANT PLANETS IN PROTOSTELLAR DISKS  
 02/04/1999 - 01/31/2002 FY02: \$0 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 2786**  
 TESTING INFLATION AND DARK MATTER WITH NEW DATA, M ODELS, AND METHODS (ATP98)  
 02/08/1999 - 08/14/2002 FY02: \$0 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 2787**  
 THE PROPERTIES OF INTERSTELLAR DUST GRAINS IN IRAS 'CIRRUS' CLOUDS (ADP98)  
 03/01/1999 - 04/30/2002 FY02: \$0 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 2788**  
 EVOLUTION OF HOT GAS IN ELLIPTICAL GALAXIES (ATP 9 8)  
 03/15/1999 - 03/31/2003 FY02: \$0 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 2789**  
 MONITORING ECOSYSTEM CONDITION AND STRESS IN THE SAN PABLO BAY, CA REGION  
 09/08/1999 - 09/14/2002 FY02: \$0 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 2790**  
 COMPOUND REMOTE SENSING FOR THE DETERMINATION OF NEW PRIMARY PRODUCTION IN COASTAL WATERS  
 11/23/1999 - 11/30/2002 FY02: \$0 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 2791**  
 SMALL BODIES ANE PLANETARY COLLISIONS  
 01/27/2000 - 12/31/2002 FY02: \$0 Total: \$222,300  
*Prin. Invest.:* E ASPHAUG  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9403 UNIV OF CALIFORNIA - SANTA CRUZ 2792**  
 STRUCTURE AND FUNCTION OF ENCAPSULATED REPLICATING SYSTEMS  
 04/06/2000 - 03/31/2003 FY02: \$0 Total: \$227,214  
*Prin. Invest.:* D DEAMER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9526 UNIV OF CALIFORNIA - SANTA CRUZ 2793**  
 MULTIDIMENSIONAL MODELING OF THE SOLAR NEBULA: A BETTER TOOL FOR UNDERSTANDING OBSERVATIONS  
 04/28/2000 - 05/31/2003 FY02: \$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 2794**  
 FORMATION AND EARLY EVOLUTION OF SOLAR AND EXTRA- SOLAR GIANT PLANETS  
 06/01/2000 - 06/14/2003 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* P BODENHEIMER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9711 UNIV OF CALIFORNIA - SANTA CRUZ 2795**  
 OBSERVATIONS OF ROTATION POWERED PULSARS IN SUPPORT OF GLAST  
 06/15/2000 - 06/14/2003 FY02: \$0 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 2796**  
 HOT GAS ENRICHMENT BY DRAWF GALAXIES IN THE 5044 GALAXY GROUP  
 09/13/2000 - 09/14/2003 FY02: \$0 Total: \$16,000  
*Prin. Invest.:* W G MATHEWS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10053 UNIV OF CALIFORNIA - SANTA CRUZ 2797**  
 THE X-RAY HALOS OF EXTREMELY LUMINOUS GIANT LSB & HSB DISK GALAXIES  
 12/06/2000 - 12/14/2002 FY02: \$0 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 2798**  
 THE IONIZATION HISTORY OF THE INTERGALACTIC MEDIUM  
 01/24/2001 - 11/30/2002 FY02: \$0 Total: \$67,957  
*Prin. Invest.:* P MADAU  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10612 UNIV OF CALIFORNIA - SANTA CRUZ 2799**  
 GROWTH OF PLANETESIMALS IN A PROTOSTELLAR DISK ENVIRONMENT  
 03/17/2001 - 03/14/2004 FY02: \$0 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 2800**  
 BEOWULF CLUSTER FOR SMALL BODIES AND PLANETARY COLLISIONS  
 03/30/2001 - 03/31/2002 FY02: \$0 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 2801**  
 PHYSICAL PROPERTIES OF A Z << 1 LYMAN LIMIT SYSTEM - FUSE 2000  
 03/29/2001 - 03/31/2003 FY02: \$0 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 2802**  
 TIDAL INTERACTION BETWEEN SHORT-PERIOD PLANETS AND THEIR HOST STARS  
 04/09/2001 - 04/14/2003 FY02: \$0 Total: \$40,000  
*Prin. Invest.:* D LIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11220 UNIV OF CALIFORNIA - SANTA CRUZ 2803**  
 CONVECTION AND MAGNETIC FIELD GENERATION IN GIANT AND EXTRA-SOLAR PLANETS: NUMERICAL SIMULATI  
 08/13/2001 - 08/31/2004 FY02: \$0 Total: \$107,000  
*Prin. Invest.:* G A GLATZMAIER  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 99 - MULTIINTERDISCIPL, OTHER

**NAG 5 11513 UNIV OF CALIFORNIA - SANTA CRUZ 2804**  
 EARLY GALAXIES  
 01/03/2002 - 12/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* P MADAU  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11521 UNIV OF CALIFORNIA - SANTA CRUZ 2805**  
 POST IMPACT ASTEROIDS: GRAVITATIONAL INTERACTIONS, SPIN STATED, AND SHAPES  
 12/31/2001 - 01/14/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* D KORYCANSKY  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11779 UNIV OF CALIFORNIA - SANTA CRUZ 2806**  
 ORIGIN OF DYNAMICAL DIVERSITY IN EXTRASOLAR MULTIPLE PLANETARY SYSTEMS  
 02/26/2002 - 02/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D LIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12036 UNIV OF CALIFORNIA - SANTA CRUZ 2807**  
 MULTI-DIMENSIONAL MODELS FOR GAMMA-RAY BURSTS, X-RAY BURSTS, AND SUPERNOVAE  
 04/12/2002 - 04/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* S E WOOSLEY  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12151 UNIV OF CALIFORNIA - SANTA CRUZ 2808**  
 EVOLUTION OF MULTI-PHASE INTERSTELLAR MEDIUM IN YOUNG GALAXIES  
 05/10/2002 - 05/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D C LIN  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12326 UNIV OF CALIFORNIA - SANTA CRUZ 2809**  
 STUDYING GALAXY FORMATION AND EVOLUTION WITH NEW DATA, MODELS, AND METHODS  
 06/27/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J R PRIMACK  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12379 UNIV OF CALIFORNIA - SANTA CRUZ 2810**  
 POSSIBLE NEAR-FUTURE RETREAT OF THE ROSS ICE SHELF DUE TO DECREASING ICE DISCHARGE FROM THE ROSS ICE  
 07/12/2002 - 07/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* S TULACZK  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12496 UNIV OF CALIFORNIA - SANTA CRUZ 2811**  
 IDENTIFYING THE PHYSICAL NATURE OF LOW Z OVI ABSORBERS.  
 08/29/2002 - 08/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J X PROCHASKA  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12574 UNIV OF CALIFORNIA - SANTA CRUZ 2812**  
 DECELERATION OF ICE STREAM A AND WHILLANS ICE STREAM (B), WEST ANTARCTICA  
 09/16/2002 - 09/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* S TULACZYK  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC 2 1037 UNIV OF CALIFORNIA - SANTA CRUZ 2813**  
 (NAS) AMES EDUCATION ASSOCIATES PROGRAM  
 05/08/1998 - 06/30/2002 FY02: \$45,204 Total: \$3,393,249  
*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 2814**  
 STAR & PLANET FORMATION  
 01/15/1999 - 02/28/2002 FY02: \$0 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 2815**  
 COMPARING & UNDERSTANDING DATA DISTRIBUTIONS IN EARTH APPLICATIONS  
 04/26/2001 - 02/28/2003 FY02: \$0 Total: \$67,301  
*Prin. Invest.:* A PANG  
*Tech. Officer:* ARC/D L KAO, ARC/V R WATSON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5339 UNIV OF CALIFORNIA - SANTA CRUZ 2816**  
 COLLABORATIVE RESEARCH IN STABLE ISOTOPE BIOGEOCHEMISTRY  
 07/30/1999 - 07/31/2001 FY02: \$0 Total: \$89,768  
*Prin. Invest.:* G H RAU  
*Tech. Officer:* ARC/D J DES MARAIS, ARC/L JAHNKE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 5351 UNIV OF CALIFORNIA - SANTA CRUZ 2817**  
 SEARCH FOR THE UPPER TEMPERATURE LIMIT FOR EUKARYA - IS THERE COMPLEX LIFE BEYOND EARTH?  
 09/03/1999 - 08/31/2001 FY02: \$0 Total: \$20,000  
*Prin. Invest.:* J PEARSE, J TRENT  
*Tech. Officer:* ARC/M FONDA  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 5358 UNIV OF CALIFORNIA - SANTA CRUZ 2818**  
 THE MOLECULAR BASIS OF HYPERTHEMPHILY  
 10/18/1999 - 10/14/2001 FY02: \$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)

**NCC 2 5370 UNIV OF CALIFORNIA - SANTA CRUZ 2819**  
 COLLABORATIVE RESEARCH ON MICROBIAL MAT NITROGEN CYCLING  
 03/16/2000 - 09/14/2002 FY02: \$0 Total: \$183,855  
*Prin. Invest.:* J P ZEHR  
*Tech. Officer:* ARC/B N BEBOUT  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5418**            **UNIV OF CALIFORNIA - SANTA CRUZ**            **2820**  
 GIANT MOLECULAR CLOUD STRUCTURE & EVOLUTION  
 02/01/2001 - 02/28/2003            FY02: \$0            Total: \$61,450  
*Prin. Invest.:* P BODENHEIMER  
*Tech. Officer:* ARC/D J HOLLENBACH, LARC/G LAUGHLIN  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5428**            **UNIV OF CALIFORNIA - SANTA CRUZ**            **2821**  
 THREE-DIMENSIONAL MODELING OF ASTEROID & CORNET IM PACTS INTO  
 PLANETARY ATMOSPHERES  
 03/14/2001 - 08/31/2001            FY02: \$0            Total: \$30,222  
*Prin. Invest.:* E I ASPHAUGH  
*Tech. Officer:* ARC/K J ZAHNLE, ARC/R E YOUNG  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5436**            **UNIV OF CALIFORNIA - SANTA CRUZ**            **2822**  
 ORIGINS & STRUCTURES OF PLANETARY & SATELLITE SYST EMS  
 05/18/2001 - 04/30/2003            FY02: \$0            Total: \$49,383  
*Prin. Invest.:* P BODENHEIMER, A R DOBROVOLSKI  
*Tech. Officer:* ARC/J J N CUZZI  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5456**            **UNIV OF CALIFORNIA - SANTA CRUZ**            **2823**  
 C/C VARIATIONS IN AQUATIC PHOTOAUTOTROPHS: THE POSSIBLE CON-  
 TRIBUTION OF PHOTORESPIRATORY CARBON EX  
 08/15/2001 - 07/31/2003            FY02: \$0            Total: \$21,423  
*Prin. Invest.:* G H RAU  
*Tech. Officer:* ARC/D DESMARAIS, ARC/L JAHNKE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 5480**            **UNIV OF CALIFORNIA - SANTA CRUZ**            **2824**  
 METEOROID AIRBURSTS AND IMPACT GENERATED TSUNAMIS  
 02/08/2002 - 01/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* E ASPHAUGH  
*Tech. Officer:* ARC/K ZAHNLE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 2 5483**            **UNIV OF CALIFORNIA - SANTA CRUZ**            **2825**  
 MOLECULAR APPROACHES TO THE IDENTIFICATION OF NITROGEN FIXING  
 MICROORGANISMS IN MICROBIAL MATS  
 02/20/2002 - 02/14/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* J ZEHR  
*Tech. Officer:* ARC/B BEBOUT, ARC/L BEBOUT  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5501**            **UNIV OF CALIFORNIA - SANTA CRUZ**            **2826**  
 THE EVOLUTION & DESPERAL OF PROTOSTELLAR DISKS  
 07/16/2002 - 06/30/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* G LAUGHLIN  
*Tech. Officer:* ARC/D HOLLENBACH, ARC/K R BELL  
*CASE Category:* 11 - ASTRONOMY

**NGT 2 52260**            **UNIV OF CALIFORNIA - SANTA CRUZ**            **2827**  
 VIOLENT VAGABONDS: THE EFFECT OF LARGE IMPACTS & MIGRATION ON  
 GIANT PLANET EVOLUTION  
 10/26/1999 - 10/14/2001            FY02: \$0            Total: \$44,000  
*Prin. Invest.:* P H  
*Tech. Officer:* ARC/K J ZAHNLE  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 43**            **UNIV OF CALIFORNIA - SANTA CRUZ**            **2828**  
 MULTI-WAVELENGTH STUDY OF THE EVOLUTION OF GALAXIES NMENT  
 06/23/1997 - 06/30/2001            FY02: \$0            Total: \$66,000  
*Prin. Invest.:* P GUHATHAKURTA  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 108**            **UNIV OF CALIFORNIA - SANTA CRUZ**            **2829**  
 MULTI-WAVELENGTH STUDY OF GRBS USING BATSE, HETE II & MILAGRO  
 (STUDENT: MIGUEL MORALES)  
 06/12/2000 - 06/30/2003            FY02: \$0            Total: \$44,000  
*Prin. Invest.:* D A WILLIAMS  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 13 - PHYSICS

**NGT 5 30112**            **UNIV OF CALIFORNIA - SANTA CRUZ**            **2830**  
 EROSION AND SEDIMENT FLUXES BY VALLEY GLACIERS THROUGH THE  
 CLIMATE CYCLE: LINKS BETWEEN ALPINE  
 08/28/1998 - 03/31/2002            FY02: \$0            Total: \$66,000  
*Prin. Invest.:* R S ANDERSON  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30415**            **UNIV OF CALIFORNIA - SANTA CRUZ**            **2831**  
 MODELING REEF ACCRETION RATES USING HYPERSPECTRAL REMOTE  
 SENSING AND FIELD MEASUREMENTS IN THE NO  
 08/16/2001 - 08/31/2004            FY02: \$0            Total: \$22,000  
*Prin. Invest.:* D POTTS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11366**            **UNIV OF REDLANDS**            **2832**  
 SCIENCE AND MATHEMATICS BUILDING PROJECT  
 09/19/2001 - 09/30/2003            FY02: \$0            Total: \$1,831,000  
*Prin. Invest.:* J R APPLETON  
*Tech. Officer:* GSFC/M V PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12538**            **UNIV OF REDLANDS**            **2833**  
 SCIENCE AND MATHEMATICS BUILDING PROJECT  
 09/19/2002 - 09/14/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* J R APPLETON  
*Tech. Officer:* GSFC/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10049**            **UNIV OF SAN DIEGO**            **2834**  
 INNOVATIVE CURRICULAR REVISION & RESEARCH IN FIELD OF EARTH-  
 SYSTEM & SPACE SCIENCE  
 10/13/2000 - 06/30/2003            FY02: \$0            Total: \$458,000  
*Prin. Invest.:* S LOWERY  
*Tech. Officer:* GSFC/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11590**            **UNIV OF SAN DIEGO**            **2835**  
 BUILDING SUPPORT OF INNOVATIVE CURRICULAR REVISION AND RE-  
 SEARCH IN THE FIELDS OF EARTH-SYSTEM AND  
 01/28/2002 - 12/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* F M LAZARUS  
*Tech. Officer:* GSFC/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## CALIFORNIA

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**NAG 9 1354**                      **UNIV OF SAN DIEGO**                      **2836**  
 FABRICATION AND GROWTH OF ENGINEERED TISSUES: ARTICULAR CAR-  
 TILAGE W/BIOLOGICAL FUNCTIONAL STRAT  
 08/17/2001 - 09/30/2004                      FY02: \$0                      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**                      **2837**  
 CREATIVE & INNOVATIVE WORKING PHOTOTYPE EARTH SCIENCE INFOR.  
 PARTNERSHIP IN SUPPORT OF EARTH  
 01/15/1998 - 12/31/2002                      FY02: \$0                      Total: \$1,375,000  
*Prin. Invest.:* J J SIMPSON  
*Tech. Officer:* GSFC/M MAIDEN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 1282**                      **UNIV OF SAN FRANCISCO**                      **2838**  
 DOES GRAVITY INFLUENCE MATRIX SURVIVAL SIGNALING  
 09/10/2001 - 09/30/2002                      FY02: \$0                      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**                      **2839**  
 TURBULENCE EFFECTS ON VERY LARGE FLIGHT VEHICLES.  
 01/23/1998 - 01/31/2002                      FY02: \$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**                      **2840**  
 INVESTIGATING TEAMWORK AMONG SPACECRAFT (NEWAMES)  
 06/28/2001 - 04/30/2002                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* M TAMBE  
*Tech. Officer:* ARC/C J PLAUNT, ARC/J BRESINA  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2124**                      **UNIV OF SOUTHERN CALIFORNIA**                      **2841**  
 STRUCTURE OF FLAME BALLS IN LOW LEWIS NUMBER STRUCTURE OF  
 FLAME BALLS IN LOW LEWIS NUMBER  
 02/10/1998 - 04/30/2003                      FY02: \$0                      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**                      **2842**  
 THE DYNAMICS OF MISCIBLE INTERFACES: A SPACE FLIGHT EXPERIMENT  
 02/25/1998 - 12/31/2002                      FY02: \$0                      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**                      **2843**  
 THE DYNAMICS OF PARTICULATE DEPOSITION AND RESUSPENSION  
 PROCESSES AT MODERATE TO HIGH REYNOLDS NUMBER  
 08/09/2000 - 11/30/2003                      FY02: \$0                      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**                      **2844**  
 INTEGRATED MICROPHONIC RECEIVER FOR KA-BAND INTEGRATED MICR-  
 PHONIC RECEIVER FOR KA-BAND  
 03/10/2001 - 03/09/2004                      FY02: \$0                      Total: \$262,500  
*Prin. Invest.:* A LEVI  
*Tech. Officer:* GRC/J POUCH  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2776**                      **UNIV OF SOUTHERN CALIFORNIA**                      **2845**  
 THE DYNAMICS OF MISCIBLE INTERFACES: A SPACE FLIGHT EXPERIMENT  
 05/21/2002 - 12/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T MAXWORTHY  
*Tech. Officer:* GRC/M M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3429**                      **UNIV OF SOUTHERN CALIFORNIA**                      **2846**  
 THE ABUNDANCES OF THE IRON GROUP ELEMENTS IN EARLY B STARS  
 10/21/1996 - 10/31/2001                      FY02: \$0                      Total: \$65,300  
*Prin. Invest.:* G J PETERS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5018**                      **UNIV OF SOUTHERN CALIFORNIA**                      **2847**  
 ROCKET UNDERFLIGHTS FOR SOHO CROSS-CALIBRATION AND SOLAR  
 ATMOSPHERE INVESTIGATIONS  
 02/28/1994 - 08/31/2001                      FY02: \$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**                      **2848**  
 FIRST OF 3 YEAR EFFORT IN BASIC SCIENTIFIC RESEARCH WITH USC  
 06/25/2001 - 06/18/2004                      FY02: \$0                      Total: \$289,969  
*Prin. Invest.:* D JUDGE  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6512**                      **UNIV OF SOUTHERN CALIFORNIA**                      **2849**  
 OPTICAL AND ANCILLARY MEASUREMENTS AT HIGH LATITUDES IN  
 SUPPORT OF THE MODIS OCEAN VALIDATION PROG  
 12/05/1997 - 09/30/2002                      FY02: \$0                      Total: \$310,372  
*Prin. Invest.:* M STRAMSKA  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6696**                      **UNIV OF SOUTHERN CALIFORNIA**                      **2850**  
 AN INVESTIGATION OF THE HIGH TEMPERATURE CIRCUMSTELLAR  
 PLASMA IN ALGOL-TYPE INTERACTING BINARIES  
 12/17/1997 - 12/31/2001                      FY02: \$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**                      **2851**  
 PHYSICAL PROCESSES AT THE HELIOSPHERIC BOUNDARY AND THEIR  
 DETECTABLE SIGNATURES AT 1 AU. A THEORETICAL  
 03/05/1998 - 12/31/2001                      FY02: \$0                      Total: \$68,300  
*Prin. Invest.:* M A GRUNTMAN  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 7117</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2852</b>  EUV OBSERVATIONS OF EARLY B STARS: EUV FLUX VARIABILITY IN BETA  CMA THROUGHOUT ITS BEAT PERIOD  04/13/1998 - 04/14/2001                    FY02: -\$35                    Total: \$11,485  <i>Prin. Invest.:</i> G J PETERS  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8978</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2860</b>  OBSERVATION OF THE ACCRETION-DRIVEN BIPOLAR FLOWS IN THE  INTERACTING BINARIES THYIA &amp; V356 SGR FUSE  01/24/2000 - 01/31/2003                    FY02: \$0                    Total: \$29,000  <i>Prin. Invest.:</i> G J PETERS  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 7147</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2853</b>  MINIATURIZED OPTICS FREE EUV ARRAY SPECTROMETER TO PROVIDE  STABLE SOLAR EUV SPECTRA  03/23/1998 - 04/14/2001                    FY02: -\$115                    Total: \$228,140  <i>Prin. Invest.:</i> D L JUDGE  <i>Tech. Officer:</i> GSFC/W WAGNER  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 9124</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2861</b>  CIRCUMSTELLAR MATERIAL &amp; STELLAR COMPONENTS IN HR 2142, A  MASSIVE INTERACTING BINARY IN A LATE EVOLU  03/01/2000 - 03/14/2003                    FY02: \$0                    Total: \$29,378  <i>Prin. Invest.:</i> G PETERS  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8021</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2854</b>  STUDIES OF SOLAR INTERNAL STRUCTURE AND DYNAMICS USING HIGH  DEGREE P-MODE OBSERVATIONS FROM THE  01/22/1999 - 03/31/2002                    FY02: \$0                    Total: \$203,000  <i>Prin. Invest.:</i> E J RHODES  <i>Tech. Officer:</i> GSFC/J GURMAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 9740</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2862</b>  VALIDATION OF THE SEMI-DIURNAL TIDAL FLUCTUATIONS IN THE COMPU-  TATIONS OF WATER LEAVING RADIANCE FROM  08/31/2000 - 08/31/2001                    FY02: \$0                    Total: \$27,125  <i>Prin. Invest.:</i> R ITURRIAGA  <i>Tech. Officer:</i> GSFC/J MARRA  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8274</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2855</b>  PHOTON ABSORPTION STUDIES OF ATMOSPHERIC GASES UNDER IN-SITU  CONDITIONS  04/06/1999 - 12/31/2001                    FY02: \$0                    Total: \$154,455  <i>Prin. Invest.:</i> D JUDGE  <i>Tech. Officer:</i> GSFC/R BEEBE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10399</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2863</b>  MICROSCALE, MILLIWATT VACUUM PUMPS FOR SAMPLING INSTRUMENTA-  TION  02/13/2001 - 02/29/2004                    FY02: \$0                    Total: \$174,272  <i>Prin. Invest.:</i> G SHIFLETT  <i>Tech. Officer:</i> GSFC/M DUTTA  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 8367</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2856</b>  THE ABUNDANCES OF THE IRON GROUP ELEMENTS IN EARLY B STARS  (ADP98)  03/01/1999 - 02/28/2002                    FY02: \$0                    Total: \$38,889  <i>Prin. Invest.:</i> G PETERS  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10930</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2864</b>  INVESTIGATING THE EXCITATION MECHANISM FOR COMETARY X-RAY, EUV,  &amp; FUV EMISSIONS (FUSE 2000)  05/17/2001 - 06/30/2002                    FY02: \$0                    Total: \$10,000  <i>Prin. Invest.:</i> D E SHEMANSKY  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8545</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2857</b>  STUDIES OF TEMPORAL CHANGES IN SOLAR INTERNAL STRUCTURE &amp;  DYNAMICS USING OBSERVATIONS OF INTERM  05/13/1999 - 04/30/2003                    FY02: \$0                    Total: \$423,448  <i>Prin. Invest.:</i> E J RHODES  <i>Tech. Officer:</i> GSFC/W WAGNER  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10989</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2865</b>  EXPLORATION OF THE HELIOSPHERIC INTERFACE BY SOLAR BACKSCAT-  TERED LYMAN ALPHA RADIATION: INTERPRETATION  06/05/2001 - 05/31/2003                    FY02: \$0                    Total: \$76,041  <i>Prin. Invest.:</i> P K GANGOPADHAY  <i>Tech. Officer:</i> GSFC/W J WAGNER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 8884</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2858</b>  MODELING N<sub>2</sub> AND CO<sub>2</sub> FIXATION BY THE OCEAN DIAZOTROPHIC  CYANOBACTERIUM, TRICHODESMIUM  11/24/1999 - 09/30/2001                    FY02: \$0                    Total: \$59,027  <i>Prin. Invest.:</i> D CAPONE  <i>Tech. Officer:</i> GSFC/J MARRA  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 11001</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2866</b>  IMPLEMENTATION OF A NEW METHOD FOR THE COMPUTATION OF THE  FREQUENCIES &amp; FREQUENCY SPLITTINGS OF THE  06/06/2001 - 05/31/2004                    FY02: \$0                    Total: \$88,000  <i>Prin. Invest.:</i> E J RHODES  <i>Tech. Officer:</i> GSFC/W J WAGNER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 8939</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2859</b>  OUTER PLANET UPPER ATMOSPHERE/MAGNETOSPHERE RESEARCH  01/14/2000 - 01/14/2003                    FY02: \$0                    Total: \$145,650  <i>Prin. Invest.:</i> D SHEMANSKY  <i>Tech. Officer:</i> GSFC/D BOGAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11042</b>                    <b>UNIV OF SOUTHERN CALIFORNIA</b>                    <b>2867</b>  TEMPERATURE-DEPENDENT CROSS SECTION MEASUREMENT OF LIGHT  HYDROCARBONS, IN SUPPORT OF OUTER PLANET  06/13/2001 - 06/14/2004                    FY02: \$0                    Total: \$53,000  <i>Prin. Invest.:</i> C WU  <i>Tech. Officer:</i> GSFC/D J BOGAN  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>

## CALIFORNIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11218**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2868**  
 IMPROVE ESTIMATE OF GAS TRANSFER USING SCATTEROMETER  
 08/13/2001 - 10/31/2001                    FY02: \$0                    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**                    **2869**  
 MICROGRAVITY TRANSPORT PROCESSES IN FLUID, THERMAL MATERIALS  
 AND BIOLOGICAL SCIENCES CONFERENCE  
 08/30/2001 - 08/31/2002                    FY02: \$0                    Total: \$15,000  
*Prin. Invest.:* S SADHAL  
*Tech. Officer:* GSFC/D SPEARS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11582**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2870**  
 HIGH-DEGREE P-MODE STRUCTURE AND DYNAMIC STUDIES  
 01/17/2002 - 03/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* E J RHODES  
*Tech. Officer:* GSFC/T KUCERA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11802**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2871**  
 HEAVY ELEMENT ABUNDANCES IN EARLY B STARS  
 02/28/2002 - 03/31/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G PETERS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11807**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2872**  
 MICRO-LIGHT XRAY TO FAR ULTRAVIOLET(FUV) SPECTROMETER FOR  
 ATMOSPHERE SCIENCE  
 02/28/2002 - 02/28/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D L JUDGE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12239**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2873**  
 HEAVY ELEMENT ABUNDANCES IN TWO B0-B0.5 MAIN SEQUENCE STARS  
 IN THE SMALLMAGELLANIC CLOUD  
 06/04/2002 - 06/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G J PETERS  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12253**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2874**  
 A STUDY OF THE HIGH TEMPERATURE POLAR PLASMA IN B-TYPE  
 INTERACTING BINARIES  
 06/12/2002 - 06/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G J PETERS  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12396**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2875**  
 REMOTE SENSING OF PARTICULATE ORGANIC CARBON POOLS IN THE  
 HIGH LATITUDES  
 07/23/2002 - 07/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M STRAMSKA  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1663**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2876**  
 NON-INTRUSIVE MEASUREMENT OF THERMOPHYSICAL PROPERTIES OF  
 LIQUIDS BY ELECTROSTATIC LEVITATION  
 06/16/2000 - 11/30/2003                    FY02: \$0                    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**                    **2877**  
 EXTINCTION AND INSTABILITY MECHANISMS OF POLYMERIZATION  
 FRONTS  
 07/19/2000 - 11/30/2003                    FY02: \$0                    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**                    **2878**  
 AUGMENTED REALITY FOR SPACE FLIGHT  
 12/07/1999 - 03/09/2003                    FY02: \$0                    Total: \$413,559  
*Prin. Invest.:* U NEUMANN  
*Tech. Officer:* JSC/B J WOOLFORD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1444**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2879**  
 SKILL LEARNING BY PRIMITIVES-BASED DEMONSTRATION AND Imitations  
 08/05/2002 - 07/31/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M J MATARIC  
*Tech. Officer:* JSC/R T SAVELY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 2 00091**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2880**  
 OPERATION / MGMT OF NASA FAR WEST RTTC  
 12/21/2000 - 12/31/2002                    FY02: \$0                    Total: \$1,202,845  
*Prin. Invest.:* K DOZIER  
*Tech. Officer:* ARC/E ROBINSON, ARC/C CASTELLANO  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAS 8 97115**                    **UNIV OF SOUTHERN CALIFORNIA**                    **2881**  
 USC RTTC  
 01/30/1997 - 12/31/2000                    FY02: \$0                    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**                    **2882**  
 BIOLOGICAL ASPECTS OF COMPUTATION  
 04/05/2001 - 02/28/2003                    FY02: \$0                    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**                    **2883**  
 ROBUST SPEECH RECOGNITION USING DYNAMIC SYNAPSE NEURAL  
 NETWORKS  
 04/25/2001 - 02/28/2003                    FY02: \$0                    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 2884**  
 CARBON NANOTUBE MOLECULAR ELECTRODES  
 02/08/2001 - 02/28/2003 FY02: \$0 Total: \$94,999  
*Prin. Invest.:* C ZHOU  
*Tech. Officer:* ARC/M MEYYPAN, ARC/H PARTRIDGE  
*CASE Category:* 13 - PHYSICS

**NCC 2 5454 UNIV OF SOUTHERN CALIFORNIA 2885**  
 MOLECULAR WIRES AND TRANSISTORS  
 08/08/2001 - 07/31/2003 FY02: \$0 Total: \$40,000  
*Prin. Invest.:* C ZHOU  
*Tech. Officer:* ARC/M MEYYPAN, ARC/H PARRISAGE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 671 UNIV OF SOUTHERN CALIFORNIA 2886**  
 TRANSPORT AND CHEMICAL EFFECTS ON CONCURRENT AND O PPOSED-  
 FLOW FLAME SPREAD AT MICROGRAVITY  
 02/12/1999 - 01/03/2003 FY02: \$0 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 2887**  
 QUANTITATIVE STUDIE SON THE PROPAGATION AND EXTINC TION OF  
 NEAR-LIMIT FLAMES UNDER NORMAL AND MICROG  
 03/01/1999 - 11/29/2002 FY02: \$0 Total: \$300,000  
*Prin. Invest.:* F N EGOLFOPOLUOS  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 827 UNIV OF SOUTHERN CALIFORNIA 2888**  
 ACOUSTIC BUBBLE REMOVAL FROM BOILING SURFACES AND ITS OPTIMI-  
 ZATION  
 09/29/2000 - 11/30/2003 FY02: \$0 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 2889**  
 DETAILED STUDIES ON THE STRUCTURE AND DYNAMICS OF REACTING  
 DUSTY FLOWS AT NORMAL- AND MICRO-GRAVITY  
 12/18/2000 - 10/31/2004 FY02: \$0 Total: \$99,999  
*Prin. Invest.:* P N EGOLFOPOLUOS  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 841 UNIV OF SOUTHERN CALIFORNIA 2890**  
 HIGH PRESSURE TRANSPORT PROPERTIES OF FLUIDS: THE ORY AND  
 DATA FROM LEVITATED DROPS AT COMBUSTION-R  
 12/22/2000 - 11/30/2003 FY02: \$0 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 2891**  
 DETERMINATION OF COOL FLAME QUENCHING DISTANCES AT MICRO-  
 GRAVITY  
 01/24/2001 - 11/30/2004 FY02: \$0 Total: \$47,467  
*Prin. Invest.:* H PEARLMAN  
*Tech. Officer:* GRC/IJ E BROOKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 871 UNIV OF SOUTHERN CALIFORNIA 2892**  
 THE HIGH-LEWIS NUMBER DIFFUSIVE-THERMAL INSTABILITY IN PREMIXED  
 GAS COMBUSTION AND LOW TEMPERATURE  
 03/01/2001 - 11/30/2004 FY02: \$0 Total: \$109,485  
*Prin. Invest.:* H PEARLMAN  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

## COLORADO

**NAG 5 9684 COLORADO SCHOOL OF MINES 2893**  
 LUNAR DATA ANALYSIS PROGRAM PROPOSAL: ECONOMIC EVA LUATION  
 OF POLAR REGIONS USING LUNAR PROSPECT  
 06/29/2000 - 06/30/2003 FY02: \$0 Total: \$64,000  
*Prin. Invest.:* M B DUKE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1207 COLORADO SCHOOL OF MINES 2894**  
 EXTRACTION OF VOLATILES FROM LUNAR AND MARTIAN REGOLITHS  
 03/01/2000 - 02/28/2003 FY02: \$0 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 2895**  
 A NOVEL COLLOIDAL MICROFULIDES PLATFORM FOR SPACE BORNE  
 MICRO TOTAL  
 07/27/2001 - 09/30/2004 FY02: \$0 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 2896**  
 A FUNDAMENTAL STUDY OF THE COMBUSTION SYNTHESIS OF CERAMIC-  
 METAL COMPOSITE MATERIALS UNDER MICROGRA  
 01/05/1999 - 11/11/2002 FY02: \$0 Total: \$358,750  
*Prin. Invest.:* D J MOORE  
*Tech. Officer:* GRC/S A GOKOGLU  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 8 238 COLORADO SCHOOL OF MINES 2897**  
 PROMOTE COMMERCIALY FUNDED RESEARCH AND TECH DEV. IN THE  
 FIELD OF SPACE COMBUSTION  
 02/05/2002 - 10/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* F D SCHOWENGERDT  
*Tech. Officer:* MSFC/J SAMS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 2045 COLORADO STATE UNIV 2898**  
 LARGE EDDY SIMULATION OF CIRRRUS CLOUDS  
 04/02/1998 - 10/31/2001 FY02: \$0 Total: \$142,463  
*Prin. Invest.:* W COTTON  
*Tech. Officer:* LARC/D S MCDUGAL, LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2247 COLORADO STATE UNIV 2899**  
 RETRIEVAL OF PROPERTIES OF HIGH CLOUDS FROM LITE DATA  
 10/21/1999 - 09/30/2002 FY02: \$0 Total: \$218,143  
*Prin. Invest.:* G STEPHENS  
*Tech. Officer:* LARC/IV DELNORE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

COLORADO

NASA'S UNIVERSITY PROGRAM

**NAG 1 02008**                      **COLORADO STATE UNIV**                      **2900**  
 COMPARISON OF CLOUD RESOLVING MODEL SIMULATIONS TO REMOTE SENSING DATA  
 11/19/2001 - 11/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D A RANDALL  
*Tech. Officer:* LARC/G G GIBSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 1801**                      **COLORADO STATE UNIV**                      **2901**  
 ADVANCED ELECTRIC PROPULSION RESEARCH  
 01/23/1996 - 09/30/2003                      FY02: \$0                      Total: \$205,107  
*Prin. Invest.:* P J WILBUR  
*Tech. Officer:* GRC/V K RAWLIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 4646**                      **COLORADO STATE UNIV**                      **2902**  
 TITLE: USING MULTI-SENSOR DATA TO MODEL FACTORS L IN GLOBAL ARID & SEMIARID LANDS  
 06/17/1997 - 05/31/2002                      FY02: \$0                      Total: \$2,212,780  
*Prin. Invest.:* D OJIMA  
*Tech. Officer:* GSFC/G C GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6228**                      **COLORADO STATE UNIV**                      **2903**  
 VEMAP PHASE II  
 09/11/1997 - 06/30/2001                      FY02: \$0                      Total: \$377,912  
*Prin. Invest.:* D OJIMA  
*Tech. Officer:* GSFC/J J RANSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6637**                      **COLORADO STATE UNIV**                      **2904**  
 ASSESSING THE IMPACT OF REMOTE SENSING DATA ON CLOUDINESS PREDICTION IN SHORT-TERM FORECASTS  
 11/18/1997 - 04/30/2001                      FY02: \$0                      Total: \$544,049  
*Prin. Invest.:* P L STEPHENS  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7717**                      **COLORADO STATE UNIV**                      **2905**  
 IMPROVING TRMM GV & FC GOALS USING POLARIMETRIC RADAR ANALYSES W/IN-SITU/GROUND-BASED AND AIRCRAFT P  
 10/27/1998 - 10/31/2002                      FY02: \$0                      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**                      **2906**  
 TOWARDS A MULTISENSOR APPROACH TO IMPROVE ON CURRENT TRMM RETRIEVALS OF CLOUDS AND PRECIPITATION  
 10/27/1998 - 10/31/2001                      FY02: \$0                      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**                      **2907**  
 MODELED AEROSOL OPTICAL PROPERTIES FROM MEASUREMENT-BASED MIXTURES OF CHEMICAL SPECIES-ASSESSING TH  
 11/03/1998 - 12/31/2001                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* S M KREIDENWEIS  
*Tech. Officer:* GSFC/M MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9308**                      **COLORADO STATE UNIV**                      **2908**  
 FUNDING FOR THE CLOSEOUT OF "FREEZING CHARACTERISTICS OF SOOT/SULFATE AEROSOLS IN RESPONSE TO NRA-  
 03/28/2000 - 09/30/2002                      FY02: \$0                      Total: \$73,040  
*Prin. Invest.:* D J DEMOTT  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9642**                      **COLORADO STATE UNIV**                      **2909**  
 ANALYSIS OF DATA FROM TRMM/LBA TO VALIDATE TRMM SATELLITE ALGORITHMS & MODELS  
 06/19/2000 - 11/30/2002                      FY02: \$0                      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**                      **2910**  
 USE OF TRMM DATA TO TEST AN IMPROVED PARAMETERIZATION OF STRATIFORM PRECIPITATION  
 06/20/2000 - 11/30/2003                      FY02: \$0                      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**                      **2911**  
 TRMM PRECIPITATION RADAR AND MICROPHYSICS: INTERPRETATION AND PRECIPITATION ESTIMATION  
 06/09/2000 - 11/30/2003                      FY02: \$0                      Total: \$193,239  
*Prin. Invest.:* V CHANDRASEKAR  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9665**                      **COLORADO STATE UNIV**                      **2912**  
 TRMM SOUNDING STUDIES  
 06/06/2000 - 06/14/2003                      FY02: \$0                      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**                      **2913**  
 TWO-BEAM SODIUM LIDAR OBSERVATION OF TEMPERATURE & WINDS & PASSIVE OPTICAL MEASUREMENT CLUSTER IN TH  
 10/24/2000 - 04/30/2003                      FY02: \$0                      Total: \$202,000  
*Prin. Invest.:* C SHE  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10482**                      **COLORADO STATE UNIV**                      **2914**  
 THE EFFECTS OF CLIMATE REGIME ON TRMM RETRIEVALS  
 03/01/2001 - 05/31/2003                      FY02: \$0                      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**                      **2915**  
 AN INTEGRATED MULTI-SCALE INVESTIGATION OF GRASSLAND MANAGEMENT: IMPLICATIONS FOR CARBON CYCLING  
 03/22/2001 - 02/28/2004                      FY02: \$0                      Total: \$115,866  
*Prin. Invest.:* R CONANT  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



**NAG 5 11010**                      **COLORADO STATE UNIV**                      **2916**  
OBSERVATIONAL, THEORETICAL, AND MODELING RESEARCH IN SUPPORT  
OF CAMEX  
06/06/2001 - 06/14/2004                      FY02: \$0                      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**                      **2917**  
VALIDATE SATELLITE MEASUREMENTS OF UV RADIATION BY TOMS  
06/21/2001 - 06/14/2003                      FY02: \$0                      Total: \$69,728  
*Prin. Invest.:* J SLUSSER  
*Tech. Officer:* GSFC/J R HERMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11073**                      **COLORADO STATE UNIV**                      **2918**  
LAND-USE CHANGE IN TEMPERATE EAST ASIA: LAND COVER CHANGES  
IMPACTS ON CARBON FLUXES AND LAND PRODUCT  
07/19/2001 - 08/14/2004                      FY02: \$0                      Total: \$43,225  
*Prin. Invest.:* D OJIMA  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11109**                      **COLORADO STATE UNIV**                      **2919**  
VALIDATION AND ENHANCEMENT OF AMSR-E CLOUD AND PRECIPITATION  
PRODUCTS AQUA-0070-0047  
07/13/2001 - 08/31/2004                      FY02: \$0                      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**                      **2920**  
ENERGY & WATER CYCLES WITHIN HURRICANES DETERMINED FROM  
HIGH-RESOLUTIONS SIMULATIONS  
08/08/2001 - 08/14/2004                      FY02: \$0                      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**                      **2921**  
THE EXTENSION OF THE TRMM MICROWAVE RAINFALL AND VERTICAL  
STRUCTURE ALGORITHM TO OTHER RADIOMET  
08/07/2001 - 08/14/2004                      FY02: \$0                      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**                      **2922**  
MARS SOIL MECHANICS INVESTIGATION  
08/20/2001 - 12/31/2002                      FY02: \$0                      Total: \$59,200  
*Prin. Invest.:* H PERKON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11370**                      **COLORADO STATE UNIV**                      **2923**  
ENSEMBLE SIMULATIONS OF REGIONAL CLIMATE INCORPORATING EX-  
PLICIT VEGETATION DYNAMICS & TERRESTRIAL  
10/18/2001 - 10/31/2004                      FY02: \$114,247                      Total: \$114,247  
*Prin. Invest.:* R A PIELKE  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11475**                      **COLORADO STATE UNIV**                      **2924**  
TOWARD UNDERSTANDING THE LIFE-CYCLE OF TROPICAL CIRRUS  
12/19/2001 - 12/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G L STEPHENS  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11476**                      **COLORADO STATE UNIV**                      **2925**  
UPPER TROPOSPHERIC ICE NUCLEI MEASUREMENTS IN CRYSTAL-FACE  
12/19/2001 - 12/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P J DEMOTT  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11507**                      **COLORADO STATE UNIV**                      **2926**  
CUMULONIMBUS/CIRRUS INTERACTIONS IN THE SUB-TROPIC S  
01/03/2002 - 12/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W R COTTON  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11710**                      **COLORADO STATE UNIV**                      **2927**  
MULTI-SCALE COVERGENCE OF COLD-LAND PROCESS REPRESENTATION  
IN LAND-SURFACE MODELS, MICROWAVE R  
02/06/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G LISTON  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11737**                      **COLORADO STATE UNIV**                      **2928**  
VARIATIONS OF CAPE ON DECADAL TIME SCALES  
02/12/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D RANDALL  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11816**                      **COLORADO STATE UNIV**                      **2929**  
RISK MITIGATION STUDIES FOR EVOLVING DATA AND INFORMATION  
SYSTEMS RELATED TO RAINFALL MISSION  
03/08/2002 - 03/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C KUMMEROW  
*Tech. Officer:* GSFC/E F STOCKER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 12105**                      **COLORADO STATE UNIV**                      **2930**  
FELLOWSHIPS FOR GRADUATE STUDENTS AS PART OF THE CENTER FOR  
EARTH ATMOSPHERE STUDIES  
05/06/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C KUMMEROW  
*Tech. Officer:* GSFC/V V SALOMONSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 12273**                      **COLORADO STATE UNIV**                      **2931**  
RAINFALL AND CONVECTIVE RAIN SYSTEM STRUCTURE DEDUCED FROM  
AMSR OBSERVATIONS  
06/07/2002 - 06/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C D KUMMEROW  
*Tech. Officer:* GSFC/R ADLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

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**NAG 5 12275**                      **COLORADO STATE UNIV**                      **2932**  
 CIRA DEVELOPMENT OF A PARALLEL COUPLED OCEAN-ICE F ORECAST  
 MODEL  
 06/14/2002 - 09/14/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C MATSUMOTO  
*Tech. Officer:* GSFC/S HAKKINEN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 8 1801**                      **COLORADO STATE UNIV**                      **2933**  
 MINI-MAGNETOSPHERIC PLASMA PROPULSION FOR PLANT- ETARY EXPLORATION  
 04/25/2001 - 02/14/2004                      FY02: \$0                      Total: \$101,101  
*Prin. Invest.:* P J WILBUR  
*Tech. Officer:* GRC/IV K RAWLIN  
*CASE Category:* 13 - PHYSICS

**NAG10 234**                      **COLORADO STATE UNIV**                      **2934**  
 GRAVITY INDUCED CHANGES IN GENE EXPRESSION  
 09/22/1997 - 12/31/2000                      FY02: \$0                      Total: \$353,340  
*Prin. Invest.:* A N REDDY  
*Tech. Officer:* KSC/W M KNOTT  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG13 02005**                      **COLORADO STATE UNIV**                      **2935**  
 APPLICATION OF REMOTELY SENSED IMAGERY TO ASSESING PROBABILITY  
 TIES AND CARBON CONSEQUENCES OF FIRE  
 12/03/2001 - 12/02/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* I BURKE  
*Tech. Officer:* SSC/C DEL CASTILLO  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 1 98125**                      **COLORADO STATE UNIV**                      **2936**  
 CLOUDS AND THE EARTH'S ENERGY SYSTEM (CERES) SCIENTIFIC INVESTIGATION  
 10/28/1998 - 10/31/2002                      FY02: \$53,864                      Total: \$748,271  
*Prin. Invest.:* D A  
*Tech. Officer:* LARC/B A WIELICKI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 99103**                      **COLORADO STATE UNIV**                      **2937**  
 ALGORITHM AND INSTRUMENT SUPPORT ACTIVITIES FOR PICASSO-CENA  
 05/17/1999 - 05/16/2003                      FY02: \$0                      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**                      **2938**  
 CLOUDSAT MISSION AS A PART OF EARTH SYSTEM SCIENCE PATHFINDER  
 (ESSP) PROJECT.  
 12/17/1999 - 03/31/2005                      FY02: \$0                      Total: \$1,126,327  
*Prin. Invest.:* G STEPHENS  
*Tech. Officer:* GSFC/D LEWIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 8 97082**                      **COLORADO STATE UNIV**                      **2939**  
 A STUDY OF THE ROLE OF CLOUDS IN THE RELATIONSHIP BETWEEN LAND  
 USE/LAND COVER AND THE CLIMATE  
 11/21/1996 - 03/20/2001                      FY02: \$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**                      **2940**  
 AN EXTENDED ANALYSIS OF SCIENCE OUTREACH PROGRAMS IN THE  
 SPACE LIFE SCIENCES IMPLEMENTED NASA IN PAR  
 03/16/1999 - 01/31/2003                      FY02: \$0                      Total: \$1,881,516  
*Prin. Invest.:* G VOGT  
*Tech. Officer:* ARC/S POTTER, ARC/M M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1268**                      **COLORADO STATE UNIV**                      **2941**  
 NASA WORKSHOP: WHEN ECOLOGIES COLLIDE? PLANETARY PROTECTION  
 ISSUES IN THE HUMAN EXPOLARTION OF MARS  
 05/31/2001 - 02/28/2002                      FY02: \$0                      Total: \$53,050  
*Prin. Invest.:* M CRISWELL  
*Tech. Officer:* ARC/M FONDA, ARC/M L FONDA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 5 284**                      **COLORADO STATE UNIV**                      **2942**  
 SPATIAL INTEGRATION OF REGIONAL CARBON BALANCE IN AMAZONIA  
 06/05/1998 - 12/31/2002                      FY02: \$0                      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**                      **2943**  
 JOINT RESEARCH STUDIES ON EARTH-ATMOSPHERIC PROBLE MS  
 06/05/1998 - 03/31/2002                      FY02: \$0                      Total: \$992,434  
*Prin. Invest.:* G L STEPHENS  
*Tech. Officer:* GSFC/A J NEGRI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 621**                      **COLORADO STATE UNIV**                      **2944**  
 GLOBAL AND REGIONAL CARBON FLUX ESTIMATION USING A TMSOPHERIC  
 CO2 MEASUREMENTS FROM SPACEBORN  
 01/09/2002 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A DENNING  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30218**                      **COLORADO STATE UNIV**                      **2945**  
 LIGHTNING & RADAR OBSERVATIONS FROM GROUND-BASED & SPACE-  
 BORNE PLATFORMS: APPLICATIONS FOR TRMM  
 08/24/1999 - 02/28/2003                      FY02: \$0                      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**                      **2946**  
 THE RESPONSE OF THE NORTH AMERICAN MONSON TO BOUND ARY AND  
 REGIONAL FORCING MECHANISMS AS SIMILAR  
 08/21/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* R PIELKE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30421**                      **COLORADO STATE UNIV**                      **2947**  
 SPACEBORNE OBSERVATIONS OF PRECIPITATION USING NAS A/TRMM AND  
 GPM MISSION(STUDENT: KONRAD GOJARA)  
 09/07/2001 - 08/31/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* V CHANDRAEKAR  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30438**                    **COLORADO STATE UNIV**                    **2948**  
 ENVIRONMENTAL AND LAND-USE CONTROLS OF CHEATGRASS INVASION  
 (STUDENT: JOHN BRADFORD)  
 08/20/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* W LAUENROTH  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30458**                    **COLORADO STATE UNIV**                    **2949**  
 DETERMINATION OF THE ROLS OF TROPICAL THIN CIRRUS CLOUDS IN  
 CLIMATE FEEDBACKS THROUGH AN IMPROVE  
 08/21/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G STEPHENS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50164**                    **COLORADO STATE UNIV**                    **2950**  
 PROPERTIES OF COMET MANTLE DUST  
 06/03/1999 - 06/30/2002                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* J NELSON  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 49**                    **COLORADO STATE UNIV**                    **2951**  
 EVALUATION OF GRAVITY-INDEPENDENT CONSTANT FORCE RESISTIVE  
 EXERCISE UNIT  
 06/29/2000 - 09/30/2001                    FY02: -\$340                    Total: \$21,646  
*Prin. Invest.:* S P JAMES  
*Tech. Officer:* JSC/M C GREENNISEN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 2165**                    **UNIV OF COLORADO - BOULDER**                    **2952**  
 COMPARISONS OF THREE DIMENSIONAL NUMERICAL SIMULATIONS OF  
 AMBIENT AND VOLOCANIC STRATOSPHERIC  
 04/28/1999 - 11/30/2002                    FY02: \$0                    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**                    **2953**  
 IMPACT OF DESCENDING POLAR MESOSPHERIC NOX ON STRATOSPHERIC  
 OZONE, NRA-98-OES-04  
 04/27/1999 - 01/31/2002                    FY02: \$0                    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 01053**                    **UNIV OF COLORADO - BOULDER**                    **2954**  
 APPLICATION OF LES TO UNDERSTANDING AND PARAMET- ERIZING THE  
 ARCTIC CLOUDY BOUNDARY LAYER  
 03/30/2001 - 04/30/2002                    FY02: \$0                    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**                    **2955**  
 ADVANCED CROSS ENTERPRISE TECHNOLOGY DEVELOPMENT FOR NASA  
 MISSIONS  
 06/07/2001 - 01/31/2004                    FY02: \$0                    Total: \$271,000  
*Prin. Invest.:* A BETY  
*Tech. Officer:* LARC/C MOORE  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 01081**                    **UNIV OF COLORADO - BOULDER**                    **2956**  
 ESTIMATES OF NUMBER OF YEARS TO DETECT FUTURE CHANGES IN  
 CLOUDS AND RADIATION  
 05/15/2001 - 04/30/2003                    FY02: \$0                    Total: \$65,414  
*Prin. Invest.:* E C  
*Tech. Officer:* LARC/B A WIELICKI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 1 02009**                    **UNIV OF COLORADO - BOULDER**                    **2957**  
 NUM:INTEGRATED MEMBRANOUS-MICROELEMENT STRUCTURES TECH-  
 NOLOGY  
 11/26/2001 - 11/25/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* K C PARK  
*Tech. Officer:* LARC/W K BELVIN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 02046**                    **UNIV OF COLORADO - BOULDER**                    **2958**  
 TERRAIN AWARENESS FOR SMALL AIRCRAFT USING GPS BISTATIC RADAR,  
 DIGITAL ELEVATION MAPS, AND GIS  
 01/31/2002 - 01/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* C AXELROD  
*Tech. Officer:* LARC/K SUTTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02079**                    **UNIV OF COLORADO - BOULDER**                    **2959**  
 ELECTRONICALLY ACTUATED ARTIFICIAL MUSCLE COMPOSED OF A NEM-  
 ATIC LIQUID CRYSTAL ELASTOMER  
 04/12/2002 - 05/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D M WALBA  
*Tech. Officer:* LARC/D L THOMSEN  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 02116**                    **UNIV OF COLORADO - BOULDER**                    **2960**  
 AIRFRAME NOISE MODELING AND CONTROL  
 09/30/2002 - 09/30/2006                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* O V VASILYEV  
*Tech. Officer:* LARC/M R KHORRANI, LARC/C L STREETT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02118**                    **UNIV OF COLORADO - BOULDER**                    **2961**  
 SUPERSONIC AIRCRAFT SHAPING TECHNOLOGY FOR A CONST RAINED  
 SHOCK PRESSURE RISE  
 09/30/2002 - 09/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* C FARHAT, K MAUTE, BARGROW  
*Tech. Officer:* LARC/P G COEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1124**                    **UNIV OF COLORADO - BOULDER**                    **2962**  
 MEASUREMENTS OF LONG LIVED TRACE GASES FROM COMMERCIAL  
 AIRCRAFT PLATFORMS: INSTRUMENT DEVELOPMENT  
 04/08/1997 - 02/28/2002                    FY02: \$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 1307**                    **UNIV OF COLORADO - BOULDER**                    **2963**  
 IN SITU MEASUREMENTS OF HALOGEN OXIDES FROM THE DC -8 FOR  
 SOLVE  
 03/19/1999 - 03/31/2002                    FY02: \$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 2964**  
 THEORETICAL STUDIES OF STRATOSPHERIC CLOUDS & AERO SOLS IN  
 SUPPORT OF SOLVE  
 04/01/1999 - 03/31/2002 FY02: \$0 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 2965**  
 APPLICATION OF AEROSONDE, CLUSTERS TO EVALUATING T HE MESOC-  
 SALE VARIABILITY IN TROPICAL STORMS  
 09/28/2000 - 03/14/2001 FY02: \$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 2966**  
 APPLICATIONS OF THE AEROSONDE TO CAMEX-4  
 07/17/2001 - 06/30/2002 FY02: \$0 Total: \$566,807  
*Prin. Invest.:* G J HOLLAND  
*Tech. Officer:* ARC/C P SCOFIELD, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1561 UNIV OF COLORADO - BOULDER 2967**  
 STRESSA DN COGNITION: A COGNITIVE PYSCHOLOGICAL PE RSPECTIVE  
 05/24/2002 - 11/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* L E BOURNE  
*Tech. Officer:* ARC/I BARSHI, ARC/R DISMUKES  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 2 1575 UNIV OF COLORADO - BOULDER 2968**  
 BALLOON BORNE SOUNDINGS OF WATER VAPOR OZONE AND T EMPERA-  
 TURE IN THE UPPER TROPOSPEREAND LOWER STRAT  
 08/06/2002 - 11/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* H VOEMEL, S J OLTMANS  
*Tech. Officer:* ARC/C P SCOFIELD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 2116 UNIV OF COLORADO - BOULDER 2969**  
 THERMOCAPILLARY-INDUCED PHASE SEPARATION OF DISPER SED SYS-  
 TEMS WITH COALESCENCE  
 01/28/1998 - 12/31/2002 FY02: \$0 Total: \$281,250  
*Prin. Invest.:* R H DAVIS  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 2136 UNIV OF COLORADO - BOULDER 2970**  
 DUSTY PLASMA DYNAMICS NEAR SURFACES IN SPACE. DUSTY PLASMA  
 DYNAMICS NEAR SURFACESIN SAPCE.  
 03/05/1998 - 09/05/2002 FY02: \$0 Total: \$355,000  
*Prin. Invest.:* J E COLWELL, S ROBERTSON, M HORANYI  
*Tech. Officer:* GRC/H K NAHRA  
*CASE Category:* 13 - PHYSICS

**NAG 3 2220 UNIV OF COLORADO - BOULDER 2971**  
 COMBUSTION OF METALS IN REDUCED-GRAVITY AND EXTRAT ERRES-  
 TRIAL ENVIRONMENTS  
 12/29/1998 - 11/11/2002 FY02: \$0 Total: \$303,001  
*Prin. Invest.:* M C BRANCH  
*Tech. Officer:* GRC/R FRIEDMAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2267 UNIV OF COLORADO - BOULDER 2972**  
 COLLISIONS INTO DUST EXPERIMENT II COLLISIONS INTO DUST EXPERI-  
 MENT II  
 05/14/1999 - 04/30/2003 FY02: \$0 Total: \$113,579  
*Prin. Invest.:* J E COLWELL  
*Tech. Officer:* GRC/B J MOTIL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2400 UNIV OF COLORADO - BOULDER 2973**  
 PHYSICS OF REGOLITH IMPACTS IN MICROGRAVITY EXPERI MENT (PRIME)  
 04/19/2000 - 11/30/2003 FY02: \$0 Total: \$135,500  
*Prin. Invest.:* J E COLWELL  
*Tech. Officer:* GRC/B J MOTIL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2402 UNIV OF COLORADO - BOULDER 2974**  
 STRATIFIED TAYLOR-COUPETTE FLOW WITH RADIAL BUOYANC Y  
 04/19/2000 - 11/30/2003 FY02: \$0 Total: \$125,000  
*Prin. Invest.:* J E HART  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2457 UNIV OF COLORADO - BOULDER 2975**  
 STRUCTURE AND DYNAMICS OF FREELY SUSPENDED LIQUID CRYSTALS  
 06/07/2000 - 11/30/2003 FY02: \$0 Total: \$190,153  
*Prin. Invest.:* N A CLARK  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2587 UNIV OF COLORADO - BOULDER 2976**  
 MILTI-BEAM ANTENNA ARRAYS FOR SATELITE COMMUNICATI ONS  
 04/04/2001 - 04/14/2003 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* Z POPOVIC  
*Tech. Officer:* GRC/R Q LEE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2643 UNIV OF COLORADO - BOULDER 2977**  
 VIRTUAL MISSION OPERATIONS USING INTERNET PROTOCOL S  
 08/23/2001 - 07/31/2004 FY02: \$0 Total: \$38,000  
*Prin. Invest.:* E HANSEN  
*Tech. Officer:* GRC/D CAREK  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2651 UNIV OF COLORADO - BOULDER 2978**  
 NEW MATERIALS FOR PROTON-CONDUCTING MEMBRANES NEW MATERI-  
 ALS FOR PROTON-CONDUCTINGMEMBRANES  
 09/27/2001 - 08/31/2002 FY02: \$0 Total: \$20,000  
*Prin. Invest.:* J MICHL  
*Tech. Officer:* GRC/P L LOYSELLE  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2716 UNIV OF COLORADO - BOULDER 2979**  
 DYNAMICS OF CHARGED DUST NEAR SURFACES IN SPACE DYNAMICS OF  
 CHARGED DUST NEAR SURFACES IN SPACE  
 02/27/2002 - 11/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D E COLWELL  
*Tech. Officer:* GRC/B J MOTIL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2783 UNIV OF COLORADO - BOULDER 2980**  
 MASS AND MOMENTUM TRANSPORT IN CELL SUSPENSION CUL TURES  
 05/24/2002 - 09/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* P KLAUS  
*Tech. Officer:* GRC/D S NELSON  
*CASE Category:* 49 - ENGINEERING, OTHER

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<p><b>NAG 5 3226</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2981</b>  THE FUNDAMENTAL PHYSICAL PROCESSES PRODUCING AND CONTROL-  LING STELLAR CORONAL/TRANSITION  05/07/1996 - 04/30/2002                    FY02: \$0                    Total: \$553,000  <i>Prin. Invest.:</i> T A AYRES  <i>Tech. Officer:</i> GSFC/D WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 4095</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2989</b>  EVENT RATE FOR LISA GRAVITATIONAL WAVE SIGNALS FRO BLACK HOLE  COALESCENCES  03/12/1997 - 03/31/2002                    FY02: \$0                    Total: \$192,500  <i>Prin. Invest.:</i> D L BENDER  <i>Tech. Officer:</i> GSFC/H HASAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 3394</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2982</b>  CHARACTERIZING AND QUANTIFYING THE X-RAY VARIABLE SKY  09/06/1996 - 09/14/2003                    FY02: \$0                    Total: \$205,188  <i>Prin. Invest.:</i> G S STRINGFELLOW  <i>Tech. Officer:</i> GSFC/D WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 4248</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2990</b>  GREENLAND ICE SHEET CLIMATOLOGY AND SURFACE ENERGY GREEN-  LAND CLIMATE NETWORK (GCNET)  03/26/1997 - 03/31/2001                    FY02: \$0                    Total: \$853,239  <i>Prin. Invest.:</i> D STEFFEN  <i>Tech. Officer:</i> GSFC/R THOMAS  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 3437</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2983</b>  LAND AND LAND-USE CHANGE IN THE CLIMATE SENSITIVE HIGH PLAINS:  AN AUTOMATED APPROACH WITH LANDSAT  10/07/1996 - 12/31/2001                    FY02: \$0                    Total: \$863,197  <i>Prin. Invest.:</i> A GOETZ  <i>Tech. Officer:</i> GSFC/D L WILLIAMS  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 4343</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2991</b>  DUST PLASMA INTERACTION  04/17/1997 - 05/14/2001                    FY02: \$0                    Total: \$236,500  <i>Prin. Invest.:</i> D HORANYI  <i>Tech. Officer:</i> GSFC/J BOHLIN  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 3438</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2984</b>  ENHANCED ANTARCTIC RESEARCH WITH LANDSAT: ICE SHEE T DYNAM-  ICS, HISTORY AND CARTOGRAPHY  10/07/1996 - 06/30/2002                    FY02: \$0                    Total: \$263,523  <i>Prin. Invest.:</i> T SCAMBOS  <i>Tech. Officer:</i> GSFC/D L WILLIAMS  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 4440</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2992</b>  RADARSAT ANTARCTIC MAPPING PROJECT  05/13/1997 - 06/30/2002                    FY02: \$0                    Total: \$50,939  <i>Prin. Invest.:</i> R G BARRY  <i>Tech. Officer:</i> GSFC/S GOGINENI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 3794</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2985</b>  LIQUID CRYSTAL FOCAL-PLANE SHUTTERS  03/25/1997 - 07/31/2002                    FY02: \$0                    Total: \$58,941  <i>Prin. Invest.:</i> P T STOCKE  <i>Tech. Officer:</i> GSFC/H HASAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 4467</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2993</b>  NATURAL OSCILLATIONS OF THE THERMOSPHERE-IONOSPHER  05/27/1997 - 04/30/2002                    FY02: \$0                    Total: \$271,054  <i>Prin. Invest.:</i> P FORBES  <i>Tech. Officer:</i> GSFC/M MELLOTT  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 3949</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2986</b>  LOWER IONOSPHERE THERMOSPHERE EXPLORER  02/21/1997 - 12/31/2001                    FY02: \$0                    Total: \$199,777  <i>Prin. Invest.:</i> D C SOLOMON  <i>Tech. Officer:</i> GSFC/R HOWARD  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 5 4804</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2994</b>  A UNIFIED ANALYSIS OF NON-RADIATIVE HEATING AND WI  07/30/1997 - 07/31/2003                    FY02: \$0                    Total: \$497,100  <i>Prin. Invest.:</i> G HARPER  <i>Tech. Officer:</i> GSFC/D WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 3967</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2987</b>  INTEGRATED ANALYSIS OF COLUMELLA CELL STRUCTURE AN  03/03/1997 - 05/31/2002                    FY02: \$0                    Total: \$499,236  <i>Prin. Invest.:</i> A STAEHELIN  <i>Tech. Officer:</i> GSFC/M AVERNER  <i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER</p>	<p><b>NAG 5 4918</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2995</b>  PENETRATIVE DYNAMICS OF THE SOLAR INTERIOR  07/07/1997 - 11/30/2000                    FY02: \$0                    Total: \$261,809  <i>Prin. Invest.:</i> D JULIEN  <i>Tech. Officer:</i> GSFC/W G WAGNER  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 4063</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2988</b>  ASTROPHYSICS AT THE DISK-HALO INTERFACE  03/18/1997 - 03/31/2002                    FY02: \$0                    Total: \$293,400  <i>Prin. Invest.:</i> M J SHULL  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 5027</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>2996</b>  ENERGY TRANSFER IN THE THERMOSPHERE AND MESOSPHERE FUNDING  FOR A ONE-YEAR EFFORT IN BASIC RESEARCH  03/03/1995 - 02/29/2004                    FY02: \$0                    Total: \$383,148  <i>Prin. Invest.:</i> S SOLOMON  <i>Tech. Officer:</i> GSFC/L EARLY  <i>CASE Category:</i> 13 - PHYSICS</p>

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**NAG 5 5028**                      **UNIV OF COLORADO - BOULDER**                      **2997**  
 TIDES, PLANETARY WAVES, AND EDDY FORCING OF THE MEAN MLT  
 CIRCULATION FOR THE TIMED SCIENCE...  
 03/03/1995 - 03/05/2005                      FY02: \$0                      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**                      **2998**  
 HIGH RESOLUTION SPECTROSCOPY IN THE FAR AND EXTREME ULTRA-  
 VIOLET  
 12/02/1996 - 05/31/2003                      FY02: \$0                      Total: \$2,325,978  
*Prin. Invest.:* E WILKINSON  
*Tech. Officer:* GSFC/W JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5274**                      **UNIV OF COLORADO - BOULDER**                      **2999**  
 FUNDING FOR PHASE 1 AWARD OF THE OWLS/MARE PROJECT UNES  
 06/21/2000 - 04/13/2006                      FY02: \$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**                      **3000**  
 YEAR 1 OF A 3 YEAR GRANT IN BASIC SCIENTIFIC RESEARCH WITH U OF  
 COLORADO FOR X-RAY  
 04/18/2001 - 12/31/2004                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* D CASH  
*Tech. Officer:* GSFC/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6048**                      **UNIV OF COLORADO - BOULDER**                      **3001**  
 LATE STAGES OF ACCRETION OF URANUS AND NEPTUNE  
 07/25/1997 - 06/30/2002                      FY02: \$0                      Total: \$164,470  
*Prin. Invest.:* D STEWART  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6051**                      **UNIV OF COLORADO - BOULDER**                      **3002**  
 ASSESSING FUTURE STABILITY OF US HIGH PLAINS LANDC PROCESS  
 MODELING WITH LANDSAT IN SITU MODERN, AND  
 07/28/1997 - 09/30/2001                      FY02: \$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**                      **3003**  
 QUANTIFYING GRASSLAND-TO-WOODLAND TRANSITIONS AND CARBON  
 AND NITROGEN DYNAMICS IN THE SOUTHWEST UNIT  
 09/08/1997 - 01/31/2002                      FY02: \$0                      Total: \$548,190  
*Prin. Invest.:* D A WESSMAN  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6337**                      **UNIV OF COLORADO - BOULDER**                      **3004**  
 X-RAY REPROCESSING IN ACTIVE GALACTIC NUCLEI  
 10/30/1997 - 06/30/2004                      FY02: \$0                      Total: \$421,000  
*Prin. Invest.:* M BEGELMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6462**                      **UNIV OF COLORADO - BOULDER**                      **3005**  
 VALIDATION STUDIES AND SENSITIVITY ANALYSES FOR RE TRIEVALS OF  
 SNOW ALBEDO & SNOWCOVERED AREA FROM  
 10/14/1997 - 09/30/2003                      FY02: \$0                      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**                      **3006**  
 IMAGING INTERPLANETARY HYDROGEN WITH ULYSSES  
 11/13/1997 - 10/31/2001                      FY02: \$0                      Total: \$120,000  
*Prin. Invest.:* D PRYOR  
*Tech. Officer:* GSFC/L LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6521**                      **UNIV OF COLORADO - BOULDER**                      **3007**  
 IMPROVING THE ACCURACY OF SATELLITE SEA SURFACE TEMPERATURE  
 MEASUREMENTS BY EXPLICITLY ACCOUNTING F  
 12/05/1997 - 09/30/2001                      FY02: \$0                      Total: \$526,369  
*Prin. Invest.:* D EMERY  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6629**                      **UNIV OF COLORADO - BOULDER**                      **3008**  
 STUDIES OF TROPICAL/MID-LATITUDE EXCHANGE USING UARS OBSER-  
 VATIONS  
 11/18/1997 - 11/30/2001                      FY02: \$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**                      **3009**  
 PASSIVE MICROWAVE SNOW COVER ALGORITHM INTERCOMPARISON  
 AND VALIDATION  
 11/18/1997 - 10/31/2001                      FY02: \$0                      Total: \$307,162  
*Prin. Invest.:* D L ARMSTRONG  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6683**                      **UNIV OF COLORADO - BOULDER**                      **3010**  
 MODELING AND ANALYSIS OF UARS DATA IN THE STRATOSPHERE,  
 MESOSPHERE, AND LOWER THERMOSPHERE  
 12/08/1997 - 11/30/2001                      FY02: \$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**                      **3011**  
 LABORATORY STUDIES OF THE VISIBLE SPECTROSCOPY AND CHEMISTRY  
 OF POLYCYCLIC AROMATIC HYDROCARBON (PA  
 12/24/1997 - 12/31/2002                      FY02: \$0                      Total: \$494,662  
*Prin. Invest.:* T P SNOW  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6791**                      **UNIV OF COLORADO - BOULDER**                      **3012**  
 EXTRACTION OF TIDES AND PLANETARY WAVES FROM SATELLITE  
 OBSERVATIONS  
 02/17/1998 - 02/28/2002                      FY02: \$0                      Total: \$142,043  
*Prin. Invest.:* S PALO  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 6820</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3013</b>  ARTIC REGIONAL SEA-ICE ANOMALIES: A DIAGNOSIS OF I CE-  ATMOSPHERE OCEAN INTERACTIONS AND LINKAGES TO  01/09/1998 - 12/31/2001                    FY02: \$0                    Total: \$257,503  <i>Prin. Invest.:</i> A LYNCH  <i>Tech. Officer:</i> GSFC/S GOGINENI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 7128</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3021</b>  PRECISION MEASUREMENT OF LARGE SCALE STRUCTURE-ATP  03/24/1998 - 02/14/2002                    FY02: \$0                    Total: \$207,289  <i>Prin. Invest.:</i> A J HAMILTON  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 6850</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3014</b>  UARS - SOLSTICE  01/12/1998 - 12/14/2001                    FY02: \$0                    Total: \$723,000  <i>Prin. Invest.:</i> D ROTTMAN  <i>Tech. Officer:</i> GSFC/C JACKMAN  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 7223</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3022</b>  A SEARCH FOR CORONAL EMISSION AT THE BOTTOM OF THE MAIN-  SEQUENCE  04/09/1998 - 04/14/2003                    FY02: \$0                    Total: \$9,920  <i>Prin. Invest.:</i> G S STRINGFELLOW  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 6875</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3015</b>  ABSOLUTE GRAVITY/GPS MEASUREMENTS IN GREENLAND  02/17/1998 - 12/31/2001                    FY02: \$0                    Total: \$57,574  <i>Prin. Invest.:</i> J WAHR  <i>Tech. Officer:</i> GSFC/S GOGINENI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 7262</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3023</b>  THE INTERGALACTIC MEDIUM AND QSO ABSORPTION SYSTEM S_ (LTSA -  NEW)  04/28/1998 - 04/30/2002                    FY02: \$0                    Total: \$427,900  <i>Prin. Invest.:</i> J SHULL  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 6880</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3016</b>  LASER INTERFEROMETRY TECHNIQUES FOR ACCURATE MEASUREMENT  OF DISTANCE CHANGES BETWEEN WIDELY SEPA  02/17/1998 - 12/31/2000                    FY02: \$0                    Total: \$285,000  <i>Prin. Invest.:</i> R T STEBBINS  <i>Tech. Officer:</i> GSFC/P CRANE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 7329</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3024</b>  XTE PROPOSAL - RXTE OBSERVATIONS OF M87: INVESTIGATING THE  NON-THERMAL CONTINUUM  04/24/1998 - 04/14/2001                    FY02: \$0                    Total: \$8,000  <i>Prin. Invest.:</i> C REYNOLDS  <i>Tech. Officer:</i> GSFC/J SWANK  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 6900</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3017</b>  INVESTIGATIONS OF CLOUDS AND AEROSOLS ON MARS AND VENUS  01/21/1998 - 03/31/2003                    FY02: \$0                    Total: \$300,239  <i>Prin. Invest.:</i> O TOON  <i>Tech. Officer:</i> GSFC/R BEEBE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 7449</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3025</b>  RELATIONSHIPS BETWEEN INTERSTELLAR AND INTERPLANETARY  GRAINS  07/02/1998 - 06/30/2002                    FY02: \$0                    Total: \$83,500  <i>Prin. Invest.:</i> T P SNOW  <i>Tech. Officer:</i> HQ/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 6936</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3018</b>  THE EVOLUTION AND X-RAY MORPHOLOGY OF DISTANT CLUSTERS OF  GALAXIES  02/04/1998 - 02/14/2002                    FY02: \$0                    Total: \$80,000  <i>Prin. Invest.:</i> J T STOCKE  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 7465</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3026</b>  NARROW BAND IMAGING WITH HOLOGRAPHIC TELESCOPES  11/25/1998 - 12/31/2002                    FY02: \$0                    Total: \$182,810  <i>Prin. Invest.:</i> D WILKINSON  <i>Tech. Officer:</i> GSFC/H HASAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 6984</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3019</b>  MEDIUM ENERGY PARTICLE PRECIPITATION EFFECTS ON THE MESO-  SPHERE AND LOWER THERMOSPHERE  02/27/1998 - 03/31/2002                    FY02: \$0                    Total: \$229,484  <i>Prin. Invest.:</i> M CODRESCU  <i>Tech. Officer:</i> GSFC/M MELLOTT  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 7543</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3027</b>  INVESTIGATING DOWNSCALING METHODS AND EVALUATING CLIMATE  MODELS FOR USE IN ESTIMATING REGIONAL WATER  06/23/1998 - 07/31/2003                    FY02: \$0                    Total: \$270,000  <i>Prin. Invest.:</i> A FREI  <i>Tech. Officer:</i> GSFC/E T ENGMAN  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 7088</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3020</b>  MHD SIMULATIONS OF THE COUPLING BETWEEN ION AND JUPITER  02/23/1998 - 03/31/2002                    FY02: \$0                    Total: \$199,346  <i>Prin. Invest.:</i> F BAGENAL  <i>Tech. Officer:</i> GSFC/D EVANS  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 7638</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3028</b>  INTERFEROMETRIC TECHNIQUES FOR GRAVITATIONAL WAVE DETECTION  IN SPACE  12/08/1998 - 06/30/2002                    FY02: \$0                    Total: \$138,000  <i>Prin. Invest.:</i> D BENDER  <i>Tech. Officer:</i> GSFC/H HASAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>

**NAG 5 7652**                    **UNIV OF COLORADO - BOULDER**                    **3029**  
 AN INVESTIGATION OF THE EFFECT OF PARTICLE IONIZATION ON THE  
 EARTH'S MIDDLE ATMOSPHERE AND ITS R  
 08/25/1998 - 09/30/2001                    FY02: \$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**                    **3030**  
 CLOUD STRUCTURE RECONSTRUCTION AND SHORTWAVE RADIATIVE  
 TRANSFER MODELING FOR ARMYEAR 1 OF A 3 YEAR  
 09/17/1998 - 02/28/2002                    FY02: \$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**                    **3031**  
 FUNDING FOR 'TEMPORAL VARIATIONS OF THE GEOPOTENTIAL' (SENH98-  
 0102)  
 09/23/1998 - 09/30/2003                    FY02: \$0                    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**                    **3032**  
 THE DISK WIND MODEL OF THE BROAD LINE REGIONS IN ACTIVE  
 GALACTIC NUCLEI AND CATAclysmic VARI  
 09/23/1998 - 09/30/2002                    FY02: \$0                    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**                    **3033**  
 MODEL PREDICTIONS OF INTERACTIONS BETWEEN SOLAR AND ANTHRO-  
 POGENIC PERTURBATIONS IN THE EARTH'  
 09/23/1998 - 09/30/2001                    FY02: \$0                    Total: \$62,000  
*Prin. Invest.:* D RUSCH  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7760**                    **UNIV OF COLORADO - BOULDER**                    **3034**  
 CHARACTERIZING THE SIMPLE COAST ICE STREAM SYSTEM USING  
 SATELLITE IMAGES, IMPROVED TOPOGRAPHY, AND IN  
 12/21/1998 - 12/31/2002                    FY02: \$0                    Total: \$119,876  
*Prin. Invest.:* T A SCAMBOS  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 7784**                    **UNIV OF COLORADO - BOULDER**                    **3035**  
 SOLAR MESOSPHERE EXPLORER MEASUREMENTS OF EL CHICHON  
 AEROSOLS  
 11/09/1998 - 10/31/2001                    FY02: \$0                    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**                    **3036**  
 STUDY OF ANOMALOUS VARIATION OF THE TOTAL SOLAR IR RADIANCE AT  
 THE BEGINNING OF SOLAR CYCLE 23  
 12/16/1998 - 12/14/2001                    FY02: \$0                    Total: \$125,020  
*Prin. Invest.:* G DE TOMA  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7996**                    **UNIV OF COLORADO - BOULDER**                    **3037**  
 GLOBAL AND LOCAL HELIOSEISMIC STUDIES OF SOLAR CONVECTION  
 ZONE DYNAMICS USING SOI-MDI  
 01/05/1999 - 12/31/2002                    FY02: \$0                    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**                    **3038**  
 A COMPARATIVE ANALYSIS OF THE GALILEO-ERA IO TORUS & ATMOS-  
 PHERE  
 01/15/1999 - 01/14/2001                    FY02: \$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**                    **3039**  
 ULTRAVIOLET STUDIES OF JUPITER'S HYDROCARBONS AND AEROSOLS  
 FROM GALILEO  
 01/29/1999 - 06/30/2003                    FY02: \$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**                    **3040**  
 THE YOUNGEST STARS - LTSA 98  
 02/11/1999 - 02/14/2004                    FY02: \$0                    Total: \$295,256  
*Prin. Invest.:* J BALLY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8127**                    **UNIV OF COLORADO - BOULDER**                    **3041**  
 "INFRARED OPTICAL CONSTANTS OF PARTICLES IN THE LOWER STRATO-  
 SPHERE AND UPPER TROPOSPHERE"  
 02/04/1999 - 03/31/2002                    FY02: \$0                    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**                    **3042**  
 GLOBAL MODELS OF SOLAR CONVECTION, ROTATION AND MAGNETIC  
 ACTIVITY  
 03/02/1999 - 04/30/2003                    FY02: \$0                    Total: \$896,788  
*Prin. Invest.:* J TOOMRE  
*Tech. Officer:* GSFC/J M GREBOWSKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8178**                    **UNIV OF COLORADO - BOULDER**                    **3043**  
 ULTRAVIOLET PHOTOMETRIC PARAMETERS OF THE ICY GALILEAN SAT-  
 ELLITES AND THE MOON  
 02/11/1999 - 02/14/2001                    FY02: \$0                    Total: \$64,800  
*Prin. Invest.:* A HENDRIX  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8236**                    **UNIV OF COLORADO - BOULDER**                    **3044**  
 SN1987A: THE BIRTH OF A SUPERNOVA REMNANT (ATP 98 )  
 02/25/1999 - 02/28/2003                    FY02: \$0                    Total: \$299,308  
*Prin. Invest.:* R A MCCRAY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY



<p><b>NAG 5 8247</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3045</b>  GG5 CEPPAD SUPPLEMENT  02/24/1999 - 01/31/2002                    FY02: \$0                    Total: \$276,000  <i>Prin. Invest.:</i> D BAKER  <i>Tech. Officer:</i> GSFC/R HOFFMAN  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 5 8399</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3053</b>  POLAR PATHFINDER HDF-EOS PILOT PROJECT  05/14/1999 - 05/14/2001                    FY02: \$0                    Total: \$92,006  <i>Prin. Invest.:</i> R L WEAVER  <i>Tech. Officer:</i> GSFC/K MOE  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>
<p><b>NAG 5 8256</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3046</b>  JOVIAN AURORAL CHEMISTRY  02/11/1999 - 02/14/2003                    FY02: \$0                    Total: \$35,304  <i>Prin. Invest.:</i> W PRYOR  <i>Tech. Officer:</i> GSFC/D BOGAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8442</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3054</b>  NONLINEAR MODELING OF HIGH-LATITUDE ELECTRODYNAMIC S AND  MID-LATITUDE CURRENTS AND PREDICTION FROM R  04/08/1999 - 04/30/2002                    FY02: \$0                    Total: \$50,418  <i>Prin. Invest.:</i> D N BAKER  <i>Tech. Officer:</i> GSFC/A J KLIMAS  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 8259</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3047</b>  MULTISPECTRAL MAPPING OF THE MARTIAN POLAR ICE CAP S  02/17/1999 - 02/28/2003                    FY02: \$0                    Total: \$217,000  <i>Prin. Invest.:</i> A W NOLIN  <i>Tech. Officer:</i> HQ/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8538</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3055</b>  SUPERCONDUCTING MIXERS FOR FAR INFRARED SPECTROSCO PY.  08/11/1999 - 08/14/2002                    FY02: \$0                    Total: \$203,000  <i>Prin. Invest.:</i> A L BETZ  <i>Tech. Officer:</i> GSFC/F HERRERO  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8266</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3048</b>  WAVE STRUCTURES AND VERTICAL COUPLING IN THE MARTI AN ATMO-  SPHERE  02/24/1999 - 05/31/2002                    FY02: \$0                    Total: \$125,900  <i>Prin. Invest.:</i> J M FORBES  <i>Tech. Officer:</i> HQ/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8615</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3056</b>  APPLICATION OF SATELLITE SAR IMAGERY IN MAPPING THE ACTIVE LAYER  OF ARCTIC PERMAFROST  06/14/1999 - 09/30/2002                    FY02: \$35,688                    Total: \$101,703  <i>Prin. Invest.:</i> T ZHANG  <i>Tech. Officer:</i> GSFC/P R HOUSER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8311</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3049</b>  THE DIURNAL CYCLE OF CONVECTION AND ITS INTERACTIO N WITH THE  LARGE SCALECIRCULATION  03/12/1999 - 02/28/2002                    FY02: \$0                    Total: \$159,769  <i>Prin. Invest.:</i> M L SALBY  <i>Tech. Officer:</i> GSFC/J R CURRAN  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 8643</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3057</b>  DISTRIBUTION &amp; AUTOMATION TECHNOLOGY APPLICATION, "DATA"  07/08/1999 - 06/30/2001                    FY02: \$0                    Total: \$568,626  <i>Prin. Invest.:</i> E R HANSEN  <i>Tech. Officer:</i> GSFC/G MUCKLOW  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>
<p><b>NAG 5 8320</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3050</b>  INTEGRATING MICROWAVE AND HYPERSPECTRAL REMOTE SEN SING FOR  ESTIMATING VEGETATION STRUCTURE AND BI  04/06/1999 - 03/31/2002                    FY02: \$0                    Total: \$135,131  <i>Prin. Invest.:</i> G P ASNER  <i>Tech. Officer:</i> GSFC/D C WICKLAND  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 8697</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3058</b>  ALGORITHMS FOR AUTONOMOUS GPS ORBIT DETERMINATION &amp; FORMA-  TION FLYING  08/18/1999 - 08/14/2001                    FY02: \$0                    Total: \$146,780  <i>Prin. Invest.:</i> P AXELRAD  <i>Tech. Officer:</i> GSFC/J LEITNER  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 5 8338</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3051</b>  PHOTOMETRIC ANALYSIS OF THE JOVIAN RING SYSTEM AND MODELING  OF RING ORIGIN AND EVOLUTION  03/23/1999 - 04/30/2003                    FY02: \$0                    Total: \$122,874  <i>Prin. Invest.:</i> L W ESPOSITO  <i>Tech. Officer:</i> GSFC/D BOGAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8709</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3059</b>  LAND USE IMPACTS ON SUBTROPICAL BIOGEOCHEMICAL CYC LES: AN  INTEGRATED FIELD-PROCESSING MODELING-REMO  07/29/1999 - 07/31/2003                    FY02: \$0                    Total: \$366,582  <i>Prin. Invest.:</i> G ASNER  <i>Tech. Officer:</i> GSFC/M Y WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8362</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3052</b>  THEORETICAL STUDIES OF MICROPHYSICAL MARINE BOUNDARY-LAYER  CLOUDS  03/15/1999 - 03/14/2002                    FY02: \$0                    Total: \$105,532  <i>Prin. Invest.:</i> O B TOON  <i>Tech. Officer:</i> GSFC/M MISCHENKO  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 8755</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3060</b>  INTERCALIBRATION OF MESOSPHERE/LOWER THERMOSPHERE WINDS  FROM SPACE-BASED &amp; GROUND-BASED MEASUREMENTS  08/12/1999 - 08/14/2003                    FY02: \$0                    Total: \$46,500  <i>Prin. Invest.:</i> J M FORBES  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>

**NAG 5 8910**                      **UNIV OF COLORADO - BOULDER**                      **3061**  
 SMALL-SCALE POLYGONS AND THE HISTORY OF GROUND ICE ON MARS  
 12/29/1999 - 02/14/2001                      FY02: \$0                      Total: \$58,900  
*Prin. Invest.:* M T MELLON  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9043**                      **UNIV OF COLORADO - BOULDER**                      **3069**  
 CLIMATOLOGY OF ARCTIC CANADA  
 02/22/2000 - 02/28/2003                      FY02: \$0                      Total: \$74,066  
*Prin. Invest.:* K STEFFEN  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8923**                      **UNIV OF COLORADO - BOULDER**                      **3062**  
 LABORATORY STUDIES OF LOW TEMPERATURE RATE COEFFEC IENTS:  
 THE ATMOSPHERICCHEMISTRY OF THE OUTER PLAN  
 01/06/2000 - 12/31/2002                      FY02: \$0                      Total: \$214,008  
*Prin. Invest.:* D R LEONE  
*Tech. Officer:* GSFC/R B BEEBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9092**                      **UNIV OF COLORADO - BOULDER**                      **3070**  
 ION ETCHED HOLOGRAPHIC GRATINGS  
 02/17/2000 - 01/31/2003                      FY02: \$0                      Total: \$165,360  
*Prin. Invest.:* J GREEN  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8940**                      **UNIV OF COLORADO - BOULDER**                      **3063**  
 GALILEO MULTI-SPECTRAL ANALYSIS  
 01/13/2000 - 09/30/2001                      FY02: \$0                      Total: \$8,241  
*Prin. Invest.:* K SIMMONS  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9114**                      **UNIV OF COLORADO - BOULDER**                      **3071**  
 PHASE-A AND BRIDGE PHASE STUDY OF STEREO/WAVES ACCOMMODA-  
 TION  
 03/01/2000 - 12/31/2002                      FY02: \$0                      Total: \$58,206  
*Prin. Invest.:* R ERGUN  
*Tech. Officer:* GSFC/M L KAISER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9007**                      **UNIV OF COLORADO - BOULDER**                      **3064**  
 SATELLITE ATMOSPHERE & IO TORUS OBSERVATIONS  
 01/28/2000 - 01/31/2003                      FY02: \$0                      Total: \$192,475  
*Prin. Invest.:* N M SCHNEIDER  
*Tech. Officer:* GSFC/T H MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9172**                      **UNIV OF COLORADO - BOULDER**                      **3072**  
 DUSTY PLASMAS IN PLANETARY MAGNETOSPHERES  
 03/08/2000 - 02/28/2003                      FY02: \$0                      Total: \$148,094  
*Prin. Invest.:* M HORANYI  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9010**                      **UNIV OF COLORADO - BOULDER**                      **3065**  
 FUV SPECTRA OF EVOLVED LATE-K AND M STARS: MASS LOSS REVISITED  
 AND STELLAR ACTIVITY - FUSE  
 02/02/2000 - 01/31/2003                      FY02: \$0                      Total: \$67,000  
*Prin. Invest.:* G HARPER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9201**                      **UNIV OF COLORADO - BOULDER**                      **3073**  
 THERMOSPHERIC ODD-NITROGEN RESPONSE TO AURORAL ENERGY  
 03/09/2000 - 09/14/2001                      FY02: \$0                      Total: \$41,400  
*Prin. Invest.:* S SOLOMON  
*Tech. Officer:* GSFC/J SCHARBER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9018**                      **UNIV OF COLORADO - BOULDER**                      **3066**  
 HIGH VELOCITY CLOUDS: ORIGIN & ENVIRONMENT - FUSE  
 02/03/2000 - 01/31/2002                      FY02: \$0                      Total: \$24,540  
*Prin. Invest.:* J SHULL  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9304**                      **UNIV OF COLORADO - BOULDER**                      **3074**  
 CLOSEOUT OF "LABORATORY STUDIES OF THE NUCLEATION, COMPOSI-  
 TION & REACTIVITY OF AIRCRAFT CONDENSATION  
 03/22/2000 - 03/31/2002                      FY02: \$0                      Total: \$154,236  
*Prin. Invest.:* D A TOLBERT  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9026**                      **UNIV OF COLORADO - BOULDER**                      **3067**  
 SIMULATION & THEORETICAL MODELING OF OBSERVATIONS OF BIPOLAR  
 STRUCTURE & LOW FREQUENCY WAVES IN THE  
 02/03/2000 - 02/28/2003                      FY02: \$0                      Total: \$167,218  
*Prin. Invest.:* M V GOLDMAN  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9336**                      **UNIV OF COLORADO - BOULDER**                      **3075**  
 INVESTIGATION OF RADIO TOMOGRAPHY IMAGING OF THE MAGNETO-  
 SPHERE  
 03/27/2000 - 02/28/2003                      FY02: \$0                      Total: \$151,700  
*Prin. Invest.:* R ERGUN  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9041**                      **UNIV OF COLORADO - BOULDER**                      **3068**  
 STELLAR WINDS, HYDROGEN WALLS, AND THE LOCAL INTER STELLAR  
 MEDIUM\_L TSA99  
 02/22/2000 - 02/28/2003                      FY02: \$0                      Total: \$228,346  
*Prin. Invest.:* B WOOD  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9353**                      **UNIV OF COLORADO - BOULDER**                      **3076**  
 CHARACTERIZATION AND NUMERICAL SIMULATION OF FAST SOLITARY  
 WAVES IN THE AURORAL IONOSPHERE  
 03/30/2000 - 03/31/2002                      FY02: \$0                      Total: \$72,600  
*Prin. Invest.:* R ERGUN  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<p><b>NAG 5 9404</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3077</b>  GLOBAL &amp; REGIONAL IMPACTS OF MESOSCALE VARIABILITY IN AIR-SEA FLUXES  04/10/2000 - 04/30/2003                    FY02: \$0                    Total: \$615,712  <i>Prin. Invest.:</i> P J WEBSTER  <i>Tech. Officer:</i> GSFC/J DODGE  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9491</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3085</b>  LITHOSPHERIC DYNAMICS OF MARS: WATER, FLOW, AND FAILURE  05/17/2000 - 04/14/2003                    FY02: \$0                    Total: \$84,830  <i>Prin. Invest.:</i> R E GRIMM  <i>Tech. Officer:</i> GSFC/J A GRANT  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 9412</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3078</b>  STANDARD GLOBAL SNOW COVER PRODUCTS FROM SATELLITE REMOTE SENSING  05/08/2000 - 05/14/2003                    FY02: \$0                    Total: \$226,805  <i>Prin. Invest.:</i> R ARMSTRONG  <i>Tech. Officer:</i> GSFC/J DODGE  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9537</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3086</b>  FORMATION OF MAGNETIC STRUCTURES AT THE BASE OF THE SOLAR CONVECTION ZONE  05/04/2000 - 05/14/2003                    FY02: \$0                    Total: \$183,523  <i>Prin. Invest.:</i> N H BRUMMELL  <i>Tech. Officer:</i> GSFC/W J WAGNER  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 9421</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3079</b>  ENERGIZATION AND LOSS OF OUTER RADIATION BELT ELECTRONS  04/11/2000 - 04/30/2003                    FY02: \$0                    Total: \$92,277  <i>Prin. Invest.:</i> X LI  <i>Tech. Officer:</i> GSFC/J SHARBER  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 9568</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3087</b>  REGIONAL INTEGRATED MONITORING SYSTEM FOR THE HYDROLOGY OF THE PAN-ARCTIC LAND MASS  05/17/2000 - 05/31/2003                    FY02: \$0                    Total: \$296,121  <i>Prin. Invest.:</i> M SERREZE  <i>Tech. Officer:</i> GSFC/P HAUSER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 9443</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3080</b>  CHARGED AEROSOLS  04/13/2000 - 05/31/2001                    FY02: \$0                    Total: \$36,800  <i>Prin. Invest.:</i> S ROBERTSON  <i>Tech. Officer:</i> GSFC/M MELLOTT  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 9590</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3088</b>  CHARACTERIZING THE OXIDIZING PROPERTIES OF MARS' POLAR REGIONS  05/15/2000 - 05/14/2002                    FY02: \$0                    Total: \$85,000  <i>Prin. Invest.:</i> A R HENDRIX  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 9448</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3081</b>  KLE ANALYSIS OF SCIGN GPS DATA  04/12/2000 - 04/14/2003                    FY02: \$0                    Total: \$80,000  <i>Prin. Invest.:</i> J B RUNDLE  <i>Tech. Officer:</i> GSFC/H V FREY  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 9602</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3089</b>  EVALUATION AND ERROR ASSESSMENT OF OPERATIONAL PASSIVE MICROWAVE ALGORITHMS  05/17/2000 - 12/31/2001                    FY02: \$0                    Total: \$72,723  <i>Prin. Invest.:</i> J STROEVE  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 9450</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3082</b>  USE OF SATELLITE GRAVIMETRY TO DEVELOP AND TEST A LAND WATER- AND ENERGY-BALANCE MODEL  04/12/2000 - 04/30/2003                    FY02: \$0                    Total: \$72,266  <i>Prin. Invest.:</i> J WAHR  <i>Tech. Officer:</i> GSFC/P HOUSER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9631</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3090</b>  MULTI-DECADE OBSERVATIONS OF MARTIAN SURFACE VARIABILITY &amp; SEDIMENT TRANSPORT: INTEGRATED ANALYSES  05/26/2000 - 05/31/2003                    FY02: \$0                    Total: \$120,000  <i>Prin. Invest.:</i> S W LEE  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 9474</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3083</b>  THERMOSPHERIC OXYGEN MAPPER (TOM)  04/17/2000 - 04/30/2003                    FY02: \$0                    Total: \$361,021  <i>Prin. Invest.:</i> A L BETZ  <i>Tech. Officer:</i> GSFC/B BETTS  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 9694</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3091</b>  ATMOSPHERIC MODELING AND INFRARED OBSERVATIONS OF A TRANSITING EXTRA-SOLAR PLANET  06/27/2000 - 09/30/2003                    FY02: \$0                    Total: \$46,914  <i>Prin. Invest.:</i> L W ESPOSITO  <i>Tech. Officer:</i> GSFC/L D DEMING  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 9477</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3084</b>  ADVANCING GLACIOLOGICAL APPLICATIONS OF REMOTE SENSING WITH EO-1  04/24/2000 - 04/30/2003                    FY02: \$59,230                    Total: \$117,810  <i>Prin. Invest.:</i> T SCAMBOS  <i>Tech. Officer:</i> GSFC/R BINDSCHADLER  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 5 9722</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3092</b>  GLOBAL LAND ICE MEASUREMENTS FROM SPACE  06/22/2000 - 06/30/2003                    FY02: \$0                    Total: \$200,000  <i>Prin. Invest.:</i> G R SCHARFEN  <i>Tech. Officer:</i> GSFC/J DODGE  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>

**NAG 5 9753**                      **UNIV OF COLORADO - BOULDER**                      **3093**  
 RETRIEVAL OF HYDROMETER SIZE DISTRIBUTIONS FROM TRMM FIELD  
 CAMPAIGN PROFILER DOPPLER VELOCITY SPEC  
 06/23/2000 - 06/30/2003                      FY02: \$0                      Total: \$111,156  
*Prin. Invest.:* C R WILLIAMS  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERICSIENCE

**NAG 5 9779**                      **UNIV OF COLORADO - BOULDER**                      **3094**  
 ORIGIN OF MAGNETIC LINEATIONS ON MARS  
 07/10/2000 - 06/30/2002                      FY02: \$0                      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**                      **3095**  
 IMPROVING THE SIMULATION OF SEA ICE LEAD CONDITION & TURBULENT  
 FLUXES USING RGPS PRODUCTS & MERGED  
 08/09/2000 - 07/31/2003                      FY02: \$0                      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**                      **3096**  
 DYNAMICS OF PLANETESIMALS AND PLANETARY ACCRETION  
 09/20/2000 - 08/31/2001                      FY02: \$0                      Total: \$70,000  
*Prin. Invest.:* G STEWART  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10083**                      **UNIV OF COLORADO - BOULDER**                      **3097**  
 CONTEMPORANEOUS XMM & HST OBSERVATIONS OF SEYFERT GALAXIES  
 11/06/2000 - 11/14/2001                      FY02: \$0                      Total: \$14,495  
*Prin. Invest.:* C S REYNOLDS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10106**                      **UNIV OF COLORADO - BOULDER**                      **3098**  
 STUDENT NITRIC OXIDE EXPERIEMNT (SNOE) - EXTENDED MISSION  
 11/24/2000 - 12/31/2002                      FY02: \$0                      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**                      **3099**  
 SMALL-SCALE POLYGONS AND THE HISTORY OF GROUND ICE ON MARS  
 12/18/2000 - 12/31/2002                      FY02: \$0                      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**                      **3100**  
 ABSOLUTE GRAVITY/GPS MEASUREMENTS IN GREENLAND  
 01/03/2001 - 12/31/2002                      FY02: \$0                      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**                      **3101**  
 FAR INFRARED FOCAL PLANE ARRAYS  
 01/04/2001 - 01/14/2004                      FY02: \$0                      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**                      **3102**  
 STUDIES FOR IMPROVED GRAVITATIONAL WAVE SENSITIVIT Y  
 01/09/2001 - 12/31/2002                      FY02: \$0                      Total: \$35,000  
*Prin. Invest.:* P L BENDER  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 13 - PHYSICS

**NAG 5 10265**                      **UNIV OF COLORADO - BOULDER**                      **3103**  
 DISTRUBUTION OF NEAR-SURFACE GROUND ICE ON MARS  
 01/09/2001 - 12/31/2003                      FY02: \$0                      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**                      **3104**  
 IMPROVING THE ACCURACY OF SATELLITE SEA SURFACE TEMPERATURE  
 MEASUREMENTS BY EXPLICITLY ACCOUNTING  
 01/29/2001 - 01/31/2002                      FY02: \$0                      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**                      **3105**  
 STUDY OF THE INFLUENCE OF SMALL SCALE E-FIELD VARIABILITY ON THE  
 DISTRIBUTION OF GEOMAGNETIC  
 01/24/2001 - 04/30/2003                      FY02: \$0                      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**                      **3106**  
 EXCITATION AND ABUNDANCIES IN N132D - FUSE.  
 01/29/2001 - 01/31/2003                      FY02: \$0                      Total: \$25,500  
*Prin. Invest.:* J A MORSE  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10325**                      **UNIV OF COLORADO - BOULDER**                      **3107**  
 THE UNUSUAL WOLF-RAYET STAR EZ CMA  
 01/31/2001 - 01/31/2003                      FY02: \$0                      Total: \$14,328  
*Prin. Invest.:* S L SKINNER  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10326**                      **UNIV OF COLORADO - BOULDER**                      **3108**  
 DECIPHERING THE X-RAY EMISSION OF THE NEAREST HERBIG AE STAR  
 01/31/2001 - 01/31/2003                      FY02: \$0                      Total: \$15,000  
*Prin. Invest.:* S L SKINNER  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10339**                      **UNIV OF COLORADO - BOULDER**                      **3109**  
 FUV SPECTRA OF EVOLVED LATE-K & M STARS: MASS LOSS REVISITED &  
 STELLAR ACTIVITY -FUSE  
 02/05/2001 - 02/14/2003                      FY02: \$0                      Total: \$56,500  
*Prin. Invest.:* G HARPER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10340**                      **UNIV OF COLORADO - BOULDER**                      **3110**  
 MAGNETOSPHERES AND WINDS IN THE RAPID BRAKING ZONE (FUSE 00)  
 02/05/2001 - 02/14/2003                      FY02: \$0                      Total: \$83,900  
*Prin. Invest.:* T R AYRES  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 10362</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3111</b>  X-RAY EMISSION IN WOLF-RAYET STARS: XMM REVEALS THE SHOCKING TRUTH  02/06/2001 - 02/14/2003                    FY02: \$0                    Total: \$15,078  <i>Prin. Invest.:</i> S L SKINNER  <i>Tech. Officer:</i> GSFC/R MUSHOTZKY  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10600</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3119</b>  ASSESSMENT OF GREENLAND OUTLET GLACIER ALBEDO VARIABILITY  03/14/2001 - 12/31/2002                    FY02: \$0                    Total: \$46,013  <i>Prin. Invest.:</i> J STROEVE  <i>Tech. Officer:</i> GSFC/W ABDALATI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 10368</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3112</b>  WIDELY TUNABLE OPTICAL LOCAL OSCILLATORS WITH 1 E-15 STABILITY: ULTRASTABLE LASER SYSTEMS  02/12/2001 - 02/14/2004                    FY02: \$0                    Total: \$392,722  <i>Prin. Invest.:</i> J L HALL  <i>Tech. Officer:</i> GSFC/W HEAPS  <i>CASE Category:</i> 45 - ELECTRICAL ENGR</p>	<p><b>NAG 5 10601</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3120</b>  COMPARISON OF INTERSTELLAR &amp; INTERPLANETARY GRAINS  03/19/2001 - 02/28/2003                    FY02: \$0                    Total: \$15,000  <i>Prin. Invest.:</i> T SNOW  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10413</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3113</b>  REMOTE SENSING OF PLANETARY SURFACES  02/14/2001 - 02/14/2002                    FY02: \$0                    Total: \$45,000  <i>Prin. Invest.:</i> B JAKOSKY  <i>Tech. Officer:</i> GSFC/D SENSE  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 10616</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3121</b>  PHYSICAL PROPERTIES OF POTENTIAL MARS LANDING SITE S  03/16/2001 - 03/14/2004                    FY02: \$0                    Total: \$39,000  <i>Prin. Invest.:</i> B JAKOSKY  <i>Tech. Officer:</i> GSFC/J M BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10418</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3114</b>  GEOMORPHOLOGY AND GEODYNAMICS AT CRUSTAL BOUNDARIES WITHIN ASIA AND AFRICA.  02/22/2001 - 02/28/2003                    FY02: \$0                    Total: \$30,000  <i>Prin. Invest.:</i> R G BILHAM  <i>Tech. Officer:</i> GSFC/H V FREY  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 10698</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3122</b>  CONTRAIL PERSISTENCE AND AIRCRAFT EXHAUST IMPACTS ON CIRRUS  04/18/2001 - 11/30/2001                    FY02: \$0                    Total: \$42,025  <i>Prin. Invest.:</i> O TOON  <i>Tech. Officer:</i> GSFC/R LAWRENCE  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 10474</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3115</b>  SOLAR WIND FLUCTUATIONS &amp; THEIR CONSEQUENCES ON THE MAGNETOSPHERE  02/27/2001 - 02/28/2004                    FY02: \$0                    Total: \$82,080  <i>Prin. Invest.:</i> X LI  <i>Tech. Officer:</i> GSFC/J SPANN  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 10763</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3123</b>  COSMOLOGICAL PARAMETERS FROM LARGE SCALE STRUCTURE (ATP 2000)  04/23/2001 - 04/30/2004                    FY02: \$0                    Total: \$79,425  <i>Prin. Invest.:</i> A J HAMILTON  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10508</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3116</b>  DYNAMICS OF PLANETESIMALS AND PLANETARY ACCRETION  03/05/2001 - 02/28/2003                    FY02: \$0                    Total: \$82,000  <i>Prin. Invest.:</i> G R STEWART  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10790</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3124</b>  DETERMINING THE STRUCTURE OF LOW-LEVEL JETS IN MARITIME STORMS USING QUIKSCAT  04/25/2001 - 04/30/2004                    FY02: \$0                    Total: \$120,012  <i>Prin. Invest.:</i> O PERSSON  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 10556</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3117</b>  INVESTIGATION OF THE ASSIMILATION OF ICE MOTION DATA IN SEA ICE MODELS  03/12/2001 - 03/14/2004                    FY02: \$0                    Total: \$96,593  <i>Prin. Invest.:</i> T ARBETTER  <i>Tech. Officer:</i> GSFC/W ABDALATI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 10791</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3125</b>  INFRARED AND PASSIVE MICROWAVE RADIOMETRIC SSTS AND THEIR RELATIONSHIPS TO ATMOSPHERIC FORCING  04/25/2001 - 04/30/2004                    FY02: \$0                    Total: \$115,618  <i>Prin. Invest.:</i> W EMERY  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 10581</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3118</b>  HIGH-RESOLUTION THERMAL INERTIA OF MARS  03/19/2001 - 02/28/2004                    FY02: \$0                    Total: \$88,000  <i>Prin. Invest.:</i> M MELON  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10797</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3126</b>  CONCEPT STUDY FOR THE "JUPITER MAGNETOSPHERIC EXPLORER" (JME) MISSION AO-99-OSS-05  04/30/2001 - 04/30/2002                    FY02: \$0                    Total: \$423,472  <i>Prin. Invest.:</i> D M SCHNEIDER  <i>Tech. Officer:</i> GSFC/J R BYRD  <i>CASE Category:</i> 11 - ASTRONOMY</p>

**NAG 5 10857**                      **UNIV OF COLORADO - BOULDER**                      **3127**  
 VARIABILITY AND FORCING OF CLIMATIC PARAMETERS ON THE GREEN-  
 LAND ICE SHEET: GREENLAND CLIMATE NETWORK  
 05/03/2001 - 04/30/2005                      FY02: \$0                      Total: \$150,000  
*Prin. Invest.:* K STEFFEN  
*Tech. Officer:* GSFC/A  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10892**                      **UNIV OF COLORADO - BOULDER**                      **3128**  
 HARD X-RAY, SPECTROSCOPIC MICROWAVE, AND H-ALPHA LINEAR PO-  
 LARIZATION STUDIES WITH HARD X-RAY OBSERV  
 05/10/2001 - 05/31/2004                      FY02: \$0                      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**                      **3129**  
 SPATIAL VARIATION OF HELIOSEISMIC FREQUENCY SHIFTS  
 05/14/2001 - 05/31/2004                      FY02: \$0                      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**                      **3130**  
 LWS PROPOSAL TO PROVIDE SCIENTIFIC GUIDANCE AND MODELING  
 SUPPORT FOR THE IONOSPHERIC MAPPER MISSIO  
 05/15/2001 - 05/14/2004                      FY02: \$0                      Total: \$169,737  
*Prin. Invest.:* T FULLER-ROWELL  
*Tech. Officer:* GSFC/J F SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10948**                      **UNIV OF COLORADO - BOULDER**                      **3131**  
 MOLECULE FORMATION AT HIGH EXTINCTION AND LOW METALlicity IN  
 THE MAGELLANIC CLOUDS - FUSE 2000  
 05/24/2001 - 05/31/2003                      FY02: \$0                      Total: \$62,500  
*Prin. Invest.:* J SHULL  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10950**                      **UNIV OF COLORADO - BOULDER**                      **3132**  
 FOSSIL FUEL IN THE LOCAL GROUP (FUSE 00)  
 05/24/2001 - 05/31/2003                      FY02: \$0                      Total: \$26,500  
*Prin. Invest.:* J SHULL  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10954**                      **UNIV OF COLORADO - BOULDER**                      **3133**  
 SCALING AND ALLOMETRY IN RIVER NETWORKS: COUPLING RAINFALL,  
 TOPOGRAPHY, AND VEGETATION WITH HYDROLOG  
 05/18/2001 - 05/31/2004                      FY02: \$0                      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**                      **3134**  
 AEROSOL-CLOUD-CLIMATE INTERACTIONS  
 06/04/2001 - 05/31/2002                      FY02: \$0                      Total: \$68,374  
*Prin. Invest.:* K STEFFEN  
*Tech. Officer:* GSFC/J ZWALLY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10967**                      **UNIV OF COLORADO - BOULDER**                      **3135**  
 POLAR TIMAS OPERATIONS AND DATA ANALYSIS  
 06/06/2001 - 01/31/2002                      FY02: \$0                      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**                      **3136**  
 DYNAMICAL MODELS OF SOLAR SYSTEM FORMATION AND EVOLUTION  
 05/22/2001 - 05/31/2002                      FY02: \$0                      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**                      **3137**  
 PRODUCT DISTRIBUTION FOR THE RAMP AMM-1 VERSION 2 AT THE  
 NATIONAL SNOW AND ICE DATA CENTER  
 06/12/2001 - 09/14/2002                      FY02: \$0                      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**                      **3138**  
 A STUDY OF UNCERTAINTIES FOR MODIS CLOUD RETRIEVAL OF OPTICAL  
 THICKNESS & EFFECTIVE RADIUS  
 06/07/2001 - 03/31/2003                      FY02: \$0                      Total: \$49,408  
*Prin. Invest.:* D PINCUS  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11028**                      **UNIV OF COLORADO - BOULDER**                      **3139**  
 CONTINUATION OF THE SCIENCE ANALYSIS AND DATA VALIDATION OF THE  
 UARS SOLSTICE.  
 06/25/2001 - 09/30/2002                      FY02: \$0                      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**                      **3140**  
 INVESTIGATIONS OF DESERT DUST & SMOKE IN THE NORTH ATLANTIC IN  
 SUPPORT OF THE TOMS INSTRUMENT.  
 07/20/2001 - 07/14/2004                      FY02: \$0                      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**                      **3141**  
 VALIDATION OF AMSR-E SNOW PRODUCTS AQUA-0090-0026 / NRA-00-OES-  
 07/24/2001 - 08/31/2004                      FY02: \$0                      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**                      **3142**  
 BALLOON BORNE SOUNDINGS FOR VALIDATION OF UPPER TROPO-  
 SPHERIC HUMIDITY AND TEMPERATURE (NRA-00-OES-  
 07/12/2001 - 08/31/2004                      FY02: \$0                      Total: \$100,523  
*Prin. Invest.:* H W VOEMEL  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

<b>NAG 5 11167</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3143</b>	<b>NAG 5 11279</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3151</b>
DENSITY STRUCTURES IN THE THERMOSPHERE OF MARS: ASSIMILATIVE ANALYSES OF MGS ACCELEROMETER AND TES			OVERSIGHT AND DEVELOPMENT OF A COMM MONTE CAR LO RADIATIVE ONE YEAR GRANT		
08/07/2001 - 08/14/2003	FY02: \$0	Total: \$45,000	08/21/2001 - 02/28/2003	FY02: \$0	Total: \$12,300
<i>Prin. Invest.:</i> J FORBES			<i>Prin. Invest.:</i> R PINCUS		
<i>Tech. Officer:</i> GSFC/J M BOYCE			<i>Tech. Officer:</i> GSFC/R CAHALAN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 11177</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3144</b>	<b>NAG 5 11292</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3152</b>
ANALYSIS OF MGS MAGNETOMETER DATA & COMPARISONS WITH MODELS OF MARS' MAGNETIC FIELD & SOLAR WIND			QUALITY DATA VISUALIZATION TOOL FOR MODIS		
08/13/2001 - 08/14/2003	FY02: \$0	Total: \$61,000	08/22/2001 - 02/28/2003	FY02: \$0	Total: \$77,600
<i>Prin. Invest.:</i> F BAGENAL			<i>Prin. Invest.:</i> R L WEAVER		
<i>Tech. Officer:</i> GSFC/J M BOYCE			<i>Tech. Officer:</i> GSFC/K L MOE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 5 11192</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3145</b>	<b>NAG 5 11294</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3153</b>
MEASUREMENT & INTERPRETATION ON TEMPORAL VARIATION OF THE EARTH'S GRAVITY FIELD USING GPS & SLR DATA			SIMPLE MODELS OF THE SPATIAL DISTRIBUTION OF CLOUD RADIATIVE PROPERTIES FOR REMOTE SENSING STUDIES		
08/30/2001 - 02/28/2003	FY02: \$0	Total: \$25,000	08/22/2001 - 09/30/2003	FY02: \$0	Total: \$42,593
<i>Prin. Invest.:</i> S R NEREM			<i>Prin. Invest.:</i> R PINCUS		
<i>Tech. Officer:</i> GSFC/H V FREY			<i>Tech. Officer:</i> GSFC/W WISCOMBE		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 11205</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3146</b>	<b>NAG 5 11299</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3154</b>
DETECTING FUTURE TRENDS IN OZONE-LOOKING FOR INITIAL SIGNS OF RECOVERY IN TOMS AND SBUV/2 RECORDS			INVESTIGATION OF THE OFF-PLANE GRATING TECHNOLOGY FOR X-RAY SPECTROSCOPY. DELIVERABLE I		
08/09/2001 - 08/14/2004	FY02: \$0	Total: \$40,915	08/29/2001 - 11/30/2001	FY02: \$0	Total: \$15,000
<i>Prin. Invest.:</i> E WEATHERHEAD			<i>Prin. Invest.:</i> D CASH		
<i>Tech. Officer:</i> GSFC/R MCPETERS			<i>Tech. Officer:</i> GSFC/D T NGUYEN		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 11224</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3147</b>	<b>NAG 5 11308</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3155</b>
INVESTIGATING THE FORMATION OF THE THARSIS RISE AND CRUSTAL DICHOTOMY BY MODELING THE MGS DATA AND M			ICE SHELVES AND LANDFAST ICE ON THE ANTARCTIC PERIMETER: CHARACTERISTICS AND THE EFFECTS OF CLIMATE		
08/13/2001 - 08/14/2004	FY02: \$0	Total: \$57,000	08/30/2001 - 08/31/2003	FY02: \$0	Total: \$20,632
<i>Prin. Invest.:</i> S ZHONG			<i>Prin. Invest.:</i> T SCAMBOS		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GSFC/W ABDALATI		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 11238</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3148</b>	<b>NAG 5 11369</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3156</b>
REGIONAL NPP & CARBON STOCKS IN SW USA RANGELANDS: LAND USE IMPACTS ON THE GRASSLAND-WOODLAND BALANCE			VALIDATION OF AMAR-E POLAR OCEAN PRODUCTS USING A COMBINATION OF OBSERVATIONS AND MODELLING.		
09/17/2001 - 08/31/2004	FY02: \$0	Total: \$365,301	10/30/2001 - 10/31/2004	FY02: \$33,127	Total: \$33,127
<i>Prin. Invest.:</i> C WESSMAN			<i>Prin. Invest.:</i> J MASLANIK		
<i>Tech. Officer:</i> GSFC/G GUTMAN			<i>Tech. Officer:</i> GSFC/D STARR		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 11241</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3149</b>	<b>NAG 5 11391</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3157</b>
12TH CAMBRIDGE WORKSHOP ON COOL STARS, STELLAR SYSTEMS AND THE SUN: THE FUTURE OF COOL-STAR ASTROPH			NEW GRANT TIMAS OPERATIONS AND DATA ANALYSIS		
08/15/2001 - 09/30/2001	FY02: \$0	Total: \$15,000	12/12/2001 - 12/14/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> T AYRES			<i>Prin. Invest.:</i> W PETERSON		
<i>Tech. Officer:</i> GSFC/P CRANE			<i>Tech. Officer:</i> GSFC/R HOFFMAN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 11243</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3150</b>	<b>NAG 5 11408</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3158</b>
THEORETICAL INVESTIGATIONS OF CLOUDS AND AEROSOLS IN THE STRATOSPHERE AND UPPER TROPOSPHERE			TIMED PHASE E SEE EXPERIMENT - WOODS		
08/16/2001 - 08/31/2004	FY02: \$0	Total: \$139,160	12/10/2001 - 12/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> O B TOON			<i>Prin. Invest.:</i> T N WOODS		
<i>Tech. Officer:</i> GSFC/P DECOLA			<i>Tech. Officer:</i> GSFC/B A CAMPBELL		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		

COLORADO

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**NAG 5 11421 UNIV OF COLORADO - BOULDER 3159**  
 GPS MODELING AND ANALYSIS  
 01/08/2002 - 01/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* P AXELROD  
*Tech. Officer:* GSFC/J ALEITNER  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 11430 UNIV OF COLORADO - BOULDER 3160**  
 INTENSIVE AIRBORNE FLASK MEASUREMENTS OF O<sub>2</sub>/N<sub>2</sub>, AR/N<sub>2</sub>, 13C, 18O,  
 AND OTHER SPECIES DURING COBRA  
 12/03/2001 - 11/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* J B MILLER  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11463 UNIV OF COLORADO - BOULDER 3161**  
 CHARACTERIZATION OF UV WINDOW PHOSPHORESCENCE  
 12/10/2001 - 12/14/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* S OSTERMAN  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11473 UNIV OF COLORADO - BOULDER 3162**  
 MEASUREMENTS OF "TOTAL WATER" AND CARBON DIOXIDE FROM THE  
 NASA WB-57 DURING CRYSTAL-FACE  
 12/19/2001 - 12/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* L M AVALLONE  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11474 UNIV OF COLORADO - BOULDER 3163**  
 INFLUENCE OF NUCLEATION MECHANISMS ON THE RADIATIVE PROPERTIES  
 OF DEEP CONVECTIVE CLOUDS AND SUBVI  
 12/19/2001 - 12/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* O B TOON  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11487 UNIV OF COLORADO - BOULDER 3164**  
 GAS-PHASE CHEMISTRY OF MOLECULES AND MOLECULAR IONS OF AS-  
 TROPHYSICAL INTEREST  
 12/19/2001 - 12/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* T P SNOW  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11490 UNIV OF COLORADO - BOULDER 3165**  
 CO/H<sub>2</sub> IN TRANSLUCENT CLOUDS  
 12/27/2001 - 12/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J C GREEN  
*Tech. Officer:* GSFC/RJ OLIVESREN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11498 UNIV OF COLORADO - BOULDER 3166**  
 DYNAMICAL EVOLUTION OF RING-SATELLITE SYSTEMS  
 12/28/2001 - 12/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* K OHTSUKI  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11501 UNIV OF COLORADO - BOULDER 3167**  
 RETRIEVAL AND VALIDATIONS OF CIRRUS CLOUD PROPERTIES WITH THE  
 FAR- INFRAREDSENSOR FOR CIRRUS  
 12/27/2001 - 12/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* K F EVANS  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11506 UNIV OF COLORADO - BOULDER 3168**  
 HIERARCHICAL MODELING STUDY OF THE INTERACTIONS AMONG TUR-  
 BULENCE, CLOUD MICROPHYSICS, AND RADIATIVE  
 01/02/2002 - 12/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J A CURRY  
*Tech. Officer:* GSFC/D ANDERSEN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11512 UNIV OF COLORADO - BOULDER 3169**  
 NASA COLD LAND PROCESSES FIELD EXPERIMENT PLAN  
 01/07/2002 - 12/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* R L ARMSTRONG  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11559 UNIV OF COLORADO - BOULDER 3170**  
 SPACE/TIME STATISTICS OF POLAR ICE MOTION  
 01/11/2002 - 01/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* W EMERY  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11562 UNIV OF COLORADO - BOULDER 3171**  
 DYNAMICAL MODELS OF SOLAR SYSTEM FORMATION AND EVOLUTION  
 01/17/2002 - 02/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* G R STEWART  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11576 UNIV OF COLORADO - BOULDER 3172**  
 FOLLOW ON TO NAG5-8247--GGS CEPPAD  
 01/09/2002 - 01/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D BAKER  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11612 UNIV OF COLORADO - BOULDER 3173**  
 VARIABILITY AND FORCING OF CLIMATIC PARAMETERS ON THE GREEN-  
 LAND ICE SHEET: GREENLAND CLIMATE NE  
 01/16/2002 - 01/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* K STEFFEN  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11616 UNIV OF COLORADO - BOULDER 3174**  
 CHARACTERISTICS AND CONSEQUENCES OF FAULTING ON GA NYMEDE  
 AND EUROPA  
 01/17/2002 - 01/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* R PAPPALARDO  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY



<p><b>NAG 5 11648</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3175</b>            REMOTE SENSING &amp; GEOCHEMISTRY OF PLANETARY SURFACE            01/25/2002 - 01/31/2004                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> B M JAKOSKY  <i>Tech. Officer:</i> GSFC/D SENSKE  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 11890</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3183</b>            HIGH RESOLUTION X-RAY PROPERTIES OF BL LACS: AN XM M SURVEY            04/09/2002 - 04/14/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> J STOCKE  <i>Tech. Officer:</i> GSFC/R MUSHOTZKY  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 11659</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3176</b>            MOVING SPECTROSCOPIC REMOTE SENSING TECHNIQUES FOR THE            IDENTIFICATION OF SWELLING POTENTIAL OF EXPAN            02/14/2002 - 02/28/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> A GOETZ  <i>Tech. Officer:</i> GSFC/T GUBBELS  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 11895</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3184</b>            ORIGIN AND EVOLUTION OF IRREGULAR SATELLITES            03/19/2002 - 03/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> K OHTSUKI  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 11686</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3177</b>            CLOUDY RADIATIVE TRANSFER MODELING AND CLOSURE STUDIES FOR            ARM            02/01/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> K EVANS  <i>Tech. Officer:</i> GSFC/W WISCOMBE  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 11907</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3185</b>            OBSERVATIONS OF EXORS WITH THE INFRARED SPACE OBSERVATORY            04/12/2002 - 04/14/2004                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> G S STRINGFELLOW  <i>Tech. Officer:</i> GSFC/J FROGEL  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 11736</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3178</b>            ACCRETION DISK OUTFLOWS IN CATAclysmic VARIABLES (LISA 2001)            02/13/2002 - 02/14/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> D PROGA  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11911</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3186</b>            SPECTROMETER TECHNOLOGY DEVELOPMENT FOR FAR- INFRARED LINE            SURVEYS            03/21/2002 - 03/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> J GLENN  <i>Tech. Officer:</i> GSFC/P CRANE  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 11766</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3179</b>            EVOLUTION OF PROTOPLANETARY DISKS NEAR THE SNOW- LINE            02/25/2002 - 02/28/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> G R STEWART  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11920</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3187</b>            EXPLORING DYNAMICAL IMPLICATIONS OF SOLAR SUBSURFACE            WEATHER            03/25/2002 - 03/14/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> D HABER  <i>Tech. Officer:</i> GSFC/W WAGNER  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 11848</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3180</b>            CORONAL IRON            04/02/2002 - 04/14/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> T AYRES  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11924</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3188</b>            CUSP DYNAMICS-PARTICLE ACCELERATION BY ALFVEN WAVE            03/27/2002 - 03/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> J SU  <i>Tech. Officer:</i> GSFC/M MELLOTT  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 11850</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3181</b>            DEVELOPMENT AND TEST OF OFF-PLANE GRATINGS FOR CON            STELLATION-X            03/15/2002 - 02/14/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> W CASH  <i>Tech. Officer:</i> GSFC/D CONTENT  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NAG 5 11950</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3189</b>            MIRA'S COMPANION IN THE FUV            04/02/2002 - 04/14/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> B E WOOD  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 11879</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3182</b>            ASPECTS OF THE GLOBAL SOLAR DYNAMIC MAGNETOHYDRODYNAMIC            MODELS OF DEEP CONVECTION AND THE TAC            03/19/2002 - 04/30/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> J TOOMRE  <i>Tech. Officer:</i> GSFC/J M GREBOWSKY  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 5 11963</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3190</b>            MULTIWAVELENGTH OBSERVATION OF CLASSICAL NOVA            04/04/2002 - 03/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> G S STRINGFELLOW  <i>Tech. Officer:</i> GSFC/J FROGEL  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 12002</b>                    <b>UNIV OF COLORADO - BOULDER</b>                    <b>3191</b>            INVESTIGATION OF H+ &amp; O+ OUTFLOWS FROM THE EARTH'S IONOSPHERE            04/12/2002 - 04/14/2004                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> W K PETERSON  <i>Tech. Officer:</i> GSFC/J SPANN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	

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**NAG 5 12026 UNIV OF COLORADO - BOULDER 3192**  
 MODELING OF PARALLEL ELECTRIC FIELDS IN THE AURORA  
 04/22/2002 - 04/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R E ERGUN  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12029 UNIV OF COLORADO - BOULDER 3193**  
 PROBING THE REIONIZATION HISTORY OF THE UNIVERSE  
 04/12/2002 - 05/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* N GNEDIN  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12035 UNIV OF COLORADO - BOULDER 3194**  
 DEFEATING THE EDDINGTON LIMIT: THE NONLINEAR DEVELOPMENT OF  
 PHOTON BUBBLE INSTABILITY  
 04/12/2002 - 04/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M C BEGELMAN  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12075 UNIV OF COLORADO - BOULDER 3195**  
 ASSESSMENT OF BASAL MELT OF PETERMANN GLETSCHER IN NW  
 GREENLAND  
 04/23/2002 - 04/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* K STEFFEN  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12188 UNIV OF COLORADO - BOULDER 3196**  
 PRE-FORMULATION FOR THE LASER INTERFEROMETER SPACE ANTENNA  
 (LISA) PROJECT  
 05/14/2002 - 05/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* P L BENDER  
*Tech. Officer:* GSFC/R T STEBBINS  
*CASE Category:* 13 - PHYSICS

**NAG 5 12194 UNIV OF COLORADO - BOULDER 3197**  
 UARS SOLSTICE CONTINUED OPERATIONS  
 05/23/2002 - 09/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* G ROTTMAN  
*Tech. Officer:* GSFC/C JACKMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 12197 UNIV OF COLORADO - BOULDER 3198**  
 SOLAR ACTIVITY AND LONG-TERM TRENDS IN THE IONO- SPHERE (SALT);  
 A HISTORIC-DATA ANALYSIS AND MODEL  
 05/15/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R A AKMAEV  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12210 UNIV OF COLORADO - BOULDER 3199**  
 CHROMOSPHERIC ACTIVITY IN POPULATION II GIANTS.  
 06/04/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* G HARPER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12233 UNIV OF COLORADO - BOULDER 3200**  
 CORONAL DYNAMICS AND COMPLETE ENERGY BUDGET FOR TH E M  
 DWARF AD LEO.  
 06/06/2002 - 06/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A BROWN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12240 UNIV OF COLORADO - BOULDER 3201**  
 PROBING THE REVERSE SHOCK IN AN OXYGEN-RICH SUPER- NOVA  
 REMNANT - FUSE 2001  
 06/06/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J A MORSE  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12260 UNIV OF COLORADO - BOULDER 3202**  
 AEROSOL-CLOUD-CLIMATE INTERACTIONS.  
 07/18/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* K STEFFEN  
*Tech. Officer:* GSFC/J ZWALLY  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12279 UNIV OF COLORADO - BOULDER 3203**  
 COSMIC ORIGINS SPECTROGRAPH GTO  
 07/09/2002 - 09/30/2008 FY02: \$0 Total: \$0  
*Prin. Invest.:* D GREEN  
*Tech. Officer:* GSFC/J JELETIC  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12288 UNIV OF COLORADO - BOULDER 3204**  
 SUPPORT FOR THE INTERNATIONAL WORKSHOP ON MULTI- ANGULAR  
 MEASUREMENTS AND MODELING (IWMMM-3)  
 06/17/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A NOLIN  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12349 UNIV OF COLORADO - BOULDER 3205**  
 AN INVESTIGATION OF THE EFFECT OF SOLAR VARIABILITY AND PARTICLE  
 IONIZATION ON THE EARTH'S M  
 08/20/2002 - 08/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D W RUSCH  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12372 UNIV OF COLORADO - BOULDER 3206**  
 ESTIMATION OF ARCTIC MELT POND COVERAGE ON SEA ICE USING EOS  
 DATA: ALGORITHM DEVELOPMENT & RET  
 07/22/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J MASLANIK  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12380 UNIV OF COLORADO - BOULDER 3207**  
 MASS IMBALANCE IN ANTARCTICA AND GREENLAND  
 07/12/2002 - 07/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J WAHR  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

<b>NAG 5 12381</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3208</b>	<b>NAG 8 1475</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3216</b>
GREENLAND ICE SHEET MELT CLIMATOLOGY BASED ON PASSIVE AND ACTIVE SATELLITE DATA: COMBINING			INFLUENCE OF SOLUTOCAPILLARY CONVECTION ON MACRO-VOID DEFECT FORMATION IN POLYMERIC MEMBRANES		
07/15/2002 - 07/14/2005	FY02: \$0	Total: \$0	02/03/1998 - 01/31/2003	FY02: \$0	Total: \$258,000
<i>Prin. Invest.:</i> K STEFFAN			<i>Prin. Invest.:</i> A GREENBERG		
<i>Tech. Officer:</i> GSFC/W ABDALATI			<i>Tech. Officer:</i> MSFC/P M DOTY		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 12394</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3209</b>	<b>NAG 9 1209</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3217</b>
JUPITER MEETING BOOK PUBLISHING			MULTI WAVELENGTH ANALYSIS OF ASTEROIDS		
07/19/2002 - 07/31/2003	FY02: \$0	Total: \$0	03/01/2000 - 12/31/2002	FY02: \$0	Total: \$14,880
<i>Prin. Invest.:</i> F BAGENAL			<i>Prin. Invest.:</i> A R HENDRIX		
<i>Tech. Officer:</i> GSFC/J HILLMAN			<i>Tech. Officer:</i> JSC/F VILAS		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 12432</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3210</b>	<b>NAG 9 1438</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3218</b>
SPATIAL AND TEMPORAL PATTERNS & VARIABILITY OF SEA & ICE SURFACE TEMPERATURES IN THE SEASONA			VIRTUAL ENVIRONMENTS FOR PREFLIGHT ADAPTATION		
08/01/2002 - 07/31/2005	FY02: \$0	Total: \$0	07/12/2002 - 08/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J MASLANIK			<i>Prin. Invest.:</i> K STROUD		
<i>Tech. Officer:</i> GSFC/W ABDALATI			<i>Tech. Officer:</i> JSC/D HARM		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 5 12438</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3211</b>	<b>NAS 5 97045</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3219</b>
EVOLVED LATE-TYPE STARR FUV SPECTRA: MASS LOSS AND FLUORESCENCE			EXTENSION OF SOLSTICE PHASE B EFFORT		
08/06/2002 - 08/14/2003	FY02: \$0	Total: \$0	02/21/1997 - 07/31/2007	FY02: \$1,275,000	Total: \$60,608,364
<i>Prin. Invest.:</i> G HARPER			<i>Prin. Invest.:</i> G ROTTMAN		
<i>Tech. Officer:</i> GSFC/G SONNEBORN			<i>Tech. Officer:</i> GSFC/V GRIFFIN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR		
<b>NAG 5 12491</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3212</b>	<b>NAS 5 97046</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3220</b>
DEVELOPING RAPID HELIOSEISMIC MAPPING OF EVOLVING SOLAR SUB-SURFACE WEATHER AND MAGNETIC STRUCTURE			LETTER CONTRACT FOR HIRDIS PHASE C/D/E		
08/20/2002 - 08/14/2005	FY02: \$0	Total: \$0	01/17/1997 - 03/31/2008	FY02: \$1,169,623	Total: \$77,240,618
<i>Prin. Invest.:</i> B W HINDMAN			<i>Prin. Invest.:</i> J GILLE		
<i>Tech. Officer:</i> GSFC/W WAGNER			<i>Tech. Officer:</i> GSFC/L MILAN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 12495</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3213</b>	<b>NAS 5 97145</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3221</b>
ANALYSIS OF NAVIGATION ALGORITHM AND MEASUREMENTS FOR FORMATION FLYING SATELLITES, IN HIGH EARTH ORBIT			MISSION OPERATIONS, DATA ANALYSIS, AND ALGORITHM MAINTENANCE FOR UARS SOLSTICE		
08/29/2002 - 08/31/2004	FY02: \$0	Total: \$0	03/31/1997 - 11/30/2002	FY02: \$0	Total: \$1,558,799
<i>Prin. Invest.:</i> P AXELRAD			<i>Prin. Invest.:</i> G J ROTTMAN		
<i>Tech. Officer:</i> GSFC/R J CARPENTER			<i>Tech. Officer:</i> GSFC/C H JACKMAN		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 12533</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3214</b>	<b>NAS 5 98043</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3222</b>
GREENLAND: REANALYSIS OF THE ENERGY BUDGET OF THE ICE SHEET			SCIENCE MANAGEMENT FOR COS		
08/28/2002 - 08/31/2005	FY02: \$0	Total: \$0	03/04/1998 - 07/31/2003	FY02: \$0	Total: \$12,609,600
<i>Prin. Invest.:</i> J CASSANO			<i>Prin. Invest.:</i> J GREEN		
<i>Tech. Officer:</i> GSFC/W ABDALATI			<i>Tech. Officer:</i> GSFC/L FEINBERG		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 12598</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3215</b>	<b>NAS 5 98070</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3223</b>
KNOWLEDGE DISCOVERY FOR GEOPHYSICAL DATA ANALYSIS			OPERATION OF SNOW AND ICE DISTRIBUTED ACTIVE ARCHIVE		
09/24/2002 - 09/14/2005	FY02: \$0	Total: \$0	01/29/1998 - 05/31/2003	FY02: \$0	Total: \$14,307,345
<i>Prin. Invest.:</i> J MENNIS			<i>Prin. Invest.:</i> R G BARRY, V TROISI		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> GSFC/Q A BARKER		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 8 38779</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3224</b>	<b>NAS 8 38779</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3224</b>
MECHANICS OF GRANULAR MATERIALS MICROGRAVITY			MECHANICS OF GRANULAR MATERIALS MICROGRAVITY		
09/24/1992 - 10/31/2004	FY02: \$0	Total: \$4,240,513	09/24/1992 - 10/31/2004	FY02: \$0	Total: \$4,240,513
<i>Prin. Invest.:</i> S STURE			<i>Prin. Invest.:</i> S STURE		
<i>Tech. Officer:</i> MSFC/B V GUYNES			<i>Tech. Officer:</i> MSFC/B V GUYNES		
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		

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**NCC 1 01046 UNIV OF COLORADO - BOULDER 3225**  
 VERY LARGE EFFICIENT SPACE STRUCTURES  
 06/22/2001 - 01/21/2002 FY02: \$0 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 3226**  
 EVA & ROBOTIC ASSEMBLY OF LARGE SPACE STRUCTURES  
 08/20/2001 - 12/19/2002 FY02: \$0 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 3227**  
 CENTER FOR ASTROBIOLOGY  
 08/28/1998 - 06/30/2003 FY02: \$0 Total: \$1,975,492  
*Prin. Invest.:* B JAKOSKI  
*Tech. Officer:* ARC/R A GRYMES, ARC/W W DOLCI  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1104 UNIV OF COLORADO - BOULDER 3228**  
 A COMPREHENSIVE-BASED ANALYSIS OF SHARED CONCEPTUAL MODELS OF AVIONICS SYSTEMS  
 04/02/1999 - 10/31/2002 FY02: \$0 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 3229**  
 COMPREHENSION OF NAVIGATION DIRECTIONS  
 04/14/1999 - 09/30/2002 FY02: \$0 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 3230**  
 THE APPLICATION OF ADVANCED CULTIVATION TECHNIQUES IN THE LONG TERM MAINTENANCE OF SPACE FLIGHT...  
 12/01/1999 - 01/14/2003 FY02: \$0 Total: \$119,337  
*Prin. Invest.:* G HEYENGA  
*Tech. Officer:* ARC/M KLISS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 1310 UNIV OF COLORADO - BOULDER 3231**  
 COMPREHENSION OF NAVIGATION DIRECTIONS  
 02/13/2002 - 02/28/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A F HEALY  
*Tech. Officer:* ARC/I BARSHI  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 1340 UNIV OF COLORADO - BOULDER 3232**  
 ASTROBIOLOGICAL AND GEOLOGICAL IMPLICATIONS OF CONVECTIVE TRANSPORT IN ICY OUTERPLANET SATELLITES  
 05/23/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R PAPPALARDO  
*Tech. Officer:* ARC/M FONDA, ARC/S ZHONG  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5401 UNIV OF COLORADO - BOULDER 3233**  
 THE PROPERTIES OF CLOUDS IN THE ATMOSPHERES OF EARLY EARTH, MARS, & TITAN  
 09/29/2000 - 10/31/2003 FY02: \$0 Total: \$109,801  
*Prin. Invest.:* O B TOON  
*Tech. Officer:* ARC/R E YOUNG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5519 UNIV OF COLORADO - BOULDER 3234**  
 PARTICLES IN REDUCING ATMOSPHERES APPLICATIONS TO EARLY EARTH AND TITAN  
 08/28/2002 - 10/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* O B TOON  
*Tech. Officer:* ARC/R YOUNG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 3 773 UNIV OF COLORADO - BOULDER 3235**  
 MICROELECTROMECHANICAL LINEAR ACTUATOR MICROELECTROMECHANICAL LINEAR ACTUATOR  
 02/15/2000 - 12/31/2002 FY02: \$0 Total: \$149,998  
*Prin. Invest.:* Y LEE  
*Tech. Officer:* GRC/H NGUYEN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 796 UNIV OF COLORADO - BOULDER 3236**  
 SURFACE COLLISIONS INVOLVING PARTICLES AND MOISTURE (SCIPM)  
 05/16/2000 - 05/30/2004 FY02: \$0 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 3237**  
 EO-1 EVALUATION & VERIFICATION FOR APPLICATION TO LAND-USE CHANGE: ATMOSPHERIC CORRECTION, SOIL &  
 02/25/2000 - 03/31/2003 FY02: \$0 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 3238**  
 ANALYSIS OF EO-1, LANDSAT 7, AND AVIRIS FOR ESTIMATING VEGETATION STRUCTURE AND FUNCTION IN ARID EC  
 03/20/2000 - 12/31/2001 FY02: \$0 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 3239**  
 LOW-COST EVALUATION OF EO-1 HYPERION AND ALI FOR DETECTION & BIOPHYSICAL CHARACTERIZATION OF FOREST  
 03/20/2000 - 02/28/2002 FY02: \$0 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 3240**  
 ALGORITHMS FOR AUTONOMOUS GPS ORBIT DETERMINATION AND FORMATION FLYING  
 06/12/2001 - 06/30/2002 FY02: \$0 Total: \$25,000  
*Prin. Invest.:* P AXELRAD  
*Tech. Officer:* GSFC/J A LEITNER  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

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<b>NCC 8 131</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3241</b>	<b>NGT 2 52287</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3250</b>
BIONERVE SPACE TECHNOLOGIES			MODELING THE ENVIRONMENT EFFECTS OF LARGE IMPACTS ON MARS		
01/31/1997 - 02/28/2002	FY02: \$0	Total: \$12,113,345	06/03/2002 - 06/30/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> G MORGENTHALER			<i>Prin. Invest.:</i> O B TOON		
<i>Tech. Officer:</i> MSFC/S J LAMBING			<i>Tech. Officer:</i> ARC/C MCKAY		
<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NCC 8 242</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3242</b>	<b>NGT 3 52386</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3251</b>
PROMOTE COMMERCIAL FUNDING R & D AND TECHNOLOGY DEV IN THE			COMPUTATIONAL MODELING OF EXTRACELLULAR MASS TRANSPORT		
FIELD OF BIOSERVE SPACE TECHNOLOGIES			08/22/2002 - 08/31/2003	FY02: \$0	Total: \$0
01/10/2002 - 10/31/2002	FY02: \$0	Total: \$0	<i>Prin. Invest.:</i> D KLAUS		
<i>Prin. Invest.:</i> L STODIECK			<i>Tech. Officer:</i> GRC/F J MONTEGANO		
<i>Tech. Officer:</i> MSFC/J R WEST			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER					
<b>NCC 9 65</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3243</b>	<b>NGT 5 47</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3252</b>
SPACE STATION BASED MIRROR ACCURACY DEPLOYMENT EXPERIMENT			INVESTIGATION OF HARDWARE AND ALGORITHM ARCHITECTURE GEO AND		
07/01/1997 - 10/31/2001	FY02: \$0	Total: \$1,475,362	HEO ORBITS		
<i>Prin. Invest.:</i> L PETERSON			06/23/1997 - 06/30/2001	FY02: \$0	Total: \$88,000
<i>Tech. Officer:</i> JSC/C PARRA			<i>Prin. Invest.:</i> P AXELRAD		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>Tech. Officer:</i> GSFC/M S BURRELL		
			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NGT 1 01023</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3244</b>	<b>NGT 5 80</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3253</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3			THE STRUCTURE AND DEVELOPMENT OF SUPERNOVA REMNANT 1987A		
06/06/2001 - 06/30/2004	FY02: \$0	Total: \$12,000	(STUDENT): ELI MICHAEL		
<i>Prin. Invest.:</i> T O MANN			05/12/1999 - 06/30/2002	FY02: \$0	Total: \$66,000
<i>Tech. Officer:</i> LARC/W K BELVIN			<i>Prin. Invest.:</i> R MCCRAY		
<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR			<i>Tech. Officer:</i> GSFC/M S BURRELL		
			<i>CASE Category:</i> 13 - PHYSICS		
<b>NGT 1 02022</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3245</b>	<b>NGT 5 93</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3254</b>
GRADUATE STUDENT RESEARCHER PROGRAM			USE OF REMOTE SENSING IMAGERY IN BIOGEOCHEMICAL MODELS TO		
08/02/2002 - 06/30/2003	FY02: \$0	Total: \$0	PREDICT TRACE GAS EMISSIONS & CROP YIELD		
<i>Prin. Invest.:</i> O VASILOV, D GOLDSTEIN			06/15/1999 - 06/30/2001	FY02: \$0	Total: \$44,000
<i>Tech. Officer:</i> LARC/T B GATSKI			<i>Prin. Invest.:</i> N KHATIB		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>Tech. Officer:</i> GSFC/J L PRIVETTE		
			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NGT 1 52182</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3246</b>	<b>NGT 5 123</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3255</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			INVESTIGATION OF GPS BISTATIC RADAR FOR SOIL MOISTURE REMOTE		
12/01/1998 - 08/31/2001	FY02: \$0	Total: \$66,001	SENSING (STUDENT): DALLAS MASTERS		
<i>Prin. Invest.:</i> M J ARMATYS, P AXELRAD			06/07/2001 - 06/30/2004	FY02: \$0	Total: \$22,000
<i>Tech. Officer:</i> LARC/S J KATZBERG			<i>Prin. Invest.:</i> D AXELRAD		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>Tech. Officer:</i> GSFC/M S BURRELL		
			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 2 52264</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3247</b>	<b>NGT 5 132</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3256</b>
MODELING AEROSOL NUCLEATION IN THE PRESENCE OF CLOUDS			SPACE WEATHER FORECASTING: PREDICTING RADIATION BELT ELECTRO-		
06/23/2000 - 12/31/2002	FY02: \$0	Total: \$44,000	TRONS USING ADAPTIVE ARMA FILTERS & DATA		
<i>Prin. Invest.:</i> O TOON			06/04/2002 - 06/30/2005	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> ARC/A S ACKERMAN			<i>Prin. Invest.:</i> D BAKER		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>Tech. Officer:</i> GSFC/M S BURRELL		
			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 2 52270</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3248</b>	<b>NGT 5 133</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3257</b>
HYDROCARBON NUCLEATION ON THOLINS: APPLICATIONS TO TITAN			ANALYSIS OF TEMPORAL VARIATIONS OF THE EARTH'S GRAVITY FIELD		
08/29/2000 - 08/31/2003	FY02: \$0	Total: \$44,000	FROM CHAMP & GRACE SATELLITE DATA.		
<i>Prin. Invest.:</i> M A TOLBERT			06/04/2002 - 08/31/2005	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> ARC/C P MCKAY			<i>Prin. Invest.:</i> R NEREM		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>Tech. Officer:</i> GSFC/M S BURRELL		
			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 2 52279</b>	<b>UNIV OF COLORADO - BOULDER</b>	<b>3249</b>			
COLD SALINE SPRINGS IN PERMAFROST ON EARTH AND MARS					
06/22/2001 - 06/30/2003	FY02: \$0	Total: \$22,000			
<i>Prin. Invest.:</i> B TOON					
<i>Tech. Officer:</i> ARC/C P MCKAY					
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE					

**NGT 5 140 UNIV OF COLORADO - BOULDER 3258**  
 GALAXY CLUSTERS AT HIGH REDSHIFT; PROBING THE HIST ORY AND  
 EVOLUTION OF THE INTRA-CLUSTER MEDIUM, G  
 07/09/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* E ELLINGSON  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 30136 UNIV OF COLORADO - BOULDER 3259**  
 LABORATORY STUDIES OF CIRRUS CLOUD FORMATION MECHA  
 NISMS/STUDENT:FORTIN  
 09/04/1998 - 08/31/2001 FY02: \$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 3260**  
 COMPARISONS OF THREE-DIMENSIONAL GENERAL CIRCULATI ON MODEL  
 SIMULATIONS OF THE DESERT AEROSOL LIFE  
 08/28/1998 - 08/31/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* B TOON, COLARCO  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30180 UNIV OF COLORADO - BOULDER 3261**  
 SPATIAL AND TEMPORAL RESPONSE TO ANTHROPOGENIC NIT ROGEN  
 DEPOSITION IN A HETEROGENEOUS ROCKY MOUNTAI  
 08/12/1999 - 08/31/2002 FY02: \$0 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 3262**  
 IN SITU MEASUREMENTS OF CARBON DIOXIDE IN THE UPPER TROPO-  
 SPHERE & LOWER STRATOSPHERE/STUDENT GAT  
 08/18/1999 - 12/31/2002 FY02: \$0 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 3263**  
 LINKING LANDSAT TM DATA & EVAPOTRANSPIRATION IN TWO HUMID  
 TROPICAL WATERSHEDS IN PANAMA/STUDENT AL  
 08/21/2000 - 08/31/2003 FY02: \$0 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 3264**  
 REGIONAL IMPACTS OF WOODLAND EXPANSION ON NITROGEN OXIDE  
 EMISSIONS FROM TEXAS SAVANNAS: COMBINING  
 08/21/2000 - 08/31/2003 FY02: \$0 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 3265**  
 LABORATORY STUDIES OF ICE NUCLEATION FROM INTERNAL LY MIXED  
 SULFURIC ACID/MINERALAEROSOL PARTICLES  
 08/24/2000 - 08/31/2003 FY02: \$0 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 3266**  
 A HIGH-RESOLUTION ABLATION STUDY NEAR JAKOBSHAVN O N THE  
 GREENLAND ICE SHEET/TODD H. ALBERT  
 08/13/2001 - 08/31/2004 FY02: \$0 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 3267**  
 IMPROVEMENTS IN THE ESTIMATION OF THE EARTH'S GRAV ITY FIELD  
 USING GRACE MISSION DATA (STUDENT: DON  
 08/14/2001 - 08/31/2004 FY02: \$0 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 3268**  
 CLIMATIC VARIABILITY, HUMAN AGENCY & ENVIRONMENTAL CHANGE  
 ACROSS AN ALTITUDINAL TRANSECT, ANDES-AMAZ  
 08/14/2001 - 08/31/2004 FY02: \$0 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 3269**  
 SNOW SLOPE STABILITY: MODELING AND INVESTIGATIONS  
 (STUDENT:HANS-PETER MARSHA  
 08/17/2001 - 08/31/2005 FY02: \$0 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 3270**  
 HETEROGENEOUS N2O5 HYDROLYSIS ON MIXED (NH4)2SO4/O RGANIC  
 THIN FILMS REPRESENTATIVE OF TROPOSPHE  
 09/07/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* M A TOLBERT  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30464 UNIV OF COLORADO - BOULDER 3271**  
 SPECTROSCOPY AND PHOTOREACTIVITY OF HYDRATED COMPL EXES:  
 RELEVANCE TO AT-MOSPHERIC CHEMISTRY AND CLI  
 08/21/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* V VAIDA  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30470 UNIV OF COLORADO - BOULDER 3272**  
 A MULTI-SENSOR APPROACH FOR ASSESSMENT OF CUMULATI VE IM-  
 PACTS AND ENVIRONMENTAL CHANGE ON THE ALASKA  
 08/21/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J MASLANIK  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40028 UNIV OF COLORADO - BOULDER 3273**  
 NATIONAL SPACE GRANT COLL AND FELLOWSHIP PROGRA  
 12/31/1996 - 01/31/2001 FY02: \$0 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**                    **3274**  
 COLORADO SPACE GRANT COLL & FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2005                    FY02: \$0                    Total: \$535,118  
*Prin. Invest.:* E R HANSEN  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50176**                    **UNIV OF COLORADO - BOULDER**                    **3275**  
 A STUDY OF THE HOT COMPONENT OF THE LOCAL INTERSTELLAR MEDIUM  
 05/22/1998 - 06/30/2001                    FY02: \$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**                    **3276**  
 STELLAR EVOLUTION IN STARBURST GALAXIES  
 06/05/1998 - 07/31/2001                    FY02: \$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**                    **3277**  
 MARTIAN SURFACE MAGNETIC FIELD  
 06/11/1998 - 06/30/2001                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* F BAGENAL  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50232**                    **UNIV OF COLORADO - BOULDER**                    **3278**  
 TIDES AND ZONAL MEAN FROM SATELLITE-BASED MEASUREMENTS: ANALYSIS TECHNIQUES  
 05/27/1999 - 06/30/2003                    FY02: \$0                    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**                    **3279**  
 MODELING THE POST-RUNAWAY GROWTH OF TERRESTRIAL PLANETS (STUDENT: CRAIG AGNOR)  
 05/27/1999 - 06/30/2002                    FY02: \$0                    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**                    **3280**  
 PROBING CORONAL STRUCTURE & VARIABILITY IN ACTIVE BINARY SYSTEMS  
 06/03/1999 - 06/30/2003                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* A BROWN  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50242**                    **UNIV OF COLORADO - BOULDER**                    **3281**  
 MAPPING THE DETAILED STRUCTURE OF THE LOCAL INTERSTELLAR MEDIUM  
 06/03/1999 - 06/30/2002                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* J LINSKY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50273**                    **UNIV OF COLORADO - BOULDER**                    **3282**  
 ATMOSPHERIC MODELING AND INFRARED OBSERVATIONS OF TRANSITING EXTRASOLAR PLANET/STUDENT: L. JEREMY RI  
 06/08/2000 - 06/30/2003                    FY02: \$0                    Total: \$44,000  
*Prin. Invest.:* L ESPOSITO  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50294**                    **UNIV OF COLORADO - BOULDER**                    **3283**  
 DUST DYNAMICS IN PHOTOELECTRON LAYERS NEAR SURFACE IN SPACE/STUDENT: AMANDA SICKAFOOSE  
 06/26/2000 - 06/30/2003                    FY02: \$0                    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**                    **3284**  
 SATELLITE GRAVITY & LARGE-SCALE HYDROLOGY/STUDENT: SEAN SWENSON  
 08/17/2000 - 08/31/2003                    FY02: \$0                    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**                    **3285**  
 ASTROBIOLOGICAL AND GEOLOGICAL IMPLICATIONS OF DIAPYCNIC TRANSPORT WITHIN EUROPA AND GANYMEDE  
 05/04/2001 - 06/30/2004                    FY02: \$0                    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**                    **3286**  
 A NARROW BAND FAR ULTRAVIOLET IMAGING SPECTROGRAPH FOR INTERSTELLAR SHOCKS (STUDENT: MATTHEW BEASLEY)  
 05/14/2001 - 06/30/2004                    FY02: \$0                    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**                    **3287**  
 NEW METHODS FOR HYPERSPECTRAL IMAGING IN THE VACUUM ULTRAVIOLET STUDENT: NATHANIEL CUNNINGHAM  
 05/14/2001 - 07/30/2004                    FY02: \$0                    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**                    **3288**  
 ELECTROSTATIC DISCHARGES NEAR THE MARTIAN SURFACE (STUDENT: CORINNE KRAUSS)  
 05/14/2001 - 07/31/2004                    FY02: \$0                    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**                    **3289**  
 NUMERICAL ALGORITHMS FOR ALGORITHMS COMPUTING STUDENT: JULIA ZUEV  
 05/08/2001 - 06/30/2004                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* E ZWEIBEL  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

COLORADO

NASA'S UNIVERSITY PROGRAM

**NGT 5 50352 UNIV OF COLORADO - BOULDER 3290**  
 PLANETARY-SCALE WAVES AND IONOSPHERE 'WEATHER' (STUDENT: GILBERT LICHSTEIN)  
 05/09/2001 - 06/30/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* J FORBES  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50380 UNIV OF COLORADO - BOULDER 3291**  
 PRODUCTION AND ANALYSIS OF EARLY EARTH THOLINS (STUDENT: MELISSA TRAINER)  
 05/21/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M A TOLBERT  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50384 UNIV OF COLORADO - BOULDER 3292**  
 BOLOCAM MILLIMETER-WAVE GALAXY SURVEY STUDENT: GLENN LAURENT  
 05/23/2002 - 05/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J GLENN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50389 UNIV OF COLORADO - BOULDER 3293**  
 THE PHYSICS OF STRUCTURES IN SELF-GRAVITATING, COLOSSAL RINGS (STUDENT: JOHN WEISS)  
 06/03/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* G STEWART  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50397 UNIV OF COLORADO - BOULDER 3294**  
 NEW STUDIES IN X-RAY OPTICS: INTERFEROMETRY AND DIFFUSE SPECTROSCOPY STUDENT: RANDALL MCENTAFFE  
 06/12/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* W CASH  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 5 50416 UNIV OF COLORADO - BOULDER 3295**  
 SIMULATIONS OF TURBULENT CONVECTION IN THE SUN: EXAMINING SUB-GRID-SCALE TURBULENCE STUDENT: M  
 08/06/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J TOOMRE  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50426 UNIV OF COLORADO - BOULDER 3296**  
 VIRTUAL ENVIRONMENTS FOR PREFLIGHT ADAPTATION TO SPACE FLIGHT (STUDENT: KENNETH STROUD)  
 08/14/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D KLAUS  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT10 52624 UNIV OF COLORADO - BOULDER 3297**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RESEARCH PROGRAM  
 07/19/2000 - 06/30/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* D HOEHN  
*Tech. Officer:* KSC/R WHEELER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10521 UNIV OF COLORADO - DENVER 3298**  
 IONOSPHERIC ELECTRODYNAMICS OF PLANETARY-SCALE OSCILLATIONS  
 03/03/2001 - 04/30/2002 FY02: \$0 Total: \$37,000  
*Prin. Invest.:* J M FORBES  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 52291 UNIV OF COLORADO - DENVER 3299**  
 THE ROLE OF ANNEXIN II IN OSTEOBLASTIC DIFFERENTIATION  
 06/24/2002 - 06/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S NIELSON-PREISS  
*Tech. Officer:* ARC/R GLOBUS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1176 UNIV OF COLORADO AT COLORADO SPRINGS 3300**  
 DEVELOPMENT OF THE PSUEDO PILOTED AIRCRAFT SIMULATION (PPAS)  
 05/05/2000 - 07/31/2002 FY02: \$0 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 3301**  
 IN SITU AEROSOL SIZE DISTRIBUTION MEASUREMENTS FROM THE ER-2 SAGE III VALIDATION & STUDIES OF OZONE  
 03/09/1999 - 03/31/2003 FY02: \$0 Total: \$647,824  
*Prin. Invest.:* J C WILSON  
*Tech. Officer:* ARC/C P SCOFIELD, ARC/S S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1391 UNIV OF DENVER 3302**  
 INFRARED REMOTE SENSING OF ATMOSPHERIC CONSTITUENTS  
 01/19/2000 - 12/31/2002 FY02: \$0 Total: \$804,271  
*Prin. Invest.:* F MURCRAY  
*Tech. Officer:* ARC/E CONDON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1578 UNIV OF DENVER 3303**  
 MEASURING AEROSOL SIZE DISTRIBUTION FROM THE NASA DC08 IN SOLVE II  
 08/23/2002 - 08/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J M REEVES, J M WILSON  
*Tech. Officer:* ARC/C P SCOFIELD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11531 UNIV OF DENVER 3304**  
 MEASUREMENTS OF PARTICLE COMPOSITION FROM 30 TO 2,000 NM ABOARD THE TWIN OTTER FOR THE CRYSTAL-  
 01/03/2002 - 12/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J M REEVES  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11533 UNIV OF DENVER 3305**  
 IN SITU MEASUREMENT OF AEROSOL SIZE DISTRIBUTIONS AND COLLECTION OF PARTICLES FOR TEM ANALYSIS I  
 01/03/2002 - 12/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J C WILSON  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



## NASA'S UNIVERSITY PROGRAM

## CONNECTICUT

**NCC 1 313**                      **UNIV OF DENVER**                      **3306**  
ANALYSIS OF ATMOSPHERIC MEASUREMENTS IN SUPPORT OF THE  
NETWORK FOR THE DETECTION OF STRATOSPHERIC CH  
07/22/1998 - 09/30/2001                      FY02: \$0                      Total: \$20,988  
*Prin. Invest.:* F J MURGRAY  
*Tech. Officer:* LARC/C P RINSLAND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 365**                      **UNIV OF DENVER**                      **3307**  
COLLABORATIVE STUDY FOR ANALYSIS OF HI RESOLUTION INFRARED  
ATMOSPHERIC SPECTRA BETW LARC & U DENVER  
01/10/2000 - 11/30/2001                      FY02: \$0                      Total: \$105,000  
*Prin. Invest.:* A GOLDMAN  
*Tech. Officer:* LARC/C P RINSLAND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 01061**                      **UNIV OF DENVER**                      **3308**  
COLLABORATIVE STUDY FOR ANALYSIS OF HI RESOLUTION INFRARED  
ATMOSPHERIC SPECTRA BETW LARC & U DENVER  
09/10/2001 - 09/14/2003                      FY02: \$0                      Total: \$54,000  
*Prin. Invest.:* A GOLDMAN  
*Tech. Officer:* LARC/C P RINSLAND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 506**                      **UNIV OF DENVER**                      **3309**  
"THE LENA INSTRUMENT ABOARD THE IMAGE SATELLITE"  
07/20/2000 - 07/31/2002                      FY02: \$0                      Total: \$51,006  
*Prin. Invest.:* T M STEPHEN  
*Tech. Officer:* GSFC/T MOORE  
*CASE Category:* 11 - ASTRONOMY

**NCC 8 176**                      **UNIV OF DENVER**                      **3310**  
INTERNATIONAL SPACE STATION METEOROID/ORBITAL DEBRIS HAZARD  
ASSESSMENT AND SOFTWARE DEVELOPMENT.  
12/22/1998 - 12/31/2002                      FY02: \$0                      Total: \$653,740  
*Prin. Invest.:* J E WILLIAMSEN  
*Tech. Officer:* MSFC/G D OLSEN  
*CASE Category:* 42 - AERONAUTICAL ENGR

**NGT 8 52894**                      **UNIV OF DENVER**                      **3311**  
TEMPERATURE EFFECTS ON METEOROID DEBRIS PROTECTIVE STRUC-  
TURES  
08/29/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* R AMME  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 11 - ASTRONOMY

**NGT 1 52209**                      **UNIV OF SOUTHERN COLORADO**                      **3312**  
GRADUATE STUDENT RESEARCH PROGRAM (GSRP) YEAR 1  
05/25/1999 - 06/30/2001                      FY02: \$0                      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**                      **3313**  
OPTIMIZING PERFORMANCE OF FAR-INFRARED PHOTOCONDUCTORS:  
NEW APPROACH FOR INTERPRETATION & CALIBRATION  
07/29/1999 - 01/31/2002                      FY02: \$0                      Total: \$151,146  
*Prin. Invest.:* N HAEGEL  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1434**                      **UNIV. OF CONNECTICUT HEALTH CENTER**                      **3314**  
USE OF GFP TRANSGENES TO ASSESS OSTEOPROGENITOR PROGRESSION  
IN INTACT BONE  
08/29/2000 - 08/31/2003                      FY02: \$0                      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**                      **3315**  
TRANSGENIC MARKERS OF BONE CELL LINEAGE PROGRESSION  
09/29/1997 - 03/31/2001                      FY02: \$0                      Total: \$369,456  
*Prin. Invest.:* D ROWE  
*Tech. Officer:* GSFC/M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 5470**                      **UNIV. OF CONNECTICUT HEALTH CENTER**                      **3316**  
HIGH THROUGHPUT METABOLIC PROFILING BY HETERONUCLEAR NMR  
10/24/2001 - 10/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* Z Y PENG  
*Tech. Officer:* ARC/S LIANG, ARC/B A BIEGEL  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 1 01113**                      **UNIV OF CONNECTICUT**                      **3317**  
PREDICTIONS OF FATIGUE LIFE AND DELAMINATION IN LIGHTWEIGHT  
AEROSPACE COMPONENTS  
08/16/2001 - 08/31/2003                      FY02: \$0                      Total: \$17,000  
*Prin. Invest.:* K D MURPHY  
*Tech. Officer:* LARC/J H ROBINSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1544**                      **UNIV OF CONNECTICUT**                      **3318**  
DEVELOPMENT OF A LABORATORY FOR IMPROVING COMMUNICATION  
BETWEEN AIR TRAFFIC CONTROLLERS AND PILOTS  
03/29/2002 - 09/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A BRAMMER  
*Tech. Officer:* ARC/E WENZEL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 7654**                      **UNIV OF CONNECTICUT**                      **3319**  
ECOPHYSIOLOGY OF SUBPOPULATIONS OF ALEXANDRIUM TAMARENSE  
08/25/1998 - 08/31/2001                      FY02: \$0                      Total: \$150,000  
*Prin. Invest.:* C ROESLER  
*Tech. Officer:* GSFC/J W MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7915**                      **UNIV OF CONNECTICUT**                      **3320**  
DECIPHERING THE MOLECULAR RECORD OF EARLY EVOLUTION  
12/09/1998 - 07/31/2002                      FY02: \$0                      Total: \$147,100  
*Prin. Invest.:* P J GOGARTEN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8602**                      **UNIV OF CONNECTICUT**                      **3321**  
DEVELOPMENT OF PLANETARY REMOTE SENSING TECHNOLOGY FOR  
APPLICATIONS TO TELEFORENSICS  
06/21/1999 - 12/14/2001                      FY02: \$0                      Total: \$140,620  
*Prin. Invest.:* J S SCHWEITZER  
*Tech. Officer:* GSFC/J I TROMBKA  
*CASE Category:* 11 - ASTRONOMY

## CONNECTICUT

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8636**                      **UNIV OF CONNECTICUT**                      **3322**  
 UNDERSTANDING THE ERROR CHARACTERISTICS OF PRECIPITATION  
 ESTIMATES FROM SPACE-BASED OBSERVING SYSTEMS  
 07/10/1999 - 09/30/2002                      FY02: \$0                      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**                      **3323**  
 INVESTIGATING THE ADEQUACY OF TRMM PRECIPITATION RADAR OBSER-  
 VATIONS FOR CALIBRATING GROUND-BASED WE  
 06/02/2000 - 11/30/2002                      FY02: \$0                      Total: \$219,362  
*Prin. Invest.:* E N ANAGOSTOU  
*Tech. Officer:* GSFC/R J LAWRENECE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10599**                      **UNIV OF CONNECTICUT**                      **3324**  
 NASA PLANNING GRANT: LEARNING COMM OF TODAY & TOMORROW  
 03/14/2001 - 06/15/2003                      FY02: \$0                      Total: \$25,000  
*Prin. Invest.:* D MOSS  
*Tech. Officer:* GSFC/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11143**                      **UNIV OF CONNECTICUT**                      **3325**  
 DEPLOYMENT OF A MOBILE POLARIMETRIC X-BAND RADAR & IN SITU  
 INSTRUMENTATION TO SUPPORT OPERATIONAL STUDIES  
 08/01/2001 - 07/31/2004                      FY02: \$0                      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**                      **3326**  
 CREATION OF AN EARTH GRANT GEOSPATIAL TECHNOLOGY EXTENSION  
 PROGRAM (ENVIRONMENTAL RESEARCH INS  
 08/30/2001 - 08/31/2004                      FY02: \$0                      Total: \$25,000  
*Prin. Invest.:* D CIVCO  
*Tech. Officer:* GSFC/E SHEFFNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11470**                      **UNIV OF CONNECTICUT**                      **3327**  
 USE OF SIMULATED SEQUENCE EVOLUTION IN AN ITERATIVE PARAMET-  
 RIC BOOTSTRAP ALGORITHM TO ASCERTAIN LONG  
 12/14/2001 - 12/14/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J P GOGARTEN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 11527**                      **UNIV OF CONNECTICUT**                      **3328**  
 MULTI-SENSOR PRECIPITATION ESTIMATION AND INVESTIGATING IM-  
 PROVEDMENTS ON WEATHER AND CLIMATE ANALYSIS  
 01/14/2002 - 01/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E N ANAGOSTOU  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11713**                      **UNIV OF CONNECTICUT**                      **3329**  
 DETECTION OF GUNPOWDER RESIDUE & BODY FLUIDS USING PORTABLE  
 X-RAY FLUORESCENCE SYSTEMS  
 02/26/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J S SCHWEITZER  
*Tech. Officer:* GSFC/J I TROMBKA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12367**                      **UNIV OF CONNECTICUT**                      **3330**  
 HORIZONTAL GENE TRANSFER IN THERMOPHILIC BACTERIA: OCCUR-  
 RENCE AND FUNCTIONAL IMPLICATIONS  
 07/09/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J GOGARTEN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1428**                      **UNIV OF CONNECTICUT**                      **3331**  
 BOSE-EINSTEIN CONDENSATE AND ATOM LASER: COHERENCE AND OPTI-  
 CAL PROPERTIES  
 02/02/1998 - 01/31/2003                      FY02: \$0                      Total: \$256,750  
*Prin. Invest.:* J JAVANAINEN  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 9 1243**                      **UNIV OF CONNECTICUT**                      **3332**  
 RESEARCH GRANT  
 07/07/2000 - 09/01/2001                      FY02: \$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**                      **3333**  
 BETTER LAND USE PLANNING FOR SUBURBANIZING NE, CREATING NET-  
 WORK OF GEOSPATIAL INFORMATION  
 02/19/1999 - 02/18/2002                      FY02: \$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**                      **3334**  
 PRODUCTION & CONSUMPTION OF BIOGENIC GASES IN MICROBIAL MATS  
 07/17/2000 - 09/30/2002                      FY02: \$0                      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 2 5481**                      **UNIV OF CONNECTICUT**                      **3335**  
 MICROBIAL SIGNATURES OF LIFE: BIOGENIC GASES AND MINERAL  
 PRECIPITATES AS PARAMETERS TO ASSES BACTERIAL  
 02/13/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P T VISSCHER  
*Tech. Officer:* ARC/D J DESMARAIS, ARC/B M BEBOUT  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 3 789**                      **UNIV OF CONNECTICUT**                      **3336**  
 HEAT TRANSFER IN ROTATING THIN LIQUID FILMS INCLUDING NUCLEATE  
 BOILING  
 04/07/2000 - 11/30/2003                      FY02: \$0                      Total: \$135,000  
*Prin. Invest.:* D FAGHRI  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 1 01025**                      **UNIV OF CONNECTICUT**                      **3337**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/22/2001 - 06/30/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* K D MURPHY  
*Tech. Officer:* LARC/W K BELVIN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

## NASA'S UNIVERSITY PROGRAM

## CONNECTICUT

<b>NGT 5 82</b>	<b>UNIV OF CONNECTICUT</b>	<b>3338</b>	<b>NAG 5 9064</b>	<b>WESLEYAN UNIV</b>	<b>3346</b>
PREDICTING THE DISTRIBUTION OF BIODIVERSITY: INTE GRATING RE-MOTE SENSING TECHNOLOGY ANDFIELD-BASED			MEASURING THE GALACTIC POTENTIAL WITH NASA'S SPACE INTERFER-OMETRY MISSION - LTSA 99		
05/11/1999 - 07/31/2001	FY02: \$0	Total: \$44,000	02/29/2000 - 02/14/2005	FY02: \$0	Total: \$77,480
<i>Prin. Invest.:</i> R COLWELL			<i>Prin. Invest.:</i> K V JOHNSTON		
<i>Tech. Officer:</i> GSFC/M S BURRELL			<i>Tech. Officer:</i> GSFC/R J OLIVERSEN		
<i>CASE Category:</i> 54 - ENVIRONMENTAL BIOLOGY			<i>CASE Category:</i> 21 - MATHEMATICS		
<b>NGT 5 30369</b>	<b>UNIV OF CONNECTICUT</b>	<b>3339</b>	<b>NAG 5 12001</b>	<b>WESLEYAN UNIV</b>	<b>3347</b>
INVESTIGATION OF CONTINUOUS THUNDERSTORM MONITORIN G OVER LARGE REGIONS USING SATELLITEINFARED OBS			AUTONOMOUS MINERAL DETECTORS FOR MARS ROVERS AND LANDERS		
08/13/2001 - 08/31/2004	FY02: \$0	Total: \$22,000	04/17/2002 - 04/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> E ANAGNOSTOU			<i>Prin. Invest.:</i> M S GILMORE		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> GSFC/P E HUNTER		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 5 30437</b>	<b>UNIV OF CONNECTICUT</b>	<b>3340</b>	<b>NAG 5 12502</b>	<b>WESLEYAN UNIV</b>	<b>3348</b>
INVESTIGATING FLOOD PREDICTION UNCERTAINTY OF HYDR OLOGIC MODELS DRIVEN BY SATELITE RAINFALL DATASE			PHOTOMETRIC STUDIES OF T TAURI STARS		
08/20/2002 - 08/31/2005	FY02: \$0	Total: \$0	08/27/2002 - 08/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> E N ANAGNOSTOU			<i>Prin. Invest.:</i> W HERBST		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> GSFC/J M BOYCE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NCC 5 390</b>	<b>UNIV OF HARTFORD</b>	<b>3341</b>	<b>NAG 2 1433</b>	<b>YALE UNIV</b>	<b>3349</b>
NASA EPSCOR: PREPARATORY GRANT PROPOSAL			EFFECTS OF SPACE FLIGHT ON DROSOPHILA NEURAL DEVEL OPMENT		
05/13/1999 - 08/31/2001	FY02: \$0	Total: \$450,000	08/29/2000 - 09/30/2002	FY02: \$0	Total: \$209,415
<i>Prin. Invest.:</i> S TOWNSEND			<i>Prin. Invest.:</i> H S KESHISHIAN		
<i>Tech. Officer:</i> GSFC/D DETROYE			<i>Tech. Officer:</i> ARC/D R BUBENHEIM, ARC/M F VASQUEZ		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NCC 5 601</b>	<b>UNIV OF HARTFORD</b>	<b>3342</b>	<b>NAG 2 1504</b>	<b>YALE UNIV</b>	<b>3350</b>
CONNECTICUT NASA EPSCOR PROGRAM			MECHANISMS OF GRAVITY-EVOKED NEURONAL PLASTICITY		
11/29/2001 - 11/30/2004	FY02: \$0	Total: \$0	07/16/2001 - 09/30/2002	FY02: \$0	Total: \$75,000
<i>Prin. Invest.:</i> S L TOWNSEND			<i>Prin. Invest.:</i> R G KALB		
<i>Tech. Officer:</i> GSFC/D DEYTROE			<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NGT 5 40031</b>	<b>UNIV OF HARTFORD</b>	<b>3343</b>	<b>NAG 3 1935</b>	<b>YALE UNIV</b>	<b>3351</b>
NATIONAL SPACE GRANT COLL AND FELLOWSHIP PROGRA			RHEOLOGY OF CONCENTRATED EMULSIONS		
12/30/1996 - 02/28/2001	FY02: -\$61,206	Total: \$746,294	08/05/1996 - 05/31/2001	FY02: \$0	Total: \$470,000
<i>Prin. Invest.:</i> S L TOWNSEND			<i>Prin. Invest.:</i> M LOEWENBERG		
<i>Tech. Officer:</i> GSFC/D DETROYE			<i>Tech. Officer:</i> GRC/B SINGH		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 43 - CHEMICAL ENGR		
<b>NGT 5 40093</b>	<b>UNIV OF HARTFORD</b>	<b>3344</b>	<b>NAG 3 1939</b>	<b>YALE UNIV</b>	<b>3352</b>
CONNECTICUT SPACE GRANT COLL AND FELLOWSHIP PRO GRAM			COMPUTATIONAL & EXPERIMENTAL STUDY OF LAMINAR DIFF USION FLAMES IN A MICROGRAVITY ENVIRONMENT		
02/28/2001 - 06/30/2005	FY02: \$61,206	Total: \$273,706	08/05/1996 - 11/30/2002	FY02: \$0	Total: \$444,000
<i>Prin. Invest.:</i> S TOWNSEND			<i>Prin. Invest.:</i> M B LONG, M D SMOOKE		
<i>Tech. Officer:</i> GSFC/D D DETROYE			<i>Tech. Officer:</i> GRC/K J WEILAND, GRC/H D ROSS		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NAG 5 4821</b>	<b>WESLEYAN UNIV</b>	<b>3345</b>	<b>NAG 3 1951</b>	<b>YALE UNIV</b>	<b>3353</b>
PHOTOMETRIC STUDIES OF T TAURI STARS			DESING/INTERPRETATION OF MICROGRAVITY EXPERIMENT T O OBTAIN FLUID/SOLID BOUNDARY CONDITIONS IN NON-I		
06/18/1997 - 05/31/2002	FY02: \$0	Total: \$254,400	08/14/1996 - 12/31/2001	FY02: \$0	Total: \$400,000
<i>Prin. Invest.:</i> D HERBST			<i>Prin. Invest.:</i> D E ROSNER		
<i>Tech. Officer:</i> GSFC/DNAVA			<i>Tech. Officer:</i> GRC/B S SINGH		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 43 - CHEMICAL ENGR		

## CONNECTICUT

## NASA'S UNIVERSITY PROGRAM

**NAG 3 2262** **YALE UNIV** **3354**  
 COMPUTATIONAL AND EXPERIMENTAL STUDY OF ENERGETIC MATERIALS  
 IN A COUNTERFLOW MICROGRAVITY ENVIRONMENT  
 04/27/1999 - 04/06/2003 FY02: \$0 Total: \$204,910  
*Prin. Invest.:* M D SMOOKE  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2377** **YALE UNIV** **3355**  
 STUDIES OF THE DYNAMIC CONTROL AND EVAPORATION OF THREE  
 DIMENSIONAL DROPLET ARRAYS  
 04/07/2000 - 11/30/2003 FY02: \$0 Total: \$142,000  
*Prin. Invest.:* R E APFEL  
*Tech. Officer:* GRC/R ROGERS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2477** **YALE UNIV** **3356**  
 FLOWS OF WET FOAMS AND CONCENTRATED EMULSIONS FLOWS OF WET  
 FOAMS AND CONCENTRATED EMULSIONS  
 07/24/2000 - 11/30/2003 FY02: \$0 Total: \$176,000  
*Prin. Invest.:* D LOEWENBERG  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2704** **YALE UNIV** **3357**  
 DROP COALESCENCE: DRAINAGE AND STABILIZATION OF TH IN LIQUID  
 FILMS  
 02/12/2002 - 11/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D BLAWZDZIEWICZ  
*Tech. Officer:* GRC/M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2722** **YALE UNIV** **3358**  
 BUBBLE-SCALE MODELING OF FOAM DRAINAGE BUBBLE-SCALE MODEL-  
 ING OF FOAM DRAINAGE  
 03/05/2002 - 12/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D LOEWENBERG  
*Tech. Officer:* GRC/D F CHAO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 5255** **YALE UNIV** **3359**  
 X-RAY SINGLE-PHOTON SPECTROMETERS X-RAY SINGLE-PHOTON SPEC-  
 TROMETERS  
 02/18/2000 - 02/03/2003 FY02: \$0 Total: \$340,000  
*Prin. Invest.:* D E PROBER  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6404** **YALE UNIV** **3360**  
 OBSERVATIONAL STUDIES OF DYNAMICAL EFFECTS IN GLOBULAR CLUS-  
 TERS  
 11/04/1997 - 08/31/2002 FY02: \$0 Total: \$424,000  
*Prin. Invest.:* C BAILYN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8406** **YALE UNIV** **3361**  
 MODELING CONVECTION IN STARS; IMPROVING STELLAR MODELS FOR  
 STELLAR POPULATION SYNTHESIS (ATP-  
 03/15/1999 - 03/14/2003 FY02: \$0 Total: \$298,261  
*Prin. Invest.:* P F DEMARQUE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8589** **YALE UNIV** **3362**  
 PHOTON-COUNTING DETECTORS FOR SUBMILLIMETER IMAGING AND  
 SPECTROSCOPY  
 07/08/1999 - 07/14/2002 FY02: \$0 Total: \$505,559  
*Prin. Invest.:* R J SCHOELKOPF  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8813** **YALE UNIV** **3363**  
 FROM RNA TO CONTEMPORARY METABOLISM: THE M1 RIBOZYME AS A  
 MODEL SYSTEM  
 09/23/1999 - 08/31/2001 FY02: \$0 Total: \$140,000  
*Prin. Invest.:* R L DORIT  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9168** **YALE UNIV** **3364**  
 GLOBULAR CLUSTER FORMATION (ATP 99\_)  
 03/27/2000 - 06/30/2001 FY02: -\$134,927 Total: \$70,503  
*Prin. Invest.:* S ZEPF  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9316** **YALE UNIV** **3365**  
 LANDSCAPE CHANGES IN THE MIDDLE EAST: A REGIONAL ASSESSMENT  
 USING REMOTE SENSING  
 03/28/2000 - 03/31/2003 FY02: \$0 Total: \$635,000  
*Prin. Invest.:* R SMITH  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9437** **YALE UNIV** **3366**  
 CHARACTERIZATION OF HUMID-FOREST & SAVANNA ECOREGIONS OF  
 WEST & CENTRAL AFRICA USING SATELLITE SENSORS  
 04/13/2000 - 04/30/2003 FY02: \$0 Total: \$329,573  
*Prin. Invest.:* M ASHTON  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9554** **YALE UNIV** **3367**  
 RNA MODIFYING ENZYMES: DETERMINANTS OF DESIGN AND EVOLUTION  
 OF BIOLOGICAL INFORMATION PROCESSING  
 05/04/2000 - 04/30/2003 FY02: \$0 Total: \$103,620  
*Prin. Invest.:* D SOLL  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 9595** **YALE UNIV** **3368**  
 SINGLE-PHOTON DETECTORS WITH RF-SINGLE-ELECTRON TRANSIS-  
 TOR READOUTS FOR VISIBLE-THRU-UV  
 06/09/2000 - 06/30/2001 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* D E PROBER  
*Tech. Officer:* GSFC/C STAHL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9651** **YALE UNIV** **3369**  
 THE FORMATION AND EVOLUTION OF GLOBULAR CLUSTER SYSTEMS AND  
 IMPLICATIONS FOR THE FORMATION HISTORY  
 06/22/2000 - 06/30/2001 FY02: -\$137,260 Total: \$94,360  
*Prin. Invest.:* S ZEPF  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

## CONNECTICUT

<p><b>NAG 5 9839</b>                      <b>YALE UNIV</b>                      <b>3370</b>  INVESTIGATIONS OF THE TROPICAL TROPOPAUSE REGION  11/16/2000 - 12/31/2003      FY02: \$59,881                      Total: \$186,157  <i>Prin. Invest.:</i> S SHERWOOD  <i>Tech. Officer:</i> GSFC/M R SCHOEBERL  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 8 1443</b>                      <b>YALE UNIV</b>                      <b>3378</b>  R/S ATOM INTERFEROMETRY IN A MICROGRAVITY ENVIRONMENT  02/06/1998 - 01/31/2003      FY02: \$0                      Total: \$370,000  <i>Prin. Invest.:</i> M A KASEVICH  <i>Tech. Officer:</i> MSFC/D HUBBARD  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 10439</b>                      <b>YALE UNIV</b>                      <b>3371</b>  DEVELOPMENT OF AN ATOM INTERFEROMETER GRAVITY GRAD IOMETER  FOR SPACE FLIGHT, PROPOSAL 1258  03/13/2001 - 03/14/2004      FY02: \$0                      Total: \$281,175  <i>Prin. Invest.:</i> P KASEVICH  <i>Tech. Officer:</i> GSFC/N J DENNEHY  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 8 1449</b>                      <b>YALE UNIV</b>                      <b>3379</b>  INVESTIGATION OF FUTURE MICROGRAVITY ATOMIC CLOCKS  03/09/1998 - 03/01/2003      FY02: \$0                      Total: \$740,000  <i>Prin. Invest.:</i> K GIBBLE  <i>Tech. Officer:</i> MSFC/D HUBBARD  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 10755</b>                      <b>YALE UNIV</b>                      <b>3372</b>  FABRICATION AND CHARACTERIZATION OF SUBMILLIMETER SINGLE-  PHONON COUNTERS  04/20/2001 - 04/30/2003      FY02: \$0                      Total: \$175,000  <i>Prin. Invest.:</i> R J SCHOELKOPF  <i>Tech. Officer:</i> GSFC/F HERRERO  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 8 1461</b>                      <b>YALE UNIV</b>                      <b>3380</b>  NUCLEATION AND GROWTH MECHANISMS UNDERLYING THE MICRO-  STRUCTURE OF POLYMER FOAMS PRODUCED  02/18/1998 - 01/31/2002      FY02: \$0                      Total: \$358,333  <i>Prin. Invest.:</i> R E APFEL, D WU  <i>Tech. Officer:</i> MSFC/C TALLEY  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 10912</b>                      <b>YALE UNIV</b>                      <b>3373</b>  RING-DIAGRAM ANALYSIS OF THE SOLAR SURFACE LAYERS  05/14/2001 - 05/31/2004      FY02: \$0                      Total: \$57,221  <i>Prin. Invest.:</i> S BASU  <i>Tech. Officer:</i> GSFC/J GURMAN  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 8 1767</b>                      <b>YALE UNIV</b>                      <b>3381</b>  ATOM INTERFEROMETER TEST OF THE EQUIVALENCE PRINCIPLE  05/14/2001 - 05/13/2005      FY02: \$0                      Total: \$150,000  <i>Prin. Invest.:</i> M A KASEVICH, L MALEKI  <i>Tech. Officer:</i> MSFC/D HUBBARD  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 11335</b>                      <b>YALE UNIV</b>                      <b>3374</b>  CHANGES INFLUENCE OF HUMANS, CLIMATE, AND FIRE ON FOREST  ECOSYSTEMS AND CARBON DYNAMICS IN INDONESIA  09/06/2001 - 09/14/2004      FY02: \$0                      Total: \$253,107  <i>Prin. Invest.:</i> L M CURRAN  <i>Tech. Officer:</i> GSFC/G GUTMAN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NCC 2 1229</b>                      <b>YALE UNIV</b>                      <b>3382</b>  DOMAIN-SPECIFIC SELF-ADAPTIVE SOFTWARE  03/26/2001 - 08/31/2002      FY02: \$0                      Total: \$50,000  <i>Prin. Invest.:</i> P HUDAK  <i>Tech. Officer:</i> ARC/R MORRIS  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>
<p><b>NAG 5 11425</b>                      <b>YALE UNIV</b>                      <b>3375</b>  PHOTO-COUNTING DETECTORS FOR SUBMILLIMETER IMAGING AND SPEC-  TROSCOPY  12/03/2001 - 12/31/2004      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> R J SHOELKOPF  <i>Tech. Officer:</i> GSFC/G STRINGFELLOW  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NCC 3 691</b>                      <b>YALE UNIV</b>                      <b>3383</b>  COMBUSTION OF INDIVIDUAL BUBBLES AND SUBMERGED GAS JETS IN  LIQUID FUELS  03/24/1999 - 01/11/2003      FY02: \$0                      Total: \$303,700  <i>Prin. Invest.:</i> D E ROSNER  <i>Tech. Officer:</i> GR/C K SACKSTEDER  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 12056</b>                      <b>YALE UNIV</b>                      <b>3376</b>  INVESTIGATION OF DEEP CUMULUS FORMATION DURING CRYSTAL  04/19/2002 - 04/30/2004      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> S SHERWOOD  <i>Tech. Officer:</i> GSFC/P DECOLA  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NGT 5 121</b>                      <b>YALE UNIV</b>                      <b>3384</b>  NOISE &amp; SENSITIVITY OF SQPC SUBMILLIMETER DETECTORS/STUDENT:  JOHN D. TEUFEL  05/31/2001 - 06/30/2004      FY02: \$0                      Total: \$22,000  <i>Prin. Invest.:</i> D SCHOELKOPF  <i>Tech. Officer:</i> GSFC/M S BURRELL  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 8 1351</b>                      <b>YALE UNIV</b>                      <b>3377</b>  NOVEL CONCEPTS IN ACOUSTOPHORESIS FOR BIOTECHNOLOGY  APPLICATIONS UNDER DIRECTION DR. APFEL.  05/23/1997 - 09/30/2001      FY02: \$0                      Total: \$248,000  <i>Prin. Invest.:</i> R E APFEL  <i>Tech. Officer:</i> MSFC/B GYNES, MSFC/J MAYO  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NGT 5 30371</b>                      <b>YALE UNIV</b>                      <b>3385</b>  ENVIRONMENTAL ASSESSMENT OF HUMAN HEALTH RISK: SPATIAL AND  TEMPORAL MODELS OF LYME DISEASE  08/14/2001 - 08/31/2004      FY02: \$0                      Total: \$22,000  <i>Prin. Invest.:</i> D FISH  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>

## DELAWARE

## NASA'S UNIVERSITY PROGRAM

**NGT 5 30457** **YALE UNIV** **3386**  
 IMPLICATIONS OF FEEDBACK BETWEEN ENSO & ANTHROPOGE NIC  
 DISTURBANCE ON ECOSYSTEM FUNCTION AND RESI  
 08/21/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L M CURRAN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50067** **YALE UNIV** **3387**  
 SPACE BASED LASER-COOLED ATOMIC CLOCKS  
 08/26/1997 - 06/30/2001 FY02: \$0 Total: \$65,060  
*Prin. Invest.:* K GIBBLE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50287** **YALE UNIV** **3388**  
 GLOBAL CLUSTER SYSTEMS AS PROBES OF GALAXY FORMATI ON  
 (STUDENT: KATHERINE RHODE)  
 06/22/2000 - 06/30/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* C E BAILYN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## DELAWARE

**NAG 1 2030** **DELAWARE STATE UNIV** **3389**  
 INVESTIGATION OF OPTICAL PHASE DISTORTIONS IN SOLID STATE  
 PULSED LASER AMPLIFIER  
 03/23/1998 - 12/31/2001 FY02: \$0 Total: \$297,207  
*Prin. Invest.:* N MELIKECHI  
*Tech. Officer:* LARC/W C EDWARDS, LARC/N P BANRES  
*CASE Category:* 13 - PHYSICS

**NAG 3 1920** **UNIV OF DELAWARE** **3390**  
 FREE-SURFACE AND CONTACT-LINE MOTION OF LIQUIDS IN A MICROGRAV-  
 ITY ENVIRONMENT  
 07/07/1996 - 07/10/2001 FY02: \$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** **3391**  
 SURFACANT-BASED CRITICAL PHENOMENA IN MICROGRAVITY  
 08/19/1996 - 08/31/2001 FY02: \$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 5181** **UNIV OF DELAWARE** **3392**  
 PROTON/ANTI-PROTON RATIO AS A PROBE OF SOLAR MODULATION  
 03/26/1998 - 08/31/2001 FY02: \$0 Total: \$201,604  
*Prin. Invest.:* T K GAISSER  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5221** **UNIV OF DELAWARE** **3393**  
 GRANT NAG5-5221 BALLOON AIR CHERENKOV (BACH) PI PROF PAUL  
 EVENSON  
 03/16/1999 - 03/11/2004 FY02: \$0 Total: \$475,000  
*Prin. Invest.:* P A EVENSON  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 7009** **UNIV OF DELAWARE** **3394**  
 NATURE AND ORIGIN OF THE HIGHEST ENERGY COSMIC RAY S - ATP  
 02/12/1998 - 02/14/2002 FY02: \$0 Total: \$293,484  
*Prin. Invest.:* T STANOV  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7949** **UNIV OF DELAWARE** **3395**  
 APPLICATION OF SATELLITE ALTIMETER DATA TO STUDIES OF OCEAN  
 SURFACE HEATFLUX AND UPPER OCEAN THERMA  
 12/23/1998 - 12/14/2001 FY02: \$0 Total: \$225,000  
*Prin. Invest.:* X YAN  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9116** **UNIV OF DELAWARE** **3396**  
 MARS GLOBAL SURVEYOR DATA ANALYSIS AND INTERPRETAT ION  
 02/28/2000 - 08/31/2002 FY02: \$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** **3397**  
 LMC 1995, THE THIRD SUPERSOFT X-RAY NOVA  
 02/22/2001 - 02/28/2002 FY02: \$0 Total: \$5,000  
*Prin. Invest.:* J MCDONALD  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10911** **UNIV OF DELAWARE** **3398**  
 COMPARATIVE STUDY OF INTERPLANETARY MAGNETIC FIELD TURBU-  
 LENCE  
 05/11/2001 - 05/31/2004 FY02: \$0 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** **3399**  
 HIGHEST ENERGY COSMIC RAYS  
 05/17/2001 - 05/31/2004 FY02: \$0 Total: \$90,000  
*Prin. Invest.:* T STANLEV  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11006** **UNIV OF DELAWARE** **3400**  
 HEATING OF THE LOWER CORONA: TRANSPORT, CASCADE & RECONNEC-  
 TION  
 06/05/2001 - 05/31/2002 FY02: \$0 Total: \$31,000  
*Prin. Invest.:* W H MATHAEUS  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11095** **UNIV OF DELAWARE** **3401**  
 FUV DIAGNOSTICS OF STRUCTURE IN HOT-STAR WINDS (FUSE 1999)  
 07/24/2001 - 07/31/2003 FY02: \$0 Total: \$20,750  
*Prin. Invest.:* S P OWOCKI  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11228** **UNIV OF DELAWARE** **3402**  
 MAGNETIC FIELDS ON OB STARS (ATP 2000)  
 08/15/2001 - 08/14/2004 FY02: \$0 Total: \$10,655  
*Prin. Invest.:* D MULLAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

DELAWARE

<b>NAG 5 11232</b>	<b>UNIV OF DELAWARE</b>	<b>3403</b>	<b>NAG 8 1346</b>	<b>UNIV OF DELAWARE</b>	<b>3411</b>
THE SPACE INFORMATION NETWORKING ARCHITECTURE FOR FUTURE NASA SCIENCE MISSIONS			PROTEIN CRYSTALLIZATION IN COMPLEX FLUIDS		
08/15/2001 - 08/14/2002	FY02: \$0	Total: \$30,000	05/23/1997 - 11/30/2001	FY02: \$0	Total: \$540,000
<i>Prin. Invest.:</i> C SHEN			<i>Prin. Invest.:</i> E W KALER, D		
<i>Tech. Officer:</i> GSFC/J RASH			<i>Tech. Officer:</i> MSFC/D SMITH		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 11452</b>	<b>UNIV OF DELAWARE</b>	<b>3404</b>	<b>NAG 8 1427</b>	<b>UNIV OF DELAWARE</b>	<b>3412</b>
A HYBRID APPROACH FOR EVALUATING AND PREDICTING INTERACTIONS BETWEEN THE SEASONAL SNOW PACK AND THE			DROPLETS OF 3HE-4HE MIXTURES		
12/27/2001 - 12/31/2004	FY02: \$0	Total: \$0	02/11/1998 - 01/31/2003	FY02: \$0	Total: \$324,000
<i>Prin. Invest.:</i> D J LEATHERS			<i>Prin. Invest.:</i> S T CHUI		
<i>Tech. Officer:</i> GSFC/P R HOUSER			<i>Tech. Officer:</i> MSFC/J W POE		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 11522</b>	<b>UNIV OF DELAWARE</b>	<b>3405</b>	<b>NAG 8 1830</b>	<b>UNIV OF DELAWARE</b>	<b>3413</b>
SEARCH FOR SHOCK-METAMORPHOSED GRAINS IN PRECAMBRIAN SPHERULE LAYERS			SUFACTANT STRUCTURES GUIDE MEMBRANE PROTEIN CRYSTALLIZATION		
12/31/2001 - 01/14/2004	FY02: \$0	Total: \$0	10/10/2001 - 11/30/2004	FY02: \$44,000	Total: \$44,000
<i>Prin. Invest.:</i> B P GLASS			<i>Prin. Invest.:</i> E W KALER, C ROBINSON, M LENHOFF		
<i>Tech. Officer:</i> GSFC/D SENSKE			<i>Tech. Officer:</i> MSFC/B GUYNES		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 11603</b>	<b>UNIV OF DELAWARE</b>	<b>3406</b>	<b>NAG 9 989</b>	<b>UNIV OF DELAWARE</b>	<b>3414</b>
INTERPLANETARY TURBULENCE AND PARTICLE TRANSPORT			PROPOSAL TO DEVELOPE ASTRONAUT TRAINING		
01/22/2002 - 01/31/2005	FY02: \$0	Total: \$0	02/08/1998 - 06/30/2002	FY02: \$0	Total: \$20,000
<i>Prin. Invest.:</i> W MATHAEUS			<i>Prin. Invest.:</i> V KLEMAS, Q ZHEN		
<i>Tech. Officer:</i> GSFC/T KUCERA			<i>Tech. Officer:</i> JSC/S K RUNCO		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 33 - OCEANOGRAPHY		
<b>NAG 5 11630</b>	<b>UNIV OF DELAWARE</b>	<b>3407</b>	<b>NCC 3 843</b>	<b>UNIV OF DELAWARE</b>	<b>3415</b>
OBSERVATIONAL STUDIES OF THE SOLAR CORONA			SOOT FORMATION IN PURELY-CURVED PREMIXED FLAMES AND LAMINAR FLAME SPEEDS OF SOOT-FORMING FLAMES		
02/19/2002 - 04/30/2002	FY02: \$0	Total: \$0	12/28/2000 - 11/30/2004	FY02: \$0	Total: \$30,000
<i>Prin. Invest.:</i> D MULLAN			<i>Prin. Invest.:</i> D WANG		
<i>Tech. Officer:</i> GSFC/J DAVILA			<i>Tech. Officer:</i> GRC/K R SACKSTER		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 5 11773</b>	<b>UNIV OF DELAWARE</b>	<b>3408</b>	<b>NGT 5 50367</b>	<b>UNIV OF DELAWARE</b>	<b>3416</b>
APPLICATION OF SATELLITE ALTIMETER DATA TO STUDIES OF SURFACE HEAT FLUX AND UPPER OCEAN PROCESSES			SENSOR DESIGN AND CONTROL FOR THE REAL-TIME OPTIMIZATION OF CULTURING CONDITIONS, ANALYSIS AND CONTROL		
02/26/2002 - 02/28/2003	FY02: \$0	Total: \$0	06/12/2001 - 08/31/2004	FY02: \$0	Total: \$22,000
<i>Prin. Invest.:</i> X YAN			<i>Prin. Invest.:</i> P DHUJATI		
<i>Tech. Officer:</i> GSFC/E LINDSTROM			<i>Tech. Officer:</i> GSFC/K BLANDING		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 11886</b>	<b>UNIV OF DELAWARE</b>	<b>3409</b>	<b>NAG 5 3530</b>	<b>UNIV OF DELAWARE - BARTOL RESEARCH INST</b>	<b>3417</b>
THE PHYSICAL CONDITIONS IN GRAND DESIGN STELLAR WIND VARIABILITY.			MULTI-SPECTRAL DIAGNOSTICS AND DYNAMICAL MODELLING OF STAR WINDS		
03/27/2002 - 03/31/2003	FY02: \$0	Total: \$0	12/13/1996 - 11/30/2002	FY02: \$0	Total: \$489,078
<i>Prin. Invest.:</i> S P OWOCKI			<i>Prin. Invest.:</i> S P OWOCKI		
<i>Tech. Officer:</i> GSFC/G SONNEBORN			<i>Tech. Officer:</i> GSFC/D K WEST		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 12323</b>	<b>UNIV OF DELAWARE</b>	<b>3410</b>	<b>NAG 5 6470</b>	<b>UNIV OF DELAWARE - BARTOL RESEARCH INST</b>	<b>3418</b>
DB WHITE DWARFS (FUSE 01)			ULYSSES-SWICS CONSTRAINTS ON NON-MAXWELLIAN ELECTRON DISTRIBUTIONS AND UNEQUAL ION FLOW SPEEDS IN A		
08/07/2002 - 08/14/2003	FY02: \$0	Total: \$0	11/14/1997 - 10/31/2001	FY02: \$0	Total: \$165,275
<i>Prin. Invest.:</i> J L PROVENCAL			<i>Prin. Invest.:</i> S OWOCKI		
<i>Tech. Officer:</i> GSFC/G SONNEBORN			<i>Tech. Officer:</i> HQ/J LING		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		

## DISTRICT OF COLUMBIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 6570 UNIV OF DELAWARE - BARTOL RESEARCH INST 3419**  
 INVESTIGATION OF INTERPLANETARY TURBULENCE AT HIGH LATITUDE  
 USING THE ULULYSSES SPACECRAFT  
 11/13/1997 - 10/31/2001 FY02: \$0 Total: \$248,199  
*Prin. Invest.:* C SMITH  
*Tech. Officer:* HQ/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6969 UNIV OF DELAWARE - BARTOL RESEARCH INST 3420**  
 ENERGETIC PARTICLE PROCESSES IN THE HELIOSPHERE  
 03/13/1998 - 10/31/2001 FY02: \$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 3421**  
 TURBULENCE AND PARTICLE TRANSPORT IN SPACE PLASMAS  
 03/23/1998 - 02/28/2002 FY02: \$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 3422**  
 TURBULENCE, RECONNECTION, AND HEATING IN THE LOWER CORONA  
 03/13/1998 - 04/14/2002 FY02: \$0 Total: \$275,851  
*Prin. Invest.:* W H MATTHAEUS  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7796 UNIV OF DELAWARE - BARTOL RESEARCH INST 3423**  
 COMPOSITION AND ABUNDANCE RATIOS OF ANOMALOUS AND GALACTIC  
 COSMIC RAYS: IMPLICATIONS OF ACE OBSERVAT  
 12/14/1998 - 06/30/2001 FY02: \$0 Total: \$241,000  
*Prin. Invest.:* G P ZANK  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8134 UNIV OF DELAWARE - BARTOL RESEARCH INST 3424**  
 RESEARCH IN "TURBULENCE AND TRANSPORT PROCESSES" T HIS IS THE  
 FIRST YEAR OF A 3-YEAR FUNDING CYCLE.  
 02/04/1999 - 02/14/2003 FY02: \$0 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 3425**  
 PARTICIPATION IN NASA-GSFC MAGNETOMETER EXPERIMENT ON MARS  
 GLOBAL SURVEYOR  
 09/07/1999 - 11/30/2002 FY02: \$0 Total: \$28,836  
*Prin. Invest.:* N F NESS  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NGT 5 40122 UNIV OF DELAWARE - BARTOL RESEARCH INST 3426**  
 DELAWARE SPACE GRANT COLL & FELLOWSHIP PROGRAM  
 03/26/2001 - 03/31/2005 FY02: \$0 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 3427**  
 PROTEIN CRYSTALLIZATION OF BINARY MIXTURES  
 07/08/1999 - 06/30/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* A M LENHOFF, TESSIER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## DISTRICT OF COLUMBIA

**NAG 2 1456 GEORGE WASHINGTON UNIV 3428**  
 ADAPTIVE UNSTRUCTURED GRID PARALLEL BENCHMARK  
 02/05/2001 - 04/30/2002 FY02: \$0 Total: \$36,499  
*Prin. Invest.:* M MYERS  
*Tech. Officer:* ARC/R BISWAS, ARC/J YAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 5292 GEORGE WASHINGTON UNIV 3429**  
 THE SHAPE OF A DESCENDING BALLOON THE SHAPE OF A DESCENDING  
 BALLOON  
 06/14/2000 - 11/30/2001 FY02: \$0 Total: \$49,948  
*Prin. Invest.:* F BAGINSKI  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5353 GEORGE WASHINGTON UNIV 3430**  
 THE SHAPE OF A STATICALLY DETERMINATE PRESSURIZED PUMPKIN  
 BALLOON AND THE ANALYSIS OF RELATED UNDE  
 01/16/2002 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* F BAGINSKI  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 8068 GEORGE WASHINGTON UNIV 3431**  
 IMPROVED NUMERICAL MODELING OF LOW-DENSITY ATMOSPHERIC  
 FLOW ON IO  
 01/29/1999 - 06/30/2002 FY02: \$0 Total: \$73,856  
*Prin. Invest.:* D A LEVIN  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8287 GEORGE WASHINGTON UNIV 3432**  
 MARS GLOBAL SURVEYOR ACCELEROMETER EXPERIMENT: STUDY OF  
 MARS THERMOSPHERE AND COUPLING  
 02/22/1999 - 03/31/2002 FY02: \$0 Total: \$146,500  
*Prin. Invest.:* G M KEATING  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9550 GEORGE WASHINGTON UNIV 3433**  
 PRECIPITATION STUDIES USING THE TRMM MICROWAVE LINK FACILITY  
 05/30/2000 - 05/31/2003 FY02: \$8,467 Total: \$158,634  
*Prin. Invest.:* R H LANG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10417 GEORGE WASHINGTON UNIV 3434**  
 DETECTION OF GUNPOWDER RESIDUE USING X-RAY FLUORESCENCE  
 AND ELECTRON MICROSCOPY.  
 02/21/2001 - 06/30/2002 FY02: \$0 Total: \$31,915  
*Prin. Invest.:* D A ROWLEY  
*Tech. Officer:* GSFC/J I TROMBKA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



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**NAG 5 10539**                    **GEORGE WASHINGTON UNIV**                    **3435**  
 SOCIOECONOMIC BENEFITS OF NASA'S EARTH SCIENCE AND APPLICA-  
 TIONS RESEARCH. PROPOSAL, JAUP, C  
 03/16/2001 - 06/30/2002                    FY02: \$0                    Total: \$182,761  
*Prin. Invest.:* D A WILLIAMSON  
*Tech. Officer:* GSFC/E TORREZ-MARTINEZ  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 11101**                    **GEORGE WASHINGTON UNIV**                    **3436**  
 PARALLEL DIMENSION REDUCTION OF HYPERSPECTRAL DATA  
 07/26/2001 - 07/31/2004                    FY02: \$0                    Total: \$31,000  
*Prin. Invest.:* T EL-GHAZAWI  
*Tech. Officer:* GSFC/J LE MOIGNE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 11175**                    **GEORGE WASHINGTON UNIV**                    **3437**  
 DATA ANALYSIS OF MGS ACCELEROMETER EXPERIMENT TO CHARACTER-  
 IZE THE MARS ATMOSPHERE AT AEROBRAKING A  
 08/30/2001 - 08/14/2003                    FY02: \$0                    Total: \$60,000  
*Prin. Invest.:* G KEATING  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11317**                    **GEORGE WASHINGTON UNIV**                    **3438**  
 SCIENCE AND ENGINEERING APPRENTICESHIP PROGRAM  
 10/01/2001 - 09/30/2004                    FY02: \$33,042                    Total: \$33,042  
*Prin. Invest.:* M PHILLIPS  
*Tech. Officer:* GSFC/G BLANEY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11343**                    **GEORGE WASHINGTON UNIV**                    **3439**  
 DEVELOPMENT OF INDIVIDUALLY ADDRESSABLE MICRO-MIRROR ARRAYS  
 FOR SPACE APPLICATIONS  
 09/27/2001 - 09/30/2002                    FY02: \$0                    Total: \$53,686  
*Prin. Invest.:* M ZAGHLOUL  
*Tech. Officer:* GSFC/M DUTTA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 11593**                    **GEORGE WASHINGTON UNIV**                    **3440**  
 SOCIOECONOMIC BENEFITS OF NASA'S EARTH SCIENCE AND APPLICA-  
 TIONS RESEARCH  
 01/16/2002 - 09/30/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R WILLIAMSON  
*Tech. Officer:* GSFC/E TORRES-MARTINEZ  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 11834**                    **GEORGE WASHINGTON UNIV**                    **3441**  
 ANALYSIS OF LONG-TERM DECLINE IN THERMOSPHERIC DENSITIES AND  
 INTERPRETATION OF RESULTS  
 03/07/2002 - 02/28/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G M KEATING  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11948**                    **GEORGE WASHINGTON UNIV**                    **3442**  
 GRADUATE EDUCATION AND TRAINING FOR AIR FORCE ACADEMY ALUMNI  
 04/03/2002 - 08/31/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* S SARKANI  
*Tech. Officer:* GSFC/M BROWN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11951**                    **GEORGE WASHINGTON UNIV**                    **3443**  
 UNVEILING THE NATURE OF SOFT GAMMA REPEATERS AND MAGNETARS  
 04/08/2002 - 10/14/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* W PARKE  
*Tech. Officer:* GSFC/J SWANK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12264**                    **GEORGE WASHINGTON UNIV**                    **3444**  
 MICROWAVE REMOTE SENSING OF SOIL MOISTURE UNDER COORNA  
 06/11/2002 - 02/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R LANG  
*Tech. Officer:* GSFC/P E O'NEIL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12594**                    **GEORGE WASHINGTON UNIV**                    **3445**  
 DEVELOPMENT OF INDIVIDUALLY ADDRESSABLE MICRO-MIRROR ARRAYS  
 FOR SPACE APPLICATION  
 09/27/2002 - 09/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M ZAGHLOUL  
*Tech. Officer:* GSFC/M LI  
*CASE Category:* 13 - PHYSICS

**NAG 9 1185**                    **GEORGE WASHINGTON UNIV**                    **3446**  
 DEVELOPMENT OF TUNABLE DIODE LASER/CAVITY RING-DOWN SENSOR  
 01/11/2000 - 01/09/2003                    FY02: \$0                    Total: \$101,249  
*Prin. Invest.:* J H MILLER  
*Tech. Officer:* NMO/D JAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 47**                    **GEORGE WASHINGTON UNIV**                    **3447**  
 CORE PROGRAM IN THE JOINT INST FOR ADVANCEMENT OF FLIGHT  
 SCIENCES AT THE NASA-LANGLEY RESEARCH  
 11/05/1980 - 11/30/2000                    FY02: \$0                    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**                    **3448**  
 A PROGRAM OF RESEARCH IN FLIGHT DYNAMICS IN JIAFS  
 01/27/1999 - 12/31/2002                    FY02: \$0                    Total: \$279,239  
*Prin. Invest.:* V KLEIN  
*Tech. Officer:* LARC/J G BATTERSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 331**                    **GEORGE WASHINGTON UNIV**                    **3449**  
 A COOPERATIVE PROGRAM OF RESEARCH & EDUCATION IN AEROSPACE  
 VEHICLE MECHANICS AT JIAFS  
 03/22/1999 - 12/31/2002                    FY02: \$0                    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**                    **3450**  
 EXPERIMENTS IN THE FLUID AND THERMAL SCIENCES  
 02/10/2000 - 12/31/2003                    FY02: \$0                    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**                    **3451**  
 AEROACOUSTICS RESEARCH PROGRAM JIAFS  
 02/15/2000 - 12/31/2002                    FY02: \$0                    Total: \$144,801  
*Prin. Invest.:* M K MYERS  
*Tech. Officer:* LARC/C A POWELL  
*CASE Category:* 41 - AERONAUTICAL ENGR

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**NCC 1 384**                    **GEORGE WASHINGTON UNIV**                    **3452**  
 A RESEARCH PROGRAM IN FLIGHT SCIENCES AT THE NASA LANGLEY  
 RESEARCH CENTER - JIAFS  
 03/07/2000 - 12/31/2002                    FY02: \$0                    Total: \$375,303  
*Prin. Invest.:* J L WHITESIDES  
*Tech. Officer:* LARC/E WAGGONER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 387**                    **GEORGE WASHINGTON UNIV**                    **3453**  
 A PROGRAM OF RESEARCH AND EDUCATION IN AERO-SPACE VEHICLE  
 DESIGN, SYNTHESIS, AND OPTIMIZATION  
 03/13/2000 - 12/31/2002                    FY02: \$0                    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**                    **3454**  
 PROGRAM OF RESEARCH AND EDUCATION IN AEROSPACE STRUCTURES  
 AT THE JOINT INST FOR ADVANCEMENT  
 01/18/2001 - 12/31/2002                    FY02: \$0                    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**                    **3455**  
 A CORE PROGRAM IN JIAFS  
 02/10/2001 - 12/31/2002                    FY02: \$0                    Total: \$133,706  
*Prin. Invest.:* J WHITESIDES  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1323**                    **GEORGE WASHINGTON UNIV**                    **3456**  
 ADAPTIVE UNSTRUCTURED GRID PARALLEL BENCHMARK  
 03/12/2002 - 02/28/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M K MYERS  
*Tech. Officer:* ARC/R BISWAS, ARC/B BIEGEL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 4 156**                    **GEORGE WASHINGTON UNIV**                    **3457**  
 INFRARED THERMOGRAPHY FLIGHT EXPERIMENTATIONS INFRARED  
 THERMOGRAPHY FLIGHT EXPERIMENTATIONS  
 05/13/2002 - 12/13/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R C BLANCHARD  
*Tech. Officer:* DFRC/D W BANKSE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 436**                    **GEORGE WASHINGTON UNIV**                    **3458**  
 PROGRAM FOR RESEARCH AND EDUCATION IN SPACE TECHNOLOGY  
 (PREST)  
 10/04/1999 - 01/31/2002                    FY02: \$0                    Total: \$192,253  
*Prin. Invest.:* S A SARKANI  
*Tech. Officer:* GSFC/D ASATO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 9 1366**                    **GEORGETOWN UNIV**                    **3459**  
 GENE EXPRESSION OF HUMAN COLORECTAL CARCINOMA IN MICRO-  
 GRAVITY  
 08/29/2001 - 09/30/2004                    FY02: \$0                    Total: \$43,000  
*Prin. Invest.:* J M JESSUP  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 1 2019**                    **HOWARD UNIV**                    **3460**  
 STRUCTURE-FUNCTION RELATIONSHIPS OF IMPACT-MODIFIED CYANATE  
 ESTER RESINS  
 03/13/1998 - 03/15/2002                    FY02: \$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 2148**                    **HOWARD UNIV**                    **3461**  
 CONTRIBUTION OF FLAP-SIDE EDGE VORTEX BURSTING TO AIRFRAME  
 NOISE (NRA 98-LARC-5)  
 02/05/1999 - 11/04/2001                    FY02: \$0                    Total: \$217,274  
*Prin. Invest.:* S T SMITH  
*Tech. Officer:* LARC/R R ANTOLIFF  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1526**                    **HOWARD UNIV**                    **3462**  
 A SEARCH FOR PORPHYRINS & METALLOPORPHYRINS IN THE MURCHIS-  
 SON METEORITE USING MALDI-TOF MASS SPECTRO  
 09/27/2001 - 09/30/2003                    FY02: \$0                    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**                    **3463**  
 AEROSPACE POWER SYSTEM AUTOMATION  
 10/25/1996 - 12/31/2000                    FY02: \$0                    Total: \$300,000  
*Prin. Invest.:* J A MOMOH  
*Tech. Officer:* GRC/J L DOLCE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2287**                    **HOWARD UNIV**                    **3464**  
 EXPERIMENTAL VERIFICATION OF ELECTRIC DRIVE TECHNOLOGIES  
 BASED ON ARTIFICIAL INTELLIGENCE TOOLS  
 08/23/1999 - 06/01/2002                    FY02: \$0                    Total: \$152,000  
*Prin. Invest.:* D RUBAAI  
*Tech. Officer:* GRC/D F NOGA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2429**                    **HOWARD UNIV**                    **3465**  
 A TRANSPORT OPERATION AND CONTROL OF HIGH PERFORMANCE,  
 POWER MANAGEMENT AND DISTRIBUTION (PMAD)  
 05/23/2000 - 12/31/2001                    FY02: \$6,861                    Total: \$51,204  
*Prin. Invest.:* D A MOMOH  
*Tech. Officer:* GRC/R M BUTTON  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2621**                    **HOWARD UNIV**                    **3466**  
 DETECTION, DIAGNOSIS, LOCATION AND RECOMMENDATION OF REME-  
 DIAL ACTIONS FOR CORONA/SHORT FAULTS  
 05/24/2001 - 04/05/2003                    FY02: \$0                    Total: \$57,517  
*Prin. Invest.:* D A MOMOH  
*Tech. Officer:* GRC/R M BUTTON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 9175**                    **HOWARD UNIV**                    **3467**  
 CELEBRATING 20TH CENTURY PIONEERS IN ATMOSPHERIC SCIENCES  
 03/08/2000 - 02/28/2001                    FY02: \$0                    Total: \$20,000  
*Prin. Invest.:* V M MORRIS  
*Tech. Officer:* GSFC/N KHAZANIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

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<p><b>NAG 5 9279</b>                      <b>HOWARD UNIV</b>                      <b>3468</b>            TO PROVIDE 7 ON-SITE INTERNSHIPS AT GODDARD FOR GRADUATE STUDENTS IN ADMINISTRATIVE DISCIPLINES            03/21/2000 - 03/31/2001                      FY02: \$0                      Total: \$73,700  <i>Prin. Invest.:</i> W WOODARD  <i>Tech. Officer:</i> GSFC/D MENCHAN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 12241</b>                      <b>HOWARD UNIV</b>                      <b>3476</b>            DEVELOPMENT OF HYBRID BEOWULF/APPLE MACINTOSH OPERATING SYSTEM X CLUSTER            05/28/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> T E SHURN  <i>Tech. Officer:</i> GSFC/M G REPH  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>
<p><b>NAG 5 10371</b>                      <b>HOWARD UNIV</b>                      <b>3469</b>            NANOCOMPOSITE-BASED COMPACT THERMOMAGNETIC CRYOCOOLERS            NRA PROPOSAL#1319            02/09/2001 - 02/14/2004                      FY02: \$0                      Total: \$126,399  <i>Prin. Invest.:</i> T HUBER  <i>Tech. Officer:</i> GSFC/J TUTTLE  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 9 977</b>                      <b>HOWARD UNIV</b>                      <b>3477</b>            CAFFEINE METABOLISM-THE PHARMACOKINETICS OF SPACE FLIGHT            09/30/1997 - 12/31/2001                      FY02: \$0                      Total: \$394,052  <i>Prin. Invest.:</i> M W COOMES  <i>Tech. Officer:</i> JSC/L PUTCHA  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAG 5 10675</b>                      <b>HOWARD UNIV</b>                      <b>3470</b>            SUPPLEMENT TO THE CENTER FOR THE STUDY OF TERRESTRIAL AND EXTRATERRESTRIAL ATMOSPHERES (CSTEA)            03/27/2001 - 03/14/2002                      FY02: \$0                      Total: \$200,000  <i>Prin. Invest.:</i> A N THORPE  <i>Tech. Officer:</i> GSFC/C PERSON  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAS 5 00214</b>                      <b>HOWARD UNIV</b>                      <b>3478</b>            HIERARCHICAL ALGORITHMS &amp; THEIR EMBEDDED COMPUTATIONAL REALIZATION IN RECONFIGURABLE H/W.            09/29/2000 - 09/28/2002                      FY02: \$0                      Total: \$234,354  <i>Prin. Invest.:</i> C GLOTZER  <i>Tech. Officer:</i> GSFC/J STEPHENS  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>
<p><b>NAG 5 10838</b>                      <b>HOWARD UNIV</b>                      <b>3471</b>            PUBLIC SERVICE INTERN PROGRAM            05/11/2001 - 05/31/2002                      FY02: \$0                      Total: \$73,700  <i>Prin. Invest.:</i> M C WOODARD  <i>Tech. Officer:</i> GSFC/D MENCHAN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NCC 3 571</b>                      <b>HOWARD UNIV</b>                      <b>3479</b>            EXPERIMENTAL EVALUATION OF MOTOR DRIVE TECHNOLOGIES FOR FUTURE AEROSPACE APPLICATIONS            08/01/1997 - 01/31/2001                      FY02: \$0                      Total: \$312,543  <i>Prin. Invest.:</i> A RUBAAL, M E ELBULUK  <i>Tech. Officer:</i> GRC/M D KANKAM  <i>CASE Category:</i> 45 - ELECTRICAL ENGR</p>
<p><b>NAG 5 11118</b>                      <b>HOWARD UNIV</b>                      <b>3472</b>            TECHNOLOGY ASSESSMENT AND RELIABILITY CHARACTERIZATION OF III-V SEMICONDUCTOR MODFET DEVICE            08/07/2001 - 08/14/2003                      FY02: \$0                      Total: \$50,000  <i>Prin. Invest.:</i> D MOHAMMAD  <i>Tech. Officer:</i> GSFC/A SHARMA  <i>CASE Category:</i> 45 - ELECTRICAL ENGR</p>	<p><b>NCC 5 184</b>                      <b>HOWARD UNIV</b>                      <b>3480</b>            TERRESTRIAL AND EXTRATERRESTRIAL ATMOSPHERES            03/12/1997 - 02/28/2002                      FY02: \$0                      Total: \$4,997,706  <i>Prin. Invest.:</i> A N THORPE  <i>Tech. Officer:</i> GSFC/G A SOFFEN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 12021</b>                      <b>HOWARD UNIV</b>                      <b>3473</b>            NASA/HBCU RENEWABLE ENERGY AND TEACHING UTILIZATION PROJECT            04/22/2002 - 04/30/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> A THORPE  <i>Tech. Officer:</i> GSFC/C PERSON  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NCC 5 387</b>                      <b>HOWARD UNIV</b>                      <b>3481</b>            CENTER FOR THE STUDY OF TERRESTRIAL AND EXTRATERRESTRIAL ATMOSPHERES (CSTEA)            04/16/1999 - 07/31/2001                      FY02: \$0                      Total: \$223,362  <i>Prin. Invest.:</i> S T SMITH  <i>Tech. Officer:</i> GSFC/W R HOEGY  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 12110</b>                      <b>HOWARD UNIV</b>                      <b>3474</b>            MAGNETIC PROPERTIES OF PRIMITIVE CHONDRITES            05/14/2002 - 05/14/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> A N THORPE  <i>Tech. Officer:</i> GSFC/D MENCHAN  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NCC 5 420</b>                      <b>HOWARD UNIV</b>                      <b>3482</b>            CSTEA-HBCU ACACEMIC AND RESEARCH CONSORTIUM (CHARC )            08/30/1999 - 08/31/2002                      FY02: \$0                      Total: \$1,125,000  <i>Prin. Invest.:</i> A THORPE  <i>Tech. Officer:</i> GSFC/W HOEGY  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 12172</b>                      <b>HOWARD UNIV</b>                      <b>3475</b>            NASA/GODDARD PUBLIC SERVICE INTERN PROGRAM            05/10/2002 - 04/30/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> D WOODARD  <i>Tech. Officer:</i> GSFC/DMENCHAN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NCC 5 424</b>                      <b>HOWARD UNIV</b>                      <b>3483</b>            GSFC/HU FELLOWSHIP IN ATMOSPHERIC SCIENCE (GOHFAS)            08/27/1999 - 08/31/2001                      FY02: \$0                      Total: \$175,000  <i>Prin. Invest.:</i> S T SMITH  <i>Tech. Officer:</i> GSFC/W HOEGY  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>

## DISTRICT OF COLUMBIA

## NASA'S UNIVERSITY PROGRAM

**NCC 5 556**                      **HOWARD UNIV**                      **3484**  
 GODDARD SPACE FLIGHT CENTER/HOWARD UNIV FELLOWSHIP IN ATMOSPHERIC SCIENCE (GOHFAS)  
 05/24/2001 - 04/30/2004                      FY02: \$0                      Total: \$295,000  
*Prin. Invest.:* S T SMITH  
*Tech. Officer:* GSFC/W R HOEGY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 656**                      **HOWARD UNIV**                      **3485**  
 HOWARD/GSFC METEORITIC CRATERS AND METEORITES PROJECT  
 09/13/2002 - 09/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D N THORPE  
*Tech. Officer:* GSFC/J L HARRINGTON  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 8 184**                      **HOWARD UNIV**                      **3486**  
 IMPORT OF IMPAIRED POLYADP-RIBOSYLATION AND FREE RADICAL STRESS IN ATAXIA-TELANGIECTASIA  
 09/01/1999 - 08/31/2001                      FY02: \$0                      Total: \$99,349  
*Prin. Invest.:* R SRIDHAR  
*Tech. Officer:* MSFC/R SRIDHAR  
*CASE Category:* 56 - MEDICL

**NGT 5 77**                      **HOWARD UNIV**                      **3487**  
 SUPPORT OF THE 1999 ASEE-NASA SUMMER FACULTY FELLOWSHIP PROGRAM (AERONAUTICS AND SPACE RESEARCH)  
 03/25/1999 - 12/31/2000                      FY02: \$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**                      **3488**  
 SUPPORT OF THE 2001 ASEE-NASA SUMMER FACULTY FELLOWSHIP PROGRAM (AERONAUTICS & SPACE RESEARCH)  
 04/13/2001 - 03/31/2003                      FY02: \$0                      Total: \$354,000  
*Prin. Invest.:* J B HALPERN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12500**                      **SOUTHEASTERN UNIV**                      **3489**  
 PROJECT ESCAPE (EAGER STUDENT COMMUNISM FOR PLANET EARTH)  
 09/30/2002 - 09/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G GRANTHAM  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10027**                      **THE AMERICAN UNIV**                      **3490**  
 DEEP LITHOSPHERIC STRUCTURE.  
 10/02/2000 - 09/30/2001                      FY02: \$0                      Total: \$7,740  
*Prin. Invest.:* J KUTINA  
*Tech. Officer:* GSFC/P TAYLOR  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 5 482**                      **THE AMERICAN UNIV**                      **3491**  
 DEVELOPMENT OF STATE-OF-THE-ART SOLID STATE LASERS FOR ALTIMETRY & OTHER LIDAR APPLICATIONS  
 03/23/2000 - 02/28/2003                      FY02: \$0                      Total: \$343,682  
*Prin. Invest.:* R B KAY  
*Tech. Officer:* GSFC/J L BUFTON  
*CASE Category:* 13 - PHYSICS

**NCC 5 630**                      **THE AMERICAN UNIV**                      **3492**  
 OSCILLATOR ARCHITECTURE  
 02/12/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R KAY  
*Tech. Officer:* GSFC/M M MATSUMURA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 40068**                      **THE AMERICAN UNIV**                      **3493**  
 DISTRICT OF COLUMBIA/NATIONAL SPACE GRANT COLLEGE AND FELLOWSHIP PROGRAM  
 03/29/2000 - 02/28/2003                      FY02: \$0                      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**                      **3494**  
 REAL-TIME ADAPTIVE AUTOMATION OF FLIGHT TASKS  
 04/18/2001 - 12/31/2001                      FY02: \$0                      Total: \$38,837  
*Prin. Invest.:* R PARASURAMAN  
*Tech. Officer:* LARC/L J PRINZEL  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 5 3378**                      **THE CATHOLIC UNIV OF AMERICA**                      **3495**  
 OBSERVATIONS AND ANALYSIS OF DATA OBTAINED BY THE SPACE TELESCOPE IMAGING SPECTROGRAPH  
 08/28/1996 - 09/30/2002                      FY02: \$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**                      **3496**  
 MEASURING BORON ABUNDANCES WITH IUE SPECTRA USING LINES  
 11/25/1996 - 11/14/2000                      FY02: \$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**                      **3497**  
 OBSERVATIONS AND ANALYSIS OF SEYFERT GALAXIES WITH THE SPACE TELESCOPE IMAGING SPECTROGRAPH  
 03/31/1997 - 08/31/2002                      FY02: \$0                      Total: \$812,607  
*Prin. Invest.:* S KRAEMER  
*Tech. Officer:* GSFC/T GULL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 4940**                      **THE CATHOLIC UNIV OF AMERICA**                      **3498**  
 INTERPRETIVE TOOLS FOR ANALYSIS OF CORONAL IMAGES  
 06/23/1997 - 09/30/2002                      FY02: \$0                      Total: \$192,800  
*Prin. Invest.:* O C ST. CYR  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 6139**                      **THE CATHOLIC UNIV OF AMERICA**                      **3499**  
 NEAR-SURFACE MANIFESTATIONS OF GEO-EFFECTIVE SOLAR  
 09/08/1997 - 09/14/2002                      FY02: \$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**                      **3500**  
 A STUDY OF PHYSICAL PROCESSES IN THE ATMOSPHERE OF  
 09/08/1997 - 09/30/2002                      FY02: \$0                      Total: \$268,375  
*Prin. Invest.:* R D ROBINSON  
*Tech. Officer:* GSFC/K G CARPENTER  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 7753</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3501</b>  QUANTITATIVE ANALYSIS OF ETHANE AND METHANE IN COMETS HYAKUTAKE AND HALE-BOPP: DETERMINATION OF  12/08/1998 - 12/31/2001            FY02: \$0            Total: \$98,174  Prin. Invest.: N RUSSO  Tech. Officer: GSFC/R BEEBE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 8793</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3509</b>  ULTRAVIOLET DIAGNOSTICS OF MAGNETIC AND RELATED ACTIVITY IN MAIN SEQUENCE B STARS (ADP 98)  09/07/1999 - 11/30/2002            FY02: \$0            Total: \$65,760  Prin. Invest.: M SMITH  Tech. Officer: GSFC/D WEST  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 7905</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3502</b>  SPATIAL-SPECTRAL MAPPING OF COMETARY CO EMISSION, AND COMPARISON WITH OTHER ORGANICS  12/10/1998 - 09/30/2002            FY02: \$0            Total: \$238,350  Prin. Invest.: D A DISANTI  Tech. Officer: GSFC/T MORGAN  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 8968</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3510</b>  CORONAL EMISSION AND MASS LOSS IN THE HOTTEST STAR OF THE H-R DIAGRAM - FUSE  01/24/2000 - 01/31/2002            FY02: \$0            Total: \$48,100  Prin. Invest.: F C BRUHWEILER  Tech. Officer: GSFC/G SONNEBORN  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 8018</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3503</b>  INTERPRETATION OF SOHO/LASCO/EIT, UVCS OBSERVATIONS USING A MULTI-DIMENSIONAL MHD MODEL  01/06/1999 - 12/31/2002            FY02: \$0            Total: \$172,276  Prin. Invest.: M GUATHAKURTA  Tech. Officer: GSFC/J GURMAN  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 5 8977</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3511</b>  PHASE RESOLVED STUDIES OF THE MAGNETIC A-STAR 17 COM A (HD 108662) - FUSE  01/24/2000 - 01/31/2003            FY02: \$0            Total: \$16,500  Prin. Invest.: C R PROFFITT  Tech. Officer: GSFC/G SONNEBORN  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 8276</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3504</b>  RADIATIVE ACCELERATION CALCULATIONS FOR B STAR ENVELOPES AND ATMOSPHERES(ATP 98)  02/19/1999 - 02/28/2003            FY02: \$0            Total: \$157,491  Prin. Invest.: C R PROFFITT  Tech. Officer: GSFC/R K OLIVERSEN  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 8998</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3512</b>  THE DRIVERS OF CORONAL AND INTERPLANETARY SHOCKS.  02/02/2000 - 02/14/2002            FY02: \$0            Total: \$110,000  Prin. Invest.: N GOPALSWAMY  Tech. Officer: GSFC/M L KAISER  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 8508</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3505</b>  EXPERIMENTAL STUDIES OF IGNEOUS PROCESSES IN ENSTATITE METEORITES  05/21/1999 - 04/30/2003            FY02: \$0            Total: \$20,000  Prin. Invest.: T DICKINSON  Tech. Officer: GSFC/J BOYCE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 9502</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3513</b>  GLOBAL MEASUREMENT OF SOLAR WIND SPEED AND TEMPERATURE IN THE SUN'S CORONA USING GROUND-BASED VISIBILITY  06/06/2000 - 06/14/2003            FY02: \$0            Total: \$251,639  Prin. Invest.: O ST.CYR  Tech. Officer: GSFC/W J WAGNER  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 8622</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3506</b>  CONTINUED DEVELOPMENT OF A FABRY-PEROT AND LYOT NARROW BAND IMAGING SYSTEM.  06/22/1999 - 06/30/2002            FY02: \$0            Total: \$58,180  Prin. Invest.: F C BRUHWEILER  Tech. Officer: GSFC/B WOODGATE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 9539</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3514</b>  ABUNDANCES OF VERY HEAVY ELEMENTS IN LATE-B AND EARLY-A STARS (ADP 99)  05/09/2000 - 05/14/2003            FY02: \$0            Total: \$60,458  Prin. Invest.: G W WAHLGREN  Tech. Officer: GSFC/R J OLIVERSEN  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 8691</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3507</b>  A SEARCH FOR ROTATIONAL MODULATION OF X-RAY CENTERS ON GAMMA CAS (BO.5E)  07/21/1999 - 01/31/2001            FY02: \$0            Total: \$9,810  Prin. Invest.: R D ROBINSON  Tech. Officer: GSFC/J SWANK  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 9600</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3515</b>  MICROWAVE ENHANCEMENT IN CORONAL HOLES: STRUCTURE, VARIABILITY &amp; MAGNETIC NATURE  05/19/2000 - 09/14/2002            FY02: \$0            Total: \$22,000  Prin. Invest.: N GOPALSWAMY  Tech. Officer: GSFC/W J WAGNER  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 8761</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3508</b>  HUMAN BIOLOGY-BASED ADAPTIVE SYSTEMS IN SUPPORT OF SPACE EXPLORATION  09/03/1999 - 08/31/2003            FY02: \$0            Total: \$472,334  Prin. Invest.: R D PARASURAMAN  Tech. Officer: GSFC/R CROUCH  CASE Category: 99 - MULTI INTERDISCIPLINARY, OTHER</p>	<p><b>NAG 5 9696</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3516</b>  HOT POPULATIONS IN NEARBY ELLIPTICAL GALAXIES - FUSE  07/18/2000 - 07/31/2003            FY02: \$0            Total: \$58,879  Prin. Invest.: T BROWN  Tech. Officer: GSFC/G SONNEBORN  CASE Category: 11 - ASTRONOMY</p>

## DISTRICT OF COLUMBIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9888** THE CATHOLIC UNIV OF AMERICA 3517  
 A SPECTROSCOPIC STUDY OF ION MOTIONS IN CORONAL HOLES USING  
 SOHO/SUMER OBSERVATIONS  
 08/24/2000 - 08/31/2003 FY02: \$0 Total: \$99,686  
*Prin. Invest.:* T MORAN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10006** THE CATHOLIC UNIV OF AMERICA 3518  
 LARGE-SCALE STRUCTURE IN THE DISTANT UNIVERSE  
 09/25/2000 - 09/30/2002 FY02: \$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 3519  
 RESEARCH EXPERIENCES FOR UNDERGRADUATES IN THE LABORATORY  
 FOR ASTRONOMY & SOLARPHYSICS  
 09/25/2000 - 09/30/2005 FY02: \$0 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 3520  
 SPACE QUALIFICATION OF LARGE LIGHTWEIGHT MIRROR TECHNOLOGY  
 FOR USE AT VISIBLE & NEAR-IR WAVELENGTH  
 09/29/2000 - 12/31/2001 FY02: \$0 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 3521  
 DEVELOPMENT OF IR ARRAY SPECTROMETERS FOR GROUND-BASED &  
 SPACE-BORNE PLANETARY ASTRONOMY.  
 11/28/2000 - 11/30/2003 FY02: \$4,000 Total: \$115,305  
*Prin. Invest.:* F C BRUHWEILER  
*Tech. Officer:* GSFC/D C REUTER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10130** THE CATHOLIC UNIV OF AMERICA 3522  
 SOLAR WIND ELECTRON DATA ANALYSES  
 12/06/2000 - 06/14/2002 FY02: \$0 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 3523  
 THE DRIVERS OF CORONAL AND INTERPLANETARY SHOCKS  
 01/22/2001 - 02/14/2004 FY02: \$0 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 3524  
 DEVELOPMENT OF INSTRUMENTATION & MISSION OPERATION CONCEPTS  
 FOR THE SOLAR TERRESTRIAL RELATIONS OBSERVATION  
 01/31/2001 - 01/31/2005 FY02: \$0 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 3525  
 MONITORING THE VARIABLE ABSORPTION IN THE SEYFERT 1 GALAXY NGC  
 3783 WITH FUSE, HST, AND CHANDRA  
 02/06/2001 - 02/14/2003 FY02: \$0 Total: \$85,600  
*Prin. Invest.:* D CRENSHAW  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10492** THE CATHOLIC UNIV OF AMERICA 3526  
 CONTINUED MAPPING OF HIGH-ALTITUDE OZONE & SEARCH FOR NIGHT-  
 GLOW ON MARS  
 02/27/2001 - 02/28/2004 FY02: \$0 Total: \$59,800  
*Prin. Invest.:* V KRASNOPOLSKY  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10500** THE CATHOLIC UNIV OF AMERICA 3527  
 SCIENTIFIC WORKSHOP AT THE CATHOLIC UNIV OF AMERICA: MASS  
 OUTFLOW IN ACTIVE GALACTIC NUCLEI: N  
 03/09/2001 - 12/31/2001 FY02: \$0 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 3528  
 CORRELATIVE PHOTOCHEMICAL STUDY OF THE IRTF-C-SHELL MAPS OF O<sub>3</sub>,  
 CO & H<sub>2</sub>O & THE MGS TES OBSERVATIONS  
 03/13/2001 - 03/14/2004 FY02: \$0 Total: \$55,000  
*Prin. Invest.:* V KRASNOPOLSKY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10680** THE CATHOLIC UNIV OF AMERICA 3529  
 DARK CLUSTERS AS GRAVITATIONAL LENSES  
 04/02/2001 - 03/31/2003 FY02: \$0 Total: \$24,020  
*Prin. Invest.:* G WILLIGER  
*Tech. Officer:* GSFC/D KAZANAS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10795** THE CATHOLIC UNIV OF AMERICA 3530  
 GROUND-BASED INFRARED SPECTROSCOPY OF WATER IN COMETS:  
 FLUORESCENCE MODELING AND QUANTITATIVE ANALYSIS  
 04/25/2001 - 04/30/2004 FY02: \$0 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 3531  
 PROPAGATION OF CMES THROUGH THE INTERPLANETARY MEDIUM: IN-  
 TERACTIONS WITH THE SOLAR WIND  
 04/27/2001 - 04/30/2002 FY02: \$0 Total: \$50,880  
*Prin. Invest.:* N GOPALSWAMY  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10867** THE CATHOLIC UNIV OF AMERICA 3532  
 X-RAY & MICROWAVE MODELS IN SUPPORT OF HESSI SOLAR FLARE  
 OBSERVATIONS.  
 05/07/2001 - 05/14/2002 FY02: \$0 Total: \$10,800  
*Prin. Invest.:* L OFMAN  
*Tech. Officer:* GSFC/G D HOLMAN  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 10870</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3533</b>  RXTE FLARES ON PROX CEN (ADP 00)  05/07/2001 - 05/14/2003            FY02: \$0            Total: \$11,941  Prin. Invest.: R D ROBINSON  Tech. Officer: GSFC/R J OLIVERSEN  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11225</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3541</b>  SOLAR WIND INTERACTION WITH THE MARTIAN CRUSTAL MAGNETIC  FIELDS AND THE IMPLICATIONS FOR THE EVOLUTION  08/13/2001 - 08/14/2003            FY02: \$0            Total: \$75,000  Prin. Invest.: D CRIDER  Tech. Officer: GSFC/J BOYCE  CASE Category: 99 - MULTI INTERDISCIPLINARY, OTHER</p>
<p><b>NAG 5 10931</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3534</b>  INVESTIGATING THE EXCITATION MECHANISM FOR COMETARY X-RAY, EUV,  &amp; FUV EMISSIONS(FUSE 2000)  05/16/2001 - 05/31/2002            FY02: \$0            Total: \$10,000  Prin. Invest.: V KRASNOPOLSKY  Tech. Officer: GSFC/G SONNEBORN  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11327</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3542</b>  DEVELOPMENT OF GOSSAMER CLASS TELESCOPE MIRRORS  09/18/2001 - 03/31/2002            FY02: \$0            Total: \$35,303  Prin. Invest.: P C CHEN  Tech. Officer: GSFC/R J OLIVERSEN  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 10944</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3535</b>  JUST WHAT IS ETA CARINAE - FUSE 00  05/24/2001 - 05/31/2003            FY02: \$0            Total: \$23,500  Prin. Invest.: R IPING  Tech. Officer: GSFC/G SONNEBORN  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11342</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3543</b>  NEW MODEL ATMOSPHERES AND SPECTRAL ENERGY DISTRIBUTIONS  FOR STARS IN THE UPPER H-R DIAGRAM  09/24/2001 - 09/30/2002            FY02: \$0            Total: \$70,615  Prin. Invest.: F C BRUHWEILER  Tech. Officer: GSFC/S HEAP  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 11003</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3536</b>  PHYSICAL PROPERTIES OF THE SOLAR WIND IN CORONAL HOLES DE-  DUCTED FROM WAVES IN PLUMES  06/06/2001 - 05/31/2002            FY02: \$0            Total: \$10,000  Prin. Invest.: L OFMAN  Tech. Officer: GSFC/W J WAGNER  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 11377</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3544</b>  THREE DIMENSIONAL MHD MODELING OF THE SOLAR WIND  10/26/2001 - 10/31/2002            FY02: \$22,602            Total: \$22,602  Prin. Invest.: L OFMAN  Tech. Officer: GSFC/A ROBERTS  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 11014</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3537</b>  SEARCH FOR H2 IN MARS' ATMOSPHERE (FUSE 1999)  06/25/2001 - 06/30/2002            FY02: \$0            Total: \$25,900  Prin. Invest.: V KRASNOPOLSKY  Tech. Officer: GSFC/G SONNEBORN  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11395</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3545</b>  REDUCTION AND SCIENTIFIC ANALYSIS OF INFRARED DATA OBTAINED  WITH THE NEAR INFRARED SPECTROMETER  11/20/2001 - 11/30/2002            FY02: \$0            Total: \$0  Prin. Invest.: F C BRUHWEILER  Tech. Officer: GSFC/M M FREUND  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 11131</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3538</b>  EVOLUTION OF THE BASTILLE DAY SHOCK AND MERGED INTERACTION  REGION  07/24/2001 - 10/31/2002            FY02: \$0            Total: \$50,000  Prin. Invest.: Y C WHANG  Tech. Officer: GSFC/L F BURLAGA  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 5 11705</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3546</b>  ANALYSIS OF RXTE AO5 DATA OF GAMMA CAS (ADP 2001)  02/07/2002 - 06/30/2003            FY02: \$0            Total: \$0  Prin. Invest.: M A SMITH  Tech. Officer: GSFC/R J OLIVERSEN  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 11137</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3539</b>  CIRCUMSTELLAR ENVIRONMENTS OF EVOLVED STARS AND THEIR INTER-  ACTION WITH THE INTERSTELLAR MEDIUM  07/20/2001 - 07/31/2004            FY02: \$0            Total: \$115,711  Prin. Invest.: F C BRUHWEILER  Tech. Officer: GSFC/R J OLIVERSEN  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11757</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3547</b>  USING CDS, EIT, AND COORDINATED GROUND-BASED OBSERVATIONS TO  MEASURE CORONAL MAGNETIC FIELDS AND  03/04/2002 - 07/14/2005            FY02: \$0            Total: \$0  Prin. Invest.: J W BROSIUS  Tech. Officer: GSFC/T KUCERA  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 11162</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3540</b>  CONSEQUENCES OF CME INTERACTION IN THE INTERPLANETARY ME-  DIUM  08/07/2001 - 08/14/2003            FY02: \$0            Total: \$60,000  Prin. Invest.: J W BROSIUS  Tech. Officer: GSFC/M ACUNA  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 5 11815</b>            <b>THE CATHOLIC UNIV OF AMERICA</b>            <b>3548</b>  INTERPRETATION OF SOHO/LASCO, EIT, UVCS OBSERVATIONS USING A  MULTIDIMENSIONAL MHD MODEL  03/06/2002 - 03/14/2005            FY02: \$0            Total: \$0  Prin. Invest.: L OFMAN  Tech. Officer: GSFC/E SITTLER  CASE Category: 13 - PHYSICS</p>

## DISTRICT OF COLUMBIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11841** THE CATHOLIC UNIV OF AMERICA 3549  
 MAGNETOHYDRODYNAMIC PROCESSES IN THE SOLAR CORONA AND THE SOLAR WIND.  
 03/11/2002 - 03/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* L OFMAN  
*Tech. Officer:* GSFC/J DAVILA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11877** THE CATHOLIC UNIV OF AMERICA 3550  
 MULTI-FLUID AND HYBRID MODELS OF WAVES IN CORONAL STRUCTURES  
 03/15/2002 - 03/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L OFMAN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 11883** THE CATHOLIC UNIV OF AMERICA 3551  
 RESEARCH PROGRAM: SOLAR WIND ELECTRON DATA ANALYSE S  
 03/20/2002 - 06/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* Y WHANG  
*Tech. Officer:* GSFC/R FITZENREITER  
*CASE Category:* 13 - PHYSICS

**NAG 5 12071** THE CATHOLIC UNIV OF AMERICA 3552  
 EXPERIMENTAL STUDIES OF IGENOUS PROCESSES IN ENSTA TITE METEORITES  
 04/19/2002 - 04/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* T DICKINSON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 12121** THE CATHOLIC UNIV OF AMERICA 3553  
 A FUSE DETERMINATION OF THE GRAVITATIONAL REDSHIFT AND SPECTROSCOPIC MASS OF SIRUS B  
 04/29/2002 - 04/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* M SAHU  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12178** THE CATHOLIC UNIV OF AMERICA 3554  
 MONITORING THE VARIABLE ABSORPTION IN THE SEYFERT 1 GALAXY NGC 3783 WITHFUSE, HST, AND CHANDRA\_ - FU  
 06/28/2002 - 06/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D CRENSHAW  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12208** THE CATHOLIC UNIV OF AMERICA 3555  
 PRODUCTION AND EXCITATION OF COMETARY CO EMISSION, AND COMPARISON WITH OTHER ORGANIC VOLATILES  
 06/03/2002 - 05/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M A DISANTI  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12235** THE CATHOLIC UNIV OF AMERICA 3556  
 EFFECTS OF CRUSTAL MAGNETIZATION ON THE STRUCTURE OF THE MARTIAN IONOSPHERE  
 05/29/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D CRIDER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12265** THE CATHOLIC UNIV OF AMERICA 3557  
 HST AND GROUND-BASED OBSERVATIONS OF ASTRONOMICAL SOURCES  
 06/24/2002 - 06/30/2007 FY02: \$0 Total: \$0  
*Prin. Invest.:* F C BRUHWEILER  
*Tech. Officer:* GSFC/T GULL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12285** THE CATHOLIC UNIV OF AMERICA 3558  
 QUANTITATIVE INFRARED DATA ANALYSIS OF ETHANE AND RELATED ORGANICS IN COMETS: OBTAINING CLUES TO THE  
 06/11/2002 - 06/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* N DELLA RUSSO  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12331** THE CATHOLIC UNIV OF AMERICA 3559  
 SUPPORT FOR THE SYMPOSIUM: INTERSTELLAR TRAVEL AND MULTI-GENERATION SPACE SHIPS  
 07/08/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* F BRUHWEILER  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12347** THE CATHOLIC UNIV OF AMERICA 3560  
 IONIZATION STRUCTURE OF NGC 7009  
 08/15/2002 - 08/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R IPING  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12389** THE CATHOLIC UNIV OF AMERICA 3561  
 THE ORIGIN AND EARLY PROPAGATION OF ERUPTIONS IN THE SUN'S CORONA  
 07/17/2002 - 07/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D C WANG  
*Tech. Officer:* GSFC/B THOMPSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12529** THE CATHOLIC UNIV OF AMERICA 3562  
 RADIAL EVOLUTION OF BASTILLE DAY FLOWS  
 08/28/2002 - 08/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* Y C WHANG  
*Tech. Officer:* GSFC/L F BURLAGA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 12575** THE CATHOLIC UNIV OF AMERICA 3563  
 SOLAR IR MAGNETIC FIELD MEASUREMENTS WITH THE CELESTE GRATING SPECTROGRAPH.  
 09/16/2002 - 09/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* T MORAN  
*Tech. Officer:* GSFC/D E JENNINGS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12591** THE CATHOLIC UNIV OF AMERICA 3564  
 CRYOGENIC LABORATORY INFRARED SPECTROSCOPY FOR REMOTE SENSING OF ATMOSPHERES  
 09/24/2002 - 09/30/2007 FY02: \$0 Total: \$0  
*Prin. Invest.:* D W STEYERT  
*Tech. Officer:* GSFC/D C REUTER  
*CASE Category:* 13 - PHYSICS



## NASA'S UNIVERSITY PROGRAM

FLORIDA

**NCC 2 1247** THE CATHOLIC UNIV OF AMERICA 3565  
 HUMAN FACTORS IN DISTRIBUTED AIR-GROUND TRAFFIC MANAGEMENT  
 03/26/2001 - 03/31/2003 FY02: \$0 Total: \$30,082  
*Prin. Invest.:* R PARASURAMAN  
*Tech. Officer:* ARC/R MOGFORD, ARC/P SNYDER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 380** THE CATHOLIC UNIV OF AMERICA 3566  
 INVESTIGATION OF X-RAY AND GAMMA-RAYS FROM SOLAR FLARES AND  
 PLANETARY TYPE BODIES  
 02/12/1999 - 03/31/2003 FY02: \$0 Total: \$1,014,985  
*Prin. Invest.:* R D STARR  
*Tech. Officer:* GSFC/L ORWIG  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 445** THE CATHOLIC UNIV OF AMERICA 3567  
 INFRARED SPECTROSCOPY OF COMETS: AN OBSERVATIONAL AND EXPERIMENTAL  
 STUDY OF COMETARY COMPOSITION AND  
 04/20/2000 - 05/31/2003 FY02: \$0 Total: \$38,140  
*Prin. Invest.:* N DELLO RUSSO  
*Tech. Officer:* GSFC/M J MUMMA  
*CASE Category:* 13 - PHYSICS

**NCC 5 452** THE CATHOLIC UNIV OF AMERICA 3568  
 CHEMICAL/PHYSICAL PROPERTIES OF PLANETARY & ASTROPHYSICAL  
 MOLECULES  
 02/03/2000 - 04/30/2005 FY02: \$0 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 3569  
 SPATIAL-SPECTRAL MAPPING OF CO AND OTHER EMISSIONS IN COMETS,  
 AND OF WATER IN MARS ATMOSPHERE  
 06/27/2000 - 03/31/2003 FY02: \$0 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 3570  
 RENEWAL OF COOP AGREEMENT NCC-418 MAINTENANCE OF CDAA DATA  
 BASE.  
 08/24/2000 - 08/31/2001 FY02: \$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 3571  
 HESSI DATA ANALYSIS  
 04/06/2001 - 04/14/2003 FY02: \$0 Total: \$61,400  
*Prin. Invest.:* J BROSIUS  
*Tech. Officer:* GSFC/B DENNIS  
*CASE Category:* 13 - PHYSICS

**NCC 5 636** THE CATHOLIC UNIV OF AMERICA 3572  
 RESEARCH OF COSMIC HARD X-RAYS AND GAMMA-RAYS  
 03/05/2002 - 03/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R D STARR  
*Tech. Officer:* GSFC/J A NUTH  
*CASE Category:* 11 - ASTRONOMY

**NGT 1 01028** THE CATHOLIC UNIV OF AMERICA 3573  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/12/2001 - 06/30/2004 FY02: \$0 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 3574  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/20/1998 - 06/30/2001 FY02: \$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 3575  
 SATURDAY ACADEMY PROGRAM  
 06/19/1997 - 03/31/2001 FY02: \$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 3576  
 REMOTE SENSING SPECTRAL IDENTIFICATION OF FRESHWATER PLANKTON  
 05/03/2000 - 09/30/2002 FY02: \$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 3577  
 RETAINING HIGH POTENTIAL JUNIOR AND SENIOR HIGH SCHOOL STUDENTS  
 05/02/2001 - 09/30/2002 FY02: \$0 Total: \$295,047  
*Prin. Invest.:* W COLEMAN  
*Tech. Officer:* GSFC/C HOLLINSWORTH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12335** UNIV OF DISTRICT OF COLUMBIA 3578  
 SCIENCE AND ENGINEERING CENTER'S SUMMER ACADEMIC ENRICHMENT  
 PROGRAM  
 07/11/2002 - 07/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* G DAVIS  
*Tech. Officer:* GSFC/D HALE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## FLORIDA

**NAG10 195** BETHUNE - COOKMAN COLL 3579  
 OPERATION OF THE CNTR FOR SPACE EDUCATION  
 09/11/1996 - 09/30/2001 FY02: \$0 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 COLL 3580  
 NASA/FLORIDA MINORITY INST ENTREPRENEURIAL PARTNERSHIP  
 09/13/1999 - 10/31/2001 FY02: \$0 Total: \$1,200,000  
*Prin. Invest.:* A D TAYLOR  
*Tech. Officer:* KSC/W B WILLIAMS  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NCC 5 426**                    **BETHUNE - COOKMAN COLL**                    **3581**  
 A BETTER, FASTER AND INEXPENSIVE PHOTOGRAMMETRY SYSTEM  
 09/07/1999 - 08/31/2002                    FY02: \$0                    Total: \$199,991  
*Prin. Invest.:* E F EKPO  
*Tech. Officer:* GSFC/S E HETHERINGTON  
*CASE Category:* 13 - PHYSICS

**NCC10 55**                    **BETHUNE - COOKMAN COLL**                    **3582**  
 OPERATION AT THE CENTER FOR SPACE EDUCATION  
 09/24/2001 - 09/24/2006                    FY02: \$0                    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 COLL**                    **3583**  
 INFRARED SPECTRA OF COSMIC-TYPE ICES CONTAINING NITROGEN  
 07/06/2001 - 07/14/2004                    FY02: \$0                    Total: \$10,000  
*Prin. Invest.:* R L HUDSON  
*Tech. Officer:* GSFC/H M MOORE  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 02087**                    **EMBRY-RIDDLE AERONAUTICAL UNIV**                    **3584**  
 TRAINING & TRANSITION WITH ADVANCED DISPLAYS  
 05/01/2002 - 12/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R L NEWMAN, S N STANDIFORD  
*Tech. Officer:* LARC/L J GLAAB  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 5199**                    **EMBRY-RIDDLE AERONAUTICAL UNIV**                    **3585**  
 ICE CONTENT AND ODD-OXYGEN IN NOCTILUCENT-CLOUDS (ICON)  
 06/18/1998 - 03/31/2003                    FY02: \$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**                    **3586**  
 FIRST YEAR FUNDING/ CYROGENIC WHOLE AIR SAMPLING OF CARBON  
 DIOXIDE IN THE UPPER MESOSPHERE  
 04/12/2000 - 03/23/2003                    FY02: \$0                    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**                    **3587**  
 ENERGETICS & DYNAMICS OF THE MESOSPHERE & LOWER THERMO-  
 SPHERE; TIMED/CEDAR COLLABORATIVE STUDIES  
 10/31/2000 - 10/31/2003                    FY02: \$0                    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**                    **3588**  
 1996 AGATE - GENERAL AVIATION  
 07/23/1996 - 10/31/2001                    FY02: \$0                    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**                    **3589**  
 SOUTHEAST SATSLAB  
 08/31/2001 - 09/30/2002                    FY02: \$0                    Total: \$500,000  
*Prin. Invest.:* S HAMPTON  
*Tech. Officer:* LARC/JR BURLEY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 685**                    **EMBRY-RIDDLE AERONAUTICAL UNIV**                    **3590**  
 SILICON CARBIDE DIODE MIXERS FOR IMPROVED SAFETY I N AIRCRAFT  
 RF AVIONICS  
 03/04/1999 - 06/26/2002                    FY02: \$0                    Total: \$73,025  
*Prin. Invest.:* A HELFRICK  
*Tech. Officer:* GRC/P G NEUDECK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 2 1384**                    **FLA INTERNATIONAL UNIV**                    **3591**  
 DEVELOPING AN ADVANCED EENVIRONMENT FOR COLLABORAT IVE COM-  
 PUTING BY AUGMENTING POSTDOC  
 09/15/1999 - 07/31/2002                    FY02: \$0                    Total: \$200,000  
*Prin. Invest.:* I R FERNANDEZ  
*Tech. Officer:* ARCH/T STEWART, ARC/S LAU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1440**                    **FLA INTERNATIONAL UNIV**                    **3592**  
 SPECIFICATION & ANALYSIS OF SOFTWARE ARCHITECTURES OF HIGH  
 ASSURANCE SYSTEMS  
 09/26/2000 - 09/14/2003                    FY02: \$0                    Total: \$194,845  
*Prin. Invest.:* X HE, X HE  
*Tech. Officer:* ARCA/CARDENAS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 3826**                    **FLA INTERNATIONAL UNIV**                    **3593**  
 BASIC RESEARCH IN ATOMIC, MOLECULAR AND OPTICAL PHYSICS IN  
 SUPPORT OF NASA STRATEGIC ENTERPRISES  
 01/29/1997 - 01/31/2001                    FY02: \$0                    Total: \$298,794  
*Prin. Invest.:* K HARDY  
*Tech. Officer:* GSFC/R HARTLE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8156**                    **FLA INTERNATIONAL UNIV**                    **3594**  
 AVIRIS IMAGE CLASSIFICATION USING PHYTOPLANKTON RE FLECTANCE  
 SPECTRA  
 02/02/1999 - 01/31/2001                    FY02: \$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**                    **3595**  
 A STUDY OF THEFINAL PRODUCT STATES OF THE DISSOCIA TIVE RECOM-  
 BINATION REACTION BY TOFSPECTROSCOPY  
 08/31/1999 - 08/31/2003                    FY02: \$0                    Total: \$198,472  
*Prin. Invest.:* K HARDY  
*Tech. Officer:* GSFC/R HARTLE  
*CASE Category:* 13 - PHYSICS

**NAG 5 9478**                    **FLA INTERNATIONAL UNIV**                    **3596**  
 HIGH PERFORMANCE DATABASE MANAGEMENT WITH APPLICAT ION TO  
 EARTH SCIENCE  
 04/25/2000 - 04/30/2003                    FY02: \$0                    Total: \$1,000,000  
*Prin. Invest.:* N RISHE  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1404**                    **FLA INTERNATIONAL UNIV**                    **3597**  
 USING LANDSAT 7 DATA IN GIS-BASED REVISION OF REEF BASE  
 05/14/2002 - 09/30/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J GEBELEIN  
*Tech. Officer:* JSC/G BYRNE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## NASA'S UNIVERSITY PROGRAM

FLORIDA

**NAG10 212**                      **FLA INTERNATIONAL UNIV**                      **3598**  
 APPLIED RESEARCH IN INDUSTRIAL & SYSTEMS ENGINEERING (ARISE)  
 CENTER  
 08/29/1997 - 08/31/2001                      FY02: \$0                      Total: \$399,960  
*Prin. Invest.:* M A CENTENO  
*Tech. Officer:* KSC/A MITSKEVICH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG10 251**                      **FLA INTERNATIONAL UNIV**                      **3599**  
 MATHEMATICS, SCIENCE & TECH ACHIEVEMENT (MSTA)  
 09/23/1998 - 09/22/2001                      FY02: \$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**                      **3600**  
 PROGRAM  
 05/01/1999 - 07/01/2002                      FY02: \$0                      Total: \$599,982  
*Prin. Invest.:* C MENDEZ  
*Tech. Officer:* KSC/R MCKINNEY  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NAG10 259**                      **FLA INTERNATIONAL UNIV**                      **3601**  
 MSTA - MATH, SCIENCE & TECHNOLOGY ACHIEVEMENT  
 05/01/1999 - 08/14/2002                      FY02: \$0                      Total: \$300,000  
*Prin. Invest.:* I BECCERA-FERNANDEZ  
*Tech. Officer:* KSC/S ROBERTS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG10 268**                      **FLA INTERNATIONAL UNIV**                      **3602**  
 PROJECT VISION: VERY INTENSIVE SCIENTIFIC INTERC URRICULAR ON-  
 SITE EDUCATION  
 09/09/1999 - 12/31/2001                      FY02: \$0                      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**                      **3603**  
 SPACEPORT TECHHNOLOGY CENTER AND WORK INSTRUCTION DELIVERY  
 INITIATIVE  
 09/29/2000 - 08/31/2001                      FY02: \$0                      Total: \$60,238  
*Prin. Invest.:* M CENTENO  
*Tech. Officer:* KSC/M GROH-HAMMOND  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG10 307**                      **FLA INTERNATIONAL UNIV**                      **3604**  
 ENHANCING THE SCOPE AND FUNCTIONALITY OF SAGE (SEA RCHABLE  
 ANSWER GENERATING ENVIRONMENT)  
 09/28/2001 - 08/31/2002                      FY02: \$0                      Total: \$25,000  
*Prin. Invest.:* I BECERRA-FERNANDEZ  
*Tech. Officer:* KSC/O MELENDEZ  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG10 309**                      **FLA INTERNATIONAL UNIV**                      **3605**  
 BRINGING SCIENCE AND TECHNOLOGY TO HISPANIC YOUTH THROUGH  
 TELEVISED, SPANISH-LANGUAGEMEDIA: BRIDGIN  
 09/28/2001 - 08/31/2002                      FY02: \$0                      Total: \$154,667  
*Prin. Invest.:* G ROIG  
*Tech. Officer:* KSC/J NUNEZ  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG10 311**                      **FLA INTERNATIONAL UNIV**                      **3606**  
 PROJECT M.A.S.T.T. MATHEMATICS/APPLIED SCIENCES TEACHERS TRAIN-  
 ING  
 02/25/2002 - 11/01/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G A ROIG  
*Tech. Officer:* KSC/H BURSIA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 321**                      **FLA INTERNATIONAL UNIV**                      **3607**  
 INTERNSHIP PROGRAM AT KENNEDY SPACE CENTER (IPKSC )  
 09/03/2002 - 07/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M CENTENO  
*Tech. Officer:* KSC/G BUCKINGHAM  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 3 02065**                      **FLA INTERNATIONAL UNIV**                      **3608**  
 ICING SOFTWARE CODE VALIDATION  
 10/24/2001 - 04/24/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M A EBADIAN  
*Tech. Officer:* GRC/IMG POTAPCZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 663**                      **FLA INTERNATIONAL UNIV**                      **3609**  
 PROMOTING EQUITY IN PREPARING SECONDARY TEACHERS I N MATH-  
 EMATICS, SCIENCEAND TECHNOLOGY  
 08/21/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C MENDEZ  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01057**                      **FLORIDA A&M UNIV**                      **3610**  
 ACTIVE CONTROL OF BOUNDARY-LAYER SEPARATION AND FLOW DISTOR-  
 TION IN ADVERSE PRESSURE GRADIENT FLOWS  
 03/27/2001 - 03/31/2004                      FY02: \$0                      Total: \$80,981  
*Prin. Invest.:* F S ALVI, C SHIH  
*Tech. Officer:* LARC/S A GORTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02059**                      **FLORIDA A&M UNIV**                      **3611**  
 ACTIVE-ADAPTIVE CONTROL OF INLET SEPARATION USING SUPERSONIC  
 MICROJETS  
 02/28/2002 - 02/28/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* F S ALVI  
*Tech. Officer:* LARC/S A GORTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02114**                      **FLORIDA A&M UNIV**                      **3612**  
 PARTIAL SUPPORT TO THE 2002 NATIONAL TEACHER PREPARATION  
 SYMPOSIUM  
 09/11/2002 - 11/01/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* F HAMILTON  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 2 1439**                      **FLORIDA A&M UNIV**                      **3613**  
 INVESTIGATION OF THE ELECTRONIC PROPERTIES OF DIST ORTED  
 CARBON NANOTUBES  
 09/21/2000 - 08/31/2003                      FY02: \$0                      Total: \$186,755  
*Prin. Invest.:* M ENCINOSA  
*Tech. Officer:* ARC/B J COLLINS, ARC/D JAMES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NAG 3 1759** **FLORIDA A&M UNIV** **3614**  
 A GRADUATE FELLOWSHIP COMPONENT TO AUGMENT PROGRAM IMAGE  
 06/14/1995 - 12/14/2001 FY02: \$0 Total: \$1,522,879  
*Prin. Invest.:* F S HUMPHRIES, F J FOREMAN  
*Tech. Officer:* GRC/J E BOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2193** **FLORIDA A&M UNIV** **3615**  
 ROBUST FAULT DETECTION AND ISOLATION FOR NASA LAUNCH VEHICLES  
 09/01/1998 - 08/31/2002 FY02: \$0 Total: \$234,476  
*Prin. Invest.:* E G COLLINS  
*Tech. Officer:* GRC/T GUO  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2786** **FLORIDA A&M UNIV** **3616**  
 A GRADUATE FELLOWSHIP COMPONENT TO AUGMENT PROGRAM IMAGE  
 05/31/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A F VAUGHN-COOKE  
*Tech. Officer:* GRC/D JOHNSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 4 164** **FLORIDA A&M UNIV** **3617**  
 EVOLUTIONARY ALGORITHMS  
 02/26/1999 - 02/26/2003 FY02: \$0 Total: \$225,000  
*Prin. Invest.:* M ABDULLAH, F HAMILTON  
*Tech. Officer:* DFRC/K GUPTA, DFRC/E COX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9119** **FLORIDA A&M UNIV** **3618**  
 LINKAGES 2001 PROJECT  
 02/24/2000 - 01/31/2001 FY02: \$0 Total: \$500,000  
*Prin. Invest.:* J H AMMONS  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9420** **FLORIDA A&M UNIV** **3619**  
 ELECTROCHEMICAL CAPACITORS & HYBRID POWER SOURCES FOR  
 SPACE APPLICATIONS  
 04/11/2000 - 04/30/2003 FY02: \$0 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** **3620**  
 COLLISION PROCESSES IN ASTROPHYSICAL PLASMAS  
 12/08/2000 - 12/31/2003 FY02: \$0 Total: \$175,427  
*Prin. Invest.:* C A WEATHERFORD  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10726** **FLORIDA A&M UNIV** **3621**  
 LINKAGES 2001 PROJECT  
 04/09/2001 - 03/31/2002 FY02: \$250,000 Total: \$500,000  
*Prin. Invest.:* B KELLY  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 238** **FLORIDA A&M UNIV** **3622**  
 MINORITY ACCESS TO GRAD ENGR PROGRAM  
 12/17/1997 - 04/30/2002 FY02: \$0 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** **3623**  
 MAPSTAP  
 05/13/1998 - 12/31/2002 FY02: \$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** **3624**  
 PRODIGY 2000  
 09/23/1998 - 09/22/2001 FY02: \$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** **3625**  
 ELECTROSTATIC CHARGING, PRECIPITATION, ADHESION, AND DISSIPATION  
 IN THE MARTIAN ATMOSPHERE  
 08/01/1999 - 10/31/2001 FY02: \$0 Total: \$192,574  
*Prin. Invest.:* F B GROSS  
*Tech. Officer:* KSC/R LEE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG10 267** **FLORIDA A&M UNIV** **3626**  
 PROJECT DISCOVER II SBI/NASA INTERNSHIPS PROJECT DISCOVER II  
 SBI/NASA INTERNSHIPS  
 09/09/1999 - 09/30/2002 FY02: \$0 Total: \$443,689  
*Prin. Invest.:* S C MOBLEY  
*Tech. Officer:* KSC/R J MCKINNEY  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NAG10 289** **FLORIDA A&M UNIV** **3627**  
 WIRELESS SPREAD-SPECTRUM INTERCOMMUNICATION SYSTEM WIRELESS  
 SPREAD-SPECTRUM INTERCOMMUNICATION SYSTEM  
 07/11/2000 - 06/07/2003 FY02: \$0 Total: \$193,581  
*Prin. Invest.:* B A HARVEY  
*Tech. Officer:* KSC/F MCKENZIE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG10 314** **FLORIDA A&M UNIV** **3628**  
 INCREASING MINORITY ACCESS TO GRADUATE ENGINEERING PROGRAM  
 (IMAGE)  
 03/29/2002 - 02/12/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* H LEWIS III  
*Tech. Officer:* KSC/D ABRAHAM  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 1 252** **FLORIDA A&M UNIV** **3629**  
 CENTER FOR NONLINEAR AND NONEQUILIBRIUM AEROSCIENCES (CEN-  
 NAS)  
 04/23/1997 - 12/31/2002 FY02: \$0 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** **3630**  
 A COOPERATIVE RESEARCH PROGRAM IN AERONAUTICAL INFORMATION  
 SCIENCE TECHNOLOGIES  
 07/01/1996 - 02/28/2001 FY02: \$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

<b>NCC 2 1005</b>	<b>FLORIDA A&amp;M UNIV</b>	<b>3631</b>	<b>NCC 8 230</b>	<b>FLORIDA ATLANTIC UNIV</b>	<b>3639</b>
DEVELOPMENT OF A TRANSDERMAL DELIVERY DEVICE FOR M ELATONIN IN VIVO			PROMOTE COMMERCIALY FUNDING R & D AND TECH DEV IN THE FIELD OF SPACE COMMUNICATIONS		
08/25/1997 - 07/31/2003	FY02: \$0	Total: \$276,406	11/01/2001 - 10/31/2002	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> M S SACHDEVA			<i>Prin. Invest.:</i> W E GLENN		
<i>Tech. Officer:</i> ARC/C M WINGET, ARC/G S LEE			<i>Tech. Officer:</i> MSFC/S LAMBING		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NCC 2 1221</b>	<b>FLORIDA A&amp;M UNIV</b>	<b>3632</b>	<b>NAG 1 2260</b>	<b>FLORIDA INST OF TECHNOLOGY</b>	<b>3640</b>
A COOPERATIVE RESEARCH PROGRAM IN AERONAUTICAL INFORMATION SCIENCE TECHNOLOGIES			MODELING COMPOSITES LAMINATE CRUSHING FOR CRASH ANALYSIS		
03/22/2001 - 03/14/2003	FY02: \$0	Total: \$349,927	01/12/2000 - 12/15/2001	FY02: \$0	Total: \$51,066
<i>Prin. Invest.:</i> A KROTHAPALLI, C SHIH, L LOURENCO			<i>Prin. Invest.:</i> D C FLEMING		
<i>Tech. Officer:</i> ARC/G K YAMAUCHI, ARC/J C ROSS			<i>Tech. Officer:</i> LARC/L E JONES		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NGT 4 52430</b>	<b>FLORIDA A&amp;M UNIV</b>	<b>3633</b>	<b>NAG 2 1508</b>	<b>FLORIDA INST OF TECHNOLOGY</b>	<b>3641</b>
DETERMINING MECHANICAL PROPERTIES OF NANO MATERIAL S USING NANOINDENTATION AND A FINITE ELEMENT METH			GRAVITATIONAL IMPACTS ON THE CELL CYCLE		
06/19/2002 - 06/30/2003	FY02: \$0	Total: \$0	07/23/2001 - 07/31/2003	FY02: \$0	Total: \$82,568
<i>Prin. Invest.:</i> M M ABDULLAH			<i>Prin. Invest.:</i> C E HELMSTETTER		
<i>Tech. Officer:</i> DFRC/K K GUPTA			<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 1 01079</b>	<b>FLORIDA ATLANTIC UNIV</b>	<b>3634</b>	<b>NAG 5 10888</b>	<b>FLORIDA INST OF TECHNOLOGY</b>	<b>3642</b>
MODIFIED AND ADVANCED FORMULATIONS FOR UNCERTAINTY ANALYSIS IN STRUCTURES ANALYSIS			COSMIC RAY INTERSTELLAR PROPAGATION (ATP 2000)		
06/01/2001 - 01/31/2002	FY02: \$0	Total: \$33,095	05/09/2001 - 05/14/2004	FY02: \$0	Total: \$63,292
<i>Prin. Invest.:</i> I ELISHAKOFF			<i>Prin. Invest.:</i> M ZHANG		
<i>Tech. Officer:</i> LARC/W J STROUD, LARC/I S RAJU			<i>Tech. Officer:</i> GSFC/R J OLIVERSEN		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 3 2023</b>	<b>FLORIDA ATLANTIC UNIV</b>	<b>3635</b>	<b>NAG 5 11036</b>	<b>FLORIDA INST OF TECHNOLOGY</b>	<b>3643</b>
SPACE COMMUNICATIONS TECHNOLOGY CENTER			STUDIES OF COSMIC RAY MODULATION & ENERGETIC PARTICLE PROPAGATION IN TIME-DEPENDENT 3-DIMENSION		
03/12/1997 - 06/30/2002	FY02: \$0	Total: \$1,404,999	06/12/2001 - 07/31/2004	FY02: \$0	Total: \$101,160
<i>Prin. Invest.:</i> W E GLENN, H HELMKEN			<i>Prin. Invest.:</i> M ZHANG		
<i>Tech. Officer:</i> GRC/T P BIZON			<i>Tech. Officer:</i> GSFC/W WAGNER		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 3 2702</b>	<b>FLORIDA ATLANTIC UNIV</b>	<b>3636</b>	<b>NAG 5 11921</b>	<b>FLORIDA INST OF TECHNOLOGY</b>	<b>3644</b>
NOISE GENERATED BY FANS WITH SUPERSONIC TIP SPEEDS NOISE GENERATED BY FANS WITH SUPERSONIC TIP SPEED			MEASURING SOLAR CYCLE VARIATIONS OF HE3 IN ENERGETIC PARTICLE EVENTS		
02/15/2002 - 08/31/2004	FY02: \$0	Total: \$0	04/09/2002 - 03/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> S GLEGG			<i>Prin. Invest.:</i> J R DWYER		
<i>Tech. Officer:</i> GRC/A ENVIA			<i>Tech. Officer:</i> GSFC/W WAGNER		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 12129</b>	<b>FLORIDA ATLANTIC UNIV</b>	<b>3637</b>	<b>NAG 8 1582</b>	<b>FLORIDA INST OF TECHNOLOGY</b>	<b>3645</b>
ACHIEVING HIGH SOFTWARE RELIABILITY.			"NEW CELL CULTURE TECHNOLOGY"		
04/30/2002 - 09/30/2004	FY02: \$0	Total: \$0	03/01/1999 - 11/30/2002	FY02: \$0	Total: \$351,450
<i>Prin. Invest.:</i> T KHOSHGOFTARR			<i>Prin. Invest.:</i> C HELMSTALTER		
<i>Tech. Officer:</i> GSFC/K MCGILL			<i>Tech. Officer:</i> MSFC/B GUYNES		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NAS 3 26956</b>	<b>FLORIDA ATLANTIC UNIV</b>	<b>3638</b>	<b>NGT 5 50257</b>	<b>FLORIDA INST OF TECHNOLOGY</b>	<b>3646</b>
ACTS PROPAGATION EXPERIMENTS			TECHNOLOGIES FOR ASSESSING THE EFFECTS OF LONG-TERM SPACE HABITATION ON CELLULAR AGING_ STUDENT: K		
06/21/1993 - 02/28/2003	FY02: \$0	Total: \$406,278	07/09/1999 - 06/30/2002	FY02: \$0	Total: \$66,000
<i>Prin. Invest.:</i> H F HELMKEN			<i>Prin. Invest.:</i> C HELMSTETTER		
<i>Tech. Officer:</i> GRC/R J GUNDERMAN			<i>Tech. Officer:</i> GSFC/L SMITH		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50290**                      **FLORIDA INST OF TECHNOLOGY**                      **3647**  
 THE LUMINOSITY FUNCTION & THE CHROMOSPHERIC ACTIVITY-AGE  
 RELATION FOR M DWARF STARS IN COMMON PROP  
 06/27/2000 - 06/30/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* T OSWALT  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 247**                      **FLORIDA MEMORIAL COLL**                      **3648**  
 INITIATIVE FOR AFRICAN AMERICAN/UNDER REPRESENTED STUDENTS  
 08/01/1998 - 11/11/2001                      FY02: \$0                      Total: \$527,713  
*Prin. Invest.:* H HUISSO  
*Tech. Officer:* KSC/R MC KINNEY  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 1 2078**                      **FLORIDA STATE UNIV**                      **3649**  
 NOISE SUPPRESSION OF HEATED SUPERSONIC JETS BY WATER INJECTION  
 06/16/1998 - 04/30/2001                      FY02: \$0                      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**                      **3650**  
 DYNAMICAL FACTORS CONTROLLING OZONE, OH AND AEROSOL LEVELS  
 OVER THE PEM-TROPICS B REGION  
 01/20/1999 - 12/31/2001                      FY02: \$0                      Total: \$203,000  
*Prin. Invest.:* T N KRISHNAURTI  
*Tech. Officer:* LARC/J R RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2145**                      **FLORIDA STATE UNIV**                      **3651**  
 AIRFRAME-JET ENGINE INTEGRATION NOISE  
 03/30/1999 - 12/31/2002                      FY02: \$0                      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**                      **3652**  
 DISCONTINUOUS SPECTRAL ELEMENT AEROACOUSTIC CODE FOR FAN  
 NOISE RADIATION  
 02/08/2001 - 11/30/2003                      FY02: \$0                      Total: \$53,070  
*Prin. Invest.:* M Y HUSSAINI  
*Tech. Officer:* LARC/F FARASSAT, LARC/R H THOMAS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02022**                      **FLORIDA STATE UNIV**                      **3653**  
 SINGLE WALL CARBON NANOTUBE ALIGNMENT MECHANISMS FOR NON-  
 DESTRUCTIVE EVALUATION  
 12/17/2001 - 12/16/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S HONG  
*Tech. Officer:* LARC/J D JORDAN  
*CASE Category:* 13 - PHYSICS

**NAG 3 1841**                      **FLORIDA STATE UNIV**                      **3654**  
 THERETICAL STUDIES OF LIQUID HELIUM NEAR THE SUPER FLUID  
 TRANSITION  
 05/01/1996 - 05/15/2002                      FY02: \$0                      Total: \$291,000  
*Prin. Invest.:* E MANOUSAKIS  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 1885**                      **FLORIDA STATE UNIV**                      **3655**  
 FLUID PHYSICS IN STOCHASTIC ACCELERATION ENVIRONMENT  
 06/17/1996 - 06/16/2001                      FY02: \$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**                      **3656**  
 NUMERICAL SIMULATION OF SCREECH TONES FROM SUPERSONIC JETS:  
 PHYSICS & PREDICTIONS  
 12/24/1997 - 11/30/2001                      FY02: \$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**                      **3657**  
 ADVANCED COMPUTATIONAL AEROACOUSTICS METHODS FOR FAN NOISE  
 PREDICTIONS  
 02/07/2000 - 01/11/2003                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* C TAM  
*Tech. Officer:* GRC/E ENVIA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2445**                      **FLORIDA STATE UNIV**                      **3658**  
 LATTICE-BOLTZMANN TECHNIQUES FOR MULTIPHASE FLOW TRANSPORT IN  
 MICROGRAVITY ENVIRONMENT  
 05/25/2000 - 05/18/2002                      FY02: \$0                      Total: \$132,828  
*Prin. Invest.:* D CHELLA  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 4873**                      **FLORIDA STATE UNIV**                      **3659**  
 USING NASA FULL PHYSICS ADJOINT OF THE GEOS-1 GCM ANALYSIS,  
 SENSITIVITY ANALYSIS AND OPTIMAL SENSOR  
 07/03/1997 - 05/31/2002                      FY02: \$0                      Total: \$323,576  
*Prin. Invest.:* I NAVON  
*Tech. Officer:* GSFC/M HALL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6258**                      **FLORIDA STATE UNIV**                      **3660**  
 AN INTERCOMPARISON OF THE INFLUENCE OF VEGETATION SURFACE-  
 ATMOSPHERE WATER EXCHANGE AND BOUNDARY LAY  
 08/27/1997 - 07/31/2001                      FY02: \$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**                      **3661**  
 COMBINING SSM/I, T/T2 AND GOES MEASUREMENTS FOR A SATELLITE-  
 BASED ATMOSPHERIC WATER BUDGET OF  
 11/25/1997 - 11/30/2002                      FY02: \$0                      Total: \$495,000  
*Prin. Invest.:* H J COOPER  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7254**                      **FLORIDA STATE UNIV**                      **3662**  
 ANOMALOUS HEAT BUDGETS IN THE INTERIOR PACIFIC OCEAN ON  
 SEASONAL-TO- INTERANNUAL TIMESCALES AND  
 05/14/1998 - 04/30/2001                      FY02: \$0                      Total: \$87,500  
*Prin. Invest.:* J J O'BRIEN  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

## NASA'S UNIVERSITY PROGRAM

FLORIDA

<p><b>NAG 5 7302</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3663</b>  RETRIEVAL OF SURFACE RADIATION FLUXES OVER BOREAS SNOW  REGIME FROM GOES 8 IMAGERY FOR APPLICATIONS T  05/04/1998 - 10/31/2000                      FY02: \$0                      Total: \$165,402  <i>Prin. Invest.:</i> E A SMITH  <i>Tech. Officer:</i> GSFC/D E WICKLAND  <i>CASE Category:</i> 39 – ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 8598</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3671</b>  THE IMPACT OF VEGETATION CHANGES IN THE SAHEL ON REGIONAL  SCALE HYDROLOGY  06/14/1999 - 06/30/2003                      FY02: \$0                      Total: \$219,361  <i>Prin. Invest.:</i> S E NICHOLSON  <i>Tech. Officer:</i> GSFC/E T ENGMAN  <i>CASE Category:</i> 39 – ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 7577</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3664</b>  "REDUCTION AND ANALYSIS OF LEO SATELLITE MAGNETIC FIELD DATA"  (SENH98-0077)  08/04/1998 - 07/31/2001                      FY02: \$0                      Total: \$196,000  <i>Prin. Invest.:</i> J C CAIN  <i>Tech. Officer:</i> GSFC/H V FREY  <i>CASE Category:</i> 32 – GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 8647</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3672</b>  "STUDY OF THE EVOLUTION OF PRECIPITATION AND CLOUD STRUCTURES  DURING THE LIFE CYCLE ... TRMM AND IS  07/19/1999 - 07/31/2002                      FY02: \$0                      Total: \$94,000  <i>Prin. Invest.:</i> G LIU  <i>Tech. Officer:</i> GSFC/W B ROSSOW  <i>CASE Category:</i> 31 – ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 7618</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3665</b>  ANNUAL MARINE PRIMARY PRODUCTION ALGORITHM DEVELOPMENT AND  APPLICATION TO MODIS DATA  09/08/1998 - 07/31/2001                      FY02: \$0                      Total: \$156,053  <i>Prin. Invest.:</i> R L IVERSON  <i>Tech. Officer:</i> GSFC/W ESAIAS  <i>CASE Category:</i> 33 – OCEANOGRAPHY</p>	<p><b>NAG 5 9410</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3673</b>  STUDY THE IMPACT OF TOMS OZONE MEASUREMENTS ON MEAOSCALE  PREDICTION USING MM5 4D-VAR SYSTEM  04/11/2000 - 04/30/2001                      FY02: \$0                      Total: \$46,772  <i>Prin. Invest.:</i> X ZOU  <i>Tech. Officer:</i> GSFC/A J KRUEGER  <i>CASE Category:</i> 31 – ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 7630</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3666</b>  ZONAL PROPAGATION OF NONLINEAR OCEANIC ANOMALIES  08/10/1998 - 09/30/2001                      FY02: \$0                      Total: \$454,144  <i>Prin. Invest.:</i> W DEWAR  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 39 – ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9662</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3674</b>  SUPERENSEMBLE FORECASTS OF PRECIPITATION USING TRMM, TMI &amp; PR  ALGORITHMS  06/06/2000 - 11/30/2002                      FY02: \$0                      Total: \$193,713  <i>Prin. Invest.:</i> T N KRISHNAMURTI  <i>Tech. Officer:</i> GSFC/R J LAWRENCE  <i>CASE Category:</i> 31 – ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 7718</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3667</b>  VALIDATION OF TRMM LEVEL-3 PRECIPITATION DATA OVER AFRICA  10/21/1998 - 10/31/2002                      FY02: \$0                      Total: \$252,007  <i>Prin. Invest.:</i> S E NICHOLSON  <i>Tech. Officer:</i> GSFC/O W THIELE  <i>CASE Category:</i> 31 – ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 9845</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3675</b>  SIBERIAN PERMAFORST: APPLICATIONS TO MARS  08/07/2000 - 07/31/2001                      FY02: \$0                      Total: \$40,492  <i>Prin. Invest.:</i> I FRIEDMAN  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 11 – ASTRONOMY</p>
<p><b>NAG 5 8284</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3668</b>  ANALYSIS OF THE CRUSTAL MAGNETIC FIELD OF MARS  02/19/1999 - 06/12/2002                      FY02: \$0                      Total: \$128,200  <i>Prin. Invest.:</i> J C CAIN  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 – ASTRONOMY</p>	<p><b>NAG 5 9866</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3676</b>  RETRIEVAL OF SURFACE RADIATION FLUXES OVER BOREAS SNOW  REGIME FROM GOES 8 IMAGERY FOR APPLICATIONS T  08/07/2000 - 07/31/2001                      FY02: \$0                      Total: \$28,000  <i>Prin. Invest.:</i> E A SMITH  <i>Tech. Officer:</i> GSFC/D E WICKLAND  <i>CASE Category:</i> 39 – ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8291</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3669</b>  THERMODYNAMICS IN LAYERED MODELS  02/25/1999 - 02/28/2002                      FY02: \$0                      Total: \$261,628  <i>Prin. Invest.:</i> W WEWAR  <i>Tech. Officer:</i> GSFC/M RIENECKER  <i>CASE Category:</i> 33 – OCEANOGRAPHY</p>	<p><b>NAG 5 10001</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3677</b>  016 OF TRMM FIELD CAMPAIGN DATA FOR VALIDATION-APPLICATION  STUDIES WITH LEVEL 2 RAIN PROFILE ALGORI  09/21/2000 - 11/30/2002                      FY02: \$0                      Total: \$149,435  <i>Prin. Invest.:</i> H A COOPER  <i>Tech. Officer:</i> GSFC/R J LAWRENCE  <i>CASE Category:</i> 31 – ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 8327</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3670</b>  ADVANCED DATA ASSIMILATION INTO OCEAN CIRCULATION MODELS  DRIVEN BY NSCAT DATA &amp; ENSO IMPACTS NORTH  04/28/1999 - 04/30/2002                      FY02: \$0                      Total: \$564,000  <i>Prin. Invest.:</i> J J O'BRIEN  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 39 – ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 10860</b>                      <b>FLORIDA STATE UNIV</b>                      <b>3678</b>  VARIABILITY OF THE WESTERN INDIAN OCEAN &amp; THE GULF OF ADEN  05/02/2001 - 04/30/2004                      FY02: \$0                      Total: \$94,007  <i>Prin. Invest.:</i> D NOF  <i>Tech. Officer:</i> GSFC/E LINDSRMOM  <i>CASE Category:</i> 33 – OCEANOGRAPHY</p>

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**NAG 5 11067**                      **FLORIDA STATE UNIV**                      **3679**  
 APPLICATIONS OF TOMS OZONE DATA TO NUMERICAL WEATHER ANALYSIS  
 AND FORECAST  
 07/09/2001 - 07/14/2004                      FY02: \$0                      Total: \$70,000  
*Prin. Invest.:* X ZOU  
*Tech. Officer:* GSFC/P K BHARTA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11889**                      **FLORIDA STATE UNIV**                      **3680**  
 PHYSICAL VALIDATION OF AMSR SNOWFALL RETRIEVAL OVER OCEAN  
 USING DATA FROM WASKASA BAY EXPERIMENT  
 04/08/2002 - 05/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G LIU  
*Tech. Officer:* GSFC/R ADLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 12097**                      **FLORIDA STATE UNIV**                      **3681**  
 EVALUATION OF OPERATIONAL LONGWAVE RADIATION BUDGET PARAMETERS  
 USING THE GOES SOUNDERS  
 04/26/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P G ELLINGSON  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12475**                      **FLORIDA STATE UNIV**                      **3682**  
 ANALYSIS OF MARS GLOBAL SURVEYOR MAGNETIC DATA & CORRELATION  
 WITH ER DATA & GEOPHYSICAL PARAMETERS  
 08/15/2002 - 08/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J C CAIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12487**                      **FLORIDA STATE UNIV**                      **3683**  
 NUMERICAL MODELING OF CROSS-SHELF EXCHANGE PROCESSES IN  
 THE GULF OF MEXICO  
 08/26/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J O'BRIEN  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1537**                      **FLORIDA STATE UNIV**                      **3684**  
 IMPACT STUDIES OF NEWER DATA SETS (COMEX-3) ON VERY HIGH  
 RESOLUTION GLOBAL FORECASTS  
 06/05/1998 - 10/30/2002                      FY02: \$0                      Total: \$273,035  
*Prin. Invest.:* T N KRISHNAMURTI  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1773**                      **FLORIDA STATE UNIV**                      **3685**  
 PREDICTING DYNAMIC AND STATIC CRITICAL PROPERTIES OF BULK AND  
 CONFINED HELIUM.  
 04/26/2001 - 04/30/2005                      FY02: \$0                      Total: \$67,664  
*Prin. Invest.:* E MANOUSAKIS  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1848**                      **FLORIDA STATE UNIV**                      **3686**  
 ASSIMILATION, ENSEMBLE FORECASTS AND ADAPTIVE STRATEGIES  
 USING CAMS-4 DATASETS  
 08/20/2001 - 09/02/2004                      FY02: \$0                      Total: \$68,602  
*Prin. Invest.:* T N KRISHNAMURTI  
*Tech. Officer:* MSFC/J E ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1882**                      **FLORIDA STATE UNIV**                      **3687**  
 ASSIMILATION OF AIRS RADIANCE DATA FOR IMPROVING 12-H QPF USING  
 MM5 4D-VAR SYSTEM  
 08/20/2002 - 09/01/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* X ZOU  
*Tech. Officer:* MSFC/B LAPENTA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG13 02011**                      **FLORIDA STATE UNIV**                      **3688**  
 SCATTEROMETER DERIVED OPERATIONAL WINDS, SURFACE PRESSURES,  
 AND RAIN  
 12/11/2001 - 12/11/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J J O'BRIEN, M A BOURASSA  
*Tech. Officer:* SSC/R MILLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 02045**                      **FLORIDA STATE UNIV**                      **3689**  
 NOISE REDUCTION RESEARCH EFFORT IN SUPPORT OF QAT  
 03/08/2002 - 03/10/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C TAM  
*Tech. Officer:* LARC/R H THOMAS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 412**                      **FLORIDA STATE UNIV**                      **3690**  
 NUMERICAL SIMULATIONS AND DIAGNOSTIC STUDIES RELATING METEOROLOGY  
 TO ATMOSPHERIC CHEMISTRY DURING  
 09/18/2000 - 08/31/2003                      FY02: \$0                      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**                      **3691**  
 AN INVESTIGATION OF THE FLOW PHYSICS OF ACOUSTIC LINERS BY  
 DIRECT NUMERICAL SIMULATION  
 01/31/2001 - 12/31/2003                      FY02: \$0                      Total: \$60,000  
*Prin. Invest.:* C K TAM  
*Tech. Officer:* LARC/W R WATSON, LARC/M G JONES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 02025**                      **FLORIDA STATE UNIV**                      **3692**  
 BAYSIAN INFERENCE AND UNCERTAINTY QUANTIFICATION  
 04/22/2002 - 04/21/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M Y HUSSAINI  
*Tech. Officer:* LARC/T A ZANG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1349**                      **FLORIDA STATE UNIV**                      **3693**  
 UNCERTAINTY QUANTIFICATION FOR LOW FIDELITY AERO/AEROTHERMO  
 MODELS  
 06/21/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M Y HUSSAINI  
*Tech. Officer:* ARC/M E LIVINGSTON, ARC/D MATHIAS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 292**                      **FLORIDA STATE UNIV**                      **3694**  
 HIGH RESOLUTION CARBON EXCHANGE OVER LARGE-SCALE AMAZONIA  
 BASED ON MODELING AND GOES SATELLITE  
 06/25/1998 - 12/31/2002                      FY02: \$0                      Total: \$379,640  
*Prin. Invest.:* E A SMITH  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



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<b>NCC 8 158</b>	<b>FLORIDA STATE UNIV</b>	<b>3695</b>	<b>NAG 2 1465</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3703</b>
SOUTHEAST REGIONAL EARTH SCIENCE APPLICATIONS CENTER			VERIFICATION TOOLS FOR KSC LAUNCH CONTROL SOFTWARE		
09/25/1998 - 09/24/2003	FY02: \$0	Total: \$90,000	03/22/2001 - 07/31/2003	FY02: \$0	Total: \$50,000
<i>Prin. Invest.:</i> J J O'BRIEN			<i>Prin. Invest.:</i> G H WALTON		
<i>Tech. Officer:</i> MSFC/J ARNOLD			<i>Tech. Officer:</i> ARC/J PENIX		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NGT 5 30158</b>	<b>FLORIDA STATE UNIV</b>	<b>3696</b>	<b>NAG 3 2691</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3704</b>
DYNAMICS AND VARIABILITY OF THE NORTH HAWAIIAN RID GE CURRENT FROM SATELLITE ALTIMETRY AND AN			GLENN-HT/BEM CONJUGATE HEAT TRANSFER SOLVER FOR LARGE-SCALE TURBOMACHINERY MODELS		
08/28/1998 - 12/31/2001	FY02: \$0	Total: \$66,000	01/11/2002 - 10/01/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J J OBRIEN, LEONARDI			<i>Prin. Invest.:</i> D J KASSAB		
<i>Tech. Officer:</i> GSFC/M Y WEI			<i>Tech. Officer:</i> GRC/J D HEIDMANN		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NGT 5 30164</b>	<b>FLORIDA STATE UNIV</b>	<b>3697</b>	<b>NAG 3 2751</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3705</b>
NONLINEAR EXCHANGE PROCESSES BETWEEN THE PACIFIC AND THE INDIAN OCEAN			HYDROGEN RESEARCH FOR FLORIDA UNIVERSITIES HYDROGEN RESEARCH FOR FLORIDA UNIVERSITIES		
08/31/1998 - 08/31/2002	FY02: \$0	Total: \$58,000	03/25/2002 - 09/30/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D NOF, H SIMMONS			<i>Prin. Invest.:</i> D L BLOCK		
<i>Tech. Officer:</i> GSFC/M Y WEI			<i>Tech. Officer:</i> GRC/D J CHATO		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NGT 5 30186</b>	<b>FLORIDA STATE UNIV</b>	<b>3698</b>	<b>NAG 5 8265</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3706</b>
THE WATER BALANCE OF EASTERN AFRICAN GREAT LAKES STUDENT: XANGANG YIN			INVESTIGATIONS OF MARTIAN IMPACT CRATER MORPHOLOGIES AND MORPHOMETRIES		
08/19/1999 - 08/31/2001	FY02: \$0	Total: \$44,000	02/23/1999 - 04/30/2002	FY02: \$0	Total: \$141,700
<i>Prin. Invest.:</i> S E NICHOLSON			<i>Prin. Invest.:</i> N G BARLOW		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> HQ/J BOYCE		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NGT 5 30370</b>	<b>FLORIDA STATE UNIV</b>	<b>3699</b>	<b>NAG 5 9548</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3707</b>
DEVELOPMENT OF SCATTEROMETER-DERIVED RESEARCH-QUALITY SURFACE PRESSURES STUDENT: KYLE HILBURN			TRMM VALIDATION: IMPROVED ZR RELATIONSHIP FROM TEFLUN-B & TROPICAL CYCLONE WINDS & PRECIPITATION		
08/13/2001 - 08/31/2004	FY02: \$0	Total: \$22,000	05/30/2000 - 05/31/2003	FY02: \$0	Total: \$193,667
<i>Prin. Invest.:</i> J O'BRIEN			<i>Prin. Invest.:</i> W JONES		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> GSFC/R J LAWRENCE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NGT 5 30454</b>	<b>FLORIDA STATE UNIV</b>	<b>3700</b>	<b>NAG 5 10308</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3708</b>
EVALUATING SOURCES OF THE GEOMAGNETIC FIELD BY GLOBAL MODELING: CORE, CRUST, IONOSPHERE AND OCEAN			ANTENNA-COUPLED INFRARED SENSORS- PROPOSAL #215		
08/20/2002 - 08/31/2005	FY02: \$0	Total: \$0	02/02/2001 - 01/31/2004	FY02: \$0	Total: \$179,596
<i>Prin. Invest.:</i> J C CAIN			<i>Prin. Invest.:</i> G D BOREMAN		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> GSFC/T STEVENSON		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG10 282</b>	<b>MIAMI-DADE COMM COLL</b>	<b>3701</b>	<b>NAG 5 10730</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3709</b>
HOMESTEAD BUSINESS INCUBATOR HOMESTEAD BUSINESS INCUBATOR			FOURIER TRANSFORM IMAGING SPECTROMETER WITH HIGH- THROUGH-PUT AND NO MOVING PARTS		
05/18/2000 - 07/31/2003	FY02: \$0	Total: \$915,000	04/10/2001 - 04/14/2003	FY02: \$0	Total: \$120,000
<i>Prin. Invest.:</i> E J PADRON			<i>Prin. Invest.:</i> R G SELLAR		
<i>Tech. Officer:</i> KSC/D CULBERTSON			<i>Tech. Officer:</i> GSFC/B BETTS		
<i>CASE Category:</i> 79 - SOCIAL SCIENCE, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 12298</b>	<b>SAINT THOMAS UNIV</b>	<b>3702</b>	<b>NAG 5 12263</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3710</b>
COMPUTER EQUIPMENT FOR SCIENCE AND TECHNOLOGY			CIRRUS REGIONAL STUDY OF TROPICAL ANVILS AND CIRRUS LAYERS - FLORIDA AREA CIRRUS EXPERIMENT.		
06/28/2002 - 06/30/2003	FY02: \$0	Total: \$0	06/10/2002 - 05/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> A VYNNE			<i>Prin. Invest.:</i> T KASPARIS		
<i>Tech. Officer:</i> HQ/M MATEU			<i>Tech. Officer:</i> GSFC/A J NEGRI		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NAG10 258 THE UNIV OF CENTRAL FLORIDA 3711**  
 NASA/UCF SPACE SCHOLARS PROGRAM  
 05/01/1999 - 06/30/2001 FY02: \$0 Total: \$75,937  
*Prin. Invest.:* J SMITH  
*Tech. Officer:* KSC/R MCKINNEY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG10 276 THE UNIV OF CENTRAL FLORIDA 3712**  
 DEVELOPMENT OF ADVANCE LIFE SUPPORT AUTOMATED REMOTE  
 MANIPULATOR END-EFFECTOR (ALSARM) (PHASE II)  
 02/02/2000 - 11/15/2001 FY02: \$0 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 3713**  
 FUNGAL DIVERSITY IN COMPOST STUDIED USING BOTH TRADITIONAL  
 PLATTING AND MOLECULAR APPROACHES  
 02/14/2000 - 10/09/2001 FY02: \$0 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 3714**  
 2000 NASA/ASEE SUMMER FACULTY FELLOWSHIP RESEARCH PROGRAM  
 04/10/2000 - 03/31/2002 FY02: \$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 3715**  
 ASSESSMENT OF TECHNOLOGIES FOR VISUAL GAS LEAK DETECTION  
 07/30/2000 - 10/31/2001 FY02: \$0 Total: \$65,043  
*Prin. Invest.:* R SELLAR  
*Tech. Officer:* KSC/C DAVIS  
*CASE Category:* 13 - PHYSICS

**NAG10 296 THE UNIV OF CENTRAL FLORIDA 3716**  
 INSTALIZING KENNEDY SPACE CENTER'S STRATEGIC LEARNING PRO-  
 CESSION  
 03/30/2001 - 12/31/2002 FY02: \$0 Total: \$262,000  
*Prin. Invest.:* T KOTNOUR  
*Tech. Officer:* KSC/J LYONS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG10 299 THE UNIV OF CENTRAL FLORIDA 3717**  
 NASA/ASEE SUMMER FACULTY FELLOWSHIP RESEARCH PROGRAM  
 05/16/2001 - 12/31/2002 FY02: \$0 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 3718**  
 ULTRASOUND ENHANCEMENT OF A PERMEABLE REACTIVE BARRIER  
 UNDERGOING ACCELERATE AGING  
 06/15/2001 - 12/31/2002 FY02: \$0 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 3719**  
 INTELLIGENT TEXT RETRIEVAL AND KNOWLEDGE ACQUISITION FROM  
 TEXTS FOR NASA APPLICATIONS: PREPROCESSING  
 09/07/2001 - 03/31/2002 FY02: \$0 Total: \$50,000  
*Prin. Invest.:* F GOMEZ  
*Tech. Officer:* KSC/C G STEVENSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG10 312 THE UNIV OF CENTRAL FLORIDA 3720**  
 REDUCTIVE EMULSIONS FOR REMEDIATION OF GROUNDWATER CONTAMI-  
 NATED WITH HALOGENATED HYDROCARBONS  
 04/26/2002 - 02/16/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* C GEIGER  
*Tech. Officer:* KSC/J W QUINN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG10 313 THE UNIV OF CENTRAL FLORIDA 3721**  
 RAPID DECHLORINATION OF POLYCHLORINATED BIPHENYLS IN SOILS BY  
 PD/FE BIMETALLIC EMULSIONS  
 05/02/2002 - 02/16/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D L GEIGER  
*Tech. Officer:* KSC/J W QUINN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG10 315 THE UNIV OF CENTRAL FLORIDA 3722**  
 NASA/ASEE SUMMER FACULTY FELLOWSHIP RESEARCH PROGRAM  
 05/02/2002 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* D KOTNOUR  
*Tech. Officer:* KSC/C D BLACK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 318 THE UNIV OF CENTRAL FLORIDA 3723**  
 RETRIEVING NASA PROBLEM REPORTS WITH NATURAL LANGUAGE  
 PROCESSING  
 07/10/2002 - 09/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* D GOMEZ  
*Tech. Officer:* KSC/C STEVENSON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG10 319 THE UNIV OF CENTRAL FLORIDA 3724**  
 AUTOMATIC PARTICLE COUNTING USING AN ACOUSTIC TRANSDUCER  
 07/02/2002 - 10/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* D CHEN  
*Tech. Officer:* KSC/G HADDARD  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG10 323 THE UNIV OF CENTRAL FLORIDA 3725**  
 A SHAPE MEMORY ALLOY THERMAL CONDITION SWITCH FOR USE AT  
 CRYOGENIC TEMPERATURES  
 09/06/2002 - 08/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R NAIDYANATHAN  
*Tech. Officer:* KSC/B NOTARDONATO  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 712 THE UNIV OF CENTRAL FLORIDA 3726**  
 ULTRA-LIGHT-WEIGHT, RADIATION-RESISTANT, THIN-FILM SOLAR CELLS  
 FOR SPACE ELECTRICPOWER  
 06/10/1999 - 12/31/2002 FY02: \$0 Total: \$160,000  
*Prin. Invest.:* N G DHERE  
*Tech. Officer:* GRC/A F HEPP  
*CASE Category:* 13 - PHYSICS

## NASA'S UNIVERSITY PROGRAM

FLORIDA

<b>NCC10 35</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3727</b>	<b>NAG 1 2092</b>	<b>UNIV OF FLORIDA</b>	<b>3735</b>
NASA NOX3; PILOT SCALE EVALUATION OF NEW TECHNOLOGY FOR NOX CONTROL			DEV OF AN INNOVATIVE ALGORITHM FOR AERODYNAMICS- STRUCTURE INTERACTION USING LATTICE BOLTZMANN METH		
02/22/2000 - 12/31/2001	FY02: \$0	Total: \$100,000	07/31/1998 - 07/14/2001	FY02: \$0	Total: \$297,500
<i>Prin. Invest.:</i> D C COOPER			<i>Prin. Invest.:</i> R MEI, W SHYY, L LUO		
<i>Tech. Officer:</i> KSC/M COLLINS			<i>Tech. Officer:</i> LARC/D H RUDY, LARC/R T BIEDRON		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 5 40069</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3728</b>	<b>NAG 1 2133</b>	<b>UNIV OF FLORIDA</b>	<b>3736</b>
FLORIDA/NATIONAL SPACE GRANT COLL & FELLOWSHIP PROGRAM			MEMS-BASED ACOUSTIC ARRAY TECHNOLOGY MY 1/3		
04/28/2000 - 04/29/2001	FY02: \$0	Total: \$475,000	02/11/1999 - 12/31/2002	FY02: \$0	Total: \$406,720
<i>Prin. Invest.:</i> S DURRRANCE			<i>Prin. Invest.:</i> M SHEPLAK		
<i>Tech. Officer:</i> GSFC/D DETROYE			<i>Tech. Officer:</i> LARC/R R ANTELIFF		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 5 40071</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3729</b>	<b>NAG 1 2177</b>	<b>UNIV OF FLORIDA</b>	<b>3737</b>
FLORIDA/NATIONAL SPACE GRANT COLL & FELLOWSHIP PROGRAM			VARIABLE COMPLEXITY OPTIMIZATION OF COMPOSITE STRUCTURES		
01/05/2001 - 08/31/2003	FY02: \$0	Total: \$85,000	04/02/1999 - 01/27/2002	FY02: \$0	Total: \$367,163
<i>Prin. Invest.:</i> S DURRRANCE			<i>Prin. Invest.:</i> R T HAFTKA		
<i>Tech. Officer:</i> GSFC/D DETROYE			<i>Tech. Officer:</i> LARC/J H STARNES, JR.		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 5 40107</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3730</b>	<b>NAG 1 2198</b>	<b>UNIV OF FLORIDA</b>	<b>3738</b>
FLORIDA SPACE GRANT CONSORTIUM			REDUCED ORDER MODELS VIA MULTIREOLUTION ANALYSIS FOR CONTROL OF FLOW		
03/02/2001 - 02/28/2005	FY02: \$0	Total: \$486,000	05/19/1999 - 02/18/2002	FY02: \$0	Total: \$157,810
<i>Prin. Invest.:</i> S DURRRANCE			<i>Prin. Invest.:</i> A J KURDILA		
<i>Tech. Officer:</i> GSFC/D DETROYE			<i>Tech. Officer:</i> LARC/W A SILVA		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT10 52625</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3731</b>	<b>NAG 1 2249</b>	<b>UNIV OF FLORIDA</b>	<b>3739</b>
GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RESEARCH PROGRAM			THE DEVELOPMENT OF DESIGN TOOLS FOR FLOW-CONTROL ACTUATORS		
08/10/2000 - 06/30/2001	FY02: -\$1,302	Total: \$20,698	12/21/1999 - 01/02/2003	FY02: \$0	Total: \$122,315
<i>Prin. Invest.:</i> D G KOTNOUR			<i>Prin. Invest.:</i> L N CATTAFESTA, A J KURDILA		
<i>Tech. Officer:</i> KSC/L GOSPER			<i>Tech. Officer:</i> LARC/S A GORTON, LARC/R D JOSLIN		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT10 52627</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3732</b>	<b>NAG 1 2261</b>	<b>UNIV OF FLORIDA</b>	<b>3740</b>
INSTABILITIES IN MAGNETIC FLUIDS IN TERRESTRIAL AND MICROGRAVITY ENVIRONMENTS			ADVANCED TECHNOLOGY DEVELOPMENT FOR ACTIVE ACOUSTIC LINERS		
07/24/2000 - 06/13/2002	FY02: \$0	Total: \$44,000	01/21/2000 - 10/31/2000	FY02: \$0	Total: \$102,393
<i>Prin. Invest.:</i> D LUO			<i>Prin. Invest.:</i> M SHEPLAK		
<i>Tech. Officer:</i> KSC/R YOUNQUIST			<i>Tech. Officer:</i> LARC/M G JONES, LARC/T L PARROTT		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NGT10 52630</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3733</b>	<b>NAG 1 01013</b>	<b>UNIV OF FLORIDA</b>	<b>3741</b>
GSRP: STRATEGIC IMPLEMENTATION THROUGH PROCESS ALIGNMENT			ELECTROMECHANICAL ACOUSTIC LINER TECHNOLOGY		
08/02/2001 - 06/30/2003	FY02: \$0	Total: \$22,000	02/07/2001 - 12/31/2003	FY02: \$0	Total: \$80,000
<i>Prin. Invest.:</i> NOT AVAILABLE			<i>Prin. Invest.:</i> L N SHEPLAK, L N CATTAFESTA III		
<i>Tech. Officer:</i> KSC/L GOSPER			<i>Tech. Officer:</i> LARC/M G JONES, LARC/T L PARROT		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NGT10 52634</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3734</b>	<b>NAG 1 01024</b>	<b>UNIV OF FLORIDA</b>	<b>3742</b>
CHARACTERIZATION OF NEW PIEZOELECTRIC MATERIALS FOR SURFACE ACOUSTIC WAVE DEVICE			COMPUTATIONAL MODELING & ANALYSIS SYNTHETIC JETS		
08/28/2002 - 06/30/2003	FY02: \$0	Total: \$0	03/09/2001 - 03/31/2004	FY02: \$0	Total: \$45,000
<i>Prin. Invest.:</i> D C MAJOCHA			<i>Prin. Invest.:</i> R MITTAL, L N CATTAFESTA III		
<i>Tech. Officer:</i> KSC/C D BLACK			<i>Tech. Officer:</i> LARC/S A GORTON		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT10 52634</b>	<b>THE UNIV OF CENTRAL FLORIDA</b>	<b>3734</b>	<b>NAG 1 01088</b>	<b>UNIV OF FLORIDA</b>	<b>3743</b>
CHARACTERIZATION OF NEW PIEZOELECTRIC MATERIALS FOR SURFACE ACOUSTIC WAVE DEVICE			ANALYSIS METHODS FOR FUNCTIONALLY GRADED MATERIALS AND STRUCTURES		
08/28/2002 - 06/30/2003	FY02: \$0	Total: \$0	06/14/2001 - 12/31/2001	FY02: \$0	Total: \$30,000
<i>Prin. Invest.:</i> D C MAJOCHA			<i>Prin. Invest.:</i> B V SANKAR		
<i>Tech. Officer:</i> KSC/C D BLACK			<i>Tech. Officer:</i> LARC/D R AMBUR		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NAG 1 01098**                      **UNIV OF FLORIDA**                      **3744**  
 INTEGRATED SHEAR STRESS/TEMPERATURE MICROMACHINED SENSORS  
 06/14/2001 - 10/31/2001                      FY02: \$0                      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 1 02042**                      **UNIV OF FLORIDA**                      **3745**  
 DESIGN OPTIMIZATION OF COMPOSITE STRUCTURES UNDER UNCER-  
 TAINTY  
 01/28/2002 - 01/27/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R T HAFTKA  
*Tech. Officer:* LARC/J H STARNES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02067**                      **UNIV OF FLORIDA**                      **3746**  
 COMBINED THERMAL AND STRUCTURAL OPTIMIZATION OF FUNCTIONALLY  
 GRADED TILE  
 03/08/2002 - 03/07/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R T HAFTKA, B V SANKAR  
*Tech. Officer:* LARC/M L BLOSSER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 02068**                      **UNIV OF FLORIDA**                      **3747**  
 IDENTIFICATION AND CONTROL OF AIRCRAFTS USING MULTIPLE MODELS  
 AND ADAPTIVE INVERSE CONTROL  
 03/14/2002 - 11/30/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J C PRINCIPE  
*Tech. Officer:* LARC/M A MOTTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02104**                      **UNIV OF FLORIDA**                      **3748**  
 DURABILITY OF MULTIFUNCTIONAL FOAMS AND THEIR COMPONENTS  
 07/01/2002 - 06/30/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B V SANKAR  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1179**                      **UNIV OF FLORIDA**                      **3749**  
 DESIGN SPACE EXPLORATION FOR MDO ON A TERAFLOP COM PUTER  
 02/26/1998 - 01/31/2001                      FY02: -\$1,792                      Total: \$102,548  
*Prin. Invest.:* R T HAITKA  
*Tech. Officer:* ARC/G H KLOPETER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2341**                      **UNIV OF FLORIDA**                      **3750**  
 SHEET FLOWS, AVALANCHES, AND DUNE EVOLUTION ON EAR TH AND  
 MARS  
 03/01/2000 - 11/30/2003                      FY02: \$0                      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**                      **3751**  
 MICROGRAVITY DRIVEN INSTABILITIES IN GAS-FLUIDIZED BEDS  
 04/05/2000 - 11/30/2003                      FY02: \$0                      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**                      **3752**  
 SEPARATION OF SPECIES BY OSCILLATORY FLOW SEPARATION OF SPE-  
 CIES BY OSCILLATORY FLOW  
 06/07/2000 - 11/30/2003                      FY02: \$0                      Total: \$130,250  
*Prin. Invest.:* D NARAYANAN  
*Tech. Officer:* GRC/F P CHIARAMONTE III  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2553**                      **UNIV OF FLORIDA**                      **3753**  
 SUPERSONIC INLETS FOR PULSE DETONATION ENGINES  
 03/15/2001 - 01/01/2004                      FY02: \$0                      Total: \$50,444  
*Prin. Invest.:* C SEGAL  
*Tech. Officer:* GRC/R FERNANDEZ  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2630**                      **UNIV OF FLORIDA**                      **3754**  
 WEIGHT OPTIMIZATION OF ACTIVE THERMAL MANAGEMENT U SING A  
 NOVEL HEAT PUMP  
 06/13/2001 - 05/31/2003                      FY02: \$0                      Total: \$58,333  
*Prin. Invest.:* D E LEAR  
*Tech. Officer:* GRC/E L GOLLIHER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2750**                      **UNIV OF FLORIDA**                      **3755**  
 HYDROGEN RESEARCH AND EDUCATION HYDROGEN RESEARCH AND  
 EDUCATION  
 03/25/2002 - 09/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D GOSWAMI  
*Tech. Officer:* GRC/D J CHATO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3772**                      **UNIV OF FLORIDA**                      **3756**  
 HUMAN DIMENSIONS OF DEFORESTATION & REGROWTH IN TH TEGRATING  
 DATA FROM SATELLITES, DEMOGRAPHIC CENSU  
 03/11/1997 - 02/28/2001                      FY02: \$0                      Total: \$536,368  
*Prin. Invest.:* D WOOD  
*Tech. Officer:* GSFC/N MAYNARD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4531**                      **UNIV OF FLORIDA**                      **3757**  
 DYNAMICS OF SOLAR SYSTYEM DUST  
 05/08/1997 - 02/28/2002                      FY02: \$0                      Total: \$419,444  
*Prin. Invest.:* D F DERMOTT  
*Tech. Officer:* HQ/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6378**                      **UNIV OF FLORIDA**                      **3758**  
 OPTICAL PROPERTIES OF IRREGULAR DUST PARTICLES: EX PERIMENT  
 AND THEORY  
 10/08/1997 - 10/31/2002                      FY02: \$0                      Total: \$261,944  
*Prin. Invest.:* D GUSTAFSON  
*Tech. Officer:* GSFC/S HOWARD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8522**                      **UNIV OF FLORIDA**                      **3759**  
 CHEMICAL ABUNDANCES AND EVOLUTION IN QUASARS AND ACTIVE  
 GALACTIC NUCLEI LTSA  
 05/12/1999 - 05/14/2002                      FY02: \$0                      Total: \$205,000  
*Prin. Invest.:* F W HAMANN  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

FLORIDA

<b>NAG 5 8944</b>	<b>UNIV OF FLORIDA</b>	<b>3760</b>	<b>NAG 8 1251</b>	<b>UNIV OF FLORIDA</b>	<b>3768</b>
COMPLEX SILICATE GRAINS WITH SUBLIMATING MANTLES: A SYSTEMATIC LABORATORY STUDY OF OPTICAL PROPERTIES			R/S " CONFINEMENT AND PROPULSION CHARACTERISTICS OF THE GASDYNAMIC MIRROR FUSION ROCKET"		
01/13/2000 - 01/14/2003	FY02: \$0	Total: \$133,769	12/23/1996 - 12/31/2002	FY02: \$0	Total: \$419,878
<i>Prin. Invest.:</i> L KOLOKOLOVA			<i>Prin. Invest.:</i> S ANGHAI		
<i>Tech. Officer:</i> GSFC/D BOGAN			<i>Tech. Officer:</i> MSFC/M J VANDYKE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NAG 5 9280</b>	<b>UNIV OF FLORIDA</b>	<b>3761</b>	<b>NAG 8 1673</b>	<b>UNIV OF FLORIDA</b>	<b>3769</b>
A GLOBAL, MULTI-WAVEBAND MODEL OF THE ZODIACAL CLOUD (ADP 99)			MORPHOLOGICAL STABILITY OF FACETED INTERFACES		
03/28/2000 - 03/31/2003	FY02: \$0	Total: \$86,446	05/16/2000 - 11/30/2003	FY02: \$0	Total: \$130,500
<i>Prin. Invest.:</i> K GROGAN			<i>Prin. Invest.:</i> R ABBASCHIAM		
<i>Tech. Officer:</i> GSFC/R J OLIVERSEN			<i>Tech. Officer:</i> MSFC/P DOTY		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 9331</b>	<b>UNIV OF FLORIDA</b>	<b>3762</b>	<b>NAG 8 1675</b>	<b>UNIV OF FLORIDA</b>	<b>3770</b>
LAND-USE & LAND-COVER CHANGE: DECADEAL-SCALE DYNAMICS OF LAND OWNERSHIP LAND MANAGEMENT & CARBON			THE FEATURES OF SELF-ASSEMBLING ORGANIC BILAYERS IMPORTANT TO THE FORMATION OF INORGANIC MATERIALS.		
03/28/2000 - 04/30/2003	FY02: \$0	Total: \$196,662	05/11/2000 - 11/30/2003	FY02: \$0	Total: \$125,500
<i>Prin. Invest.:</i> M W BINFORD			<i>Prin. Invest.:</i> D TALHAM		
<i>Tech. Officer:</i> GSFC/G GUTMAN			<i>Tech. Officer:</i> MSFC/P DOTY		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 10567</b>	<b>UNIV OF FLORIDA</b>	<b>3763</b>	<b>NAG 8 1679</b>	<b>UNIV OF FLORIDA</b>	<b>3771</b>
CHARACTERIZATION AND SIMULATION OF REMOTELY SENSED SOIL MOISTURE FOR RAINFALL-RUNOFF MODELING			AN ELECTROCHEMICAL METHOD TO VISUALIZE FLOW IN LIQUID METALS		
03/12/2001 - 03/14/2004	FY02: \$0	Total: \$78,853	04/25/2000 - 11/30/2003	FY02: \$0	Total: \$149,500
<i>Prin. Invest.:</i> J JACOBS			<i>Prin. Invest.:</i> T J ANDERSON		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> MSFC/P DOTY		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 10670</b>	<b>UNIV OF FLORIDA</b>	<b>3764</b>	<b>NAG 8 1729</b>	<b>UNIV OF FLORIDA</b>	<b>3772</b>
MOLTEN MORPHOLOGIES & NON-EQUILIBRIUM MINERAL COMPOSITIONS GENERATED BY A POLYMER-INDUCED LIQUID PRE			DEVELOPMENT AND APPLICATION OF OPTIMIZATION TECHNIQUES FOR ROCKET ENGINE COMPONENT DESIGN		
03/29/2001 - 04/30/2004	FY02: \$0	Total: \$100,000	06/16/2000 - 05/31/2001	FY02: \$0	Total: \$50,000
<i>Prin. Invest.:</i> L B GOWER			<i>Prin. Invest.:</i> W SHYY		
<i>Tech. Officer:</i> GSFC/M MEYER			<i>Tech. Officer:</i> MSFC/L W GRIFFIN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR		
<b>NAG 5 11635</b>	<b>UNIV OF FLORIDA</b>	<b>3765</b>	<b>NAG 8 1791</b>	<b>UNIV OF FLORIDA</b>	<b>3773</b>
A MULTIWAVELENGTH STUDY OF LBCGS FROM Z=1 TO Z=0 (L TSA 2001)			RESEARCH ENTITLED, "DEV. OF OPTIMIZATION STRATEGIES FOR FULL-FLOW STAGED COMBUSTION INJECTORS		
01/29/2002 - 01/31/2007	FY02: \$0	Total: \$0	03/15/2001 - 03/14/2005	FY02: \$0	Total: \$80,000
<i>Prin. Invest.:</i> R GUZMAN			<i>Prin. Invest.:</i> W SHYY		
<i>Tech. Officer:</i> GSFC/R J OLIVERSEN			<i>Tech. Officer:</i> MSFC/K TUCKER, MSFC/D CHAFFEE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 5 11643</b>	<b>UNIV OF FLORIDA</b>	<b>3766</b>	<b>NAG 8 1821</b>	<b>UNIV OF FLORIDA</b>	<b>3774</b>
ORIGINS AND DYNAMICS OF INTERPLANETARY DUST PARTICLES			APPLICATION OF PRESSURE SENSITIVE PAINT TO THE MSFC 14 INCH TRISONIC WIND TUNNEL		
01/23/2002 - 01/31/2005	FY02: \$0	Total: \$0	06/01/2001 - 08/31/2002	FY02: \$0	Total: \$29,361
<i>Prin. Invest.:</i> S F DERMOTT			<i>Prin. Invest.:</i> B CARROLL		
<i>Tech. Officer:</i> GSFC/D SENSEK			<i>Tech. Officer:</i> MSFC/A L FROST		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER		
<b>NAG 5 12565</b>	<b>UNIV OF FLORIDA</b>	<b>3767</b>	<b>NAG10 145</b>	<b>UNIV OF FLORIDA</b>	<b>3775</b>
THE RESPONSE OF SOIL CARBON TO PERMAFROST MELTING IN HIGH LATITUDE ECOSYSTEMS			GENETICALLY ENGINEERED PLANT BIOMONITOR IN MICRO-GRAVITY		
09/12/2002 - 09/14/2005	FY02: \$0	Total: \$0	09/21/1994 - 08/31/2001	FY02: \$0	Total: \$711,208
<i>Prin. Invest.:</i> E SCHUUR			<i>Prin. Invest.:</i> R J FERL		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> KSC/M M KNOTT		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 55 - AGRICULTURE		

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NAG10 285** **UNIV OF FLORIDA** **3776**  
 CRYOGENICS R&T SUPPORT FOR KENNEDY SPACE CENTER CRYOGENICS  
 R&T SUPPORT FOR KENNEDY SPACE CENTER  
 06/05/2000 - 05/18/2003 FY02: \$0 Total: \$225,000  
*Prin. Invest.:* C SEGAL  
*Tech. Officer:* KSC/M LONERGAN  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG10 291** **UNIV OF FLORIDA** **3777**  
 TIANGENIC PLANT BIOMONITORS TIANGENIC PLANT BIOMONITORS  
 09/29/2000 - 09/30/2003 FY02: \$0 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** **3778**  
 DEVELOPMENT OF AN OBJECT-ORIENTED ALS-CROP DATABAS E SYSTEM  
 FOR DOCUMENTING RESEARCH AND MARS DEPLOY  
 12/08/2000 - 10/29/2003 FY02: \$0 Total: \$45,000  
*Prin. Invest.:* R A BUCKLIN  
*Tech. Officer:* KSC/J C SAGER  
*CASE Category:* 55 - AGRICULTURE

**NAG10 303** **UNIV OF FLORIDA** **3779**  
 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 FY02: \$0 Total: \$15,000  
*Prin. Invest.:* E D WACHSMAN  
*Tech. Officer:* KSC/D E LUECK  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG10 316** **UNIV OF FLORIDA** **3780**  
 SPACE AGRICULTURE AND BIOTECHNOLOGY RESEARCH AND E DUCATION  
 (SABRE)  
 04/29/2002 - 09/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* W M PHILLIPS  
*Tech. Officer:* KSC/D FITCH  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAS10 96004** **UNIV OF FLORIDA** **3781**  
 ON-SITE MEDICAL SUPPORT DURING STS LAUNCH & LAND- ING OPERA-  
 TIONS  
 09/13/1996 - 09/30/2001 FY02: \$0 Total: \$512,555  
*Prin. Invest.:* A H NEIMS  
*Tech. Officer:* KSC/D A TIPTON  
*CASE Category:* 56 - MEDICL

**NCC 1 397** **UNIV OF FLORIDA** **3782**  
 FLEXIBLE WING BASED MICRO AERIAL VEHICLES  
 05/24/2000 - 09/30/2001 FY02: \$0 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** **3783**  
 REAL-TIME FEEDBACK FLOW CONTROL  
 02/14/2001 - 01/31/2004 FY02: \$0 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** **3784**  
 CHARACTERIZATION OF MICROMACHINED THERMAL SHEAR STRESS SEN-  
 SOR FOR QUANTITATIVE TURBULENCE MEASUREM  
 08/30/2001 - 08/31/2003 FY02: \$0 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 1 02004** **UNIV OF FLORIDA** **3785**  
 FLEXIBLE WING BASED MICRO AERIAL VEHICLES  
 12/19/2001 - 12/18/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* P G IFJU  
*Tech. Officer:* LARC/M R WASZAK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1197** **UNIV OF FLORIDA** **3786**  
 DO INTEGRINS MEDIATE THE SKELETAL RESPONSE TO ALTE RED LOAD-  
 ING? (SUBPROJECT C)  
 08/28/2000 - 09/30/2003 FY02: \$0 Total: \$48,417  
*Prin. Invest.:* T J WRONSKI  
*Tech. Officer:* ARC/R K GLOBUS, ARC/E M HOLTON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5246** **UNIV OF FLORIDA** **3787**  
 OPTIMIZATION OF INFRARED DETECTOR ARRAYS FOR AIRBORNE AS-  
 TRONOMY  
 12/03/1997 - 02/28/2001 FY02: \$0 Total: \$142,822  
*Prin. Invest.:* C M TELESKO, R K PIKA  
*Tech. Officer:* ARC/E F ERICKSON, ARC/M R HAAS  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5403** **UNIV OF FLORIDA** **3788**  
 COMPUTATIONAL INVESTIGATION OF CARBON NANOTUBE MAT ERIALS  
 10/11/2000 - 11/30/2002 FY02: \$0 Total: \$44,873  
*Prin. Invest.:* S SINNOTT  
*Tech. Officer:* ARC/H PARTRIDGE, ARC/M MEYYPAPPAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5424** **UNIV OF FLORIDA** **3789**  
 UF PARTICIPATION IN THE AIRBORNE INFRARED ECHELLE SPECTROM-  
 ETER PROJECT  
 02/27/2001 - 02/28/2002 FY02: \$0 Total: \$36,167  
*Prin. Invest.:* R K PINA  
*Tech. Officer:* ARC/E F ERICKSON  
*CASE Category:* 11 - ASTRONOMY

**NCC 3 994** **UNIV OF FLORIDA** **3790**  
 INST FOR FUTURE SPACE TRANSPORT INST FOR FUTURE SPACE TRANS-  
 PORT  
 08/19/2002 - 08/18/2007 FY02: \$0 Total: \$0  
*Prin. Invest.:* D SHYY  
*Tech. Officer:* GRC/M HYATT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 8 149** **UNIV OF FLORIDA** **3791**  
 RESEARCH IN COMMUNICATING SCIENTIFIC KNOWLEDGE  
 12/22/1997 - 08/31/2002 FY02: \$0 Total: \$1,039,917  
*Prin. Invest.:* D TREISE  
*Tech. Officer:* MSFC/R KOZOR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

FLORIDA

<b>NCC 8 157</b>	<b>UNIV OF FLORIDA</b>	<b>3792</b>	<b>NGT10 52632</b>	<b>UNIV OF FLORIDA</b>	<b>3801</b>
SOUTHEAST REGIONAL EARTH SCIENCE APPLICATIONS CENTER			NASA BASED OBJECT DATABASE APPLICATION NASA BASED OBJECT		
10/20/1998 - 10/20/2003	FY02: \$0	Total: \$120,000	DATABASE APPLICATION		
<i>Prin. Invest.:</i> J W JONES, J W HANSEN			08/22/2002 - 06/30/2003	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> MSFC/J ARNOLD			<i>Prin. Invest.:</i> H BECK		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>Tech. Officer:</i> KSC/C D BLACK		
			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NCC 9 110</b>	<b>UNIV OF FLORIDA</b>	<b>3793</b>	<b>NGT10 52633</b>	<b>UNIV OF FLORIDA</b>	<b>3802</b>
ENVIRONMENTAL SYSTEMS COMMERCIAL SPACE TECH CNTR			PRODUCTION OF OXYGEN FROM CARBON DIOXIDE IN A MART IAN		
09/22/2000 - 11/30/2005	FY02: \$0	Total: \$926,741	ATMOSPHERE USING PRECIOUS METAL CATALYSTS ON		
<i>Prin. Invest.:</i> J J WARWICK			08/22/2002 - 06/30/2003	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> JSC/K R DAUES			<i>Prin. Invest.:</i> G B HOFLUND		
<i>CASE Category:</i> 54 - ENVIRONMENTAL BIOLOGY			<i>Tech. Officer:</i> KSC/C BLACK		
			<i>CASE Category:</i> 43 - CHEMICAL ENGR		
<b>NGT 1 01022</b>	<b>UNIV OF FLORIDA</b>	<b>3794</b>	<b>NAG 5 6577</b>	<b>UNIV OF MIAMI</b>	<b>3803</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			HIGH ACCURACY INFRARED INTERFEROMETRIC VALIDATION OF SATEL-		
06/01/2001 - 06/30/2003	FY02: \$0	Total: \$22,000	LITE SURFACE TEMPERATURE RETRIEVALS		
<i>Prin. Invest.:</i> M SHEPLAK			12/12/1997 - 05/31/2001	FY02: \$0	Total: \$599,877
<i>Tech. Officer:</i> LARC/K K TEDJOJWONS			<i>Prin. Invest.:</i> P J MINNETT		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>Tech. Officer:</i> GSFC/J C DODGE		
			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NGT 1 52233</b>	<b>UNIV OF FLORIDA</b>	<b>3795</b>	<b>NAG 5 6659</b>	<b>UNIV OF MIAMI</b>	<b>3804</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			A STUDY OF THE IMPACT OF OCEANIC BIOLOGICAL PROCES SES ON THE		
04/24/2000 - 06/30/2001	FY02: \$0	Total: \$22,000	AIR-SEA EXCEXCHANGE OF METHYL BROMIDE:		
<i>Prin. Invest.:</i> M SHEPHERD			11/20/1997 - 04/30/2003	FY02: \$0	Total: \$320,065
<i>Tech. Officer:</i> LARC/K K TEDJOJONO			<i>Prin. Invest.:</i> R ZIKA		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>Tech. Officer:</i> GSFC/C W TREES		
			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NGT 5 128</b>	<b>UNIV OF FLORIDA</b>	<b>3796</b>	<b>NAG 5 7110</b>	<b>UNIV OF MIAMI</b>	<b>3805</b>
ADAPTIVE SATELLITE ATTITUDE CONTROL/KEVIN J. WALCH KO			TOMS VALIDATION BASED ON PROFILES OF AEROSOL PROPE RTIES IN		
08/22/2001 - 07/31/2004	FY02: \$0	Total: \$22,000	THE LOWER TROPOSPHERE AS OBTAINED WIT		
<i>Prin. Invest.:</i> P C MASON			03/18/1998 - 03/31/2002	FY02: \$0	Total: \$452,904
<i>Tech. Officer:</i> GSFC/M S BURRELL			<i>Prin. Invest.:</i> D M PROSPERO		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>Tech. Officer:</i> GSFC/J HERMAN		
			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NGT 5 50031</b>	<b>UNIV OF FLORIDA</b>	<b>3797</b>	<b>NAG 5 7674</b>	<b>UNIV OF MIAMI</b>	<b>3806</b>
DETECTING PLANETS IN CIRCUMSTELLAR DISKS			INTEGRATION OF LONG TERM OCEANIC AEROSOL RECORDS F ROM UNIV		
07/17/1997 - 01/31/2001	FY02: \$0	Total: \$66,000	OF MIAMI NETWORK STATIONS WITH		
<i>Prin. Invest.:</i> S DERMOTT			09/09/1998 - 08/31/2001	FY02: \$0	Total: \$120,000
<i>Tech. Officer:</i> GSFC/K BLANDING			<i>Prin. Invest.:</i> J M PROSPERO		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>Tech. Officer:</i> GSFC/M I MISHCHENKO		
			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NGT 5 50233</b>	<b>UNIV OF FLORIDA</b>	<b>3798</b>	<b>NAG 5 8229</b>	<b>UNIV OF MIAMI</b>	<b>3807</b>
LOOKING FOR VARIATIONS IN THE INITIAL MASS FUNCTIO N: FIRST			STUDIES OF WESTERN PACIFIC INTERANNUAL ANOMALY PAT TERNS		
COMPREHENSIVENEAR -INFRARED SPECTROSCOPI			TOWARD IMPROVED ENSO PREDICTION.		
05/27/1999 - 06/30/2002	FY02: \$0	Total: \$44,000	02/24/1999 - 03/31/2002	FY02: \$0	Total: \$175,623
<i>Prin. Invest.:</i> E A LADA			<i>Prin. Invest.:</i> G HALIWELL		
<i>Tech. Officer:</i> GSFC/L SMITH			<i>Tech. Officer:</i> GSFC/M RIENECKER		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NGT 8 52890</b>	<b>UNIV OF FLORIDA</b>	<b>3799</b>	<b>NAG 5 8864</b>	<b>UNIV OF MIAMI</b>	<b>3808</b>
CRITICAL INITIAL FLAW (CIF) SIZE EVALUATION IN SINGLE CRYSTAL			SEAWIFS DATA COLLECTION, CALIBRATION, & PROCESSING FOR THE		
NICKEL-BASE (PWA 1493)			INDIAN OCEAN		
06/01/2000 - 10/30/2001	FY02: \$0	Total: \$22,000	12/02/1999 - 01/31/2002	FY02: \$0	Total: \$107,010
<i>Prin. Invest.:</i> N ARAKERE			<i>Prin. Invest.:</i> R H EVANS		
<i>Tech. Officer:</i> MSFC/S NASH-STEVENSON			<i>Tech. Officer:</i> GSFC/J MARRA		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NGT10 52626</b>	<b>UNIV OF FLORIDA</b>	<b>3800</b>			
HIGH PERFORMANCE MASS SPECTROMETRY WITH A MINIATUR E ION					
TRAP FOR BIOLOGICAL AND ENVIRONMENTAL MONIT					
07/20/2000 - 06/30/2003	FY02: \$0	Total: \$44,000			
<i>Prin. Invest.:</i> R A YOST					
<i>Tech. Officer:</i> KSC/F ADAMS					
<i>CASE Category:</i> 12 - CHEMISTRY					

FLORIDA

NASA'S UNIVERSITY PROGRAM

**NAG 5 9066**                      **UNIV OF MIAMI**                      **3809**  
 PRESENT DAY ELECTRONICS OF THE CENTRAL ANDES  
 02/18/2000 - 02/28/2003                      FY02: \$0                      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**                      **3810**  
 VOLCANO PLUME MONITORING USING UNMANNED AERIAL VEHICLES  
 02/17/2000 - 02/28/2003                      FY02: \$0                      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**                      **3811**  
 A SATELLITE DATA RECEPTION & ANALYSIS FACILITY FOR ENVIRONMENTAL MONITORING IN THE SOUTHEASTERN  
 08/10/2000 - 07/14/2003                      FY02: \$0                      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**                      **3812**  
 DERIVATION, VALIDATION, & EXPLOITATION OF SEA-SURFACE TEMPERATURES MEASURED BY SENSORS ON TRMM  
 06/28/2000 - 05/31/2003                      FY02: \$0                      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**                      **3813**  
 CONTINUED PROCESSING & EXTENSION OF THE AVHRR PATH FINDER OCEANS GLOBALSEA SURFACE TEMPERATURE DATA  
 03/20/2001 - 03/31/2004                      FY02: \$0                      Total: \$107,060  
*Prin. Invest.:* R EVANS  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 10725**                      **UNIV OF MIAMI**                      **3814**  
 ACTIVITIES AS PROJECT SCIENTIST OF THE GLOBAL MODELLING INITIATIVE.  
 04/09/2001 - 02/29/2004                      FY02: \$0                      Total: \$162,267  
*Prin. Invest.:* J RODRIGUEZ  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10963**                      **UNIV OF MIAMI**                      **3815**  
 IMPROVING TROPICAL CYCLONE QUANTITATIVE PRECIPITATION FORECASTS USING TRMM PRECIPITATION ESTIMATES  
 06/01/2001 - 05/31/2003                      FY02: \$0                      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**                      **3816**  
 TRANS-OCEANIC MEASUREMENTS FOR EOS AQUA VALIDATION AQUA-0058-0087  
 07/13/2001 - 08/31/2004                      FY02: \$0                      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**                      **3817**  
 ANALYSIS OF TROPOSPHERIC MEASUREMENTS UTILIZING A HIERARCHY OF MODELS  
 08/22/2001 - 08/31/2004                      FY02: \$0                      Total: \$78,555  
*Prin. Invest.:* J RODRIGUEZ  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11392**                      **UNIV OF MIAMI**                      **3818**  
 IMPROVE ESTIMATE OF GAS TRANSFER USING SCATTEROMETER  
 11/13/2001 - 10/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D BOGUCKI  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11508**                      **UNIV OF MIAMI**                      **3819**  
 RADAR OBSERVATIONS OF TROPICAL CIRRUS ANVILS  
 01/13/2002 - 12/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B A ALBRETCH  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11864**                      **UNIV OF MIAMI**                      **3820**  
 WAVES: AN UNDULATING OCEAN SURFACE  
 03/13/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* H GRABER  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 12103**                      **UNIV OF MIAMI**                      **3821**  
 LONG-RANGE TRANSPORT OF VIABLE MICROORGANISMS THROUGH THE ATMOSPHERE: THE IMPACT OF AFRICAN SOURCES  
 04/25/2002 - 04/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J M PROSPERO  
*Tech. Officer:* GSFC/N MAYNARD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 12513**                      **UNIV OF MIAMI**                      **3822**  
 FEASIBILITY STUDY TO DETERMINE OCEANIC MIXED LAYER DEPTH USING LIDAR MEASUREMENTS  
 08/27/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D BOGUCKI  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1346**                      **UNIV OF MIAMI**                      **3823**  
 CELL TRANSPLANTATION THERAPY FOR DIABETES  
 08/15/2001 - 09/30/2004                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* L INVERARDI  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG13 02050**                      **UNIV OF MIAMI**                      **3824**  
 CSTARS DATA RECEPTION AND ANALYSIS FOR SE US, GULF OF MEXICO, CARIBBEAN BASIN EQUATORIAL BASIN  
 08/02/2002 - 07/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T DIXON  
*Tech. Officer:* SSC/C DEL CASTILLO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



## NASA'S UNIVERSITY PROGRAM

FLORIDA

<b>NAS 5 31361</b>	<b>UNIV OF MIAMI</b>	<b>3825</b>	<b>NAG 5 3446</b>	<b>UNIV OF SOUTH FLORIDA</b>	<b>3833</b>
MODIS - INVESTIGATION			BOTTOM-ASSESSMENT AND WATER-CONSTITUTENT ALGORITHM S FOR		
01/15/1992 - 06/14/2003	FY02: \$0	Total: \$8,314,000	THE ETM IN THE COASTAL ZONE		
<i>Prin. Invest.:</i> O B BROWN			10/10/1996 - 06/30/2001	FY02: \$0	Total: \$782,681
<i>Tech. Officer:</i> GSFC/H OSEROFF			<i>Prin. Invest.:</i> KARGER		
<i>CASE Category:</i> 33 - OCEANOGRAPHY			<i>Tech. Officer:</i> GSFC/D L WILLIAMS		
			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAS 5 31362</b>	<b>UNIV OF MIAMI</b>	<b>3826</b>	<b>NAG 5 5202</b>	<b>UNIV OF SOUTH FLORIDA</b>	<b>3834</b>
EOS/MODIS INVESTIGATION ENTITLED: "PROCESSING/ CALIBRATION FOR			COLLABORATION ON A STUDY OF SIGMA NAUGHT BLOOM EFFECTS ON		
OCEAN OBSERVATION WITH EOS/MODIS"			RADAR ALTIMETERS		
12/13/1991 - 06/14/2003	FY02: \$0	Total: \$11,122,000	06/18/1998 - 12/31/2002	FY02: \$0	Total: \$110,000
<i>Prin. Invest.:</i> R EVANS			<i>Prin. Invest.:</i> G T MITCHUM		
<i>Tech. Officer:</i> GSFC/H OSEROFF			<i>Tech. Officer:</i> GSFC/G S HAYNE		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 33 - OCEANOGRAPHY		
<b>NAS 5 31363</b>	<b>UNIV OF MIAMI</b>	<b>3827</b>	<b>NAG 5 6301</b>	<b>UNIV OF SOUTH FLORIDA</b>	<b>3835</b>
MODERATE RESOLUTION IMAGING SPECTROMETER INVESTIGATION -			HYPERSPECTRAL CHARACTERIZATION FOR APPLICATION TO CARBON		
OCEAN			CYCLING IN COASTAL REGIONS		
01/15/1992 - 06/14/2003	FY02: \$0	Total: \$6,198,000	09/02/1997 - 08/14/2001	FY02: \$0	Total: \$335,571
<i>Prin. Invest.:</i> H GORDON			<i>Prin. Invest.:</i> P COBLE		
<i>Tech. Officer:</i> GSFC/H OSEROFF			<i>Tech. Officer:</i> GSFC/J YODER		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 33 - OCEANOGRAPHY		
<b>NCC 1 01021</b>	<b>UNIV OF MIAMI</b>	<b>3828</b>	<b>NAG 5 6448</b>	<b>UNIV OF SOUTH FLORIDA</b>	<b>3836</b>
DEPLOY FAST-GAS GC/MS SYS TO MEAS C2&C5 CARBONYLS, METHANOL			SYNOPTIC ANALYSIS OF FACTORS INFLUENCING CARBON FLUXES AT THE		
& ETHANOL ON NASA AIRCRAFT DURING TRACE-			CARIACO CONTINENTAL MARGIN TIME SER		
03/13/2001 - 10/14/2002	FY02: \$0	Total: \$49,959	10/24/1997 - 09/30/2001	FY02: \$0	Total: \$446,836
<i>Prin. Invest.:</i> D D RIEMER			<i>Prin. Invest.:</i> F MULLER-KARGER		
<i>Tech. Officer:</i> LARC/J L RAPER			<i>Tech. Officer:</i> GSFC/J MARRA		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NCC 2 5500</b>	<b>UNIV OF MIAMI</b>	<b>3829</b>	<b>NAG 5 6449</b>	<b>UNIV OF SOUTH FLORIDA</b>	<b>3837</b>
CLUES TO CORAL REEF EXOSYSTEM HEALTH DERIVED FROM AIRBORNE			A NUMERICAL ANALYSIS OF NEW NITROGEN SOURCES OF NO 3 AND N2		
HYPERSPECTRAL DATA COUPLED WITH RADIATIVE			EFFECTING CARBON CYCLING IN THE SOUTH		
07/09/2002 - 07/31/2003	FY02: \$0	Total: \$0	10/24/1997 - 10/14/2001	FY02: \$0	Total: \$582,965
<i>Prin. Invest.:</i> P KRAMER			<i>Prin. Invest.:</i> J WALSH		
<i>Tech. Officer:</i> ARC/L GUILD, ARC/J L DUNGAN			<i>Tech. Officer:</i> GSFC/J MARRA		
<i>CASE Category:</i> 54 - ENVIRONMENTAL BIOLOGY			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NGT 5 30425</b>	<b>UNIV OF MIAMI</b>	<b>3830</b>	<b>NAG 5 8175</b>	<b>UNIV OF SOUTH FLORIDA</b>	<b>3838</b>
A STUDY OF GLOBAL RAINFALL DISTRIBUTIONS IN TROPIC AL CYCLONES			SOUTHEASTERN US X-BAND EOS DB RECEPTION FACILITY ( SEUS-X);		
USING NASA/TRMM DATA/STUDENT: MAN			INFRASTRUC- TURE FOR ENVIRONMENTAL ASSE		
09/19/2001 - 09/30/2004	FY02: \$0	Total: \$22,000	02/04/1999 - 02/14/2001	FY02: \$0	Total: \$490,660
<i>Prin. Invest.:</i> S S CHEN			<i>Prin. Invest.:</i> F E MULLER-KARGER		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> GSFC/J DODGE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 1 01046</b>	<b>UNIV OF SOUTH FLORIDA</b>	<b>3831</b>	<b>NAG 5 10532</b>	<b>UNIV OF SOUTH FLORIDA</b>	<b>3839</b>
CIMBINED THERMAL AND STRUCTURAL OPTIMIZATION OF FUNCTIONALLY			SOUTHEASTERN US X-BAND EOS DB PROCESSING AND ANALYSIS FACIL-		
GRADED TILE			ITY INFRASTRUCTURE FOR ENVIRONMENT		
03/26/2001 - 12/31/2001	FY02: \$0	Total: \$65,000	03/12/2001 - 02/28/2004	FY02: \$0	Total: \$227,319
<i>Prin. Invest.:</i> R T HAFTA, S VENKATARAMAN, B V SANKAR			<i>Prin. Invest.:</i> F MULLER-KARGER		
<i>Tech. Officer:</i> LARC/M L BLOSSER			<i>Tech. Officer:</i> GSFC/J DODGE		
<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 3 2614</b>	<b>UNIV OF SOUTH FLORIDA</b>	<b>3832</b>	<b>NAG 5 10738</b>	<b>UNIV OF SOUTH FLORIDA</b>	<b>3840</b>
DEVELOPMENT OF A FLEXIBLE II-VI-BASED HIGH PERFORM ANCE HIGH			IMPACTS OF LARGE RIVER PLUMES ON CARBON AND SALT FLUXES IN THE		
BANDGAP DEVICE FOR THIN FILM TANDEM SOL			SURFACE OCEAN		
05/23/2001 - 04/30/2003	FY02: \$0	Total: \$58,837	04/18/2001 - 04/30/2004	FY02: \$0	Total: \$125,853
<i>Prin. Invest.:</i> D MOREL			<i>Prin. Invest.:</i> C CHU		
<i>Tech. Officer:</i> GRC/A HEPP			<i>Tech. Officer:</i> GSFC/J MARRA		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			<i>CASE Category:</i> 33 - OCEANOGRAPHY		

## FLORIDA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10908 UNIV OF SOUTH FLORIDA 3841**  
 A MILLENIUM GLOBAL SCALE CORAL REEF ECOSYSTEM ASSESSMENT  
 USING HIGH RESOLUTION REMOTE SENSING DATA  
 05/07/2001 - 05/31/2004 FY02: \$0 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 3842**  
 AN ASSESSMENT OF GLOBAL ORGANIC CARBON FLUX ALONG CONTINENTAL MARGINS  
 08/20/2001 - 08/31/2004 FY02: \$0 Total: \$133,545  
*Prin. Invest.:* F MULLER-KARGER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11318 UNIV OF SOUTH FLORIDA 3843**  
 VOLCANIC PLUME MONITORING USING UNMANNED AERIAL VEHICLES  
 10/17/2001 - 09/30/2003 FY02: \$202,559 Total: \$202,559  
*Prin. Invest.:* C B CONNOR  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1381 UNIV OF SOUTH FLORIDA 3844**  
 RESEARCH "DEVELOPMENT OF AN INSULIN SECRETING IMMUNOPRIVILEGED CELL-CELL AGGREGATE UTILIZING  
 06/01/1997 - 12/31/2001 FY02: \$0 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 3845**  
 EVALUATION OF OVARIAN TUMOR CELL GROWTH AND GENE EXPRESSION  
 10/28/1992 - 01/31/2002 FY02: \$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 3846**  
 3D GROWTH EFFECTS ON DRUG RESISTANCE IN HUMAN OVARIAN TUMOR CELLS  
 08/01/2001 - 09/30/2004 FY02: \$0 Total: \$35,000  
*Prin. Invest.:* J L BECKER  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1365 UNIV OF SOUTH FLORIDA 3847**  
 CREATION AND TRANSPLANTATION OF IMMUNOPRIVILEGED SERTOLI-LEIDYERON-AGGREGATED CELLS  
 07/27/2001 - 09/30/2004 FY02: \$0 Total: \$68,000  
*Prin. Invest.:* S SAPORTA, D F CAMERON, A E WILLING  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 56 - MEDICAL

**NAG 9 1431 UNIV OF SOUTH FLORIDA 3848**  
 USING LANDSAT 7 DATA IN A GISBASED REVISION OF REEF BASE  
 05/30/2002 - 04/07/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* S ANDREFOUET  
*Tech. Officer:* JSC/G BYRNE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG10 204 UNIV OF SOUTH FLORIDA 3849**  
 EDUCATION GRANT ENTITLED "YES WE CARE"  
 01/07/1997 - 06/30/2002 FY02: \$0 Total: \$324,546  
*Prin. Invest.:* R E HENNING  
*Tech. Officer:* KSC/J A DIGGS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG10 310 UNIV OF SOUTH FLORIDA 3850**  
 EVALUATION OF A SURFACE-APPLIED CATHODIC PROTECTION SYSTEM  
 02/11/2002 - 10/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* D A SAGUESS  
*Tech. Officer:* KSC/L MACDOWELL  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAS 5 31716 UNIV OF SOUTH FLORIDA 3851**  
 EARTH OBSERVING SYSTEM MODIS/HIRIS TEAM MEMBER INVESTIGATION  
 01/15/1992 - 06/14/2003 FY02: \$0 Total: \$5,511,168  
*Prin. Invest.:* K R CARDER  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 30143 UNIV OF SOUTH FLORIDA 3852**  
 EL NINO/SOUTHERN OSCILLATION IN THE ANTARCTIC CIRCUMPOLAR CURRENT  
 08/27/1998 - 08/31/2001 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* G T MITHCHUM, HAAN  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30346 UNIV OF SOUTH FLORIDA 3853**  
 CHARACTERIZATION OF CDOM RIVERINE CONTRIBUTION AND DISTRIBUTION THOROUGH REMOTE SENSING SATELLITE IMA  
 08/21/2000 - 08/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* P COBLE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30354 UNIV OF SOUTH FLORIDA 3854**  
 IMPACT OF LARGE & SMALL RIVERSON ADJACENT OCEANIC ENVIRONMENTS/STUDENT: ANA ODRIOLLA  
 08/24/2000 - 08/31/2003 FY02: \$0 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 3855**  
 MAPPING AND MONITORING OF CHANGE IN THE FLORIDA KEYS REEF TRACT FROM SPACE USING LANDSAT 7, MODIS  
 08/15/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* F MULLER-KARGER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50422 UNIV OF SOUTH FLORIDA 3856**  
 IRON FERTILIZATION OF TRICHODESMIUM ON THE WEST FLORIDA SHELF: A THREE-DIMENSIONAL PHYSICAL  
 08/21/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J WALSH  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2236** **UNIV OF WEST FLORIDA** **3857**  
 INTELLIGENT TACTILE SYSTEMS FOR IMPROVED SAFETY OF FLIGHT  
 (NRA-98-LARC-8)  
 09/20/1999 - 03/31/2002 FY02: \$0 Total: \$395,962  
*Prin. Invest.:* A K RAV  
*Tech. Officer:* LARC/W K GERDEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1225** **UNIV OF WEST FLORIDA** **3858**  
 ATTENTION DIRECTING PILOTING DISPLAY: OZ A COMPUTE R BASED  
 HUMAN-CENTERED SYSTEM  
 05/29/1998 - 01/31/2002 FY02: \$0 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** **3859**  
 INTELLIGENT HUMAN COMPUTER TACTILE INTERFACES FOR ROTOR-  
 CRAFT & CIVIL AVIATION  
 06/11/1998 - 12/31/2001 FY02: \$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 ENGR

**NAG 2 1332** **UNIV OF WEST FLORIDA** **3860**  
 ADAPTING AN ATTENTION DIRECTION PILOTING DISPLAY FOR THE SPACE  
 SHUTTLE  
 06/21/1999 - 09/30/2001 FY02: \$0 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** **3861**  
 TACTILE INTERFACES TO ENHANCE SAFETY PERFORMANCE A ND  
 RELIABILITY IN AGRICULTURAL  
 07/02/2001 - 06/30/2002 FY02: \$0 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** **3862**  
 HAPTIC INTERFACES TO AUGMENT HUMAN/MACHINE INTERAC TION IN  
 SPACE ACTIVITES  
 08/30/1999 - 08/31/2002 FY02: \$0 Total: \$402,754  
*Prin. Invest.:* A K RAJ  
*Tech. Officer:* GSF/C R CROUCH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1386** **UNIV OF WEST FLORIDA** **3863**  
 HUMAN CENTERED COMPUTING PERSPECTIVE ON MARS EXPLO RATION  
 09/21/2001 - 10/31/2002 FY02: \$0 Total: \$175,000  
*Prin. Invest.:* J HANSEN  
*Tech. Officer:* JSC/B WARD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 2 1036** **UNIV OF WEST FLORIDA** **3864**  
 EXPLANATION & COLLABORATION THROUGH CONCEPT MAPS  
 05/07/1998 - 06/30/2001 FY02: \$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** **3865**  
 UNSOLOCIATED PROPOSAL TO ESTABLISH THE INFORMATION TECHNOL-  
 OGY ASSESSMENT CONSORTIUM (ITAC) & SUPPOR  
 08/07/2000 - 05/31/2002 FY02: \$0 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** **3866**  
 POLISHING: ENHANCING DATA QUALITY BY REPAIRING IM PERFECTIONS  
 04/06/2001 - 02/28/2003 FY02: \$0 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** **3867**  
 TEAMWORK IN PRACTICE: DESIGN FOR COLLABORATION IN MIXED  
 HUMAN-ROBOTIC TEAMS  
 04/27/2001 - 02/28/2003 FY02: \$0 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** **3868**  
 MULTI-AGENT SOFTWARE DESIGN & ENGINEERING FOR HUMA  
 N-CENTERED COLLABORATIVE AUTONOMOUS SPACE SYSTEMS  
 09/04/2001 - 08/31/2003 FY02: \$0 Total: \$297,400  
*Prin. Invest.:* J M BRADSHAW  
*Tech. Officer:* ARC/D CLANCY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1295** **UNIV OF WEST FLORIDA** **3869**  
 MULTI-DOMAIN NETWORK LEARNING ALGORITHMS OF LATENT VARIABLE  
 INTERPRETATION AND DISCOVERING GENETIC  
 11/08/2001 - 11/14/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* C GLYMOUR  
*Tech. Officer:* ARC/J C COUGHLAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1297** **UNIV OF WEST FLORIDA** **3870**  
 CMAP TOOLS: A SOFTWARE ENVIRONMENT FOR KNOWLEDGE MODELING  
 & SHARING  
 12/18/2001 - 12/14/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* A CANAS  
*Tech. Officer:* ARC/M SHAFTO, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG10 165** **VALENCIA COMM COLL** **3871**  
 HIGH TECH TRNG OF INDIVIDUALS W/DISABILITY  
 06/06/1995 - 08/31/2002 FY02: \$0 Total: \$135,043  
*Prin. Invest.:* K WOODBERRY  
*Tech. Officer:* KSC/G BUCKINGHAM  
*CASE Category:* 22 - COMPUTER SCIENCE

## GEORGIA

**NAG 3 2806** **ALBANY STATE UNIV** **3872**  
 PRECOLL ACHIEVEMENT OF EXCELLENCE IN MATHEMATIC S, SCIENCE,  
 ENGINEERING AND TECHNOLOGY (PACE/MSET)  
 09/12/2002 - 09/12/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* G WRENSFORD  
*Tech. Officer:* GRC/R F LAWRENCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

GEORGIA

NASA'S UNIVERSITY PROGRAM

**NAG10 265**                      **ALBANY STATE UNIV**                      **3873**  
 ALBANY STATE UNIV HIGH SCHOOL/HIGH TECH ALBANY STATE UNIV HIGH SCHOOL/HIGH TECH  
 09/10/1999 - 09/30/2002                      FY02: \$0                      Total: \$200,000  
*Prin. Invest.:* D HODGES-TILLER  
*Tech. Officer:* KSC/R J MCKINNEY  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NAG 1 01091**                      **CLARK ATLANTA UNIV**                      **3874**  
 COMMERCIAL PROCESS DEVELOPMENT FOR POLYIMIDE FOAMS  
 05/24/2001 - 05/24/2004                      FY02: \$0                      Total: \$75,000  
*Prin. Invest.:* D R VEAZIE  
*Tech. Officer:* LARC/E S WEISER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2292**                      **CLARK ATLANTA UNIV**                      **3875**  
 TEST AND EVALUATION OF NONCHROMATE FINISHING AGENT  
 09/29/1999 - 08/23/2002                      FY02: \$0                      Total: \$199,998  
*Prin. Invest.:* D OKHIO  
*Tech. Officer:* GRC/R LAWRENCE  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 5 6889**                      **CLARK ATLANTA UNIV**                      **3876**  
 ELECTRON EXCITATION CROSS SECTIONS OF ATOMS AND IONS REL-  
 EVANT TO PLANETARY ATMOSPHERES  
 01/21/1998 - 09/30/2001                      FY02: \$0                      Total: \$192,755  
*Prin. Invest.:* S TAYAL  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8792**                      **CLARK ATLANTA UNIV**                      **3877**  
 DEVELOPMENT OF DISPERSION RELATIONS FOR SOLAR AND STELLAR  
 DIAGNOSTICS  
 09/02/1999 - 08/31/2001                      FY02: \$0                      Total: \$197,950  
*Prin. Invest.:* A MSEZANE  
*Tech. Officer:* GSFC/A TEMKIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 11434**                      **CLARK ATLANTA UNIV**                      **3878**  
 ELECTRON COLLISIONAL EXCITATION STRENGTHS FOR IONS OF ASTRO-  
 PHYSICAL INTEREST  
 12/05/2001 - 03/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S S TAYAL  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1493**                      **CLARK ATLANTA UNIV**                      **3879**  
 MOBILE SCIENCE, MATHEMATICS EDUCATION UNIT  
 06/01/1998 - 08/15/2001                      FY02: \$0                      Total: \$295,984  
*Prin. Invest.:* A MSEZANE  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 21 - MATHEMATICS

**NAG 8 1535**                      **CLARK ATLANTA UNIV**                      **3880**  
 MASTAP FOR SCIENCE TEACHERS OPEN SUPPORT SYSTEMS (S-TOSS)  
 05/01/1998 - 05/01/2001                      FY02: \$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**                      **3881**  
 TRANSFER ICEMS INSPIRING CAREERS IN ENGINEERING, MATHEMATICS  
 AND SCIENCE FROM MOORHOUSE TO CLARK AT  
 05/21/2001 - 09/05/2001                      FY02: \$0                      Total: \$19,864  
*Prin. Invest.:* E MCDONALD  
*Tech. Officer:* MSFC/E ORDONEZ  
*CASE Category:* 21 - MATHEMATICS

**NAS 3 01201**                      **CLARK ATLANTA UNIV**                      **3882**  
 RESIN TRANSFER MOLDING AND VACUUM ASSISTED RESIN TRANSFER  
 MOLDING PROGRAM  
 08/27/2001 - 07/31/2002                      FY02: \$0                      Total: \$56,136  
*Prin. Invest.:* E A MINTZ  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NAS 3 02104**                      **CLARK ATLANTA UNIV**                      **3883**  
 PEM-FAN ALL COMPOSITE ELECTRIC AIRCRAFT ENGINE CONCEPT  
 06/13/2002 - 01/22/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J A FABUNMI  
*Tech. Officer:* GRC/J A SEIDEL, GRC/L A BURKARDT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 552**                      **CLARK ATLANTA UNIV**                      **3884**  
 HIGH PERFORMANCE POLYMERS AND COMPOSITES CENTER  
 04/29/1997 - 03/31/2003                      FY02: \$0                      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**                      **3885**  
 LIQUID FUELS: PYROLYTIC DEGRADATION AND FIRE SPREAD BEHAVIOR  
 AS INFLUENCED BY BUOYANCY  
 05/19/1999 - 03/14/2003                      FY02: \$0                      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**                      **3886**  
 DEVELOPMENT OF THERMALLY STABLE AND HIGHLY FLUORESCENT IR  
 DYES  
 08/21/2001 - 08/19/2003                      FY02: \$0                      Total: \$20,000  
*Prin. Invest.:* D R BU  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 911**                      **CLARK ATLANTA UNIV**                      **3887**  
 DEVELOPING NOVEL FLUORESCENT MATERIALS WITH NEAR INFRARED  
 EMISSION BY USING M-PHEYLENE  
 09/04/2001 - 08/19/2003                      FY02: \$0                      Total: \$20,000  
*Prin. Invest.:* D PANG  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NCC 5 347**                      **CLARK ATLANTA UNIV**                      **3888**  
 INTEGRATION OF RESEARCH AND EDUCATION IN THE AREA OF EARTH  
 SYSTEMS SCIENCE  
 07/01/1998 - 06/30/2003                      FY02: \$0                      Total: \$1,929,914  
*Prin. Invest.:* C H WILLIAMS  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

GEORGIA

<b>NCC 5 666</b>	<b>CLARK ATLANTA UNIV</b>	<b>3889</b>	<b>NAG 1 2235</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3897</b>
CLARK ATLANTA UNIV. AND PARTNERS CENTER FOR PREPAR ING MATH- EMATICS AND SCIENCE TEACHERS FOR URBAN			EXPLORATION OF ADVANCED PROBABILISTIC/STOCHASTIC DESIGN METH- ODS		
08/22/2002 - 08/31/2005	FY02: \$0	Total: \$0	08/26/1999 - 12/31/2002	FY02: \$0	Total: \$264,819
<i>Prin. Invest.:</i> B FLOURNOY			<i>Prin. Invest.:</i> D MAVRIS		
<i>Tech. Officer:</i> GSFC/M MATEU			<i>Tech. Officer:</i> GRC/R E YACKOVETSKY, GRC/M D MOORE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 3 2728</b>	<b>EMORY UNIV</b>	<b>3890</b>	<b>NAG 1 2243</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3898</b>
CONFOCAL MICROSCOPY OF THE COLLOIDAL GLASS TRANSIT ION			DEMO/EVAL OF INTELLIGENT FLT PROPULSION & CONTROL SYS UNDER UNANTICIPATED CRITICALFAILURE CONDITION		
05/06/2002 - 05/05/2006	FY02: \$0	Total: \$0	09/27/1999 - 09/30/2002	FY02: \$0	Total: \$162,846
<i>Prin. Invest.:</i> E R WEEKS			<i>Prin. Invest.:</i> A J CALISE		
<i>Tech. Officer:</i> GRC/R B ROGERS			<i>Tech. Officer:</i> LARC/P W GOODE		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER		
<b>NAG 8 1579</b>	<b>EMORY UNIV</b>	<b>3891</b>	<b>NAG 1 2312</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3899</b>
DESIGN, SYNTHESIS, AND CHARACTERIZATION OF WELL- DEFINED, BIO- MIMETIC POLYPEPTIDE NETWORKS"			NANOTUBE REINFORCEMENT OF ADHESIVELY BONDED JOINTS		
01/05/1999 - 11/30/2002	FY02: \$0	Total: \$340,424	06/20/2000 - 06/30/2003	FY02: \$0	Total: \$59,934
<i>Prin. Invest.:</i> V CONTICELLO			<i>Prin. Invest.:</i> W S JOHNSON		
<i>Tech. Officer:</i> MSFC/B GUYNES			<i>Tech. Officer:</i> LARC/B J JENSEN		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NCC 9 144</b>	<b>EMORY UNIV</b>	<b>3892</b>	<b>NAG 1 01055</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3900</b>
MODELING PROSTATE CANCER SKELETAL METASTASIS & GEN E THERAPY			INTELLIGENT PILOT AIDS FOR FLIGHT RE-PLANNING IN EMERGENCIES		
12/14/2001 - 11/30/2002	FY02: \$0	Total: \$0	04/26/2001 - 04/25/2004	FY02: \$0	Total: \$65,325
<i>Prin. Invest.:</i> L CHUNG			<i>Prin. Invest.:</i> A R PRITCHETT		
<i>Tech. Officer:</i> JSC/D RISIN			<i>Tech. Officer:</i> LARC/A C TRUJILLO		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 1 2146</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3893</b>	<b>NAG 1 01117</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3901</b>
APPLIC OF CIRCULATION CONTROL TECHNOL TO AIRFRAME NOISE RE- DUCTION			NEURAL NETWORK BASED ADAPTIVE CONTROL FOR NONLINEAR FLIGHT REGIMES NRA 01-LARC-1		
03/09/1999 - 02/28/2003	FY02: \$0	Total: \$634,721	08/16/2001 - 08/31/2004	FY02: \$0	Total: \$50,000
<i>Prin. Invest.:</i> K K AHUIA, L N SANKAR, R J ENGLAN			<i>Prin. Invest.:</i> A J CALISE, N HOVAKIMYAN		
<i>Tech. Officer:</i> LARC/R R ANTCLIFF			<i>Tech. Officer:</i> LARC/M A MOTTER		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 1 2149</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3894</b>	<b>NAG 1 02015</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3902</b>
DEVELOPMENT FOR ADVANCED LIFE CYCLE COSTING METHOD FOR TECHNOLOGY BENEFITS/COSTS/RISK ASSESSMENT			DEVELOPMENT OF A MINIATURE PIEZOHYDRAULIC PUMP BASED ACTUA- TION SYSTEM WITH A SINGLE CRYSTAL		
03/26/1999 - 12/31/2001	FY02: \$0	Total: \$323,593	12/06/2001 - 12/05/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D N MAVRIS			<i>Prin. Invest.:</i> C S LYNCH		
<i>Tech. Officer:</i> LARC/M D MOORE, LARC/P A GELHAUSEN			<i>Tech. Officer:</i> LARC/G C HORNER		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 1 2169</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3895</b>	<b>NAG 1 02018</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3903</b>
PNEUMATIC AERODYNAMICS AND CONTROL FOR CHANNEL WING POWERED-LIFT AIRCRAFT (FOLLOW-ON NAG-1-02075			EVALUATION OF THE NEW GENERATION TITANIUM MATRIX COMPOSITES FOR THE 3RD GENERATIONRLV		
03/24/1999 - 02/28/2002	FY02: \$0	Total: \$298,000	12/13/2001 - 12/14/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R J ENGLAR			<i>Prin. Invest.:</i> W S JOHNSON		
<i>Tech. Officer:</i> LARC/W T HODGES123			<i>Tech. Officer:</i> LARC/R K BIRD		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NAG 1 2202</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3896</b>	<b>NAG 1 02023</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3904</b>
SAGE II OZONE (V6.0) ANAL W/EMPHASIS ON LONG TERM TRENDS IN THE LOWER STRATOSPHERE(NRA-98-OES-04)			DESIGN METHODOLOGIES FOR REVOLUTIONARY AEROSPACE CONCEPTS		
06/11/1999 - 07/07/2002	FY02: \$0	Total: \$254,700	01/15/2002 - 12/31/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D M CUNNOLD			<i>Prin. Invest.:</i> D N MAVRIS		
<i>Tech. Officer:</i> LARC/G L MADDREA, LARC/L R POOLE			<i>Tech. Officer:</i> LARC/R E MCKINLEY,JR, LARC/W M KIMMEL		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		

GEORGIA

NASA'S UNIVERSITY PROGRAM

**NAG 1 02054**            **GEORGIA INST OF TECHNOLOGY**            **3905**  
 EQUIVALENT CONTINUUM CONCEPTS FOR DEFORMATION AND FRACTURE  
 BASED ON MOLECULAR MODELING TECHNIQUES  
 02/19/2002 - 02/28/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* D L MCDOWELL, M ZHOU  
*Tech. Officer:* LARC/E H GLAESSGEN, LARC/I S RAJU  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 2 1488**            **GEORGIA INST OF TECHNOLOGY**            **3913**  
 REAL-TIME CONTROL OF LEAN BLOWOUT IN A TURBINE ENGINE FOR  
 MINIMIZING NOX EMISSIONS  
 06/27/2001 - 05/31/2003            FY02: \$0            Total: \$349,978  
*Prin. Invest.:* B ZINN  
*Tech. Officer:* ARC/N N MANSOUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02075**            **GEORGIA INST OF TECHNOLOGY**            **3906**  
 DEVELOPMENT OF PNEUMATIC CHANNEL WING POWER-LIFT AIRCRAFT  
 TECHNOLOGY  
 04/03/2002 - 04/02/2004            FY02: \$0            Total: \$0  
*Prin. Invest.:* R J ENGLAR  
*Tech. Officer:* LARC/B A CAMPBELL  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1571**            **GEORGIA INST OF TECHNOLOGY**            **3914**  
 SYNTHESIS OF HAFNIUM BASED CERAMIC MATERIALS FOR ULTRA HIGH  
 TEMPERATURE AEROSPACE APPLICATIONS  
 07/18/2002 - 07/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* M SACKS  
*Tech. Officer:* ARC/S JOHNSON  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 02088**            **GEORGIA INST OF TECHNOLOGY**            **3907**  
 RESEARCH IN PLANETARY EXPLORATION AND PLANETARY ATMOSPHERIC  
 FLIGHT  
 04/30/2002 - 04/29/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* J R OLDS  
*Tech. Officer:* LARC/H S WRIGHT, LARC/R D BRAUN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 3 1949**            **GEORGIA INST OF TECHNOLOGY**            **3915**  
 THE DEVELOPMENT OF NOVEL, HIGH-FLUX, HEAT TRANSFER CELLS FOR  
 THERMAL CONTROL IN MICROGRAVITY  
 09/17/1996 - 09/12/2001            FY02: \$0            Total: \$480,000  
*Prin. Invest.:* M K SMITH, A GLEZER  
*Tech. Officer:* GRC/B SINGH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 02093**            **GEORGIA INST OF TECHNOLOGY**            **3908**  
 INVESTIGATION OF PNEUMATIC INLET AND DIFFUSER BLOWING ON A  
 DUCTED FAN PROPULSOR INSTANT THRUST  
 05/01/2002 - 12/15/2002            FY02: \$0            Total: \$0  
*Prin. Invest.:* S KONDOR, B ENGLAR  
*Tech. Officer:* LARC/M D MOORE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2006**            **GEORGIA INST OF TECHNOLOGY**            **3916**  
 TERRESTRIAL EXPERIMENTS ON G-GITTER EFFECTS ON TRANSPORT &  
 PATTERN FORMATION  
 01/24/1997 - 07/16/2001            FY02: \$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 2 1291**            **GEORGIA INST OF TECHNOLOGY**            **3909**  
 SIMULATION OF THE NATIONAL AIRSPACE SYSTEM FOR SAFETY ANALYSIS  
 02/02/1999 - 09/30/2002            FY02: \$10,000            Total: \$284,150  
*Prin. Invest.:* D GOLDSMAN, A R PRITCHETT  
*Tech. Officer:* ARC/C I STATLER, ARC/M C CONNORS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2329**            **GEORGIA INST OF TECHNOLOGY**            **3917**  
 SINGLE-/MULTI-LAYER MICROSTRIP AND COPLANAR WAVEGUIDE LINES  
 CROSSTALK  
 02/09/2000 - 01/31/2003            FY02: \$0            Total: \$98,233  
*Prin. Invest.:* D M TENTZERIS  
*Tech. Officer:* GRC/G E PONCHAK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 2 1314**            **GEORGIA INST OF TECHNOLOGY**            **3910**  
 ENABLING CSPA OPERATIONS THROUGH PILOT DEVELOPMENT IN LONGI-  
 TUDINAL APPROACH SPACING  
 04/01/1999 - 06/30/2003            FY02: \$0            Total: \$150,201  
*Prin. Invest.:* A B PRITCHETT  
*Tech. Officer:* ARC/V BATTISTE, ARC/W W JOHNSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2352**            **GEORGIA INST OF TECHNOLOGY**            **3918**  
 DISTRIBUTED EXHAUST NOZZLES FOR JET NOISE REDUCTION  
 03/10/2000 - 09/30/2001            FY02: \$0            Total: \$149,991  
*Prin. Invest.:* D K AHULA  
*Tech. Officer:* GRC/N H SAYED  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1418**            **GEORGIA INST OF TECHNOLOGY**            **3911**  
 IN-FLIGHT DEMONSTRATION OF TACTILE CUEING ON RASCAL  
 07/13/2000 - 08/31/2003            FY02: \$0            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 3 2373**            **GEORGIA INST OF TECHNOLOGY**            **3919**  
 NOVEL OPTICAL DIAGNOSTICS TECHNIQUES FOR STUDYING PARTICLE  
 CONTACT AND DEPOSITION UPON A LARGE CYLINDER  
 03/28/2000 - 11/30/2003            FY02: \$0            Total: \$117,152  
*Prin. Invest.:* D YODA  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 2 1431**            **GEORGIA INST OF TECHNOLOGY**            **3912**  
 MOLECULAR BASIS OF MECHANOSIGNAL TRANSDUCTION IN VASCULAR  
 ENDOTHELIAL CELL  
 08/15/2000 - 07/31/2003            FY02: \$0            Total: \$395,163  
*Prin. Invest.:* H JO  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2431**            **GEORGIA INST OF TECHNOLOGY**            **3920**  
 NON-COALESCENCE IN MICROGRAVITY: SCIENCE AND TECHNOLOGY  
 05/23/2000 - 11/30/2003            FY02: \$0            Total: \$133,600  
*Prin. Invest.:* D P NEITZEL  
*Tech. Officer:* GRC/R SKARDA  
*CASE Category:* 49 - ENGINEERING, OTHER

<p><b>NAG 3 2500</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3921</b>  NONLINEAR DYNAMIC ANALYSIS OF DISORDERED BLADE-DISK ASSEMBLIES  11/03/2000 - 09/30/2001                    FY02: \$0                    Total: \$73,412  <i>Prin. Invest.:</i> D G MCGEE  <i>Tech. Officer:</i> GRC/J M LUCERO  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 3 2763</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3929</b>  VIBE TECHNOLOGY FOR MICROGRAVITY HEAT TRANSFER APPLICATIONS  04/04/2002 - 03/31/2006                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> M K SMITH  <i>Tech. Officer:</i> GRC/M M HASAN  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 3 2580</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3922</b>  MULTI-ACCESS &amp; ROUTING PROTOCOLS FOR MULTICAST APPLICATIONS IN SATELLITE IP NETWORKS  04/05/2001 - 03/07/2004                    FY02: \$0                    Total: \$55,000  <i>Prin. Invest.:</i> I F AKYILDIZ  <i>Tech. Officer:</i> GRC/C T RAMOS  <i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER</p>	<p><b>NAG 5 4190</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3930</b>  LABORATORY EVALUATION AND APPLICATION OF MICROWAVE UNDER SIMULATED CONDITIONS FOR PLANETARY ATMOSPHERE  06/10/1997 - 12/31/2001                    FY02: \$0                    Total: \$432,851  <i>Prin. Invest.:</i> D G STEFFES  <i>Tech. Officer:</i> GSFC/J BERGSTRALH  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 3 2585</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3923</b>  A MULTICAST PROTOCOL SUITE FOR SATELLITE IP NETWORKS  04/10/2001 - 02/28/2004                    FY02: \$0                    Total: \$149,833  <i>Prin. Invest.:</i> D F AKYILDIZ  <i>Tech. Officer:</i> GRC/C T RAMOS  <i>CASE Category:</i> 45 - ELECTRICAL ENGR</p>	<p><b>NAG 5 7420</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3931</b>  ANALYSIS OF USER ASSISTANCE REQUESTS AT THE NASA G ODDARD DISTRIBUTED ACTIVE ARCHIVE CENTER  06/09/1998 - 05/31/2002                    FY02: \$0                    Total: \$210,000  <i>Prin. Invest.:</i> C MITCHELL  <i>Tech. Officer:</i> GSFC/W TRUSZOKWSKI  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>
<p><b>NAG 3 2586</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3924</b>  AN INVESTIGATION OF APPLICATIONS FOR THERMODYNAMIC WORK POTENTIAL TO TURBOSHAFT ENGINE TECH EVALUATION  04/06/2001 - 06/30/2002                    FY02: \$0                    Total: \$60,000  <i>Prin. Invest.:</i> D N MAVRIS  <i>Tech. Officer:</i> GRC/D THURMAN  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 5 7519</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3932</b>  APPRENTICE - INCREMENTAL PASS AUTOMATION INITIAL PROTOTYPE AND EVALUATION WITH TRACE  06/16/1998 - 05/31/2002                    FY02: \$0                    Total: \$90,000  <i>Prin. Invest.:</i> C MITCHELL  <i>Tech. Officer:</i> GSFC/J CATENA  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>
<p><b>NAG 3 2649</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3925</b>  ACOUSTIC AND THERMOACOUSTICS: THE PATHWAY TO NO-MO VING-PARTS AEROSPACE PROPULSION  12/31/2001 - 12/11/2004                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> D MAVRIS  <i>Tech. Officer:</i> GRC/K L SUDER  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 5 7682</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3933</b>  GLOBAL DISTRIBUTION OF TROPOSPHERIC AEROSOLS: A 3-D MODEL ANALYSIS OF SATELLITE DATA.  09/09/1998 - 08/31/2002                    FY02: \$0                    Total: \$287,506  <i>Prin. Invest.:</i> M CHIN  <i>Tech. Officer:</i> GSFC/M I MISHCHENKO  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 3 2653</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3926</b>  LARGE-EDDY/LATTICE BOLTZMANN SIMULATIONS OF MICRO-BLOWING/SUCTION STRATEGIES FOR SUBSONIC AND SUPER  12/31/2001 - 12/11/2004                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> D MENON  <i>Tech. Officer:</i> GRC/D P HWANG  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 5 8698</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3934</b>  QUANTIFYING THE RELATIONSHIP BETWEEN REMOTELY-SENSED &amp; MODELED SOIL MOISTURE  09/14/1999 - 06/30/2002                    FY02: \$0                    Total: \$142,030  <i>Prin. Invest.:</i> C D PETERS-LIDARD  <i>Tech. Officer:</i> GSFC/E T ENGMAN  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 3 2660</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3927</b>  SUBGRID COMBUSTION MODELING FOR THE NEXT GENERATION NATIONAL COMBUSTION CODE  12/22/2001 - 12/11/2004                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> S MENON  <i>Tech. Officer:</i> GRC/N LIU  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 5 8880</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3935</b>  PROJECT TO INTERFACE CLIMATE MODELING ON GLOBAL &amp; REGIONAL SCALES WITH EARTH OBSERVING SYSTEM (EOS)  11/24/1999 - 12/31/2001                    FY02: \$0                    Total: \$677,654  <i>Prin. Invest.:</i> R E DICKINSON  <i>Tech. Officer:</i> GSFC/M Y WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 3 2739</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3928</b>  DROP FORMULATION PROCESSES IN SOLIDS-LADON LIQUIDS DROP FORMULATION PROCESSES IN SOLIDS-LADON LIQUID  04/02/2002 - 03/31/2006                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> D MORRIS  <i>Tech. Officer:</i> GRC/H K NAHRA  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NAG 5 8931</b>                    <b>GEORGIA INST OF TECHNOLOGY</b>                    <b>3936</b>  LABORATORY INVESTIGATIONS OF STRATOSPHERIC &amp; UPPER TROPOSPHERIC CHEMISTRY  01/19/2000 - 12/31/2002                    FY02: \$0                    Total: \$340,826  <i>Prin. Invest.:</i> P H WINE  <i>Tech. Officer:</i> GSFC/M KURYLO  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>

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**NAG 5 9868**                    **GEORGIA INST OF TECHNOLOGY**                    **3937**  
 THE YANGTZE DELTA OF CHINA AS AN ENVOLVING METRO- AGRO-PLEX  
 (MAP)  
 08/09/2000 - 10/31/2001                    FY02: \$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**                    **3938**  
 IMPROVING THE REPRESENTATION OF LAND IN CLIMATE MODELS BY  
 APPLICATION OF EOS OBSERVATIONS  
 12/29/2000 - 12/31/2003                    FY02: \$0                    Total: \$500,000  
*Prin. Invest.:* R DICKINSON  
*Tech. Officer:* GSFC/Y SUD  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 5 10374**                    **GEORGIA INST OF TECHNOLOGY**                    **3939**  
 DIAGNOSTIC STUDIES OF SHORT-TERM CLIMATE VARIABILITY IN  
 NASA/GSFC GENERAL CIRCULATION MODELS  
 03/17/2001 - 03/31/2004                    FY02: \$0                    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**                    **3940**  
 COMPARISON OF INTERSTELLAR AND INTERPLANETARY DUST  
 03/17/2001 - 06/30/2002                    FY02: \$0                    Total: \$50,000  
*Prin. Invest.:* J BRADLEY  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 11063**                    **GEORGIA INST OF TECHNOLOGY**                    **3941**  
 VARIABILITY OF AEROSOL DISTRIBUTION AND OPTICAL PROPERTIES  
 SIMULATED BY GOCART MODEL USING TOMS  
 06/26/2001 - 06/30/2002                    FY02: \$0                    Total: \$61,170  
*Prin. Invest.:* P GINOUX  
*Tech. Officer:* GSFC/R MCPETERS  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 5 11479**                    **GEORGIA INST OF TECHNOLOGY**                    **3942**  
 AEROSOL, CHEMISTRY AND RADIATIVE FORCING: A 3-D MODEL ANALYSIS  
 OF SATELLITE AND ACE-ASIA DATA  
 12/21/2001 - 12/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M CHIN  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 5 11671**                    **GEORGIA INST OF TECHNOLOGY**                    **3943**  
 INVESTIGATING THE INFLUENCES OF CHANGES IN CONVECTION TYPES &  
 BOUNDARY LAYER CLOUDS ON INTRASEASON  
 01/28/2002 - 01/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R FU  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 5 12122**                    **GEORGIA INST OF TECHNOLOGY**                    **3944**  
 LABORATORY EVALUATION AND APPLICATION OF MICROWAVE ABSORP-  
 TION PROPERTIES UNDER SIMULATED CONDITIONS  
 04/29/2002 - 04/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* P G STEFFES  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 12256**                    **GEORGIA INST OF TECHNOLOGY**                    **3945**  
 "CHARAC & GLOB IMPACT OF AEROSOLS FROM S. AFRICA & E. ASIA: 3D  
 MODEL ANAL DATA  
 06/17/2002 - 06/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M CHIN  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 5 12268**                    **GEORGIA INST OF TECHNOLOGY**                    **3946**  
 RADIATION EFFECTS IN SIGE HBT BICMOS TECHNOLOGY  
 06/25/2002 - 08/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J D CRESSLER  
*Tech. Officer:* GSFC/R A REED  
*CASE Category:* 13 – PHYSICS

**NAG 5 12498**                    **GEORGIA INST OF TECHNOLOGY**                    **3947**  
 GLOBAL MODELING AND ANALYSIS OF NONMETHANE HYDRO- CARBONS,  
 OXYGENATED HYDROCARBONS, AND ANTHROPOGE  
 08/29/2002 - 08/31/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* Y WANG  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 12545**                    **GEORGIA INST OF TECHNOLOGY**                    **3948**  
 REFINED UNDERSTANDING OF THE INTERACTION OF ARCTIC CLOUDS  
 AND SEA ICE IN REGULATING THE REGIONAL CLIMATE  
 09/06/2002 - 09/14/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J A CURRY  
*Tech. Officer:* GSFC/W B ROSSOW  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 8 1245**                    **GEORGIA INST OF TECHNOLOGY**                    **3949**  
 EFFECT OF GRAVITY ON THE EVOLUTION OF SPATIAL ARRANGEMENT OF  
 FEATURES IN MICROSTRUCTURES  
 05/10/1996 - 05/09/2001                    FY02: \$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**                    **3950**  
 R/S CONCEPTUAL DESIGN FOR ADVANCED SPACE TRANSPORTATION  
 SYSTEMS  
 12/16/1998 - 12/15/2001                    FY02: \$10,000                    Total: \$399,850  
*Prin. Invest.:* J R OLDS  
*Tech. Officer:* MSFC/J J HUTT  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAG 8 1638**                    **GEORGIA INST OF TECHNOLOGY**                    **3951**  
 RESEARCH ENTITLED: "FAULT TOLERANT NONLINEAR ADAPTIVE  
 FLIGHT CONTROL FOR THE X-33"  
 09/24/1999 - 12/31/2002                    FY02: \$0                    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**                    **3952**  
 STUDY OF DEPLOYMENT OPTIONS AND EXPLORATION USES FOR SPACE  
 SOLAR POWER  
 03/01/2000 - 01/31/2002                    FY02: \$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**                    **3953**  
 PERMEABILITY TESTING OF IMPACTED COATED COMPOSITE LAMINATES  
 05/21/2001 - 08/31/2002                    FY02: \$0                    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**                    **3954**  
 RESEARCH IN ACOUSTICS & NOISE CONTROL FOR AIRCRAFT AND SPACE  
 TRANSPORTATION VEHICLES  
 05/01/2000 - 04/30/2005                    FY02: \$0                    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 02056**                    **GEORGIA INST OF TECHNOLOGY**                    **3955**  
 ELECTROMAGNETIC SYSTEMS  
 12/27/2001 - 12/26/2006                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G HOPKINS  
*Tech. Officer:* LARC/T S DANIELS, LARC/R T NEECE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAS 1 18938**                    **GEORGIA INST OF TECHNOLOGY**                    **3956**  
 SAGE III EXPERIMENT SCIENTIFIC SUPPORT/CUNNOLD  
 02/20/1990 - 01/31/2005                    FY02: \$0                    Total: \$657,700  
*Prin. Invest.:* D M CUNNOLD  
*Tech. Officer:* LARC/G L MADDREA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 99073**                    **GEORGIA INST OF TECHNOLOGY**                    **3957**  
 R & D OF ELECTROMAGNETIC SYSTEMS  
 02/17/1999 - 02/16/2004                    FY02: \$0                    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**                    **3958**  
 SYSTEM STUDIES FOR NASA AEROSPACE PROPULSION AND AIRFRAME  
 TECHNOLOGY  
 09/28/2000 - 09/27/2005                    FY02: \$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 3 02110**                    **GEORGIA INST OF TECHNOLOGY**                    **3959**  
 COMBUSTION DRIVEN ACTUTOR FOR JET NOISE REDUCTION NRA PHASE  
 1  
 03/05/2002 - 11/05/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* K K AHUJA  
*Tech. Officer:* GRC/J E BRIDGE, GRC/J E BRIDGES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 3 02126**                    **GEORGIA INST OF TECHNOLOGY**                    **3960**  
 REVOLUTIONARY/UNCONVENTIONAL AEROPROPULSION TECHNOLOGY  
 05/06/2002 - 02/05/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* C TAM  
*Tech. Officer:* GRC/K T PHAM  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 5 00171**                    **GEORGIA INST OF TECHNOLOGY**                    **3961**  
 OZONE MONITORING INSTRUMENT (OMI) SCIENCE TEAM.  
 06/07/2000 - 10/31/2004                    FY02: \$0                    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**                    **3962**  
 OPERATIONS/MAINT SOUTHEAST REGIONAL TECH TRANSFER CENTER  
 01/31/2001 - 01/31/2003                    FY02: \$0                    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

**NCC 1 296**                    **GEORGIA INST OF TECHNOLOGY**                    **3963**  
 MEASUREMENTS OF NO AND NO2 OVER THE TROPICAL PACIFIC  
 04/28/1998 - 05/31/2001                    FY02: \$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**                    **3964**  
 MEASUREMENT OF OH, H2SO4, MSA, NH3, AND DMSO ABOARD THE P-3B  
 AIRCRAFT  
 05/27/1998 - 05/31/2001                    FY02: \$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**                    **3965**  
 TROPOSPHERIC DIAGNOSTIC MODELING STUDIES OF PEM-TROPICS B  
 FIELD DATA: INVESTIGATION OF THE  
 07/10/1998 - 11/23/2001                    FY02: \$0                    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**                    **3966**  
 MODELING AND DATA ANALYSIS OF PEM-TROPICS B OBSERVATIONS  
 08/17/1998 - 07/31/2001                    FY02: \$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**                    **3967**  
 DOWNSIZING OF GATECH'S AIRBORNE FLUORESCENCE (AFS) FOR THE  
 MEASUREMENT OF NITROGENOXIDES  
 02/10/2000 - 05/18/2001                    FY02: \$0                    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**                    **3968**  
 HUMAN FACTORS CONSIDERATIONS FOR SAFE RECOVERY FROM FAULTS  
 IN FLIGHT CONTROL SYSTEMS  
 06/08/2000 - 06/14/2003                    FY02: \$0                    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**                    **3969**  
 RAPID MEASUREMENTS OF AEROSOL IONIC COMPOSITION AND 3-10 NM  
 PARTICLE SIZE DISTRIBUTIONS ON THE NASA  
 09/14/2000 - 03/01/2003                    FY02: \$0                    Total: \$338,672  
*Prin. Invest.:* R J WEBER  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

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**NCC 1 417**                    **GEORGIA INST OF TECHNOLOGY**                    **3970**  
 MEASUREMENTS OF NO AND NO<sub>2</sub> FROM THE ASIAN OUTFLOW INTO THE WESTERN PACIFIC  
 09/27/2000 - 09/30/2003                    FY02: \$0                    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**                    **3971**  
 MEASUREMENT OF OH, H<sub>2</sub>SO<sub>4</sub>, MSA, AND HN<sub>3</sub> ABOARD THE P-3B AIRCRAFT  
 09/26/2000 - 06/30/2003                    FY02: \$0                    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**                    **3972**  
 TROPOSPH MODELG STUDIES TRACE-P FIELD DATA: INVEST HOX/NOX/03 PHOTOCHEM SYS COUPL'G TO SULFUR/AEROSO  
 01/29/2001 - 11/30/2003                    FY02: \$0                    Total: \$149,710  
*Prin. Invest.:* D D DAVIS  
*Tech. Officer:* LARC/V E DELUORE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 02031**                    **GEORGIA INST OF TECHNOLOGY**                    **3973**  
 EXPERIMENTAL & ANALYTICAL DEVELOPMENT & EVALUATION OF ADVANCED CIRCULATION CONTROL/PNEUMATIC CONFIGU  
 06/10/2002 - 06/09/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R J ENGLAR, L N SANKAR  
*Tech. Officer:* LARC/G S JONES, LARC/M D MOORE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 945**                    **GEORGIA INST OF TECHNOLOGY**                    **3974**  
 ROTORCRAFT CENTERS OF EXCELLENCE  
 05/03/1996 - 02/28/2001                    FY02: \$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**                    **3975**  
 MODELING, TRAINING, AND AIDING IN AEROSPACE SYSTEM S  
 07/18/1996 - 05/31/2002                    FY02: \$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**                    **3976**  
 HOW PROFESSIONAL PILOTS PERCEIVE & RESPOND TO AMIB GUOUS & UNCERTAIN DECISION SITUATIONS  
 07/01/1999 - 05/31/2003                    FY02: \$0                    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**                    **3977**  
 A PROBABILISTIC APPROACH TO TECHNOLOGY, IDENTIFICATION, EVALUATION & SELECTION FOR LOW COST SPACE T  
 08/24/2000 - 09/14/2002                    FY02: \$0                    Total: \$178,381  
*Prin. Invest.:* D N MAVRIS  
*Tech. Officer:* ARC/M E LIVINGSTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1306**                    **GEORGIA INST OF TECHNOLOGY**                    **3978**  
 AGENT BASED SIMULATION OF THE NATIONAL AIRSPACE SY STEM FOR SAFTEY ANALYSIS  
 02/26/2002 - 02/28/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* A R PRITCHETT  
*Tech. Officer:* ARC/I STATLER, ARC/M M CONNORS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1332**                    **GEORGIA INST OF TECHNOLOGY**                    **3979**  
 DISTRIBUTED DECISION MAKING IN HIGH RISK AND HIGH STRESS ENVIRONMENT: A MODEL FOREXTENDED SPACE FL  
 04/18/2002 - 05/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* U M FISCHER  
*Tech. Officer:* ARC/J ORASANU  
*CASE Category:* 62 - PSYCHOLOGY SOCIAL ASPECTS

**NCC 2 5332**                    **GEORGIA INST OF TECHNOLOGY**                    **3980**  
 EVALUATION OF ADVANCED THERMAL PROTECTION TECHNIQUES FOR FUTURE REUSABLE LAUNCH VEHICLES  
 07/20/1999 - 06/30/2001                    FY02: \$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**                    **3981**  
 DAMAGE MECHANICS MODELING FOR LIFE PREDICTION OF ULTRA HIGH TEMPERATURE POLYMER MATRIX COMPOSITES  
 06/07/1999 - 12/31/2001                    FY02: \$0                    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**                    **3982**  
 MICROMACHINED HIGH FREQUENCY CIRCUITS FOR SUBMILLI METER-WAVE SENSORS  
 06/28/2001 - 06/24/2003                    FY02: \$0                    Total: \$39,918  
*Prin. Invest.:* D PAPANOLYMEROU  
*Tech. Officer:* GRC/G E PONCHAK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 982**                    **GEORGIA INST OF TECHNOLOGY**                    **3983**  
 UNIV RESEARCH, ENGINEERING & TECHNOLOGY INST  
 08/19/2002 - 08/18/2007                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* B T ZINN, D MAVRIS, J WILLIAMS  
*Tech. Officer:* GRC/K T PHAM  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 8 253**                    **GEORGIA INST OF TECHNOLOGY**                    **3984**  
 RESEARCH AND DEVELOPMENT NSSTC  
 02/11/2002 - 02/10/2007                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J L GODDARD  
*Tech. Officer:* MSFC/S COLEMAN, MSFC/C TALLEY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 02002**                    **GEORGIA INST OF TECHNOLOGY**                    **3985**  
 GRADUATE STUDENT RESEARCHERS PROGRAM - GSRP  
 02/08/2002 - 02/28/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* L A BOTTOMLEY  
*Tech. Officer:* LARC/P T LILLEHEI  
*CASE Category:* 12 - CHEMISTRY

## NASA'S UNIVERSITY PROGRAM

GEORGIA

<b>NGT 1 02005</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3986</b>	<b>NGT 2 52266</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3995</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			FULLY AUTOMATED CARTESIAN GRID CFD APPLICATIONS FO R MDO IN		
05/21/2002 - 06/30/2005	FY02: \$0	Total: \$0	HIGH - SPEED FLOWS		
<i>Prin. Invest.:</i> D N MAVRIS			07/17/2000 - 08/14/2003	FY02: \$0	Total: \$44,000
<i>Tech. Officer:</i> LARC/R E MCKINLEY, LARC/W M KIMMEL			<i>Prin. Invest.:</i> S M RUFFIN		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>Tech. Officer:</i> ARC/M J AHOSMIS		
			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 1 02006</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3987</b>	<b>NGT 2 52274</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3996</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			CENTERS OF EXCELLENCE IN ROTORCRAFT TECHNOLOGY		
05/24/2002 - 06/30/2005	FY02: \$0	Total: \$0	02/12/2001 - 01/31/2003	FY02: \$0	Total: \$780,000
<i>Prin. Invest.:</i> D N MAVRIS			<i>Prin. Invest.:</i> D P SCHRAGE, D A PETERS		
<i>Tech. Officer:</i> LARC/R E MCKINLEY, LARC/W M KIMMEL			<i>Tech. Officer:</i> ARC/Y H YU, ARC/AWKERR		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 1 02012</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3988</b>	<b>NGT 3 52371</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3997</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT		
05/24/2002 - 06/18/2005	FY02: \$0	Total: \$0	RESEARCHERS PROGRAM		
<i>Prin. Invest.:</i> J R OLDS, S R STEFFES			06/26/2000 - 08/31/2002	FY02: \$0	Total: \$31,600
<i>Tech. Officer:</i> LARC/R D BRAUN			<i>Prin. Invest.:</i> J H GINSBERG		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>Tech. Officer:</i> GRC/F J MONTEGANI		
			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NGT 1 02019</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3989</b>	<b>NGT 3 52384</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3998</b>
GRADUATE STUDENT RESEARCHERS PROGRAM			GRADUATE STUDENT RESEARCH PROGRAM: TECHNOLOGY FOR ECAS-		
07/23/2002 - 06/30/2003	FY02: \$0	Total: \$0	ING APPLIED TO TURBINE-BASED COMBINED-CYCLE		
<i>Prin. Invest.:</i> W S REES			07/19/2002 - 06/30/2003	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> LARC/E WEISER			<i>Prin. Invest.:</i> D MAVRIS		
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR			<i>Tech. Officer:</i> GRC/F J MONTEGANI		
			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 1 52132</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3990</b>	<b>NGT 3 52385</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3999</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			GRADUATE STUDENT RESEARCHERS PROGRAM: FORMULATION AND		
06/06/1996 - 08/31/2001	FY02: \$0	Total: \$99,000	IMPLEMENTATION OF A METHODOLOGY FOR THE ASSESS		
<i>Prin. Invest.:</i> A GLEZER, A GLEZER (ADVISOR)			07/19/2002 - 06/30/2003	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> LARC/R D JOSLIN			<i>Prin. Invest.:</i> D MARVIS		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>Tech. Officer:</i> GRC/F J MONTEGANI		
			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 1 52162</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3991</b>	<b>NGT 4 52434</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>4000</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			GRADUATE STUDENT RESEARCHERS PROGRAM - NONLINEAR H YBRID		
06/11/1997 - 06/30/2001	FY02: \$0	Total: \$66,001	CONTROL FOR THERMOACOUSTIC COMBUSTION INSTA		
<i>Prin. Invest.:</i> B V GIBBENS			06/14/2002 - 06/16/2003	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> LARC/J E GARDNER			<i>Prin. Invest.:</i> W M HADDAD		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>Tech. Officer:</i> DFRC/K GUPTA		
			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 1 52163</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3992</b>	<b>NGT 5 129</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>4001</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			TRAJECTORY PLANNING FOR COORDINATING SATELLITES US ING COM-		
09/03/1997 - 09/02/2001	FY02: \$0	Total: \$88,001	MAND GENERATION (STUDENT: ERIKA BIEDIGER)		
<i>Prin. Invest.:</i> J R OLDS, D W WAY			06/04/2002 - 08/14/2005	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> LARC/R A LEPSCH, LARC/L R ROWELL			<i>Prin. Invest.:</i> W E SINGHOSE		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>Tech. Officer:</i> GSFC/M S BURRELL		
			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NGT 1 52170</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3993</b>	<b>NGT 5 30384</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>4002</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			DEVELOPMENT OF A CHEMICAL IONIZATION MASS SPECTROM ETRY		
04/15/1997 - 01/01/2001	FY02: \$0	Total: \$66,001	TECHNIQUE FOR MEASURING ATMOSPHERIC PERNI		
<i>Prin. Invest.:</i> F MISTREE			08/13/2001 - 08/31/2004	FY02: \$0	Total: \$22,000
<i>Tech. Officer:</i> LARC/T A ZANG			<i>Prin. Invest.:</i> L HUEY		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>Tech. Officer:</i> GSFC/M WEI		
			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 1 52225</b>	<b>GEORGIA INST OF TECHNOLOGY</b>	<b>3994</b>			
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) YEAR 1					
10/28/1999 - 09/30/2001	FY02: \$0	Total: \$42,400			
<i>Prin. Invest.:</i> W H REES					
<i>Tech. Officer:</i> LARC/E WEISER, LARC/T ST. CLARA					
<i>CASE Category:</i> 43 - CHEMICAL ENGR					

**NGT 5 40116**            **GEORGIA INST OF TECHNOLOGY**            **4003**  
 GEORGIA SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 03/08/2001 - 02/28/2005            FY02: \$0            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**            **4004**  
 EXPLOITING TEMPORAL UNCERTAINTY IN SIMULATION MODELS  
 06/23/2000 - 07/31/2003            FY02: \$0            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**            **4005**  
 THE EFFECTS ON LAND SURFACE HETEROGENETIES ON AERO SOL  
 CONCENTRATIONS IN CHINA & THEIR IMPACT ON REG  
 08/17/2000 - 08/31/2003            FY02: \$0            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**            **4006**  
 KINETIC FRICTION ON NON-COALESCING AND NON-WETTING  
 DROPS/STUDENT: MARIA-ISABEL CARNASCIALI  
 06/12/2001 - 07/31/2004            FY02: \$0            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**            **4007**  
 DEVELOPMENT OF A TOOL FOR CONCEPTUAL DESIGN OF ROCKET BASED  
 COMBINED CYCLE PROPULSION SYSTEMS  
 07/21/1998 - 08/14/2001            FY02: \$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**            **4008**  
 QUANTITATIVE CHARACTERIZATION OF GRAVITATIONAL EFFECTS ON THE  
 EVOLUTION OF MICROSTRUCTURE.  
 09/14/1999 - 03/14/2002            FY02: \$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**            **4009**  
 DEV OF PREDICTIVE MODELS OF ADVANCED PROPULSION CONCEPTS  
 FOR LOW COST SPACE TRANSPORTATION  
 05/24/2000 - 08/01/2002            FY02: \$0            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**            **4010**  
 A CAPABILITY TO GENERATE PHYSICS-BASED MASS ESTIMATING RELATIONSHIPS FOR CONCEPTUAL SPACE VEHICLE  
 05/25/2001 - 08/01/2002            FY02: \$0            Total: \$22,000  
*Prin. Invest.:* J OLDS  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 13 - PHYSICS

**NGT13 52742**            **GEORGIA INST OF TECHNOLOGY**            **4011**  
 RAPID MEASUREMENTS OF AEROSOL BULK COMPOSITION USING A  
 PARTICLE INTO LIQUID SAMPLING SYSTEM  
 07/12/2000 - 01/31/2003            FY02: \$0            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**            **4012**  
 DYNAMIC FLUID FLOW SIMULATION AND VALIDATION OF E- 1 AND E-2  
 LIQUID OXYGEN HYDRODENMODELS  
 06/18/2001 - 06/30/2003            FY02: \$0            Total: \$22,000  
*Prin. Invest.:* R RIVERA  
*Tech. Officer:* SSC/R HOLLAND  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11540**            **GEORGIA SOUTHERN UNIV**            **4013**  
 GEOLOGIC MAPPING OF GENETIC ASTEROID FAMILIES: AN ALYSIS OF  
 THE FACES DATABASE  
 01/03/2002 - 12/31/2004            FY02: \$0            Total: \$0  
*Prin. Invest.:* M S KELLEY  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 12445**            **GEORGIA SOUTHERN UNIV**            **4014**  
 COMPOSITIONAL INVESTIGATION AND GENETIC TESTING OF DYNAMICAL  
 ASTEROID FAMILIES  
 08/14/2002 - 08/14/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* M S KELLEY  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 254**            **GEORGIA SOUTHERN UNIV**            **4015**  
 "PHYSICAL PROPERTIES OF PLANETARY MOLECULES", GSFC CONTROL  
 NUMBER 5-3326  
 10/30/1997 - 10/31/2000            FY02: \$0            Total: \$83,883  
*Prin. Invest.:* R NELSON  
*Tech. Officer:* GSFC/J ALLEN  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 4950**            **GEORGIA STATE UNIV**            **4016**  
 WAVELENGTH-TUNABLE NOVEL SEMICONDUCTOR FIR DETECTOR RESEARCH  
 06/23/1997 - 12/31/2001            FY02: \$0            Total: \$158,000  
*Prin. Invest.:* D PERERA  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6904**            **GEORGIA STATE UNIV**            **4017**  
 CROSS-CORRELATION ANALYSIS OF UV PROFILE VARIATIONS AND NON-RADIAL PULSATIONS IN BESTARS  
 02/06/1998 - 12/31/2001            FY02: \$0            Total: \$65,300  
*Prin. Invest.:* D GIES  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7752**            **GEORGIA STATE UNIV**            **4018**  
 PHOTOIONIZATION AND RELATED DIELECTRONIC/RADIATIVE RECOMBINATION AND ELASTIC SCATTERING CROSS SECTION  
 11/25/1998 - 09/30/2002            FY02: \$0            Total: \$146,100  
*Prin. Invest.:* S T MANSON  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

<b>NCC 2 5479</b>	<b>GEORGIA STATE UNIV</b>	<b>4019</b>	<b>NAG 3 2611</b>	<b>MOREHOUSE SCHOOL MED</b>	<b>4027</b>
THE CTIOP1 EFFORT TO DISCOVER NEARBY SOUTHERN STAR S			GRAVITATIONAL EFFECTS ON NUTRIENT DIFFUSION THROUG H CARTI-		
02/07/2002 - 01/31/2003	FY02: \$0	Total: \$0	LAGE MATRIX		
<i>Prin. Invest.:</i> T J HENRY			05/22/2001 - 07/31/2005	FY02: \$0	Total: \$30,000
<i>Tech. Officer:</i> ARC/T P GREENE, ARC/J BREGMEN			<i>Prin. Invest.:</i> D J KLEMENT		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>Tech. Officer:</i> GRC/D W GRIFFIN		
			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 2 1416</b>	<b>MEDICAL COLL OF GEORGIA</b>	<b>4020</b>	<b>NAG 9 963</b>	<b>MOREHOUSE SCHOOL MED</b>	<b>4028</b>
CELLULAR & MOLECULAR MECHANISMS MEDIATING RAPID RE SEALING			GRAVITY-INDUCED CHANGES ON THE STERIDOGENSIS ...		
OF GRAVITY-INDUCED PLASMA MEMBRANE DISRUP			09/25/1997 - 09/30/2001	FY02: \$0	Total: \$299,966
07/12/2000 - 06/30/2003	FY02: \$0	Total: \$457,166	<i>Prin. Invest.:</i> R SRIDARAN		
<i>Prin. Invest.:</i> P L MCNEIL			<i>Tech. Officer:</i> JSC/K KRISHEN		
<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY			<i>CASE Category:</i> 56 - MEDICL		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)					
<b>NAG 8 1636</b>	<b>MOREHOUSE COLL</b>	<b>4021</b>	<b>NAG 9 1164</b>	<b>MOREHOUSE SCHOOL MED</b>	<b>4029</b>
"USING THE NASA ROTATING BIOREACTOR TO STUDY ROLE OF NITRIC			TISSUE ENGINEERING OF HUMAN RETINA IN NASA BIOREACTOR FOR		
OXIDE IN BREAST-INDUCED ANGIOGENESIS"			TRANSPLANT		
09/30/1999 - 06/30/2002	FY02: \$0	Total: \$221,635	10/01/1999 - 01/02/2003	FY02: \$0	Total: \$199,999
<i>Prin. Invest.:</i> G L SANFORD			<i>Prin. Invest.:</i> K DUTT		
<i>Tech. Officer:</i> MSFC/R RICHMOND			<i>Tech. Officer:</i> JSC/C SAMS		
<i>CASE Category:</i> 61 - PSYCHOLOGY BIOLOGY			<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER		
<b>NAG 8 1711</b>	<b>MOREHOUSE COLL</b>	<b>4022</b>	<b>NCC 2 1262</b>	<b>MOREHOUSE SCHOOL MED</b>	<b>4030</b>
STRATEGIC PREPAREDNESS ADVANCING CAREERS IN			JOINT RESEARCH ON SPACE-RELATED BIOLOGICAL ISSUES		
ENGINEERING/SCIENCES (SPACE)			05/07/2001 - 12/31/2002	FY02: \$0	Total: \$150,000
03/29/2000 - 03/28/2003	FY02: \$0	Total: \$3,040,303	<i>Prin. Invest.:</i> G SONNENFELD, M THIERRY-PALMER		
<i>Prin. Invest.:</i> J KING			<i>Tech. Officer:</i> ARC/S M HING, ARC/O SANTOS		
<i>Tech. Officer:</i> MSFC/W LOVE			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER					
<b>NAG 9 964</b>	<b>MOREHOUSE COLL</b>	<b>4023</b>	<b>NCC 2 1322</b>	<b>MOREHOUSE SCHOOL MED</b>	<b>4031</b>
SIMULATED MICROGRAVITY ...			TELEMEDICINE APPLICATION OF AUTOGENIC FEEDBACK TRAINING EXER-		
09/25/1997 - 06/01/2002	FY02: \$0	Total: \$300,000	CISE AS A TREATMENT FOR SPECIFICPATIEN		
<i>Prin. Invest.:</i> K DUTT			03/14/2002 - 02/28/2003	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> JSC/K KRISHEN			<i>Prin. Invest.:</i> E OFILI		
<i>CASE Category:</i> 56 - MEDICL			<i>Tech. Officer:</i> ARC/P COWLINGS, ARC/B TOSCANO		
			<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER		
<b>NAG 2 1215</b>	<b>MOREHOUSE SCHOOL MED</b>	<b>4024</b>	<b>NCC 9 112</b>	<b>MOREHOUSE SCHOOL MED</b>	<b>4032</b>
PRE-METARSAL DIFFERENTIATION & MINERALIZATION			SPACE MEDICINE		
05/04/1998 - 06/30/2001	FY02: \$0	Total: \$100,789	09/26/2000 - 06/30/2005	FY02: \$0	Total: \$1,200,000
<i>Prin. Invest.:</i> B J KLEMENT			<i>Prin. Invest.:</i> M THIERRY-PALMER		
<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY			<i>Tech. Officer:</i> JSC/C SAMS, JSC/G HENDERSEN		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 56 - MEDICL		
<b>NAG 2 1381</b>	<b>MOREHOUSE SCHOOL MED</b>	<b>4025</b>	<b>NAG 5 9157</b>	<b>PAINE COLL</b>	<b>4033</b>
BONE & CALCIUM METABOLISM IN DAHL SALT SENSITIVE & SALT RESES-			PRE-COLL ENRICHMENT PROGRAM IN MATHEMATICS SCIENCE, ENGI-		
TANT RATS WITH UNLOADED HINDLIMBS			NEERING AND TECHNOLOGY		
09/03/1999 - 08/31/2003	FY02: \$0	Total: \$129,499	03/03/2000 - 02/28/2002	FY02: \$0	Total: \$200,000
<i>Prin. Invest.:</i> M THIERRY-PALMER			<i>Prin. Invest.:</i> R KESSLER		
<i>Tech. Officer:</i> ARC/A J CARDENAS			<i>Tech. Officer:</i> GSFC/M STOUTSENBERGER		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 2 1448</b>	<b>MOREHOUSE SCHOOL MED</b>	<b>4026</b>	<b>NAG 3 2241</b>	<b>SAVANNAH STATE UNIV</b>	<b>4034</b>
CHONDROCYTE DIFFERENTIATION & MATURATION IN HYPERGRAVITY			RENEWABLE ENERGY SCADE/TRAINING USING ACTS RENEWABLE EN-		
09/29/2000 - 09/30/2003	FY02: \$1	Total: \$191,607	ERGY SCADE/TRAINING USING ACTS		
<i>Prin. Invest.:</i> B J KLEMENT			03/17/1999 - 10/29/2001	FY02: \$0	Total: \$212,086
<i>Tech. Officer:</i> ARC/C E WADE, ARC/B J COLLINS			<i>Prin. Invest.:</i> D KALU		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>Tech. Officer:</i> GRC/R J ACOSTA		
			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		

GEORGIA

NASA'S UNIVERSITY PROGRAM

**NAG10 266 SAVANNAH STATE UNIV 4035**  
 HIGH SCHOOL/HIGH TECH PROGRAM A PARTNERSHIP OF SSU WITH THE  
 GEORGIA COMMITTEE ON EMPLOYMENT OF PEOP  
 09/01/1999 - 03/30/2002 FY02: \$0 Total: \$199,942  
*Prin. Invest.:* D SAJWAN  
*Tech. Officer:* KSC/R J MCKINNEY  
*CASE Category:* 79 - SOCIAL SCIENCE, OTHER

**NAG 3 2486 SPELMAN COLL 4036**  
 DEVELOPMENT OF A PROBE FOR DETERMINING FUEL-TO-OXY GEN  
 RATIOS IN AIRPLANE FUEL TANKS  
 09/01/2000 - 08/31/2001 FY02: \$0 Total: \$42,000  
*Prin. Invest.:* D CHEN  
*Tech. Officer:* GRC/Q NGUYEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2758 SPELMAN COLL 4037**  
 CONTINUED DEVELOPMENT OF A PROBE FOR DETERMINING F UEL-TO-  
 OXYGEN RATIOS IN AIRPLANE FUEL TANKS  
 03/29/2002 - 02/18/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D C CHEN  
*Tech. Officer:* GRC/Q NGUYEN  
*CASE Category:* 12 - CHEMISTRY

**NAG 8 1635 SPELMAN COLL 4038**  
 FIFTH ANNUAL MODEL INST FOR EXCELLANCE CONFERENCE  
 09/29/1999 - 11/29/2000 FY02: -\$39,515 Total: \$398,816  
*Prin. Invest.:* E FALCONER  
*Tech. Officer:* MSFC/W LOVE, MSFC/A C BEAM  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1712 SPELMAN COLL 4039**  
 WOMEN IN SCIENCES AND ENGINEERING SCHOLARS PROGRAM  
 05/15/2000 - 03/31/2003 FY02: \$0 Total: \$3,000,000  
*Prin. Invest.:* C GILLYARD  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 758 SPELMAN COLL 4040**  
 DEVELOPMENT OF A NOVEL MULTI-COMPONENT PROBE FOR C OMBUS-  
 TION AND PROPULSION DIAGNOSTICS  
 12/30/1999 - 01/31/2002 FY02: \$0 Total: \$158,420  
*Prin. Invest.:* D C CHEN  
*Tech. Officer:* GRC/Q NGUYEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 8 194 SPELMAN COLL 4041**  
 CRYSTAL ENGINEERING OF NONLINEAR OPTICAL COMPOUNDS NEW  
 APPROACH FOR PREDICTING HYPERPOLARIZABILITIES  
 09/30/1999 - 09/30/2002 FY02: \$0 Total: \$298,134  
*Prin. Invest.:* O SCRIVEN  
*Tech. Officer:* MSFC/D O FRAIZER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 8 227 SPELMAN COLL 4042**  
 SPELMAN COLL MODEL INSITUIONS FOR EXCELLENCE  
 06/26/2001 - 06/26/2006 FY02: \$0 Total: \$1,508,300  
*Prin. Invest.:* A THOMPSON  
*Tech. Officer:* MSFC/W LOVE, MSFC/E ORDONEZ  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 8376 UNIV OF GEORGIA 4043**  
 THE ROLE OF TRANSLUCENT CLOUDS IN GALACTIC STAR FORMATION  
 (L TSA98)  
 03/09/1999 - 03/14/2002 FY02: \$0 Total: \$60,000  
*Prin. Invest.:* L MAGNANI  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8425 UNIV OF GEORGIA 4044**  
 NLTE MODEL ATMOSPHERES FOR VERY LOW MASS STARS (LT SA98)  
 05/10/1999 - 05/14/2003 FY02: \$0 Total: \$212,115  
*Prin. Invest.:* P H HAUSCHILD  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8469 UNIV OF GEORGIA 4045**  
 THE EVALUATION OF SNOW WATER EQUIVALENT ACROSS GRA SSLAND  
 REGIONS  
 05/06/1999 - 06/30/2002 FY02: \$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 4046**  
 TEMPERATURE DEPENDENT ELECTRON RECOMBINATION RATES & SPEC-  
 TRAL SIGNATURES OF ION REACTIONS RELEVANT TO  
 01/21/2000 - 08/31/2003 FY02: \$0 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 4047**  
 ULTRAVIOLET & VISIBLE EMISSION MECHANISMS IN ASTRO PHYSICS  
 02/23/2000 - 01/31/2003 FY02: \$0 Total: \$143,766  
*Prin. Invest.:* P C STANCIL  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9222 UNIV OF GEORGIA 4048**  
 NON-LTE MODEL ATMOSPHERES OF HOT STARS WITH WINDS  
 04/05/2000 - 04/14/2003 FY02: \$0 Total: \$156,499  
*Prin. Invest.:* P H HAUSCHILD  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10551 UNIV OF GEORGIA 4049**  
 MODELING OF EXTRASOLAR GIANT PLANETS WITH IMPROVED MOLEC-  
 LAR LINE OPACITIES, CONTINUUM OPACITIES, CO  
 03/09/2001 - 03/14/2004 FY02: \$0 Total: \$60,000  
*Prin. Invest.:* P C STANCIL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11453 UNIV OF GEORGIA 4050**  
 CHARGE TRANSFER CALCULATIONS FOR ASTROPHYSICS  
 12/06/2001 - 12/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* P C STANCIL  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

## NASA'S UNIVERSITY PROGRAM

HAWAII

**NAG 5 11592**                      **UNIV OF GEORGIA**                      **4051**  
 A HYBRID APPROACH FOR EVALUATING AND PREDICTING IN TERACTIONS  
 BETWEEN THESEASONAL SNOW PACK AND THE  
 01/15/2002 - 01/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T L MOTE  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1771**                      **UNIV OF GEORGIA**                      **4052**  
 COMPUTER SIULATIONS OF CONFINED QUANTUM SYSTEMS IN MICRO-  
 GRAVITY  
 05/01/2001 - 01/31/2004                      FY02: \$0                      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**                      **4053**  
 CONTROLLED GROWTH OF BIOLOGIC AND ABIOTIC CARBONATES AND-  
 FEOXIDES  
 05/14/1999 - 05/13/2002                      FY02: \$0                      Total: \$30,000  
*Prin. Invest.:* C S ROMANEK  
*Tech. Officer:* JSC/E K GIBSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 02003**                      **UNIV OF GEORGIA**                      **4054**  
 CARBON FROM COMMUNITIES: A SATELLITE VIEW CARBON FROM COM-  
 MUNITIES: A SATELLITE VIEW  
 11/08/2001 - 11/06/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C L NEELY  
*Tech. Officer:* SSC/G CARTER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 8 233**                      **UNIV OF GEORGIA**                      **4055**  
 ONE SHARE OF SYNCHROTRON BEAM TIME FROM THE SOUTH EASTRE-  
 GIONAL COLLABROATIVE ACCESS TEAM (SER-CAT)  
 09/13/2001 - 03/18/2006                      FY02: \$0                      Total: \$375,000  
*Prin. Invest.:* B WANG  
*Tech. Officer:* MSFC/C KUNDROT  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT 5 50427**                      **UNIV OF GEORGIA**                      **4056**  
 QUANTIFYING THE ROLE OF THE WESTERN TROPICAL ATLAN TIC OCEAN  
 IN GLOBAL INORGANIC CARBON BUDGETS: I  
 08/20/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P YAGER  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## HAWAII

**NAG 2 1374**                      **UNIV OF HAWAII AT MANOA - HONOLULU**                      **4057**  
 THE EVOLUTIONARY ORIGIN & DEPLOYMENT OF HOX & PARA HOX GENES  
 IN METAZOA  
 08/12/1999 - 07/31/2003                      FY02: \$0                      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**                      **4058**  
 THE EVOLUTION OF GRAVITY RECEPTION IN THE METAZOA  
 08/28/2001 - 08/31/2003                      FY02: \$0                      Total: \$219,272  
*Prin. Invest.:* M Q MARTINDALE  
*Tech. Officer:* ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 6057**                      **UNIV OF HAWAII AT MANOA - HONOLULU**                      **4059**  
 MAUNA KEA ASTRONOMY EDUCATION CENTER  
 06/14/2002 - 06/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G JACOB  
*Tech. Officer:* ARC/R MANCINI  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3370**                      **UNIV OF HAWAII AT MANOA - HONOLULU**                      **4060**  
 TWO EXTREMELY RED GALAXIES  
 09/06/1996 - 08/14/2001                      FY02: \$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**                      **4061**  
 ANALYSIS OF VOLCANIC ERUPTIONS AND FIRES USING LAN DSAT 7  
 10/07/1996 - 06/30/2002                      FY02: \$0                      Total: \$294,131  
*Prin. Invest.:* FLYNN  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3766**                      **UNIV OF HAWAII AT MANOA - HONOLULU**                      **4062**  
 MINERALOGICAL MAPPING OF THE MOON  
 02/20/1997 - 09/30/2001                      FY02: \$0                      Total: \$487,750  
*Prin. Invest.:* P G LUCEY  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3875**                      **UNIV OF HAWAII AT MANOA - HONOLULU**                      **4063**  
 REGIONAL PLANETARY IMAGE CENTER  
 02/10/1997 - 11/14/2001                      FY02: \$0                      Total: \$197,785  
*Prin. Invest.:* E R HAWKE  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4150**                      **UNIV OF HAWAII AT MANOA - HONOLULU**                      **4064**  
 VOLATILE EVOLUTION  
 04/02/1997 - 10/31/2000                      FY02: \$0                      Total: \$340,000  
*Prin. Invest.:* F P FANALE  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4212**                      **UNIV OF HAWAII AT MANOA - HONOLULU**                      **4065**  
 ORIGIN OF METEORITE PARENT BODIES AND THE MOON  
 03/19/1997 - 11/30/2002                      FY02: \$0                      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**                      **4066**  
 OBSERVATION AND ANALYSIS OF JOVIAN AND SATURNIAN S  
 03/26/1997 - 09/14/2001                      FY02: \$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**                      **4067**  
 MAPPING HAZARDOUS VOLCANOES WITH RADARSAT AND OTHE  
 04/10/1997 - 02/28/2001                      FY02: \$0                      Total: \$60,000  
*Prin. Invest.:* P MOUGINIS-MARK  
*Tech. Officer:* GSFC/R H THOMAS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## HAWAII

## NASA'S UNIVERSITY PROGRAM

**NAG 5 4395 UNIV OF HAWAII AT MANOA - HONOLULU 4068**  
 A GLOBAL ASSESSMENT OF ACTIVE VOLCANISM, VOLCANIC INPUTS TO  
 THE ATMOSPHERE FROM THE EARTH OBSERVING  
 05/06/1997 - 12/31/2000 FY02: \$0 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 4069**  
 DISTANT COMETS IN THE EARLY SOLAR SYSTEM  
 05/06/1997 - 03/31/2003 FY02: \$0 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 4070**  
 OBSERVATIONS OF PLANET-CROSSING ASTEROIDS  
 05/28/1997 - 08/31/2002 FY02: \$0 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 4071**  
 THE SOLAR SYSTEM BEYOND NEPTUNE  
 06/17/1997 - 12/31/2001 FY02: \$0 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 4072**  
 OBSERVATIONAL INVESTIGATION OF THE SOLAR INTERIOR  
 06/23/1997 - 02/28/2003 FY02: \$0 Total: \$1,185,309  
*Prin. Invest.:* J R KUHN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 5276 UNIV OF HAWAII AT MANOA - HONOLULU 4073**  
 PHASE 1 OF CORAL REEF ECOSYSTEM PHASE 1 OF CORAL REEF  
 ECOSYSTEM  
 04/17/2000 - 04/13/2005 FY02: \$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 4074**  
 A COMPARATIVE STUDY OF X-RAY & LENSING MASS DETERMINATIONS  
 FOR THE MOST X-RAY LUMINOUS CLUSTERS IN  
 10/02/1997 - 03/14/2001 FY02: \$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 4075**  
 AIRCRAFT RADIATION & AEROSOL MSMTS. NEAR HAWAII: SATELLITE  
 VALIDATION AT THE MOBY BUOY & THE HOT SI  
 10/02/1997 - 05/31/2002 FY02: \$0 Total: \$846,282  
*Prin. Invest.:* J N PORTER  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6561 UNIV OF HAWAII AT MANOA - HONOLULU 4076**  
 SPECTROSCOPIC OBSERVATIONS OF THE PLANETS  
 12/09/1997 - 03/31/2003 FY02: \$0 Total: \$159,000  
*Prin. Invest.:* D OWEN  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6829 UNIV OF HAWAII AT MANOA - HONOLULU 4077**  
 OUTER SOLAR SYSTEM NOMENCLATURE  
 01/15/1998 - 01/14/2003 FY02: \$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 4078**  
 WEAK LENSING FROM SPACE\_ ATP  
 02/24/1998 - 03/31/2003 FY02: \$0 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 4079**  
 SUBMILLIMETER STUDIES OF COMETS  
 02/27/1998 - 02/28/2002 FY02: \$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 4080**  
 REMOTE RAMAN ANALYSIS FOR PLANETARY LANDERS  
 03/04/1998 - 03/31/2002 FY02: \$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 4081**  
 "ARCHITECTURE AND IMPLEMENTATION CONSIDERATION OF A HIGH-  
 SPEED VIBERBI DECODER FOR REED-MULLER SUBC  
 05/12/1998 - 09/14/2002 FY02: \$0 Total: \$249,000  
*Prin. Invest.:* M FOSSORIER  
*Tech. Officer:* GSFC/P H YEHLER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 7513 UNIV OF HAWAII AT MANOA - HONOLULU 4082**  
 HYPERSPECTRAL REMOTE SENSING OF CORAL REEFS IN A TROPICAL  
 ESTUARY  
 07/28/1998 - 09/30/2001 FY02: \$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 4083**  
 FUNDING FOR 'POST-ERUPTION HAZARDS AT MT. PINATUBO, PHILIPPINES'  
 (SENH98-0118)  
 08/04/1998 - 07/31/2002 FY02: \$0 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 4084**  
 INTERACTIVE TEACHING USING LANDSAT 5 AND LANDSAT 7 DATA  
 09/29/1998 - 06/14/2002 FY02: \$0 Total: \$90,533  
*Prin. Invest.:* L P FLYNN  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



## NASA'S UNIVERSITY PROGRAM

HAWAII

<p><b>NAG 5 7855</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4085</b>  THERMAL INFRARED MEASUREMENTS OF THE MOON AND MERCURY  12/07/1998 - 11/30/2002      FY02: \$0      Total: \$171,584  <i>Prin. Invest.:</i> D G LUCEY  <i>Tech. Officer:</i> GSFC/T MORGAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8330</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4093</b>  SOLAR-C: SCATTER-FREE OBSERVATORY FOR LIMB ACTIVE REGIONS AND CORONAE  04/30/1999 - 04/30/2003      FY02: \$0      Total: \$506,785  <i>Prin. Invest.:</i> J R KUHN  <i>Tech. Officer:</i> GSFC/W WAGNER  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 7963</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4086</b>  THE FIFTH PLANETARY VOLCANOLOGY FIELD WORKSHOP  12/15/1998 - 04/30/2002      FY02: \$0      Total: \$46,000  <i>Prin. Invest.:</i> S K ROWLAND  <i>Tech. Officer:</i> GSFC/J GRANT  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 8421</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4094</b>  SCIENTIFIC RESEARCH FOR DESIGN REFERENCE MISSION FOR NEXT GENERATION SPACE TELESCOPE  04/02/1999 - 04/14/2002      FY02: \$0      Total: \$20,000  <i>Prin. Invest.:</i> D N HALL  <i>Tech. Officer:</i> GSFC/E SMITH  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8002</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4087</b>  SOLAR LIMB SHAPE, RADIUS AND OSCILLATION STUDIES USING SOHO/MDI  01/12/1999 - 01/14/2003      FY02: \$0      Total: \$362,429  <i>Prin. Invest.:</i> J R KUHN  <i>Tech. Officer:</i> GSFC/J GURMAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8593</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4095</b>  1999 BIOASTRONOMY MEETING  06/04/1999 - 05/31/2001      FY02: \$0      Total: \$40,000  <i>Prin. Invest.:</i> T C OWEN  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8118</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4088</b>  A PRELIMINARY AEROSOL CLIMATOLOGY FOR THE PACIFIC BOUNDARY LAYER &amp; FREE TROPOSPHERE  01/29/1999 - 01/31/2003      FY02: \$0      Total: \$333,000  <i>Prin. Invest.:</i> A D CLARKE  <i>Tech. Officer:</i> GSFC/M MISHCHENKO  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 8713</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4096</b>  MINERALOGY AND ISOTOPE CHEMISTRY OF CA-AL-RICH INCLUSIONS, CHONDRULES &amp; MATRIX IN THE CV CHONDRITE  08/04/1999 - 07/31/2003      FY02: \$0      Total: \$70,500  <i>Prin. Invest.:</i> K KEIL  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8216</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4089</b>  FIP, FIT, OR MAD? ANALYSIS OF HIGH SIGNAL-TO-NOISE ASCA SPECTRA OF CORONAL STARS (ADP98)  02/08/1999 - 02/14/2002      FY02: \$0      Total: \$67,497  <i>Prin. Invest.:</i> T SIMON  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8745</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4097</b>  LOCAL TSUNAMIS IN HAWAII: HAZARD ASSESSMENT &amp; EMERGENCY RESPONSE  08/24/1999 - 08/31/2001      FY02: \$0      Total: \$100,000  <i>Prin. Invest.:</i> G J FRYER  <i>Tech. Officer:</i> GSFC/E PAYLOR  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8253</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4090</b>  FROM DETECTION TO COMPREHENSION: UNDERSTANDING THE PHYSICAL MECHANISMS DRIVING CLUSTER X-RAY EVOLUTION  02/19/1999 - 12/31/2003      FY02: \$0      Total: \$405,000  <i>Prin. Invest.:</i> H EBELING  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8748</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4098</b>  A REAL-TIME SIMULATION PACKAGE FOR STORM SURGE AND WAVE RUNUP PACIFIC  08/25/1999 - 08/30/2002      FY02: \$0      Total: \$400,000  <i>Prin. Invest.:</i> K F CHEUNG  <i>Tech. Officer:</i> GSFC/E PAYLOR  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8298</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4091</b>  A SURVEY FOR MASSIVE PLANETS BY DIRECT IMAGING WITH ADVANCED ADAPTIVE OPTICS  02/23/1999 - 02/28/2003      FY02: \$0      Total: \$369,000  <i>Prin. Invest.:</i> D J RODDIER  <i>Tech. Officer:</i> HQ/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8751</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4099</b>  DEVELOPMENT OF A UV/VISIBLE-OPTIMIZED CCD FOR WFC3 ON HST  09/08/1999 - 09/30/2002      FY02: \$0      Total: \$93,500  <i>Prin. Invest.:</i> G LUPPINO  <i>Tech. Officer:</i> GSFC/E CHENG  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 8300</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4092</b>  RADIATIVE BALANCE &amp; BEHAVIOR OF THE SEASONAL MARS POLAR CAPS  03/05/1999 - 03/14/2003      FY02: \$0      Total: \$177,000  <i>Prin. Invest.:</i> T MCCORD  <i>Tech. Officer:</i> HQ/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8757</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4100</b>  IMAGING, GEOCODING AND ENVIRONMENTAL MONITORING IN HAWAII AND THE WEST PACIFIC  08/24/1999 - 02/28/2002      FY02: \$0      Total: \$400,000  <i>Prin. Invest.:</i> M BEVIS  <i>Tech. Officer:</i> GSFC/E PAYLOR  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>

## HAWAII

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8863 UNIV OF HAWAII AT MANOA - HONOLULU 4101**  
 LABORATORY INVESTIGATIONS OF VOLATILE TRAPPING IN COMETS  
 10/20/1999 - 09/30/2004 FY02: \$0 Total: \$80,000  
*Prin. Invest.:* T C OWEN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8903 UNIV OF HAWAII AT MANOA - HONOLULU 4102**  
 REMOTE SENSING AND GEOLOGIC STUDIES OF PLANETARY CRUSTS  
 12/28/1999 - 12/31/2002 FY02: \$0 Total: \$137,280  
*Prin. Invest.:* B HAWKE  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8920 UNIV OF HAWAII AT MANOA - HONOLULU 4103**  
 A GLOBAL ASSESSMENT OF ACTIVE VOLCANISM FROM THE EARTH  
 OBSERVING SYSTEM  
 01/24/2000 - 12/31/2001 FY02: \$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 4104**  
 THE FIFTH PLANETARY VOLCANOLOGY FIELD WORKSHOP  
 01/06/2000 - 05/31/2002 FY02: \$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 4105**  
 FINDING THE ONSET OF CONVECTION IN MAIN SEQUENCE STARS - FUSE  
 01/24/2000 - 01/31/2003 FY02: \$0 Total: \$68,700  
*Prin. Invest.:* T SIMON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8983 UNIV OF HAWAII AT MANOA - HONOLULU 4106**  
 PROPERTIES OF ICE ON THE SURFACE OF EUROPA AND THE OTHER ICY  
 GALILEAN SATELLITES  
 01/24/2000 - 01/31/2003 FY02: \$0 Total: \$85,000  
*Prin. Invest.:* G HANSEN  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8991 UNIV OF HAWAII AT MANOA - HONOLULU 4107**  
 ASTEROID PROCESSING ON EROS  
 01/24/2000 - 01/31/2001 FY02: \$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 4108**  
 VALIDATION AND ANALYSIS OF SRTM AND VCL DATA OVER TROPICAL  
 VOLCANOES.  
 02/10/2000 - 02/14/2003 FY02: \$0 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 4109**  
 ANALYSIS OF HIPPARCHOS MARGINAL PARALLAXES - ADP 99  
 02/22/2000 - 02/28/2003 FY02: \$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 4110**  
 ORIGIN & EVOLUTION OF STRUCTURE IN THE UNIVERSE DETERMINED  
 FROM THE X-RAYEVOLUTION OF GALAXY  
 03/08/2000 - 03/14/2003 FY02: \$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 4111**  
 SHARING DISCOVERIES IN PLANETARY GEOSCIENCE ON THE WORLD  
 WIDE WEB AND CD-ROM  
 03/07/2000 - 03/14/2003 FY02: \$0 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 4112**  
 A CALIBRATION OF THE CLUSTER FLUX MEASUREMENTS IN THE ROSAT  
 ALL-SKY SURVEY - ADP 99  
 03/09/2000 - 03/14/2002 FY02: \$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 4113**  
 REAL-TIME LABORATORY FOR REMOTE SENSING  
 03/10/2000 - 02/28/2003 FY02: \$0 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 4114**  
 FULLERENES: A NEW CARRIER-PHASE FOR NOBLE GASES IN METEORITES  
 04/03/2000 - 10/01/2001 FY02: \$0 Total: \$40,000  
*Prin. Invest.:* L BECKER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9413 UNIV OF HAWAII AT MANOA - HONOLULU 4115**  
 TRACKING ERUPTIONS & FIRES WITHIN THE RING OF FIRE  
 04/07/2000 - 04/30/2003 FY02: \$0 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 4116**  
 INTERSTELLAR ORGANIC MOLECULES AND THE ORIGIN OF LIFE: THE  
 ROLE OF EXOGENOUS DELIVERY  
 05/03/2000 - 11/30/2001 FY02: \$0 Total: \$174,780  
*Prin. Invest.:* L BECKER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9576 UNIV OF HAWAII AT MANOA - HONOLULU 4117**  
 THE DIVERSITY OF MARTIAN VOLCANIC FEATURES AS SEEN IN MOC  
 IMAGES AND MOLATOPOGRAPHIC DATA  
 05/17/2000 - 04/30/2003 FY02: \$0 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 4118**  
 A VOLCANIC PLUME DISPERSION MONITORING AND PREDICTION CAPABILITY  
 05/09/2000 - 09/30/2002 FY02: \$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 4119**  
 CONTROLS ON THE VARIABILITY OF PHYTOPLANKTON BIO- MASS & PRODUCTIVITY IN THE NORTHERN PACIFIC CENTRAL OCEAN  
 06/23/2000 - 06/30/2002 FY02: \$0 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 4120**  
 GEOCHEMICAL STUDIES OF THE LUNAR CRUST  
 07/03/2000 - 06/30/2002 FY02: \$0 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 4121**  
 MAPPING THE STELLAR X-RAY EMISSION BEYOND 1 GYR IN SPACE AND TIME  
 09/06/2000 - 09/14/2001 FY02: \$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 4122**  
 X-RAY EMISSION FROM BROWN DWARFS: A SEQUENCE OF TEMPERATURES AND AGES?  
 09/05/2000 - 09/14/2001 FY02: \$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 4123**  
 SEARCH FOR X-RAY EMISSION IN THE NEAREST KNOWN BROWN DWARF  
 09/20/2000 - 08/31/2003 FY02: \$0 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 4124**  
 RXJ1821+6828: TEMPERATURE DISTRIBUTION AND METALLICITY FOR A Z=0.81 CLUSTER  
 09/14/2000 - 08/31/2002 FY02: \$0 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 4125**  
 HARD X-RAYS FROM A COMPLETE SAMPLE OF THE BRIGHTEST ULTRALUMINOUS INFRARED GALAXIES  
 09/27/2000 - 09/30/2002 FY02: \$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 4126**  
 MEASURING THE MASS DISTRIBUTION IN Z0.2 CLUSTER LENSES WITH XMM, HST AND CFHT  
 10/03/2000 - 09/30/2003 FY02: \$0 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 4127**  
 DATA-INTENSIVE RESEARCH & MODEL DEVELOPMENT AT THE INTERNATIONAL PACIFIC RESEARCH CENTER  
 09/28/2000 - 09/30/2005 FY02: \$0 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 4128**  
 THE X-RAY TEMPERATURE FUNCTION AND STRUCTURE OF CLUSTERS AT Z=0.6-1  
 11/07/2000 - 11/14/2002 FY02: \$0 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 4129**  
 MONITORING SURFACE DEFORMATION AT HAWAIIAN & OTHER BASALTIC VOLCANOES WITH RADARSAT INTERFEROMETRY  
 11/20/2000 - 11/30/2002 FY02: \$0 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 4130**  
 AN XMM STUDY OF LOW-ACTIVITY CORONAL STARS OF 1-2 SOLAR MASSES  
 11/28/2000 - 11/30/2002 FY02: \$0 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 4131**  
 PARTICIPATION IN PLANET-B NMS TEAM  
 12/12/2000 - 12/14/2002 FY02: \$0 Total: \$15,000  
*Prin. Invest.:* T C OWEN  
*Tech. Officer:* GSFC/W T KASPRZAK  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10141 UNIV OF HAWAII AT MANOA - HONOLULU 4132**  
 NEW OPPORTUNITIES THROUGH MINORITY INITIATIVES IN SPACE SCIENCE  
 12/19/2000 - 12/31/2003 FY02: \$0 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 4133**  
 THE SIXTH PLANETARY VOLCANOLOGY FIELD WORKSHOP  
 01/04/2001 - 01/14/2003 FY02: \$0 Total: \$48,000  
*Prin. Invest.:* S K ROWLAND  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

## HAWAII

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10229 UNIV OF HAWAII AT MANOA - HONOLULU 4134**  
 VOLATILE EVOLUTION  
 01/04/2001 - 01/14/2003 FY02: \$0 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 4135**  
 REGIONAL PLANETARY IMAGE CENTER  
 01/08/2001 - 01/14/2004 FY02: \$0 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 4136**  
 EVOLUTION OF DUST AROUND STARS  
 02/16/2001 - 02/28/2004 FY02: \$0 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 4137**  
 PHYSICAL PROPERTIES OF COMETRAY NUCLEUS CANDIDATES  
 02/20/2001 - 02/28/2004 FY02: \$0 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 4138**  
 STABILITY & BEHAVIOR OF HYDRATED/HYDROXYLATED MATE RIALS IN  
 COLD SOLAR SYSTEM ENVIRONMENTS  
 03/05/2001 - 03/31/2004 FY02: \$0 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 4139**  
 A DEEP X-RAY SURVEY OF LOW-MASS PMS STARS IN NGC 2264  
 03/15/2001 - 03/14/2003 FY02: \$0 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 4140**  
 CHRONOLOGY OF THE EARLY SOLAR NEBULA: DISTRIBUTIO N OF 26A1 IN  
 CHONDRULES FROM PRIMITIVE C  
 03/16/2001 - 03/14/2004 FY02: \$0 Total: \$30,000  
*Prin. Invest.:* A KROT  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10640 UNIV OF HAWAII AT MANOA - HONOLULU 4141**  
 EFFECTS OF VOLCANIC ERUPTIONS ON THE NATURAL ENVIR ONMENT  
 03/20/2001 - 03/31/2004 FY02: \$0 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 4142**  
 HIGH TEMPERATURES AND DISKS AROUND PMS STARS FUSE SPECTRA OF  
 THREE HERBIGAEBE STARS - FUSE 2000  
 03/27/2001 - 05/31/2003 FY02: \$0 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 4143**  
 A LIGHTWEIGHT FTIR SPECTROMETER FOR IN SITU GAS ANALYSIS  
 05/01/2001 - 03/31/2004 FY02: \$0 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 4144**  
 SPATIAL STATISTICS OF LARGE ASTRONOMICAL DATABASES AN ALGO-  
 RITHMIC APPROACH  
 05/03/2001 - 04/14/2002 FY02: \$0 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 4145**  
 A CALIBRATION OF THE CLUSTER FLUX MEASUREMENTS IN THE ROSAT  
 ALL-SKY SURVEY  
 04/20/2001 - 04/30/2003 FY02: \$0 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 4146**  
 APPLICATION OF A THERMO-RHEOLOGICAL LAVA FLOW MODEL TO MAR-  
 TIAN CONDITIONS  
 05/09/2001 - 05/14/2004 FY02: \$0 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 4147**  
 PARTICIPATION ON THE CASSINI-HUYGENS GAS CHROMATO- GRAPH-  
 MASS SPECTROMETER(GCMS) TEAM  
 07/25/2001 - 07/31/2005 FY02: \$0 Total: \$15,000  
*Prin. Invest.:* T C OWEN  
*Tech. Officer:* GSFC/W T KASPRZAK  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11362 UNIV OF HAWAII AT MANOA - HONOLULU 4148**  
 FLOW-EJECTA CRATER POPULATION ON MARS & CHRONOLOGY OF  
 MAJOR GEOLOGIC EVENTS  
 09/26/2001 - 09/30/2004 FY02: \$0 Total: \$84,000  
*Prin. Invest.:* K KEIL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11445 UNIV OF HAWAII AT MANOA - HONOLULU 4149**  
 THERMAL STUDIES OF NEAR EARTH OBJECTS  
 12/21/2001 - 02/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D JEWITT  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11466 UNIV OF HAWAII AT MANOA - HONOLULU 4150**  
 ORIGINS, EVOLUTION, AND FATE OF BROWN DWARFS  
 12/12/2001 - 12/14/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* E MARTIN  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

HAWAII

<p><b>NAG 5 11516</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4151</b>  MINERALOGICAL MAPPING OF THE MOON AND ASTEROIDS  12/31/2001 - 12/31/2004      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> P G LUCEY  <i>Tech. Officer:</i> GSFC/D SENSKE  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 12198</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4159</b>  SEEING DOUBLE: DO THE X-RAY LUMINOUS EARLY A STARS HAVE ACTIVE  BINARY COMPANIONS?  05/15/2002 - 05/31/2003      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> T SIMON  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 11564</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4152</b>  SOLAR SYSTEM BEYOND NEPTUNE  02/08/2002 - 02/14/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> D C JEWITT  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 12207</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4160</b>  REPLACEMENT OF THE TELESCOPE CONTROL SYSTEM FOR TH E IRTF  06/05/2002 - 06/30/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> A T TOKUNAGA  <i>Tech. Officer:</i> GSFC/J HILLMAN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 11591</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4153</b>  ORIGIN OF METEORITE PARENT BODIES AND THE MOON  01/10/2002 - 11/30/2004      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> K KEIL  <i>Tech. Officer:</i> GSFC/D SENSKE  <i>CASE Category:</i> 12 - CHEMISTRY</p>	<p><b>NAG 5 12214</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4161</b>  QUASI-BIENNIAL OSCILLATION MODULATION OF EDDIES IN THE TROPICAL  STRATOSPHERE  05/16/2002 - 05/14/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> K HAMILTON  <i>Tech. Officer:</i> GSFC/P DECOLA  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 11782</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4154</b>  DEVELOPMENT OF CRITICAL ELEMENTS OF A DUST TELE- SCOPE  02/27/2002 - 02/28/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> E GRUEN  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 12236</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4162</b>  SMALL OUTER SOLAR SYSTEM BODIES: OBSERVATIONS AND MODELING  05/31/2002 - 05/31/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> K J MEECH  <i>Tech. Officer:</i> GSFC/J J HILLMAN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 11938</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4155</b>  FUZE OBSERVATIONS OF LMC AND SMC O3-4 STARS: THE PHYSICAL  PARAMETERS OF THE HOTTEST STARS  03/28/2002 - 03/31/2003      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> R KUDRITZKI  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 12406</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4163</b>  SEARCH FOR NEAR EARTH OBJECTS WITH SMALL APHELION DISTANCES  08/01/2002 - 08/14/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> D THOLEN  <i>Tech. Officer:</i> GSFC/T MORGAN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 11996</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4156</b>  SCALABLE ALGORITHMS FOR FAST ANALYSIS OF MEGAPIXEL CMB MAPS  AND LARGE ASTRONOMICAL DATABASES.  04/11/2002 - 04/14/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> I SZAPDUI  <i>Tech. Officer:</i> GSFC/P E HUNTER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 12485</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4164</b>  SPECTRAL VARIATIONS IN MARTIAN DARK REGIONS &amp; THE SEARCH FOR  THE SOURCE REGIONS OF SNC METEORITES  08/26/2002 - 08/31/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> V HAMILTON  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 12101</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4157</b>  NOVEL TECHNIQUES FOR FAST CMB ANALYSIS  04/24/2002 - 04/30/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> I SZAPUDI  <i>Tech. Officer:</i> GSFC/M SALAMON  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 12486</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4165</b>  PETROLOGIC &amp; EXPERIMENTAL EVALUATION OF AN IGNEOUS ORIGIN FOR  MAGNETIC ANOMALIES ON MARS  08/26/2002 - 08/31/2004      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> J HAMMER  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 12145</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4158</b>  THERMAL EMISSION SPECTROSCOPY OF PARTICULATE MARTIAN ANA-  LOGUE MATERIALS  05/14/2002 - 05/14/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> V E HAMILTON  <i>Tech. Officer:</i> GSFC/D SENSKE  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 12506</b>      <b>UNIV OF HAWAII AT MANOA - HONOLULU</b>      <b>4166</b>  CONSTRAINING THE ORIGINS OF LAYERING IN THE VALLES MARINERIS:  COMPARING TES AND MOLA  08/21/2002 - 08/31/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> S ANDERSON  <i>Tech. Officer:</i> GSFC/H FREY  <i>CASE Category:</i> 11 - ASTRONOMY</p>

## HAWAII

## NASA'S UNIVERSITY PROGRAM

**NAG 5 12508 UNIV OF HAWAII AT MANOA - HONOLULU 4167**  
 CHARACTERIZATION OF 2003 MER LANDING SITES USING M OC AND MOLA  
 DATA  
 08/21/2002 - 08/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S ANDERSON  
*Tech. Officer:* GSFC/H FREY  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1798 UNIV OF HAWAII AT MANOA - HONOLULU 4168**  
 RESEARCH, "CURVATURE-BASED WAVEFRONT SENSOR FOR USE ON  
 EXTENDED, ARBITRARY, LOW CONTRAST SCENES"  
 04/25/2001 - 04/24/2004 FY02: \$0 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 4169**  
 DEVELOPMENT OF ADVANCED NEAR INFRARED FOCAL PLANE TECHNOL-  
 OGY  
 08/04/1998 - 06/30/2003 FY02: \$0 Total: \$3,698,106  
*Prin. Invest.:* D N HALL  
*Tech. Officer:* ARC/K W HODAPP  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 99180 UNIV OF HAWAII AT MANOA - HONOLULU 4170**  
 LASER RANGING OPERATION, REPAIR & MAINTENANCE OF LURE OBSER-  
 VATORY FACILITY, MAUI, HI.  
 05/16/1999 - 05/15/2003 FY02: \$0 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 4171**  
 OPERATION AND MAINTENANCE OF THE INFRARED TELESCOPE FACILITY  
 01/31/1996 - 01/31/2001 FY02: \$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 4172**  
 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 FY02: \$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 4173**  
 AEROSOL PHYSICO-CHEMISTRY: P-3B AIRCRAFT MEASURE- MENTS FOR  
 TRACE-P. NRA00-OES-01.  
 09/25/2000 - 09/30/2003 FY02: \$0 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 4174**  
 FLAME DESIGN - A NOVEL APPROACH TO CLEAN, EFFICIENT DIFFUSION  
 FLAMES  
 03/25/1999 - 01/13/2003 FY02: \$0 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 4175**  
 PARTICIPATION IN THE COMPOSITE INFRARED SPECTROMETER (CIRS)  
 PROJECT AS CO-INVESTIGATOR  
 01/12/1999 - 01/14/2003 FY02: \$10,000 Total: \$28,000  
*Prin. Invest.:* T C OWEN  
*Tech. Officer:* GSFC/G L BJORAKER  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 461 UNIV OF HAWAII AT MANOA - HONOLULU 4176**  
 QUANTITATIVE ANALYSIS OF HOT SPOTS USING EO-1 & LAND SAT 7.  
 02/28/2000 - 09/30/2002 FY02: \$0 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 4177**  
 THE NASA INFRARED TELESCOPE FACILITY: SOLAR SYSTEM OBSERVA-  
 TIONS AND MISSION SUPPORT  
 02/12/2001 - 01/31/2006 FY02: \$0 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 4178**  
 PHYSICAL MODELING OF MULTI-SPECTRAL DATA TO CHARACTERIZE  
 DEPTH & BOTTOM-TYPE IN NEARSHORE MARINE CA  
 08/12/1999 - 08/31/2001 FY02: \$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 4179**  
 SOURCES AND ISOTOPIC COMPOSITIONS OF NITROUS OXIDE FROM THE  
 SUBTROPIC NORTH PACIFIC & EASTERN TROPIC  
 08/19/1999 - 12/31/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* B POPP  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40021 UNIV OF HAWAII AT MANOA - HONOLULU 4180**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLL AND  
 FELLOWSHIP PROGRAM.  
 02/13/1997 - 01/31/2001 FY02: \$0 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 4181**  
 HAWAII SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 02/08/2001 - 01/31/2005 FY02: \$0 Total: \$588,324  
*Prin. Invest.:* G TAYLOR  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50175 UNIV OF HAWAII AT MANOA - HONOLULU 4182**  
 A COMPLETE SAMPLE OF X-RAY SELECTED GALAXY CLUSTERS FROM  
 THE ROSAT NORTHECLIPTIC POLE SURVEY  
 05/22/1998 - 06/30/2001 FY02: \$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 4183**  
 THE CHANGING FACE OF A NEW VOLCANIC LANDSCAPE SYST EM: RATES,  
 CAUSES & HAZARDS/STUDENT: JOHN BAILEY  
 08/16/2000 - 08/31/2003 FY02: \$0 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 4184**  
 A STUDY OF PLANETARY SYSTEM FORMATION & EVOLUTION WITH A DUAL  
 CHANNEL ADAPTIVE OPTICS IMAGING POLAR  
 05/14/2001 - 06/30/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* D JEWITT  
*Tech. Officer:* GSFC/K E BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50396 UNIV OF HAWAII AT MANOA - HONOLULU 4185**  
 AN INFRARED SEARCH FOR THE ORIGINS OF ELLIPTICAL GALAXIES  
 STUDENT: BARRY ROTHBERG  
 06/12/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R JOSEPH  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 11 - ASTRONOMY

## IDAHO

**NAG 5 7537 BOISE STATE UNIV 4186**  
 INVESTIGATION OF PHYSICAL PROCESS DYNAMICS DURING COLD SEA-  
 SON FLOODING.  
 06/18/1998 - 06/30/2002 FY02: \$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 4187**  
 WILDFIRE EFFECTS ON RANGELAND ECOSYSTEMS AND LIVE STOCK  
 GRAZING IN IDAHO  
 06/12/2001 - 12/14/2003 FY02: \$0 Total: \$348,889  
*Prin. Invest.:* K T WEBER  
*Tech. Officer:* GSFC/W TURNER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12301 IDAHO STATE UNIV 4188**  
 DETECTION, PREDICTION, IMPACT AND MANAGEMENT OF INVASIVE  
 PLANTS USING GPS  
 06/24/2002 - 05/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* K T WEBER  
*Tech. Officer:* GSFC/W TURNER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9052 UNIV OF IDAHO - MOSCOW, IDAHO 4189**  
 NOVA ONLINE ESS  
 02/14/2000 - 09/14/2003 FY02: \$0 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 4190**  
 STUDY OF LAND-ATMOSPHERE INTERACTIONS USING SATELLITE DATA  
 ASSIMILATION  
 08/01/2000 - 07/31/2002 FY02: \$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 4191**  
 LAND SURFACE MODELING & DATA ASSIMILATION WITH IN SITU & REMOTE  
 SENSING DATA FROM CASES-97  
 08/22/2000 - 07/14/2003 FY02: \$0 Total: \$121,988  
*Prin. Invest.:* R QUALLS  
*Tech. Officer:* GSFC/P HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10210 UNIV OF IDAHO - MOSCOW, IDAHO 4192**  
 LEWIS & CLARK REDISCOVERY PROJECT: LIFE-LONG LEARNING ONLINE  
 (L3)  
 01/03/2001 - 09/30/2003 FY02: \$0 Total: \$1,831,000  
*Prin. Invest.:* J A TEASDALE  
*Tech. Officer:* GSFC/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11112 UNIV OF IDAHO - MOSCOW, IDAHO 4193**  
 VALIDATION OF THE ATMOSPHERIC INFRARED SOUNDER (AIRS) OVER  
 THE ANTARCTIC PLATEAU (AQUA-0080-033) NR  
 07/12/2001 - 08/31/2004 FY02: \$0 Total: \$99,319  
*Prin. Invest.:* V P WALDEN  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11495 UNIV OF IDAHO - MOSCOW, IDAHO 4194**  
 FRACTURE & STRESS EVOLUTION ON EUROPA: NEW INSIGHT INTO  
 FRACTURE INTERPRETATION & ICE THICKNESS ESTI  
 12/27/2001 - 12/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S KATTENHORN  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11589 UNIV OF IDAHO - MOSCOW, IDAHO 4195**  
 LEWIS & CLARK REDISCOVERY PROJECT: LIFE LONG LEARNING ONLINE  
 (L3)  
 01/24/2002 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* J TEASDALE  
*Tech. Officer:* GSFC/M PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11734 UNIV OF IDAHO - MOSCOW, IDAHO 4196**  
 "ULTRA-LOW POWER HIGH PERFORMANCE CMOS VLSI"  
 03/12/2002 - 03/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* G MAKI  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11805 UNIV OF IDAHO - MOSCOW, IDAHO 4197**  
 "HIGH PERFORMANCE LOSSY DATA COMPRESSION VLSI ARCHITEC-  
 TURES"  
 03/12/2002 - 03/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* G MAKI  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11970 UNIV OF IDAHO - MOSCOW, IDAHO 4198**  
 LOW POWER, RADIATION-TOLERANT RECONFIGURABLE PROCESSOR  
 04/09/2002 - 04/14/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* G DONOHOE  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

## ILLINOIS

## NASA'S UNIVERSITY PROGRAM

**NCC 2 1174** UNIV OF IDAHO - MOSCOW, IDAHO 4199  
 ANALYZING THE IMPACT OF RISK AND TASK ANALYSIS AND HUMAN  
 FACTORS PRICIPLES ON THE OUTCOME OF ....  
 04/24/2000 - 04/14/2003 FY02: \$105,351 Total: \$366,021  
*Prin. Invest.:* L T OSTROM  
*Tech. Officer:* ARC/B G KANKE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 5 395** UNIV OF IDAHO - MOSCOW, IDAHO 4200  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/13/1999 - 05/31/2002 FY02: \$0 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 4201  
 IDAHO NASA EPSCOR PROGRAM  
 08/17/2001 - 07/31/2004 FY02: \$0 Total: \$125,000  
*Prin. Invest.:* J TEASDALE  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40108** UNIV OF IDAHO - MOSCOW, IDAHO 4202  
 IDAHO SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 03/02/2001 - 02/28/2005 FY02: \$0 Total: \$532,325  
*Prin. Invest.:* J TEASDALE  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## ILLINOIS

**NAG 5 12091** CHICAGO STATE UNIV 4203  
 SATURDAY ACADEMY FOR SPACE SCIENCE  
 05/03/2002 - 05/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J RICHARD  
*Tech. Officer:* GSFC/C HOLLINGSWORTH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 5414** DEPAUL UNIV 4204  
 DEVELOPING, EVALUATING & APPLYING A COMPUTATIONAL MODEL OF  
 INFORMATION NAVIGATION  
 12/19/2000 - 02/14/2003 FY02: \$0 Total: \$16,920  
*Prin. Invest.:* C S MILLER  
*Tech. Officer:* ARC/R W REMINGTON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 272** DEPAUL UNIV 4205  
 OSS EDUCATION AND OUTREACH BROKER/FACILITATOR PROG RAM  
 02/24/1998 - 06/30/2002 FY02: \$0 Total: \$865,000  
*Prin. Invest.:* C C NARASIMHAN  
*Tech. Officer:* GSFC/J ROSENDHAL  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 641** DEPAUL UNIV 4206  
 DEPAUL SPACE SCIENCE CENTER  
 04/04/2002 - 06/30/2007 FY02: \$0 Total: \$0  
*Prin. Invest.:* C C  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1827** FINCH UNIV HEALTH SCI / CHICAGO MED SCHL 4207  
 CRYSTALLIZATION OF THE MITOCHONDRIAL METABOLITE TRANSPORT  
 PROTEINS  
 09/13/2001 - 11/30/2004 FY02: \$0 Total: \$72,000  
*Prin. Invest.:* R S KAPLAN  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 3 2743** ILLINOIS INST OF TECHNOLOGY 4208  
 THERMAL CONTROL AND ENHANCEMENT OF HEAT TRANSFER CAPACITY  
 OF CRYOGENIC CAPILLARYPUMPED LOOP AND HE  
 03/19/2002 - 09/13/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* J SEYED-YAGOOBI  
*Tech. Officer:* GRC/M M HASAN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 12370** ILLINOIS INST OF TECHNOLOGY 4209  
 ELECTROHYDRODYNAMIC CONDUCTION PUMPING OF CRYOGENIC FLU-  
 IDS  
 07/12/2002 - 12/14/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* J S YAGOOBI  
*Tech. Officer:* GSFC/J DIDION  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 798** ILLINOIS INST OF TECHNOLOGY 4210  
 MODELING NONLINEAR ACOUSTIC STANDING WAVES IN RESONATORS:  
 THEORY AND EXPERIMENT  
 05/16/2000 - 04/30/2003 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* D RAMAN  
*Tech. Officer:* GRC/B M STEINETS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 9584** ILLINOIS STATE UNIV 4211  
 DETERMINATION OF THE MAGNETOTAIL CURRENT SHEET STRUCTURE  
 USING NONLINEARDYNAMICS MODELING AND GEOTA  
 05/25/2000 - 05/31/2003 FY02: \$0 Total: \$103,989  
*Prin. Invest.:* D HOLLAND  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1512** JUDSON COLL-ELGIN ILLINOIS 4212  
 EFFECTS OF OSCILLATORY ACCELERATIONS ON BACTERIAL PROLIFERA-  
 TION & RESPONSE TO ANTIBIOTICS  
 08/17/2001 - 07/31/2003 FY02: \$0 Total: \$65,889  
*Prin. Invest.:* E A JUERGENSMAYER  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 1 02004** KNOX COLL 4213  
 CALIBRATION OF ECO BADGE TEST-STRIPS FOR OZONE MEASUREMENT  
 FOR GLOBE  
 11/15/2001 - 09/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* L C BUSH  
*Tech. Officer:* LARC/J FISHMAN, LARC/R J DEYOUNG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 8 244** NORTHEASTERN ILLINOIS UNIV 4214  
 PRMTE COMMERCILLY FNDD RSERH AND TECH. DEV. IN THE FLD OF  
 ADVNCD MATEIALS PROCESSING UTIL.MICROGRAVI  
 01/14/2002 - 10/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* A SACCO JR.  
*Tech. Officer:* MSFC/J SAMS  
*CASE Category:* 49 - ENGINEERING, OTHER



**NAG 1 2313**                      **NORTHWESTERN UNIV**                      **4215**  
 MECHANICS OF NANOTUBES & NANOTUBE/POLYMER COMPOSITES  
 07/18/2000 - 07/19/2003                      FY02: \$0                      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**                      **4216**  
 SURFACE TEMPLATED GROWTH & ASSEMBLY OF CARBON NANOTUBE  
 ARRAYS  
 05/29/2001 - 12/31/2002                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* C A MIRKIN  
*Tech. Officer:* LARC/J D JORDAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 1 02078**                      **NORTHWESTERN UNIV**                      **4217**  
 DEPLOYMENT OF INFLATABLE STRUCTURES BY ALE FEM AND PARTICLE  
 METHODS  
 04/10/2002 - 04/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W K LIU  
*Tech. Officer:* LARC/J T WANG  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 2 1522**                      **NORTHWESTERN UNIV**                      **4218**  
 MATHEMATICAL & COMPUTATIONAL ANALYSIS OF CENTRAL C ARBON  
 PATHWAYS FOR EFFICIENT METABOLIC ENGINEERIN  
 09/14/2001 - 09/14/2003                      FY02: \$62,587                      Total: \$62,587  
*Prin. Invest.:* V HATZIMANIKATI  
*Tech. Officer:* ARC/J HINES, ARC/P FUNG  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 1823**                      **NORTHWESTERN UNIV**                      **4219**  
 COARSENING IN SOLID-LIQUID MIXTURES  
 04/01/1996 - 05/31/2001                      FY02: \$0                      Total: \$837,375  
*Prin. Invest.:* P W VOORHEES  
*Tech. Officer:* GRC/IT K GLASGOW  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 1892**                      **NORTHWESTERN UNIV**                      **4220**  
 THE MICROMECHANICS OF THE MOVING CONTACT LINE  
 06/01/1996 - 05/31/2001                      FY02: \$0                      Total: \$320,000  
*Prin. Invest.:* S LICHTER  
*Tech. Officer:* GRC/IM WEISLOGEL  
*CASE Category:* 13 - PHYSICS

**NAG 3 2113**                      **NORTHWESTERN UNIV**                      **4221**  
 COMPLEX DYNAMICS IN MARANGONI CONVECTION WITH ROTATION  
 03/04/1998 - 01/06/2003                      FY02: \$0                      Total: \$370,000  
*Prin. Invest.:* H RIECKE  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2209**                      **NORTHWESTERN UNIV**                      **4222**  
 FILTRATION COMBUSTION FOR MICROGRAVITY APPLICASTIONS: (1)  
 SMOLDERING (2) COMBUSTION SYNTHESIS OF A  
 11/17/1998 - 11/11/2002                      FY02: \$0                      Total: \$386,500  
*Prin. Invest.:* B J MATKOWSKY  
*Tech. Officer:* GRC/S A GOGOKLU  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2364**                      **NORTHWESTERN UNIV**                      **4223**  
 COMPETING INSTABILITIES AND THE SPATIO-TEMPORAL DYNAMICS OF  
 INTERFACIAL WAVE PATTERNS  
 03/20/2000 - 11/30/2003                      FY02: \$0                      Total: \$130,250  
*Prin. Invest.:* M SILBER  
*Tech. Officer:* GRC/C E NIEDERHAUS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2369**                      **NORTHWESTERN UNIV**                      **4224**  
 INTERFACIAL DYNAMICS INTERFACIAL DYNAMICS  
 04/03/2000 - 11/30/2003                      FY02: \$0                      Total: \$136,583  
*Prin. Invest.:* D H DAVIS  
*Tech. Officer:* GRC/H C DEGROH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2474**                      **NORTHWESTERN UNIV**                      **4225**  
 COARSENING IN SOLID-LIQUID MIXTURES-2 (CSLM-2) COARSENING IN  
 SOLID-LIQUID MIXTURES-2 (CSLM-2)  
 07/24/2000 - 11/30/2005                      FY02: \$0                      Total: \$220,470  
*Prin. Invest.:* P W VOORHEES  
*Tech. Officer:* GRC/W B DUVAL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2485**                      **NORTHWESTERN UNIV**                      **4226**  
 ATOMIC-SCALE STUDIES OF EVOLVING MICROSTRUCTURES OF NICKEL-  
 BASED SUPERALLOYS: A GRADUATE TRAINING G  
 08/22/2000 - 08/31/2001                      FY02: \$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**                      **4227**  
 MODELING MICROGRAVITY NON-PREMIXED COMBUSTION SYSTEMS  
 12/01/2000 - 11/15/2004                      FY02: \$0                      Total: \$70,000  
*Prin. Invest.:* D MATALON  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2628**                      **NORTHWESTERN UNIV**                      **4228**  
 DEVELOPMENT OF HIGH-CONDUCTIVE POLYELECTROLYTES FOR LI BATT  
 TERIES  
 06/01/2001 - 12/31/2003                      FY02: \$0                      Total: \$90,000  
*Prin. Invest.:* D F SHRIVER  
*Tech. Officer:* GRC/R S BALDWIN  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 5094**                      **NORTHWESTERN UNIV**                      **4229**  
 THE DEVELOPMENT OF A FOCUSING SYSTEM FOR 40-100 KEV X-RAYS  
 11/22/1996 - 03/31/2003                      FY02: \$0                      Total: \$497,000  
*Prin. Invest.:* M P ULMER  
*Tech. Officer:* GSFC/L W GURKIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 7011**                      **NORTHWESTERN UNIV**                      **4230**  
 THEORETICAL STUDIES OF X-RAY BURSTS IN ACCRETING NEUTRON  
 STARS - ATP  
 02/18/1998 - 02/14/2003                      FY02: \$0                      Total: \$211,710  
*Prin. Invest.:* R E TAAM  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8294**                      **NORTHWESTERN UNIV**                      **4231**  
 LESSER THARIS VOLCANOES: STYLES OF ERUPTION AND RELATIONS TO  
 THARIS FLOOD VOLCANISM  
 02/23/1999 - 03/31/2003                      FY02: \$0                      Total: \$132,200  
*Prin. Invest.:* M S ROBINSON  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9188**                      **NORTHWESTERN UNIV**                      **4232**  
 A MULTI-WAVELENGTH STUDY OF THE INNER 50 PC-REGION AT THE  
 GALACTIC GALACTIC CENTER (LTS99)  
 03/07/2000 - 03/14/2005                      FY02: \$0                      Total: \$75,425  
*Prin. Invest.:* F YUSEF-ZADEH  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9272**                      **NORTHWESTERN UNIV**                      **4233**  
 SMALL-SCALE STRUCTURE IN THE DIFFUSE INTERSTELLAR MEDIUM (LTS  
 99)  
 03/16/2000 - 03/14/2003                      FY02: \$0                      Total: \$181,895  
*Prin. Invest.:* D MEYER  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10306**                      **NORTHWESTERN UNIV**                      **4234**  
 ANDEAN MOUNTAIN BUILDING: AN INTEGRATED TOPOGRAPHIC, GPS,  
 SEISMOLOGICAL AND NUMERICAL STUDY (SENH99)  
 01/30/2001 - 03/14/2003                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* S STEIN  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10323**                      **NORTHWESTERN UNIV**                      **4235**  
 SMALL-SCALE INTERSTELLAR STRUCTURE TOWARD THE OPEN CLUSTER  
 CHI PERSEI (FUSE 00)  
 01/30/2001 - 01/31/2003                      FY02: \$0                      Total: \$71,700  
*Prin. Invest.:* D M MEYER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10324**                      **NORTHWESTERN UNIV**                      **4236**  
 THE PHYSICAL CHARACTER OF SMALL-SCALE INTERSTELLAR STRUC-  
 TURES (FUSE 00)  
 01/30/2001 - 01/31/2003                      FY02: \$0                      Total: \$45,100  
*Prin. Invest.:* J T LAUROESCH  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10465**                      **NORTHWESTERN UNIV**                      **4237**  
 ANOMALOUS OXYGEN AND KRYPTON ABUNDANCES IN INTER-  
 STELLAR GAS (FUSE 00)  
 03/02/2001 - 02/28/2003                      FY02: \$0                      Total: \$66,200  
*Prin. Invest.:* D M MEYER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10598**                      **NORTHWESTERN UNIV**                      **4238**  
 COLLABORATIVE EFFORT BETWEEN NASA AND PROFESSOR MEL  
 ULMER  
 03/16/2001 - 03/31/2002                      FY02: \$0                      Total: \$40,000  
*Prin. Invest.:* M ULMER  
*Tech. Officer:* GSFC/W ZHANG  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10847**                      **NORTHWESTERN UNIV**                      **4239**  
 ALBEDO, COLOR, AND TOPOGRAPHIC STUDIES OF THE MOON AND  
 MERCURY  
 05/03/2001 - 05/14/2002                      FY02: \$0                      Total: \$31,000  
*Prin. Invest.:* M S ROBINSON  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11396**                      **NORTHWESTERN UNIV**                      **4240**  
 BINARY STARS AND GLOBAL CLUSTER DYNAMICS  
 01/24/2002 - 09/30/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* F A RASIO  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11457**                      **NORTHWESTERN UNIV**                      **4241**  
 GAN PHOTO-CATHODE STRUCTURES FOR DETECTION AND IMAGING IN  
 THE UV  
 12/17/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M P ULMER  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12018**                      **NORTHWESTERN UNIV**                      **4242**  
 QUANTITATIVE STUDIES IN PLANETARY VOLCANISM  
 04/11/2002 - 04/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M S ROBINSON  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12044**                      **NORTHWESTERN UNIV**                      **4243**  
 BINARY STARS AND GLOBULAR CLUSTER DYNAMICS  
 04/17/2002 - 04/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* F A RASIO  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12157**                      **NORTHWESTERN UNIV**                      **4244**  
 ANALYSIS OF MARS MAGNETIC LINEATIONS FOR TRUE POLAR WANDER,  
 REVERSALS, & CRUSTAL ACCRETION  
 05/08/2002 - 05/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D JURDY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12587**                      **NORTHWESTERN UNIV**                      **4245**  
 LUNAR POLAR INVESTIGATIONS  
 09/18/2002 - 09/14/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B BUSSEY  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1660**                      **NORTHWESTERN UNIV**                      **4246**  
 EVOLUTION OF DENDRITE MORPHOLOGY DURING ISOTHERMAL COARS-  
 ENING  
 04/24/2000 - 11/30/2003                      FY02: \$0                      Total: \$135,000  
*Prin. Invest.:* J ALKEMPER  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## NASA'S UNIVERSITY PROGRAM

ILLINOIS

**NAG 9 1053**                      **NORTHWESTERN UNIV**                      **4247**  
 RESEARCH FOR ROTATION MEMBRANE WATER PURIFICATION  
 12/10/1998 - 12/14/2002                      FY02: \$0                      Total: \$520,029  
*Prin. Invest.:* R M LUEPTOW  
*Tech. Officer:* JSC/N PACKMAN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1297**                      **NORTHWESTERN UNIV**                      **4248**  
 PILOT STUDY: ACOUSTIC ATTENUATION AS A REA-TIME GA SEOUS PRO-  
 CESS CONTROL MONITOR  
 05/01/2001 - 06/30/2002                      FY02: \$0                      Total: \$56,758  
*Prin. Invest.:* R M LUEPTOW  
*Tech. Officer:* JSC/D RUSSO  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 9 1398**                      **NORTHWESTERN UNIV**                      **4249**  
 ADVANCING ROTATING MEMBRANE WATER PURIFICATION FOR HUMAN  
 LIFE SUPPORT IN SPACE  
 02/20/2002 - 02/19/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R N LUEPTOW  
*Tech. Officer:* JSC/K DAUES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 9 02003**                      **NORTHWESTERN UNIV**                      **4250**  
 THERMAL IONIZATION MASS SPECTROMETER  
 02/07/2002 - 03/30/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K MCKEEGAN  
*Tech. Officer:* JSC/ESTANSBERY  
*CASE Category:* 56 - MEDICL

**NCC 1 01002**                      **NORTHWESTERN UNIV**                      **4251**  
 NANO-, MICRO- & MACRO-MECHANICS OF NANOREINFORCED POLYMERIC  
 MATERIALS  
 12/13/2000 - 08/31/2003                      FY02: \$0                      Total: \$73,467  
*Prin. Invest.:* L C BRINSON  
*Tech. Officer:* LARC/T S GATES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 1 02007**                      **NORTHWESTERN UNIV**                      **4252**  
 MICROMECHANICS-CONTINUUM-NUMERICAL MODELING OF SHAPE  
 MEMORY ALLOYS  
 01/16/2002 - 01/15/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L C BRINSON  
*Tech. Officer:* LARC/T L TURNER, LARC/K P SHEPHERD  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 2 1013**                      **NORTHWESTERN UNIV**                      **4253**  
 PROPHECY: A HIERARCHICAL TOOL FOR MODELING & ANALYZING PAR-  
 ALLEL SCIENTIFIC APPLICATIONS  
 01/27/1998 - 09/30/2002                      FY02: \$0                      Total: \$269,931  
*Prin. Invest.:* V E TAYLOR  
*Tech. Officer:* ARC/A GRADY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1098**                      **NORTHWESTERN UNIV**                      **4254**  
 AN INVESTIGATION OF THE EFFECTS OF OUTSOURCING MAINTENANCE  
 ON TASK PERFORMANCE  
 03/15/1999 - 06/30/2002                      FY02: \$0                      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**                      **4255**  
 SYNTHESIS, MICROSTRUCTURE AND PROPERTIES OF NICKEL ALUMINIDE  
 FOAMS  
 02/28/2001 - 12/31/2002                      FY02: \$0                      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**                      **4256**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 06/21/2001 - 08/31/2003                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* D N SEIDMAN  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 88**                      **NORTHWESTERN UNIV**                      **4257**  
 DEVELOPMENT OF A MOVING GRID RETARDER FOR SUBMILLI METER  
 POLARIMETRY OF SGR B2 (STUDENT: DAVID CHUS)  
 05/26/1999 - 06/30/2002                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* G NOVAK  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 90**                      **NORTHWESTERN UNIV**                      **4258**  
 HIGH DETECTION EFFICIENCY PHOTON COUNTERS AT 1064N M AND THEIR  
 USE IN A NOVEL QUANTUM IMAGING SCHEME  
 06/03/1999 - 08/31/2002                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* P KUMAR  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 5 30456**                      **NORTHWESTERN UNIV**                      **4259**  
 HETEROGENEOUS NOX CHEMISTRY ON METAL OXIDE SURFACES STUDIED  
 USING NON-LINEAR OPTICAL SPECTROSCOPY  
 08/21/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* F GEIGER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30471**                      **NORTHWESTERN UNIV**                      **4260**  
 DATA MINING TECHNIQUES FOR STREAMING DATA STUDENT: YI QIAO  
 08/27/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P SCHEUERMANN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50198**                      **NORTHWESTERN UNIV**                      **4261**  
 IMPROVED FEM DYNAMIC SUBSTRUCTURING THROUGH WAVE-BASED  
 JOINT MODELS  
 06/18/1998 - 02/28/2002                      FY02: \$0                      Total: \$60,500  
*Prin. Invest.:* T IGUSA  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 50263**                      **NORTHWESTERN UNIV**                      **4262**  
 RAPIDLY PROPAGATING BUOYANT FILTRATION COMBUSTION WAVES WITH  
 APPLICATIONS TO SMOLDERING & COMBUSTION  
 07/09/1999 - 12/31/2002                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* B J MATKOWSKY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## ILLINOIS

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50368**                      **NORTHWESTERN UNIV**                      **4263**  
 THE EFFECT OF GRAIN BOUNDARIES DURING COARSENING IN SOLID-  
 LIQUID MIXTURES\_(STUDENT: DAVID ROW  
 06/18/2001 - 08/31/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* P VOORHEES  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50405**                      **NORTHWESTERN UNIV**                      **4264**  
 INSTABILITIES IN FLAMES SPREADING OVER LIQUID FUELS (STUDENT:  
 TANYA TICKEL)  
 07/30/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M MATALON  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7662**                      **SOUTHERN ILLINOIS UNIV - CARBONDALE**                      **4265**  
 'COMPREHENSIVE MODELS OF THE NEAR-EARTH MAGNETIC FIELD:INTER  
 PRETATION OF THE LITHOSPHER  
 09/09/1998 - 09/14/2002                      FY02: \$0                      Total: \$111,000  
*Prin. Invest.:* D RAVAT  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICALSCIENCE

**NAG 5 7771**                      **SOUTHERN ILLINOIS UNIV - CARBONDALE**                      **4266**  
 GEOLOGIC INTERPRETATION OF SATELLITE ALTITUDE CRUSTAL MAG-  
 NETIC ANOMALY DATA  
 11/12/1998 - 10/31/2002                      FY02: \$0                      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**                      **4267**  
 GEOLOGICAL ANALYSIS IF THE MARTIAN CRUSTAL MAGNETIC ANOMALIES  
 07/26/2000 - 07/31/2003                      FY02: \$0                      Total: \$42,000  
*Prin. Invest.:* D RAVAT  
*Tech. Officer:* GSFC/P TAYLOR  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 8 1812**                      **SOUTHERN ILLINOIS UNIV - CARBONDALE**                      **4268**  
 ANISOTROPIC EFFECT IN LAMINATE COMPOSITES USING LASER HEATING  
 05/08/2001 - 06/30/2002                      FY02: \$0                      Total: \$38,000  
*Prin. Invest.:* T CHU  
*Tech. Officer:* MSFC/S RUSSELL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 1 01026**                      **SOUTHERN ILLINOIS UNIV - CARBONDALE**                      **4269**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/12/2001 - 06/30/2004                      FY02: \$0                      Total: \$12,000  
*Prin. Invest.:* J SCOTT  
*Tech. Officer:* LARC/R TRIPATHI, LARC/J WILSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50321**                      **SOUTHERN ILLINOIS UNIV - CARBONDALE**                      **4270**  
 ASSESSING MASS WASTING & LANDSLIDE SUSCEPTIBILITY USING GIS &  
 REMOTELY SENSED IMAGERY, SANTA CRUZ IS  
 08/17/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* N PINTER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 6050**                      **UNIV OF CHICAGO**                      **4271**  
 CONFERENCE: THE DEVELOPMENTAL BASIS OF EVOLUTIONARY CHANGE  
 05/25/2001 - 04/30/2002                      FY02: \$0                      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**                      **4272**  
 ABUNDANCES AND PHYSICAL CONDITIONS FOR INDIVIDUALS INTERSTEL-  
 LAR CLOUDS  
 05/07/1996 - 04/30/2001                      FY02: \$0                      Total: \$479,600  
*Prin. Invest.:* D E WELTY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3687**                      **UNIV OF CHICAGO**                      **4273**  
 ACCRETION AND OUTFLOW PHENOMENA IN YOUNG STELLAR O  
 01/15/1997 - 01/14/2003                      FY02: \$0                      Total: \$557,400  
*Prin. Invest.:* A KONIGL  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4476**                      **UNIV OF CHICAGO**                      **4274**  
 CHEMICAL ASPECTS OF THE ORIGIN OF THE SOLAR SYSTEM  
 06/09/1997 - 11/30/2002                      FY02: \$0                      Total: \$1,081,000  
*Prin. Invest.:* D GROSSMAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4953**                      **UNIV OF CHICAGO**                      **4275**  
 TURBULENT CONVECTION AND ITS ROLE IN ACOUSTIC EMIS  
 06/23/1997 - 04/30/2002                      FY02: \$0                      Total: \$364,844  
*Prin. Invest.:* D CATTANEO  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 5179**                      **UNIV OF CHICAGO**                      **4276**  
 ORIGINS OF GALACTIC COSMIC RADIATION: TESTING ALTERNATE MODELS  
 WITH RADIOACTIVE & STABLE ISOTOPE  
 03/09/1998 - 03/31/2002                      FY02: \$0                      Total: \$116,000  
*Prin. Invest.:* J A SIMPSON  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5223**                      **UNIV OF CHICAGO**                      **4277**  
 GRANT NAG5-5223 - HIGH ENERGY ANTIMATTER TELESCOPE (HEAT) PI DR.  
 DIETRICH MULLER  
 03/16/1999 - 11/30/2002                      FY02: \$0                      Total: \$485,000  
*Prin. Invest.:* D MULLER  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5229**                      **UNIV OF CHICAGO**                      **4278**  
 GRANT NAG5-5229 STUDIES OF THE COSMIC RADIATION AT HIGH ENER-  
 GIES PI PROF SWORDY  
 03/16/1999 - 11/30/2002                      FY02: \$0                      Total: \$752,000  
*Prin. Invest.:* SWORDY  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 13 - PHYSICS

## NASA'S UNIVERSITY PROGRAM

ILLINOIS

<b>NAG 5 5305</b>	<b>UNIV OF CHICAGO</b>	<b>4279</b>	<b>NAG 5 8539</b>	<b>UNIV OF CHICAGO</b>	<b>4287</b>
EXPERIMENTS IN HIGH ENERGY ASTROPHYSICS: THE TRACER PROJECT			PRIOR GRANT:NAG5-3253 CONTINUATION OF MAP SCIENCE SUPPORT		
01/09/2001 - 11/30/2003	FY02: \$0	Total: \$400,000	ACTIVITIES BEING IMPLEMENTED BY THE MAP		
<i>Prin. Invest.:</i> D MULLER			08/17/1999 - 08/14/2004	FY02: \$0	Total: \$307,723
<i>Tech. Officer:</i> GSFC/B A MERRITT			<i>Prin. Invest.:</i> S MEYER		
<i>CASE Category:</i> 13 - PHYSICS			<i>Tech. Officer:</i> GSFC/C BENNETT		
			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 6405</b>	<b>UNIV OF CHICAGO</b>	<b>4280</b>	<b>NAG 5 8708</b>	<b>UNIV OF CHICAGO</b>	<b>4288</b>
STRUCTURE, KINEMATICS & ABUNDANCES IN LOCAL ISM (L TSA)			RADIO INTERFEROMETRIC STUDIES OF COMETS AND ASTEROIDS		
10/10/1997 - 10/14/2002	FY02: \$0	Total: \$263,099	07/20/1999 - 12/31/2002	FY02: \$0	Total: \$60,000
<i>Prin. Invest.:</i> P FRISCH			<i>Prin. Invest.:</i> P PALMER		
<i>Tech. Officer:</i> GSFC/D WEST			<i>Tech. Officer:</i> GSFC/T MORGAN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 6972</b>	<b>UNIV OF CHICAGO</b>	<b>4281</b>	<b>NAG 5 9016</b>	<b>UNIV OF CHICAGO</b>	<b>4289</b>
MASS LOSS KINETICS AND ISOTOPE FRACTIONATION OF MOL TEN CAI			PROPOSAL TO THE NASA ESS HPCC PROGRAM		
COMPOSITIONS			02/01/2000 - 01/31/2001	FY02: \$0	Total: \$29,335
03/13/1998 - 05/31/2001	FY02: \$0	Total: \$100,000	<i>Prin. Invest.:</i> D OLSON		
<i>Prin. Invest.:</i> F M RICHTER			<i>Tech. Officer:</i> GSFC/D SPICER		
<i>Tech. Officer:</i> HQ/J BOYCE			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<i>CASE Category:</i> 11 - ASTRONOMY					
<b>NAG 5 7307</b>	<b>UNIV OF CHICAGO</b>	<b>4282</b>	<b>NAG 5 9063</b>	<b>UNIV OF CHICAGO</b>	<b>4290</b>
KINETICS OF VOLATILIZATION OF INTERSTELLAR GRAINS			DISK-DRIVEN OUTFLOWS IN ACTIVE GALACTIC NUCLEI - ATP-99		
04/22/1998 - 03/31/2001	FY02: \$0	Total: \$158,800	02/14/2000 - 02/14/2003	FY02: \$0	Total: \$119,145
<i>Prin. Invest.:</i> L GROSSMAN			<i>Prin. Invest.:</i> A KONIGL		
<i>Tech. Officer:</i> HQ/J BOYCE			<i>Tech. Officer:</i> GSFC/R J OLIVERSEN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 7731</b>	<b>UNIV OF CHICAGO</b>	<b>4283</b>	<b>NAG 5 9303</b>	<b>UNIV OF CHICAGO</b>	<b>4291</b>
RADIATIVE-DYNAMIC PROBLEMS RELATED TO THE ATMOSPHERE OF			LABORATORY STUDIES OF HETEROGENEOUS CHEMISTRY IN THE UPPER		
EARLY MARS			TROPOSPHERE. NRA-97-OASTT-01 DATED JANUARY		
09/24/1998 - 09/30/2002	FY02: \$0	Total: \$219,256	03/22/2000 - 03/31/2002	FY02: \$0	Total: \$76,130
<i>Prin. Invest.:</i> R PIERREHUMBERT			<i>Prin. Invest.:</i> D ABBATT		
<i>Tech. Officer:</i> GSFC/R BEEBE			<i>Tech. Officer:</i> GSFC/R LAWRENCEQ		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 7986</b>	<b>UNIV OF CHICAGO</b>	<b>4284</b>	<b>NAG 5 9378</b>	<b>UNIV OF CHICAGO</b>	<b>4292</b>
GALAXY CLUSTERS AS COSMOLOGICAL PROBES: ANALYSES OF X-RAY,			MASS LOSS KINETICS AND ISOTOPE FRACTIONATION OF MOLTEN CAI		
LENSING, AND SUNYAEV ZEL'DOVICH MEASUREMENTS			COMPOSITIONS		
01/03/1999 - 12/31/2003	FY02: \$0	Total: \$381,902	04/03/2000 - 03/31/2003	FY02: \$0	Total: \$117,000
<i>Prin. Invest.:</i> J E CARLSTROM			<i>Prin. Invest.:</i> F RICHTER		
<i>Tech. Officer:</i> GSFC/D K WEST			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 8032</b>	<b>UNIV OF CHICAGO</b>	<b>4285</b>	<b>NAG 5 9510</b>	<b>UNIV OF CHICAGO</b>	<b>4293</b>
ASTROPHYSICAL STUDIES WITH IMP SATELLITE DATA			REFRACTORY INCLUSIONS IN CARBONACEOUS CHONDRITES		
01/19/1999 - 03/31/2002	FY02: \$0	Total: \$240,297	04/25/2000 - 04/30/2003	FY02: \$0	Total: \$180,000
<i>Prin. Invest.:</i> C LOPATE			<i>Prin. Invest.:</i> A M DAVIS		
<i>Tech. Officer:</i> GSFC/J KING			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 8163</b>	<b>UNIV OF CHICAGO</b>	<b>4286</b>	<b>NAG 5 9583</b>	<b>UNIV OF CHICAGO</b>	<b>4294</b>
THE JOURNEY OF THE SUN - A VIRTUAL REALITY SIMULATION			SEARCH FOR NEW VIBRATIONAL AND ELECTRONIC SPECTRA OF MOLECULAR		
IONS OF ASTROPHYSICAL INTEREST			05/09/2000 - 05/14/2001	FY02: \$0	Total: \$65,940
02/08/1999 - 01/31/2003	FY02: \$0	Total: \$363,125	<i>Prin. Invest.:</i> T OKA		
<i>Prin. Invest.:</i> P C FRISCH			<i>Tech. Officer:</i> GSFC/P CRANE		
<i>Tech. Officer:</i> GSFC/P HUNTER			<i>CASE Category:</i> 11 - ASTRONOMY		
<i>CASE Category:</i> 11 - ASTRONOMY					

## ILLINOIS

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9800**                      **UNIV OF CHICAGO**                      **4295**  
 SIDEROPHILE ELEMENT MICROANALYSIS BY LASER ABLATION ICPMS  
 07/14/2000 - 06/30/2003                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* M HUMAYUN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10370**                      **UNIV OF CHICAGO**                      **4296**  
 ABUNDANCES AND PHYSICAL CONDITIONS IN THE SMC ISM (FUSE 00)  
 02/08/2001 - 04/30/2003                      FY02: \$0                      Total: \$64,700  
*Prin. Invest.:* D E WELTY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10634**                      **UNIV OF CHICAGO**                      **4297**  
 ISOTOPIC STUDIES OF THE MOON AND METEORITES  
 03/17/2001 - 03/14/2002                      FY02: \$0                      Total: \$170,000  
*Prin. Invest.:* R CLAYTON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10759**                      **UNIV OF CHICAGO**                      **4298**  
 STUDIES OF GAMMA-RAY BURSTS (LISA 2000)  
 04/23/2001 - 04/30/2002                      FY02: \$0                      Total: \$63,000  
*Prin. Invest.:* D Q LAMB  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10831**                      **UNIV OF CHICAGO**                      **4299**  
 FAST DYNAMOS AND THE ORIGIN OF SMALL SCALE PHOTO SPHERIC  
 FIELDS  
 04/26/2001 - 04/30/2004                      FY02: \$0                      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**                      **4300**  
 CMB AND ITS RELATION TO LARGE-SCALE STRUCTURE (ATP 2000)  
 05/11/2001 - 05/14/2004                      FY02: \$0                      Total: \$68,821  
*Prin. Invest.:* W HU  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10878**                      **UNIV OF CHICAGO**                      **4301**  
 COSMIC RAY INTERSTELLAR PROPAGATION (ATP 2000)  
 05/08/2001 - 05/31/2004                      FY02: \$0                      Total: \$21,082  
*Prin. Invest.:* J J CONNELL  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11005**                      **UNIV OF CHICAGO**                      **4302**  
 BOUNDARY CONDITIONS OF THE HELIOSPHERE: FLUCTUATIONS IN  
 NEARBY INTERSTELLAR GAS  
 06/05/2001 - 05/31/2004                      FY02: \$0                      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**                      **4303**  
 PATHFINDER ALPHA PROTON X-RAY SPECTROMETER DATA ANALYSIS &  
 INTERPRETATION  
 06/13/2001 - 05/31/2002                      FY02: \$0                      Total: \$110,000  
*Prin. Invest.:* T ECONOMOU  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11380**                      **UNIV OF CHICAGO**                      **4304**  
 UNIV OF CHICAGO TOPHAT COLLABORATION  
 10/30/2001 - 04/30/2002                      FY02: \$30,000                      Total: \$30,000  
*Prin. Invest.:* S S MEYER  
*Tech. Officer:* GSFC/E S CHENG  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11413**                      **UNIV OF CHICAGO**                      **4305**  
 ABUNDANCES AND PHYSICAL CONDITIONS IN THE INTER- STELLAR  
 MEDIUM OF THE MAGELLANIC CLOUDS.  
 12/20/2001 - 04/30/2007                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D E WELTY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11443**                      **UNIV OF CHICAGO**                      **4306**  
 ANALYSIS OF TOPHAT DATA  
 12/19/2001 - 12/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S MEYER  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11568**                      **UNIV OF CHICAGO**                      **4307**  
 ISOTOPIC STUDIES OF THE MOON AND METEORITES  
 02/21/2002 - 03/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R N CLAYTON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11588**                      **UNIV OF CHICAGO**                      **4308**  
 CHEMICAL ASPECTS OF THE ORIGIN OF THE SOLAR SYSTEM  
 01/10/2002 - 11/30/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L GROSSMAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11793**                      **UNIV OF CHICAGO**                      **4309**  
 NEW NUCLEAR TECHNIQUE FOR WATER, HYDROGEN AND DEUTERIUM  
 DETERMINATION IN PLANETARY SURFACES  
 02/28/2002 - 02/28/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T E ECONOMOU  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11860**                      **UNIV OF CHICAGO**                      **4310**  
 ASTROPHYSICAL STUDIES WITH IMP SATELLITE DATA.  
 04/01/2002 - 03/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C LOPATE  
*Tech. Officer:* GSFC/J KING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11903**                      **UNIV OF CHICAGO**                      **4311**  
 CONSTRUCT NEXT GENERATION NOBEL GAS MASS SPECTRO- METER  
 FOR ULTIMATELY SMALL SAMPLES  
 04/04/2002 - 03/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R S LEWIS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11999**                      **UNIV OF CHICAGO**                      **4312**  
 JOURNEY OF THE SUN: A VIRTUAL REALITY SIMULATION.  
 05/01/2002 - 04/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P C FRISCH  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

ILLINOIS

<b>NAG 5 12153</b>	<b>UNIV OF CHICAGO</b>	<b>4313</b>	<b>NGT 8 52906</b>	<b>UNIV OF CHICAGO</b>	<b>4321</b>
ULTRA-HIGH ENERGY PARTICLES FROM SPACE			CONSTRAINING COSMOLOGY WITH THE CHANGDRA AND XMM OBSERVATORIES		
05/13/2002 - 05/14/2003	FY02: \$0	Total: \$0	05/25/2001 - 06/30/2004	FY02: \$0	Total: \$22,000
<i>Prin. Invest.:</i> A OLINTO			<i>Prin. Invest.:</i> J CARLSTROM		
<i>Tech. Officer:</i> GSFC/MSALAMON			<i>Tech. Officer:</i> MSFC/S NASH-STEVENSON		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 9 1096</b>	<b>UNIV OF CHICAGO</b>	<b>4314</b>	<b>NGT 8 52921</b>	<b>UNIV OF CHICAGO</b>	<b>4322</b>
GENESIS PHASE C/D			GRADUATE STUDENT RESEARCH PROGRAM - FOR GRAD STDNT DASIUKE NAGAI		
04/02/1999 - 04/11/2002	FY02: \$0	Total: \$69,100	07/03/2002 - 06/30/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> M HUMAYYO			<i>Prin. Invest.:</i> J CARLSTROM		
<i>Tech. Officer:</i> JSC/K CYR			<i>Tech. Officer:</i> MSFC/S NASH-STEVENSON		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 9 1306</b>	<b>UNIV OF CHICAGO</b>	<b>4315</b>	<b>NAG 1 01065</b>	<b>UNIV OF ILLINOIS - CHICAGO CIRCLE</b>	<b>4323</b>
SUPPORT DATA ACQUISITION FROM SPADUS INSTRUMENT			TELECOLLABORATIVE DESIGN & SIMULATION IN IMMERSIVE VIRTUAL ENVIRONMENT		
05/23/2001 - 09/30/2002	FY02: \$0	Total: \$29,413	05/29/2001 - 11/30/2004	FY02: \$0	Total: \$61,000
<i>Prin. Invest.:</i> A J TUZZOLINO			<i>Prin. Invest.:</i> P BANERJEE		
<i>Tech. Officer:</i> JSC/E G STANSBERY			<i>Tech. Officer:</i> LARC/C A SANDRIDGE		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NAG 9 1436</b>	<b>UNIV OF CHICAGO</b>	<b>4316</b>	<b>NAG 2 1358</b>	<b>UNIV OF ILLINOIS - CHICAGO CIRCLE</b>	<b>4324</b>
SUBSTRATE COMPOSITION FOR GENESIS MISSION MATERIALS			AN ULTRASTRUCTURAL STUDY OF DEVELOPMENT IN VESTIBULAR HAIR CELLS, & THEIR CELLULAR RESPONSES TO HYP		
06/25/2002 - 06/30/2005	FY02: \$0	Total: \$0	07/23/1999 - 06/30/2003	FY02: \$0	Total: \$308,883
<i>Prin. Invest.:</i> M HUMAYUN			<i>Prin. Invest.:</i> A LYSAKOWSKI		
<i>Tech. Officer:</i> JSC/N ROBERTSON			<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NCC 2 1103</b>	<b>UNIV OF CHICAGO</b>	<b>4317</b>	<b>NAG 3 2450</b>	<b>UNIV OF ILLINOIS - CHICAGO CIRCLE</b>	<b>4325</b>
NUMERICAL EXPERIMENTS ON THE DYNAMICS OF GALAXIES			DESIGN OF GEAR DRIVES WITH HIGH GEAR RATIO DESIGN OF GEAR DRIVES WITH HIGH GEAR RATIO		
04/01/1999 - 08/31/2001	FY02: \$0	Total: \$5,000	06/09/2000 - 09/30/2003	FY02: \$0	Total: \$120,000
<i>Prin. Invest.:</i> R N MILLER			<i>Prin. Invest.:</i> D L LITVIN		
<i>Tech. Officer:</i> ARC/B F SMITH			<i>Tech. Officer:</i> GRC/R F HANDSCHUH		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NCC 5 653</b>	<b>UNIV OF CHICAGO</b>	<b>4318</b>	<b>NAG 3 2456</b>	<b>UNIV OF ILLINOIS - CHICAGO CIRCLE</b>	<b>4326</b>
FREQUENCY SELECTIVE BOLOMETER DEMONSTRATION FOR THE EDGE MISSION			MOLTEN-METAL DROPLET DEPOSITION ON A MOVING SUBSTRATE IN MICROGRAVITY: AIDING THE DEVELOPMENT OF NO		
08/21/2002 - 09/30/2004	FY02: \$0	Total: \$0	06/08/2000 - 11/30/2003	FY02: \$0	Total: \$116,276
<i>Prin. Invest.:</i> S S MEYER			<i>Prin. Invest.:</i> D M MEGARIDIS		
<i>Tech. Officer:</i> GSFC/C SAVINELL			<i>Tech. Officer:</i> GRC/W B DUVAL		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NGT 5 86</b>	<b>UNIV OF CHICAGO</b>	<b>4319</b>	<b>NAG 5 9427</b>	<b>UNIV OF ILLINOIS - CHICAGO CIRCLE</b>	<b>4327</b>
MEASUREMENTS OF ANISOTROPY IN THE COSMIC MICROWAVE BACKGROUND WITH THE TOPHAT-SPINNER TELESCOPE/STU			ANTARCTIC DRY VALLEY LAKES: ANALOGS OF ANCIENT MARTIAN LACUSTRINE SYSTEMS		
05/20/1999 - 06/30/2002	FY02: \$0	Total: \$66,000	04/11/2000 - 04/14/2003	FY02: \$0	Total: \$130,502
<i>Prin. Invest.:</i> S MEYER			<i>Prin. Invest.:</i> P DORAN		
<i>Tech. Officer:</i> GSFC/M S BURRELL			<i>Tech. Officer:</i> GSFC/M MEYER		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 5 50173</b>	<b>UNIV OF CHICAGO</b>	<b>4320</b>	<b>NAG 5 10334</b>	<b>UNIV OF ILLINOIS - CHICAGO CIRCLE</b>	<b>4328</b>
X-RAY AND SUNYAEV-ZEL'DOVICH IMAGING OF GALAXY CLUSTERS AS A COSMOLOGICAL PROBE			CARRIER LIFE TIME ENHANCEMENT USING HGCDTE/CDZNTI STRAINED-LAYER SUPERLATTICES FOR NEAR ROOM		
05/22/1998 - 08/31/2001	FY02: \$0	Total: \$66,000	01/31/2001 - 01/31/2004	FY02: \$0	Total: \$257,233
<i>Prin. Invest.:</i> J E CARLSTROM, REESE			<i>Prin. Invest.:</i> C GREIN		
<i>Tech. Officer:</i> HQ/A NURRIDIN			<i>Tech. Officer:</i> GSFC/R MARTINEAU		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 13 - PHYSICS		

## ILLINOIS

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10398**      **UNIV OF ILLINOIS - CHICAGO CIRCLE**      **4329**  
 HIGH SPEED/HIGH ACCURACY MICRO-MIRRORS FOR ADAPT- ABLE SUR-  
 FACES AND MULTIPLE SHUTTERS  
 02/13/2001 - 02/29/2004      FY02: \$0      Total: \$167,383  
*Prin. Invest.:* A FEINERMAN  
*Tech. Officer:* GSFC/M DUTTA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1473**      **UNIV OF ILLINOIS - CHICAGO CIRCLE**      **4330**  
 MICROGRAVITY INVESTIGATION OF DYNAMIC OXYGEN ABSORPTION IN  
 MOLTEN SOLDER JETTING  
 04/13/1998 - 01/31/2002      FY02: \$0      Total: \$358,333  
*Prin. Invest.:* C MEGARIDIS  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 655**      **UNIV OF ILLINOIS - CHICAGO CIRCLE**      **4331**  
 EXPERIMENTS AND MODEL DEVELOPMENT FOR INVESTIGATION OF  
 SOOTING AND RADIATION EFFECTS IN MICROGRAVIT  
 12/29/1998 - 10/25/2001      FY02: \$0      Total: \$191,606  
*Prin. Invest.:* Y CHOI  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 688**      **UNIV OF ILLINOIS - CHICAGO CIRCLE**      **4332**  
 GRAVITATIONAL EFFECTS ON PARTIALLY-PREMIXED FLAMES GRAVITA-  
 TIONAL EFFECTS ON PARTIALLY-PREMIXED FLAME  
 03/16/1999 - 03/09/2003      FY02: \$0      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**      **4333**  
 THE EXTINCTION OF LOW STRAIN RATE DIFFUSION FLAMES BY AN AGENT  
 IN MICROGRAVITY  
 03/22/1999 - 03/21/2003      FY02: \$0      Total: \$72,476  
*Prin. Invest.:* I K PURI  
*Tech. Officer:* GRC/S L OLSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 50214**      **UNIV OF ILLINOIS - CHICAGO CIRCLE**      **4334**  
 EXPERIMENTAL INVESTIGATION OF ENVIRONMENT OXYGEN CONTENT IN  
 SOLDER JET TECHNOLOGY (STUDENT: ERIC  
 07/22/1998 - 07/31/2001      FY02: \$0      Total: \$66,000  
*Prin. Invest.:* C M MEGARIDIS  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 50406**      **UNIV OF ILLINOIS - CHICAGO CIRCLE**      **4335**  
 REGULATION OF PROTEIN SYNTHESIS BY STRAIN INDUCED SIGNALING  
 EVENTS  
 07/31/2002 - 07/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* K ESSER  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2221**      **UNIV OF ILLINOIS AT URBANA-CHAMPAIGN**      **4336**  
 EVALUATION INTERACTIONS BETWEEN CHEMICAL AND CLIMATE PRO-  
 CESSES IN THE TROPOSPHERE & STRATOSPHER  
 08/20/1999 - 07/31/2002      FY02: \$0      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**      **4337**  
 DEFINING THE RELATIONSHIP BETWEEN HUMAN ERROR CLASSES AND  
 TECHNOLOGY INTERVENTION STRATEGIES  
 02/01/2001 - 12/31/2001      FY02: \$0      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**      **4338**  
 DEV OF NANOCRYSTALLINE TIA1 ALLOYS FOR SPACE APPLICATIONS  
 02/21/2001 - 09/30/2002      FY02: \$0      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**      **4339**  
 JOHN C. HOUBOLT PAPERS  
 08/16/2001 - 08/20/2003      FY02: \$0      Total: \$33,560  
*Prin. Invest.:* W J MAHER  
*Tech. Officer:* LARC/R E MCKINLEY, LARC/W P GIBERT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02013**      **UNIV OF ILLINOIS AT URBANA-CHAMPAIGN**      **4340**  
 DEV OF NANOCRYSTALLINE TIA1 ALLOYS FOR SPACE APPLICATIONS  
 12/07/2001 - 12/06/2002      FY02: \$0      Total: \$0  
*Prin. Invest.:* R S AVERBACK, P BELLON  
*Tech. Officer:* LARC/S J HALES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 02032**      **UNIV OF ILLINOIS AT URBANA-CHAMPAIGN**      **4341**  
 DEFINING THE RELATIONSHIP BETWEEN HUMAN ERROR CLASSES AND  
 TECHNOLOGY INTERVENTION STRATEGIES  
 01/14/2002 - 12/31/2002      FY02: \$0      Total: \$0  
*Prin. Invest.:* D A WIEGMANN  
*Tech. Officer:* LARC/V K CRISP  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02071**      **UNIV OF ILLINOIS AT URBANA-CHAMPAIGN**      **4342**  
 THE PRIMARY FLIGHT DISPLAY AND ITS PATHWAY GUIDANCE: WORKLOAD,  
 PERFORMANCE & SITUATION AWARE  
 03/12/2002 - 10/11/2002      FY02: \$0      Total: \$0  
*Prin. Invest.:* C WICKENS  
*Tech. Officer:* LARC/L J PRINZEL, LARC/R COMSTOCK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1120**      **UNIV OF ILLINOIS AT URBANA-CHAMPAIGN**      **4343**  
 SEAMLESS DISPLAYS FOR AIRCRAFT LANDING  
 03/27/1997 - 05/31/2002      FY02: \$0      Total: \$387,293  
*Prin. Invest.:* C D WICKENS  
*Tech. Officer:* ARCID C FOYLE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 2 1282**      **UNIV OF ILLINOIS AT URBANA-CHAMPAIGN**      **4344**  
 INCREMENTAL TRANSFER OF TRAINING EFFECTIVENESS OF AVIATION  
 TRAINING DEVICES  
 01/13/1999 - 01/31/2002      FY02: \$0      Total: \$278,259  
*Prin. Invest.:* H L TAYLOR, G L BRADSHAW, T W EMANUEL  
*Tech. Officer:* ARCID BARSHI  
*CASE Category:* 69 - PSYCHOLOGY, OTHER



**NAG 2 1406 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4345**  
 QOS PROGRAMMING AND DEVELOPMENT ENVIRONMENT  
 05/08/2000 - 05/31/2003 FY02: \$0 Total: \$200,000  
*Prin. Invest.:* K NAHRSTEDT  
*Tech. Officer:* ARC/K A FREEMEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1424 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4346**  
 NEXT GENERATION MODELING OF DAMAGE TOLERANCE FOR RISK  
 ASSESSMENT & MITIGATION IN HIGH PERFORMANCE S  
 07/20/2000 - 10/14/2002 FY02: \$0 Total: \$268,858  
*Prin. Invest.:* R H DODDS  
*Tech. Officer:* ARC/T L PANONTIN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 2 1535 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4347**  
 ATTENTIONAL AVIATION DISPLAY LAYOUT: RESEARCH AND MODELING  
 02/26/2002 - 02/28/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* C D WICKENS  
*Tech. Officer:* ARC/D FOYLE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 3 2122 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4348**  
 FLUID PHYSICS OF FOAM EVOLUTION AND FLOW FLUID PHYSICS OF FOAM  
 EVOLUTION AND FLOW  
 02/13/1998 - 01/06/2003 FY02: \$0 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 4349**  
 SMART ICING SYSTEMS SMART ICING SYSTEMS  
 03/05/1998 - 11/30/2002 FY02: \$0 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 2263 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4350**  
 WIDEBAND CDMA FOR A SATCOM BASED AVIONICS NETWORK WIDEBAND  
 CDMA FOR A SATCOM BASED AVIONICS NETWORK  
 05/03/1999 - 03/31/2002 FY02: \$0 Total: \$108,598  
*Prin. Invest.:* U MADHOW  
*Tech. Officer:* GRC/K S CHUN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2314 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4351**  
 DEVELOPMENT OF A NEW SHAPE OPTIMIZATION TOOL FOR 3 D TRAN-  
 SONIC COMPRESSORS BASED ON NAVIER-STOKES PH  
 12/30/1999 - 10/31/2002 FY02: \$0 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 4352**  
 SMOLDER-EDGE-WAVES AND EDGE-FLAMES SMOLDER-EDGE-WAVES AND  
 EDGE-FLAMES  
 12/22/2000 - 11/30/2004 FY02: \$0 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 4353**  
 RECONFIGURABLE ANTENNAS FOR HIGH DATA RATE MULTI-BEAM COM-  
 MUNICATION SYSTEMS  
 03/01/2001 - 02/28/2004 FY02: \$0 Total: \$101,749  
*Prin. Invest.:* D BERNHARD  
*Tech. Officer:* GRC/R R ROMANOFSKY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2599 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4354**  
 DEEP ETCHING OF AIN USING INDUCTIVELY-COUPLED-PLASMA REACTIVE  
 ION ETCHING METHOD  
 04/21/2001 - 09/30/2002 FY02: \$0 Total: \$15,000  
*Prin. Invest.:* I ADESIDA  
*Tech. Officer:* GRC/R S OKOJIE  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2623 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4355**  
 VIRTUAL ICING RESEARCH TUNNEL VIRTUAL ICING RESEARCH TUNNEL  
 05/31/2001 - 05/31/2004 FY02: \$0 Total: \$47,780  
*Prin. Invest.:* E LOTH  
*Tech. Officer:* GRC/M G POTAPCZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2661 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4356**  
 NANOPOROUS SILICON CARBIDE FOR NANOELECTROMECHANICAL SYS-  
 TEMS APPLICATIONS  
 12/31/2001 - 12/11/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* I ADESIDA  
*Tech. Officer:* GRC/L G MATUS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2662 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4357**  
 JET NOISE PHYSICS AND MODELING USING FIRST-PRINCIPLES SIMULA-  
 TIONS  
 12/22/2001 - 12/11/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* J FREUND  
*Tech. Officer:* GRC/J E BRIDGES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2747 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4358**  
 DEEP ETCHING OF WIDE BANDGAP SEMICONDUCTORS USING INDUC-  
 TIVELY  
 04/12/2002 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* I ADESIDA  
*Tech. Officer:* GRC/R S OKOJIE  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 3 2764 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4359**  
 THREE-DIMENSIONAL REFLECTION-MATE NEUR-FIELD MICROSCOPY FOR  
 MICROFLUIDIC PHENOMENA  
 04/08/2002 - 03/12/2006 FY02: \$0 Total: \$0  
*Prin. Invest.:* P S CARNEY  
*Tech. Officer:* GRC/D G FISHER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2791 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4360**  
 TECHNOLOGIES FOR IMPROVEMENT OF THE OTIS PROGRAM TECHNOLO-  
 GIES FOR IMPROVEMENT OF THE OTIS PROGRAM  
 07/09/2002 - 07/04/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* B CONWAY  
*Tech. Officer:* GRC/J P RIEHL  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

## ILLINOIS

## NASA'S UNIVERSITY PROGRAM

**NAG 5 2040 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4361**  
 EOSDIS VERSION O STANDARD DATA FORMAT SUPPORT  
 07/16/1992 - 12/31/2001 FY02: \$0 Total: \$3,384,897  
*Prin. Invest.:* M FOLK  
*Tech. Officer:* GSFC/C CARLISLE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 5241 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4362**  
 A SOUNDING ROCKET INVESTIGATION PI DR. C GARDNER  
 02/12/1999 - 02/08/2003 FY02: \$0 Total: \$105,690  
*Prin. Invest.:* C GARDNER  
*Tech. Officer:* GSFC/W JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5368 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4363**  
 LAYERS IN THE EQUATORIAL MESOSPHERE, MOTIONS AND A EROSOL  
 ROCKET AND RADAR STUDY (LEMMA)  
 06/19/2002 - 06/10/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* E KUDEKIE  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5377 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4364**  
 INVESTIGATION OF DC ELECTRIC FIELDS, WINDS, AND PL ASMA DENSITY  
 STRUCTURE IN THE NIGHTTIME EQUATORIAL  
 06/19/2002 - 06/10/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* E KUDEKIE  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 7152 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4365**  
 ROTATING AND BINARY NEUTRON STARS IN GENERAL RELATIVITY - ATP  
 03/05/1998 - 03/14/2001 FY02: \$0 Total: \$166,136  
*Prin. Invest.:* S L SHAPIRO  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8104 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4366**  
 ORIGIN OF X-RAY EMISSION FROM PLANETARY NEBULAE-AD P 98  
 02/05/1999 - 10/31/2002 FY02: \$0 Total: \$78,000  
*Prin. Invest.:* U CHU  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8418 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4367**  
 SUPERNOVA FALLBACK AND THE EMERGENCE OF BLACK HOLES AND  
 NEUTRON STARS (ATP 98)  
 03/25/1999 - 04/30/2002 FY02: \$0 Total: \$189,000  
*Prin. Invest.:* S L SHAPIRO  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8424 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4368**  
 X-RAY SPECTRA AND VARIABILITY OF ACCRETING NEUTRON STARS- ATP-  
 98  
 04/15/1999 - 10/14/2002 FY02: \$0 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 4369**  
 EARLY EVOLUTION: THE UNIVERSAL ANCESTOR AND ORIGIN OF MODERN  
 CELL  
 05/04/1999 - 04/30/2003 FY02: \$0 Total: \$500,140  
*Prin. Invest.:* G OLSEN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8521 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4370**  
 RADIO INTERFEROMETRIC STUDIES OF COMETS & ASTEROID  
 06/25/1999 - 06/30/2001 FY02: \$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 4371**  
 MULTISCALE ESTIMATION, ERROR PROPAGATION AND SCALE EFFECTS IN  
 THE DYNAMICAL RESPONSE OF SOIL-MOISTURE  
 06/21/1999 - 06/30/2003 FY02: \$66,932 Total: \$175,976  
*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 4372**  
 THE WAVES EXPLORER  
 05/25/1999 - 08/31/2001 FY02: \$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 4373**  
 SIMULATION OF TURBULENT MIXING AND PROPAGATION OF NUCLEAR  
 BURNING IN THE SURFACE LAYERS OF ACCRETING  
 08/12/1999 - 07/31/2003 FY02: \$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 4374**  
 INTEGRATED BIOMIMETIC SENSORS USING ARTIFICIAL HAIR CELLS  
 08/27/1999 - 08/31/2003 FY02: \$0 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 4375**  
 CORE ANGULAR MOMENTUM & THE IERS COORDINATING CENTER/ SUB-  
 CENTERS ACTIVITY FOR MONITORING GLOBAL GEOPHY  
 10/19/1999 - 08/31/2002 FY02: \$0 Total: \$59,200  
*Prin. Invest.:* X SONG  
*Tech. Officer:* GSFC/B F CHAO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9180 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4376**  
 EVOLUTIONARY MODELS OF COLD, MAGNETIZED, INTERSTELLAR  
 CLOUDS (ATP 99)  
 03/07/2000 - 03/14/2003 FY02: \$0 Total: \$102,076  
*Prin. Invest.:* C F GAMMIE  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 10011 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4377</b> HOT GAS IN AND AROUND THE SUPERGIANT SHELL LMC-2 09/25/2000 - 09/30/2002 FY02: \$0 Total: \$49,400 <i>Prin. Invest.:</i> Y CHU <i>Tech. Officer:</i> GSFC/R MUSHOTZKY <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10942 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4386</b> A TROPOSPHERE/STRATOSPHERE/MESOSPHERE GCM STUDY OF EEP ON ATMOSPHERIC CHEMICAL COMPOSITION &amp; TROPOS 05/15/2001 - 06/30/2003 FY02: \$0 Total: \$112,796 <i>Prin. Invest.:</i> M E SCHLESINGER <i>Tech. Officer:</i> GSFC/J F SPANN <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 10037 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4378</b> HOT GAS IN WIND BLOWN BUBBLES 09/27/2000 - 09/30/2002 FY02: \$0 Total: \$34,000 <i>Prin. Invest.:</i> Y CHU <i>Tech. Officer:</i> GSFC/R MUSHOTZKY <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11011 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4387</b> INTERFEROMETRIC OBSERVATIONS OF MID-LATITUDE SPORADIC-E RA- DAR ECHOES ATFT MACON, NC, &amp; A STUDY 06/07/2001 - 06/14/2002 FY02: \$0 Total: \$50,000 <i>Prin. Invest.:</i> E KUDEKI <i>Tech. Officer:</i> GSFC/R PFAFF <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10042 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4379</b> NGC 7009: TESTING THE WIND-WIND INTERACTION FORMATION OF PLANETARY NEBULAE 09/27/2000 - 09/30/2002 FY02: \$0 Total: \$33,200 <i>Prin. Invest.:</i> Y CHU <i>Tech. Officer:</i> GSFC/R MUSHOTZKY <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11016 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4388</b> CONTACT BINARY STARS (ATP 2000) 06/12/2001 - 06/14/2004 FY02: \$0 Total: \$41,454 <i>Prin. Invest.:</i> R F WEBBINK <i>Tech. Officer:</i> GSFC/R J OLIVERSEN <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10072 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4380</b> GRAVITY WAVE STUDIES AT ALBUQUERQUE, NM 10/23/2000 - 10/31/2003 FY02: \$0 Total: \$33,600 <i>Prin. Invest.:</i> G R SWENSON <i>Tech. Officer:</i> GSFC/M MELLOTT <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 11159 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4389</b> HOT BUBBLES IN EVOLVED SUPERNOVA REMNANTS 08/06/2001 - 08/14/2002 FY02: \$0 Total: \$22,034 <i>Prin. Invest.:</i> J R DICKEL <i>Tech. Officer:</i> GSFC/R MUTSHOTZKY <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10182 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4381</b> HOT GAS IN PLANETARY NEBULAE FUSE 2000 01/25/2001 - 01/31/2003 FY02: \$0 Total: \$59,700 <i>Prin. Invest.:</i> R A GRUENDL <i>Tech. Officer:</i> GSFC/G SONNEBORN <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11389 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4390</b> A STOCHASTIC APPROACH TO PARAMETERIZATIONS OF MICROPHYSICS FOR MESOSCALE MODELS: APPLICATIONS TO QUANTUM 11/26/2001 - 07/31/2004 FY02: \$0 Total: \$0 <i>Prin. Invest.:</i> G M MCFARQUHAR <i>Tech. Officer:</i> GSFC/R J LAWRENCE <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 10303 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4382</b> MAPPING HOT GAS IN A PRISTINE H, SC II REGION - FUSE - 2000 01/25/2001 - 01/31/2003 FY02: \$0 Total: \$68,100 <i>Prin. Invest.:</i> Y CHU <i>Tech. Officer:</i> GSFC/G SONNEBORN <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11415 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4391</b> GALAXY CLUSTER EVOLUTION AND COSMOLOGY (ADP 2001) 01/07/2002 - 12/31/2006 FY02: \$0 Total: \$0 <i>Prin. Invest.:</i> J J MOHR <i>Tech. Officer:</i> GSFC/R J OLIVERSEN <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10491 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4383</b> RADIO INTERFEROMETRIC IMAGING OF COMETS 02/27/2001 - 02/28/2004 FY02: \$0 Total: \$32,600 <i>Prin. Invest.:</i> L SNYDER <i>Tech. Officer:</i> GSFC/T MORGAN <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11460 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4392</b> SUPPORT RESEARCH AND SCIENCE REQUIREMENTS AND CAPABILITIES AND THE INSTRUMENT FUNCTIONS NEEDED 12/07/2001 - 12/14/2002 FY02: \$0 Total: \$0 <i>Prin. Invest.:</i> D MEIXNER <i>Tech. Officer:</i> GSFC/D C MATHER <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10754 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4384</b> GRAVITY WAVES AND AIRGLOW PHASE MEASUREMENTS STUDY 04/20/2001 - 04/30/2002 FY02: \$0 Total: \$49,879 <i>Prin. Invest.:</i> G SWENSON <i>Tech. Officer:</i> GSFC/F HERREO <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 11644 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4393</b> LARGE DUST SHELLS AROUND EVOLVED STARS (ADP 2001) 01/30/2002 - 01/31/2004 FY02: \$0 Total: \$0 <i>Prin. Invest.:</i> A SPECK <i>Tech. Officer:</i> GSFC/R J OLIVERSEN <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10781 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4385</b> ROTATING AND BINARY STARS IN GENERAL RELATIVITY (ATP 2000) 04/20/2001 - 04/30/2004 FY02: \$0 Total: \$89,315 <i>Prin. Invest.:</i> S L SHAPIRO <i>Tech. Officer:</i> GSFC/R J OLIVERSEN <i>CASE Category:</i> 11 - ASTRONOMY</p>	

**NAG 5 11756 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4394**  
 CLOUD RESOLVING MODEL SIMULATIONS OF WATER AND ENERGY BUDGETS FOR THE INDIAN OCEAN REGION: EFFECT  
 02/28/2002 - 02/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* G M MCFARQUHAR  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12030 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4395**  
 RAPID X-RAY VARIABILITY OF ACCRETING NEUTRON STARS  
 04/12/2002 - 04/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* F LAMB  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12132 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4396**  
 ADVANCED METHODS FOR OPTIMAL TRAJECTORY DESIGN.  
 05/06/2002 - 05/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* V COVERSTONE  
*Tech. Officer:* GSFC/D FOLTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 12228 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4397**  
 MULTI-FUNCTION STOCHASTIC OPTIMIZATION FOR SPACE MISSION DESIGN  
 05/30/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* V COVERSTONE  
*Tech. Officer:* GSFC/S P HUGHES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 12255 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4398**  
 O VI FROM THE CAT'S EYE NEBULA  
 06/06/2002 - 06/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* M A GUERRERO  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12334 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4399**  
 EARLY EVOLUTION: THE UNIVERSAL ANCESTOR AND THE ORIGIN OF MODERN CELLS  
 07/08/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* G L OLSEN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1249 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4400**  
 ADAPTIVE GRID METHODS FOR PHASE FIELD MODELS OF MICROSTRUCTURE DEVELOPMENT  
 04/16/1996 - 08/15/2001 FY02: \$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 4401**  
 R/S "PARTICLE INTERACTION POTENTIALS & PROTEIN CRYSTAL QUALITY UNDER DR. CHARLES F. ZUKOSKI."  
 07/01/1997 - 11/30/2000 FY02: \$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 4402**  
 MODELS OF MAGNETIC DAMPING FOR BRIDGMAN SEMI- CONDUCTOR CRYSTAL GROWTH  
 05/20/1998 - 01/31/2003 FY02: \$0 Total: \$358,333  
*Prin. Invest.:* J S WALKER  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1471 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4403**  
 COLLOIDAL STABILITY IN COMPLEX FLUIDS  
 04/23/1998 - 01/31/2003 FY02: \$0 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 4404**  
 RESEARCH ENTITLED, "PHASE FIELD MODELING OF MICROSTRUCTURE IN MICROGRAVITY  
 06/14/2000 - 11/30/2003 FY02: \$0 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 4405**  
 MODELS TO OPTIMIZE THE BENEFITS OF ROTATING MAGNETIC FIELDS FOR SEMICONDUCTOR CRYSTAL GROWTH IN SP  
 06/09/2000 - 11/30/2002 FY02: \$0 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 4406**  
 ADVANCED MODELING OF LOW CYCLE FATIGUE CRACK GROWTH IN METALS  
 10/31/2000 - 10/30/2004 FY02: \$40,000 Total: \$204,500  
*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 4407**  
 PREDICTION OF PROPERTIES LIQUID HELIUM FROM COMPUTER SIMULATION  
 04/26/2001 - 04/30/2005 FY02: \$0 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 4408**  
 OPTIMAL TRAJECTORY ANALYSIS FOR FUTURE PROPULSION SYSTEMS  
 04/16/2001 - 04/14/2002 FY02: \$0 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 4409**  
 YAW CONTROL OF A LIFTING BODY RE-ENTRY VEHICLE AT HIGH ANGLE OF ATTACK  
 07/27/2001 - 08/01/2003 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* M BRAGG  
*Tech. Officer:* JSC/R BURTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 2 02057 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4410**  
 A NON LINEAR OPTICAL COHERENCE TOMOGRAPHY SYSTEM F OR  
 BIOMOLECULAR DETECTION AND INTERVENTION  
 12/21/2001 - 12/20/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* S A BOPPART  
*Tech. Officer:* ARC/J W HINES, ARC/P P FUNG  
*CASE Category:* 56 - MEDICL

**NCC 1 309 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4411**  
 EVAL PEM-TROPICS B OBSERVAT: UNCERTAIN ANALYSES & EFFECTS ON  
 DEEP CONVECTIVE MIX'G ON TROPOSPH CHEM  
 07/22/1998 - 07/31/2001 FY02: -\$1 Total: \$108,368  
*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 4412**  
 COMPUTATIONAL MODEL OF PILOT SITUATION AWARENESS E RRORS  
 02/08/2001 - 12/14/2001 FY02: \$0 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 4413**  
 STOCHASTIC ANYTIME SEARCH WITH APPLICATIONS IN AUT ONOMOUS  
 PLANNING & SCHEDULING  
 03/25/2001 - 11/30/2002 FY02: \$0 Total: \$75,000  
*Prin. Invest.:* B J WAH  
*Tech. Officer:* ARC/R MORRIS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1293 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4414**  
 SYNTHETIC VISION SYSTEM HUMAN FACTORS ANALYSIS  
 10/31/2001 - 11/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* C WICKENS  
*Tech. Officer:* ARC/B L BEARD, ARC/D FOYLE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 3 852 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4415**  
 EXPERIMENTAL STUDY OF ICED AIRFOIL AERODYNAMICS  
 01/23/2001 - 12/17/2003 FY02: \$0 Total: \$122,663  
*Prin. Invest.:* M BRAGG  
*Tech. Officer:* GRC/H E ADDY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 599 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4416**  
 PROVIDE HDF SUPPORT FOR THE ESDIS PROJECT AND THE EOSDIS  
 STANDARD DATA FORMAT.  
 11/20/2001 - 12/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* M J FOLK  
*Tech. Officer:* GSFC/R ULLMAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 615 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4417**  
 DEVELOPMENT OF AN INTEROPERABILITY BASED ENVIRONMENT FOR  
 ADAPTIVE MESHES(I BEAM)  
 02/25/2002 - 02/24/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* P E SAYLOR  
*Tech. Officer:* GSFC/J FISCHER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 2 52244 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4418**  
 NON-LINEAR ALFVEN WAVES, AMBIPOLAR DIFFUSION & STA R FORMATION  
 08/05/1998 - 06/30/2002 FY02: \$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 4419**  
 FUNCTIONALLY GRADED MATERIAL APPLICATIONS TO ADVAN CE THERMAL  
 PROTECTION SYSTEMS  
 09/14/2000 - 09/14/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* G H PAULINO  
*Tech. Officer:* ARC/T L PANONTIN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 3 52345 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4420**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 07/28/1998 - 08/20/2001 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* J S MOORE  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 43 - CHEMICAL ENGR

**NGT 3 52357 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4421**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RE-  
 SEARCH PROGRAM  
 07/15/1999 - 09/30/2003 FY02: \$0 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 4422**  
 NEW GRANT FOR GSRP STUDENT - DANIEL BULLOK  
 05/18/1999 - 06/30/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* P SAYLOR  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 134 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4423**  
 AN OBJECT-ORIENTED MULTIGRID FRAMEWORK (STUDENT: DANIEL  
 BULLOK)  
 06/07/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* P E SAYLOR  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 21 - MATHEMATICS

**NGT 5 138 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4424**  
 INCORPORATING FLASH INTO I-BEAA: REFACTORIZING SCIEN TIFIC SOFT-  
 WARE STUDENT: BRADLEY JONES  
 06/20/2002 - 08/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R JOHNSON  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 30433 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4425**  
 KNOWLEDGE DISCOVERY FROM REMOTE SENSING OBSERVATIO NS  
 (STUDENT: AMANDA WHITE)  
 08/15/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* P KUMAR  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30434 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4426**  
 IMPROVED CLOUD CLIMATOLOGIES OVER POLAR REGIONS FROM EOS-TERRA DATA (STUDENT: MICHAEL WILSON)  
 08/15/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L GIROLAMO  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40030 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4427**  
 NATIONAL SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 12/19/1996 - 01/31/2001 FY02: \$0 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 4428**  
 ILLINOIS SPACE GRANT COLL & FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2005 FY02: \$0 Total: \$483,894  
*Prin. Invest.:* W C SOLOMON  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50228 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4429**  
 SOFTWARE-IMPLEMENTED ADAPTIVE FAULT TOLERANCE THROUGH DYNAMICALLY RECONFIGURABLE AGENTS  
 10/29/1998 - 08/31/2001 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* R K IYER  
*Tech. Officer:* HQ/S MCGEE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50326 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4430**  
 BIOGEOCHEMICAL CYCLES & CLIMATE CHANGE; POTENTIAL FEEDBACKS & INTERACTIONS/STUDENT: VAISHALI NAIK  
 08/17/2000 - 08/31/2003 FY02: \$0 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 4431**  
 NUMERICAL STUDIES OF GENERAL RELATIVISTIC MAGNETO-HYDRODYNAMICS AS APPLIED TO ACTIVE GALACTIC NUCLEI  
 05/14/2001 - 06/30/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* R GAMMIE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52912 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4432**  
 ORBITAL PROPAGATION OF MOMENTUM EXCHANGE TETHER SYSTEMS  
 07/01/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* V COVERSTONE  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 9 33 UNIV OF ILLINOIS AT URBANA-CHAMPAIGN 4433**  
 TRAINING GRANT  
 06/04/1998 - 03/08/2002 FY02: \$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 4434**  
 INNOVATIVE USES OF HYPERSPECTRAL IMAGERY FOR MONITORING SPATIALLY DISTRIBUTED ECOSYSTEMS  
 08/27/2001 - 08/31/2004 FY02: \$0 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 4435**  
 NANOSTRUCTURED SINGLE-ION SOLID POLYMER ELECTROLYTES FOR LITHIUM BATTERIES  
 04/30/2001 - 06/30/2004 FY02: \$0 Total: \$95,000  
*Prin. Invest.:* D W ZWANZIGER  
*Tech. Officer:* GRC/D BRITTON  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2399 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4436**  
 NEW COMPUTATIONAL METHOD FOR MASSIVELY PARALLEL COMPUTATIONAL FLUID DYNAMICS  
 04/19/2000 - 12/31/2002 FY02: \$0 Total: \$122,772  
*Prin. Invest.:* D HSU  
*Tech. Officer:* GRC/M LIU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2762 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4437**  
 WAVE FAN AND HYBRID PULSE DETONATION ENGINE WAVE FAN AND HYBRID PULSE DETONATION ENGINE  
 04/09/2002 - 12/08/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* D NALIM  
*Tech. Officer:* GRC/D PALAC  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1586 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4438**  
 SELF RENEWAL REPLICATION OF HEMATOPOIETIC STEM CELLS IN MICROGRAVITY  
 03/01/1999 - 11/30/2002 FY02: \$0 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 4439**  
 PARATHYROID HORMONE MODULATES THE RESPONSE OF OSTEOBLAST-LIKE CELLS TO MECHANICAL STIMULATION  
 07/01/1998 - 06/30/2001 FY02: \$0 Total: \$39,600  
*Prin. Invest.:* R L DUCN  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 50291 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4440**  
 EFFECTS OF INTEGRIN-EXTRACELLULAR MATRIX ADHESION IN FLUID SHEAR-INDUCED PROSTAGLANDIN METABOLISM  
 07/06/2000 - 06/30/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* F PAVALKO  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 56 - MEDICAL

**NGT 5 50366 INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS 4441**  
 ACTIVATION, ADAPTATION AND RESTORATION OF THE MECHANICAL RESPONSE OF OSTEOBLASTS TO FLUID SHEAR/STRESS  
 06/12/2001 - 06/30/2004 FY02: \$0 Total: \$20,400  
*Prin. Invest.:* R DUNCAN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<p><b>NGT 5 50373</b>      <b>INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS</b>      <b>4442</b>            CAPILLARY FRACTAL PERFUSION PATTERNS MAY PROTECT THE LUNG DURING MICROGRAVITY/STUDENT:ERIC JARYSZAK            06/26/2001 - 06/30/2004      FY02: \$0      Total: \$22,000  <i>Prin. Invest.:</i> W WAGNER  <i>Tech. Officer:</i> GSFC/K BLANDING  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 10459</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4450</b>            PETROLOGIC EVOLUTION OF LUNAR &amp; METEORITE PARENT BODY REGOLITH            02/21/2001 - 02/28/2004      FY02: \$0      Total: \$20,458  <i>Prin. Invest.:</i> A BASU  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 12 - CHEMISTRY</p>
<p><b>NAG 2 1449</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4443</b>            HYPERGRAVITY EFFECTS ON THE MATERNAL-FETAL SYSTEM            10/19/2000 - 10/14/2001      FY02: \$0      Total: \$23,740  <i>Prin. Invest.:</i> J R ALBERTS  <i>Tech. Officer:</i> ARC/A E RONCA, ARC/E M HOLTON  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NAG 5 11964</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4451</b>            EVOLUTION AND APPEARANCE OF YOUNG STELLAR DISKS WITH GRAVITATIONAL INSTABILITIES            04/03/2002 - 06/30/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> R DURISEN  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 4295</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4444</b>            3D SIMULATIONS OF GRAVITATIONAL INSTABILITIES IN P PROTOSTELLAR DISKS            04/04/1997 - 06/30/2002      FY02: \$0      Total: \$183,000  <i>Prin. Invest.:</i> D H DURISEN  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 12360</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4452</b>            TESTING THE RNA WORLD WITH METABOLIC RIBOZYMES IN VITRO AND INSIDE CELLS            07/09/2002 - 06/30/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> D H BURKE  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 5224</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4445</b>            HEAT HIGH ENERGY ANTIMATTER TELESCOPE PI PROF. JAMES MUSSER            02/03/1999 - 11/30/2002      FY02: \$0      Total: \$419,200  <i>Prin. Invest.:</i> J MUSSER  <i>Tech. Officer:</i> WFF/B MERRIT  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 8 1770</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4453</b>            THEORETICAL STUDIES OF LORENTZ AND CPT SYMMETRY            05/01/2001 - 08/31/2005      FY02: \$0      Total: \$48,000  <i>Prin. Invest.:</i> V A KOSTELECKY  <i>Tech. Officer:</i> MSFC/D HUBBARD  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 6773</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4446</b>            COBE AND THE STRUCTURE OF THE GALACTIC INTERSTELLAR MEDIUM            01/22/1998 - 07/31/2002      FY02: \$0      Total: \$125,600  <i>Prin. Invest.:</i> STEIMAN-CAMERON  <i>Tech. Officer:</i> GSFC/D WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAS 9 01103</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4454</b>            CYCLOTRON FACILITY-HIGH ENERGY RADIATION EFFECTS TESTING            06/21/2001 - 09/30/2005      FY02: \$0      Total: \$1,524,477  <i>Prin. Invest.:</i> J CAMERON  <i>Tech. Officer:</i> JSC/W CULPEPPER  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 7619</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4447</b>            FUNDING FOR "LITHOSPHERIC RHEOLOGY AND GEODYNAMIC PROCESSES FROM INTEGRATION OF GEODETIC, GRAVITY AND            07/24/1998 - 09/30/2001      FY02: \$0      Total: \$100,000  <i>Prin. Invest.:</i> M W HAMBURGER  <i>Tech. Officer:</i> GSFC/H V FREY  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NCC 2 1035</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4455</b>            CASE-BASED CAPTURE &amp; REUSE OF AEROSPACE DESIGN RATIONALIZATION            05/07/1998 - 07/31/2001      FY02: \$0      Total: \$392,092  <i>Prin. Invest.:</i> D B LEAKE  <i>Tech. Officer:</i> ARC/M E LIVINGSTON, ARC/W VAN DALSEM  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>
<p><b>NAG 5 9236</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4448</b>            FUSE OBSERVATIONS OF GALACTIC AND LMC NOVAE IN OUTBURST - FUSE            03/09/2000 - 03/14/2003      FY02: \$0      Total: \$27,330  <i>Prin. Invest.:</i> S SHORE  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NCC 2 1216</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4456</b>            INTEGRATED INTELLIGENT SUPPORT FOR KNOWLEDGE CAPTURE, REFINEMENT AND SHARING            03/08/2001 - 02/28/2003      FY02: \$0      Total: \$148,000  <i>Prin. Invest.:</i> D B LEAKE  <i>Tech. Officer:</i> ARC/M G SHAFTO, ARC/W J CLANCEY  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>
<p><b>NAG 5 9369</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4449</b>            PETROLOGIC EVOLUTION OF LUNAR AND METEORITE PARENT BODY REGOLITH            04/03/2000 - 03/31/2001      FY02: \$0      Total: \$14,000  <i>Prin. Invest.:</i> A BASU  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NCC 5 334</b>      <b>INDIANA UNIV - BLOOMINGTON</b>      <b>4457</b>            HUMAN AND PHYSICAL DIMENSIONS OF LAND USE/COVER CHANGE IN ANAZONIA: FOREST REGENERATION AND LANDSCAPE            06/16/1998 - 12/31/2002      FY02: \$67,749      Total: \$639,678  <i>Prin. Invest.:</i> E MORAN  <i>Tech. Officer:</i> GSFC/D DEERING  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>

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## NASA'S UNIVERSITY PROGRAM

**NGT 1 01009**                    **INDIANA UNIV - BLOOMINGTON**                    **4458**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/05/2001 - 06/30/2004                    FY02: \$0                    Total: \$12,000  
*Prin. Invest.:* S D JOHNSON  
*Tech. Officer:* LARC/P S MINER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 3 873**                    **MANCHESTER COLL**                    **4459**  
 INTERCALATION OF GRAPHITE FIBERS FOR SPACE POWER APPLICATIONS  
 03/13/2001 - 08/31/2002                    FY02: \$0                    Total: \$15,668  
*Prin. Invest.:* G W CLARK  
*Tech. Officer:* GRC/C HUNG  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 01027**                    **PURDUE UNIV**                    **4460**  
 MECHANISMS OF BOUNDARY-LAYER TRANSITION ON RESUABLE LAUNCH  
 VEHICLES  
 02/05/2001 - 01/31/2002                    FY02: \$0                    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**                    **4461**  
 MODELING OF NANO MATERIALS MY 1/3  
 05/09/2001 - 12/31/2003                    FY02: \$0                    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**                    **4462**  
 AUTONOMOUS NAVIGATION FOR ALTERNATE ACCESS TO THE INTERNA-  
 TIONAL SPACE STATION  
 05/18/2001 - 05/17/2003                    FY02: \$0                    Total: \$49,283  
*Prin. Invest.:* J L GARRISON  
*Tech. Officer:* LARC/J ANTOL  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 1 01115**                    **PURDUE UNIV**                    **4463**  
 DESIGN METHODS AND OPTIMIZATION FOR MORPHING AIRCRAFT  
 08/15/2001 - 08/14/2004                    FY02: \$0                    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 1 02047**                    **PURDUE UNIV**                    **4464**  
 MECHANISMS OF BOUNDARY-LAYER TRANSITION OF REUSABLE LAUNCH  
 VEHICLES  
 01/31/2002 - 01/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* S P SCHNEIDER  
*Tech. Officer:* LARC/S A BERRY, LARC/J N MOSS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02064**                    **PURDUE UNIV**                    **4465**  
 BUCKLING STABILITY OF DISBONDED COMPOSITE STRUCTURES  
 03/19/2002 - 03/18/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* H KIM  
*Tech. Officer:* LARC/J H STARNES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1344**                    **PURDUE UNIV**                    **4466**  
 A GRAVIRESSONSIVE TIME-KEEPING PROTEIN OF THE PLAN T & ANIMAL  
 CELL SURFACE  
 07/21/1999 - 07/31/2003                    FY02: \$0                    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**                    **4467**  
 ELUCIDATING THE MECHANISM OF MECHANICAL-STRESS INHIBITION OF  
 PLANT GROWTH  
 12/21/1999 - 05/31/2003                    FY02: \$0                    Total: \$41,407  
*Prin. Invest.:* C MITCHELL  
*Tech. Officer:* ARC/R MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1542**                    **PURDUE UNIV**                    **4468**  
 A PROPOSAL FOR INFRASTRUCTURE TO SUPPORT NANOTECHNOLOGY  
 RESEARCH AT PURDUE UNIV  
 03/26/2002 - 03/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J A COOPER  
*Tech. Officer:* ARC/H PARTRIDGE, ARC/M MEYYAPPAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 1730**                    **PURDUE UNIV**                    **4469**  
 3-D UNSTEADY AERODYNAMICS AND AEROELASTICITY OF ADVANCED  
 TURBOPROPS  
 02/01/1995 - 06/30/2001                    FY02: \$0                    Total: \$533,235  
*Prin. Invest.:* S FLEETER  
*Tech. Officer:* GRC/D H BUFFUM  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2095**                    **PURDUE UNIV**                    **4470**  
 ON THE DEVELOPMENT OF SUPERSONIC JET NOISE PREDICTION METH-  
 ODOLOGY  
 12/22/1997 - 11/30/2001                    FY02: \$0                    Total: \$104,186  
*Prin. Invest.:* A S LYRINTZIS  
*Tech. Officer:* GRC/J R SCOTT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2217**                    **PURDUE UNIV**                    **4471**  
 SCRAMJET SCALING AND INTERACTIONS TESTING SCRAMJET SCALING AND  
 INTERACTIONS TESTING  
 12/15/1998 - 11/30/2001                    FY02: \$0                    Total: \$191,080  
*Prin. Invest.:* S MURTHY  
*Tech. Officer:* GRC/S R THOMAS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2336**                    **PURDUE UNIV**                    **4472**  
 INVESTIGATION OF CRITICAL HEAT FLUX IN REDUCED GRAVITY USING  
 PHOTOMICROGRAPHIC TECHNIQUES  
 02/22/2000 - 11/30/2003                    FY02: \$0                    Total: \$116,000  
*Prin. Invest.:* I MUDAWAR  
*Tech. Officer:* GRC/M HANSAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2413**                    **PURDUE UNIV**                    **4473**  
 MHD BYPASS ENERGY CYCLE FOR JET ENGINE MHD BYPASS ENERGY  
 CYCLE FOR JET ENGINE  
 06/28/2000 - 12/31/2001                    FY02: \$0                    Total: \$70,000  
*Prin. Invest.:* S MURTHY  
*Tech. Officer:* GRC/I BLANKSON  
*CASE Category:* 41 - AERONAUTICAL ENGR



## NASA'S UNIVERSITY PROGRAM

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<b>NAG 3 2532</b>	<b>PURDUE UNIV</b>	<b>4474</b>	<b>NAG 5 3965</b>	<b>PURDUE UNIV</b>	<b>4482</b>
THE 15TH INTERNATIONAL SYMPOSIUM ON AIR BREATHING ENGINES (ISABE)			STUDY ON APPLICATIONS OF SATELLITE DATA TO UNDERST SEA INTER-ACTIONS		
01/24/2001 - 06/30/2002	FY02: \$0	Total: \$5,100	03/03/1997 - 01/31/2001	FY02: \$0	Total: \$266,112
<i>Prin. Invest.:</i> S MURTHY			<i>Prin. Invest.:</i> C A CLAYSON		
<i>Tech. Officer:</i> GRC/M THARP			<i>Tech. Officer:</i> GSFC/R KAKAR		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 3 2536</b>	<b>PURDUE UNIV</b>	<b>4475</b>	<b>NAG 5 3992</b>	<b>PURDUE UNIV</b>	<b>4483</b>
THREE-DIMENSIONAL UNSTEADY AERODYNAMICS AND AEROELASTICITY OF ADVANCED TURBOPROPS			THE ANALYSIS AND PARAMETERIZATION OF SHORTWAVELENGTH ATMOSPHERES		
03/01/2001 - 02/28/2003	FY02: \$0	Total: \$46,000	02/26/1997 - 05/31/2002	FY02: \$0	Total: \$296,000
<i>Prin. Invest.:</i> D FLEETER			<i>Prin. Invest.:</i> D HARSHVARDHAN		
<i>Tech. Officer:</i> GRC/E MCFARLAND			<i>Tech. Officer:</i> GSFC/K H BERGMAN		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 3 2550</b>	<b>PURDUE UNIV</b>	<b>4476</b>	<b>NAG 5 7727</b>	<b>PURDUE UNIV</b>	<b>4484</b>
ROBUST SATELLITE COMMUNICATIONS FOR AIR TRAFFIC CONTROL SPS #D135			QUANTIFYING THE INDIRECT RADIATIVE FORCING OF SULFATE AEROSOLS BY A HYBRID TECHNIQUE.		
02/27/2001 - 09/30/2002	FY02: \$0	Total: \$60,000	10/21/1998 - 10/14/2002	FY02: \$0	Total: \$284,508
<i>Prin. Invest.:</i> D S LEHNERT			<i>Prin. Invest.:</i> H HARSHVARDHAN		
<i>Tech. Officer:</i> GRC/K CHUN			<i>Tech. Officer:</i> GSFC/M I MISHCHENKO		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 3 2635</b>	<b>PURDUE UNIV</b>	<b>4477</b>	<b>NAG 5 8155</b>	<b>PURDUE UNIV</b>	<b>4485</b>
A LASER SCANNING PSP/TSP SYSTEM FOR PROPULSION APPLICATIONS			LABORATORY STUDIES OF DIACETYLENE AND CYANOACETYLENE PHOTOCHEMISTRY: ROUTES TO COMPLEX MOLECULES		
06/20/2001 - 06/30/2002	FY02: \$0	Total: \$49,242	02/17/1999 - 11/30/2002	FY02: \$0	Total: \$324,406
<i>Prin. Invest.:</i> D P SULLIVAN			<i>Prin. Invest.:</i> T ZWIER		
<i>Tech. Officer:</i> GRC/T BENCIC			<i>Tech. Officer:</i> GSFC/D BOGAN		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 3 2681</b>	<b>PURDUE UNIV</b>	<b>4478</b>	<b>NAG 5 9098</b>	<b>PURDUE UNIV</b>	<b>4486</b>
SCRAMJET SCALING AND INTERACTIONS #0ED87			LONG-TERM X-RAY VARIABILITY OF CYG X-1: ORBITAL MODULATION, INTENSITY DIPS, FLARES, STATE TRANSIT		
01/10/2002 - 12/16/2004	FY02: \$0	Total: \$0	02/18/2000 - 02/28/2002	FY02: \$0	Total: \$19,999
<i>Prin. Invest.:</i> S FRANKEL			<i>Prin. Invest.:</i> W CUI		
<i>Tech. Officer:</i> GRC/S THOMAS			<i>Tech. Officer:</i> GSFC/R J OLIVERSEN		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 3 2715</b>	<b>PURDUE UNIV</b>	<b>4479</b>	<b>NAG 5 9822</b>	<b>PURDUE UNIV</b>	<b>4487</b>
STUDY OF CO-CURRENT AND COUNTER-CURRENT GAS LIQUID TWO-PHASE FLOW THROUGH PACKED BED IN MICROGRAVITY			A COMPARISON OF THE IMPACT OF PRECIPITATION ON THE TROPICAL PACIFIC & NORTH INDIAN OCEAN MIXED LAYER		
02/21/2002 - 11/30/2005	FY02: \$0	Total: \$0	07/24/2000 - 11/30/2002	FY02: \$0	Total: \$194,194
<i>Prin. Invest.:</i> D T REVANKAR			<i>Prin. Invest.:</i> C A CLAYTON		
<i>Tech. Officer:</i> GRC/B J MOTIL			<i>Tech. Officer:</i> GSFC/R J LAWRENCE		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 3 2770</b>	<b>PURDUE UNIV</b>	<b>4480</b>	<b>NAG 5 9998</b>	<b>PURDUE UNIV</b>	<b>4488</b>
GRANULAR FLOW AROUND IMMERSED OBJECTS SPS #ODY12			RELATIVISTIC ASTROPHYSICS IN BLACK HOLE & LOW-MASS NEUTRON STAR X-RAY BINARIES - LISA98		
04/17/2002 - 05/31/2006	FY02: \$0	Total: \$0	09/21/2000 - 01/31/2004	FY02: \$0	Total: \$105,317
<i>Prin. Invest.:</i> D R WASSGREN			<i>Prin. Invest.:</i> W CUI		
<i>Tech. Officer:</i> GRC/R WILKINSON			<i>Tech. Officer:</i> GSFC/R J OLIVERSEN		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 4 227</b>	<b>PURDUE UNIV</b>	<b>4481</b>	<b>NAG 5 10061</b>	<b>PURDUE UNIV</b>	<b>4489</b>
DESIGN, FABRICATION, AND TESTING OF A ROCKET-BASED COMBINED CYCLE FLIGHT EXPERIMENT			AN EXPERIMENTAL ECONOMIC ANALYSIS OF NASA'S MISSION ACQUISITION PROCESS		
05/29/2002 - 01/31/2003	FY02: \$0	Total: \$0	10/31/2000 - 10/31/2001	FY02: \$0	Total: \$140,000
<i>Prin. Invest.:</i> D E ANDERSON			<i>Prin. Invest.:</i> C NOUSSAIR		
<i>Tech. Officer:</i> DFRC/N PALUMBO			<i>Tech. Officer:</i> GSFC/P ULRICH		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

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## NASA'S UNIVERSITY PROGRAM

**NAG 5 10262** PURDUE UNIV 4490  
 FORMATION & EARLY EVOLUTION OF THE SOLAR SYSTEM  
 01/09/2001 - 12/31/2003 FY02: \$0 Total: \$22,400  
*Prin. Invest.:* B PICKETT  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10422** PURDUE UNIV 4491  
 CHEMICAL STUDIES OF METEORITES  
 02/15/2001 - 02/28/2003 FY02: \$0 Total: \$80,000  
*Prin. Invest.:* M LIPSCHUTZ  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10735** PURDUE UNIV 4492  
 PROBING PREBIOTIC PROCESSES WITH PEPTIDE SELF REPLICATION  
 04/19/2001 - 04/30/2004 FY02: \$0 Total: \$130,000  
*Prin. Invest.:* J A CHMIELEWSKI  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10747** PURDUE UNIV 4493  
 OPTIMIZATION OF GPS TRACKING LOOPS FOR SPACECRAFT NAVIGATION  
 IN HEO/GEO ORBITS.  
 04/17/2001 - 05/31/2002 FY02: \$0 Total: \$20,000  
*Prin. Invest.:* J L GARRISON  
*Tech. Officer:* GSFC/J A LEITNER  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 11080** PURDUE UNIV 4494  
 MOLA-SUPPORTED PRECISION GEOSPATIAL PROCESSING OF MOCAS IM-  
 AGES: MODELS, ALGORITHMS AND EVALUATION  
 08/06/2001 - 08/14/2003 FY02: \$0 Total: \$53,000  
*Prin. Invest.:* J SHAN  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11747** PURDUE UNIV 4495  
 INVESTIGATION OF THE FUNDAMENTAL PROPERTIES OF FORWARD  
 SCATTERED GPS SIGNALS FOR OCEANOGRAPHIC R  
 02/25/2002 - 02/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J GARRISON  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11839** PURDUE UNIV 4496  
 APPLICATION OF DYNAMICAL SYSTEMS THEORY, CONTROL METHODS, &  
 OPTIMIZATION STRATEGIES TO TRAJECTORY  
 04/17/2002 - 09/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* K C HOWELL  
*Tech. Officer:* GSFC/D FOLTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 12065** PURDUE UNIV 4497  
 MODEL IMPROVEMENT AND VALIDATION FOR GPS CODE TRACKING IN  
 HIGH EARTH ORBITS (HEO)  
 04/24/2002 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* J L GARRISON  
*Tech. Officer:* GSFC/R CARPENTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 12098** PURDUE UNIV 4498  
 LABORATORY STUDIES OF PHOTOCHEMICAL ROUTES TO AROMATIC RING  
 FORMATION IN THE ATMOSPHERES OF TITAN AN  
 04/29/2002 - 04/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* T ZWIER  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12551** PURDUE UNIV 4499  
 MODEL FUNCTION DEVELOPMENT FOR THE RETRIEVAL OF OCEAN  
 SURFACE PROPERTIES FROM SCATTERED GPS SIGNALS  
 09/09/2002 - 09/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J GARRISON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12562** PURDUE UNIV 4500  
 CHICAGO NASA SATURDAY ACADEMY  
 09/16/2002 - 09/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S BAST  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1233** PURDUE UNIV 4501  
 RESEARCH "DEVELOPMENT OF ATMOSPHERIC PHYSICAL RET. USING  
 SATELLITE DATA FROM MICROWAVE SOUNDING, ETC  
 12/04/1996 - 01/21/2002 FY02: \$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 4502  
 VARIABILITY AND PREDICTABILITY OF LAND-ATMOSPHERE INTERACTIONS:  
 OBSERVATIONAL AND MODELING STUDIES  
 05/15/1998 - 05/31/2002 FY02: \$0 Total: \$168,057  
*Prin. Invest.:* R OGLESBY  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 8 1691** PURDUE UNIV 4503  
 EXPERIMENTAL AND NUMERICAL INVESTIGATIONS OF GROWTH MOR-  
 PHOLOGIES OF PERITECTIC REACTIONS  
 06/01/2000 - 11/30/2003 FY02: \$0 Total: \$116,000  
*Prin. Invest.:* D JOHNSON  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1782** PURDUE UNIV 4504  
 RESEARCH GRANT ENTITLED "MAGNETIC FIELD GRADIENT LEVITATION  
 SYSTEM FOR PHYSICS AND BIOPHYSICS"  
 04/30/2001 - 04/29/2005 FY02: \$0 Total: \$110,000  
*Prin. Invest.:* N M LAVRENDEAN  
*Tech. Officer:* GRC/Y R HICKS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 8 1833** PURDUE UNIV 4505  
 ENGINEERING A RIBOZYME FOR DIFFRACTIVE PROPERTIES  
 09/05/2001 - 11/30/2004 FY02: \$0 Total: \$40,000  
*Prin. Invest.:* B L GOLDEN  
*Tech. Officer:* MSFC/B V GUYNES  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## NASA'S UNIVERSITY PROGRAM

INDIANA

**NAG 8 1856**                      **PURDUE UNIV**                      **4506**  
 IMPROVED PRELIMINARY DESIGN ANALYSIS PROCESS FOR HIGH PRES-  
 SURE ROCKET COMBUSTORS  
 12/12/2001 - 12/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W ANDERSON  
*Tech. Officer:* MSFC/A REEB  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1869**                      **PURDUE UNIV**                      **4507**  
 "ZERO-GRAVITY VALIDATION OF SURFACE-TENSION PROPELLANT FOR  
 ROCKET-GRADE HYDROGEN PEROXIDE"  
 06/03/2002 - 06/03/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S H COLLICOTT  
*Tech. Officer:* MSFC/R UNGER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1870**                      **PURDUE UNIV**                      **4508**  
 DEVELOPMENT OF A PARTIAL DESIGN DATABASE FOR ADVANCED HYDRO-  
 GEN PEROXIDE ENGINES  
 06/03/2002 - 06/03/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W E ANDERSON  
*Tech. Officer:* MSFC/R UNGER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1876**                      **PURDUE UNIV**                      **4509**  
 STUDY OF LONG LIFE THRUSTER  
 07/18/2002 - 03/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W ANDERSON  
*Tech. Officer:* MSFC/H TRINH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 9 1281**                      **PURDUE UNIV**                      **4510**  
 HUMAN FACTORS RESEARCH/ORGANIZATIONAL LEARNING USING THE  
 INTRANET  
 03/07/2001 - 12/31/2001                      FY02: \$0                      Total: \$25,000  
*Prin. Invest.:* G SALVENDY  
*Tech. Officer:* JSC/B J WOOLFORD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1292**                      **PURDUE UNIV**                      **4511**  
 CONTROL CREW NETWORK COMMUNICATIONS DURING ROUTINE & NON-  
 ROUTINE EVENTS  
 05/14/2001 - 09/30/2002                      FY02: \$0                      Total: \$145,618  
*Prin. Invest.:* B S CALDWELL  
*Tech. Officer:* JSC/B WOOLFORD  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1385**                      **PURDUE UNIV**                      **4512**  
 COLD WIRE MEASUREMENTS IN THE BODY FLAP CAVITY OF AN X-38  
 MODEL  
 09/24/2001 - 09/30/2002                      FY02: \$0                      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**                      **4513**  
 EVALUATING REMOTE SENSING TECHNOLOGY FOR SITE SPECIFIC AGRIC-  
 CULTURE AND NATIONAL RESOURCES  
 02/18/2000 - 03/19/2003                      FY02: \$0                      Total: \$482,343  
*Prin. Invest.:* C J JOHANNSEN  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 00008**                      **PURDUE UNIV**                      **4514**  
 SIMULATION AND VISUALIZATION OF CAVITATING VENTURI FLOWS - REF  
 #SPS0D086  
 01/29/2001 - 03/31/2002                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* D HEISTER  
*Tech. Officer:* SSC/R E FIELD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG13 02037**                      **PURDUE UNIV**                      **4515**  
 IMPROVED MODELING OF CAVITATING VENTURI FLOWS SPS #OEK37  
 03/07/2002 - 11/30/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D D HEISTER  
*Tech. Officer:* SSC/R FIELD  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG13 02038**                      **PURDUE UNIV**                      **4516**  
 FIELD TEST METHODS FOR HYDROGEN PEROXIDE STABILITY MARGIN SPS  
 #OEM16  
 04/10/2001 - 02/17/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D ANDERSON  
*Tech. Officer:* SSC/W ST CYR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 01042**                      **PURDUE UNIV**                      **4517**  
 COMBINATORIAL MULTIOBJECTIVE OPTIMIZATION USING GENETIC ALGO-  
 RITHMS  
 04/10/2001 - 04/09/2002                      FY02: \$0                      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**                      **4518**  
 MACHINE LEARNING & DATA MINING FOR IMPROVED INTELLIGENT DATA  
 UNDERSTANDING OF HIGH DIMENSIONAL EART  
 04/05/2001 - 02/28/2003                      FY02: \$0                      Total: \$133,000  
*Prin. Invest.:* C BRODLEY  
*Tech. Officer:* ARC/C A HLAVKA, ARC/J COUGHLAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1363**                      **PURDUE UNIV**                      **4519**  
 INST FOR NANOELECTRONICS AND COMPUTING  
 09/25/2002 - 08/31/2007                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S DATTA  
*Tech. Officer:* ARC/H PATRIDGE, ARC/M MEYAPPAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 5 358**                      **PURDUE UNIV**                      **4520**  
 DYNAMICAL SYSTEMS THEORY, NUMERICAL METHODS, OPTIMIZATION  
 STRATEGIES & THEIR APPLICATION TO TRAJECT  
 08/26/1998 - 07/31/2003                      FY02: \$0                      Total: \$299,347  
*Prin. Invest.:* K C HOWELL  
*Tech. Officer:* GSFC/D FOLTA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 627**                      **PURDUE UNIV**                      **4521**  
 YR. 1 OF 1; REOB. FUNDS FROM NCC5-361 UMBC DUE PI TRANSFER TO  
 PURDUE  
 02/08/2002 - 06/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D S EBERT  
*Tech. Officer:* GSFC/A ROBERTS  
*CASE Category:* 22 - COMPUTER SCIENCE

## INDIANA

## NASA'S UNIVERSITY PROGRAM

**NGT 1 52198**                      **PURDUE UNIV**                      **4522**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 07/08/1998 - 10/31/2001                      FY02: \$0                      Total: \$66,001  
*Prin. Invest.:* G L ROTH  
*Tech. Officer:* LARC/D W BARTLETT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 2 52285**                      **PURDUE UNIV**                      **4523**  
 THE ROLE OF DIFFERENTIAL GENE EXPRESSION IN MECHAN O-DWARFING  
 OF PLANTS  
 09/25/2001 - 05/31/2003                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* C A MITCHELL  
*Tech. Officer:* ARC/C A CONLEY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 3 52382**                      **PURDUE UNIV**                      **4524**  
 NASA GRADUATE STUDENT RESEARCHERS PROGRAM SPS #OEM 82  
 07/10/2002 - 07/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J P SULLIVAN  
*Tech. Officer:* GRC/F MONTEGANI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 30163**                      **PURDUE UNIV**                      **4525**  
 DEVELOPMENT, EVALUATION, AND APPLICATION OF A FAST TIME RE-  
 SPONSE MASS SPECTROMETRIC METHOD FOR QU  
 08/31/1998 - 08/31/2001                      FY02: \$0                      Total: \$65,600  
*Prin. Invest.:* P B SHEPSON, BARKET  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40114**                      **PURDUE UNIV**                      **4526**  
 INDIANA SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 03/06/2001 - 02/28/2005                      FY02: \$0                      Total: \$256,250  
*Prin. Invest.:* D ANDRISANI  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50222**                      **PURDUE UNIV**                      **4527**  
 MODELING MULTITHREADING ON MIMD COMPUTERS  
 09/25/1998 - 08/31/2001                      FY02: \$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**                      **4528**  
 LOW-THRUST GRAVITY-ASSIST TRAJECTORY DESIGN STUDENT: THERESA  
 J. DEBBAN  
 06/20/2000 - 12/31/2002                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* J M LONGUSKI  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50336**                      **PURDUE UNIV**                      **4529**  
 SPECTROSCOPY & KINETICS OF METASTABLE DIACETYLENE: IMPROVING  
 MODELS OF TITAN'S ATMOSPHERIC CHEMI  
 05/04/2001 - 06/30/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* T ZWEIR  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8077**                      **TAYLOR UNIV**                      **4530**  
 SOURCE-LOSS/CONE INVESTIGATION  
 01/20/1999 - 01/31/2002                      FY02: \$0                      Total: \$124,994  
*Prin. Invest.:* H D VOSS  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11982**                      **TAYLOR UNIV**                      **4531**  
 SOURCE-LOSS/CONE INVESTIGATION (SEPS)  
 04/23/2002 - 04/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* H VOSS  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 12454**                      **TAYLOR UNIV**                      **4532**  
 CHARGING OF AEROSOLS AND PARTICLES IN THE POLAR SU MMER  
 MESOPHERE (CAPPS)  
 08/19/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* H D FOSS  
*Tech. Officer:* GSFC/R A GOLDBERG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2240**                      **UNIV OF NOTRE DAME**                      **4533**  
 ADVANCED INFO TECHNOLOGY IN SIMULATION BASED LIFE CYCLE DE-  
 SIGN UNDER UNCERTAINTY - NRA-98-LARC-8  
 09/20/1999 - 09/30/2002                      FY02: \$0                      Total: \$143,270  
*Prin. Invest.:* J E RENAUD  
*Tech. Officer:* LARC/J L ROSEY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 01020**                      **UNIV OF NOTRE DAME**                      **4534**  
 ACOUSTIC SOURCE MODELING AND CONTROL FOR HIGH BY-PASS JET  
 ENGINES  
 01/24/2001 - 01/31/2002                      FY02: \$0                      Total: \$63,380  
*Prin. Invest.:* T C CORKE, F O THOMAS  
*Tech. Officer:* LARC/K W KINZIE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02045**                      **UNIV OF NOTRE DAME**                      **4535**  
 ACOUSTIC SOURCE MODELLING AND CONTROL FOR HIGH BY- PASS JET  
 ENGINES  
 01/28/2002 - 01/31/2003                      FY02: \$0                      Total: \$0  
*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**                      **4536**  
 MECHANISTIC STUDIES OF COMBUSTION AND STRUCTURE FO RMATION  
 DURING SYNTHESIS OF ADVANCED MATERIALS  
 01/15/1999 - 11/17/2002                      FY02: \$0                      Total: \$270,125  
*Prin. Invest.:* A VARMA  
*Tech. Officer:* GRC/R FRIEDMAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2366**                      **UNIV OF NOTRE DAME**                      **4537**  
 DIFFUSIVE COARSENING OF LIQUID FOAMS IN MICROGRAVI TY  
 03/28/2000 - 11/30/2003                      FY02: \$0                      Total: \$125,215  
*Prin. Invest.:* D A GLAZIER  
*Tech. Officer:* GRC/F P CHIARMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

## NASA'S UNIVERSITY PROGRAM

INDIANA

**NAG 3 2384**                      **UNIV OF NOTRE DAME**                      **4538**  
 EXPERIMENTAL AND THEORETICAL STUDIES OF WET GRANULAR MEDIA  
 04/06/2000 - 11/30/2003                      FY02: \$0                      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**                      **4539**  
 NASA GRADUATE STUDENT DOCTORAL BUDGET PROJECT NASA GRADUATE STUDENT DOCTORAL BUDGET PROJECT  
 05/09/2000 - 12/01/2001                      FY02: \$0                      Total: \$252,500  
*Prin. Invest.:* S JOHNSON  
*Tech. Officer:* GRC/R LAWRENCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2696**                      **UNIV OF NOTRE DAME**                      **4540**  
 FUNDAMENTAL STUDIES ON TWO-PHASE GAS-LIQUID FLOWS THROUGH PACKED-BEDS IN MICROGRAVITY  
 01/29/2002 - 11/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D J MCCREADY  
*Tech. Officer:* GRC/B MOTIL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2701**                      **UNIV OF NOTRE DAME**                      **4541**  
 MICROCIRCULATION ANOMALIES IN MICROGRAVITY BLOOD FLOW  
 02/04/2002 - 10/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D CHANG  
*Tech. Officer:* GRC/R ANSAH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 9364**                      **UNIV OF NOTRE DAME**                      **4542**  
 SUPERNOVAE AND THE UNIVERSE (LISA - 99)  
 04/25/2000 - 04/30/2005                      FY02: \$0                      Total: \$221,152  
*Prin. Invest.:* P GARNAVICH  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9731**                      **UNIV OF NOTRE DAME**                      **4543**  
 THE MICROLENSING PLANET SEARCH PROJECT  
 06/20/2000 - 02/28/2003                      FY02: \$0                      Total: \$93,000  
*Prin. Invest.:* D BENNET  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 13 - PHYSICS

**NAG 5 10503**                      **UNIV OF NOTRE DAME**                      **4544**  
 ERROR CONTROL CODING TECHNIQUES FOR SPACE & SATELLITE COMMUNICATIONS  
 03/01/2001 - 02/28/2003                      FY02: \$0                      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**                      **4545**  
 GEOCHEMICAL EVOLUTION OF THE MOON & METEORITES  
 03/17/2001 - 03/14/2002                      FY02: \$0                      Total: \$30,000  
*Prin. Invest.:* C NEAL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 12076**                      **UNIV OF NOTRE DAME**                      **4546**  
 GEOCHEMICAL EVOLUTION OF THE MOON & METEORITES  
 04/30/2002 - 04/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C NEAL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NCC 1 395**                      **UNIV OF NOTRE DAME**                      **4547**  
 TURBULENT WAKE DEVELOPMENT IN PRESSURE GRADIENT  
 05/08/2000 - 07/14/2001                      FY02: \$0                      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**                      **4548**  
 TURBULENT WAKE DEVELOPMENT IN PRESSURE GRADIENT  
 06/25/2001 - 07/14/2003                      FY02: \$0                      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**                      **4549**  
 EXPERIMENTAL INVESTIGATION OF UNSTEADY ASPECTS OF HIGH FLOWS  
 02/01/1998 - 12/31/2002                      FY02: \$0                      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**                      **4550**  
 FUNDAMENTAL PROCESSES OF ATOMIZATION IN FLUID-FLUID FLOWS  
 04/16/1996 - 04/15/2001                      FY02: \$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**                      **4551**  
 EFFECTS OF NONUNIFORM FLOWS ON SOUND GENERATION AND PROPAGATION  
 02/10/2000 - 09/30/2001                      FY02: \$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**                      **4552**  
 ENHANCED DESIGN OF TURBO-JET LPT BY ACTIVE SEPARATION CONTROL  
 02/16/2000 - 12/15/2002                      FY02: \$0                      Total: \$170,372  
*Prin. Invest.:* P C CORKE  
*Tech. Officer:* GRC/D ASHPIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 935**                      **UNIV OF NOTRE DAME**                      **4553**  
 ENHANCED DESIGN OF TURBO-JET LPT BY SEPARATION CONTROL USING PHASED PLASMA ACTUATORS  
 01/03/2002 - 01/02/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D C CORKE  
*Tech. Officer:* GRC/D E ASHIPS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 02003**                      **UNIV OF NOTRE DAME**                      **4554**  
 GRADUATE STUDENT RESEARCH PROGRAM  
 06/06/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T C CORKE, E H MATLIS  
*Tech. Officer:* LARC/M CHOUDHARI  
*CASE Category:* 41 - AERONAUTICAL ENGR

## IOWA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8490** VALPARISO UNIV 4555  
 VALIDATION OF H2O & O3 MEASUREMENTS FROM SAGE III USING TRAJEC-  
 TORY MAPPING & CONSTITUENT RECONSTRUCT  
 05/19/1999 - 10/31/2002 FY02: \$0 Total: \$66,156  
*Prin. Invest.:* G A MORRIS  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## IOWA

**NAG 1 1933** IOWA STATE UNIV 4556  
 DEVELOPMENT OF ENHANCED X-RAY INSPECTION  
 05/21/1997 - 05/19/2001 FY02: \$0 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 4557  
 NEW APPROACHES TO INVERTING NDE DATA MY 1/3  
 03/15/2001 - 12/31/2003 FY02: \$0 Total: \$80,000  
*Prin. Invest.:* S S UPDA, J R BOWLER  
*Tech. Officer:* LARC/W P WINFREE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 02098** IOWA STATE UNIV 4558  
 ADVANCED NON-DESTRUCTIVE EVALUATION (NDE) FOR FUTURE AERO-  
 SPACE SYSTEMS  
 05/23/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R B THOMPSON  
*Tech. Officer:* LARC/E R GENERAZIO, LARC/W P WINFRE  
*CASE Category:* 13 - PHYSICS

**NAG 2 1471** IOWA STATE UNIV 4559  
 VERIFICATION OF CONTROLLERS BASED ON ADAPTIVE NEURAL NET-  
 WORKS  
 05/01/2001 - 04/14/2003 FY02: \$0 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 4560  
 MODELING SURFACE ICING ROUGHNESS AND SURFACE WATER TRANS-  
 PORT  
 03/01/2000 - 12/31/2000 FY02: \$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 4561  
 DEVELOPMENT OF CHEMICALLY AND THERMALLY ROBUST LITHIUM FAST  
 ION CONDUCTING CHALCAGENIDE GLASSES  
 02/08/2001 - 01/13/2003 FY02: \$0 Total: \$75,000  
*Prin. Invest.:* S W MARTIN  
*Tech. Officer:* GRC/N H HAGEDORN  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2571** IOWA STATE UNIV 4562  
 MODELING SURFACE ICING ROUGHNESS & SURFACE WATER TRANSPORT  
 03/30/2001 - 02/25/2002 FY02: \$0 Total: \$87,597  
*Prin. Invest.:* A P ROTHMAYER  
*Tech. Officer:* GRC/M G POTAPCZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2731** IOWA STATE UNIV 4563  
 MODELING SURFACE ICING ROUGHNESS AND SURFACE WATER TRANS-  
 PORT  
 03/05/2002 - 01/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A P ROTHMAYER  
*Tech. Officer:* GRC/M G POTAPCZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2784** IOWA STATE UNIV 4564  
 NON-LINEAR ANALYTICAL/NUMERICAL MODEL OF HIGH INTENSITY SOUND  
 INTERACTING WITH A LIQUID  
 06/17/2002 - 11/15/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* J A MANN  
*Tech. Officer:* GRC/R C OEFTERING  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7133** IOWA STATE UNIV 4565  
 ATMOSPHERIC DYNAMICS DEDUCED FROM UARS USING MIDDLE ATMOS-  
 PHERE ISAMS CARBON MONOXIDE AND UPPER T  
 03/16/1998 - 04/30/2002 FY02: \$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 4566  
 SMALL SCALE TROPOPAUSE DYNAMICS AND TOMS TOTAL OZONE  
 05/05/1998 - 05/14/2002 FY02: \$0 Total: \$239,000  
*Prin. Invest.:* S L STANFORD  
*Tech. Officer:* GSFC/S CHANDRA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7530** IOWA STATE UNIV 4567  
 ANALYSES FOR THE CLIMATOLOGY AND SHORT-TERM VARIABILITY OF  
 THE ATMOSPHERIC GENERAL CIRCULATION  
 06/12/1998 - 06/14/2002 FY02: \$0 Total: \$216,000  
*Prin. Invest.:* T CHEN  
*Tech. Officer:* GSFC/S SCHUBERT  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7561** IOWA STATE UNIV 4568  
 COUPLED ATMOSPHERE-SNOW MODEL EVALUATION OF REGIONAL SNOW-  
 MELT  
 06/29/1998 - 06/30/2002 FY02: \$0 Total: \$270,000  
*Prin. Invest.:* W J GUTOWSKI, JR.  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8293** IOWA STATE UNIV 4569  
 DIAGNOSIS AND SIMULATION OF THE SOUTHEAST ASIAN-INDUCED  
 WAVETRAIN THAT OCCURS DURING TROPICAL PACIFIC  
 02/25/1999 - 02/28/2003 FY02: \$0 Total: \$101,626  
*Prin. Invest.:* T C CHEN  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8352** IOWA STATE UNIV 4570  
 THEORETICAL MODELS FOR SEISMOLOGICAL STUDIES OF HOT COMPACT  
 STARS (ATP98)  
 03/01/1999 - 02/28/2002 FY02: \$0 Total: \$194,059  
*Prin. Invest.:* S D KAWALER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

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<p><b>NAG 5 8465</b>                      <b>IOWA STATE UNIV</b>                      <b>4571</b>            THE RESPONSE OF THE SOLAR ATMOSPHERE TO TIME-VARYING AND SPATIALLY IN-HOMOGENEOUS BOUNDARY CONDITIONS            04/21/1999 - 03/31/2003                      FY02: \$0                      Total: \$130,214  <i>Prin. Invest.:</i> L A WILLSON  <i>Tech. Officer:</i> GSFC/W WAGNER  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NCC 1 01039</b>                      <b>IOWA STATE UNIV</b>                      <b>4579</b>            AN INTEGRATED APPROACH TO NOISE CONTROL WITH APPLICATIONS TO AIRCRAFT CABINS            03/28/2001 - 01/31/2004                      FY02: \$0                      Total: \$68,063  <i>Prin. Invest.:</i> A G KELKAR  <i>Tech. Officer:</i> LARC/S M JOSHI  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 5 12428</b>                      <b>IOWA STATE UNIV</b>                      <b>4572</b>            EXCITATION AND WORLDWIDE IMPACT OF CIRCUMGLOBAL ATMOSPHERIC WAVETRAINS.            08/02/2002 - 07/31/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> T CHEN  <i>Tech. Officer:</i> GSFC/M RIENECKER  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NCC 1 01047</b>                      <b>IOWA STATE UNIV</b>                      <b>4580</b>            PREDICTIVE AND NEURAL PREDICTIVE CONTROL OF UNCERTAIN SYSTEMS - II            04/17/2001 - 02/28/2003                      FY02: \$0                      Total: \$12,198  <i>Prin. Invest.:</i> A G KELKAR  <i>Tech. Officer:</i> LARC/P J HALEY  <i>CASE Category:</i> 21 - MATHEMATICS</p>
<p><b>NAG 8 1637</b>                      <b>IOWA STATE UNIV</b>                      <b>4573</b>            AN ADVANCED ENTRY GUIDANCE CONCEPT BASED ON TRAJECTORY REGULATION            10/28/1999 - 01/31/2002                      FY02: \$0                      Total: \$105,974  <i>Prin. Invest.:</i> P LU  <i>Tech. Officer:</i> MSFC/G DUKEMAN  <i>CASE Category:</i> 46 - MECHANICAL ENGR</p>	<p><b>NCC 1 02016</b>                      <b>IOWA STATE UNIV</b>                      <b>4581</b>            SYNTHESIS OF ANALYTIC &amp; COMPUTATIONAL METHODS TO ENHANCE PREDICTION OF HYPERSONIC VEHICLE FLOW FIELDS            03/04/2002 - 03/03/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> G R INGER  <i>Tech. Officer:</i> LARC/P A GNOFFO  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 8 1681</b>                      <b>IOWA STATE UNIV</b>                      <b>4574</b>            DYNAMICAL SELECTION OF THREE-DIMENSIONAL INTERFACE PATTERNS IN DIRECTIONAL SOLIDIFICATION.            05/25/2000 - 11/30/2003                      FY02: \$0                      Total: \$185,300  <i>Prin. Invest.:</i> R K TRIVEDI  <i>Tech. Officer:</i> MSFC/A JACKSON  <i>CASE Category:</i> 47 - METAL &amp; MATERIALS ENGR</p>	<p><b>NCC 2 5349</b>                      <b>IOWA STATE UNIV</b>                      <b>4582</b>            PROPOSAL FOR JOINT RESEARCH EXCHANGE BETWEEN NASA &amp; ISU            09/03/1999 - 12/31/2000                      FY02: \$0                      Total: \$109,500  <i>Prin. Invest.:</i> M S GORDON  <i>Tech. Officer:</i> ARC/W M HUO, ARC/R L JAFFE  <i>CASE Category:</i> 12 - CHEMISTRY</p>
<p><b>NAG 9 1115</b>                      <b>IOWA STATE UNIV</b>                      <b>4575</b>            EXAMINATION OF BACTERIA MATERIALS            05/10/1999 - 05/09/2004                      FY02: \$0                      Total: \$45,000  <i>Prin. Invest.:</i> P A BAZLINSKI  <i>Tech. Officer:</i> JSC/E K GIBSON  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NCC 2 5379</b>                      <b>IOWA STATE UNIV</b>                      <b>4583</b>            STOKES CODE FOR COMPUTING MAGNETO-HYDRODYNAMIC FLOW FIELDS            04/07/2000 - 04/30/2003                      FY02: \$0                      Total: \$58,000  <i>Prin. Invest.:</i> J C TANNEHILL  <i>Tech. Officer:</i> ARC/U B MEHTA  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 9 1184</b>                      <b>IOWA STATE UNIV</b>                      <b>4576</b>            EXPERIMENTS TO DETERMINE THE AERODYNAMIC COEFFICIENT OF THE X38 PARAFOL            01/28/2000 - 12/31/2002                      FY02: \$0                      Total: \$23,200  <i>Prin. Invest.:</i> L M LILJEGREN  <i>Tech. Officer:</i> JSC/R L BARTON, JSC/W D GOODRICH  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NCC 2 5517</b>                      <b>IOWA STATE UNIV</b>                      <b>4584</b>            NUMERICAL SIMULATION OF A SUPERSONIC MHD FLOW USING AN ITERATIVE PNS ALGORITHM            08/08/2002 - 07/31/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> J C TANNEHILL  <i>Tech. Officer:</i> ARC/U B MEHTA, ARC/S LAWRENCE  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 9 1191</b>                      <b>IOWA STATE UNIV</b>                      <b>4577</b>            RAPID SPECIFIC CHEMICAL SENSORS AND TEST KIT            02/28/2000 - 01/31/2003                      FY02: \$0                      Total: \$491,761  <i>Prin. Invest.:</i> M D PORTER  <i>Tech. Officer:</i> JPL/D JAN  <i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER</p>	<p><b>NCC 3 846</b>                      <b>IOWA STATE UNIV</b>                      <b>4585</b>            QUENCHING OF PARTIAL-GAS COMBUSTIBLE MIXTURES USING ELECTRIC PARTICULATE SUSPENSION (EPS) AND DISPERSION            01/09/2001 - 12/07/2004                      FY02: \$0                      Total: \$84,996  <i>Prin. Invest.:</i> G M COLVER  <i>Tech. Officer:</i> GR/K R SACKSTEDER  <i>CASE Category:</i> 46 - MECHANICAL ENGR</p>
<p><b>NCC 1 01038</b>                      <b>IOWA STATE UNIV</b>                      <b>4578</b>            SYNTHESIS METHODS FOR ROBUST PASSIFICATION AND CONTROL - II            03/20/2001 - 06/15/2002                      FY02: -\$4,096                      Total: \$5,036  <i>Prin. Invest.:</i> A G KELKAR  <i>Tech. Officer:</i> LARC/S M JOSHI  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NCC 8 98</b>                      <b>IOWA STATE UNIV</b>                      <b>4586</b>            INTERFACE PATTERN SELECTION CRITERION FOR CELLULAR STRUCTURES IN DIRECTIONAL SOLIDIFICATION            06/28/1996 - 12/31/2002                      FY02: \$0                      Total: \$1,024,543  <i>Prin. Invest.:</i> R K TRIVEDI  <i>Tech. Officer:</i> MSFC/M HAMMOND  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>

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**NCC 9 100** **IOWA STATE UNIV** **4587**  
 60 DAY DEFINITION PHASE  
 08/01/1999 - 10/03/2004 FY02: \$0 Total: \$1,225,000  
*Prin. Invest.:* D OLSEN  
*Tech. Officer:* JSC/H LANE  
*CASE Category:* 55 - AGRICULTURE

**NGT 3 52380** **IOWA STATE UNIV** **4588**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 06/29/2001 - 06/30/2003 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* D ROTHMAYER  
*Tech. Officer:* GRC/F J MONTGOMERY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 4 52433** **IOWA STATE UNIV** **4589**  
 GRADUATE STUDENT RESEARCH PROGRAM - FORMULATION OF A COM-  
 PLETE AIRCRAFT STRUCTURAL VARIATIONMODEL F  
 06/17/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* F R CHAVEZ  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 30419** **IOWA STATE UNIV** **4590**  
 INTERANNUAL VARIATION OF THE NORTH AMERICAN MONSOON RAINFALL  
 STUDENT: JIN-HO YOON  
 09/06/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* T CHEN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40081** **IOWA STATE UNIV** **4591**  
 IOWA STATE GRANT COLL AND FELLOWSHIP PROGRAM  
 02/08/2001 - 01/31/2005 FY02: \$0 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** **4592**  
 OPTIMAL EARTH-MARS TRANSFER TRAJECTORIES USING ADVANCED PRO-  
 PULSION SYSTEM  
 05/25/2001 - 06/30/2002 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* P LU  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 8 52903** **IOWA STATE UNIV** **4593**  
 MORPHOLOGICAL SELECTION DURING ALLOW SOLIDIFICATION  
 05/25/2001 - 06/30/2002 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* R NAPOLITANO  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 2305** **UNIV OF IOWA** **4594**  
 IMPACT OF MINERAL AND OTHER AEROSOLS AND ASIAN EMISSIONS ON  
 THE CHEMISTRY OF THE TROPOSPHERE  
 06/15/2000 - 03/31/2003 FY02: \$0 Total: \$211,000  
*Prin. Invest.:* G R CARMICHAEL, H LEVY  
*Tech. Officer:* LARC/G L MADDREA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 02097** **UNIV OF IOWA** **4595**  
 SYNTHETIC VISION DISPLAY: OPTIMAL DISPLAY CHARACTERISTICS  
 05/14/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* T SCHNELL, K LEMOS  
*Tech. Officer:* LARC/L J GLAAB  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2128** **UNIV OF IOWA** **4596**  
 PLASMA DUST CRYSTALLIZATION PLASMA DUST CRYSTALLIZATION  
 02/27/1998 - 12/31/2002 FY02: \$0 Total: \$459,000  
*Prin. Invest.:* J A GOREE  
*Tech. Officer:* GRC/R B ROGERS  
*CASE Category:* 13 - PHYSICS

**NAG 3 2368** **UNIV OF IOWA** **4597**  
 RIVULET DYNAMICS WITH VARIABLE GRAVITY AND WIND SH EAR  
 04/03/2000 - 11/30/2003 FY02: \$0 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** **4598**  
 THEORY AND SIMULATION OF GROUND-BASED AND MICROGRA VITY  
 DUSTY PLASMA EXPERIMENTS  
 03/28/2000 - 11/30/2003 FY02: \$0 Total: \$140,000  
*Prin. Invest.:* A BHATTACHARJEE  
*Tech. Officer:* GRC/R B ROGERS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2771** **UNIV OF IOWA** **4599**  
 OPTICALLY-EXCITED WAVES IN 3D DUSTY PLASMAS OPTICALLY-EXCITED  
 WAVES IN 3D DUSTY PLASMAS  
 04/22/2002 - 03/31/2006 FY02: \$0 Total: \$0  
*Prin. Invest.:* D A GOREE  
*Tech. Officer:* GRC/R B ROGERS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 5232** **UNIV OF IOWA** **4600**  
 ROCKET AURORAL CORRELATOR EXPERIMENT PI DR. CRAIG KLETZING  
 02/12/1999 - 02/09/2003 FY02: \$0 Total: \$373,657  
*Prin. Invest.:* C A KLETZING  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5319** **UNIV OF IOWA** **4601**  
 PLASMA DIAGNOSTIC FOR THE HIBAR EXPERIMENT PLASMA DIAGNOSTIC  
 FOR THE HIBAR EXPERIMENT  
 03/19/2001 - 02/28/2004 FY02: \$0 Total: \$78,966  
*Prin. Invest.:* C A KLETZING  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 7187** **UNIV OF IOWA** **4602**  
 RESTORATION AND ARCHIVING OF THE ISEE 1 AND 2 PLASMA WAVE  
 INVESTIGATION DATA SETS  
 03/26/1998 - 06/30/2002 FY02: \$0 Total: \$134,117  
*Prin. Invest.:* D ANDERSON  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY



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**NAG 5 7390**                      **UNIV OF IOWA**                      **4603**  
 GENERATION AND SCATTERING OF RADIATION OBSERVED BY VOYAGER  
 IN THE OUTER HELIOSPHERE  
 05/07/1998 - 02/28/2002              FY02: \$0                      Total: \$43,200  
*Prin. Invest.:* I H CAIRNS  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7684**                      **UNIV OF IOWA**                      **4604**  
 FUNDING OF THE ANALYSIS OF PLASMA MEASUREMENTS FOR THE  
 GEOTAIL EXTENDED MISSION / FUNDING FOR YR 1  
 09/09/1998 - 09/30/2002              FY02: \$0                      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**                      **4605**  
 A PROPOSAL FOR STUDYING GEOMAGNETIC STORMS FROM THE ANALY-  
 SES AND INTER. OF PLASMA WAVE DATA  
 09/23/1998 - 10/31/2001              FY02: \$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**                      **4606**  
 FUNDING FOR VIS ON THE POLAR SPACECRAFT FOR THE EXTENDED  
 MISSION  
 09/28/1998 - 03/31/2002              FY02: \$0                      Total: \$1,978,606  
*Prin. Invest.:* L A FRANK  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 7943**                      **UNIV OF IOWA**                      **4607**  
 POLAR PLASMA WAVE INVESTIGATION DATA ANALYSIS IN THE EXTENDED  
 MISSION  
 01/27/1999 - 03/31/2002              FY02: \$0                      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**                      **4608**  
 GGS-POLAR-HYDRA EXTENDED MISSION SCIENCE INVESTIGATION  
 01/29/1999 - 01/31/2002              FY02: \$0                      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**                      **4609**  
 COUPLING SATELLITE REMOTE SENSING & UNSTEADY FLOW MODELING  
 FOR DISCHARGE ESTIMATION  
 11/16/1999 - 10/31/2002              FY02: \$0                      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**                      **4610**  
 ANALYSIS AND MODELING OF JOVIAN RADIO EMISSIONS OBSERVED BY  
 GALILEO  
 01/18/2000 - 06/30/2003              FY02: \$0                      Total: \$105,000  
*Prin. Invest.:* J MENIETTI  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9499**                      **UNIV OF IOWA**                      **4611**  
 NEW GRANT EXTEND SOLAR MAX: COLLISIONLESS RECOMME NDATION  
 THEORY AND HIGH RESOLUTION SIMULATIONS  
 05/04/2000 - 05/14/2002              FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* J SCUDDER  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9561**                      **UNIV OF IOWA**                      **4612**  
 WAVE AND PARTICLE INTERACTIONS IN THE HIGH AND LOW -ALTITUDE  
 AURORAL REGION DURING RISING SOLARACTI  
 05/04/2000 - 05/14/2003              FY02: \$0                      Total: \$90,041  
*Prin. Invest.:* D GURNETT  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9664**                      **UNIV OF IOWA**                      **4613**  
 GROUND-BASED RAINFALL ESTIMATION STUDIES FOR TRMM VALIDATION  
 06/08/2000 - 12/14/2002              FY02: \$0                      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**                      **4614**  
 X-RAY EMISSION FROM SINGLE WOLF-RAYET STARS  
 09/25/2000 - 08/31/2002              FY02: \$0                      Total: \$32,581  
*Prin. Invest.:* R IGNACE  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9974**                      **UNIV OF IOWA**                      **4615**  
 A PROPOSAL FOR CLUSTER II WIDEBAND (WBD) PLASMA WAVE INVESTI-  
 GATION MISSION OPERATIONS & DATA  
 09/21/2000 - 10/31/2003              FY02: \$60,000                      Total: \$846,130  
*Prin. Invest.:* D GURNETT  
*Tech. Officer:* GSFC/M GOLDSTEIN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10329**                      **UNIV OF IOWA**                      **4616**  
 BALLOONING INSTABILITIES OF COLLISIONLESS THIN CURRENT SHEETS:  
 A MECHANISM FOR SUBSTORM ONSET  
 01/29/2001 - 01/31/2003              FY02: \$0                      Total: \$40,000  
*Prin. Invest.:* A BHATTACHARJEE  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11117**                      **UNIV OF IOWA**                      **4617**  
 PLASMA MEASUREMENTS FOR GEOTAIL  
 08/08/2001 - 10/15/2001              FY02: -\$400,000                      Total: \$0  
*Prin. Invest.:* L FRANK  
*Tech. Officer:* GSFC/D FAIRFIELD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11379**                      **UNIV OF IOWA**                      **4618**  
 A PROPOSAL FOR WRAPPING UP THE ANALYSES AND INTERP RETATION  
 OF PLASMA WAVE DATA FROM THE GEOTAIL  
 10/25/2001 - 01/31/2002              FY02: \$35,000                      Total: \$35,000  
*Prin. Invest.:* R ANDERSON  
*Tech. Officer:* GSFC/D FAIRFIELD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11485**                      **UNIV OF IOWA**                      **4619**  
 PLASMA MEASUREMENTS FOR GEOTAIL  
 12/19/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L FRANK  
*Tech. Officer:* GSFC/D FAIRFIELD  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 11528**                      **UNIV OF IOWA**                      **4620**  
 THE ANALYSIS OF IMAGES FROM THE VISIBLE IMAGING SYSTEM ON  
 POLAR SPACECRAFT FOR THE ISTP MISSION  
 01/14/2002 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L FRANK  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 5 11676**                      **UNIV OF IOWA**                      **4621**  
 GGS-POLAR-HYDRA EXTENDED MISSION SCIENCE INVESTIGATION  
 01/30/2002 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J SCUDDER  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 5 11688**                      **UNIV OF IOWA**                      **4622**  
 "IMPACT OF FIELD-SCALE HETEROGENEITY IN SURFACE MOISTURE AND  
 VEGETATION COVER ON REGIONAL SCALE FLU  
 02/12/2002 - 01/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W EICHINGER  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 5 11707**                      **UNIV OF IOWA**                      **4623**  
 PLASMA WAVE DATA FROM GEOTAIL  
 02/14/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R ANDERSON  
*Tech. Officer:* GSFC/D FAIRFIELD  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 5 11867**                      **UNIV OF IOWA**                      **4624**  
 ALFVEN WAVE ELECTRON ACCELERATION ON REALISTIC AURORAL FIELD  
 LINES  
 03/18/2002 - 03/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C A KLETZING  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 11942**                      **UNIV OF IOWA**                      **4625**  
 A PROPOSAL FOR POLAR PLASMA WAVE INVESTIGATION (PW I) DATA  
 ANALYSIS IN THE EXTENDED MISSION  
 03/29/2002 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D A GURNETT  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 5 11969**                      **UNIV OF IOWA**                      **4626**  
 AMSR VALIDATION SITE IN IOWA CITY, IOWA  
 04/05/2002 - 04/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W KRAJEWSKI  
*Tech. Officer:* GSFC/RADLER  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

**NAG 5 11981**                      **UNIV OF IOWA**                      **4627**  
 DATA-CENTRIC ANALYSIS OF SCIENCE RETURN FOR HUMAN-DIRECTED  
 ROBOTIC GEOLOGY  
 05/14/2002 - 05/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G W THOMAS  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 8 1352**                      **UNIV OF IOWA**                      **4628**  
 FOR RESEARCH "REAL TIME MONITORING OF PROTEIN CONCENTRATION  
 IN SOLUTION TO CONTROL NUCLEATION...  
 06/02/1997 - 08/31/2001                      FY02: \$0                      Total: \$573,441  
*Prin. Invest.:* M A ARNOLD  
*Tech. Officer:* MSFC/B GUYNES, MSFC/J MAYO  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NAG 8 1588**                      **UNIV OF IOWA**                      **4629**  
 REJUBENATION OF SPENT MEDIA VIA SUPPORTED EMULSION LIQUID  
 MEMBRANES  
 03/19/1999 - 11/30/2002                      FY02: \$100,000                      Total: \$610,650  
*Prin. Invest.:* J WIENECK  
*Tech. Officer:* MSFC/B GUYNES, MSFC/D CHAFEE  
*CASE Category:* 51 – BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1591**                      **UNIV OF IOWA**                      **4630**  
 EVALUATING OXIDATIVE STRESS IN VIRALLY-INFECTED CELLS IN SIMU-  
 LATED MICROGRAVITY  
 03/19/1999 - 11/30/2002                      FY02: \$0                      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**                      **4631**  
 R/S MONITORING AND CONTROL OF ROTATING WALL VESSELS AND  
 APPLICATION TO THE STUDY OF PROSTATE  
 03/30/1999 - 11/30/2002                      FY02: \$0                      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**                      **4632**  
 R/S EXTREMOPHILIC INTERFACIAL SYSTEMS FOR WASTE PROCESSING IN  
 SPACE  
 03/15/1999 - 11/30/2002                      FY02: \$0                      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**                      **4633**  
 NONINVASIVE NEAR-INFRARED MONITORS FOR PROTEIN CRYSTALLIZA-  
 TION  
 08/30/2001 - 11/30/2004                      FY02: \$0                      Total: \$124,000  
*Prin. Invest.:* M A ARNOLD  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 19 – PHYSICAL SCIENCE, OTHER

**NCC 1 422**                      **UNIV OF IOWA**                      **4634**  
 REGIONAL SCALE FORECASTING AND EXPERIMENT-SPECIFIC EMISSION  
 ESTIMATES OF GAS AND AEROSOL DISTRIBUTION  
 09/26/2000 - 06/30/2003                      FY02: \$0                      Total: \$105,551  
*Prin. Invest.:* G R CARMICHAEL  
*Tech. Officer:* LARC/J L RAPER, SR  
*CASE Category:* 31 – ATMOSPHERIC SCIENCE

## NASA'S UNIVERSITY PROGRAM

KANSAS

**NCC 3 666**                      **UNIV OF IOWA**                      **4635**  
 REFLIGHT OF ELF (ENCLOSED LAMINAR FLAMES) INVESTIGATION  
 02/02/1999 - 01/03/2003                      FY02: \$0                      Total: \$225,575  
*Prin. Invest.:* D CHEN  
*Tech. Officer:* GRC/D P STOCKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 8 94**                      **UNIV OF IOWA**                      **4636**  
 EQUIAXED DENDRITIC SOLIDIFICATION EXPERIMENT (EDSE)  
 05/31/1996 - 05/03/2003                      FY02: \$0                      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**                      **4637**  
 DENDRITIC ALLOY SOLIDIFICATION EXPERIMENT (DASE)  
 04/12/2000 - 11/30/2003                      FY02: \$0                      Total: \$186,250  
*Prin. Invest.:* C BECKERMANN  
*Tech. Officer:* GSFC/P DOTY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 5 30199**                      **UNIV OF IOWA**                      **4638**  
 ASSESSMENT OF THE IMPACT OF ASIAN EMISSIONS ON A LOCAL,  
 REGIONAL & GLOBAL SCALE/STUDENT: SARATHG  
 08/25/1999 - 08/31/2002                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* G CARMICHAEL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50377**                      **UNIV OF IOWA**                      **4639**  
 ARCHAICAL CHAPERONINS CAN BE USED TO EXTEND THE FUNCTIONAL  
 RANGE OF CONDITIONS IN WHICH ENZYMES  
 09/05/2001 - 09/14/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* T PEEPLES  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## KANSAS

**NAG 1 02014**                      **KANSAS STATE UNIV**                      **4640**  
 STIFFNESS & STRENGTH OF POLYMER NETWORK & CARBON NANOTUBE  
 REINFORCED POLYMER NETWORK  
 12/07/2001 - 12/09/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* Y WANG  
*Tech. Officer:* LARC/J A HINKLEY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 02041**                      **KANSAS STATE UNIV**                      **4641**  
 COMPUTATIONAL MODELS FOR ELECTROSTRICTIVE GRAFT ELASTOMER  
 01/18/2002 - 01/17/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* Y WANG  
*Tech. Officer:* LARC/J SU  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 2 1274**                      **KANSAS STATE UNIV**                      **4642**  
 DIFFERENTIATION OF BONE MARROW MACROPHAGES IN SPAC E-PHASE A  
 12/28/1998 - 09/30/2002                      FY02: \$0                      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**                      **4643**  
 GELATION IN AEROSOLS: NON-MEAN-FIELD AGGREGATION KINETICS  
 03/27/2000 - 11/30/2003                      FY02: \$0                      Total: \$120,000  
*Prin. Invest.:* C SORENSEN  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 13 - PHYSICS

**NAG 5 11337**                      **KANSAS STATE UNIV**                      **4644**  
 SCALING UP THE ECOSYSTEM CONSEQUENCES OF FOREST EXPANSION  
 IN THE GREAT PLAINS REGION  
 09/07/2001 - 09/14/2004                      FY02: \$0                      Total: \$194,762  
*Prin. Invest.:* L JOHNSON  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1687**                      **KANSAS STATE UNIV**                      **4645**  
 RESEARCH ENTITLED, "NANOCRYSTAL SUPERLATTICES: SYNTHESIS AND  
 PROPERTIES"  
 06/01/2000 - 11/30/2003                      FY02: \$0                      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**                      **4646**  
 RESEARCH, "CRYSTAL GROWTH OF NEW FAMILIES OF FERROELASTIC  
 MATERIALS"  
 06/07/2000 - 11/30/2003                      FY02: \$0                      Total: \$125,500  
*Prin. Invest.:* M D HOLLINGSWORTH  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG10 325**                      **KANSAS STATE UNIV**                      **4647**  
 USEFUL LIFE PREDICTION FOR PAYLOAD CARRIER HARDWARE  
 09/19/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D BEN-ARIEH  
*Tech. Officer:* KSC/L GOSPER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 234**                      **KANSAS STATE UNIV**                      **4648**  
 ASPECTS AND CONTROL OF TIDAL SEDIMENTATION AND THE EXTRACTION  
 AND MODELING OF TIDAL PARAMETERS FROM  
 12/12/1997 - 09/30/2001                      FY02: \$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**                      **4649**  
 ESTIMATION OF UNSTEADY AERODYNAMIC MODELS FROM FLIGHT TEST  
 DATA  
 12/08/2000 - 06/30/2003                      FY02: \$0                      Total: \$62,572  
*Prin. Invest.:* C E LAN  
*Tech. Officer:* LARC/J M BRANDON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 7053**                      **UNIV OF KANSAS**                      **4650**  
 ANALYSIS OF AIRCRAFT LASER ALTIMETER DATA FROM GREENLAND  
 02/25/1998 - 02/28/2002                      FY02: \$0                      Total: \$90,772  
*Prin. Invest.:* D A BRAATEN  
*Tech. Officer:* GSFC/R THOMAS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## KANSAS

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8758** **UNIV OF KANSAS** **4651**  
 MEASUREMENT OF THE THICKNESS OF THE GREENLAND ICE SHEET &  
 HIGH RESOLUTION MAPPING OF INTERNALLAYERS  
 08/24/1999 - 12/31/2002 FY02: \$0 Total: \$547,701  
*Prin. Invest.:* S GOGINENI  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9840** **UNIV OF KANSAS** **4652**  
 REMOTE SENSING OF EAST ANTARCTIC ICE STREAMS  
 07/28/2000 - 03/31/2002 FY02: \$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** **4653**  
 INCUBATING COMMERCIAL REMOTE SENSING PRODUCTS  
 07/28/2000 - 01/14/2002 FY02: \$0 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** **4654**  
 VALIDATION OF AMSR-E & AMSU/HSB LEVEL 1 BRIGHTNESS TEMPERA-  
 TURES & LEVEL 2 CLOUD & PRECIPITATION  
 07/13/2001 - 08/31/2004 FY02: \$0 Total: \$84,273  
*Prin. Invest.:* R BENNARTZ  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11788** **UNIV OF KANSAS** **4655**  
 VALIDATIONS OF AMSR SNOW DEPTH ON SEA ICE RETREIVALS USING AN  
 AIRBORNE PULSE RADAR  
 02/26/2002 - 02/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* S GOGINENI  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11988** **UNIV OF KANSAS** **4656**  
 INCUBATING COMMERCIAL REMOTE SENSING PRODUCTS  
 04/09/2002 - 03/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* K P PRICE  
*Tech. Officer:* GSFC/A J TUYAHOV  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12439** **UNIV OF KANSAS** **4657**  
 RADAR SOUNDING AND AIRBORNE HIGH RESOLUTION MAPPING OF NEAR  
 SURFACE LAYERS OF THE GREENLAND ICE  
 08/12/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* P GOGINENI  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12588** **UNIV OF KANSAS** **4658**  
 ICE THICKNESS MEASUREMENTS OVER THE PATAGONIAN GLACIES AND  
 THE PINE ISLAND AND THWAITES GLACIER  
 09/18/2002 - 09/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* P KANAGARATNAM  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG13 01008** **UNIV OF KANSAS** **4659**  
 LINKING REMOTE SENSING, LAND USE, AND CARBON SEQUESTRATION:  
 INSIGHTS LEAF TO LANDSCAPE SCALE  
 09/18/2001 - 09/17/2003 FY02: \$0 Total: \$997,800  
*Prin. Invest.:* K P PRICE  
*Tech. Officer:* SSC/B DAVIS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99009** **UNIV OF KANSAS** **4660**  
 CONSORTIUM FOR PRODUCTS AND TECHNOLOGY TO SUPPORT THE  
 GREAT PLAINS AGROECOSYSTEM  
 03/01/1999 - 03/01/2003 FY02: \$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** **4661**  
 REMOTE SENSING-BASED GEOSTATISTICAL MODELING FOR CONIFEROUS  
 FOREST INVENTORY & CHARACTERIZATION  
 08/10/1999 - 08/09/2003 FY02: \$0 Total: \$430,000  
*Prin. Invest.:* M JAKUBAUSKAS  
*Tech. Officer:* SSC/R MCKALLIP  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAS 1 99052** **UNIV OF KANSAS** **4662**  
 DEVELOPMENT OF A HYBRID RF/LASER RADAR  
 03/08/1999 - 03/07/2002 FY02: \$0 Total: \$583,648  
*Prin. Invest.:* C ALLEN  
*Tech. Officer:* LARC/J HILL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 3 00162** **UNIV OF KANSAS** **4663**  
 NRA 99-OES-08 ESTO AIST SBI  
 08/01/2000 - 08/02/2002 FY02: \$0 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** **4664**  
 KANSAS SPACE AND LIFE SCIENCES, GEOPHYSICAL INFORM AERONAU-  
 TICS AND FLIGHT ENGINEERING TECHNOLOGY (K-  
 01/27/1997 - 12/31/2002 FY02: \$0 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** **4665**  
 EPSCOR PREPARATION PROGRAM  
 06/24/1999 - 03/01/2002 FY02: \$0 Total: \$450,000  
*Prin. Invest.:* D DOWNING  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 600** **UNIV OF KANSAS** **4666**  
 KANSAS NASA EPSCOR PROGRAM: EXPERIMENTAL PROGRAM TO STIMU-  
 LATE COMPETITIVE RESEARCH  
 12/17/2001 - 11/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* D R DOWNING  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

KANSAS

**NGT 3 52361**                      **UNIV OF KANSAS**                      **4667**  
 NASA GRADUATE STUDENT RESEARCHERS PROGRAM NASA GRADUATE  
 STUDENT RESEARCHERS PROGRAM  
 08/18/1999 - 08/14/2002                      FY02: \$0                      Total: \$49,500  
*Prin. Invest.:* R TAGHAVI  
*Tech. Officer:* GRC/M MEYER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 30404**                      **UNIV OF KANSAS**                      **4668**  
 DETERMINATION OF THERMAL RESPONSE PATTERNS FROM LAND SUR-  
 FACES & THEIR RELATIONSHIP WITH CLIMATIC  
 08/14/2001 - 08/31/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* S EGBERT  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30449**                      **UNIV OF KANSAS**                      **4669**  
 DEVELOPMENT OF A MONOSTATIC/BISTATIC SYNTHETIC APE RTURE RA-  
 DAR SYSTEM FORTWO DIMENSAIONAL MAPPING OF  
 08/23/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P GOGINENI  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40065**                      **UNIV OF KANSAS**                      **4670**  
 KANSAS/NATIONAL SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 09/16/1998 - 03/31/2001                      FY02: \$0                      Total: \$637,500  
*Prin. Invest.:* D R DOWNING  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40121**                      **UNIV OF KANSAS**                      **4671**  
 KANSAS SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 03/20/2001 - 03/31/2005                      FY02: \$0                      Total: \$212,500  
*Prin. Invest.:* D R DOWNING  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50219**                      **UNIV OF KANSAS**                      **4672**  
 DEVELOPMENT OF RADAR SYSTEM FOR ACCUMULATION MEASU RE-  
 MENTS ESSF STUDENT: PANNIRSELVAM  
 09/17/1998 - 02/28/2002                      FY02: \$0                      Total: \$73,839  
*Prin. Invest.:* G S PRASAD  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 50421**                      **UNIV OF KANSAS**                      **4673**  
 DEVELOPMENT OF A NEAR REAL-TIME MAPPING & MONITORI NG PROTO-  
 COL FOR THE U.S. GREAT PLAINS AGRO-ECOS  
 08/21/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S EGBERT  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1016**                      **UNIV OF KANSAS MEDICAL CENTER**                      **4674**  
 MICROGRAVITY & SIGNAL TRASDUCTION PATHWAYS IN SPER M  
 10/12/1995 - 12/31/2000                      FY02: \$0                      Total: \$572,927  
*Prin. Invest.:* J S TASH  
*Tech. Officer:* ARC/C M WINGET, ARC/G C JANHS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1491**                      **UNIV OF KANSAS MEDICAL CENTER**                      **4675**  
 LONG-TERM SIMULATED MICROGRAVITY INHIBITS SPERMATO GENESIS IN  
 ADULT MALE RATS  
 07/11/2001 - 06/30/2003                      FY02: \$0                      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**                      **4676**  
 STUDIES IN PLANETARY AERONOMY  
 06/14/2001 - 08/31/2004                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* T E CRAVENS  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 3 2137**                      **WICHITA STATE UNIV**                      **4677**  
 PILOT SIMULATOR TRAINING FOR AIRCRAFT ICING PILOT SIMULATOR  
 TRAINING FOR AIRCRAFT ICING  
 03/06/1998 - 08/31/2002                      FY02: \$0                      Total: \$1,014,319  
*Prin. Invest.:* D ELLIS, M PAODAKIS  
*Tech. Officer:* GRC/T H BOND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2324**                      **WICHITA STATE UNIV**                      **4678**  
 WATER DROPLET IMPINGEMENT PROGRAM - PHASE II WATER DROPLET  
 IMPINGEMENT PROGRAM - PHASE II  
 02/01/2000 - 11/30/2002                      FY02: \$0                      Total: \$201,434  
*Prin. Invest.:* D PAPADAKIS  
*Tech. Officer:* GRC/C BIDWELL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3435**                      **WICHITA STATE UNIV**                      **4679**  
 SPECTROSCOPIC PROPERTIES OF SUB STELLAR OBJECTS  
 10/01/1996 - 09/30/2003                      FY02: \$0                      Total: \$303,500  
*Prin. Invest.:* D ALEXANDER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NCA 1 106**                      **WICHITA STATE UNIV**                      **4680**  
 GENERAL AVIATION PROGRAM/AGATE  
 02/24/1995 - 02/28/2002                      FY02: \$0                      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**                      **4681**  
 JOINT SPONSORED RESARCH AGREEMENT - ICHING RESEARC H  
 02/22/1996 - 03/31/2001                      FY02: \$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**                      **4682**  
 TAILPLANE ICING PROGRAM - PHASE II TAILPLANE ICING PROGRAM -  
 PHASE II  
 06/08/1998 - 05/31/2002                      FY02: \$0                      Total: \$464,712  
*Prin. Invest.:* M PAPADAKIS, D ELLIS  
*Tech. Officer:* GRC/T P RATVASKY  
*CASE Category:* 41 - AERONAUTICAL ENGR

KENTUCKY

NASA'S UNIVERSITY PROGRAM

**NCC 8 202**                      **WICHITA STATE UNIV**                      **4683**  
 "ROLE OF THE FILLER WIRE COMPOSITIONS IN CRACK NUCLEATION AND  
 PROPAGATION OF ALUMINUM WELDS"  
 06/08/2000 - 07/17/2002                      FY02: \$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 5 12319**                      **MOREHEAD STATE UNIV**                      **4684**  
 DEVELOPMENT OF A HYBRID 18-METER ANTENNA SYSTEM FO R RE-  
 SEARCH IN RADIO ASTRONOMY AND SATELLITE TEL  
 07/17/2002 - 07/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B K MALPHRUS  
*Tech. Officer:* GSFC/V OXENHAM  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 01036**                      **UNIV OF KENTUCKY**                      **4685**  
 DEV/APPLIC OF MAGNETOELASTIC & MAGNETOACOUSTIC REMOTE  
 QUERY ENVIRONMENTAL SENSORS  
 06/05/2001 - 06/30/2004                      FY02: \$0                      Total: \$157,770  
*Prin. Invest.:* V SINGH, E DICKEY, CA GRIMES  
*Tech. Officer:* LARC/C H ROLLINS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 2 1363**                      **UNIV OF KENTUCKY**                      **4686**  
 BIOMIMETIC DETECTION SCHEMES ON A MICROCENTRIFUGE PLATFORMS  
 (LABCD)  
 07/27/1999 - 07/14/2003                      FY02: \$0                      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**                      **4687**  
 LARGE EDDY SIMULATION OF FLOWS IN TURBINE CASCADES USING  
 CONSERVATIVE UPWIND-BIASED 5TH ORDER NUMBE  
 12/23/1997 - 01/31/2003                      FY02: \$0                      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**                      **4688**  
 MAGNETICALLY ASSISTED COMBUSTION EXPERIMENT (MACE)  
 03/16/2001 - 12/31/2004                      FY02: \$0                      Total: \$10,000  
*Prin. Invest.:* K SAITO  
*Tech. Officer:* GRC/K R SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2613**                      **UNIV OF KENTUCKY**                      **4689**  
 AN EXPERIMENTAL AND COMPUTATIONAL INVESTIGATION OF OSCILLAT-  
 ING AIRFOIL UNSTEADY AERODYNAMICS AT LAR  
 06/06/2001 - 05/31/2005                      FY02: \$0                      Total: \$46,221  
*Prin. Invest.:* V CAPECE  
*Tech. Officer:* GRC/D MIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2695**                      **UNIV OF KENTUCKY**                      **4690**  
 UNSTEADY AERODYNAMIC RESPONSE OF A LINEAR CASCADE OF AIR-  
 FOILS IN SEPARATED FLOW  
 01/18/2002 - 09/30/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D CAPICE  
*Tech. Officer:* GRC/E R MCFARLAND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3841**                      **UNIV OF KENTUCKY**                      **4691**  
 GAS DYNAMICS IN ACTIVE GALACTIC NUCLEI: BROAD LINE  
 02/28/1997 - 02/14/2001                      FY02: \$0                      Total: \$182,500  
*Prin. Invest.:* I SHLOSMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6937**                      **UNIV OF KENTUCKY**                      **4692**  
 QUANTITATIVE X-RAY - UV LINE AND CONTINUUM SPECTRO SCOPLY WITH  
 APPLICATION TO AGN  
 04/29/1998 - 06/30/2001                      FY02: \$0                      Total: \$64,700  
*Prin. Invest.:* G FERLAND  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8212**                      **UNIV OF KENTUCKY**                      **4693**  
 FUNDAMENTAL PROBLEMS IN ASTROPHYSICAL PLASMAS (LTS A98)  
 02/26/1999 - 02/28/2004                      FY02: \$0                      Total: \$233,719  
*Prin. Invest.:* G J FERLAND  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10518**                      **UNIV OF KENTUCKY**                      **4694**  
 DUST EVOLUTION IN THE EARLY UNIVERSE AND GALACTIC SYSTEMS:  
 OBSERVATIONAL CONSEQUENCES & COSMOLOGICAL  
 03/07/2001 - 03/14/2003                      FY02: \$0                      Total: \$168,387  
*Prin. Invest.:* M ELITZUR  
*Tech. Officer:* GSFC/E DWEK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10823**                      **UNIV OF KENTUCKY**                      **4695**  
 CENTRAL REGIONS IN DISK GALAXIES (ATP 2000)  
 05/01/2001 - 05/14/2004                      FY02: \$0                      Total: \$70,204  
*Prin. Invest.:* I SHLOSMAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11732**                      **UNIV OF KENTUCKY**                      **4696**  
 ROBUST REQUIREMTNS TRACING VIA INTERNET SEARCH TEC HNOLOGY  
 02/14/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J HAYES  
*Tech. Officer:* GSFC/K MCGILL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 12020**                      **UNIV OF KENTUCKY**                      **4697**  
 THE HYDRODYNAMICS OF PHOTOIONIZED FLOWS: PROBING CONDITIONS  
 IN STARBUST GALAXIES AND STAR-FORMING  
 04/17/2002 - 04/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G J FERLAND  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAS 1 01099**                      **UNIV OF KENTUCKY**                      **4698**  
 A VERIFIED DESIGN TOOL FOR LARGE APERTURE MEMBRANE TELESCOPE  
 MIRRORS  
 07/11/2001 - 01/31/2002                      FY02: \$0                      Total: \$126,594  
*Prin. Invest.:* S W SMITH  
*Tech. Officer:* LARC/R S PAPPA  
*CASE Category:* 46 - MECHANICAL ENGR

## NASA'S UNIVERSITY PROGRAM

KENTUCKY

<b>NCC 1 385</b>	<b>UNIV OF KENTUCKY</b>	<b>4699</b>	<b>NGT 1 52223</b>	<b>UNIV OF KENTUCKY</b>	<b>4707</b>
FIGURE CONTROL OF LIGHTWEIGHT OPTICAL STRUCTURES (NASA HQS COMPETITION)			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
03/15/2000 - 12/31/2002	FY02: \$0	Total: \$185,000	09/10/1999 - 08/23/2001	FY02: \$0	Total: \$44,000
<i>Prin. Invest.:</i> J A MAIN			<i>Prin. Invest.:</i> M ROCHE, J MAIN		
<i>Tech. Officer:</i> LARC/R S PAPPA			<i>Tech. Officer:</i> LARC/G C HORNER		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NCC 2 5386</b>	<b>UNIV OF KENTUCKY</b>	<b>4700</b>	<b>NGT 5 71</b>	<b>UNIV OF KENTUCKY</b>	<b>4708</b>
SIMULATIONS OF CARBON NANOTUBES IN NANO-ELECTRONICS AND BIO-MATERIALS APPLICATIONS			GSRP TRAINING GRANT - GEORGE NELSON - SHAPE TUNING OF EXTREMELY LARGE ORBITAL TELESCOPE MIRRORS		
06/08/2000 - 08/31/2001	FY02: \$0	Total: \$25,000	06/09/1998 - 11/30/2001	FY02: \$0	Total: \$66,000
<i>Prin. Invest.:</i> M MENON			<i>Prin. Invest.:</i> J A MAIN		
<i>Tech. Officer:</i> ARC/H PATRIDGE			<i>Tech. Officer:</i> GSFC/M S BURRELL		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NCC 2 5405</b>	<b>UNIV OF KENTUCKY</b>	<b>4701</b>	<b>NAG 5 11040</b>	<b>UNIV OF LOUISVILLE</b>	<b>4709</b>
FUNDAMENTAL PROBLEMS IN PLASMA ASTROPHYSICS: THE THERMAL EQUILIBRIUM OF NGC 7009			GENERAL CIRCULATION OF PLANETARY ATMOSPHERES		
10/24/2000 - 10/31/2001	FY02: \$0	Total: \$10,250	06/13/2001 - 06/14/2004	FY02: \$0	Total: \$91,000
<i>Prin. Invest.:</i> G J FERLAND			<i>Prin. Invest.:</i> T DOWLING		
<i>Tech. Officer:</i> ARC/D GOORTVITCH			<i>Tech. Officer:</i> GSFC/D J BOGAN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NCC 2 5486</b>	<b>UNIV OF KENTUCKY</b>	<b>4702</b>	<b>NCC 2 5373</b>	<b>UNIV OF LOUISVILLE</b>	<b>4710</b>
A DEVICE APPLICATIONS OF CARBON NANOTUBES A SIMULATIONS APPROACH			MICROARRAY ANALYSIS OF MICROGRAVITY-DEPENDENT GENE EXPRESSIONS IN NORMAL HUMAN FIBROBLASTS		
03/12/2002 - 03/14/2004	FY02: \$0	Total: \$0	03/30/2000 - 02/14/2003	FY02: \$0	Total: \$185,250
<i>Prin. Invest.:</i> M MENON			<i>Prin. Invest.:</i> E WANG		
<i>Tech. Officer:</i> ARC/H PARTRIDGE, ARC/M MEYYAPEAN			<i>Tech. Officer:</i> ARC/J W HINES, ARC/M M AVERNER		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NCC 2 5491</b>	<b>UNIV OF KENTUCKY</b>	<b>4703</b>	<b>NCC 2 5374</b>	<b>UNIV OF LOUISVILLE</b>	<b>4711</b>
SIMULATIONS OF SIGNAL TRANSMISSIONS AND SWITCHING IN NANOTUBE NETWORKS			CLONING AND FUNCTIONAL CHARACTERIZATION OF NOVEL GENES WHOSE EXPRESSIONS ARE MICROGRAVITY-DEPENDENT...		
05/21/2002 - 12/31/2002	FY02: \$0	Total: \$0	03/30/2000 - 02/14/2003	FY02: \$0	Total: \$185,250
<i>Prin. Invest.:</i> M MENON			<i>Prin. Invest.:</i> E WANG		
<i>Tech. Officer:</i> ARC/B BIEGEL, ARC/T R GOVINDAN			<i>Tech. Officer:</i> ARC/J W HINES, ARC/M M AVERNER		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NCC 3 590</b>	<b>UNIV OF KENTUCKY</b>	<b>4704</b>	<b>NAG 5 8762</b>	<b>WESTERN KENTUCKY UNIV</b>	<b>4712</b>
TURBULENCE & TRANSITION MODELING OF LOW PRESSURE TURBINE FLOWS			STARBASE NETWORK		
12/17/1997 - 12/31/2002	FY02: \$0	Total: \$419,754	08/27/1999 - 09/14/2003	FY02: \$0	Total: \$1,915,000
<i>Prin. Invest.:</i> G HUANG			<i>Prin. Invest.:</i> C H MCGRUDER, 111		
<i>Tech. Officer:</i> GRC/D E ASHPIS			<i>Tech. Officer:</i> GSFC/JD ROSENDHAL		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NCC 3 940</b>	<b>UNIV OF KENTUCKY</b>	<b>4705</b>	<b>NCC 5 222</b>	<b>WESTERN KENTUCKY UNIV</b>	<b>4713</b>
MODELING, VALIDATION AND IMPLEMENTATION OF TURBULENCE MODELS FOR 21ST CENTURY AIRCRAFT			TO SUPPORT THE KENTUCKY NASA EXPERIMENTAL PROGRAM COMPETITIVE RESEARCH		
02/26/2002 - 12/31/2004	FY02: \$0	Total: \$0	08/11/1997 - 06/30/2002	FY02: \$0	Total: \$1,800,000
<i>Prin. Invest.:</i> D HUANG			<i>Prin. Invest.:</i> R HACKNEY		
<i>Tech. Officer:</i> GRC/D ASHIPS			<i>Tech. Officer:</i> GSFC/D DETROYE		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 1 01006</b>	<b>UNIV OF KENTUCKY</b>	<b>4706</b>	<b>NCC 5 396</b>	<b>WESTERN KENTUCKY UNIV</b>	<b>4714</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3			NASA EPSCOR: PREPARATORY GRANT PROPOSAL		
06/05/2001 - 06/30/2004	FY02: \$0	Total: \$12,000	05/13/1999 - 05/31/2002	FY02: \$0	Total: \$450,000
<i>Prin. Invest.:</i> S W SMETH			<i>Prin. Invest.:</i> R HACKNEY		
<i>Tech. Officer:</i> LARC/R A HATHAWAY			<i>Tech. Officer:</i> GSFC/D DETROYE		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

## LOUISIANA

## NASA'S UNIVERSITY PROGRAM

**NCC 5 571**                    **WESTERN KENTUCKY UNIV**                    **4715**  
 KENTUCKY NASA EPSCOR PROGRAM  
 07/16/2001 - 07/31/2004                    FY02: \$0                    Total: \$700,000  
*Prin. Invest.:* R HACKNEY  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40051**                    **WESTERN KENTUCKY UNIV**                    **4716**  
 NATIONAL SPACE GRANT COLL AND FELLOWSHIP PROGRA  
 01/30/1997 - 02/28/2002                    FY02: \$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**                    **4717**  
 KENTUCKY SPACE GRANT COLL & FELLOWSHIP PROGRAM  
 03/06/2001 - 02/28/2005                    FY02: \$0                    Total: \$262,650  
*Prin. Invest.:* R HACKNEY  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## LOUISIANA

**NAG 2 1320**                    **LOUISIANA STATE UNIV - BATON ROUGE**                    **4718**  
 A RADAPPERTIZATION PROTOCOL FOR SAMPLES RETURNED T O EARTH  
 FROM MARS  
 05/10/1999 - 04/14/2001                    FY02: \$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**                    **4719**  
 DEVELOPMENT OF A PROTOCOL FOR STERILING MINERAL SA MPLES  
 RETURNED TO EARTH FROM MARS USING GAMMA RAD  
 03/08/2001 - 01/31/2003                    FY02: \$0                    Total: \$42,446  
*Prin. Invest.:* J R BATTISTA  
*Tech. Officer:* ARC/M FONDA, ARC/D DIVINCENZI  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1511**                    **LOUISIANA STATE UNIV - BATON ROUGE**                    **4720**  
 THE EFFECTS OF MICROGRAVITY ON PROTEIN-LIGAND INTE RACTAC-  
 TIONS  
 07/23/2001 - 07/31/2003                    FY02: \$0                    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**                    **4721**  
 THEORETICAL AND EXPERIMENTAL INVESTIGATION OF THE STABILITY OF  
 AN EVAPORATING CONSTRAINED VAPOR BUBB  
 04/03/2000 - 11/30/2003                    FY02: \$0                    Total: \$71,200  
*Prin. Invest.:* H WONG  
*Tech. Officer:* GRC/IJ SKARDA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 5064**                    **LOUISIANA STATE UNIV - BATON ROUGE**                    **4722**  
 THE ADVANCED THIN IONIZATION CALORIMETER (ATIC) BALLOON EXPERI-  
 MENT  
 05/03/1996 - 05/06/2001                    FY02: \$0                    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 5177**                    **LOUISIANA STATE UNIV - BATON ROUGE**                    **4723**  
 TRANSITION RADIATION DETECTORS FOR HIGH ENERGY MEASUREMENTS  
 ON ACCESS  
 04/24/1998 - 03/31/2002                    FY02: \$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**                    **4724**  
 ULTRA-LONG DURATION MISSION CONCEPT FOR PROPOSAL FOR A  
 MINUTE-OF-ARC RESOLUTION GAMMA-RAY EXPERIMNT  
 09/24/1998 - 11/30/2002                    FY02: \$0                    Total: \$210,000  
*Prin. Invest.:* M CHERRY  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 19 - PHYSICALSCIENCE, OTHER

**NAG 5 5297**                    **LOUISIANA STATE UNIV - BATON ROUGE**                    **4725**  
 SIFTER SIFTER  
 06/12/2000 - 06/30/2002                    FY02: \$0                    Total: \$41,500  
*Prin. Invest.:* M L CHERRY  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5306**                    **LOUISIANA STATE UNIV - BATON ROUGE**                    **4726**  
 ADVANCED THIN IONIZATION CARLORIMETER BALLOON EXPERIMENT  
 01/09/2001 - 11/30/2003                    FY02: \$0                    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**                    **4727**  
 INITIAL FUNDING FOR THE ABOVE REFERENCED GRANT IN THE AMOUNT  
 OF 55K PI: FAZELY/LSU; GRANT TITLE:  
 06/05/2001 - 11/30/2003                    FY02: \$0                    Total: \$55,000  
*Prin. Invest.:* D FAZELY  
*Tech. Officer:* WFF/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5323**                    **LOUISIANA STATE UNIV - BATON ROUGE**                    **4728**  
 A WIDE-FIELD HIGH-RESOLUTION HARD X-RAY/GAMMA-RAY IMAGING  
 TELESCOPE FOR ULTRA LONG BALLOON MISSION  
 03/21/2001 - 11/30/2003                    FY02: \$0                    Total: \$132,500  
*Prin. Invest.:* M L CHERRY  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5359**                    **LOUISIANA STATE UNIV - BATON ROUGE**                    **4729**  
 CONTINUED DEVELOPMENT OF SCINTILLATING FIBER DETEC TORS FOR  
 GAMMA-RAY ASTRONOMY.  
 07/15/2002 - 04/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M CHERRY  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 7933**                    **LOUISIANA STATE UNIV - BATON ROUGE**                    **4730**  
 EXTRAGALACTIC INTERSTELLAR DUST \_\_\_\_ (LTSA - NEW)  
 12/14/1998 - 12/31/2003                    FY02: \$0                    Total: \$191,989  
*Prin. Invest.:* G C CLAYATON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY



## NASA'S UNIVERSITY PROGRAM

LOUISIANA

**NAG 5 8497** LOUISIANA STATE UNIV - BATON ROUGE 4731  
 NUMERICAL HYDRODYNAMICS OF MASS-TRANSFERRING BINAR IES (ATP -  
 98)  
 05/18/1999 - 04/30/2003 FY02: \$0 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 4732  
 MOVING BEYOND THE STANDARD PARADIGM/THE IMPORTANCE OF INTER-  
 STELLAR DUST FROM THE MILKY WAY TO HIGH R  
 03/16/2000 - 03/14/2003 FY02: \$0 Total: \$103,706  
*Prin. Invest.:* G CLAYTON  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9245** LOUISIANA STATE UNIV - BATON ROUGE 4733  
 WORLD DELTAS: A BASELINE AND CHANGES.  
 03/14/2000 - 03/31/2003 FY02: \$0 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 4734  
 USING IR EMISSION TO CONSTRAIN THE ROLE OF DUST IN GALAXIES  
 07/25/2000 - 06/30/2003 FY02: \$0 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 4735  
 FAR-ULTRAVIOLET INTERSTELLAR EXTINCTION IN THE LARGE MAGEL-  
 LANIC CLOUD - FUSE-2000  
 01/25/2001 - 01/31/2003 FY02: \$0 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 4736  
 ADVANCED LIGHT WEIGHT MAGNET PROGRAM  
 07/25/2000 - 10/31/2003 FY02: \$0 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 4737  
 SECOND GENERATION SPACE LAUNCH INITIATIVES: AN EXPLORATION AND  
 ROADMAP TOSOLVING PROBLEMS.  
 07/26/2001 - 08/29/2001 FY02: \$0 Total: \$9,999  
*Prin. Invest.:* B SARKER  
*Tech. Officer:* MSFC/E SHAW  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 8 01042** LOUISIANA STATE UNIV - BATON ROUGE 4738  
 MECHANICS OF GRANULAR MATERIAL MGM III  
 03/23/2001 - 10/31/2004 FY02: \$0 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 4739  
 SCALABLE SIMULATION& DATA MANAGEMENT FOR COMPUTATI ONAL  
 NANO-ELECTRONICS ON THE INFORMATION POWER GRI  
 05/10/1999 - 08/31/2001 FY02: \$0 Total: \$190,000  
*Prin. Invest.:* A NAKANO  
*Tech. Officer:* ARC/S SAINI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5440** LOUISIANA STATE UNIV - BATON ROUGE 4740  
 MULTISCALE SIMULATIONS OF PROTEIN NANOTUBES ON A G RID  
 07/02/2001 - 06/30/2003 FY02: \$0 Total: \$95,000  
*Prin. Invest.:* P VASHISTA, R K KALIA, A NAKANO  
*Tech. Officer:* ARC/M MEYAPPAN, ARC/H PATRIDGE  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5469** LOUISIANA STATE UNIV - BATON ROUGE 4741  
 CHANGES IN MICROBIAL DIVERSITY & THE OCCURANCE OF IONIZING  
 RADIATION RESITANT ORGANISMS ACROSS MOIST  
 10/15/2001 - 09/14/2003 FY02: \$67,763 Total: \$67,763  
*Prin. Invest.:* F A RAINEY  
*Tech. Officer:* ARC/C MCKAY, ARC/B SMITH  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 5484** LOUISIANA STATE UNIV - BATON ROUGE 4742  
 SCALABLE ALGORITHMS ON THE INFORMATION POWER GRID  
 03/06/2002 - 02/28/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A NAKANO  
*Tech. Officer:* ARC/S SAINI, ARC/A GRADY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 167** LOUISIANA STATE UNIV - BATON ROUGE 4743  
 NASA EPSCOR PROGRAM  
 11/02/1996 - 10/31/2001 FY02: \$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 4744  
 NASA EPSCOR PREPARATION PROGRAM  
 05/13/1999 - 08/14/2002 FY02: \$0 Total: \$450,000  
*Prin. Invest.:* J WEFEL  
*Tech. Officer:* HQ/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC13 02003** LOUISIANA STATE UNIV - BATON ROUGE 4745  
 ADAPTING AND VALIDATING PRECISION TECHNOLOGIES FOR COTTON  
 PRODUCTION IN THE MID-SOUTHER U S  
 02/28/2002 - 01/31/2006 FY02: \$0 Total: \$0  
*Prin. Invest.:* B R LEONARD  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 55 - AGRICULTURE

**NGT 5 40115** LOUISIANA STATE UNIV - BATON ROUGE 4746  
 LOUISIANA SPACE GRANT COLL & FELLOWSHIP PROGRAM  
 03/06/2001 - 02/28/2005 FY02: \$0 Total: \$384,010  
*Prin. Invest.:* J WEFEL  
*Tech. Officer:* HQ/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

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## NASA'S UNIVERSITY PROGRAM

**NGT 8 52919**      **LOUISIANA STATE UNIV - BATON ROUGE**      **4747**  
 COMPUTED TOMOGRAPHY: A POTENTIAL TECHNOLOGY TO UNDERSTAND  
 FRICTION PROPERTIES OF GRANULAR MATERIA  
 05/08/2002 - 06/30/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* K ALSHIBLI  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 44 - CIVIL ENGR

**NGT13 52743**      **LOUISIANA STATE UNIV - BATON ROUGE**      **4748**  
 A TESTING OF REMOTE SENSING METHODS AT THE BROUSSARD MOUNDS  
 ITE  
 07/12/2000 - 11/30/2002      FY02: \$0      Total: \$44,000  
*Prin. Invest.:* B S GOODWIN  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT13 52755**      **LOUISIANA STATE UNIV - BATON ROUGE**      **4749**  
 GRADUATE STUDY RESEARCH - IMPROVEMENT OF RANS MODE LS FOR  
 ENGINE FLOWS USING DIRECT NUMERICAL SIMULA  
 06/24/2002 - 06/30/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* S ACHARYS  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 4293**      **NORTHEAST LOUISIANA UNIV**      **4750**  
 ANCIENT CRUST AND LACUSTRINE PLAIN SITES FOR MARS  
 04/18/1997 - 09/30/2001      FY02: \$0      Total: \$30,000  
*Prin. Invest.:* D A DE HON  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1468**      **SOUTHERN UNIV & A&M COLL**      **4751**  
 INTEGRATED APPROACH TO REASONING UNDER MULTIPLE PE RSPEC-  
 TIVES  
 03/28/2001 - 03/14/2003      FY02: \$0      Total: \$88,670  
*Prin. Invest.:* C DEBESSONER  
*Tech. Officer:* ARC/R MORRIS, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2076**      **SOUTHERN UNIV & A&M COLL**      **4752**  
 KNOWLEDGE PRESERVATION FOR DESIGN OF ROCKET SYSTEM S  
 09/26/1997 - 05/31/2002      FY02: \$0      Total: \$100,000  
*Prin. Invest.:* D MOREMAN, J DYER  
*Tech. Officer:* GRC/D F NOGA  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 4 232**      **SOUTHERN UNIV & A&M COLL**      **4753**  
 DEVELOPMENT OF COMPUTER AIDED RISK MITIGATION AND CATEGORI-  
 ZATION PRODUCT  
 08/20/2002 - 06/30/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* D F MENSAH  
*Tech. Officer:* DFRC/L DAVIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 5066**      **SOUTHERN UNIV & A&M COLL**      **4754**  
 THE ADVANCED THIN IONIZATION CALORIMETER (ATIC) BALLOON EXPERI-  
 MENT  
 06/17/1996 - 06/30/2001      FY02: -\$388      Total: \$497,112  
*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 COLL**      **4755**  
 DEVELOPMENT OF BALLOON-BORNE X-RAY/GAMMA DETECTORS FOR  
 STUDIES OF HIGH ENERGY ASTROPHYSICAL SOURCE  
 03/11/1998 - 02/28/2003      FY02: \$0      Total: \$297,660  
*Prin. Invest.:* J STACY  
*Tech. Officer:* GSFC/J TUELLER  
*CASE Category:* 13 - PHYSICS

**NAG 5 8552**      **SOUTHERN UNIV & A&M COLL**      **4756**  
 PROGRAM TO INCREASE THE PURSUIT OF EDUCATION AND LEARNING IN  
 ENGINEERING AND SCIENCE  
 06/15/1999 - 09/30/2001      FY02: \$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 COLL**      **4757**  
 PARTNERSHIPS IN ASTRONOMY & ASTROPHYSICS EDUCATION & RE-  
 SEARCH AT SOUTHERN UNIV  
 01/10/2001 - 01/14/2004      FY02: \$0      Total: \$210,000  
*Prin. Invest.:* G STACY  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11936**      **SOUTHERN UNIV & A&M COLL**      **4758**  
 BUILDING THE CAPACITY OF HBCUS FOR ESTABLISHING EFFECTIVE  
 GLOBE PARTNERSHIPS.  
 03/27/2002 - 06/30/2002      FY02: \$0      Total: \$0  
*Prin. Invest.:* D BAGAYOKO  
*Tech. Officer:* GSFC/J L HARRINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1495**      **SOUTHERN UNIV & A&M COLL**      **4759**  
 RELATIONSHIP BETWEEN STRUCTURE AND MAGNETIC AND ELECTRON  
 TRANSPORT PROPERTIES IN R1-AXMN03  
 06/01/1998 - 05/31/2002      FY02: \$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 COLL**      **4760**  
 MODELING AND ANALYSIS OF HEAT-ACTIVATED THERMAL COUPLES  
 06/08/1998 - 06/30/2001      FY02: \$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 COLL**      **4761**  
 FIBERGLAST INSTRUMENT DEVELOPMENT  
 09/22/1999 - 08/31/2001      FY02: \$0      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 COLL**      **4762**  
 EDUCATION GRANT "AN INTEGRATED THEORY AND LAB LEARNING EXPE-  
 RIENCE  
 09/09/1999 - 09/08/2002      FY02: \$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

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<b>NAG 8 1633</b>	<b>SOUTHERN UNIV &amp; A&amp;M COLL</b>	<b>4763</b>	<b>NAG 2 1378</b>	<b>TULANE UNIV</b>	<b>4771</b>
VIRTUAL REALITY INNOVATIONS IN TRAINING AND SCIENCE, ENGINEERING AND MATHEMATICS EDUCATION.			EFFECT OF SIMULATED MICROGRAVITY ON GENE EXPRESSION IN THE ENTERIC PATHOGEN SALMONELLA TYPHIMURIUM		
09/15/1999 - 09/30/2002	FY02: \$0	Total: \$99,354	08/19/1999 - 07/31/2003	FY02: \$0	Total: \$334,716
<i>Prin. Invest.:</i> M C DUNN			<i>Prin. Invest.:</i> C A NICKERSON		
<i>Tech. Officer:</i> MSFC/A BEAM, MSFC/W LOVE			<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY		
<i>CASE Category:</i> 21 - MATHEMATICS			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NAG10 322</b>	<b>SOUTHERN UNIV &amp; A&amp;M COLL</b>	<b>4764</b>	<b>NAG 3 2689</b>	<b>TULANE UNIV</b>	<b>4772</b>
DEVELOPMENT OF A SMART MATERIAL INTEGRATED SENSOR THERMAL SWITCH FOR CRYOGENIC SYSTEMS			LIFE PREDICTION MODEL FOR THERMAL BARRIER COATINGS LIFE PREDICTION MODEL FOR THERMAL BARRIER COATING		
09/04/2002 - 08/31/2003	FY02: \$0	Total: \$0	01/10/2002 - 08/31/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D F MENSAH			<i>Prin. Invest.:</i> D A RUBINSTEIN		
<i>Tech. Officer:</i> KSC/B NOTARDONATO			<i>Tech. Officer:</i> GRC/A M CALOMINO		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG13 98003</b>	<b>SOUTHERN UNIV &amp; A&amp;M COLL</b>	<b>4765</b>	<b>NAG 3 2734</b>	<b>TULANE UNIV</b>	<b>4773</b>
NOISE REMOVAL DECONVULTION AND VIBRATION RELAXATION STUDIES TO ENHANCE PLUME DIAGNOSTIC TECH.			INVESTIGATIONS OF THE INFLUENCE OF AIR-LIQUID INTERFACIAL STRESSES ON PULMONARY EPITHELIAL CELLS		
03/11/1998 - 05/14/2002	FY02: \$0	Total: \$299,772	03/14/2002 - 11/30/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> A AMINI			<i>Prin. Invest.:</i> D P GAVER		
<i>Tech. Officer:</i> SSC/B B ST. CYR			<i>Tech. Officer:</i> GRC/P A PARSONS-WINGERT		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG13 98013</b>	<b>SOUTHERN UNIV &amp; A&amp;M COLL</b>	<b>4766</b>	<b>NAG 8 1362</b>	<b>TULANE UNIV</b>	<b>4774</b>
MATHEMATICS AND SCIENCE ENRICHMENT ACTIVITIES FOR MIDDLE AND HIGH SCHOOL STUDENTS			FOR RESEARCH-PRODUCTION OF 125 DIOH D3 BY RENAL EPITHELIAL CELLS IN SIMULATED MICROGRAVITY CULTURE		
07/15/1998 - 06/30/2002	FY02: \$0	Total: \$300,000	06/01/1997 - 11/30/2001	FY02: \$0	Total: \$740,000
<i>Prin. Invest.:</i> M SUBBLEFIELD			<i>Prin. Invest.:</i> T HAMMOND		
<i>Tech. Officer:</i> SSC/A JOYCE			<i>Tech. Officer:</i> JSC/S R GONDA		
<i>CASE Category:</i> 21 - MATHEMATICS			<i>CASE Category:</i> 56 - MEDICL		
<b>NCC 2 1344</b>	<b>SOUTHERN UNIV &amp; A&amp;M COLL</b>	<b>4767</b>	<b>NAG 9 826</b>	<b>TULANE UNIV</b>	<b>4775</b>
PREDICTIVE CALCULATION AND SIMULATION FOR NANOSEMICONDUCTORS AND RELATED HETEROSTRUCTURES FOR AEROS			CELL CULTIVATION		
05/29/2002 - 05/31/2003	FY02: \$0	Total: \$0	08/09/1995 - 01/15/2001	FY02: \$0	Total: \$424,000
<i>Prin. Invest.:</i> G L ZHAO			<i>Prin. Invest.:</i> K O'CONNOR		
<i>Tech. Officer:</i> ARC/A CARDENAS			<i>Tech. Officer:</i> JSC/N PELLIS		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NCC 8 156</b>	<b>SOUTHERN UNIV &amp; A&amp;M COLL</b>	<b>4768</b>	<b>NAG 9 1344</b>	<b>TULANE UNIV</b>	<b>4776</b>
FOR RESEARCH ENTITLED: "STRUCTURAL MATERIALS FAILURE ANALYSIS DATABASE"			GENETICALLY ENGINEERED COLLAGEN II FOR SMART BIOMATERIALS		
09/28/1998 - 08/31/2001	FY02: \$0	Total: \$198,638	08/22/2001 - 09/30/2004	FY02: \$0	Total: \$44,000
<i>Prin. Invest.:</i> J DYER			<i>Prin. Invest.:</i> T HAMMOND		
<i>Tech. Officer:</i> MSFC/G JERMAN			<i>Tech. Officer:</i> JSC/D RISEN		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 56 - MEDICL		
<b>NCC13 00010</b>	<b>SOUTHERN UNIV &amp; A&amp;M COLL</b>	<b>4769</b>	<b>NAG 9 1350</b>	<b>TULANE UNIV</b>	<b>4777</b>
PROGRAM TO INCREASE PURSUIT OF EDUCATION AND LEARNING IN ENGINEERING AND SCIENCES (PIPLINES)			NOVEL TISSUE ASSEMBLIES; MODELS FOR ENTERIC PATHOGENESIS		
09/25/2000 - 09/24/2003	FY02: \$0	Total: \$1,828,800	08/08/2001 - 09/30/2004	FY02: \$0	Total: \$63,000
<i>Prin. Invest.:</i> D BAGAYOKO			<i>Prin. Invest.:</i> C A NICKERSON		
<i>Tech. Officer:</i> SSC/R TRAVIS			<i>Tech. Officer:</i> JSC/D RISIN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 56 - MEDICL		
<b>NAG 1 02070</b>	<b>TULANE UNIV</b>	<b>4770</b>	<b>NAG 9 1351</b>	<b>TULANE UNIV</b>	<b>4778</b>
TULANE INST FOR MACROMOLECULAR ENGINEERING AND SCIENCE (TIMES)			SPATIAL ORGANIZATION WITHIN PROSTATE CANCER SPHEROIDS		
03/25/2002 - 09/30/2003	FY02: \$0	Total: \$0	08/01/2001 - 09/30/2004	FY02: \$0	Total: \$74,000
<i>Prin. Invest.:</i> D C DEKEE, B S MITCHELL			<i>Prin. Invest.:</i> K C O'CONNOR, S CLEJAN, D C.R. DE KEE		
<i>Tech. Officer:</i> LARC/J G SMITH			<i>Tech. Officer:</i> JSC/D RIIN		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 56 - MEDICL		

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**NCC 2 1362** **TULANE UNIV** **4779**  
 EFFECT OF SPACEFLIGHT ON MICROBIAL GENE EXPRESSION AND VIRULANCE  
 09/06/2002 - 08/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* C A NICKERSON  
*Tech. Officer:* ARC/B E GIRTEN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 3 946** **TULANE UNIV** **4780**  
 TULANE INST FOR MACROMOLECULAR ENGINEERING AND SCIENCE (TIMES)  
 03/25/2002 - 09/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D DEKEE  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT13 52722** **TULANE UNIV** **4781**  
 DYNAMIC PARTICLE PROCESSES & BIOGEOCHEMICAL MATERIAL FLUX IN RIVER DOMINATED OCEAN MARGINS  
 07/28/1999 - 07/31/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* B MCKEE  
*Tech. Officer:* JSC/R TRAVIS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT13 52754** **TULANE UNIV** **4782**  
 GRADUATE STUDENT RESEARCH - ARCHAEOLOGICAL REMOTE SENSING SURVEY OF THE CHUNCHUCMIL ECONOMIC REGION  
 06/24/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* W ANDREWS  
*Tech. Officer:* SSC/I TRAVIS  
*CASE Category:* 71 - ANTHROPOLOGY

**NAG 3 2447** **UNIV OF NEW ORLEANS** **4783**  
 GEOPHYSICAL FLOW EXPERIMENT IN A ROTATING SPHERICAL CAPACITOR  
 05/30/2000 - 11/30/2003 FY02: \$0 Total: \$135,015  
*Prin. Invest.:* J HEGSETH  
*Tech. Officer:* GRC/F P CHIARAMONTEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 2 5376** **UNIV OF NEW ORLEANS** **4784**  
 LIFE IN EXTREME ENVIRONMENTS RESEARCH  
 03/30/2000 - 03/31/2001 FY02: \$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** **4785**  
 DEVELOPMENT OF INNOVATIVE ADVANCED COMPOSITE MFG TECHNOLOGIES UTILIZING NCAM/LOUISIANA PARTNERSHIP  
 03/19/2001 - 03/18/2006 FY02: \$0 Total: \$2,700,000  
*Prin. Invest.:* J N CRISP  
*Tech. Officer:* MSFC/J VICKERS, MSFC/M NIEDERMEYER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT13 52721** **UNIV OF NEW ORLEANS** **4786**  
 NUMERICAL ANALYSIS OF THERMAL STRATIFICATION AND BEYSERING IN LIQUID PROPELLANT STORAGE TANKS  
 07/22/1999 - 07/31/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* K M AKYUZLU  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 21 - MATHEMATICS

**NGT13 52740** **UNIV OF NEW ORLEANS** **4787**  
 OPTIMIZATION OF SPACE FLIGHT SYTEM GROUND-BASED PROCESSING  
 05/22/2000 - 05/31/2001 FY02: -\$3,233 Total: \$18,767  
*Prin. Invest.:* R SAXTON  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT13 52749** **UNIV OF NEW ORLEANS** **4788**  
 FACTORS AFFECTING THE EARLY LIFE HISTORY OF FISHES IN LAKE PONTCHATRAIN, LOUISIANA  
 06/08/2001 - 06/30/2004 FY02: \$0 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** **4789**  
 ANALYSIS OF THE GRAVISENSING SYSTEM IN CHARA  
 07/18/2000 - 06/30/2003 FY02: \$0 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** **4790**  
 RESPONSE SYSTEM OF PLANTS  
 03/25/1996 - 11/30/2002 FY02: \$0 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** **4791**  
 "TEACHER AND CURRICULUM ENHANCEMENT PROGRAM"  
 05/25/1999 - 05/24/2002 FY02: \$0 Total: \$600,000  
*Prin. Invest.:* R P HALE  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 21 - MATHEMATICS

**NAG13 98006** **XAVIER UNIV - LOUISIANA** **4792**  
 SEEING THE EARTH: USING REMOTE SENSING TECHNOLOGIES TO STIR IMAGINATION OF STUDENTS  
 04/20/1998 - 10/19/2001 FY02: \$0 Total: \$300,000  
*Prin. Invest.:* S O'CONNOR  
*Tech. Officer:* JSC/R TRAVIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 02036** **XAVIER UNIV - LOUISIANA** **4793**  
 2002 PRE-SERVICE TEACHER INST (PSTI)  
 06/26/2002 - 09/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* T C TAYLOR  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 70010** **XAVIER UNIV - LOUISIANA** **4794**  
 SOAR 2 SUMMER BRIDGE PROGRAM  
 06/12/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A CHATTERS  
*Tech. Officer:* GSFC/C COLLINGSWORTH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 90084** **XAVIER UNIV - LOUISIANA** **4795**  
 SOAR 2 SUMMER BRIDGE PROGRAM  
 09/09/1997 - 04/30/2001 FY02: \$0 Total: \$590,023  
*Prin. Invest.:* G BAKER  
*Tech. Officer:* GSFC/L RANDOLPH  
*CASE Category:* 49 - ENGINEERING, OTHER

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**NGT 5 90086**                      **XAVIER UNIV - LOUISIANA**                      **4796**  
 SOAR 2 SUMMER BRIDGE PROGRAM  
 05/07/2001 - 04/30/2002                      FY02: \$0                      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**                      **4797**  
 SOILS, WATER, PEOPLE, AND PIXELS: A STUDY OF NANG  
 09/11/1997 - 07/14/2001                      FY02: -\$340                      Total: \$569,653  
*Prin. Invest.:* R RINDFUSS  
*Tech. Officer:* HQ/A JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6041**                      **UNIV OF MAINE - ORONO**                      **4798**  
 TIME-SERIES FOREST CHANGE, LAND-COVER/LAND-USE CON ECONOMIC  
 DRIVING FORCES IN THE NORTHERN PETEN DIS  
 07/23/1997 - 07/31/2001                      FY02: \$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**                      **4799**  
 BIOLOGICAL-PHYSICAL COUPLING IN THE GULF OF MAINE: SATELLITE AND  
 MODEL SSTUDIES IN PHYTOPLANKTON VA  
 10/27/1997 - 10/31/2001                      FY02: \$0                      Total: \$351,586  
*Prin. Invest.:* A C THOMAS  
*Tech. Officer:* GSFC/J A MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6604**                      **UNIV OF MAINE - ORONO**                      **4800**  
 PHYTOPLANKTON VARIABILITY IN EASTERN BOUNDARY CURR ENTS:  
 CONNECTIONS TO PHYSICAL FORCING  
 12/11/1997 - 11/30/2002                      FY02: \$0                      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**                      **4801**  
 MONITORING THE MESOAMERICAN BIOLOGICAL CORRIDOR  
 07/26/1999 - 05/31/2003                      FY02: \$0                      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**                      **4802**  
 RASCAL-A REMOTE AUTONOMOUS SYSTEM FOR THE CONTROL OF ALTIM-  
 ETRY  
 09/14/2000 - 09/14/2002                      FY02: \$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**                      **4803**  
 CIS NET: IN SITU AND REMOTE MONITORING OF PRODUCTIVITY AND  
 NUTRIENT CYCLES IN PUGET SOUND  
 09/12/2000 - 12/31/2002                      FY02: \$0                      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**                      **4804**  
 SURFACE GPS MEASUREMENTS FOR ICE SHEET MASS BALANCE &  
 FIDUCIAL CONTROL OF ALTIMETRY  
 10/24/2000 - 12/31/2001                      FY02: \$0                      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**                      **4805**  
 MULTI-SENSOR & MODELING ANALYSES OF GULF OF MAINE PHYTOPLANK-  
 TON VARIABILITY  
 03/19/2001 - 03/31/2004                      FY02: \$0                      Total: \$120,823  
*Prin. Invest.:* A THOMAS  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11132**                      **UNIV OF MAINE - ORONO**                      **4806**  
 ASTTEX VALIDATION MOORING  
 07/26/2001 - 07/31/2002                      FY02: \$0                      Total: \$20,000  
*Prin. Invest.:* D A BYRNE  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12385**                      **UNIV OF MAINE - ORONO**                      **4807**  
 PRIMARY PRODUCTION IN THE MIXED LAYER  
 07/17/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E BOSS  
*Tech. Officer:* GSFC/M BEHRENFELD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12393**                      **UNIV OF MAINE - ORONO**                      **4808**  
 SCATTERING CHARACTERISTICS OF PHYTOPLANKTON TAXONO MIC  
 GROUPS AND THEIR EFFECT ON REFLECTANCE  
 07/19/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L KARP-BOSS  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12473**                      **UNIV OF MAINE - ORONO**                      **4809**  
 A ONE YEAR PILOT STUDY FOR THE INCLUSION OF ACTIVE OPTICAL  
 SENSORS INTO PALACE FLOATS  
 08/20/2002 - 07/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E BOSS  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 98008**                      **UNIV OF MAINE - ORONO**                      **4810**  
 FOREST MONITORING AND MULTISENSOR RESEARCH IN MAINE'S INDUS-  
 TRIAL FOREST  
 04/30/1998 - 04/29/2002                      FY02: \$0                      Total: \$650,000  
*Prin. Invest.:* S SADER  
*Tech. Officer:* JSC/B GRAHAM  
*CASE Category:* 55 - AGRICULTURE

**NGT 5 30353**                      **UNIV OF MAINE - ORONO**                      **4811**  
 THE ROLE OF CLAY MINERALOGY ON SOIL C ACCUMULATION & LOSS  
 ALONG A TROPICAL FOREST ELEVATION (CLIMATE  
 08/24/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* L M MAYER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**MARYLAND**

**NASA'S UNIVERSITY PROGRAM**

**NGT 5 30426**                      **UNIV OF MAINE - ORONO**                      **4812**  
 DISTRIBUTION OF SNOW ACCUMULATION AND MASS BALANCE ACROSS  
 THE WEST ANTARCTIC ICESHEET/STUDENT  
 09/19/2001 - 09/30/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* G HAMILTON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT13 52751**                      **UNIV OF MAINE - ORONO**                      **4813**  
 NEURAL NETWORK MODELING OF CHLOROPHYLL-A CONCENTRATION  
 FROM REMOTE SENSING DATA  
 06/08/2001 - 06/30/2004                      FY02: \$0                      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**                      **4814**  
 ACCESS EARTH: PROMOTING ACCESSIBILITY TO THE EARTH SYSTEM  
 SCIENCES FOR PERSONS WITH DISABILITIES  
 03/01/2000 - 02/28/2003                      FY02: \$0                      Total: \$145,277  
*Prin. Invest.:* S M LOCKE  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**MARYLAND**

**NAG 2 1572**                      **BOWIE STATE UNIV**                      **4815**  
 BIOMOLECULAR RECOGNITION OF FULLERNESS AND CARBON NANO-  
 TUBES  
 07/24/2002 - 07/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B BRADEN  
*Tech. Officer:* ARC/A CARDENAS  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 5 2829**                      **BOWIE STATE UNIV**                      **4816**  
 MODEL-BASED VQ FOR MULTISPECTRAL EARTH IMAGE DATA COMPRES-  
 SION  
 12/14/1994 - 06/30/2001                      FY02: \$0                      Total: \$164,231  
*Prin. Invest.:* M MAREBOYANA  
*Tech. Officer:* GSFC/J TILTON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6476**                      **BOWIE STATE UNIV**                      **4817**  
 ASSESSING THE IMPACT OF EXPANDING URBAN LAND USE ON AGRICUL-  
 TURAL PRODUCTIVITY USING REMOTE S  
 12/08/1997 - 09/14/2002                      FY02: \$0                      Total: \$471,184  
*Prin. Invest.:* W LAWRENCE  
*Tech. Officer:* GSFC/M L IMHOFF  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7669**                      **BOWIE STATE UNIV**                      **4818**  
 SUPPORT FOR DATA ANALYSIS, PRESENTATION, FIELD & MEETING  
 TRAVEL NASA/DOD/LEGACY CENTRAL AMERICA DEPL  
 09/28/1998 - 09/30/2001                      FY02: \$0                      Total: \$163,957  
*Prin. Invest.:* W LAWRENCE  
*Tech. Officer:* GSFC/M L IMHOFF  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8370**                      **BOWIE STATE UNIV**                      **4819**  
 A FAST TRACK PLAN TOWARD TEACHER CERTIFICATION FOR THE PUBLIC  
 SCHOOL SYSTEM OF PRINCE GEORGE'S C  
 03/12/1999 - 08/31/2002                      FY02: \$0                      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**                      **4820**  
 TRAINING UNDERGRADUATES IN SPACE SCIENCE AND SATEL LITE OPERA-  
 TION AND TECHNOLOGY  
 08/31/1999 - 11/30/2001                      FY02: \$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**                      **4821**  
 A 2000 SUMMER INST IN ENGINEERING & COMPUTER  
 04/14/2000 - 10/31/2001                      FY02: \$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**                      **4822**  
 GODDARD STUDENT INTERNSHIP PROGRAM (GSIP)  
 05/03/2000 - 05/14/2001                      FY02: \$0                      Total: \$49,868  
*Prin. Invest.:* N T WAKIM  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 9843**                      **BOWIE STATE UNIV**                      **4823**  
 PROJECT ACCESS (ACADEMY FOR THE COLLABORATIVE ENHANCEMENT  
 OF STUDENT SKILLS)  
 08/07/2000 - 03/31/2002                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* V B GUILFORD  
*Tech. Officer:* GSFC/C HOLLINGSWORTH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10034**                      **BOWIE STATE UNIV**                      **4824**  
 CONTINUED SUPPORT OF EOS-IDS URBAN IMPACTS ON GLOB AL PRO-  
 DUCTIVITY  
 10/10/2000 - 12/14/2002                      FY02: \$0                      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**                      **4825**  
 TO MANAGE A 2001 SUMMER INST IN ENGINEERING & COMPUTER  
 APPLICATIONS PROGRAM  
 04/24/2001 - 07/31/2002                      FY02: \$0                      Total: \$207,800  
*Prin. Invest.:* D LANGDON  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11361**                      **BOWIE STATE UNIV**                      **4826**  
 BOWIE SEEKS TO INTEGRATE THE WIRE MISSION INTO ITS BSOC  
 PROGRAM TO PROVIDE OPPORTUNITIES TO ST  
 09/27/2001 - 09/30/2003                      FY02: \$0                      Total: \$64,000  
*Prin. Invest.:* N T WAKIM  
*Tech. Officer:* GSFC/P L CROUSE  
*CASE Category:* 22 - COMPUTER SCIENCE

## NASA'S UNIVERSITY PROGRAM

MARYLAND

<b>NAG 5 11450</b>	<b>BOWIE STATE UNIV</b>	<b>4827</b>	<b>NAG 5 12463</b>	<b>CAPITOL COLL</b>	<b>4835</b>
"LOCATING HUMAN RISKS TO BIODIVERSITY, A CARBON BA LANCE APPROACH"			CAPITOL COLL SPACE OPERATIONS INST		
12/17/2001 - 12/31/2004	FY02: \$0	Total: \$0	08/19/2002 - 08/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> W LAWRENCE			<i>Prin. Invest.:</i> P D SMIT		
<i>Tech. Officer:</i> GSFC/M L IMHOFF			<i>Tech. Officer:</i> GSFC/E CHANG		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR		
<b>NAG 5 12165</b>	<b>BOWIE STATE UNIV</b>	<b>4828</b>	<b>NCC 5 400</b>	<b>CHARLES COUNTY COMM COLL</b>	<b>4836</b>
A 2002 SUMMER INST IN ENGINEERING AND COMPUTE R APPLICATIONS (SIECA)PROGRAM			LABORATORY INVESTIGATION OF THE FORMATION, PROPERT IES AND METAMORPHISM OF PRE-SOLAR MATERAILS		
05/16/2002 - 05/14/2003	FY02: \$0	Total: \$0	05/14/1999 - 05/31/2002	FY02: \$0	Total: \$67,586
<i>Prin. Invest.:</i> D LANGDON			<i>Prin. Invest.:</i> G KRAUSE		
<i>Tech. Officer:</i> GSFC/D MENCHAN			<i>Tech. Officer:</i> GSFC/J A NUTH		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 12 - CHEMISTRY		
<b>NAG 5 12237</b>	<b>BOWIE STATE UNIV</b>	<b>4829</b>	<b>NAG 5 11846</b>	<b>COPPIN STATE COLL</b>	<b>4837</b>
PROGRAM DEVELOPMENT IN MICROELECTROMECHANICAL SYSTEMS (MEMS)			EDUCATION AND RESEARCH MERIT OFM PROPOSED COPPIN/ GSFC ACTIVITIES		
05/31/2002 - 05/31/2003	FY02: \$0	Total: \$0	03/27/2002 - 03/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J E TAYLOR			<i>Prin. Invest.:</i> D C WILSON		
<i>Tech. Officer:</i> GSFC/D MENCHAN			<i>Tech. Officer:</i> GSFC/D MENCHAN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 12553</b>	<b>BOWIE STATE UNIV</b>	<b>4830</b>	<b>NAG 1 2043</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4838</b>
UTILIZING COLL STUDENT SCIENCE MENTORS TO DEVEL OP RESEARCH SKILLS OF SECONDARY PUBLIC SCHOOL STU			INFERRING ASPECTS OF TRANSPORT AND MIXING IN THE STRATO- SPHEREAND TROPOSPHERE FROM CHEMICAL TRACER		
09/12/2002 - 09/30/2003	FY02: \$0	Total: \$0	04/01/1998 - 09/30/2001	FY02: \$0	Total: \$208,022
<i>Prin. Invest.:</i> P A SINSKY			<i>Prin. Invest.:</i> D W WAUGH		
<i>Tech. Officer:</i> GSFC/J L HARRINGTON			<i>Tech. Officer:</i> LARC/G L MADDREA, LARC/L R POOLE		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NCC 5 446</b>	<b>BOWIE STATE UNIV</b>	<b>4831</b>	<b>NAG 1 2194</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4839</b>
ANALYSIS & MODIFICATION OF NASA WEB BASED SOFTWARE			DYNAMICAL COUPLING OF THE TROPOSPHERE WITH THE POLAR STRATO- SPHERE		
07/10/2000 - 07/14/2001	FY02: \$0	Total: \$70,082	05/14/1999 - 04/30/2002	FY02: \$0	Total: \$124,376
<i>Prin. Invest.:</i> D CARVALO			<i>Prin. Invest.:</i> D W WAUGH		
<i>Tech. Officer:</i> GSFC/H PARK			<i>Tech. Officer:</i> LARC/G L MADDREA, LARC/L R POOLE		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NCC 5 507</b>	<b>BOWIE STATE UNIV</b>	<b>4832</b>	<b>NAG 1 2257</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4840</b>
FOLIAR OPTICAL PROPERTY MEASUREMENTS OF BOREAL SPE CIES (A CONTINUATION OF THE BOREAL RESEARCH PROGR			METHODS FOR REFLECTED GLOBAL POSITIONING SYSTEM (GPS) DATA COLLECTION AND ANALYSIS		
08/07/2000 - 08/14/2003	FY02: \$0	Total: \$23,625	01/11/2000 - 09/30/2001	FY02: \$0	Total: \$339,000
<i>Prin. Invest.:</i> W T LAWRENCE			<i>Prin. Invest.:</i> M S ASHER, R K RANEY, T ELFOUHAILY		
<i>Tech. Officer:</i> GSFC/E MIDDLETON			<i>Tech. Officer:</i> LARC/S J KATZBERG, GSFC/J L GARRISON		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 33 - OCEANOGRAPHY		
<b>NCC 5 516</b>	<b>BOWIE STATE UNIV</b>	<b>4833</b>	<b>NAG 1 2270</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4841</b>
MODEL INSTS FOR EXCELLENCE			PHOTOLYSIS RATE COEFFICIENT CALCULATIONS IN SUPPORT OF SOLVE CAMPAIGN		
10/05/2000 - 09/30/2003	FY02: \$1,671,000	Total: \$3,200,000	02/17/2000 - 09/30/2001	FY02: \$0	Total: \$188,000
<i>Prin. Invest.:</i> E J DAVIS			<i>Prin. Invest.:</i> S A LLOYD		
<i>Tech. Officer:</i> GSFC/D MENCHAN			<i>Tech. Officer:</i> LARC/L R POOLE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 12066</b>	<b>CAPITOL COLL</b>	<b>4834</b>	<b>NAG 1 2304</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4842</b>
A PRE-COLL MINORITY ENGINEERING PROGRAM			NONDESTRUCTIVE EVALUATION OF SPACECRAFT & AIRCRAFT WIRING		
04/30/2002 - 04/30/2003	FY02: \$0	Total: \$0	06/06/2000 - 06/30/2003	FY02: \$0	Total: \$150,000
<i>Prin. Invest.:</i> H JARRELL			<i>Prin. Invest.:</i> J M GREEN		
<i>Tech. Officer:</i> GSFC/D MENCHAN			<i>Tech. Officer:</i> LARC/W P WINFREE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 1 2329**                      **JOHNS HOPKINS UNIV**                      **4843**  
 COMPREHENSIVE ASSESSMENT OF HEALTH AND THE AIR- CRAFT CABIN  
 ENVIRONMENT: PHASE I  
 09/26/2000 - 09/30/2002                      FY02: \$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**                      **4844**  
 INTEGRATED POWER SOURCE DEVELOPMENT  
 04/12/2001 - 10/30/2001                      FY02: \$0                      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**                      **4845**  
 NSTARS PROJECT SUPPORT AND RESEARCH ON NEARBY STAR S  
 02/01/2000 - 12/31/2001                      FY02: \$0                      Total: \$116,988  
*Prin. Invest.:* T HENRY  
*Tech. Officer:* ARC/L CAROFF  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1476**                      **JOHNS HOPKINS UNIV**                      **4846**  
 KNOWLEDGE RETENTION TOOLS FOR LONG DURATION MISSIO NS  
 04/20/2001 - 09/30/2002                      FY02: \$0                      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**                      **4847**  
 MINIME DIAGNOSTICS ENGINE DEVELOPMENT SUPPORT  
 04/20/2001 - 10/14/2002                      FY02: \$0                      Total: \$150,000  
*Prin. Invest.:* K J HEERES  
*Tech. Officer:* ARC/M SHIRLEY, ARC/H STEWART  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1559**                      **JOHNS HOPKINS UNIV**                      **4848**  
 COMPILATION OF MODEL BASED PROGRAMS FOR REACTIVE A UTONO-  
 MOUS CONTROL  
 05/09/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D P WATSON  
*Tech. Officer:* ARC/M SHIRLEY, ARC/R MORRIS  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 1815**                      **JOHNS HOPKINS UNIV**                      **4849**  
 EXPERIMENTAL INVESTIGATION; POOL BOILING HEAT TRAN SFER EN-  
 HANCEMENT IN THE PRESENCE OF ELECTRIC FIEL  
 03/25/1996 - 05/14/2002                      FY02: \$0                      Total: \$352,889  
*Prin. Invest.:* D HERMAN  
*Tech. Officer:* GRC/H K NAHRA, GRC/B MOTIL  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2118**                      **JOHNS HOPKINS UNIV**                      **4850**  
 PRODUCTION AND REMOVAL OF GAS BUBBLES IN MICROGRAV ITY  
 02/26/1998 - 08/16/2002                      FY02: \$0                      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**                      **4851**  
 ANALYTICAL AND EXPERIMENTAL INVESTIGATIONS OF A HY DROCARBON  
 FUELED AIR-AUGMENTED ROCKET ENGINE CYCL  
 02/16/2000 - 07/31/2002                      FY02: \$0                      Total: \$301,612  
*Prin. Invest.:* T RICE  
*Tech. Officer:* GRC/T D SMITH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2362**                      **JOHNS HOPKINS UNIV**                      **4852**  
 ACOUSTIC BUBBLE REMOVAL FROM BOILING SURFACES AND ITS OPTIMI-  
 ZATION  
 04/03/2000 - 11/30/2003                      FY02: \$0                      Total: \$126,252  
*Prin. Invest.:* A PROSPERETTI  
*Tech. Officer:* GRC/M M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2460**                      **JOHNS HOPKINS UNIV**                      **4853**  
 DESIGN OF EXHAUST NOZZLES FOR THE RBCC-GTX CONCEPT DESIGN OF  
 EXHAUST NOZZLES FOR THE RBCC-GTX CONCEP  
 06/09/2000 - 09/30/2002                      FY02: \$0                      Total: \$93,033  
*Prin. Invest.:* T RICE  
*Tech. Officer:* GRC/T D SMITH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2569**                      **JOHNS HOPKINS UNIV**                      **4854**  
 PULSED DETONATION WAVE ENGINE COMPONENT DESIGN AND ANALYSIS  
 STUDY  
 03/23/2001 - 12/31/2002                      FY02: \$0                      Total: \$180,000  
*Prin. Invest.:* P WALTRUP  
*Tech. Officer:* GRC/H D PERKINS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2622**                      **JOHNS HOPKINS UNIV**                      **4855**  
 LOW TEMPERATURE DIFFERENTIAL STIRLING ENGINE  
 09/26/2001 - 09/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D MEHOKE  
*Tech. Officer:* GRC/J G SCHREIBER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2690**                      **JOHNS HOPKINS UNIV**                      **4856**  
 MICROSAMPLE CHARACTERIZATION OF COATING FOR GRCOP 84 FOR  
 HIGH TEMPERATURE HIGH HEAT FLUX APPLICATION  
 01/11/2002 - 09/30/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D J HEMKER  
*Tech. Officer:* GRC/S V RAJ  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2726**                      **JOHNS HOPKINS UNIV**                      **4857**  
 ENHANCEMENT OF POOL BOILING HEAT TRANSFER AND CONT ROL OF  
 BUBBLE MOTION IN MICROGRAVITY USING ELECTR  
 03/13/2002 - 12/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D HERMAN  
*Tech. Officer:* GRC/M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2727**                      **JOHNS HOPKINS UNIV**                      **4858**  
 NOVEL NEMS STIRLING COOLER #AD-22598 NOVEL NEMS STIRLING  
 COOLER #AD-22598  
 03/07/2002 - 02/24/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A G DARRIN  
*Tech. Officer:* GRC/M MORAN  
*CASE Category:* 49 - ENGINEERING, OTHER



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<b>NAG 5 3255</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4859</b>	<b>NAG 5 5198</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4868</b>
THE STRUCTURE OF ACTIVE GALACTIC NUCLEI			DENSITY TEMPERATURE & MEASUREMENTS FOR ICON ROCKET EXPERIMENT		
06/06/1996 - 12/31/2001	FY02: \$0	Total: \$317,700	05/21/1998 - 04/11/2001	FY02: \$0	Total: \$68,805
<i>Prin. Invest.:</i> G A KRISS			<i>Prin. Invest.:</i> J H YEE		
<i>Tech. Officer:</i> GSFC/D WEST			<i>Tech. Officer:</i> GSFC/W B JOHNSON		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 3485</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4860</b>	<b>NAG 5 5301</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4869</b>
DIFFUSE IONIZED GAS IN GALACTIC ENVIRONMENTS			GRANT ENTITLED: ALTIMETER SEA-STATE BIAS MODEL STUDY		
10/31/1996 - 10/31/2001	FY02: \$0	Total: \$561,400	07/18/2000 - 07/17/2003	FY02: \$0	Total: \$74,699
<i>Prin. Invest.:</i> K R SEMBACH			<i>Prin. Invest.:</i> D R THOMPSON		
<i>Tech. Officer:</i> GSFC/D K WEST			<i>Tech. Officer:</i> WFF/D C VANDEMARK, WFF/D W HANCOCK		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 45 - ELECTRICAL ENGR		
<b>NAG 5 3503</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4861</b>	<b>NAG 5 5314</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4870</b>
THE EVOLUTION AND CLUSTERING OF GALAXIES AT Z=1 AN			SUPPORT OF THE INTERNATIONAL WORKSHOP ENTITLED: COUPLING COASTAL OCEAN, COASTAL ATMOSPHERE WIND		
11/27/1996 - 11/30/2002	FY02: \$0	Total: \$648,611	03/22/2001 - 12/31/2002	FY02: \$0	Total: \$35,000
<i>Prin. Invest.:</i> A S SZALAY			<i>Prin. Invest.:</i> E GROSS		
<i>Tech. Officer:</i> GSFC/D K WEST			<i>Tech. Officer:</i> GSFC/S R LONG, GSFC/N E HUANG		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 33 - OCEANOGRAPHY		
<b>NAG 5 4168</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4862</b>	<b>NAG 5 5315</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4871</b>
PLANETARY AERONOMY			ROCKET AND LABORATORY STUDIES IN ASTRONOMY ROCKET AND LABORATORY STUDIES IN ASTRONOMY		
03/15/1997 - 08/31/2002	FY02: \$0	Total: \$426,943	02/14/2001 - 02/28/2004	FY02: \$0	Total: \$420,000
<i>Prin. Invest.:</i> D F STROBEL			<i>Prin. Invest.:</i> P D FELDMAN		
<i>Tech. Officer:</i> GSFC/D BOGAN			<i>Tech. Officer:</i> GSFC/J C BRINTON		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 4261</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4863</b>	<b>NAG 5 6113</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4872</b>
WINDOWLESS FUV LAMPS			PROJECT ULYSSES HI-SCALE DATA ANALYSIS PHASE ACTIV		
04/14/1997 - 12/31/2001	FY02: \$0	Total: \$202,316	07/28/1997 - 03/31/2002	FY02: \$0	Total: \$1,616,000
<i>Prin. Invest.:</i> D R MCCANDLISS			<i>Prin. Invest.:</i> R E GOLD		
<i>Tech. Officer:</i> GSFC/H HASAN			<i>Tech. Officer:</i> GSFC/V JONESS		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 4365</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4864</b>	<b>NAG 5 6178</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4873</b>
CONTINUATION OF THE VOYAGER INTERSTELLAR MISSION:			CRITICAL COMPARISON OF SUBSTORM TRIGGER MODELS AGA HE NEAR-EARTH TAIL		
04/23/1997 - 03/31/2002	FY02: \$0	Total: \$1,900,000	07/28/1997 - 05/14/2002	FY02: \$0	Total: \$296,538
<i>Prin. Invest.:</i> D M KRIMIGIS			<i>Prin. Invest.:</i> D OHTANI		
<i>Tech. Officer:</i> GSFC/C P HOLMES			<i>Tech. Officer:</i> GSFC/D EVANS		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 4664</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4865</b>	<b>NAG 5 6400</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4874</b>
ION CYCLOTRON WAVES: AN ISTP STUDY			SPACE OBSERVATIONS OF STARBURST GALAXIES (LTSA)		
06/25/1997 - 05/31/2001	FY02: \$0	Total: \$131,931	10/10/1997 - 09/30/2002	FY02: \$0	Total: \$677,200
<i>Prin. Invest.:</i> D J ANDERSON			<i>Prin. Invest.:</i> T HECKMAN		
<i>Tech. Officer:</i> GSFC/J G GREBOWSKY			<i>Tech. Officer:</i> GSFC/R J OLIVERSEN		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 5047</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4866</b>	<b>NAG 5 6764</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4875</b>
WIND-WAVE-CURRENT COUPLED MODEL			MONITORING OF NGC 4151		
08/22/1995 - 02/14/2003	FY02: \$0	Total: \$346,239	12/30/1997 - 12/31/2000	FY02: \$0	Total: \$44,999
<i>Prin. Invest.:</i> O PHILLIPS			<i>Prin. Invest.:</i> G KRISS		
<i>Tech. Officer:</i> GSFC/S R LONG, GSFC/N E HUANG			<i>Tech. Officer:</i> GSFC/R POLIDAN		
<i>CASE Category:</i> 33 - OCEANOGRAPHY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 5122</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4867</b>			
ROCKET AND LABORATORY EXPERIMENTS IN ASTRONOMY					
02/21/1997 - 02/28/2002	FY02: \$0	Total: \$2,031,000			
<i>Prin. Invest.:</i> P D FELDMAN					
<i>Tech. Officer:</i> GSFC/B J FLOWERS					
<i>CASE Category:</i> 13 - PHYSICS					

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**NAG 5 7080**                      **JOHNS HOPKINS UNIV**                      **4876**  
 PYROTECHNIC ROCK CHIPPER  
 03/10/1998 - 07/31/2002                      FY02: \$0                      Total: \$247,576  
*Prin. Invest.:* A F CHENG  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7186**                      **JOHNS HOPKINS UNIV**                      **4877**  
 INFRARED INVESTIGATION OF COMETARY VOLATILES  
 03/25/1998 - 02/28/2002                      FY02: \$0                      Total: \$200,056  
*Prin. Invest.:* H WEAVER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7227**                      **JOHNS HOPKINS UNIV**                      **4878**  
 TOMS VALIDATION AND UTLS PHOTOCHEMISTRY USING ER-2 AND  
 GROUND BASED DATASETS  
 04/14/1998 - 09/30/2001                      FY02: \$0                      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**                      **4879**  
 MIDDLEWORLD TRANSPORT WITHIN THREE-DIMENSIONAL MOD ELS:  
 CHARACTERIZATION AND SENSITIVITIES TO MODEL  
 05/06/1998 - 09/30/2001                      FY02: \$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**                      **4880**  
 TROPOSPHERIC AND STRATOSPHERIC COMPOSITION RETRIEVALS USING  
 THE STELLAR OCCULTATION TECHNIQUE  
 06/22/1998 - 08/31/2002                      FY02: \$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**                      **4881**  
 PROPOSAL TITLED "A PROPOSAL TO INVESTIGATE OUTSTANDING PROBLEMS  
 IN ASTRONOMY BY THE INSTRUMENT DEFINITION STUDY"  
 09/17/1998 - 11/30/2002                      FY02: \$0                      Total: \$6,543,435  
*Prin. Invest.:* H FORD  
*Tech. Officer:* GSFC/J JELETIC  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7724**                      **JOHNS HOPKINS UNIV**                      **4882**  
 QUANTITATIVE MAGNETOSPHERIC DYNAMICS FROM POLAR UV AND VIS-  
 IBLE IMAGERS  
 09/24/1998 - 03/31/2002                      FY02: \$0                      Total: \$821,200  
*Prin. Invest.:* C I MENG  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7769**                      **JOHNS HOPKINS UNIV**                      **4883**  
 GRAVITY WAVES IN JUPITER'S UPPER ATMOSPHERE  
 01/15/1999 - 08/31/2001                      FY02: \$0                      Total: \$125,000  
*Prin. Invest.:* D STROBEL  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7797**                      **JOHNS HOPKINS UNIV**                      **4884**  
 TURBULENCE IN MAGNETOTAIL PLASMA SHEET  
 12/15/1998 - 12/31/2002                      FY02: \$0                      Total: \$272,087  
*Prin. Invest.:* D Y LUI  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7863**                      **JOHNS HOPKINS UNIV**                      **4885**  
 SATELLITE BOMBARDMENT MODEL WITH DATA CONSTRAINTS  
 01/11/1999 - 12/31/2001                      FY02: \$0                      Total: \$174,228  
*Prin. Invest.:* C P PARANICAS  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7920**                      **JOHNS HOPKINS UNIV**                      **4886**  
 ISTP: SOLAR WIND, FORESHOCK, AND MAGNETOSHEATH PROCESSES  
 12/15/1998 - 02/28/2002                      FY02: \$0                      Total: \$311,000  
*Prin. Invest.:* D G SIBECK  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7921**                      **JOHNS HOPKINS UNIV**                      **4887**  
 SOLAR FILAMENTS AT 1 AU  
 12/10/1998 - 09/30/2002                      FY02: \$0                      Total: \$278,713  
*Prin. Invest.:* D M RUST  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8019**                      **JOHNS HOPKINS UNIV**                      **4888**  
 CORONAL MASS EJECTION EVENTS: COMPARATIVE GEOEFFECTIVENESS  
 FROM SOLAR MINIMUM THROUGH SOLAR MAXIMUM  
 01/06/1999 - 12/31/2002                      FY02: \$0                      Total: \$238,636  
*Prin. Invest.:* N J FOX  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8062**                      **JOHNS HOPKINS UNIV**                      **4889**  
 ANALYSIS OF 3-D IMAGERY OF POLAR MESOSPHERIC CLOUDS OBSERVED  
 FROM MSX  
 01/12/1999 - 01/14/2002                      FY02: \$0                      Total: \$185,500  
*Prin. Invest.:* D MORRISON  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 8122**                      **JOHNS HOPKINS UNIV**                      **4890**  
 ANALYSIS OF OPTICAL OBSERVATIONS OF TOPSIDE MOLECULAR IONS IN  
 THE POLAR REGIONS  
 02/03/1999 - 12/31/2001                      FY02: \$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**                      **4891**  
 DEV. OF MISSION INDEPENDENCE DATA FORMAT FOR PARTICLE FIELD  
 MEASUREMENT WITH APPLICATION TO AMPTE/C  
 02/05/1999 - 12/31/2002                      FY02: \$0                      Total: \$356,989  
*Prin. Invest.:* S R NYLUND  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 11 - ASTRONOMY

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<b>NAG 5 8171</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4892</b>	<b>NAG 5 8590</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4901</b>
SPATIAL VARIATIONS IN ROCK SPECTRAL PROPERTIES AT THE SAGAN MEMORIAL STATION			STANDARDIZED SKY PARTITIONING FOR THE NEXT GENERATION ASTRONOMY AND SPACE ARCHIVES		
02/22/1999 - 09/30/2002	FY02: \$0	Total: \$116,000	06/03/1999 - 05/31/2003	FY02: \$0	Total: \$190,828
<i>Prin. Invest.:</i> S L MURCHIE			<i>Prin. Invest.:</i> A SZALAY		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GSFC/P E HUNTER		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 8191</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4893</b>	<b>NAG 5 8655</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4902</b>
ENERGETIC ION INTERACTIONS WITH THE GALILEAN SATELLITES			"CROSSLINK TRANSCIEVER DEVELOPMENT IN SUPPORT OF THE NASA/DOD UNIV NANO-SATELLITE PROGRAM."		
04/21/1999 - 03/31/2001	FY02: \$0	Total: \$31,391	08/19/1999 - 05/31/2001	FY02: \$0	Total: \$370,119
<i>Prin. Invest.:</i> D MAUK			<i>Prin. Invest.:</i> P A STADTER		
<i>Tech. Officer:</i> GSFC/R BEEBE			<i>Tech. Officer:</i> GSFC/J BRISTOW		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 5 8279</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4894</b>	<b>NAG 5 8665</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4903</b>
RECONCILING STARBURSTS AND NORMAL STAR FORMATION (ADP98)			CROSSLINK NAVIGATION AND COMMUNICATION SYSTEM FOR MULTIPLE DISTRIBUTED SPACECRAFT.		
02/25/1999 - 05/14/2003	FY02: \$0	Total: \$48,051	08/17/1999 - 08/31/2002	FY02: \$0	Total: \$474,781
<i>Prin. Invest.:</i> G R MEURER			<i>Prin. Invest.:</i> P A STADTER		
<i>Tech. Officer:</i> GSFC/D K WEST			<i>Tech. Officer:</i> GSFC/G H MUCKLOW		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR		
<b>NAG 5 8331</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4895</b>	<b>NAG 5 8687</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4904</b>
FLARE GENESIS EXPERIMENT			ADVANCED TECHNIQUES FOR ENERGETIC ION AND NEUTRAL ATOM TOF/IMAGING SENSORS		
05/05/1999 - 03/31/2002	FY02: \$0	Total: \$520,789	07/20/1999 - 07/31/2002	FY02: \$0	Total: \$139,443
<i>Prin. Invest.:</i> D M RUST			<i>Prin. Invest.:</i> D G MITCHELL		
<i>Tech. Officer:</i> GSFC/W WAGNER			<i>Tech. Officer:</i> GSFC/G H MUCKLOW		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 8347</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4896</b>	<b>NAG 5 8688</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4905</b>
OPTIMAL COADDITION OF DITHERED IMAGES USING THE KA RHUNEN-LOEVE TRANSFORM			DATA COMPRESSION FOR TIME SERIES AND SPECTRAL DATA		
02/25/1999 - 02/28/2003	FY02: \$0	Total: \$174,900	07/20/1999 - 07/31/2002	FY02: \$0	Total: \$204,374
<i>Prin. Invest.:</i> A S SZALAY			<i>Prin. Invest.:</i> S HAWKINS, 111		
<i>Tech. Officer:</i> GSFC/J BREDEDAMP			<i>Tech. Officer:</i> GSFC/G H MUCKLOW		
<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 5 8361</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4897</b>	<b>NAG 5 8741</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4906</b>
ISTP MISSION DATA INTERFACES FOR DARN			ADVANCED AUTOMATION CONCEPTS IN SPACEFLIGHT DYNAMICS & SPACE NAVIGATION.		
03/12/1999 - 04/14/2001	FY02: \$0	Total: \$340,000	08/17/1999 - 02/28/2001	FY02: \$0	Total: \$147,275
<i>Prin. Invest.:</i> R GREEWALD			<i>Prin. Invest.:</i> P STADTER		
<i>Tech. Officer:</i> GSFC/S CURTIS			<i>Tech. Officer:</i> GSFC/J BRISTOW		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 5 8516</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4898</b>	<b>NAG 5 8862</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4907</b>
MINIATURIZED ENERGETIC PARTICLE DETECTOR DEVELOPMENT			HIGH RESOLUTION IMAGING FROM THE STRATOSPHERE: ATMOSPHERIC SEEING AND TETHER DYNAMICS		
06/14/1999 - 05/31/2003	FY02: \$0	Total: \$456,327	10/22/1999 - 10/14/2002	FY02: \$0	Total: \$10,000
<i>Prin. Invest.:</i> R L MCNUTT			<i>Prin. Invest.:</i> H FORD		
<i>Tech. Officer:</i> GSFC/B BETTS			<i>Tech. Officer:</i> GSFC/T GRUNER		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 5 8548</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4899</b>	<b>NAG 5 8955</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4908</b>
IMPLEMENTATION OF ALGORITHMS FOR HIGH SPEED AUTONOMOUS CCD DATA REDUCTION			ABUNDANCES IN OXYGEN-RICH SUPERNOVA REMNANTS: OBSERVATIONAL TESTS OF NUCLEOSYNTHESIS MODELS - FU		
05/18/1999 - 05/14/2001	FY02: \$0	Total: \$21,250	01/24/2000 - 01/31/2002	FY02: \$0	Total: \$38,500
<i>Prin. Invest.:</i> G MURPHY			<i>Prin. Invest.:</i> J A MORSE		
<i>Tech. Officer:</i> GSFC/J BREDEKAMP			<i>Tech. Officer:</i> GSFC/G SONNEBORN		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 8572</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4900</b>			
CLOUD & WATER VAPOR EFFECTS ON CLIMATE SENSITIVITY					
06/02/1999 - 05/31/2002	FY02: \$0	Total: \$500,000			
<i>Prin. Invest.:</i> A ARKING					
<i>Tech. Officer:</i> GSFC/W LAU					
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE					

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**NAG 5 8964**                      **JOHNS HOPKINS UNIV**                      **4909**  
 INVESTIGATION OF MAGNETOSPHERIC WAVEGUIDE MODE USING SATEL-  
 LITE & RADAR OBSERVATIONS  
 02/23/2000 - 02/28/2003                      FY02: \$0                      Total: \$132,997  
*Prin. Invest.:* K TAKAHASHI  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9012**                      **JOHNS HOPKINS UNIV**                      **4910**  
 THE FAR UV-SPECTRA OF STARBURSTS - FUSE  
 02/23/2000 - 01/31/2002                      FY02: \$0                      Total: \$120,700  
*Prin. Invest.:* T M HECKMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9078**                      **JOHNS HOPKINS UNIV**                      **4911**  
 INVESTIGATION OF THE MAGNETIC FIELD LINE STRETCHING AT SUB-  
 STORM ONSET  
 02/23/2000 - 02/28/2003                      FY02: \$0                      Total: \$148,291  
*Prin. Invest.:* K LIU  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9109**                      **JOHNS HOPKINS UNIV**                      **4912**  
 SIMULATING TRANSIENT PROCESSES AT THE MAGNETOPAUSE  
 02/23/2000 - 02/28/2003                      FY02: \$0                      Total: \$148,388  
*Prin. Invest.:* H KU  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9118**                      **JOHNS HOPKINS UNIV**                      **4913**  
 ELECTROMAGNETIC ION CYCLOTRON WAVES ON AURORAL FIELD LINES  
 02/24/2000 - 04/30/2002                      FY02: \$0                      Total: \$33,000  
*Prin. Invest.:* R E ERLANDSON  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9186**                      **JOHNS HOPKINS UNIV**                      **4914**  
 THE CLUSTERING OF GALAXIES & DARK MATTER AT INTERMEDIATE  
 REDSHIFTS (ATP 99)  
 03/07/2000 - 03/14/2001                      FY02: \$0                      Total: \$37,000  
*Prin. Invest.:* A S SZALAY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9187**                      **JOHNS HOPKINS UNIV**                      **4915**  
 PREDICTING THE SPECTRA OF GALACTIC BLACK HOLES (ATP 99)  
 03/07/2000 - 03/14/2003                      FY02: \$0                      Total: \$186,533  
*Prin. Invest.:* J H KROLIK  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9219**                      **JOHNS HOPKINS UNIV**                      **4916**  
 HOT MASSIVE STARS IN LOCAL GROUP GALAXIES: A MULTI WAVELENGTH  
 SPECTRAL ANALYSIS  
 03/13/2000 - 03/14/2004                      FY02: \$0                      Total: \$203,724  
*Prin. Invest.:* L BIANCHI  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9240**                      **JOHNS HOPKINS UNIV**                      **4917**  
 ANALYSIS OF POLAR MESOSPHERIC CLOUDS USING SPECTROGRAPHIC  
 IMAGES ON A SATELLITE  
 03/13/2000 - 02/28/2003                      FY02: \$0                      Total: \$146,387  
*Prin. Invest.:* J CARBARY  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9296**                      **JOHNS HOPKINS UNIV**                      **4918**  
 INNOVATIVE APPROACHES TO LITTORAL ALTIMETRY FOR PREDICTION &  
 MONITORING OF NEAR-SHORE SEA  
 04/13/2000 - 09/14/2001                      FY02: \$0                      Total: \$75,000  
*Prin. Invest.:* R K RANEY  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9426**                      **JOHNS HOPKINS UNIV**                      **4919**  
 SENSITIVITY OF COUPLED LAND-ATMOSPHERE BOUNDARY LAYER DY-  
 NAMICS TO SURFACE HETEROGENEITY USING  
 04/11/2000 - 04/30/2003                      FY02: \$0                      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**                      **4920**  
 SPACE PHYSICS DATA MARKUP LANGUAGE  
 04/18/2000 - 04/14/2003                      FY02: \$0                      Total: \$223,900  
*Prin. Invest.:* D MORRISON  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 13 - PHYSICS

**NAG 5 9456**                      **JOHNS HOPKINS UNIV**                      **4921**  
 ADAPTIVE INSTRUMENT MODULE (AIM)  
 04/13/2000 - 01/31/2003                      FY02: \$0                      Total: \$78,692  
*Prin. Invest.:* R F CONDE  
*Tech. Officer:* GSFC/P LUERS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 9569**                      **JOHNS HOPKINS UNIV**                      **4922**  
 NEW ISTP SOLAR MAX: CONTINUED INTEGRATION OF INTERBALL INTO  
 ISTP  
 05/08/2000 - 05/14/2001                      FY02: \$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**                      **4923**  
 MOLECULAR AND ATOMIC LASER MASS ANALYSIS (MALMA) INSTRUMENTATION  
 FOR IN-SITU STUDIES OF PLANETARY  
 06/20/2000 - 06/30/2001                      FY02: \$0                      Total: \$40,000  
*Prin. Invest.:* R W MCENTIRE  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9837**                      **JOHNS HOPKINS UNIV**                      **4924**  
 CONTEMPORANEOUS XMM & HST OBSERVATIONS OF SEYFERT GALAXIES  
 11/06/2000 - 11/14/2003                      FY02: \$0                      Total: \$14,505  
*Prin. Invest.:* M E KAISER  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

MARYLAND

**NAG 5 9872**                      **JOHNS HOPKINS UNIV**                      **4925**  
 A LOW POWER CROSSLINK TRANSCEIVER FOR NANOSAT COMMUNICA-  
 TIONS EXPERIMENT  
 08/10/2000 - 09/30/2001                      FY02: \$0                      Total: \$400,000  
*Prin. Invest.:* P STADTER  
*Tech. Officer:* GSFC/J BRISTOW  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9878**                      **JOHNS HOPKINS UNIV**                      **4926**  
 ASTROPHYSICAL PROPERTIES OF ACCRETING BLACK HOLES IN NORMAL  
 GALAXY NUCLEI (LISA 99)  
 08/28/2000 - 08/31/2002                      FY02: \$0                      Total: \$40,000  
*Prin. Invest.:* E COLBERT  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9903**                      **JOHNS HOPKINS UNIV**                      **4927**  
 ACTIVITIES TO SUPPORT SCIENCE PLANNING AND COORDINATION IN  
 ASSOCIATION WITH THE INTERNATIONAL SOLAR  
 08/30/2000 - 09/30/2002                      FY02: \$0                      Total: \$78,814  
*Prin. Invest.:* N J FOX  
*Tech. Officer:* GSFC/R A HOFFMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9910**                      **JOHNS HOPKINS UNIV**                      **4928**  
 THE X-RAY PROPERTIES OF ULTRALUMINOUS GALAXIES: COSMOLOGICAL  
 IMPLICATIONS  
 09/05/2000 - 09/30/2002                      FY02: \$0                      Total: \$37,600  
*Prin. Invest.:* T HECKMAN  
*Tech. Officer:* GSFC/R M MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9948**                      **JOHNS HOPKINS UNIV**                      **4929**  
 STARBURST-DRIVEN OUTFLOWS & THE EVOLUTION OF DWARF GALAXIES  
 09/07/2000 - 08/31/2002                      FY02: \$0                      Total: \$39,200  
*Prin. Invest.:* T HECKMAN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9963**                      **JOHNS HOPKINS UNIV**                      **4930**  
 CHARACTERIZING THE X-RAY SPECTRUM OF THE GALACTIC HALO  
 09/22/2000 - 09/30/2002                      FY02: \$0                      Total: \$39,900  
*Prin. Invest.:* W BLAIR  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9968**                      **JOHNS HOPKINS UNIV**                      **4931**  
 REMM, RADIATION ENVIRONMENT MINI-MONITOR. SUPPORT FOR NASA  
 NANOSAT PROGRAM DEVELOPMENT OF ENVIRONMENT  
 10/30/2000 - 12/31/2002                      FY02: \$0                      Total: \$130,000  
*Prin. Invest.:* A GARRISON-DARRIN  
*Tech. Officer:* GSFC/J BARTH  
*CASE Category:* 13 - PHYSICS

**NAG 5 9988**                      **JOHNS HOPKINS UNIV**                      **4932**  
 VALIDATION OF MSX/UVISI STELLAR OCCULTATION RETRIEVALS OF  
 LOWER STRATOSPHERE/UPPER TROPOSPHERE  
 10/04/2000 - 09/30/2003                      FY02: \$0                      Total: \$155,000  
*Prin. Invest.:* J YEE  
*Tech. Officer:* GSFC/A C AIKIN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10060**                      **JOHNS HOPKINS UNIV**                      **4933**  
 SUPERDARN CONTRIBUTIONS TO TIMED/CEDAR COLLABORATIVE STUD-  
 IES  
 10/23/2000 - 10/31/2002                      FY02: \$0                      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**                      **4934**  
 FLAT PLASMA SPECTROMETER  
 11/07/2000 - 11/14/2002                      FY02: \$0                      Total: \$167,226  
*Prin. Invest.:* J L CHAMPION  
*Tech. Officer:* GSFC/F HERRERO  
*CASE Category:* 13 - PHYSICS

**NAG 5 10176**                      **JOHNS HOPKINS UNIV**                      **4935**  
 THE PHYSICAL PROPERTIES OF THE INTRA-CLUSTER MEDIUM AT Z 1  
 12/18/2000 - 12/31/2002                      FY02: \$0                      Total: \$8,300  
*Prin. Invest.:* H FORD  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10234**                      **JOHNS HOPKINS UNIV**                      **4936**  
 A SELF-HEALING SPACECRAFT ARCHITECTURE FOR LONG DURATION LOW  
 POWER MISSION.  
 01/30/2001 - 01/31/2004                      FY02: \$0                      Total: \$91,924  
*Prin. Invest.:* B ANDREWS  
*Tech. Officer:* GSFC/P LUERS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 10241**                      **JOHNS HOPKINS UNIV**                      **4937**  
 VARIABILITY EMISSION CONTROLLER CONCEPTS & RISK MITIGATION  
 PATH  
 01/08/2001 - 01/14/2003                      FY02: \$0                      Total: \$108,679  
*Prin. Invest.:* R OSIANDER  
*Tech. Officer:* GSFC/D DOUGLAS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 10242**                      **JOHNS HOPKINS UNIV**                      **4938**  
 GEOTAIL ENERGETIC PARTICLE AND ION COMPOSITION (EPIC) PROGRAM  
 01/12/2001 - 12/31/2003                      FY02: \$0                      Total: \$430,000  
*Prin. Invest.:* R MCENTIRE  
*Tech. Officer:* GSFC/M ACUNA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10248**                      **JOHNS HOPKINS UNIV**                      **4939**  
 INVESTIGATION OF SUPERNOVA REMNANT SHOCKS IN THE VELA-PUPPIS  
 REGION  
 02/12/2001 - 02/14/2003                      FY02: \$0                      Total: \$61,900  
*Prin. Invest.:* R SANKRIT  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10261**                      **JOHNS HOPKINS UNIV**                      **4940**  
 CONTINUED PARTICIPATION IN CRYOSAT SCIENCE ADVISORY GROUP  
 01/09/2001 - 12/31/2003                      FY02: \$0                      Total: \$25,956  
*Prin. Invest.:* R RANEY  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10281**                      **JOHNS HOPKINS UNIV**                      **4941**  
 COMPARATIVE MAGNETOSPHERES INVESTIGATION OF PLASMA INJECTION PHENOMENA  
 01/23/2001 - 01/31/2004                      FY02: \$0                      Total: \$67,852  
*Prin. Invest.:* B MAUK  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10285**                      **JOHNS HOPKINS UNIV**                      **4942**  
 STRUCTURE OF THE MAGNETOPAUSE  
 01/23/2001 - 01/31/2004                      FY02: \$0                      Total: \$69,449  
*Prin. Invest.:* D G SIBECK  
*Tech. Officer:* GSFC/JSHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10302**                      **JOHNS HOPKINS UNIV**                      **4943**  
 THE FAR-UV SPECTRA OF POWERFUL STARBURSTS - FUSE- 00  
 01/25/2001 - 01/31/2003                      FY02: \$0                      Total: \$103,210  
*Prin. Invest.:* T M HECKMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10304**                      **JOHNS HOPKINS UNIV**                      **4944**  
 SEARCH FOR X-RAY SPECTRAL FEATURES IN BL LAC OBJECTS MKN 180 AND 1ES1517+656  
 01/29/2001 - 01/31/2003                      FY02: \$0                      Total: \$500  
*Prin. Invest.:* J H KROLIK  
*Tech. Officer:* GSFC/R MUSHOTSKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10355**                      **JOHNS HOPKINS UNIV**                      **4945**  
 SMALL-SCALE INTERSTELLAR STRUCTURE TOWARD THE OPEN CLUSTER CHI PERSEI - FUSE 00  
 02/13/2001 - 02/14/2003                      FY02: \$0                      Total: \$10,000  
*Prin. Invest.:* S D FRIEDMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10364**                      **JOHNS HOPKINS UNIV**                      **4946**  
 CENTRAL STARS OF PLANETARY NEBULAE IN THE LARGE MAGELLANIC CLOUD-FUSE00  
 02/05/2001 - 02/14/2002                      FY02: \$0                      Total: \$65,700  
*Prin. Invest.:* L BIANCHI  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10380**                      **JOHNS HOPKINS UNIV**                      **4947**  
 MOLECULAR HYDROGEN FLUORESCENCE IN IC 63 (FUSE 00)  
 02/08/2001 - 02/14/2003                      FY02: \$0                      Total: \$72,500  
*Prin. Invest.:* R SANKRIT  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10394**                      **JOHNS HOPKINS UNIV**                      **4948**  
 O VI EMISSION FROM THE INTERSTELLAR MEDIUM (FUSE 00)  
 02/12/2001 - 02/14/2003                      FY02: \$0                      Total: \$79,000  
*Prin. Invest.:* R L SHELTON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10397**                      **JOHNS HOPKINS UNIV**                      **4949**  
 "PROGRAMMABLE CIRCUIT INTERCONNECT USING MEMS LIQUID-METAL MICROSWITCHES".  
 02/12/2001 - 02/14/2004                      FY02: \$0                      Total: \$376,889  
*Prin. Invest.:* R EDWARDS  
*Tech. Officer:* GSFC/P YEP  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10402**                      **JOHNS HOPKINS UNIV**                      **4950**  
 DETECTOR ANALOG INTERFACE APPLICATION SPECIFIC INTEGRATED CIRCUIT (ASIC)  
 02/27/2001 - 02/14/2003                      FY02: \$0                      Total: \$147,012  
*Prin. Invest.:* D STROHBEHN  
*Tech. Officer:* GSFC/J F SUTTON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10403**                      **JOHNS HOPKINS UNIV**                      **4951**  
 SYMBIOTIC BINARIES LABORATORIES FOR WIND STUDIES (FUSE 00)  
 02/15/2001 - 02/14/2003                      FY02: \$0                      Total: \$53,000  
*Prin. Invest.:* S R MCCANDLISS  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10405**                      **JOHNS HOPKINS UNIV**                      **4952**  
 FUSE SPECTROSCOPY OF HOT POST-AGB STARS IN GLOBULA R CLUSTERS - FUSE  
 03/28/2001 - 03/31/2003                      FY02: \$0                      Total: \$31,540  
*Prin. Invest.:* W V DIXON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10464**                      **JOHNS HOPKINS UNIV**                      **4953**  
 CONCEPT STUDY FOR INFRARED BASED BUS SYSTEM (IRCOM M)  
 03/05/2001 - 03/14/2002                      FY02: \$0                      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**                      **4954**  
 ISTP: NONLINEAR DYNAMICS OF THE MAGNETOSPHERE FROM AURORAL ACTIVITY  
 02/27/2001 - 02/28/2004                      FY02: \$0                      Total: \$91,138  
*Prin. Invest.:* A LUJ  
*Tech. Officer:* GSFC/J SPAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10479**                      **JOHNS HOPKINS UNIV**                      **4955**  
 ISTP: TRANSIENT EVENTS AT THE MAGNETOPAUSE & IN THE IONOSPHERE  
 02/27/2001 - 02/28/2004                      FY02: \$0                      Total: \$69,923  
*Prin. Invest.:* D G SIBECK  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10511**                      **JOHNS HOPKINS UNIV**                      **4956**  
 A DETAILED STUDY OF TWO OPTICALLY-SELECTED, HIGH- REDSHIFT CLUSTERS OF GALAXIES  
 03/02/2001 - 06/30/2002                      FY02: \$0                      Total: \$42,635  
*Prin. Invest.:* L M LUBIN  
*Tech. Officer:* GSFC/R MUSHOTSKY  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

MARYLAND

**NAG 5 10562**                      **JOHNS HOPKINS UNIV**                      **4957**  
 NANOSAT CROSSLINK TRANSCIVER FOR NEAR-TERM DISTRI BUTED  
 SPACECRAFT TECHNOLOGY DEMONSTRATION MI  
 03/16/2001 - 03/14/2003                      FY02: \$0                      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**                      **4958**  
 PROPOSED ACTIVITIES FOR SUPERDARN GROUND-BASED INV ESTIGA-  
 TION IN SUPPORT OF ISTEP SOLAR MAX AND CLUST  
 03/19/2001 - 03/31/2003                      FY02: \$0                      Total: \$140,000  
*Prin. Invest.:* R GREENWALD  
*Tech. Officer:* GSFC/S CURTIS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10647**                      **JOHNS HOPKINS UNIV**                      **4959**  
 DIFFUSION & WEAK STELLAR WINDS IN HOT B SUBDWARFS - LTSA-2000  
 03/27/2001 - 06/30/2003                      FY02: \$0                      Total: \$20,500  
*Prin. Invest.:* P CHAYER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10650**                      **JOHNS HOPKINS UNIV**                      **4960**  
 CNO ABUNDANCES IN LMC BN AND BC SUPERGIANTS (FUSE 00)  
 04/04/2001 - 04/14/2003                      FY02: \$0                      Total: \$10,824  
*Prin. Invest.:* A FULLERTON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10693**                      **JOHNS HOPKINS UNIV**                      **4961**  
 LASER/EVOLVED-GAS TIME-OF-FLIGHT MASS SPECTROMETER AND  
 SAMPLE HANDLING SYSTEM FOR IN SITU COMPOSITIO  
 04/16/2001 - 04/14/2004                      FY02: \$0                      Total: \$146,599  
*Prin. Invest.:* W BRINCKERHOFF  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10742**                      **JOHNS HOPKINS UNIV**                      **4962**  
 PARALLEL SCANNING FOR THE NVO.  
 04/12/2001 - 04/30/2004                      FY02: \$0                      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**                      **4963**  
 HIGH-REDSHIFT QUASAR HOSTS AND ENVIRONMENTS (LTSA 2000)  
 04/23/2001 - 04/30/2006                      FY02: \$0                      Total: \$45,372  
*Prin. Invest.:* S RIDGWAY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10769**                      **JOHNS HOPKINS UNIV**                      **4964**  
 BLACK HOLES IN ACTIVE GALACTIC NUCLEI (LTSA 2000)  
 04/23/2001 - 04/30/2006                      FY02: \$0                      Total: \$95,000  
*Prin. Invest.:* T YAQOQB  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10778**                      **JOHNS HOPKINS UNIV**                      **4965**  
 STUDY FOR SPACE APPLICATION SWITCH/HUB FOR ETHERNET  
 05/18/2001 - 05/30/2003                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* P EISENREICH  
*Tech. Officer:* GSFC/E WEBB  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 10787**                      **JOHNS HOPKINS UNIV**                      **4966**  
 SOLAR ENERGETIC PARTICLE EVENTS IN THE INNER HELIO SPHERE AND  
 DEEP SPACE: A MODEL FOR FORECASTING PRO  
 04/27/2001 - 04/30/2004                      FY02: \$0                      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**                      **4967**  
 CONCEPT STUDY FOR THE "THE PRIMORDIAL EXPLORER" PRIME MISSION  
 AO-99-OSS-05  
 04/30/2001 - 04/30/2003                      FY02: \$0                      Total: \$418,500  
*Prin. Invest.:* D ZHENG  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10807**                      **JOHNS HOPKINS UNIV**                      **4968**  
 THE GALACTIC HALO AND LOCAL BUBBLE (LTSA 2000)  
 04/23/2001 - 04/30/2006                      FY02: \$0                      Total: \$68,854  
*Prin. Invest.:* C A NORMAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10836**                      **JOHNS HOPKINS UNIV**                      **4969**  
 INTERPLANETARY SHOCK PREDICTION USING REAL TIME ENERGETIC  
 PARTICLE OBSERVATIONS  
 04/27/2001 - 04/30/2003                      FY02: \$0                      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**                      **4970**  
 GLOBAL MAGNETOSPHERE/IONOSPHERE SPECIFICATION: LOW EARTH  
 ORBIT CONSTELLATION OBSERVATIONS & GLOBAL  
 05/07/2001 - 05/14/2004                      FY02: \$0                      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**                      **4971**  
 SOLAR PROTON PENETRATION AT HIGH LATITUDES: MODEL CALCULA-  
 TIONS OF CUTOFF LATITUDES & VARIATIONS WIT  
 05/07/2001 - 05/14/2003                      FY02: \$0                      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**                      **4972**  
 A STATISTICAL MODEL OF HIGH-LATITUDE CONVECTION REFRENCED TO  
 AURORAL BOUNDARIES  
 05/07/2001 - 05/14/2003                      FY02: \$0                      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**                      **4973**  
 FUV AND OPTICAL SPECTROSCOPY OF HOT POST-AGB STARS IN GLOBU-  
 LAR CLUSTERS  
 05/10/2001 - 05/14/2003                      FY02: \$0                      Total: \$49,400  
*Prin. Invest.:* W V DIXON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

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**NAG 5 10921**                      **JOHNS HOPKINS UNIV**                      **4974**  
 INVESTIGATING THE EXCITATION MECHANISM FOR COMETARY X-RAY, EUV,  
 AND FIJUV EMISSIONS  
 05/21/2001 - 12/31/2002                      FY02: \$0                      Total: \$52,500  
*Prin. Invest.:* H A WEAVER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10922**                      **JOHNS HOPKINS UNIV**                      **4975**  
 EVOLUTIONARY SYNTHESIS OF EARLY-TYPE GALAXIES (ATP 00)  
 05/15/2001 - 05/31/2004                      FY02: \$0                      Total: \$105,582  
*Prin. Invest.:* M A HOUDASHELT  
*Tech. Officer:* GSFC/R J OLIVERESEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10941**                      **JOHNS HOPKINS UNIV**                      **4976**  
 WINTER-SUMMER ASYMMETRY OF IONOSPHERIC ELECTRO- DYNAMICS  
 05/15/2001 - 05/14/2003                      FY02: \$0                      Total: \$38,000  
*Prin. Invest.:* S OHTANI  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10957**                      **JOHNS HOPKINS UNIV**                      **4977**  
 OBSERVATIONS OF O VI EMISSION IN THE HOT HALO OF NGC 891 (FUSE  
 00)  
 05/30/2001 - 05/31/2002                      FY02: \$0                      Total: \$12,006  
*Prin. Invest.:* C HOWK  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10971**                      **JOHNS HOPKINS UNIV**                      **4978**  
 PREPARING FOR MULTI-SPACECRAFT MISSIONS: AURORAL SPACE-TIME  
 SCALES AND MAGNETOTAL ASSIMILATION MOD  
 05/25/2001 - 05/31/2004                      FY02: \$0                      Total: \$59,900  
*Prin. Invest.:* S WING  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10998**                      **JOHNS HOPKINS UNIV**                      **4979**  
 A SOLAR BOLOMETRIC IMAGER FOR STUDYING SOLAR ENERGY INPUT TO  
 EARTH  
 06/07/2001 - 05/31/2004                      FY02: \$0                      Total: \$386,254  
*Prin. Invest.:* D M RUST  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 11029**                      **JOHNS HOPKINS UNIV**                      **4980**  
 TOMS DATA VALIDATION: SOLAR FLUX, QUIKTOMS AND TOTAL OZONE  
 RETRIEVALS AT HIGH LATITUDES.  
 06/25/2001 - 06/30/2004                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* S A LLOYD  
*Tech. Officer:* GSFC/R MCPETERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11034**                      **JOHNS HOPKINS UNIV**                      **4981**  
 ATMOSPHERIC LOSS PROCESSES AT IO  
 06/20/2001 - 05/31/2002                      FY02: \$0                      Total: \$88,000  
*Prin. Invest.:* B MAUK  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11035**                      **JOHNS HOPKINS UNIV**                      **4982**  
 RADIATION FIELD MODELING & DATA ANALYSIS IN SUPPORT OF NASA  
 STRATOSPHEREAND UPPER TROPOSPHERE  
 06/20/2001 - 06/14/2003                      FY02: \$0                      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**                      **4983**  
 SATURN'S UPPER ATMOSPHERIC STRUCTURE AS DERIVED FROM A  
 RE-ANALYSIS OF THE VOYAGER ULTRAVIOLET  
 06/20/2001 - 06/14/2004                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* R J VERVACK, JR  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11060**                      **JOHNS HOPKINS UNIV**                      **4984**  
 LOW ENGERGY CHARGED PARTICLES ON THE VOYAGER INTER STELLAR  
 MISSION  
 06/28/2001 - 06/30/2003                      FY02: \$0                      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**                      **4985**  
 NEW RADIATION FACILITIES PLANNING SUPPORT.  
 08/06/2001 - 07/31/2002                      FY02: \$0                      Total: \$40,000  
*Prin. Invest.:* J KINNISON  
*Tech. Officer:* GSFC/R REED  
*CASE Category:* 13 - PHYSICS

**NAG 5 11193**                      **JOHNS HOPKINS UNIV**                      **4986**  
 AN AUTOMATED SYSTEM FOR THE REDUCTION AND ANALYSIS OF X-RAY  
 DATA FROM GALAXIES  
 08/29/2001 - 01/31/2003                      FY02: \$0                      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**                      **4987**  
 INFERENCE FROM TOPOGRAPHY ON THE EMPLACEMENT OF FLUIDIZED  
 EJECTA ON MARS  
 08/09/2001 - 08/14/2003                      FY02: \$0                      Total: \$53,000  
*Prin. Invest.:* O BARNOUIN-JHA  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11283**                      **JOHNS HOPKINS UNIV**                      **4988**  
 INFERRING STRATOSPHERIC AND TROPOSPHERIC TRANSPORT FROM  
 CHEMICAL TRACER MEASUREMENTS  
 08/17/2001 - 08/31/2004                      FY02: \$0                      Total: \$92,581  
*Prin. Invest.:* D WAUCH  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11297**                      **JOHNS HOPKINS UNIV**                      **4989**  
 DETAILED MODELING AND ANALYSIS OF THE CPFM DATASET  
 08/22/2001 - 08/31/2003                      FY02: \$0                      Total: \$52,090  
*Prin. Invest.:* W SWARTZ  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



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<b>NAG 5 11332</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4990</b>	<b>NAG 5 11581</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4998</b>
TIME-RESOLVED STUDY OF FLUORESCENCE IN FLUORESCENT PROTEIN BIOSENSORS			A STUDY OF HOT GAS IN SHOCK WAVE--INTERSTELLAR CLOUD INTERACTIONS - FUSE		
09/28/2001 - 08/31/2002	FY02: \$0	Total: \$32,408	01/17/2002 - 01/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J B KHURGIN			<i>Prin. Invest.:</i> W P BLAIR		
<i>Tech. Officer:</i> GSFC/H SHAW			<i>Tech. Officer:</i> GSFC/G SONNEBORN		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 11350</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4991</b>	<b>NAG 5 11584</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4999</b>
AURORAL INVESTIGATIONS USING THE POLAR UV AND VISI BLE IMAGERS			SOLAR FILAMENTS NEAR 1 AU		
11/19/2001 - 11/30/2004	FY02: \$0	Total: \$0	01/16/2002 - 09/30/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> C MENG			<i>Prin. Invest.:</i> D M RUST		
<i>Tech. Officer:</i> GSFC/R HOFFMAN			<i>Tech. Officer:</i> GSFC/T KUCERA		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 11378</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4992</b>	<b>NAG 5 11670</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5000</b>
XMM SEARCHES FOR IRON LINES IN LOW LUMINOSITY AGN: A TEST OF ACCRETION THEORIES			INTERMEDIATE-LUMINOSITY X-RAY OBJECTS (LTSA 2001)		
10/29/2001 - 06/30/2003	FY02: \$15,011	Total: \$15,011	01/28/2002 - 08/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> A F PTAK			<i>Prin. Invest.:</i> E COLBERT		
<i>Tech. Officer:</i> GSFC/R F MUSHOTZKY			<i>Tech. Officer:</i> GSFC/R J OLIVERSEN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 11412</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4993</b>	<b>NAG 5 11717</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5001</b>
TIMED PHASE E - SABER FLIGHT EXPERIMENT - PAXTON.			SURFACE ABUNDANCE PATTERN OF ACCRETING WHITE DWARF S IN NON-INTERACTING CLOSE BINARIES_ (FUSE 00)		
12/20/2001 - 12/31/2005	FY02: \$0	Total: \$0	02/08/2002 - 02/14/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> L PAXTON			<i>Prin. Invest.:</i> J DUPUIS		
<i>Tech. Officer:</i> GSFC/B A CAMPBELL			<i>Tech. Officer:</i> GSFC/G SONNEBORN		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 11456</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4994</b>	<b>NAG 5 11728</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5002</b>
FUV WINDOWLESS LAMPS			TOMOGRAPHIC DIAGNOSIS OF THE IONIZATION CONE IN NG C 1068 (FUSE 99)		
12/05/2001 - 12/31/2005	FY02: \$0	Total: \$0	02/13/2002 - 02/28/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> S R MCCANDLISS			<i>Prin. Invest.:</i> W ZHENG		
<i>Tech. Officer:</i> GSFC/P CRANE			<i>Tech. Officer:</i> GSFC/G SONNEBORN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 11570</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4995</b>	<b>NAG 5 11783</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5003</b>
A SEARCH FOR TRACE ELEMENTS IN ULTRAMASSIVE WHITE DWARF PHOTOSPHERES (FUSE 00)			MINIATURE NEUTRON-ALPHA ACTIVATION SPECTROMETER		
01/04/2002 - 12/31/2002	FY02: \$0	Total: \$0	02/26/2002 - 02/28/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J DUPUIS			<i>Prin. Invest.:</i> E RHODES		
<i>Tech. Officer:</i> GSFC/G SONNEBORN			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 11571</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4996</b>	<b>NAG 5 11829</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5004</b>
GEOTAIL ENERGETIC PARTICLES AND ION COMPOSITION (E PIC) PROGRAM			TECHNICAL SUPPORT FOR THE DEPLOYMENT OF RADAR AND LASER ALTIMETERS DURING LARA-2002		
01/09/2002 - 02/28/2002	FY02: \$0	Total: \$0	03/04/2002 - 02/28/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R W MCENTIRE			<i>Prin. Invest.:</i> R RANEY		
<i>Tech. Officer:</i> GSFC/D FAIRFIELD			<i>Tech. Officer:</i> GSFC/W ABDALATI		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 11572</b>	<b>JOHNS HOPKINS UNIV</b>	<b>4997</b>	<b>NAG 5 11844</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5005</b>
X-RAY SPECTROSCOPY OF LOW-LUMINOSITY ACTIVE GALACTIC NUCLEI WITH XMM			ORIGIN AND EVOLUTION OF WHITE DWARF STARS: THE EARLY YRS (LTSA)		
01/04/2002 - 12/31/2002	FY02: \$0	Total: \$0	04/03/2002 - 11/30/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> A F PTAK			<i>Prin. Invest.:</i> J DUPUIS		
<i>Tech. Officer:</i> GSFC/R MUSHOTZKY			<i>Tech. Officer:</i> GSFC/R OLIVERSEN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		

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**NAG 5 11845**                      **JOHNS HOPKINS UNIV**                      **5006**  
 EVALUATION OF SPACE RADIATION TOLERANCE OF CRITICAL LASER  
 SYSTEM COMPONENTS  
 03/27/2002 - 03/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B BOONE  
*Tech. Officer:* GSFC/W S HEAPS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 11876**                      **JOHNS HOPKINS UNIV**                      **5007**  
 RESEARCH WITH THE FLARE GENESIS DATA ON VECTOR MAG NETIC  
 FIELDS IN ACTIVE REGION FLUX ROPES  
 03/18/2002 - 03/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D M RUST  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 11894**                      **JOHNS HOPKINS UNIV**                      **5008**  
 CONTINUATION OF THE ULYSSES: HI-SCALE INVESTIGATION N  
 03/20/2002 - 03/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R E GOLD  
*Tech. Officer:* GSFC/V JONES  
*CASE Category:* 13 - PHYSICS

**NAG 5 11909**                      **JOHNS HOPKINS UNIV**                      **5009**  
 CLOUD & WATER VAPOR EFFECTS ON CLIMATE SENSITIVITY  
 04/17/2002 - 04/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A ARKING  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11945**                      **JOHNS HOPKINS UNIV**                      **5010**  
 STARBURST SUPERWINDS (FUSE 2001)  
 04/01/2002 - 03/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C HOWK  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11962**                      **JOHNS HOPKINS UNIV**                      **5011**  
 INVESTIGATION OF TITAN'S ATMOSPHERE  
 04/04/2002 - 04/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* X ZHU  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11967**                      **JOHNS HOPKINS UNIV**                      **5012**  
 A FUSE DETERMINATION OF THE GRAVITATIONAL REDSHIFT AND SPEC-  
 TROSCOPIC MASS OF SIRIUS B  
 04/03/2002 - 04/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J KRUK  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12017**                      **JOHNS HOPKINS UNIV**                      **5013**  
 THE DISTRIBUTION OF SHOCK VELOCITIES IN N49 - A BRIGHT SUPERNOVA  
 REMNANT IN THE LMC  
 04/30/2002 - 05/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R SANKRIT  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12050**                      **JOHNS HOPKINS UNIV**                      **5014**  
 PLASMA SHEET CONVICTION AND NEAR-EARTH SUBSTORM PR OCESSES  
 04/18/2002 - 04/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S OHTANI  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12051**                      **JOHNS HOPKINS UNIV**                      **5015**  
 PLANETARY AERONOMY  
 04/18/2002 - 04/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D F STROBEL  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12085**                      **JOHNS HOPKINS UNIV**                      **5016**  
 INTERBALL AND VEGA DATA ARCHIVING.  
 04/25/2002 - 04/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D SIBECK  
*Tech. Officer:* GSFC/P EHUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12092**                      **JOHNS HOPKINS UNIV**                      **5017**  
 A HIGH-SPEED DATA ACCESS COMPONENT FOR NATIONAL VI RTUAL  
 OBSERVATORY DATA GRID NODE  
 04/23/2002 - 04/30/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A R THAKAR  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12108**                      **JOHNS HOPKINS UNIV**                      **5018**  
 A COMPREHENSIVE STUDY OF RELATIONSHIPS BETWEEN SOLAR WIND  
 DESTINY AND AURORAL ELECTROJECTS  
 05/09/2002 - 05/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J SHUE  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12135**                      **JOHNS HOPKINS UNIV**                      **5019**  
 VARIATIONS IN THE HOT ISM (FUSE 00)  
 05/09/2002 - 09/30/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C HOWK  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12169**                      **JOHNS HOPKINS UNIV**                      **5020**  
 TIME-OF-FLIGHT MASS SPECTROMETER TECHNOLOGY FOR IN SITU  
 05/09/2002 - 05/14/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W B BRINCKERHOFF  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12201**                      **JOHNS HOPKINS UNIV**                      **5021**  
 MODELING GEOSPACE PLASMA MASS DENSITY BASED ON THE FRE-  
 QUENCY OF ULF WAVES  
 05/14/2002 - 05/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K TAKAHASHI  
*Tech. Officer:* GSFC/J Q SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12209**                      **JOHNS HOPKINS UNIV**                      **5022**  
 CONCEPT STUDY FOR INFRARED BASED BUS SYSTEM (IRCOM M)  
 06/04/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M DARRIN  
*Tech. Officer:* GSFC/P LUERS  
*CASE Category:* 45 - ELECTRICAL ENGR

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**NAG 5 12213**                      **JOHNS HOPKINS UNIV**                      **5023**  
 WHY DO SOME DWARF NOVAE STAND STILL?  
 05/20/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T M HECKMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12224**                      **JOHNS HOPKINS UNIV**                      **5024**  
 MAGNETOSPHERES OF THE OUTER PLANETS 2002  
 05/21/2002 - 05/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B MAUK  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12261**                      **JOHNS HOPKINS UNIV**                      **5025**  
 THE METALLICITY DEPENDENCE OF THE BESTIBILITY JUMP IN HOST-STAR WINDS.  
 06/04/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A FULLERTON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12291**                      **JOHNS HOPKINS UNIV**                      **5026**  
 CONTINUATION OF THE VOYAGER INTERSTELLAR MISSION: LCEP INVESTIGATION  
 06/17/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S M KRIMIGIS  
*Tech. Officer:* GSFC/M GUTATHAKURTA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12294**                      **JOHNS HOPKINS UNIV**                      **5027**  
 CENTRAL STARS OF PLANETARY NEBULAR IN THE SMALL MAGELLANIC CLOUD  
 06/14/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L BIANCHI  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12303**                      **JOHNS HOPKINS UNIV**                      **5028**  
 IMAGE-IRIDIUM INTERCOMPARISON: BIRKELAND CURRENTS, AURORA, RING CURRENT AND PLASMASPHERE  
 06/21/2002 - 06/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B J ANDERSON  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 12354**                      **JOHNS HOPKINS UNIV**                      **5029**  
 STUDIES OF ORGANIC SYNTHESIS IN HYPERVELOCITY IMPACTS WITH PULSED LASER ABLATION  
 07/03/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W B BRINCKERHOFF  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12363**                      **JOHNS HOPKINS UNIV**                      **5030**  
 LASER ABLATION HYPERVELOCITY IMPACT SIMULATION MICROPROBE (LA-HISM) FOR STUDIES OF ORGANIC SYNTHESIS  
 07/09/2002 - 07/14/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W B BRINCKERHOFF  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12423**                      **JOHNS HOPKINS UNIV**                      **5031**  
 ABSORPTION-EMISSION LINE STUDY OF THE NORTHEAST CYGNUS LOOP (FUSE 2001)  
 08/06/2002 - 08/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W P BLAIR  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12448**                      **JOHNS HOPKINS UNIV**                      **5032**  
 KINEMATICS AND COMPOSITION OF O-RICH MATERIAL IN P UPPIS A  
 08/15/2002 - 08/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W P BLAIR  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12456**                      **JOHNS HOPKINS UNIV**                      **5033**  
 TRACING THE MOLECULAR ENVIRONMENTS OF HERBIG AE STARS WITH FUSE.  
 09/03/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G WILLIGER  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12479**                      **JOHNS HOPKINS UNIV**                      **5034**  
 SOLAR ENERGETIC ELECTRONS AS PREDATORS OF GEO-EFFECTIVE CME-DRIVEN SHOCKS AND SOLAR ENERGETIC  
 08/21/2002 - 08/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D HAGGERTY  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12481**                      **JOHNS HOPKINS UNIV**                      **5035**  
 THE HALO'S O VI INTENSITY (FUSE 01)  
 08/21/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R L SHELTON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12518**                      **JOHNS HOPKINS UNIV**                      **5036**  
 THE YOUNGEST, MASSIVE STAR CLUSTERS IN M33  
 08/21/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L BIANCHI  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12525**                      **JOHNS HOPKINS UNIV**                      **5037**  
 RESEARCH AND ACTIVITIES TO SUPPORT SCIENCE PLANNING AND COORDINATION IN ASSOCIATION WITH THE POLAR  
 09/19/2002 - 09/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* N FOX  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 12555**                      **JOHNS HOPKINS UNIV**                      **5038**  
 GSFC MISSION SERVICES EVOLUTION CENTER (GMSEC) ARCHITECTURE ASSESSMENT TASK  
 09/12/2002 - 09/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D P WATSON  
*Tech. Officer:* GSFC/J BRISTOW  
*CASE Category:* 22 - COMPUTER SCIENCE

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**NAG 5 12623**                      **JOHNS HOPKINS UNIV**                      **5039**  
 IMPROVED SIGNAL PROCESSING STRATEGIES FOR EXTRACT ING ICE  
 THICKNESS FROM RADAR DEPTH SOUNDING MEASU  
 09/30/2002 - 09/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C LEUSCHEN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 13 - PHYSICS

**NAG 8 1377**                      **JOHNS HOPKINS UNIV**                      **5040**  
 R/S "NOVEL MICROGRAVITY OPTICAL TECHNIQUE FOR MOLECULARLY  
 ENGINEERING ELECTROPHORETIC MEDIA.  
 07/23/1997 - 11/30/2001                      FY02: \$0                      Total: \$457,000  
*Prin. Invest.:* D WIRTZ  
*Tech. Officer:* MSFC/B GYNES, MSFC/J MAYO  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1527**                      **JOHNS HOPKINS UNIV**                      **5041**  
 AXAF INTERDISCIPLINARY SCIENTIST  
 03/30/1998 - 09/30/2002                      FY02: \$0                      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**                      **5042**  
 RBCC ACCESS TO SPACE ASSESSMENT  
 11/24/1999 - 03/31/2001                      FY02: \$0                      Total: \$96,583  
*Prin. Invest.:* P J WALTRUP  
*Tech. Officer:* MSFC/C M MC ARTHUR  
*CASE Category:* 42 - AERONAUTICAL ENGR

**NAG 8 1695**                      **JOHNS HOPKINS UNIV**                      **5043**  
 DEVELOPMENT OF A NEUTRON SPECTROMETER TO ASSESS BIOLOGICAL  
 RADIATION DAMAGE BEHIND SPACECRAFT MAT.  
 05/01/2000 - 11/30/2003                      FY02: \$0                      Total: \$130,500  
*Prin. Invest.:* R MAUER  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1146**                      **JOHNS HOPKINS UNIV**                      **5044**  
 CALCIUM KINETICS DURING SPACE FLIGHT  
 09/14/1999 - 09/30/2003                      FY02: \$0                      Total: \$110,325  
*Prin. Invest.:* K O O'BRIEN  
*Tech. Officer:* SSC/S M SMITH  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1345**                      **JOHNS HOPKINS UNIV**                      **5045**  
 MODULAR LIBRARY OF SELF ASSEMBLING ARTIFICIAL PROTE INS FOR 3  
 DIMENSIONAL TISSUE CULTURE  
 08/01/2001 - 09/30/2004                      FY02: \$0                      Total: \$41,000  
*Prin. Invest.:* J L HARDEN  
*Tech. Officer:* KSC/D RISIN  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG13 00045**                      **JOHNS HOPKINS UNIV**                      **5046**  
 POLARIZATION DEPENDENCE OF GPS SIGNALS REFLECTED FROM THE  
 OCEAN SURFACE  
 10/12/2000 - 10/11/2002                      FY02: \$0                      Total: \$119,850  
*Prin. Invest.:* D R THOMPSON  
*Tech. Officer:* SSC/R MILLER  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 3 01146**                      **JOHNS HOPKINS UNIV**                      **5047**  
 EPIREP/FIS ARCHITECTURE WORK  
 04/30/2001 - 06/30/2002                      FY02: \$0                      Total: \$190,122  
*Prin. Invest.:* L BACHMAN  
*Tech. Officer:* GRC/G CHOMOS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 5 00166**                      **JOHNS HOPKINS UNIV**                      **5048**  
 DEVELOPMENT OF SOLID STATE UV SOURCE/ORIGINAL POP 7/13/01  
 06/14/2000 - 07/25/2003                      FY02: \$2                      Total: \$273,853  
*Prin. Invest.:* J KANG  
*Tech. Officer:* GSFC/F SELDON- JONES  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAS 5 01072**                      **JOHNS HOPKINS UNIV**                      **5049**  
 SUN EARTH CONNECTION LIVING WITH A STAR PROGRAM LETTER  
 CONTRACT.  
 12/21/2000 - 12/20/2012                      FY02: \$0                      Total: \$1,447,000  
*Prin. Invest.:* N AVAILABLE  
*Tech. Officer:* GSFC/J E ROBINSON  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 30403**                      **JOHNS HOPKINS UNIV**                      **5050**  
 SPACE TELESCOPE IMAGING SPECTROGRAPH PROGRAM SUPPORT  
 02/04/1988 - 06/30/2003                      FY02: \$0                      Total: \$2,795,865  
*Prin. Invest.:* W MOOS  
*Tech. Officer:* GSFC/D VITABLANO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 5 32865**                      **JOHNS HOPKINS UNIV**                      **5051**  
 DESIGN & DEVELOPMENT OF ADVANCED CAMERA SCIENCE  
 08/25/1995 - 06/30/2003                      FY02: \$0                      Total: \$3,725,677  
*Prin. Invest.:* D FORD, D I ILLINGWORTH  
*Tech. Officer:* GSFC/C KREBS  
*CASE Category:* 42 - AERONAUTICAL ENGR

**NAS 5 32985**                      **JOHNS HOPKINS UNIV**                      **5052**  
 PHASE C/D DESIGN AND DEVELOPMENT OF THE FAR ULTRA- VOILET  
 SPECTROSCOPIC EXPLORER (FUSE) MISSION  
 11/22/1995 - 06/30/2003                      FY02: \$0                      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**                      **5053**  
 TIMED PHASE C/D LETTER CONTRACT  
 06/16/1997 - 01/06/2006                      FY02: \$0                      Total: \$120,130,864  
*Prin. Invest.:* D GRANT  
*Tech. Officer:* GSFC/J J WOLFF  
*CASE Category:* 11 - ASTRONOMY

**NAS 5 97271**                      **JOHNS HOPKINS UNIV**                      **5054**  
 AEROSPACE RESEARCH, DESIGN, AND DEVELOPMENT TASKS FOR NASA  
 10/01/1997 - 12/31/2018                      FY02: \$1,500,000                      Total: \$208,259,485  
*Prin. Invest.:* T COUGHLIN  
*Tech. Officer:* GSFC/J WOLFF  
*CASE Category:* 11 - ASTRONOMY

**NCC 1 01019**                      **JOHNS HOPKINS UNIV**                      **5055**  
 ADAPTIVE DATA ANALYSIS AND PROCESSING TECHNOLOGY (ADAPT)--NRA-  
 99-OES-08  
 01/16/2001 - 03/10/2004                      FY02: \$0                      Total: \$159,017  
*Prin. Invest.:* M A DARRIN, M A DARRIN  
*Tech. Officer:* LARC/M E BEATTY, III  
*CASE Category:* 45 - ELECTRICAL ENGR

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<b>NCC 3 812</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5056</b>	<b>NGT 5 50328</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5064</b>
USING SURFACTANTS TO CONTROL BUBBLE GROWTH COALESCENCE IN NUCLEATE POOL BOILING			THE IMPACT OF DATA CONSTRAINTS IN GLOBAL CLIMATE MODELS (STUDENT: ANDREA MOLOD)		
07/06/2000 - 05/31/2004	FY02: \$0	Total: \$151,940	08/17/2000 - 08/31/2003	FY02: \$0	Total: \$44,000
<i>Prin. Invest.:</i> K J STEBE			<i>Prin. Invest.:</i> D WAUGH		
<i>Tech. Officer:</i> GRC/F P CHIARAMONTE			<i>Tech. Officer:</i> GSFC/M WEI		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NCC 3 961</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5057</b>	<b>NGT 5 50372</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5065</b>
TESTING AND MODELING OF MICRO AND NANO SCALE STRUCTURAL MATERIALS SYSTEMS			SYNTHESIS, GROWTH KINETICS, AND ASSEMBLY OF NANO PARTICLES		
05/02/2002 - 10/31/2002	FY02: \$0	Total: \$0	06/13/2001 - 07/31/2004	FY02: \$0	Total: \$22,000
<i>Prin. Invest.:</i> D N SHARPE			<i>Prin. Invest.:</i> P C SEARSON		
<i>Tech. Officer:</i> GRC/N N NEMETH			<i>Tech. Officer:</i> GSFC/K BLANDING		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 5 447</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5058</b>	<b>NGT 9 50</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5066</b>
COOPERATIVE RESEARCH IN HIGH ENERGY ASTROPHYSICS BETWEEN JHU AND GSFC			AN INVESTIGATION OF THE ADDITIVITY AND LINEARITY		
12/21/1999 - 12/31/2002	FY02: \$0	Total: \$502,512	07/05/2000 - 07/09/2002	FY02: \$0	Total: \$44,000
<i>Prin. Invest.:</i> E T VISHNIAC			<i>Prin. Invest.:</i> J DICELLO		
<i>Tech. Officer:</i> GSFC/K E WEAVER			<i>Tech. Officer:</i> JSC/F A CUCINOTTA		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 56 - MEDICL		
<b>NCC 5 500</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5059</b>	<b>NGT 9 65</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5067</b>
ATMOSPHERIC TRANSPORT: COMPARISON OF OBSERVATIONS AND MODELS			MICROMECHANICAL RESPONSE OR LIVING CELLS TO CYTOSKELETAL REORGANIZATION		
05/08/2000 - 05/14/2003	FY02: \$0	Total: \$69,499	08/06/2002 - 07/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D WAUGH			<i>Prin. Invest.:</i> D WIRTZ		
<i>Tech. Officer:</i> GSFC/A R DOUGLASS			<i>Tech. Officer:</i> JSC/C SAMS		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NCC 5 635</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5060</b>	<b>NAG 5 10230</b>	<b>LOYOLA COLL</b>	<b>5068</b>
INTEGRATED DISCRETE EVENT CONTROLLER FOR AUTONOMOUS DISTRIBUTED SPACECRAFT COORDINATION			APPLICATION OF GRADIENT-DESCENT IMAGE REGISTRATION TO SATELLITE IMAGERY.		
02/28/2002 - 02/28/2003	FY02: \$0	Total: \$0	01/16/2001 - 04/30/2002	FY02: \$0	Total: \$24,811
<i>Prin. Invest.:</i> P A STADTER			<i>Prin. Invest.:</i> P EASTMAN		
<i>Tech. Officer:</i> GSFC/J BRISTOW			<i>Tech. Officer:</i> GSFC/J LE MOIGNE		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NGT 5 40079</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5061</b>	<b>NAG 5 12313</b>	<b>LOYOLA COLL</b>	<b>5069</b>
MARYLAND SPACE GRANT COLL & FELLOWSHIP PROGRAM			SYSTEM ENGINEERING ISSUES IN IMPLEMENTATION OF IMAGE REGISTRATION ALGORITHMS WITH EMPHASIS ON		
02/09/2001 - 01/31/2005	FY02: \$0	Total: \$496,673	07/12/2002 - 12/14/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R C HENRY			<i>Prin. Invest.:</i> P D EASTMAN		
<i>Tech. Officer:</i> GSFC/D D DETROYE			<i>Tech. Officer:</i> GSFC/J LEMOIGNE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NGT 5 50259</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5062</b>	<b>NAG 5 7136</b>	<b>MORGAN STATE UNIV</b>	<b>5070</b>
PROTEIN CRYSTALLIZATION AT INTERFACE STUDENT: JEFREY ERICKSON			CHARACTERIZATION AND SIMULATION OF GALLIUM NITRIDE ULTRAVIOLET PHOTODETECTORS		
07/07/1999 - 06/30/2001	FY02: \$0	Total: \$44,000	03/16/1998 - 08/30/2001	FY02: \$0	Total: \$300,000
<i>Prin. Invest.:</i> K J STEBE			<i>Prin. Invest.:</i> C J SCOTT		
<i>Tech. Officer:</i> GSFC/L SMITH			<i>Tech. Officer:</i> GSFC/B MOTT		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 45 - ELECTRICAL ENGR		
<b>NGT 5 50268</b>	<b>JOHNS HOPKINS UNIV</b>	<b>5063</b>	<b>NAG 5 8574</b>	<b>MORGAN STATE UNIV</b>	<b>5071</b>
SURFACTANT FACILITATED SPREADING			SEM MULTIPURPOSE FACILITY/PHASE I		
07/08/1999 - 06/30/2002	FY02: \$0	Total: \$66,000	07/21/1999 - 07/14/2002	FY02: \$0	Total: \$1,098,252
<i>Prin. Invest.:</i> K J STEBE, VAN NGUYE			<i>Prin. Invest.:</i> H WILLIAMS		
<i>Tech. Officer:</i> GSFC/L SMITH			<i>Tech. Officer:</i> GSFC/P HOLLOWAY		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

**MARYLAND**

**NASA'S UNIVERSITY PROGRAM**

**NAG 5 8857**                      **MORGAN STATE UNIV**                      **5072**  
 INVESTIGATION OF THE MAGNETIC & ELECTRONIC PROPER TIES OF  
 METAL & METAL OXIDE FILMS & MULTILAYER FOR  
 09/28/1999 - 06/30/2003                      FY02: \$0                      Total: \$200,000  
*Prin. Invest.:* C WILLIAMS  
*Tech. Officer:* GSFC/J CHITWOOD  
*CASE Category:* 13 – PHYSICS

**NAG 5 9215**                      **MORGAN STATE UNIV**                      **5073**  
 FORGING A PARTNERSHIP: A TWENTY-FIRST CENTURY APPROACH TO THE  
 INVESTIGATION OF SCIENTIFIC & TECHNOL  
 03/09/2000 - 12/14/2001                      FY02: \$0                      Total: \$850,000  
*Prin. Invest.:* E DELOATCH  
*Tech. Officer:* GSFC/G SOFFEN  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 5 9710**                      **MORGAN STATE UNIV**                      **5074**  
 A PROPOSAL FOR NASA-RELATED RESEARCH CAPACITY BUILDING AND  
 OUTREACH BUILDING AND OUTREACH AT MORGAN  
 06/29/2000 - 03/31/2002                      FY02: \$0                      Total: \$1,600,000  
*Prin. Invest.:* D N WILLIAMS  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 10104**                      **MORGAN STATE UNIV**                      **5075**  
 SPACE TECHNOLOGY 5 PROJECT. APPLICATION OF PRODUCTION DESIGN  
 CONSIDERATIONS TO NANO-SATELLITES  
 12/13/2000 - 12/14/2001                      FY02: \$0                      Total: \$5,000  
*Prin. Invest.:* G CHEN  
*Tech. Officer:* GSFC/J OBERRIGHT  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 5 10913**                      **MORGAN STATE UNIV**                      **5076**  
 DEVELOPING A SSPA UTILIZING WIDE BAND GAP SEMICONDUCTOR  
 MATERIAL  
 05/22/2001 - 09/30/2001                      FY02: \$0                      Total: \$13,244  
*Prin. Invest.:* C WHITE  
*Tech. Officer:* GSFC/D NGUYEN  
*CASE Category:* 45 – ELECTRICAL ENGR

**NAG 5 10934**                      **MORGAN STATE UNIV**                      **5077**  
 IMAGE REGISTRATION AND FUSION FOR FUTURE FORMATION FLYING  
 SYSTEMS  
 06/06/2001 - 06/14/2004                      FY02: \$0                      Total: \$18,000  
*Prin. Invest.:* D COLE-RHODES  
*Tech. Officer:* GSFC/J MOIGNE  
*CASE Category:* 22 – COMPUTER SCIENCE

**NAG 5 10947**                      **MORGAN STATE UNIV**                      **5078**  
 A PROPOSAL CAPACITY BUILDING FOR NASA RELATED AND OUTREACH AT  
 MORGAN STATE UNIV  
 05/25/2001 - 03/31/2003                      FY02: \$0                      Total: \$1,600,000  
*Prin. Invest.:* E N ISUK  
*Tech. Officer:* GSFC/B WHITE  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 11229**                      **MORGAN STATE UNIV**                      **5079**  
 EXAMINE SAMPLES OF CARBON CARBONADOS.  
 08/15/2001 - 08/14/2002                      FY02: \$0                      Total: \$3,000  
*Prin. Invest.:* E C HAMMOND  
*Tech. Officer:* GSFC/P TAYLOR  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 11405**                      **MORGAN STATE UNIV**                      **5080**  
 "FORGING A PARTNERSHIP"  
 12/03/2001 - 12/14/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E DELOATCH  
*Tech. Officer:* GSFC/J BENNETT  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 11837**                      **MORGAN STATE UNIV**                      **5081**  
 DESIGN OF HIGH SPEED COMPARATOR ARCHITECTURES FOR ANALOG-  
 TO-DIGITAL CONVERTERS.  
 03/11/2002 - 03/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C T JOHNSON-BEY  
*Tech. Officer:* GSFC/J PIEMEIER  
*CASE Category:* 45 – ELECTRICAL ENGR

**NAG 5 11852**                      **MORGAN STATE UNIV**                      **5082**  
 A PLANNING GRANT PROPOSAL FOR FACULTY RESEARCH DEVELOPMENT  
 AND CAPACITY BUILDING FOR NASA-RELATED R  
 03/12/2002 - 03/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E ISUK  
*Tech. Officer:* GSFC/D MENCAHN  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 8 1847**                      **MORGAN STATE UNIV**                      **5083**  
 POLYMERIZATION OF ADVANCED THERMOSETS IN MICROGRAVITY TO  
 DEVELOP ULTRA LOW POLYMERS  
 08/06/2001 - 07/31/2002                      FY02: \$0                      Total: \$99,966  
*Prin. Invest.:* A KENNEDY  
*Tech. Officer:* MSFC/E ORDONEZ  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NAG 9 998**                      **MORGAN STATE UNIV**                      **5084**  
 SMART-SENSOR DESIGN INCORPORATING SIGNAL PROCESSING FOR  
 DATA-COMPRESSION AND FEATURE ENHANCEMENT  
 03/31/1998 - 12/31/2001                      FY02: \$0                      Total: \$300,000  
*Prin. Invest.:* J E WHITNEY  
*Tech. Officer:* JSC/K KRISHEN  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NCC 5 532**                      **MORGAN STATE UNIV**                      **5085**  
 NRTS CONTINUATION/MUSPIN NRTS PROGRAM.  
 02/01/2001 - 01/31/2004                      FY02: \$0                      Total: \$350,000  
*Prin. Invest.:* W LUPTON  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NCC 5 565**                      **MORGAN STATE UNIV**                      **5086**  
 SIGE ADC FOR DIGITAL MICROWAVE RADIOMETRY  
 06/22/2001 - 12/31/2002                      FY02: \$0                      Total: \$40,000  
*Prin. Invest.:* C WHITE  
*Tech. Officer:* GSFC/J PIEDMEIER  
*CASE Category:* 45 – ELECTRICAL ENGR

**NAG 5 5342**                      **SALISBURY STATE UNIV**                      **5087**  
 UNDERSTANDING TAXONOMIC AND PHYSIOLOGICAL PROPERTIES OF  
 PHYTOPLANKTON  
 10/31/2001 - 12/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T JONES  
*Tech. Officer:* WFF/T MOISAN  
*CASE Category:* 33 – OCEANOGRAPHY

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**NCC 5 488** TOWSON STATE UNIV 5088  
 MULTI-AGENT SYSTEMS INSPACECRAFT: INTELLIGENT AGENTS AND  
 AGENT COMM MANAGEMENT  
 04/14/2000 - 08/31/2002 FY02: \$0 Total: \$49,205  
*Prin. Invest.:* B N NAG  
*Tech. Officer:* GSFC/N TRUSZKOWSKI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 6249** U OF MD CTR FOR ENVIR SCI - CAMBRIDGE 5089  
 TIMES-SCALES OF LAND-USE CHANGE AND EXPORT OF N AN BASIN TO  
 THE COASTAL ZONE  
 08/19/1997 - 08/31/2001 FY02: \$0 Total: \$350,351  
*Prin. Invest.:* P R FISHER  
*Tech. Officer:* GSFC/A C JANETOS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6286** U OF MD CTR FOR ENVIR SCI - CAMBRIDGE 5090  
 REMOTE OBSERVATIONS AND MODELING OF PHYTOPLANKTON  
 09/10/1997 - 08/31/2002 FY02: \$0 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 5091  
 MODELLING N2 AND CO2 FIXATION BY THE OCEANIC DIAZO TROPIC  
 CYANOBACTERIUMTRICHODESMIUM  
 10/18/1997 - 09/30/2001 FY02: \$0 Total: \$239,144  
*Prin. Invest.:* R G HOOD  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7602** U OF MD CTR FOR ENVIR SCI - CAMBRIDGE 5092  
 REMOTE OBSERVATIONS IN THE CHOPTANK RIVER INDEX SITE: OCEAN  
 COLOR, SALINITY, TEMPERATURE AND C  
 07/21/1998 - 08/31/2002 FY02: \$0 Total: \$447,423  
*Prin. Invest.:* L W HARDING  
*Tech. Officer:* GSFC/J W CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11083** U OF MD CTR FOR ENVIR SCI - CAMBRIDGE 5093  
 EFFECTS OF LAND USE, SOILS & HUMAN POPULATIONS ON EXPORT OF  
 WATER, C, N, & P FROM THE MID-ATLANTIC  
 07/19/2001 - 08/14/2004 FY02: \$0 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 5094  
 INDICES OF NUTRIENT ENRICHMENT IN U.S. ATLANTIC ESTUARIES  
 FROM REMOTE SENSING OF OCEAN COLOR AND  
 08/30/2001 - 08/31/2005 FY02: \$0 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 5095  
 R&D TO SUPPORT GSFC'S SIMBIOS PROJECT  
 12/18/2000 - 11/30/2002 FY02: \$0 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 5096  
 REMOTE SENSING OF FOREST COMPOSITION AND STRUCTURE IN THE  
 CENTRAL APPALACHIANS USING EO-1 HYPE  
 04/19/2000 - 09/30/2003 FY02: \$2,500 Total: \$138,779  
*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 5097  
 OCCURRENCE OF V CHOLERA IN THE BAY OF BENGAL & APPLICATION  
 OF REMOTE SENSING METHODS FOR PREDICTION  
 03/26/1998 - 02/28/2003 FY02: \$0 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 5098  
 R/S MICROBIAL RESISTANCE TO SOLAR RADIATION: DNA DAMAGE AND  
 APPLICATION OF REPAIR ENZYMES IN BIOTEC  
 01/15/1999 - 11/05/2001 FY02: \$0 Total: \$289,500  
*Prin. Invest.:* J DI RUAGIERO  
*Tech. Officer:* JSC/S GONDA  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 1 2024** UNIV OF MARYLAND - COLL PARK 5099  
 DIRECT MEASUREMENTS OF TROPOSPHERIC OZONE FROM TOMS DATA  
 03/26/1998 - 01/31/2001 FY02: \$0 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 - COLL PARK 5100  
 INTERACTION OF A BOUNDARY LAYER WITH A TURBULANT WAKE  
 03/30/2000 - 03/31/2003 FY02: \$0 Total: \$104,953  
*Prin. Invest.:* U PIOMELLI  
*Tech. Officer:* LARC/C L STREETT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01084** UNIV OF MARYLAND - COLL PARK 5101  
 WHIRL FLUTTER OF TWO BLADED PROPELLOR/PYLON SYSTEM  
 05/17/2001 - 03/14/2002 FY02: \$0 Total: \$40,000  
*Prin. Invest.:* I CHOPRA  
*Tech. Officer:* LARC/A S POTOTZKY, LARC/R G KVATERNIK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1352** UNIV OF MARYLAND - COLL PARK 5102  
 MECHANOSENSITIVE CHANNELS IN BACTERIA: FUNCTIONAL DOMAINS &  
 MECHANISMS OF GATING  
 07/27/1999 - 07/31/2003 FY02: \$0 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 - COLL PARK 5103  
 QUAD TILTROTOR COMPUTATIONAL FLUID DYNAMICS PROGRAM  
 04/28/2000 - 04/30/2003 FY02: \$0 Total: \$589,999  
*Prin. Invest.:* F SCHMITZ, J BAEDER  
*Tech. Officer:* ARC/R A STRAWN, ARC/C TUNG  
*CASE Category:* 41 - AERONAUTICAL ENGR

## MARYLAND

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**NAG 2 1407**                    **UNIV OF MARYLAND - COLL PARK**                    **5104**  
 DYNAMICS OF HELICOPTERS WITH ON-BLADE CONTROLS  
 05/22/2000 - 05/31/2003                    FY02: \$0                    Total: \$71,849  
*Prin. Invest.:* R CELI  
*Tech. Officer:* ARC/M B TISCHER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1536**                    **UNIV OF MARYLAND - COLL PARK**                    **5105**  
 MODEL BASED HAZARD ANALYSIS METHOD AND SIMULATION TOOL  
 02/13/2002 - 02/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* A MOSLEH  
*Tech. Officer:* ARC/M SHIRLEY  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 2 1549**                    **UNIV OF MARYLAND - COLL PARK**                    **5106**  
 RUNWAY INDEPENDENT AIRCRAFT (RIA) OPERATIONAL NOISE PREDICTION/VALIDATION  
 04/12/2002 - 04/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* F H SCHMITZ  
*Tech. Officer:* ARC/W A DECKER, ARC/J A SCHROEDER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1577**                    **UNIV OF MARYLAND - COLL PARK**                    **5107**  
 NEURAL NETWORK BASED ROBUST INDIVIDUAL BALDWIN CONTROLLER  
 08/13/2002 - 07/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* I CHOPRA  
*Tech. Officer:* ARC/W WARBRODT, ARC/S KOTTAPOLLI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2139**                    **UNIV OF MARYLAND - COLL PARK**                    **5108**  
 SPECTRAL ELEMENT SIMULATIONS OF THERMAL CONVECTION IN A ROTATING HEMISPHERICAL SHELL WITH RADIAL GRADIENTS  
 03/17/1998 - 01/05/2001                    FY02: \$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 - COLL PARK**                    **5109**  
 INVESTIGATION OF POD BOILING HEAT TRANSFER MECHANISMS IN MICROGRAVITY USING AN ARRAY OF SURFACE MOUNTED HEAT FLUX SENSORS  
 10/28/1998 - 05/31/2001                    FY02: \$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 - COLL PARK**                    **5110**  
 ROBUST DIAGNOSIS OF PLANETARY GEARTRAIN FAULTS ROBUST DIAGNOSIS OF PLANETARY GEARTRAIN FAULTS  
 01/08/1999 - 10/31/2002                    FY02: \$0                    Total: \$244,015  
*Prin. Invest.:* D J PINES  
*Tech. Officer:* GRC/D G LEWICKI  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2337**                    **UNIV OF MARYLAND - COLL PARK**                    **5111**  
 DATA-BASE ON FUEL AIR MIXING AND COMBUSTION FOR NATIONAL COMBUSTION  
 02/24/2000 - 02/02/2005                    FY02: \$0                    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 - COLL PARK**                    **5112**  
 GEOPHYSICAL FLOW EXPERIMENT IN A ROTATING SPHERICAL CAPACITOR, UM #000508-7778  
 07/26/2000 - 11/30/2003                    FY02: \$0                    Total: \$57,486  
*Prin. Invest.:* D DEANE  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2480**                    **UNIV OF MARYLAND - COLL PARK**                    **5113**  
 PROPULSION/AIRFRAME INTEGRATION FOR HYPERSONIC ACCESS-TO-SPACE  
 07/27/2000 - 09/30/2001                    FY02: \$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 - COLL PARK**                    **5114**  
 MATERIAL PROPERTIES GOVERNING COCURRENT FLAME SPREAD IN MICROGRAVITY  
 03/20/2001 - 11/30/2004                    FY02: \$0                    Total: \$100,000  
*Prin. Invest.:* J L TORERO  
*Tech. Officer:* GRC/G A RUFF  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2736**                    **UNIV OF MARYLAND - COLL PARK**                    **5115**  
 GRANULAR FLOW INSTABILITIES: TRANSIENTS, AGING AND SEGREGATION DYNAMICS.  
 03/15/2002 - 11/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* W LOSERT  
*Tech. Officer:* GRC/J H AGUI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2805**                    **UNIV OF MARYLAND - COLL PARK**                    **5116**  
 PACKAGE TECHNOLOGY EVALUATION FOR HIGH TEMPERATURE SIC ELECTRONICS AND MEMSPRESSURE  
 09/09/2002 - 12/31/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D MCCLUSKEY  
*Tech. Officer:* GRC/R S OKOJIE  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 3361**                    **UNIV OF MARYLAND - COLL PARK**                    **5117**  
 ISO DATA ANALYSIS IN PROGRAM FOR RESEARCH TO BE CONDUCTED AT THE UMD  
 08/28/1996 - 08/31/2001                    FY02: \$0                    Total: \$196,200  
*Prin. Invest.:* D G CURRLA  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3454**                    **UNIV OF MARYLAND - COLL PARK**                    **5118**  
 TERRESTRIAL MONITORING AT HIGH SPATIAL RESOLUTION: THE ROLE OF LANDSAT-TYPESENSORS IN MISSION.....  
 10/07/1996 - 06/01/2002                    FY02: \$0                    Total: \$1,695,179  
*Prin. Invest.:* S N GOWARD  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 3678**                    **UNIV OF MARYLAND - COLL PARK**                    **5119**  
 TROPOSPHERIC CONVECTION AND STRATOSPHERE-TROPOSPHERIC PHOTO-CHEMISTRY, AEROSOLS, AND CLIMATE  
 01/04/1997 - 01/14/2001                    FY02: \$0                    Total: \$830,000  
*Prin. Invest.:* K E PICKERING  
*Tech. Officer:* GSFC/M D HALL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE



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<p><b>NAG 5 3836</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5120</b>  LOW LUMINOSITY ACCRETION ONTO COMPACT OBJECTS  02/11/1997 - 08/14/2001                    FY02: \$0                    Total: \$219,000  <i>Prin. Invest.:</i> J L WANG  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 5225</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5129</b>  GRANT NAG5-5225 FOR ANTIMATTER AND COSMIC RAY STUDIES USING  BESS. PI DR. EUN-SUK SEO  03/16/1999 - 09/30/2002                    FY02: \$0                    Total: \$281,100  <i>Prin. Invest.:</i> E S SEO  <i>Tech. Officer:</i> GSFC/B A MERRITT  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 3840</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5121</b>  MAGNETOHYDRODYNAMIC MODELS OF THE COLD INTERSTELLA  02/14/1997 - 02/14/2002                    FY02: \$0                    Total: \$217,500  <i>Prin. Invest.:</i> E C OSTRIKER  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 5249</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5130</b>  COSMIC RAY ENERGETICS AND MASS (CREAM) COSMIC RAY ENERGETICS  AND MASS (CREAM)  03/13/2000 - 11/30/2002                    FY02: \$0                    Total: \$2,088,200  <i>Prin. Invest.:</i> E SEO  <i>Tech. Officer:</i> GSFC/B MERRITT  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 3960</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5122</b>  THE EFFECT OF VARIATIONS IN PACIFIC FRESH-WATER AN INDIAN OCEAN  02/18/1997 - 01/31/2002                    FY02: \$0                    Total: \$350,884  <i>Prin. Invest.:</i> R WAJSOWICZ  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 33 - OCEANOGRAPHY</p>	<p><b>NAG 5 5263</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5131</b>  SOUNDING ROCKET EXPERIMENT TO EXPLORE ELECTRO- DYNAMICS  COUPLING  03/02/2000 - 02/21/2003                    FY02: \$0                    Total: \$160,277  <i>Prin. Invest.:</i> M A COPLAN  <i>Tech. Officer:</i> GSFC/W B JOHNSON  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 4056</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5123</b>  SATELLITE BASED IDENTIFICATION OF LINKED VEGETATIO SURFACE  TEMPERATURE ANOMALY AREAS  03/11/1997 - 03/14/2001                    FY02: \$0                    Total: \$400,350  <i>Prin. Invest.:</i> J R TOWNSHEND  <i>Tech. Officer:</i> GSFC/C J TUCKER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 5308</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5132</b>  FIRST YEAR FUNDING FOR NAG5-5308 FIRST YEAR FUNDING FOR NAG5-  5308  02/01/2001 - 11/30/2003                    FY02: \$0                    Total: \$250,000  <i>Prin. Invest.:</i> E S SEO  <i>Tech. Officer:</i> GSFC/B A MERRITT  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 4080</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5124</b>  OBSERVATIONS OF COMETS AND ASTEROIDS  04/11/1997 - 11/30/2001                    FY02: \$0                    Total: \$300,000  <i>Prin. Invest.:</i> D F A'HEARN  <i>Tech. Officer:</i> GSFC/J BERGSTRALH  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 5347</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5133</b>  SEARCHING FOR ANTIMATTER AND OTHER EXOTICS USING T HE BALLOON  BORNE EXPERIMENT WITH A SUPERCOND  01/16/2002 - 01/07/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> J WANG  <i>Tech. Officer:</i> GSFC/B MERRITT  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 4313</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5125</b>  A SPACE PHYSICS ANALYSIS AND PLANNING TOOL  05/09/1997 - 12/31/2001                    FY02: \$0                    Total: \$312,500  <i>Prin. Invest.:</i> D C GOODRICH  <i>Tech. Officer:</i> GSFC/J BREDEKAMP  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>	<p><b>NAG 5 6004</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5134</b>  CHARACTERIZING LAND-COVER HETEROGENEITY AND LAND-C SENSOR  SATELLITE DATA  08/28/1997 - 03/14/2001                    FY02: \$0                    Total: \$573,934  <i>Prin. Invest.:</i> D DEFRIES  <i>Tech. Officer:</i> GSFC/G C GUTMAN  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 4811</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5126</b>  DEFORESTRATION AND DEGRADATION IN SOUTHERN AND CEN  06/25/1997 - 10/31/2001                    FY02: \$0                    Total: \$580,000  <i>Prin. Invest.:</i> S PRINCE  <i>Tech. Officer:</i> GSFC/G C GUTMAN  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 6421</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5135</b>  GLOBAL VEGETATION DYNAMICS  09/26/1997 - 06/30/2001                    FY02: \$0                    Total: \$693,429  <i>Prin. Invest.:</i> S D PRINCE  <i>Tech. Officer:</i> GSFC/D E WICKLAND  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 5155</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5127</b>  OPTIMIZED CALORIMETER FOR ACCESS MEASUREMENTS OF Z-1-26 NU-  CLEI AND ELECTRONS  03/26/1998 - 03/31/2002                    FY02: \$0                    Total: \$247,200  <i>Prin. Invest.:</i> E S SEO  <i>Tech. Officer:</i> GSFC/B A MERRITT  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 5 6459</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5136</b>  VALIDATING MODIS/MISR LAND SURFACE REFLECTING AND ALBEDO  PRODUCTS  10/14/1997 - 09/30/2001                    FY02: \$0                    Total: \$360,529  <i>Prin. Invest.:</i> S LIANG  <i>Tech. Officer:</i> GSFC/D STARR  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 5204</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5128</b>  COSMIC-RAY ORIGIN, ACCELERATION, AND PROPAGATION SELECTED  UNDER THE PRESIDENTIAL EARLY CAREER AWARD  06/24/1998 - 06/30/2003                    FY02: \$0                    Total: \$400,000  <i>Prin. Invest.:</i> E S SEO  <i>Tech. Officer:</i> GSFC/B A MERRITT  <i>CASE Category:</i> 13 - PHYSICS</p>	

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**NAG 5 6464 UNIV OF MARYLAND - COLL PARK 5137**  
 EOS VALIDATION ACTIVITY IN A DESERT ENCROACHMENT ZONE OF  
 SUB-SAHEL AFRICA  
 10/14/1997 - 09/30/2003 FY02: \$0 Total: \$495,819  
*Prin. Invest.:* R PINKER  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6483 UNIV OF MARYLAND - COLL PARK 5138**  
 EVALUATION OF OPERATIONAL LONGWAVE RADIATION BUDGET PARAME-  
 TERS USING THE GOES SOUNDERS  
 11/18/1997 - 12/31/2001 FY02: \$0 Total: \$839,848  
*Prin. Invest.:* P ELLINGSON  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6547 UNIV OF MARYLAND - COLL PARK 5139**  
 ORIGIN AND IMPACT OF NUCLEAR ACTIVITY IN GALAXIES (LTSA)  
 10/29/1997 - 10/31/2003 FY02: \$0 Total: \$117,452  
*Prin. Invest.:* S VEILLEUX  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6667 UNIV OF MARYLAND - COLL PARK 5140**  
 EVALUATION OF ACCURACIES IN GEOPHYSICAL PARAMETERS DERIVED  
 FROM PATHFINDER DATA  
 12/10/1997 - 12/31/2001 FY02: \$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 - COLL PARK 5141**  
 INTERANNUAL VARIABILITY, TRENDS, AND TRACER CORRELATIONS IN THE  
 UARS DATA SET  
 12/08/1997 - 11/30/2001 FY02: \$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 - COLL PARK 5142**  
 ENHANCED METADATA EXTRACTION FOR NASA'S REGIONAL VALIDATION  
 CENTER SYSTEM.  
 12/12/1997 - 03/31/2003 FY02: \$0 Total: \$189,770  
*Prin. Invest.:* J JAJA  
*Tech. Officer:* GSFC/J LEMONIGNE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 6750 UNIV OF MARYLAND - COLL PARK 5143**  
 ANALYSIS TOOLS FOR IR LINE AND CONTINUUM OBSERVATIONS; COBE  
 AND THE STRUCTURE OF THE GALACTIC I  
 01/12/1998 - 01/14/2002 FY02: \$0 Total: \$208,147  
*Prin. Invest.:* M WOLFIRE  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6970 UNIV OF MARYLAND - COLL PARK 5144**  
 MACHINE LEARNING TO IMPROVE LAND COVER CLASSIFICATIONS FROM  
 MULTISENSOR ANDMULTITEMPORAL DATA  
 03/12/1998 - 09/30/2001 FY02: \$0 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 - COLL PARK 5145**  
 ICE FLOW IN THE NORTHEAST GREENLAND ICE STREAM: MEASUREMENT  
 AND ANALYSIS  
 03/04/1998 - 02/28/2003 FY02: \$0 Total: \$272,998  
*Prin. Invest.:* M FAHNESTOCK  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7141 UNIV OF MARYLAND - COLL PARK 5146**  
 PIONEER 10/11 AND ULYSSES STUDY OF ENERGETIC PARTICLES IN THE  
 HELIOSPHERE  
 03/12/1998 - 02/28/2001 FY02: \$0 Total: \$329,500  
*Prin. Invest.:* F B MCDONALD  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7145 UNIV OF MARYLAND - COLL PARK 5147**  
 EMISSION PROCESSES ASSOCIATED WITH SOLAR TYPE III RADIO BURSTS  
 03/23/1998 - 04/14/2002 FY02: \$0 Total: \$162,414  
*Prin. Invest.:* T GOLLA  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7263 UNIV OF MARYLAND - COLL PARK 5148**  
 VERTICAL TRANSPORT PROCESSES IN THE SASS/GMI CHEMICAL  
 TRANSPORT MODEL: DEVELOPMENT, EVALUATION, AN  
 04/29/1998 - 04/30/2002 FY02: \$0 Total: \$170,883  
*Prin. Invest.:* K PICKERING  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7419 UNIV OF MARYLAND - COLL PARK 5149**  
 SIMULATION OF RADIOACTIVE TRACERS TO EVALUATE TRANSPORT AND  
 SCAVENGING IN THE GMI CORE MODEL  
 06/29/1998 - 04/30/2001 FY02: \$0 Total: \$162,321  
*Prin. Invest.:* D CONSIDINE  
*Tech. Officer:* GSFC/R W STEWART  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7425 UNIV OF MARYLAND - COLL PARK 5150**  
 FUSION OF AVHRR AND SEAWIFS DATA  
 05/26/1998 - 10/31/2000 FY02: \$0 Total: \$168,774  
*Prin. Invest.:* S D PRINCE  
*Tech. Officer:* GSFC/C J TUCKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7587 UNIV OF MARYLAND - COLL PARK 5151**  
 TERRESTRIAL ENVIRONMENTAL VARIABLES DERIVED FROM EOS PLAT-  
 FORM  
 06/29/1998 - 07/31/2001 FY02: \$0 Total: \$241,817  
*Prin. Invest.:* S N GOWARD  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7634 UNIV OF MARYLAND - COLL PARK 5152**  
 ISOTOPIC AND GEOCHEMICAL INVESTIGATIONS OF METEORITES  
 09/10/1998 - 07/31/2002 FY02: \$0 Total: \$209,000  
*Prin. Invest.:* R J WALKER  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

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<p><b>NAG 5 7762</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5153</b>  WIND/SOHO GUEST OBSERVER PROGRAM FOR STUDY OF SOLAR ENER-  GETIC PARTICLES AND GALACTIC  12/24/1998 - 09/30/2002                    FY02: \$0                    Total: \$251,100  <i>Prin. Invest.:</i> F B MCDONALD  <i>Tech. Officer:</i> GSFC/M GUHATHAKURTA  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8192</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5161</b>  RESEARCH IN SOLAR RADIO ASTRONOMY AT SHORT WAVELEN GTHS  05/13/1999 - 05/31/2003                    FY02: \$0                    Total: \$342,214  <i>Prin. Invest.:</i> M R KUNDU  <i>Tech. Officer:</i> GSFC/W J WAGNER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 7842</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5154</b>  OBSERVING SYSTEM SIMULATION EXPERIMENTS AND 4DDA ASSOCIATED  WITH CAMEX3  11/27/1998 - 11/30/2001                    FY02: \$0                    Total: \$270,000  <i>Prin. Invest.:</i> D ZHANG  <i>Tech. Officer:</i> GSFC/A F NEGRI  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 8230</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5162</b>  COMPARISON OF THE RADIATIVE AND PHYSIOLOGICAL EFFE CTS OF  DOUBLED CO2 ON THEGLOBAL CLIMATE AND DEVE  03/01/1999 - 11/30/2000                    FY02: \$0                    Total: \$151,808  <i>Prin. Invest.:</i> L BOUNOUA  <i>Tech. Officer:</i> GSFC/J G COLLATZ  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 7958</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5155</b>  DYNAMICS OF DUST IN THE JOVIAN SYSTEM  01/27/1999 - 02/28/2001                    FY02: \$0                    Total: \$99,321  <i>Prin. Invest.:</i> D P HAMILTON  <i>Tech. Officer:</i> GSFC/R BEEBE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8263</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5163</b>  SALINITY EFFECTS ON INTRA-SEASONAL TO INTERANNUAL VARIABILITY  OF A COUPLED CLIMATE PREDICTION M  02/22/1999 - 12/31/2002                    FY02: \$0                    Total: \$429,840  <i>Prin. Invest.:</i> R MURTUGUDDE  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8033</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5156</b>  SUPPORT OF DATA ACCESS FOR THE IMP-8 UMD EXPERIMEN T  01/19/1999 - 01/31/2002                    FY02: \$0                    Total: \$16,937  <i>Prin. Invest.:</i> F IPAVICH  <i>Tech. Officer:</i> GSFC/J KING  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8289</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5164</b>  DYNAMICAL DIAGNOSIS OF THE NSIPP ATMOSPHERIC AND COUPLED  MODEL SIMULATIONS  02/24/1999 - 02/28/2003                    FY02: \$0                    Total: \$302,305  <i>Prin. Invest.:</i> S NIGAM  <i>Tech. Officer:</i> GSFC/M RIENECKER  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 8079</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5157</b>  A PROPOSAL TO ASSIST IN THE INTERPRETATION OF DATA FROM THE  COSMIC RAY ISOTOPE SPECTROMETER EXPERI  01/14/1999 - 12/31/2001                    FY02: \$0                    Total: \$140,400  <i>Prin. Invest.:</i> D LUKASIAK  <i>Tech. Officer:</i> GSFC/D C LING  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 8366</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5165</b>  SURFACE RADIATION BUDGETS FOR LBA  03/08/1999 - 02/28/2003                    FY02: \$0                    Total: \$290,045  <i>Prin. Invest.:</i> R T PINKER  <i>Tech. Officer:</i> GSFC/E T ENGMAN  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8121</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5158</b>  GENERATION OF A CONSISTENT TERRESTRIAL NET PRIMARY PRODUC-  TION DATA SET: PART II  01/26/1999 - 12/31/2001                    FY02: \$0                    Total: \$187,510  <i>Prin. Invest.:</i> S D PRINCE  <i>Tech. Officer:</i> GSFC/D E WICKLAND  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 8398</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5166</b>  CONDUCT RESEARCH IN RAREFIED GAS DYNAMICS TO SUPPO RT THE  DEVELOPMENT OF NASA'S GLOBAL ELECTRODYNAMI  05/10/1999 - 05/14/2003                    FY02: \$0                    Total: \$150,000  <i>Prin. Invest.:</i> D J LEWIS  <i>Tech. Officer:</i> GSFC/J FIORA  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 8177</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5159</b>  DISTRIBUTION OF IJRS SPECIAL ISSUE ON GLOBAL AND REGIONAL LAND  COVER CHARACTERIZATION FROM REMOTE  02/09/1999 - 12/31/2000                    FY02: \$0                    Total: \$15,037  <i>Prin. Invest.:</i> R DEFRIES  <i>Tech. Officer:</i> GSFC/A C JANETOS  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 8459</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5167</b>  EQ-S MISSIONS OPERATIONS AND DATA ANALYSIS  04/19/1999 - 04/14/2002                    FY02: \$0                    Total: \$139,871  <i>Prin. Invest.:</i> J DRAKE  <i>Tech. Officer:</i> GSFC/M HESSE  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 8179</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5160</b>  INTERNATIONAL FORUM ON BRDF  02/12/1999 - 12/30/2000                    FY02: \$0                    Total: \$14,993  <i>Prin. Invest.:</i> S LIANG  <i>Tech. Officer:</i> GSFC/D E WICKLAND  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 8528</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5168</b>  ENSEMBLE OCEAN-ATMOSPHERE PERTURBATIONS WITH GROWI NG  ENSO USING BREEDING  05/26/1999 - 05/31/2003                    FY02: \$0                    Total: \$584,118  <i>Prin. Invest.:</i> E KALNAY  <i>Tech. Officer:</i> GSFC/M RIENECKER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>

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**NAG 5 8595**                    **UNIV OF MARYLAND - COLL PARK**                    **5169**  
 PHYSICAL & BIOGEOCHEMICAL PROCESSES WITH THE INDIA OCEAN: A  
 STUDY OF ANNUAL& INTERANNUAL VARIABILITY  
 06/07/1999 - 11/30/2001                    FY02: \$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 - COLL PARK**                    **5170**  
 YEAR 1 FUNDING FROM HPCC/ESS PROJECT FOR PROPOSAL TITLE: AN  
 ADAPTIVE MHD CODE BASED ON CHARACTERI  
 06/11/1999 - 06/14/2002                    FY02: \$0                    Total: \$146,327  
*Prin. Invest.:* A DEANE  
*Tech. Officer:* GSFC/J R FISCHER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8621**                    **UNIV OF MARYLAND - COLL PARK**                    **5171**  
 ANALYSIS OF DATA FROM THE SWE EXPERIMENT ON THE WIND SPACE-  
 CRAFT  
 06/16/1999 - 03/31/2001                    FY02: \$0                    Total: \$31,144  
*Prin. Invest.:* M COPLAN  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8678**                    **UNIV OF MARYLAND - COLL PARK**                    **5172**  
 ROLE OF GRAY SQUIRRELS IN MAINTAINING LIFE CYCLE  
 07/09/1999 - 08/31/2002                    FY02: \$0                    Total: \$18,885  
*Prin. Invest.:* L W ADAMS  
*Tech. Officer:* GSFC/D E WALTER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 8764**                    **UNIV OF MARYLAND - COLL PARK**                    **5173**  
 MODELS & ALGORITHMS FOR FOREST DYNAMIC STUDIES IN SIBERIA &  
 NORTHEASTERN CHINA USING MULTI-SATELLITE  
 09/10/1999 - 11/30/2002                    FY02: \$0                    Total: \$224,080  
*Prin. Invest.:* G SUN  
*Tech. Officer:* GSFC/K J RANSON  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 8833**                    **UNIV OF MARYLAND - COLL PARK**                    **5174**  
 THE REDSHIFT DEPENDENCE OF THE INTERACTION- ACTIVITY CONNEC-  
 TION AMONG ULTRALUMINOUS STARBURST  
 09/12/2000 - 09/14/2003                    FY02: \$0                    Total: \$17,432  
*Prin. Invest.:* P J TEUBEN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8842**                    **UNIV OF MARYLAND - COLL PARK**                    **5175**  
 AWARD FUNDING TO THE UNIV OF MARYLAND FOR PROPOSAL ENTITLED  
 "OCTOBER ASTROPHYSICS CONFER  
 09/24/1999 - 09/30/2004                    FY02: \$0                    Total: \$75,000  
*Prin. Invest.:* J D TRASCO  
*Tech. Officer:* GSFC/D NORTON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8877**                    **UNIV OF MARYLAND - COLL PARK**                    **5176**  
 SOLAR CYCLE DYNAMICS STUDIES WITH SAMPEX  
 11/24/1999 - 11/30/2003                    FY02: \$0                    Total: \$1,550,000  
*Prin. Invest.:* G MASON  
*Tech. Officer:* GSFC/T VON ROSENVINGE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8936**                    **UNIV OF MARYLAND - COLL PARK**                    **5177**  
 AN INVESTIGATION OF TROPICAL UPPER TROPOSPHERIC HUMIDITY  
 01/18/2000 - 11/30/2003                    FY02: \$0                    Total: \$259,155  
*Prin. Invest.:* A DESSLER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9075**                    **UNIV OF MARYLAND - COLL PARK**                    **5178**  
 ULTRA-WIDEBAND MICROWAVE SPECTROMETERS FOR HETEROD YNE  
 SPECTROSCOPY  
 02/16/2000 - 02/28/2003                    FY02: \$0                    Total: \$228,000  
*Prin. Invest.:* A HARRIS  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9108**                    **UNIV OF MARYLAND - COLL PARK**                    **5179**  
 MAGNETIC RECONNECTION & ASSOCIATED WAVE & PARTICLE SIGNA-  
 TURES IN COLLISIONLESS PLASMA  
 02/23/2000 - 02/28/2003                    FY02: \$0                    Total: \$176,162  
*Prin. Invest.:* J F DRAKE  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9150**                    **UNIV OF MARYLAND - COLL PARK**                    **5180**  
 CENTER FOR SATELLITE AND HYBRID COMMUNICATION NETWORKS, NASA  
 COMMERCIAL SPACE CENTER  
 03/03/2000 - 09/01/2001                    FY02: \$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 - COLL PARK**                    **5181**  
 UNDERGRADUATE AND GRADUATE STUDENT TRAINING IN AERONAUTICS  
 RESEARCH (STAR)  
 03/02/2000 - 02/28/2001                    FY02: \$0                    Total: \$53,798  
*Prin. Invest.:* M GAVRILAS  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NAG 5 9167**                    **UNIV OF MARYLAND - COLL PARK**                    **5182**  
 EVOLUTIONARY MODELS OF COLD, MAGNETIZED, INTERSTEL LAR  
 CLOUDS (ATP 99)  
 03/15/2000 - 03/14/2003                    FY02: \$0                    Total: \$173,503  
*Prin. Invest.:* E OSTRIKER  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9228**                    **UNIV OF MARYLAND - COLL PARK**                    **5183**  
 ESTABLISHMENT OF CENTER FOR ADVANCED INFORMATION TECHNOL-  
 OGY  
 03/20/2000 - 02/28/2002                    FY02: \$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 - COLL PARK**                    **5184**  
 PDRS IN GALAXIES: FROM THE LOCAL UNIVERSE TO HIGH Z STARBURSTS  
 (LTSA 99)  
 03/15/2000 - 03/14/2005                    FY02: \$0                    Total: \$130,777  
*Prin. Invest.:* M WOLFIRE  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

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**NAG 5 9282**                    **UNIV OF MARYLAND - COLL PARK**                    **5185**  
MISSION OPERATIONS & DATA ANALYSIS FOR THE CELIAS/ MT OF  
EXPERIMENT  
04/06/2000 - 04/30/2003                    FY02: \$0                    Total: \$750,000  
*Prin. Invest.:* F IPAVICH  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9319**                    **UNIV OF MARYLAND - COLL PARK**                    **5186**  
AN INTEGRATED FOREST MONITORING SYSTEM FOR CENTRAL ASIA  
03/24/2000 - 03/31/2003                    FY02: \$0                    Total: \$201,720  
*Prin. Invest.:* N LAPORTE  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9329**                    **UNIV OF MARYLAND - COLL PARK**                    **5187**  
INTER-ANNUAL LAND SURFACE VARIATION  
03/24/2000 - 04/30/2003                    FY02: \$0                    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 - COLL PARK**                    **5188**  
IMPROVEMENTS IN LANDSAT PATHFINDER METHODS FOR MONITORING  
TROPICAL DEFORESTATION & THEIR EXTENSION  
03/27/2000 - 04/30/2003                    FY02: \$0                    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 - COLL PARK**                    **5189**  
MONITORING FOREST DYNAMICS IN NORTHEASTEN CHINA IN SUPPORT  
OF GOF C  
03/31/2000 - 04/30/2003                    FY02: \$0                    Total: \$176,441  
*Prin. Invest.:* G SUN  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9339**                    **UNIV OF MARYLAND - COLL PARK**                    **5190**  
TOWARDS METHODOLOGIES FOR GLOBAL MONITORING OF FOREST  
COVER CHARACTERISTICS WITH COARSE  
03/31/2000 - 04/30/2003                    FY02: \$0                    Total: \$191,624  
*Prin. Invest.:* R DEFRIES  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9411**                    **UNIV OF MARYLAND - COLL PARK**                    **5191**  
UNDERSTANDING WATER, ENERGY AND CLIMATE: A GEWEX GLOBAL  
WATER & ENERGY BUDGET PATHFINDER DATA SET  
04/10/2000 - 04/30/2003                    FY02: \$0                    Total: \$78,333  
*Prin. Invest.:* R DUBAYAH  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9440**                    **UNIV OF MARYLAND - COLL PARK**                    **5192**  
CONTRIBUTION OF EMISSIONS FROM BOREAL FOREST FIRES  
04/13/2000 - 04/30/2003                    FY02: \$0                    Total: \$398,951  
*Prin. Invest.:* K KASISCHKE  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9447**                    **UNIV OF MARYLAND - COLL PARK**                    **5193**  
TERRESTRIAL HYDROLOGY & CLIMATE STUDIES USING EOS- ERA DATA  
04/12/2000 - 04/14/2003                    FY02: \$0                    Total: \$151,972  
*Prin. Invest.:* R DUBAYAH  
*Tech. Officer:* GSFC/P HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9560**                    **UNIV OF MARYLAND - COLL PARK**                    **5194**  
2000 ASEE-NASA SUMMER FACULTY FELLOWSHIP PROGRAM (AERONAU-  
TICS AND SPACE RESEARCH)  
05/09/2000 - 09/14/2001                    FY02: \$0                    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 - COLL PARK**                    **5195**  
THE PHYSICAL & CHEMICAL STRUCTURE OF CIRCUMSTELLAR DISKS &  
ENVELOPES  
05/10/2000 - 04/30/2001                    FY02: \$0                    Total: \$40,000  
*Prin. Invest.:* L MUNDY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 13 - PHYSICS

**NAG 5 9620**                    **UNIV OF MARYLAND - COLL PARK**                    **5196**  
A GLOBAL NETWORK OF SITES FOR ASSESSING BIOGEOCHEMICAL &  
BIOPHYSICAL CONSEQUENCES OF LAND COVER DIS  
05/18/2000 - 05/14/2003                    FY02: \$0                    Total: \$231,709  
*Prin. Invest.:* R DEFRIES  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9632**                    **UNIV OF MARYLAND - COLL PARK**                    **5197**  
INVESTIGATIONS OF THE TROPICAL TROPOPAUSE REGION  
06/01/2000 - 05/31/2003                    FY02: \$0                    Total: \$202,968  
*Prin. Invest.:* A DESSLER  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9634**                    **UNIV OF MARYLAND - COLL PARK**                    **5198**  
IMPROVED GLOBAL SCALE MODELS FOR SURFACE RADIATION BUDGETS  
05/26/2000 - 04/30/2003                    FY02: \$0                    Total: \$239,000  
*Prin. Invest.:* R T PINKER  
*Tech. Officer:* GSFC/R CURAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9672**                    **UNIV OF MARYLAND - COLL PARK**                    **5199**  
TROPOSPHERIC CONVECTION & STRATOSPHERE-TROPOSPHERE EX-  
CHANGE: EFFECTS ON PHOTOCHEMISTRY, AEROSOLS  
06/12/2000 - 05/31/2003                    FY02: \$0                    Total: \$435,801  
*Prin. Invest.:* K E PICKERING  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9750**                    **UNIV OF MARYLAND - COLL PARK**                    **5200**  
"WIDE-FIELD IMAGING INTERFEROMETRY"  
07/12/2000 - 07/31/2003                    FY02: \$0                    Total: \$37,460  
*Prin. Invest.:* L G MUNDY  
*Tech. Officer:* GSFC/D LEISAWITZ  
*CASE Category:* 11 - ASTRONOMY

## MARYLAND

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**NAG 5 9756**                    **UNIV OF MARYLAND - COLL PARK**                    **5201**  
 PERIODIC, QUASI-PERIODIC, AND BURSTING BEHAVIOR OF NEUTRON  
 STAR X-RAY SOURCES  
 06/28/2000 - 06/30/2002                    FY02: \$0                    Total: \$40,020  
*Prin. Invest.:* M MILLER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9793**                    **UNIV OF MARYLAND - COLL PARK**                    **5202**  
 SUPRATHERMAL THROUGH ENERGETIC PARTICLE DETECTOR ( STEP)  
 SUBSYSTEM OF THEEPACT EXPERIMENT ON THE WIN  
 07/27/2000 - 01/31/2002                    FY02: \$0                    Total: \$62,000  
*Prin. Invest.:* G M MASON  
*Tech. Officer:* GSFC/T VONROSENVINGE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9809**                    **UNIV OF MARYLAND - COLL PARK**                    **5203**  
 STUDY OF LAND-ATMOSPHERE INTERACTIONS USING SATEL- LITE DATA  
 ASSIMILATION  
 07/18/2000 - 01/31/2003                    FY02: \$0                    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 - COLL PARK**                    **5204**  
 VARIABILITY ASSESSMENT OF TMI SNAPSHOTS & QUALITY CONTROLLING  
 N-SENSOR DATA.  
 08/23/2000 - 08/31/2001                    FY02: \$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 - COLL PARK**                    **5205**  
 RAREFIED FLOW AERODYNAMICS FOR STABILITY & CONTROL OF  
 FORMATION-FLYINGSATELLITES  
 08/23/2000 - 08/31/2003                    FY02: \$0                    Total: \$150,000  
*Prin. Invest.:* M J LEWIS  
*Tech. Officer:* GSFC/M CONCHA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9892**                    **UNIV OF MARYLAND - COLL PARK**                    **5206**  
 NASA-CENTRAL AFRICAN REGIONAL PROGRAM FOR THE ENVI RONMENT  
 (CARPE) ACTIVITY  
 08/24/2000 - 08/31/2002                    FY02: \$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 - COLL PARK**                    **5207**  
 CARPE FOREST COVER & INFORMATION SYSTEM - REVISED  
 08/29/2000 - 08/31/2001                    FY02: \$0                    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 - COLL PARK**                    **5208**  
 REPROCESSING OF GOES NOAA/NESDIS SURFACE RADIATION BUDGET  
 PRODUCTS FOR GCIP  
 09/01/2000 - 08/31/2003                    FY02: \$200,000                    Total: \$300,000  
*Prin. Invest.:* R T PINKER  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9935**                    **UNIV OF MARYLAND - COLL PARK**                    **5209**  
 X-RAY PERIODOCOTY & THE BROAD IRON K LINE IN IRAS 18325-5926  
 09/06/2000 - 09/14/2002                    FY02: \$0                    Total: \$10,500  
*Prin. Invest.:* A J YOUNG  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9961**                    **UNIV OF MARYLAND - COLL PARK**                    **5210**  
 PRECISION RIGID BODY CONTROL OF A SATELLITE CONSTE LLATION.  
 09/20/2000 - 09/30/2001                    FY02: \$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 - COLL PARK**                    **5211**  
 COMPARISON OF THE RADIATIVE & PHYSIOLOGICAL EFFECT OF DOUBLED  
 CO2 ON THE GLOBAL CLIMATE & THE  
 11/29/2000 - 12/31/2003                    FY02: \$0                    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 - COLL PARK**                    **5212**  
 INTEGRATING RADAR DATA WITH OTHER SATELLITE IMAGERGY TO ESTI-  
 MATE NET PRIMARYPRODUCTIVITY IN  
 11/20/2000 - 10/31/2002                    FY02: \$0                    Total: \$141,700  
*Prin. Invest.:* E KASISCHKE  
*Tech. Officer:* GSFC/K PARTINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10126**                    **UNIV OF MARYLAND - COLL PARK**                    **5213**  
 RECENT ADVANCES IN REMOTE SENSING OF BIOPHYSICAL VARIABLES  
 12/11/2000 - 12/14/2002                    FY02: \$0                    Total: \$5,920  
*Prin. Invest.:* S GOETZ  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10175**                    **UNIV OF MARYLAND - COLL PARK**                    **5214**  
 MILLIMETER OBSERVATIONS OF MEV-ENERGY ELECTRONS IN CONJUNC-  
 TION WITH THE HESSI MISSION  
 12/18/2000 - 12/31/2002                    FY02: \$0                    Total: \$68,900  
*Prin. Invest.:* S WHITE  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10179**                    **UNIV OF MARYLAND - COLL PARK**                    **5215**  
 MICROWAVE EMISSION DEPTH IN FIRN AND LONG-TERM ACC UMULATION  
 RATES FROM INTERNAL LAYER DISTRIBUTION  
 01/10/2001 - 02/28/2003                    FY02: \$0                    Total: \$111,438  
*Prin. Invest.:* M FAHNESTOCK  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10180**                    **UNIV OF MARYLAND - COLL PARK**                    **5216**  
 SOLAR FLARE PHYSICS  
 01/11/2001 - 01/14/2006                    FY02: \$0                    Total: \$113,888  
*Prin. Invest.:* E J SCHUMAH  
*Tech. Officer:* GSFC/B DENNIS  
*CASE Category:* 11 - ASTRONOMY

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**NAG 5 10235**                    **UNIV OF MARYLAND - COLL PARK**                    **5217**  
 NASA/UMD: MONITORING THE STATE OF THE RAINFOREST IN THE REPUB-  
 LIC DEMOCRATIC OF THE CONGO  
 02/05/2001 - 02/14/2003                    FY02: \$0                    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 - COLL PARK**                    **5218**  
 NONLOCAL KINETIC ANALYSIS OF MAGNETOTAIL THIN CURR ENT SHEET  
 STRUCTURE & DYNAMICS DURING SUBSTORMS  
 01/24/2001 - 01/31/2004                    FY02: \$0                    Total: \$82,323  
*Prin. Invest.:* S SHARMA  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10388**                    **UNIV OF MARYLAND - COLL PARK**                    **5219**  
 IMPROVED SIBERIAN LANDSCAPE MAPPING USING SRTM AND VCL DATA  
 02/08/2001 - 02/14/2003                    FY02: \$0                    Total: \$25,000  
*Prin. Invest.:* G SUN  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10425**                    **UNIV OF MARYLAND - COLL PARK**                    **5220**  
 ISOTOPIIC & GEOCHEMICAL INVESTIGATIONS OF METEORITES  
 02/15/2001 - 07/31/2004                    FY02: \$0                    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 - COLL PARK**                    **5221**  
 NANOTECHNOLOGY OPTICS FOR INFRARED ASTRONOMY  
 02/28/2001 - 05/31/2002                    FY02: \$0                    Total: \$11,775  
*Prin. Invest.:* L G MUNDY  
*Tech. Officer:* GSFC/M M FREUND  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10527**                    **UNIV OF MARYLAND - COLL PARK**                    **5222**  
 SATELLITE MAPPING OF THE AFRICAN & ASIAN ARID & SEMI-ARID  
 BOUNDARIES  
 03/09/2001 - 09/14/2002                    FY02: \$0                    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 - COLL PARK**                    **5223**  
 MISSION OPERATIONS & DATA ANALYSIS FOR THE SOLAR WIND &  
 SUPRATHERMAL ION COMPOSITION INVESTIGATION  
 03/22/2001 - 03/14/2002                    FY02: \$0                    Total: \$175,000  
*Prin. Invest.:* G GLOEKLER  
*Tech. Officer:* GSFC/M ACUNA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10563**                    **UNIV OF MARYLAND - COLL PARK**                    **5224**  
 AUTOMATION OF SAMPEX ORBIT DETERMINATION  
 03/19/2001 - 09/14/2002                    FY02: \$0                    Total: \$50,000  
*Prin. Invest.:* B SHAPIRO  
*Tech. Officer:* GSFC/J TOTH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10585**                    **UNIV OF MARYLAND - COLL PARK**                    **5225**  
 CHAPMAN CONFERENCE ON STORM -SUBSTORMS RELATION SHIPS:  
 TRAVEL GRANT  
 03/13/2001 - 01/14/2002                    FY02: \$0                    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 - COLL PARK**                    **5226**  
 NEW ISTP THEORY GRANT  
 03/16/2001 - 03/31/2002                    FY02: \$0                    Total: \$300,000  
*Prin. Invest.:* K PAPADOPOULIS  
*Tech. Officer:* GSFC/S CURTIS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10611**                    **UNIV OF MARYLAND - COLL PARK**                    **5227**  
 THE STRUCTURE OF YOUNG STELLAR SYSTEMS: ESTABLISH ING THE  
 INITIAL CONDITIONS FOR PLANET FORMA  
 03/17/2001 - 03/31/2004                    FY02: \$0                    Total: \$45,000  
*Prin. Invest.:* L MUNDY  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10626**                    **UNIV OF MARYLAND - COLL PARK**                    **5228**  
 ADVANCED MHD MODELS FOR SOLAR WIND TURBULENCE  
 03/22/2001 - 03/31/2004                    FY02: \$0                    Total: \$153,474  
*Prin. Invest.:* A DEANE  
*Tech. Officer:* GSFC/D GOLDSTEIN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10746**                    **UNIV OF MARYLAND - COLL PARK**                    **5229**  
 SEA ICE VARIABILITY, TRENDS AND CLIMATE CHANGE  
 04/17/2001 - 04/30/2004                    FY02: \$0                    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 - COLL PARK**                    **5230**  
 WITS: THE WEB INFRARED TOOLSHED.  
 04/13/2001 - 04/14/2004                    FY02: \$0                    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 - COLL PARK**                    **5231**  
 RADIO & PLASMA WAVES ASSOCIATED WITH CORONAL MASS EJECTIONS  
 04/30/2001 - 04/30/2002                    FY02: \$0                    Total: \$20,000  
*Prin. Invest.:* T GOLLA  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10819**                    **UNIV OF MARYLAND - COLL PARK**                    **5232**  
 APPLICATIONS IN DEPLOYMENT DYNAMICS AND CONTROL  
 04/24/2001 - 09/30/2001                    FY02: \$0                    Total: \$40,000  
*Prin. Invest.:* P KRISHNAPRASAD  
*Tech. Officer:* GSFC/D FOLTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10858**                    **UNIV OF MARYLAND - COLL PARK**                    **5233**  
 LAND COVER LAND USE CHANGE PROJECT SCIENTIST SUPPORT  
 05/03/2001 - 04/30/2004                    FY02: \$0                    Total: \$197,665  
*Prin. Invest.:* C JUSTICE  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

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**NAG 5 10859**            **UNIV OF MARYLAND - COLL PARK**            **5234**  
 INTER-COMPARISON OF GLOBAL SCALE ECOLOGICAL MODELS  
 05/02/2001 - 07/31/2002            FY02: \$0            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 - COLL PARK**            **5235**  
 PREDICTION OF THE THREE DIMENSIONAL STRUCTURE OF THE SOLAR  
 WIND AT THE EARTH FROM L1 ORBIT  
 05/03/2001 - 04/30/2003            FY02: \$0            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 - COLL PARK**            **5236**  
 TOWARDS UNDERSTANDING STARBURST GALAXIES AT LOW & HIGH  
 REDSHIFT (FUSE 2000)  
 05/14/2001 - 05/31/2003            FY02: \$0            Total: \$36,000  
*Prin. Invest.:* T LANZ  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10898**            **UNIV OF MARYLAND - COLL PARK**            **5237**  
 DEVELOPMENT OF ALGORITHMS FOR MONITORING & MAPPING FIRE  
 BURNED AREAS OF NORTH AMERICA'S BOREAL & TEM  
 05/22/2001 - 04/30/2003            FY02: \$0            Total: \$88,718  
*Prin. Invest.:* L ZHANQUING  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10929**            **UNIV OF MARYLAND - COLL PARK**            **5238**  
 SOLAR ULTRAVIOLET RADIATION AND THE ORIGIN OF LIFE ON EARTH  
 (FUSE 2000)  
 05/14/2001 - 05/31/2003            FY02: \$0            Total: \$35,000  
*Prin. Invest.:* T LANZ  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10958**            **UNIV OF MARYLAND - COLL PARK**            **5239**  
 ANALYSIS OF SOLAR WIND DATA FROM MTOFON SOHO & SWE ON WIND  
 05/30/2001 - 12/31/2002            FY02: \$0            Total: \$25,703  
*Prin. Invest.:* M COPLAN  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 13 - PHYSICS

**NAG 5 10959**            **UNIV OF MARYLAND - COLL PARK**            **5240**  
 IMPROVING HURRICANE FORECASTS THROUGH 3D RETRIEVAL & 4D VAR  
 ASSIMILATION IN THE GEOS DATA SYSTEM ASS  
 06/04/2001 - 06/14/2004            FY02: \$0            Total: \$100,000  
*Prin. Invest.:* D ZHANG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10981**            **UNIV OF MARYLAND - COLL PARK**            **5241**  
 INTRASEASONAL VARIABILITY IN THE INDIAN OCEAN  
 05/31/2001 - 06/30/2004            FY02: \$0            Total: \$30,000  
*Prin. Invest.:* R MURTUGUDDE  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11054**            **UNIV OF MARYLAND - COLL PARK**            **5242**  
 STUDIES OF THE SOLAR MODULATION OF GALACTIC AND ANOMALOUS  
 COSMIC RAYS IN THE HELIOSPHERE  
 06/20/2001 - 06/14/2004            FY02: \$0            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 - COLL PARK**            **5243**  
 THE PROPAGATION OF HIGH-ENERGY COSMIC RAYS IN THE GALAXY  
 07/06/2001 - 07/14/2004            FY02: \$0            Total: \$50,000  
*Prin. Invest.:* F B MCDONALD  
*Tech. Officer:* GSFC/F C JONES  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11149**            **UNIV OF MARYLAND - COLL PARK**            **5244**  
 SPATIAL PREDICTIVE MODELING AND REMOTE SENSING OF LAND USE  
 CHANGE IN THE CHESAPEAKE BAY WATERSHED  
 07/26/2001 - 08/14/2004            FY02: \$0            Total: \$76,666  
*Prin. Invest.:* N BOCKSTAEEL  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 11151**            **UNIV OF MARYLAND - COLL PARK**            **5245**  
 GLOBAL 3D MODEL STUDIES OF POLAR PROCESSES & RADI ONUCLIDES  
 WITH APPLICATION TO THE GLOBAL  
 07/27/2001 - 07/31/2004            FY02: \$0            Total: \$77,909  
*Prin. Invest.:* K PICKERING  
*Tech. Officer:* GSFC/P DE COLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11161**            **UNIV OF MARYLAND - COLL PARK**            **5246**  
 LAND USE LAND CHANGE AROUND PROTECTED AREAS IN LCL UC SITES:  
 SYNTHESIS OF RATES, CONSEQUENCES FOR  
 08/08/2001 - 08/14/2004            FY02: \$0            Total: \$25,402  
*Prin. Invest.:* R DEFRIES  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 11246**            **UNIV OF MARYLAND - COLL PARK**            **5247**  
 EVALUATION OF ASIAN OUTFLOW USING A STRETCHED GRID CTM  
 08/16/2001 - 08/14/2004            FY02: \$0            Total: \$50,343  
*Prin. Invest.:* D ALLEN  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11247**            **UNIV OF MARYLAND - COLL PARK**            **5248**  
 TRENDS IN TOTAL AND PROFILE OZONE SORTED BY METEOROLOGICAL  
 REGIMES  
 08/16/2001 - 08/14/2004            FY02: \$0            Total: \$99,999  
*Prin. Invest.:* R HUDSON  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11251**            **UNIV OF MARYLAND - COLL PARK**            **5249**  
 BURNED AREA MAPPING IN SOUTHERN AFRICA: CASE STUDY SYNTHESIS  
 AND REGIONAL APPLICATION OF MOD  
 08/20/2001 - 08/14/2004            FY02: \$0            Total: \$131,572  
*Prin. Invest.:* D ROY  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



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<p><b>NAG 5 11252</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5250</b>  BEYOND POTENTIAL VEGETATION: IMPROVING MODEL CARBON PROJECTIONS OF THE LAND SURFACE USING LIDAR RE  08/20/2001 - 08/14/2004                    FY02: \$0                    Total: \$78,629  <i>Prin. Invest.:</i> R DUBAYAH  <i>Tech. Officer:</i> GSFC/D WICKLAND  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 11523</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5258</b>  CONTEMPORANEOUS XMM AND HST OBSERVATIONS OF SEYFERT GALAXIES  01/08/2002 - 11/14/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> C S REYNOLDS  <i>Tech. Officer:</i> GSFC/R MUSHOTZKY  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 11274</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5251</b>  MOORING BASED OPTICAM MEASUREMENTS IN THE TROPICAL ATLANTIC OCEAN  08/22/2001 - 08/31/2002                    FY02: \$0                    Total: \$60,522  <i>Prin. Invest.:</i> A SUBRAMANIAN  <i>Tech. Officer:</i> GSFC/J MARRA  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 11544</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5259</b>  OXYGEN ISOTOPE STUDY OF CARBONATE AND SULFATE IN CARBONACEOUS CHONDRITES  01/04/2002 - 12/31/2004                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> J FARGUHAR  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 12 - CHEMISTRY</p>
<p><b>NAG 5 11276</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5252</b>  REPRESENTATION IN THE GMI MODEL AND EFFECTS ON CHEMISTRY AND CLIMATE  08/22/2001 - 08/31/2004                    FY02: \$0                    Total: \$54,842  <i>Prin. Invest.:</i> K PICKERING  <i>Tech. Officer:</i> GSFC/P DECOLA  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 11577</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5260</b>  "CLIMATE STUDIES ON VARIABILITY AND PREDICTABILITY OF WATER AND ENERGY CYCLES USING A VARIABLE RES  01/16/2002 - 01/14/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> E BERBERY  <i>Tech. Officer:</i> GSFC/P R HOUSER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 11291</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5253</b>  AN INVESTIGATION OF THE INDO-PACIFIC CLIMATE IN THE NSIPP COUPLED CLIMATE SYSTEM  08/31/2001 - 08/31/2002                    FY02: \$0                    Total: \$60,000  <i>Prin. Invest.:</i> R WAJSOWICZ  <i>Tech. Officer:</i> GSFC/M RIENECKER  <i>CASE Category:</i> 33 - OCEANOGRAPHY</p>	<p><b>NAG 5 11600</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5261</b>  FRESH WATER FLUXES OF THE OB' RIVER, RUSSIA: CONTRIBUTION OF SNOWPACK IN COMPLEX TERRAIN.  01/28/2002 - 01/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> K L BRUBAKER  <i>Tech. Officer:</i> GSFC/P R HOUSER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 11306</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5254</b>  GLOBAL FOREST COVER ASSESSMENT  08/31/2001 - 08/31/2003                    FY02: \$0                    Total: \$240,266  <i>Prin. Invest.:</i> J TOWNSHEND  <i>Tech. Officer:</i> GSFC/G GUTMAN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 11654</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5262</b>  GLOBAL EARTHQUAKE SATELLITE SYSTEM REQUIREMENTS DERIVED FROM A SUITE OF SCIENTIFIC OBSERVATIONAL AN  02/01/2002 - 01/31/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> M HOFTON  <i>Tech. Officer:</i> GSFC/B F CHAO  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 11313</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5255</b>  OPTIMAL PLANNING &amp; CONTROL OF A VIRTUAL RIGID BODY SATELLITE CONSTELLATION.  09/05/2001 - 09/14/2002                    FY02: \$0                    Total: \$82,630  <i>Prin. Invest.:</i> R SANNER  <i>Tech. Officer:</i> GSFC/S STRARIN  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 5 11672</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5263</b>  CARPE FOREST COVER AND INFORMATION SYSTEM  01/30/2002 - 01/31/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> C JUSTICE  <i>Tech. Officer:</i> GSFC/C J TUCKER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 11399</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5256</b>  BIODIVERSITY SURVEY OF GODDARD SPACE FLIGHT CENTER  11/27/2001 - 11/30/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> L W ADAMS  <i>Tech. Officer:</i> GSFC/D E SQUIBB  <i>CASE Category:</i> 54 - ENVIRONMENTAL BIOLOGY</p>	<p><b>NAG 5 11693</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5264</b>  ANALYSIS OF ISTP EVENTS FOR STRONG GEOMAGNETIC ACTIVITY  02/12/2002 - 02/14/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> K PAPADOPOULOS  <i>Tech. Officer:</i> GSFC/S A CURTIS  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 11468</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5257</b>  INFRARED OBSERVATIONS OF COMETARY DUST AND NUCLEI  12/10/2001 - 01/31/2004                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> C M LISSE  <i>Tech. Officer:</i> GSFC/J J HILMAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11698</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5265</b>  COUPLING SATELLITE REMOTE SENSING &amp; UNSTEADY FLOW MODELING FOR DISCHARGE ESTIMATION.  02/12/2002 - 09/30/2002                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> C BIRKETT  <i>Tech. Officer:</i> GSFC/P R HOUSER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>

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**NAG 5 11699 UNIV OF MARYLAND - COLL PARK 5266**  
 EFFECTS OF FRESHWATER FORCING ON SEASONAL-TO-INTER ANNUAL  
 VARIABILITY OF TROPICAL OCEANS AND ECOSYST  
 02/12/2002 - 09/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* C BIRKETT  
*Tech. Officer:* GSFC/A J BUSSALACCHI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11700 UNIV OF MARYLAND - COLL PARK 5267**  
 FLOODS AND DROUGHTS IN AFRICA: RELATION TO SHORT- TERM CLIMATE  
 VARIABILITY.  
 02/12/2002 - 09/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* C M BIRKETT  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11722 UNIV OF MARYLAND - COLL PARK 5268**  
 RUBBLE PILE DYNAMICS  
 02/11/2002 - 02/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D C RICHARDSON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11767 UNIV OF MARYLAND - COLL PARK 5269**  
 MAGNETOHYDRODYNAMICS OF DUSTY PROTOSTELLAR DISKS  
 02/21/2002 - 02/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J M STONE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11786 UNIV OF MARYLAND - COLL PARK 5270**  
 BIOMASS BURNING EMISSIONS WORKSHOP  
 02/22/2002 - 02/28/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* E KASISCHKE  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11812 UNIV OF MARYLAND - COLL PARK 5271**  
 MISSION OPERATIONS AND DATA ANALYSIS (MO&DA PHASE) FOR THE  
 SOLAR WIND AND SUPRATHERMAL ION COMPOSITION  
 02/28/2002 - 03/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* G GLOECKLER  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11854 UNIV OF MARYLAND - COLL PARK 5272**  
 STEPS TOWARD AN ULTRAVIOLET/OPTICAL FIZEAU INTERFEROMETER  
 03/28/2002 - 03/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L MUNDY  
*Tech. Officer:* GSFC/K CARPENTER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11872 UNIV OF MARYLAND - COLL PARK 5273**  
 RESEARCH IN SOLAR RADIO ASTRONOMY AT SHORT WAVELENGTHS  
 03/15/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* M R KUNDU  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11939 UNIV OF MARYLAND - COLL PARK 5274**  
 ALTIMETRIC REMOTE SENSING OF THE AMAZON: CONTRIBUTION TO  
 SURFACE WATER DYNAMICS  
 03/28/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* C BIRKETT  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11952 UNIV OF MARYLAND - COLL PARK 5275**  
 EVALUATION OF SOFTWARE ENGINEERING METHODOLOGIES  
 04/08/2002 - 04/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D SMIDTS  
*Tech. Officer:* GSFC/L H ROSENBERG  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 11956 UNIV OF MARYLAND - COLL PARK 5276**  
 CHEMICAL TRACER TRANSPORT IN CRYSTAL-FACE: MESOSCALE FORE-  
 CASTS AND CLOUD MODEL ANALYSIS  
 03/29/2002 - 03/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* K PICKERING  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11994 UNIV OF MARYLAND - COLL PARK 5277**  
 COMPUTATIONAL FRAMEWORK FOR LWS.  
 05/30/2002 - 04/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* C C GOODRICH  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12011 UNIV OF MARYLAND - COLL PARK 5278**  
 "ELECTROMECHANICAL CHARACTERIZATION OF MEMS MATERIALS AT  
 CRYOGENIC TEMPERATURE"  
 04/16/2002 - 04/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* R GHODSSI  
*Tech. Officer:* GSFC/T T KING  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 12063 UNIV OF MARYLAND - COLL PARK 5279**  
 DATA ANALYSIS, SCIENTIFIC INTERPRETATION, AND MISSION OPERATIONS  
 FOR SOHO/CELIAS  
 05/07/2002 - 05/14/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* F M IPAVICH  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 12073 UNIV OF MARYLAND - COLL PARK 5280**  
 INVESTIGATION OF DEEP CUMULUS FORMATION DURING CRYSTAL  
 04/23/2002 - 04/14/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* A DESSLER  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12112 UNIV OF MARYLAND - COLL PARK 5281**  
 LARGE AREA LIDAR REMOTE SENSING OF VEGETATION HEIGHT, VERTI-  
 CIAL STRUCTURE, AND BIOMASS IN T  
 04/30/2002 - 04/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M HOFTON  
*Tech. Officer:* GSFC/S B LUTHCKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## NASA'S UNIVERSITY PROGRAM

## MARYLAND

<p><b>NAG 5 12130</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5282</b>  THE CONTRIBUTION OF SATELLITE RADAR ALTIMETRY TO THE DETERMINATION OF RIVER DISCHARGE AND LAKE/RES  04/30/2002 - 09/30/2002                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> C BIRKETT  <i>Tech. Officer:</i> GSFC/P R HOUSER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 12375</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5290</b>  MODELING OCEANIC AND COUPLED PROCESSES RELEVANT TO SEASONAL-TO- INTERANNUAL VARIABILITY  08/09/2002 - 07/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> R C WAJSOWICZ  <i>Tech. Officer:</i> GSFC/M RIENECKER  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 12136</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5283</b>  2002 ASEE-NASA SUMMER FACULTY FELLOWSHIP PROGRAM ( AERONAUTICS AND SPACE RESEARCH)  05/01/2002 - 04/30/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> M GAVRILAS  <i>Tech. Officer:</i> GSFC/M S BURRELL  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 12376</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5291</b>  ON THE ROLE OF OCEAN SALINITY VARIABILITY ON THE RECONDITIONING OF MAJOR WARM EVENTS IN THE TROPICS  07/15/2002 - 07/14/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> R MURTUGUDDE  <i>Tech. Officer:</i> GSFC/S HAKKINEN  <i>CASE Category:</i> 33 - OCEANOGRAPHY</p>
<p><b>NAG 5 12149</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5284</b>  BIOMASS BURNING OVER NORTH AMERICA  05/10/2002 - 05/15/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> I CSISZAR  <i>Tech. Officer:</i> GSFC/G GUTMAN  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 12383</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5292</b>  THE FORMATION MECHANISM OF HELIUM-RICH SUBDWARF B STARS  07/17/2002 - 06/30/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> T LANZ  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 12175</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5285</b>  INTEGRATED NUMERICAL SIMULATION OF THE SOLAR-TERRESTRIAL ENVIRONMENT FOR THE LIVING WITH A STAR  05/13/2002 - 05/14/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> C C GOODRICH  <i>Tech. Officer:</i> GSFC/J SPANN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 12414</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5293</b>  SUPPORT, CHARACTERIZATION, ASSESSMENT, PORTOTYPING AND DISTRIBUTION OF GLOBAL LAND PRODUCTS FROM THE  08/02/2002 - 07/31/2007                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> D ROY  <i>Tech. Officer:</i> GSFC/E J MASUOKA  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 12246</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5286</b>  STUDY OF THE CIRCULATIONS THAT CONNECT THE TROPICAL, SUBTROPICAL, AND SUBPOLAR REGIONS IN THE PACIFIC  06/20/2002 - 06/14/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> A BUSALACCHI  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 12417</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5294</b>  DYNAMICAL DIAGNOSIS OF THE NSIPP ATMOSPHERIC SIMULATIONS AND PREDICTIONS  08/01/2002 - 07/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> S NIGAM  <i>Tech. Officer:</i> GSFC/M RIENECKER  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 12276</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5287</b>  MICROPHYSICS AND FLUID MODELING OF MAGNETOSPHERIC DYNAMICS  06/18/2002 - 06/30/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> J DRAKE  <i>Tech. Officer:</i> GSFC/M HESSE  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 5 12464</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5295</b>  METHODOLOGIES AND TOOLS FOR SYNTHESIS AND MANAGEMENT OF NASA GLOBAL PRECIPITATION MEASUREMENT (GPM)  08/21/2002 - 09/30/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> M AUSTIN  <i>Tech. Officer:</i> GSFC/D EVERETT  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 12337</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5288</b>  EMPIRICAL ESTIMATES OF PROTEROZOIC CO2 LEVELS BY IN-SITU ION MICROPROBE CARBON ISOTOPE ANALYSIS OF  07/15/2002 - 06/30/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> A KAUFMAN  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 12480</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5296</b>  DBA AND DAB WHITE DWARFS (FUSE 2001)  08/21/2002 - 08/31/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> T LANZ  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 12350</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5289</b>  EXPERIMENTAL INVESTIGATION OF PHOTOCHEMICAL SULFUR ISOTOPE EFFECTS: APPLICATIONS TO EARTH'S EARLY HISTORY  07/03/2002 - 06/30/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> J FARQUHAR  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 12494</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5297</b>  ESTABLISHING A SOFTWARE METRICS CAPABILITY OF NASA PAPANALTAO PROJECTS  08/22/2002 - 10/14/2002                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> V BASILI  <i>Tech. Officer:</i> GSFC/K MCGILL  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>

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**NAG 5 12499 UNIV OF MARYLAND - COLL PARK 5298**  
 INVESTIGATION OF SURFACE CONTAMINATION CHEMISTRY O N OPTICAL  
 COMPONENT SURFACE COATINGS  
 09/09/2002 - 09/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A CHRISTOU  
*Tech. Officer:* GSFC/J ABSHIRE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 12550 UNIV OF MARYLAND - COLL PARK 5299**  
 OBSERVATION OF CALCIUM AND SEARCH FOR NEW SPECIES IN MERCU-  
 RY'S ATMOSPHERE  
 09/06/2002 - 08/14/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* R KILLEN  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12566 UNIV OF MARYLAND - COLL PARK 5300**  
 ORIGINS OF THE ATMOSPHERES OF MERCURY AND THE MOON  
 09/11/2002 - 05/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* R M KILLEN  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1440 UNIV OF MARYLAND - COLL PARK 5301**  
 SEARCH FOR SPIN-MASS INTERACTION WITH A SUPER- CONDUCTING  
 DIFFERENTIAL ANGULAR ACCELEROMETER  
 02/02/1998 - 12/31/2002 FY02: \$0 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 - COLL PARK 5302**  
 STUDIES OF RADIO JETS AND THE NARROW LINE REGIONS OF ACTIVE  
 GALAXIES WITH THE ADVANCED X-RAY ASTROPH  
 01/16/2001 - 09/30/2002 FY02: \$0 Total: \$124,000  
*Prin. Invest.:* A S WILSON  
*Tech. Officer:* MSFC/M SMITH  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1762 UNIV OF MARYLAND - COLL PARK 5303**  
 THEORY OF PHASE TRANSITIONS AND SIMULATIONS IN USPERFLUID  
 HELIUM OF COSMOLOGICAL PHENOMENA  
 04/26/2001 - 02/01/2005 FY02: \$0 Total: \$84,166  
*Prin. Invest.:* R FERRELL  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1180 UNIV OF MARYLAND - COLL PARK 5304**  
 GRANT DEVELOPEMENT/TESTING OF MECH COUNTERSPRESSURE SPACE  
 SUIT GLOVE  
 12/14/1999 - 12/31/2002 FY02: \$0 Total: \$293,000  
*Prin. Invest.:* D L AKIN  
*Tech. Officer:* JSC/B WOOLFORD  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1290 UNIV OF MARYLAND - COLL PARK 5305**  
 RESEARCH IN SPACE & TELEROBOTICS  
 04/04/2001 - 03/31/2002 FY02: \$0 Total: \$500,000  
*Prin. Invest.:* D AKIN  
*Tech. Officer:* JSC/C CULBERT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1920 UNIV OF MARYLAND - COLL PARK 5306**  
 COMPUTER SIMULATIONS OF THE VARIABLE SPECIFIC IMPU LSE MAGNE-  
 TOPLASMA ROCKET  
 06/23/2000 - 12/31/2001 FY02: \$0 Total: \$130,000  
*Prin. Invest.:* R SAGDEEV  
*Tech. Officer:* JSC/F R CHANG-DIAZ  
*CASE Category:* 13 - PHYSICS

**NAG13 02009 UNIV OF MARYLAND - COLL PARK 5307**  
 THE USE OF SATELLITE OCEAN COLOR DATA FOR COASTAL WATER  
 QUALITY MONITORING  
 12/10/2001 - 09/23/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* A SUBRAMANIAM  
*Tech. Officer:* SSC/G FLETCHERT  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG13 02010 UNIV OF MARYLAND - COLL PARK 5308**  
 REMOTE SENSING APPLICATIONS TO FOREST RESOURCE ASS ESSMENT  
 12/10/2001 - 09/16/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* S J GOETZ  
*Tech. Officer:* SSC/T M STANLEY  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 98001 UNIV OF MARYLAND - COLL PARK 5309**  
 ENHANCING EARTH SYSTEM SCIENCES USING COMMERCIAL TERRES-  
 TRIAL REMOTE SENSING SYSTEMS  
 11/03/1997 - 02/24/2003 FY02: \$0 Total: \$797,015  
*Prin. Invest.:* S GOWARD  
*Tech. Officer:* SSC/J JENNER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99011 UNIV OF MARYLAND - COLL PARK 5310**  
 MID ATLANTIC RESAC CONSORTIUM SAME  
 03/01/1999 - 02/28/2003 FY02: \$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 - COLL PARK 5311**  
 R & D TO SUPPORT GSFC'S SIMBIOS PROJECT  
 12/18/2000 - 11/30/2002 FY02: \$0 Total: \$260,821  
*Prin. Invest.:* A SUBRAMANIAM  
*Tech. Officer:* GSFC/C R MCCLAIN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAS 5 31365 UNIV OF MARYLAND - COLL PARK 5312**  
 EOS EXECUTION PHASE  
 01/02/1992 - 06/14/2003 FY02: \$0 Total: \$4,464,390  
*Prin. Invest.:* C JUSTICE  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 5 96060 UNIV OF MARYLAND - COLL PARK 5313**  
 DEFINITION PHASE ACTIVITIES ASSOCIATED WITH THE MODIS INSTRU-  
 MENT OF THE EOS  
 07/25/1996 - 06/14/2003 FY02: \$0 Total: \$1,891,000  
*Prin. Invest.:* J TOWNSHEND  
*Tech. Officer:* GSFC/D TOLL  
*CASE Category:* 11 - ASTRONOMY

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**NAS 5 96062**                    **UNIV OF MARYLAND - COLL PARK**                    **5314**  
 DEFINITION PHASE ACTIVITIES ASSOCIATED WITH MODIS INSTRUMENT OF  
 THE EOS  
 07/02/1996 - 06/14/2003                    FY02: \$0                    Total: \$2,096,562  
*Prin. Invest.:* E VERMONTE  
*Tech. Officer:* GSFC/D TOLL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 97160**                    **UNIV OF MARYLAND - COLL PARK**                    **5315**  
 VEGETATION CANOPY LIDAR MISSION FOR ESSP  
 05/15/1997 - 09/30/2002                    FY02: \$0                    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 - COLL PARK**                    **5316**  
 AWARD - SAMPEX MISSION SUPPORT  
 08/27/1999 - 08/26/2003                    FY02: \$0                    Total: \$270,000  
*Prin. Invest.:* W FOURNEY  
*Tech. Officer:* GSFC/T STENGLE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NASW 00004**                    **UNIV OF MARYLAND - COLL PARK**                    **5317**  
 MESSENGER DISCOVERY PROJECTS (PI'S MANAGE PROJECT ORBIT &  
 EXPLOR PLANET MERCURY PHASE B  
 03/14/2000 - 02/29/2004                    FY02: \$0                    Total: \$14,244,398  
*Prin. Invest.:* M F A'HEARN  
*Tech. Officer:* JPL/D JARRETT  
*CASE Category:* 11 - ASTRONOMY

**NASW 00028**                    **UNIV OF MARYLAND - COLL PARK**                    **5318**  
 JOINT US/RUSSIAN RESEARCH SPACE SCIENCES (JURRISS) PROGRAM  
 SUPPORT SERVICE/OPTION DATE 8/5/2002  
 12/06/2000 - 08/05/2002                    FY02: \$0                    Total: \$219,800  
*Prin. Invest.:* L MUKHIN, R SAGDEEV  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 75 - POLITICAL SCIENCE

**NASW 02011**                    **UNIV OF MARYLAND - COLL PARK**                    **5319**  
 KTR WILL PROVIDE SOFTWARE ENHANCEMENTS, DEVELOP TRNG MATE-  
 RIALS & PRESENT WORKSHOPS ON SOFTWARE  
 03/29/2002 - 09/30/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* A MOSLEH  
*Tech. Officer:* HQ/P BOELINER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1129**                    **UNIV OF MARYLAND - COLL PARK**                    **5320**  
 WAVERIDER-BASED REENTRY CONFIGURATIONS FOR THE SHARP FLIGHT  
 EXPERIMENT  
 07/13/1999 - 12/14/2001                    FY02: \$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 - COLL PARK**                    **5321**  
 EVALUATION OF METHODOLOGY FOR TESTING AND ANALYSIS FOR AD-  
 VANCED ROTOR SYSTEMS  
 12/01/1999 - 03/31/2003                    FY02: \$0                    Total: \$296,025  
*Prin. Invest.:* F HARRIS, I CHROPA, G PRICE  
*Tech. Officer:* ARC/W WARBRODT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1303**                    **UNIV OF MARYLAND - COLL PARK**                    **5322**  
 INTERSTELLAR ICES AND INTERSTELLAR POLYCYCLIC AROMATIC HYDRO-  
 CARBON ION NANOCCLUSERS  
 02/06/2002 - 01/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M GUDIPATI  
*Tech. Officer:* ARC/L ALLAMANDOLA  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5348**                    **UNIV OF MARYLAND - COLL PARK**                    **5323**  
 THE EVOLUTION OF DUST IN THE MULTIPHASE INTERSTELLAR MEDIUM  
 09/01/1999 - 09/14/2001                    FY02: \$0                    Total: \$33,199  
*Prin. Invest.:* M G WOLFIRE  
*Tech. Officer:* ARC/D J HOLLENBACH, ARC/R E YOUNG  
*CASE Category:* 11 - ASTRONOMY

**NCC 3 528**                    **UNIV OF MARYLAND - COLL PARK**                    **5324**  
 CENTER FOR SATELLITE AND HYBRID COMMUNICATION NETWORKS  
 01/30/1997 - 08/31/2002                    FY02: \$0                    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 - COLL PARK**                    **5325**  
 STUDIES ON THE BEHAVIOR OF HIGHLY PRE-HEATED AIR F LAMES IN  
 MICROGRAVITY  
 03/11/1999 - 01/11/2003                    FY02: \$0                    Total: \$273,500  
*Prin. Invest.:* A K GUPTA  
*Tech. Officer:* GRC/D STOCKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 783**                    **UNIV OF MARYLAND - COLL PARK**                    **5326**  
 POOL BOILING HEAT TRANSFER MECHANISMS IN MICROGRAVITY AND  
 PARTIAL GRAVITY  
 03/13/2000 - 11/30/2003                    FY02: \$0                    Total: \$195,000  
*Prin. Invest.:* J KIM  
*Tech. Officer:* GRC/J B MCQUILLEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 804**                    **UNIV OF MARYLAND - COLL PARK**                    **5327**  
 FLAMMABILITY DIAGRAMS OF COMBUSTIBLE MATERIALS IN MICROGRAV-  
 ITY  
 05/25/2000 - 04/30/2004                    FY02: \$0                    Total: \$129,092  
*Prin. Invest.:* D L  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 919**                    **UNIV OF MARYLAND - COLL PARK**                    **5328**  
 TRANSITION FROM IGNITION TO FLAME GROWTH UNDER EXTENSIVE  
 RADIATION IN D-D  
 09/27/2001 - 09/30/2005                    FY02: \$0                    Total: \$69,300  
*Prin. Invest.:* T KASHIWAGI  
*Tech. Officer:* GRC/S OLSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 989**                    **UNIV OF MARYLAND - COLL PARK**                    **5329**  
 MARYLAND-MICHIGAN-WASHINGTON THIRD GENERATION REUSABLE  
 LAUNCH TECHNOLOGY INST (URETI)  
 08/19/2002 - 08/18/2007                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D LEWIS  
*Tech. Officer:* GRC/M HYATT  
*CASE Category:* 41 - AERONAUTICAL ENGR

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**NCC 5 180**                    **UNIV OF MARYLAND - COLL PARK**                    **5330**  
 THIS GRANT PROVIDES POST-DOC SUPPORT, FELLOWSHIPS, LABORATORY FOR HIGH ENERGY ASTROPHYSICS  
 02/06/1997 - 03/31/2002                    FY02: \$0                    Total: \$8,219,607  
*Prin. Invest.:* J D TRASCO  
*Tech. Officer:* GSFC/A HARDING  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 190**                    **UNIV OF MARYLAND - COLL PARK**                    **5331**  
 SUPPORT OF THE EARTH SYSTEM SCIENCE INTERDISCIPLIN  
 04/04/1997 - 03/31/2002                    FY02: \$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 - COLL PARK**                    **5332**  
 COOPERATIVE RESEARCH AGREEMENT FOR SPACE LASER RES MD, A. JAMES CLARK SCHOOL OF ENGINEERING & NASA/G  
 09/18/1997 - 04/30/2002                    FY02: \$0                    Total: \$2,514,055  
*Prin. Invest.:* D CHRISTOU  
*Tech. Officer:* GSFC/R AFZAL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 243**                    **UNIV OF MARYLAND - COLL PARK**                    **5333**  
 RANGER TELEROBOTIC FLIGHT EXPERIMENT  
 11/03/1997 - 09/30/2002                    FY02: \$0                    Total: \$9,611,377  
*Prin. Invest.:* D AKIN  
*Tech. Officer:* GSFC/J PARRISH  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 300**                    **UNIV OF MARYLAND - COLL PARK**                    **5334**  
 A LANDCOVER EARTH SCIENCE INFORMATION PARTNERSHIP  
 04/21/1998 - 12/31/2002                    FY02: \$0                    Total: \$5,092,162  
*Prin. Invest.:* J TOWNSENDE  
*Tech. Officer:* GSFC/M MAIDEN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 353**                    **UNIV OF MARYLAND - COLL PARK**                    **5335**  
 FUNDS ARE PROVIDED FOR THE GRANT PROPOSAL BY THE UNIVERSITY RESEARCH FOUNDATION FOR ENVIRONET TO  
 08/04/1998 - 12/31/2001                    FY02: \$0                    Total: \$298,556  
*Prin. Invest.:* C F MARTIN  
*Tech. Officer:* GSFC/H PARK  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 372**                    **UNIV OF MARYLAND - COLL PARK**                    **5336**  
 COOPERATIVE RESEARCH IN SPACE SCIENCE WITH THE UNIVERSITY OF MARYLAND  
 12/22/1998 - 12/31/2001                    FY02: \$59,145                    Total: \$1,787,208  
*Prin. Invest.:* J D TRASCO  
*Tech. Officer:* GSFC/T KOSTIUK  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 374**                    **UNIV OF MARYLAND - COLL PARK**                    **5337**  
 EARTH SCIENCE INTER-DISCIPLINARY CENTER  
 01/20/1999 - 10/31/2002                    FY02: \$0                    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 - COLL PARK**                    **5338**  
 PROTOTYPE IMPLEMENTATION OF A RESEARCH ENVIRONMENT FOR ADVANCED LANDSAT MONITORING (REALM)  
 05/17/1999 - 10/31/2002                    FY02: \$0                    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 - COLL PARK**                    **5339**  
 RANGER TELEROBOTICS FLIGHT EXPERIMENT  
 08/25/1999 - 08/30/2001                    FY02: \$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 - COLL PARK**                    **5340**  
 A STUDY OF THE DEVELOPMENT OF REMOTE SENSING ALGORITHMS  
 02/08/2000 - 12/31/2002                    FY02: \$0                    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 - COLL PARK**                    **5341**  
 EO-1 VALIDATION AND EVALUATION FOR AGRICULTURAL MONITORING  
 02/29/2000 - 09/30/2003                    FY02: \$24,211                    Total: \$266,494  
*Prin. Invest.:* S LIANG  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 464**                    **UNIV OF MARYLAND - COLL PARK**                    **5342**  
 EVALUATION OF SOFTWARE ENGINEERING METHODOLOGIES  
 02/29/2000 - 11/14/2002                    FY02: \$0                    Total: \$633,539  
*Prin. Invest.:* D R BASILI  
*Tech. Officer:* GSFC/D E JAMISON  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 5 552**                    **UNIV OF MARYLAND - COLL PARK**                    **5343**  
 SUMMER INST ON ATMOSPHERIC AND HYDROSPHERIC SCIENCES  
 04/24/2001 - 04/30/2004                    FY02: \$0                    Total: \$114,929  
*Prin. Invest.:* F BAER  
*Tech. Officer:* GSFC/R HARTLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 609**                    **UNIV OF MARYLAND - COLL PARK**                    **5344**  
 COOPERATIVE RESEARCH IN SPACE SCIENCE WITH THE UNIV MARYLAND  
 12/19/2001 - 12/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J TRASCO  
*Tech. Officer:* GSFC/T KOSTIUK  
*CASE Category:* 13 - PHYSICS

**NCC 5 640**                    **UNIV OF MARYLAND - COLL PARK**                    **5345**  
 CENTER FOR HIGH ENERGY ASTROPHYSICS RESEARCH (CHEAR)  
 03/27/2002 - 03/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J TRASCO  
*Tech. Officer:* GSFC/A HARDING  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 648**                    **UNIV OF MARYLAND - COLL PARK**                    **5346**  
 VALIDATION OF LANDSAT 7 LONG TERM ACQUISITION PLAN  
 06/19/2002 - 06/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* S N GOWARD  
*Tech. Officer:* GSFC/D L WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

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<p><b>NCC 5 650</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5347</b>            RAPID RESPONSE PATHFINDER FOR NATURAL HAZARDS            08/02/2002 - 07/31/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> R A SOHLBERG  <i>Tech. Officer:</i> GSFC/E J MASUOKA  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NGT 5 116</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5355</b>            INVESTIGATION OF LIBRATION ORBITS IN THE EARTH-MOO N SYSTEM            (STUDENT): RAQUEL JARABEK            06/04/2001 - 06/30/2004                    FY02: \$0                    Total: \$22,000  <i>Prin. Invest.:</i> D SHAPIRO  <i>Tech. Officer:</i> GSFC/M S BURRELL  <i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR</p>
<p><b>NCC 8 235</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5348</b>            PROMOT COMMERICALLY FUNDED RESCH &amp; TECH DEV IN THE FIELD OF            SATELLITE &amp; HYBRID COMMUNICATIONS NETWORK            01/14/2002 - 10/31/2002                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> J BARAS  <i>Tech. Officer:</i> MSFC/S LAMBING  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NGT 5 30142</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5356</b>            THE EFFECT OF WARM TROPICAL ATLANTIC SST ON EARLY SEASON            CARIBBEAN RAIN-FALL            08/27/1998 - 08/31/2001                    FY02: \$0                    Total: \$44,000  <i>Prin. Invest.:</i> A VERNEKAR, TAYLOR  <i>Tech. Officer:</i> GSFC/M Y WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NCC 9 147</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5349</b>            MICROBIAL RESISTANCE TO SOLAR RADIATION            12/10/2001 - 11/30/2002                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> J DIRUGGIERO, J M DAVILA, F T ROBB  <i>Tech. Officer:</i> JSC/D RISIN  <i>CASE Category:</i> 54 - ENVIRONMENTAL BIOLOGY</p>	<p><b>NGT 5 30196</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5357</b>            TORNADOES: COHERENT FLOW STRUCTURES IN ATMOSPHERIC TURBU-            LENCE            08/18/1999 - 02/28/2003                    FY02: \$0                    Total: \$66,000  <i>Prin. Invest.:</i> F BAER, NAWRI  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NGT 2 52273</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5350</b>            CENTER FOR ROTORCRAFT EDUCATION &amp; RESEARCH            01/09/2001 - 12/31/2002                    FY02: \$0                    Total: \$916,829  <i>Prin. Invest.:</i> CHOPRA  <i>Tech. Officer:</i> ARC/Y YU, ARC/A  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NGT 5 30377</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5358</b>            ANALYSIS OF MOPITT DATA FOR INVESTIGATION OF BOREAL FOREST FIRE            EMISSIONS/EDWARD J. HYER            08/13/2001 - 08/31/2004                    FY02: \$0                    Total: \$21,989  <i>Prin. Invest.:</i> E KASISCHKE  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NGT 3 52367</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5351</b>            SYNTHESIS OF MOLECULARLY DISPERSED CERAMIC POLYMER NANO-            COMPOSITES            06/14/2000 - 06/30/2003                    FY02: \$0                    Total: \$44,000  <i>Prin. Invest.:</i> D C WILSON JR  <i>Tech. Officer:</i> GRC/F MONTEGANI  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NGT 5 30429</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5359</b>            MODELING AND MONITORING THE IMPACT OF LAND DEGRADATION ON            PRIMARY PRO- DUCTIVITY IN SOUTHERN AFRIC            08/15/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> S D PRINCE  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NGT 5 99</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5352</b>            ESTIMATION OF TROPICAL FOREST ABOVEGROUND USING LARGE FOOT-            PRINT LIDAR            08/20/1999 - 08/31/2002                    FY02: \$0                    Total: \$66,000  <i>Prin. Invest.:</i> R DUBAYAH, J DRAKE  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NGT 5 30441</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5360</b>            THE SPATIAL AND TEMPORAL DISTRIBUTION OF BIOMASS BURNING IN            SOUTHERN AFRICA            08/21/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> C JUSTICE  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NGT 5 100</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5353</b>            GLOBAL CLIMATE CHANGE AND CHOLERA: MODELING OF CHO LERA            OCCURRENCE IN SELECTED COASTAL AREAS USING S            08/23/1999 - 05/31/2003                    FY02: \$0                    Total: \$66,000  <i>Prin. Invest.:</i> E RUSSEK-COHEN  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NGT 5 30450</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5361</b>            A NOVEL APPROACH TOWARDS GLOBAL AEROSOL CLIMATOLOG Y. STU-            DENT: HONGQING LIU            08/19/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> R PINKER  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NGT 5 107</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5354</b>            FEASIBILITY OF ATMOSPHERIC PENETRATION FOR SATELLITE FORMA-            TION FLYING EXPERIMENTS/STUDENT: JOS SCHU            06/07/2000 - 06/30/2003                    FY02: \$0                    Total: \$44,000  <i>Prin. Invest.:</i> D PINES  <i>Tech. Officer:</i> GSFC/G SOFFEN  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NGT 5 30459</b>                    <b>UNIV OF MARYLAND - COLL PARK</b>                    <b>5362</b>            IMPACTS OF LAND COVER CHANGE ON WILDBEEST MIGRATION AND            ABUNDANCE IN THESERENGETI-MARA REGION (            08/21/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> R DEFRIES  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>

## MARYLAND

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**NGT 5 50217**      **UNIV OF MARYLAND - COLL PARK**      **5363**  
 CONVECTIVE EFFECTS ON TROPOSPHERIC OZONE CHEMISTRY STUDIED  
 WITH A COUPLED CLOUD/CHEMISTRY MOD  
 09/15/1998 - 08/31/2001      FY02: \$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**      **5364**  
 RESEARCH PARTICIPATION IN AIRBORNE OCEANOGRAPHIC LIDAR ON  
 LONG RANGE MISSIONS  
 03/19/2001 - 03/31/2003      FY02: \$0      Total: \$27,623  
*Prin. Invest.:* D R LEVIN  
*Tech. Officer:* GSFC/W B KRABILL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9243**      **UNIV OF MARYLAND - EASTERN SHORE**      **5365**  
 PRE-COLL ACTIVITIES FOR ENHANCING MINORITY PARTICIPATION IN  
 ENGINEERING.  
 03/13/2000 - 03/14/2003      FY02: \$0      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**      **5366**  
 MATHEMATICS, ENGINEERING, SCIENCE ENRICHMENT PRE- COLL PRO-  
 GRAM  
 11/28/2000 - 11/30/2002      FY02: \$0      Total: \$50,000  
*Prin. Invest.:* T DUBE  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11861**      **UNIV OF MARYLAND - EASTERN SHORE**      **5367**  
 UMES/NASA COLLABORATIVE RESEARCH IN COMPUTATIONAL SCIENCES  
 03/14/2002 - 03/14/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* I K DABIPI  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11897**      **UNIV OF MARYLAND - EASTERN SHORE**      **5368**  
 UMES STUDENT INTERNSHIPS AT NASA WOLLOPS: AN OUTREACH PRO-  
 POSAL  
 03/20/2002 - 03/14/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* I K DABIPI  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 668**      **UNIV OF MARYLAND - EASTERN SHORE**      **5369**  
 EASTERN SHORE MATHEMATICS TEACHER EDUCATION PROJECT  
 08/22/2002 - 08/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* D SEATON  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 5339**      **UNIV OF MARYLAND BALTIMORE**      **5370**  
 ASSIST GSFC CODE 972 DURING CAMEX-4 PROJECT A  
 07/12/2001 - 09/30/2001      FY02: \$0      Total: \$9,000  
*Prin. Invest.:* W MCMILLAN  
*Tech. Officer:* WFF/F SCHMIDLIN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1573**      **UNIV OF MARYLAND BALTIMORE**      **5371**  
 IONS AND PROTEIN ASSOCIATION: AW AND PROTEIN CRYSTALS  
 01/19/1999 - 11/30/2002      FY02: \$0      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**      **5372**  
 IDENTIFICATION FOR RISK FACTORS FOR CHILDHOOD ASTHMA  
 03/22/2001 - 12/31/2002      FY02: \$0      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**      **5373**  
 A CLIMATOLOGY OF TROPOSPHERIC CO OVER THE CENTRAL AND  
 SOUTHEASTERN UNITED STATES AND THE SOUTHWESTERN  
 03/12/1998 - 03/11/2002      FY02: \$0      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**      **5374**  
 VALIDATION OF MOPITT COLUMN & PROFILE CO FROM SPAC EBORNE,  
 AIRBORNE, & GROUND-BASED INTERFEROMETERS  
 10/14/1997 - 09/30/2002      FY02: \$0      Total: \$317,893  
*Prin. Invest.:* W MCMILLAN  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICALSCIENCE, OTHER

**NAG 5 6675**      **UNIV OF MARYLAND BALTIMORE COUNTY**      **5375**  
 VALIDATION OF CLOUD OPTICAL DEPTHS RETRIEVED FROM EOS/MODIS  
 DATA  
 12/01/1997 - 09/30/2002      FY02: \$0      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**      **5376**  
 ASSIMILATION OF WIND OBSERVATIONS FROM THE HIGH RESOLUTION  
 DOPPLER IMAGER  
 12/05/1997 - 11/30/2001      FY02: \$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**      **5377**  
 A STUDY OF UNCERTAINTIES FOR MODIS CLOUD RETRIEVALS OF  
 OPTICAL THICKNESS AND EFFECTIVE RADIUS  
 02/06/1998 - 12/14/2001      FY02: \$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**      **5378**  
 X-RAY SPECTROSCOPY OF ACTIVE GALACTIC NUCLEI: (LT SA)  
 05/15/1998 - 06/30/2003      FY02: \$0      Total: \$570,610  
*Prin. Invest.:* T J TURNER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY



## NASA'S UNIVERSITY PROGRAM

## MARYLAND

**NAG 5 7563 UNIV OF MARYLAND BALTIMORE COUNTY 5379**  
 MODELING OF SHORTWAVE RADIATION FIELDS USING ATMOSPHERIC  
 RADIATION MEASUREMENTS (ARM) AND LANDSAT D  
 06/29/1998 - 06/30/2001 FY02: \$0 Total: \$275,720  
*Prin. Invest.:* A MARSHAK  
*Tech. Officer:* GSFC/W WISCOMBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7909 UNIV OF MARYLAND BALTIMORE COUNTY 5380**  
 TRMM PRECIPITATION RADAR: DEVELOPMENT OF A RAIN RETRIEVAL  
 ALGORITHM USING GROUND VALIDATION DATA  
 12/08/1998 - 12/14/2002 FY02: \$0 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 5381**  
 USE OF DATA FROM TRMM FIELD CAMPAIGNS IN IMPROVED INITIALIZA-  
 TION AND VALIDATION OF HIGH RESOLUTION  
 03/03/1999 - 03/14/2002 FY02: \$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 5382**  
 VARIATIONAL ASSIMILATION OF TRMM-DERIVED PRECIPITATION OBSER-  
 VATIONS FOR THE IMPROVEMENT OF NUMERICAL  
 04/14/1999 - 04/14/2001 FY02: \$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 5383**  
 INNOVATIVE ANALYSIS OF GRAVITY MAPPING MISSION DATA  
 02/10/2000 - 12/31/2001 FY02: \$0 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 5384**  
 UNDERSTANDING TON S180? (ADP - 99)  
 03/31/2000 - 06/30/2001 FY02: \$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 5385**  
 LABORATORY QUANTITATIVE SPECTROSCOPY OF MOLECULES OF ATMO-  
 SPHERIC RELEVANCE  
 05/11/2000 - 12/31/2002 FY02: \$0 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 5386**  
 A COMPARATIVE STUDY OF FOREST MAPPING METHODS AND ALGO-  
 RITHMS: TOWARDS OPTIMAL SOLUTIONS FOR OPERATIO  
 06/12/2000 - 06/30/2003 FY02: \$0 Total: \$124,699  
*Prin. Invest.:* Y SOHN  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9698 UNIV OF MARYLAND BALTIMORE COUNTY 5387**  
 IMPROVEMENT OF CONVECTIVE/STRATIFORM SEPARATION & LATENT  
 HEATING PROFILE ESTIMATION FROM TRMM  
 07/21/2000 - 06/30/2003 FY02: \$0 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 5388**  
 ORGANIZATION, STRUCTURE, AND EVOLUTION OF TROPICAL CONVEC-  
 TIONS IN SOUTH CHINA SEA MONSOON AND THEIR  
 07/21/2000 - 05/31/2003 FY02: \$0 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 5389**  
 US INDIA COLLABORATIVE RESEARCH ON MONSOON PREDICTABILITY  
 06/16/2000 - 08/31/2003 FY02: \$0 Total: \$47,712  
*Prin. Invest.:* A MEHTA  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9718 UNIV OF MARYLAND BALTIMORE COUNTY 5390**  
 INVESTIGATIONS OF MARITIME & CONTINENTAL TROPICAL CONVECTIVE  
 SYSTEMS USING DATA FROM TRMM FIELD E  
 06/19/2000 - 06/30/2003 FY02: \$0 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 5391**  
 CLIMATOLOGY AND EVOLUTION OF CONVECTIVE SYSTEMS COMBINING  
 SURFACE RADAR & GEOSTATIONARY INFRARED SA  
 07/21/2000 - 07/31/2003 FY02: \$0 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 5392**  
 MYERHOFF SCHOLARSHIP PROGRAM  
 09/08/2000 - 09/14/2005 FY02: \$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 5393**  
 A SPECTRAL STUDY OF A NEW CLASS OF RADIO QUASARS  
 09/20/2000 - 03/31/2002 FY02: \$0 Total: \$21,878  
*Prin. Invest.:* E S PERLMAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9997 UNIV OF MARYLAND BALTIMORE COUNTY 5394**  
 THE PHYSICS OF EXTRAGALACTIC RADIO/OPTICAL/X-RAY JETS  
 09/20/2000 - 03/14/2005 FY02: \$0 Total: \$101,603  
*Prin. Invest.:* E S PERLMAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

## MARYLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10024 UNIV OF MARYLAND BALTIMORE COUNTY 5395**  
 DIAGNOSTICS OF THE ISM IN INTERMEDIATE REDSHIFT GALAXIES USING  
 BACKGROUND BL LACS  
 09/27/2000 - 09/30/2002 FY02: \$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 5396**  
 THE X-RAY TEMPERATURE FUNCTION AND STRUCTURE OF CLUSTERS AT  
 Z=0.6-1  
 11/07/2000 - 11/14/2002 FY02: \$0 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 5397**  
 HIGH RESOLUTION X-RAY PROPERTIES OF BL LACS: AN XMM SURVEY  
 01/26/2001 - 01/31/2003 FY02: \$0 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 5398**  
 QUANTITATIVE INFRARED SPECTROSCOPY FOR STUDIES OF BROWN  
 DWARFS & EXTRASOLAR GIANT PLANETS  
 12/28/2000 - 12/31/2003 FY02: \$0 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 5399**  
 VALIDATION OF CLOUD MODEL MICROPHYSICS & RAIN RATE ESTIMATION  
 WITH HIGH-RESOLUTION MICROWAVE OBSERVA  
 02/01/2001 - 09/30/2002 FY02: \$0 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 5400**  
 CALIBRATION & NAVIGATION OF RAW INSAT IMAGERY & APPLICATION FOR  
 CLIMATE VARIABILITY ANALYSES  
 04/04/2001 - 04/14/2004 FY02: \$0 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 5401**  
 STUDY OF SOLAR AND SPECTRAL GRADIANCE VARIATIONS BASED ON  
 SOHO/VIRGO AND MDI  
 05/15/2001 - 11/30/2002 FY02: \$0 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 5402**  
 DERIVING MICROPHYSICAL CLOUD PROFILES USING AIR-BORNE ACTIVE &  
 WIDEBAND PASSIVE MICROWAVE OBSERVA  
 06/06/2001 - 06/14/2004 FY02: \$0 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 5403**  
 SCATTERING & ABSORPTION PROPERTIES OF NONSPHERICAL  
 /INHOMOGENEOUS AEROSOLS& ICE CRYSTALS:  
 06/22/2001 - 08/31/2001 FY02: -\$30,000 Total: \$0  
*Prin. Invest.:* P YANG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11092 UNIV OF MARYLAND BALTIMORE COUNTY 5404**  
 UNDERSTANDING ARK 564 (ADP 2000)  
 07/09/2001 - 09/30/2003 FY02: \$0 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 5405**  
 STUDIES OF THE UPPER ATMOSPHERIC INNER CORE REGION OF HURRI-  
 CANES USING THENASA ER-2 DROPWINDSONDE  
 07/26/2001 - 07/31/2002 FY02: \$0 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 5406**  
 MARS WATER CONSTRAINTS FROM VOLCANIC LANDFORM TOPO GRAPHY  
 07/26/2001 - 07/31/2002 FY02: \$0 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 5407**  
 BBAERI AIRS OCEAN VALIDATION EXPERIMENT: BOAVE" AQUA-0056-0064  
 08/01/2001 - 08/31/2004 FY02: \$0 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 5408**  
 CONSTRAINTS ON WATER ON MARS FROM EXPLOSIVE VOLCAN ISM  
 LANDFORM TOPOGRAPHY  
 09/05/2001 - 09/30/2001 FY02: \$0 Total: \$13,000  
*Prin. Invest.:* S SAKIMOTO  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11206 UNIV OF MARYLAND BALTIMORE COUNTY 5409**  
 MODELING OF SHORTWAVE RADIATION FIELDS USING ATMOSPHERIC  
 RADIATION MEASUREMENTS (ARM) & LANDSAT DAT  
 08/14/2001 - 06/30/2002 FY02: \$0 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 5410**  
 OBSERVATIONALLY-BASED PROCESS EVALUATION OF MODEL TRANS-  
 PORT: IMPROVING ATMOSPHERIC MODELS AND THE G  
 08/16/2001 - 08/14/2004 FY02: \$0 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 5411**  
 MICROPHYSICAL PROPERTIES OF CRYSTALLINE PSC PARTICLES  
 DERIVED FROM AIRBORNE LADAR MEASUREMENTS  
 08/22/2001 - 08/31/2004 FY02: \$0 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 5412**  
 STATISTICAL INVESTIGATIONS OF SUBGRID SCALE VARIABILITY IN THE  
 UT/LS  
 08/17/2001 - 08/31/2004 FY02: \$0 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 5413**  
 VARIATIONS IN THE SOLAR RADIATION ENERGY OUTPUT ON TIME SCALES  
 OF YEARS AND THE SOLAR CYCLE  
 09/05/2001 - 02/14/2003 FY02: \$0 Total: \$20,378  
*Prin. Invest.:* J PAP  
*Tech. Officer:* GSFC/C JACKSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11373 UNIV OF MARYLAND BALTIMORE COUNTY 5414**  
 A NEW "CLOUD MODE" FOR THE AERONET  
 11/01/2001 - 10/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* A MARSHAK  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11598 UNIV OF MARYLAND BALTIMORE COUNTY 5415**  
 REMOTE SENSING OF THE RADIATIVE AND MICROPHYSICAL PROPERTIES  
 OF CIRRUS CLOUDS DURING CRYSTAL-FACE W  
 01/23/2002 - 01/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* S PLATNICK  
*Tech. Officer:* GSFC/M KING  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11601 UNIV OF MARYLAND BALTIMORE COUNTY 5416**  
 ANALYSIS AND VALIDATION OF THE UARS/ACRIM II SOLAR TOTAL IRRADI-  
 ANCE DATA  
 01/15/2002 - 01/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J M PAP  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11624 UNIV OF MARYLAND BALTIMORE COUNTY 5417**  
 VARIATIONS IN TOTAL SOLAR AND SPECTRAL IRRADIANCE  
 02/07/2002 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J PAP  
*Tech. Officer:* GSFC/T KUCERA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11631 UNIV OF MARYLAND BALTIMORE COUNTY 5418**  
 USE OF NEW RADIATIVE TRANSFER SCHEMES & SATELLITE DATA FOR  
 MORE REALISTIC CLOUD RADIATIVE FORCING &  
 01/29/2002 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L OREOPOULOS  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11653 UNIV OF MARYLAND BALTIMORE COUNTY 5419**  
 MEASUREMENT OF CARBON DIOXIDE, METHANE, AND CARBON MONOX-  
 IDE WITH THE ATMOSPHERIC INFRARED SOUNDER ON  
 02/06/2002 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* C BARNET  
*Tech. Officer:* GSFC/J SUSSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11798 UNIV OF MARYLAND BALTIMORE COUNTY 5420**  
 THE EFFECT OF SUBGRID VARIABILITY OF SNOW COVER IN VEGETATED  
 REGION ON LAND ATMOSPHERE INTERACTIONS  
 03/22/2002 - 03/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* W NI  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12064 UNIV OF MARYLAND BALTIMORE COUNTY 5421**  
 IMPROVEMENT OF GENERAL CIRCULATION MODEL SIMULATIONS USING  
 GLOBAL OBSERVATIONS OF PRECIPITATION  
 04/24/2002 - 04/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* S YANG  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12161 UNIV OF MARYLAND BALTIMORE COUNTY 5422**  
 SOLAR VARIABILITY, CLIMATE & SPACE WEATHER  
 05/13/2002 - 05/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J M PAP  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12162 UNIV OF MARYLAND BALTIMORE COUNTY 5423**  
 REANALYSIS FOR STRATOSPHERIC TRACE GAS STUDIES  
 06/05/2002 - 05/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* S PAWSON  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12199 UNIV OF MARYLAND BALTIMORE COUNTY 5424**  
 LANDSLIDE MODELING AND FORECASTING UTILIZING REMOTELY SENSED  
 DATA (LANDMOD)  
 05/17/2002 - 02/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* M H BULMER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 12227 UNIV OF MARYLAND BALTIMORE COUNTY 5425**  
 CENTER FOR THE ADVANCED STUDIES IN PHOTONICS RESEARCH  
 (CASPR)  
 05/28/2002 - 09/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S A BASS  
*Tech. Officer:* GSFC/A D SIMPSON  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 12238 UNIV OF MARYLAND BALTIMORE COUNTY 5426**  
 UNDERSTANDING AND COPING WITH THE EFFECT OF 3D CLOUD STRUC-  
 TURE ON ARM DATA  
 06/04/2002 - 06/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A MARSHAK  
*Tech. Officer:* GSFC/W WISCOMBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

MASSACHUSETTS

NASA'S UNIVERSITY PROGRAM

**NAG 5 12271 UNIV OF MARYLAND BALTIMORE COUNTY 5427**  
 WATER ON MARS: INFERENCES FROM MARS MOVEMENT STUD IES  
 MASSMOVE  
 08/01/2002 - 08/14/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* M BULMER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12287 UNIV OF MARYLAND BALTIMORE COUNTY 5428**  
 PLAINS VOLCANISM & SMALL VOLCANIC EDIFICES ON MARS  
 06/13/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* S SAKIMOTOS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1190 UNIV OF MARYLAND BALTIMORE COUNTY 5429**  
 EFFECTS OF EXPOSURE TO HEAVY PARTICLES  
 01/20/2000 - 01/19/2003 FY02: \$0 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 5430**  
 PICASSO-CENA SCIENCE TEAM SUPPORT FOR AEROSOL RETRIEVAL  
 STUDIES  
 11/02/1999 - 11/01/2002 FY02: \$0 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 5431**  
 PARTICIPATION IN THE OZONE MONITORING INSTRUMENT SCIENCE TEAM.  
 06/06/2000 - 10/31/2004 FY02: \$0 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 5432**  
 R & D TO SUPPORT GSFC'S SIMBIOS PROJECT  
 12/15/2000 - 11/30/2002 FY02: \$0 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 5433**  
 OZONE MONITORING INSTRUMENT (OMI) SCIENCE TEAM  
 04/18/2001 - 10/31/2004 FY02: \$0 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 5434**  
 EOS EXECUTION PHASE  
 12/16/1991 - 06/14/2003 FY02: \$0 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 5435**  
 COMPACT HYPERSPECTRAL MAPPER FOR ENVIRONMENTAL APPLICA-  
 TIONS (CHYMER).  
 02/08/1999 - 12/15/2001 FY02: \$0 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 5436**  
 DISTRIBUTED DATA MINING FOR LARGE NASA DATABASES  
 04/10/2001 - 02/28/2003 FY02: \$0 Total: \$156,000  
*Prin. Invest.:* H KARGUPTA  
*Tech. Officer:* ARC/J C COUGHLAN, ARC/M SCHWABACHER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 339 UNIV OF MARYLAND BALTIMORE COUNTY 5437**  
 JOINT CENTER FOR EARTH SYSTEM TECHNOLOGY NEW AWARD  
 07/01/1998 - 06/30/2003 FY02: \$0 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 5438**  
 DESKTOP STEREOSCOPIC VISUALIZATION AND ANALYSIS OF MULTI-  
 DIMENSIONAL DATA SETS  
 09/08/1998 - 12/31/2000 FY02: \$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 5439**  
 LHEA/UMBC COOPERATIVE AGREEMENT (LUCA)  
 10/20/1998 - 12/31/2001 FY02: \$0 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 5440**  
 ESTABLISHMENT OF GODDARD EARTH SCIENCE & TECHN CTR ESTAB-  
 LISHING GODDARD EARTH SCIENCE AND TECHNOLOGY  
 05/11/2000 - 05/10/2005 FY02: \$563,236 Total: \$10,350,242  
*Prin. Invest.:* R CURRAN  
*Tech. Officer:* GSFC/R HARTLE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 610 UNIV OF MARYLAND BALTIMORE COUNTY 5441**  
 LHEA/UMBC COOPERATIVE AGREEMENT (LUCA)  
 12/21/2001 - 12/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M J HENRIKSEN  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

MASSACHUSETTS

**NAG 1 2057 BOSTON COLL 5442**  
 ENHANCEMENT OF SOLID STATE LASER OUTPUT VIA INTER IONIC ENERGY  
 TRANSFER  
 04/24/1998 - 01/31/2001 FY02: \$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 COLL 5443**  
 INVESTIGATIONS OF FUNDAMENTAL PROCESSES IN LASER SOLIDS WITH  
 REMOTE SENSING APPLICATIONS  
 01/25/2001 - 11/30/2003 FY02: \$0 Total: \$142,260  
*Prin. Invest.:* B DIBARTOLO, B WALSH  
*Tech. Officer:* LARC/N P BARNES, LARC/J C BARNES  
*CASE Category:* 13 - PHYSICS

## NASA'S UNIVERSITY PROGRAM

## MASSACHUSETTS

<b>NAG 1 01067</b>	<b>BOSTON COLL</b>	<b>5444</b>	<b>NAG 5 3439</b>	<b>BOSTON UNIV</b>	<b>5452</b>
NATO ADVANCED STUDY INST ON SPECTROSCOPY WITH SPATIALLY CONFINED STRUCTURES			MONITORING CHANGE IN TEMPERATE CONIFEROUS FOREST E COSYSTEMS		
04/18/2001 - 08/17/2001	FY02: \$0	Total: \$15,000	10/07/1996 - 12/31/2001	FY02: \$0	Total: \$915,007
<i>Prin. Invest.:</i> B DIBARTOLOL			<i>Prin. Invest.:</i> C WOODCOCK		
<i>Tech. Officer:</i> LARC/J C BARNES			<i>Tech. Officer:</i> GSFC/D L WILLIAMS		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 1 02034</b>	<b>BOSTON COLL</b>	<b>5445</b>	<b>NAG 5 4246</b>	<b>BOSTON UNIV</b>	<b>5453</b>
INVESTIGATIONS OF FUNDAMENTAL PROCESSES IN LASER SOLIDS WITH REMOTE SENSING APPLICATIONS			USE OF ENERGETIC NEUTRAL ATOMS AS DIAGNOSTICS OF M PROCESSES		
01/15/2002 - 02/20/2002	FY02: \$0	Total: \$0	03/26/1997 - 04/30/2001	FY02: \$0	Total: \$262,266
<i>Prin. Invest.:</i> B D BARTOLO			<i>Prin. Invest.:</i> D MENDILLO		
<i>Tech. Officer:</i> LARC/N P BARNES			<i>Tech. Officer:</i> GSFC/J GREBOWSKY		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 10824</b>	<b>BOSTON COLL</b>	<b>5446</b>	<b>NAG 5 4707</b>	<b>BOSTON UNIV</b>	<b>5454</b>
STAR FORMATION IN MSX INFRARED DARK CLOUDS (L TSA 2000)			USE OF NASA'S GLOBAL POSITIONING SYSTEM (GPS) MONI STUDIES OF IONOSPHERIC STRUCTURE AND VARIABILITY		
05/01/2001 - 05/14/2002	FY02: \$0	Total: \$87,882	06/11/1997 - 05/31/2001	FY02: \$0	Total: \$200,000
<i>Prin. Invest.:</i> S J CAREY			<i>Prin. Invest.:</i> D MENDILLO		
<i>Tech. Officer:</i> GSFC/R J OLIVERSEN			<i>Tech. Officer:</i> GSFC/M M MELLOTT		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 10833</b>	<b>BOSTON COLL</b>	<b>5447</b>	<b>NAG 5 5251</b>	<b>BOSTON UNIV</b>	<b>5455</b>
THE MAGNETIC STRUCTURE OF CMES: A COMPARISON OF HALO CMES WITH MAGNETIC CLOUDS AT 1 AU			A SUBORBITAL RESEARCH PROGRAM IN ULTRAVIOLET HIGH RESOLUTION AND IMAGING SPECTROSCOPY PI CHAKRABARTI		
04/27/2001 - 04/30/2003	FY02: \$0	Total: \$64,760	02/04/2000 - 02/03/2003	FY02: \$0	Total: \$652,929
<i>Prin. Invest.:</i> D F WEBB			<i>Prin. Invest.:</i> S CHAKRABARTI		
<i>Tech. Officer:</i> GSFC/W J WAGNER			<i>Tech. Officer:</i> WFF/W B JOHNSON		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 2 1432</b>	<b>BOSTON UNIV</b>	<b>5448</b>	<b>NAG 5 5383</b>	<b>BOSTON UNIV</b>	<b>5456</b>
INTEGRATION OF ATMOSPHERIC, LABORATORY, & SATELITE DATA TO ESTIMATE BIOSPHERIC SOURCES OF OXYGENATE			SOUNDING ROCKET UV MEASUREMENT OF JUPITER'S UPPER ATMOSPHERIC DYNAMICS, THE VENUE UPPER ATMOSPHERE D		
08/15/2000 - 08/14/2003	FY02: \$0	Total: \$80,000	08/20/2002 - 08/14/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R B MYNENI			<i>Prin. Invest.:</i> J CLARKE		
<i>Tech. Officer:</i> ARC/C S POTTER			<i>Tech. Officer:</i> WFF/J BRINTIN		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 3 2143</b>	<b>BOSTON UNIV</b>	<b>5449</b>	<b>NAG 5 6214</b>	<b>BOSTON UNIV</b>	<b>5457</b>
SONOLUMINESCENCE IN SPACE: THE CRITICAL ROLE OF B OUYANCY IN STABILITY AND EMISSION MECHANISMS			MODELING AND FORECASTING EFFECTS OF LAND-USE CHANG SOCIO-ECONOMIC DRIVERS		
04/10/1998 - 01/08/2003	FY02: \$0	Total: \$517,500	08/18/1997 - 06/30/2001	FY02: \$0	Total: \$312,042
<i>Prin. Invest.:</i> R G HOLT, R A ROY			<i>Prin. Invest.:</i> D K KAUFMANN		
<i>Tech. Officer:</i> GRC/N R HALL			<i>Tech. Officer:</i> GSFC/G C GUTMAN		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 3 2392</b>	<b>BOSTON UNIV</b>	<b>5450</b>	<b>NAG 5 6658</b>	<b>BOSTON UNIV</b>	<b>5458</b>
RHEOLOGY OF FOAM NEAR THE ORDER-DISORDER PHASE TRA NSITION			ULYSSES DATA ANALYSIS: MAGNETIC TOPOLOGY OF HELIO SPHERIC STRUCTURES		
04/18/2000 - 11/30/2003	FY02: \$0	Total: \$130,000	11/20/1997 - 06/30/2001	FY02: \$0	Total: \$203,772
<i>Prin. Invest.:</i> D HOLT			<i>Prin. Invest.:</i> N CROOKER		
<i>Tech. Officer:</i> GRC/R B ROGERS			<i>Tech. Officer:</i> GSFC/J LING		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 3384</b>	<b>BOSTON UNIV</b>	<b>5451</b>	<b>NAG 5 7049</b>	<b>BOSTON UNIV</b>	<b>5459</b>
TOWARD A REFINED UNDERSTANDING OF THE HIGH-ENERGY GAMMA-RAY UNIVERSE			WIND DATA ANALYSIS: GLOBAL HELIOSPHERIC STRUCTURE S		
08/28/1996 - 08/31/2001	FY02: \$0	Total: \$365,000	02/26/1998 - 06/30/2002	FY02: \$0	Total: \$127,700
<i>Prin. Invest.:</i> J R MATTOX			<i>Prin. Invest.:</i> N U CROOKER		
<i>Tech. Officer:</i> GSFC/D WEST			<i>Tech. Officer:</i> GSFC/J LING		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		

MASSACHUSETTS

NASA'S UNIVERSITY PROGRAM

**NAG 5 7217** **BOSTON UNIV** **5460**  
 GEOMETRIC OPTICAL MODELING OF DIRECTIONAL THERMAL RADIANCE  
 FOR IMPROVEMENT OF LAND SURFACE TEMPERATURE  
 04/17/1998 - 12/31/2001 FY02: \$0 Total: \$300,236  
*Prin. Invest.:* X LI  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7218** **BOSTON UNIV** **5461**  
 MACHINE LEARNING TO IMPROVE LAND COVER CLASSIFICATIONS FROM  
 MULTISENSOR AND MULTITEMPORAL DATA  
 04/09/1998 - 04/14/2001 FY02: \$0 Total: \$84,433  
*Prin. Invest.:* M FRIEDL  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7452** **BOSTON UNIV** **5462**  
 SIMULATIONS AND THEORY OF THE FARLEY-BUNEMAN INSTABILITY IN THE  
 E-REGION IONOSPHERE  
 07/10/1998 - 08/31/2001 FY02: \$0 Total: \$157,357  
*Prin. Invest.:* M OPPENHEIM  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 7677** **BOSTON UNIV** **5463**  
 STUDIES BY THE CAMMICE INVESTIGATION TEAM DURING THE EXTENDED  
 MISSION OF GGSPOL  
 09/18/1998 - 11/30/2001 FY02: \$0 Total: \$1,335,607  
*Prin. Invest.:* T FRITZ  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 7706** **BOSTON UNIV** **5464**  
 STUDIES OF MAGNETOSPHERIC ENERGETIC PARTICLES IN THE SOLAR  
 MAXIMUM AREA  
 10/01/1998 - 12/31/2002 FY02: \$0 Total: \$355,000  
*Prin. Invest.:* H E SPENCER  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8135** **BOSTON UNIV** **5465**  
 "SIGNATURES OF MAGNETOPAUSE RECONNECTION".  
 01/29/1999 - 01/31/2003 FY02: \$0 Total: \$607,075  
*Prin. Invest.:* G L SISCOE  
*Tech. Officer:* GSFC/J GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 8584** **BOSTON UNIV** **5466**  
 INVESTIGATION OF AERODYNAMIC AND RADIOMETRIC LAND SURFACE  
 TEMPERATURES  
 06/21/1999 - 06/30/2002 FY02: \$0 Total: \$65,906  
*Prin. Invest.:* M A FRIEDL  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9110** **BOSTON UNIV** **5467**  
 SUBSTORM EVOLUTION IN THE NEAR-EARTH PLASMA SHEET  
 02/23/2000 - 02/28/2003 FY02: \$0 Total: \$182,498  
*Prin. Invest.:* G ERICKSON  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9161** **BOSTON UNIV** **5468**  
 RXTE OBSERVATIONS OF SELECTED BLAZARS - ADP - 99  
 03/08/2000 - 03/14/2002 FY02: \$0 Total: \$23,580  
*Prin. Invest.:* A MARSCHER  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9444** **BOSTON UNIV** **5469**  
 SIMULATIONS & THEORY OF ELECTRON PHASE-SPACE HOLES OBSERVED  
 IN THE AURORAL IONOSPHERE  
 04/13/2000 - 12/31/2001 FY02: \$0 Total: \$37,000  
*Prin. Invest.:* M OPPENHEIM  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9547** **BOSTON UNIV** **5470**  
 MULTI-DECADAL PATHFINDER DATA SETS OF GLOBAL LAND BIOPHYSICAL  
 VARIABLES FROM AVHRR & MODIS & THEIR  
 05/16/2000 - 05/31/2002 FY02: \$0 Total: \$150,000  
*Prin. Invest.:* R MYNENI  
*Tech. Officer:* GSFC/DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9557** **BOSTON UNIV** **5471**  
 MULTIPOINT ENERGETIC NEUTRAL ATOM IMAGING WITH POLAR GEOTAIL  
 AND TIROS  
 05/16/2000 - 05/14/2002 FY02: \$0 Total: \$58,999  
*Prin. Invest.:* H SPENCE  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9562** **BOSTON UNIV** **5472**  
 NEW ISTP SOLAR MAX: CUSP ENERGETIC PARTICLES  
 05/09/2000 - 05/14/2001 FY02: \$0 Total: \$30,000  
*Prin. Invest.:* J CHEN  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9582** **BOSTON UNIV** **5473**  
 A LARGE FORMAT, MINIATURIZED, PHOTON COUNTING IMAGING SYSTEM  
 WITH MICRO-CHANNEL PLATE PORE-LIMITED  
 05/09/2000 - 05/14/2003 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* S CHAKRABARTI  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 13 - PHYSICS

**NAG 5 10108** **BOSTON UNIV** **5474**  
 THE CLUSTER RAPID ON-ORBIT OPERATIONS AND DATA VERIFICATION  
 12/28/2000 - 12/31/2004 FY02: \$0 Total: \$502,000  
*Prin. Invest.:* T FRITZ  
*Tech. Officer:* GSFC/M GOLDSTEIN  
*CASE Category:* 13 - PHYSICS

**NAG 5 10156** **BOSTON UNIV** **5475**  
 RETRIEVING LAI AND FPAR FROM MERIS DATA WITH ADVANCED ALGO-  
 RITHMS  
 12/18/2000 - 12/31/2003 FY02: \$0 Total: \$89,641  
*Prin. Invest.:* R B MYNENI  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

## MASSACHUSETTS

**NAG 5 10286**                      **BOSTON UNIV**                      **5476**  
 USE OF ENERGETIC NEUTRAL ATOMS AS DIAGNOSTICS OF MAGNETO-  
 SPHERIC PROCESSES AT JUPITER  
 01/23/2001 - 01/31/2002                      FY02: \$0                      Total: \$35,000  
*Prin. Invest.:* M MENDILLO  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10419**                      **BOSTON UNIV**                      **5477**  
 CONSTELLATION PATHFINDER TECHNOLOGY DEVELOPMENT: SYSTEMS  
 INTEGRATION AND MANUFACTURABILITY.  
 03/13/2001 - 03/14/2003                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* D SPENCE  
*Tech. Officer:* GSFC/P BUCHANAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10496**                      **BOSTON UNIV**                      **5478**  
 HIGH DEFINITION IMAGES OF MERCURY'S SURFACE AND EXTENDED  
 ATMOSPHERE  
 02/28/2001 - 02/28/2003                      FY02: \$0                      Total: \$55,000  
*Prin. Invest.:* J BAUMGARDNER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10801**                      **BOSTON UNIV**                      **5479**  
 CONCEPT STUDY FOR THE "A SMALL EXPLORER MISSION FOR SPEC-  
 TROSCOPY & PHOTOMETRY OF IGM'S DIFFUSE  
 04/30/2001 - 09/30/2002                      FY02: \$0                      Total: \$450,000  
*Prin. Invest.:* P CHAKRABARTI  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10808**                      **BOSTON UNIV**                      **5480**  
 INFRARED STUDIES OF 13CO CLUMPS IN THE GRS (LISA 2 000)  
 04/25/2001 - 04/30/2006                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* J M JACKSON  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10856**                      **BOSTON UNIV**                      **5481**  
 HELIOSPHERIC CURRENT SHEET STRUCTURE  
 05/01/2001 - 04/30/2004                      FY02: \$0                      Total: \$71,950  
*Prin. Invest.:* N U CROOKER  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 10881**                      **BOSTON UNIV**                      **5482**  
 HELIOSPHERIC CONSEQUENCES OF CORONAL MASS EJECTION  
 05/14/2001 - 05/31/2004                      FY02: \$0                      Total: \$71,950  
*Prin. Invest.:* N U CROOKER  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11077**                      **BOSTON UNIV**                      **5483**  
 IONOSPHERE VARIABILITY AND STORMS ON MARS  
 08/06/2001 - 08/14/2003                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* M MENDILLO  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11165**                      **BOSTON UNIV**                      **5484**  
 MODELING STUDIES OF TITAN'S THERMOSPHERE, IONOSPHERE, AND  
 AURORA  
 08/06/2001 - 08/14/2004                      FY02: \$0                      Total: \$40,198  
*Prin. Invest.:* M MENDILLO  
*Tech. Officer:* GSFC/D J BOGAN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 11263**                      **BOSTON UNIV**                      **5485**  
 LAND SURFACE ALBEDO FROM MERIS REFLECTIONS USING MODIS  
 DIRECTIONAL FACTORS  
 08/29/2001 - 12/31/2003                      FY02: \$0                      Total: \$22,607  
*Prin. Invest.:* C SCHAAF  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11338**                      **BOSTON UNIV**                      **5486**  
 THE EFFECTS OF AGRICULTURAL EXPANSION ON REGIONAL HYDROLOGY  
 IN SE TURKEY  
 09/01/2001 - 09/15/2004                      FY02: \$0                      Total: \$191,205  
*Prin. Invest.:* G SALVUCCI  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11397**                      **BOSTON UNIV**                      **5487**  
 POLAR/CAMMICE  
 11/20/2001 - 11/30/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T FRITZ  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11454**                      **BOSTON UNIV**                      **5488**  
 RESEARCH PROGRAM FOR ADVANCED MICROCHANNEL PLATE UV DETEC-  
 TOR TECHNOLOGY  
 12/13/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S CHAKRABARTI  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11695**                      **BOSTON UNIV**                      **5489**  
 "NEW SCALE APPROPRIATE DIAGNOSTICS FOR EVALUATING LAND SUR-  
 FACE PARAMETERIZATIONS AND WATER BALANCE  
 02/06/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G D SALVUCCI  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11751**                      **BOSTON UNIV**                      **5490**  
 INTEGRATIVE SUN-EARTH SYSTEM STUDIES USING MAGNETOSPHERIC  
 ENERGETIC PARTICLES.  
 02/20/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* H SPENCE  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11790**                      **BOSTON UNIV**                      **5491**  
 CROSS SECTIONS FOR THERMOSPHERIC-IONOSPHERIC NONAD IABATIC  
 REACTIONS FROM QUASI-CLASSICAL DYNAMICS  
 02/28/2002 - 02/28/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D COKER  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

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**NAG 5 11811** **BOSTON UNIV** **5492**  
 FREQUENCY-DEPENDENT TIME LAGS IN THREE BLAZARS (AD P 2001)  
 03/01/2002 - 02/28/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A P MARSCHER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12003** **BOSTON UNIV** **5493**  
 PERIODICITY AND TURBULENCE ASSOCIATED WITH MAGNETO TAIL FLOW BURSTS  
 04/26/2002 - 04/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* H E SPENCE  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12095** **BOSTON UNIV** **5494**  
 SATURN THERMOSPHERE-IONOSPHERE MODEL  
 04/26/2002 - 04/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M MENDILLO  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12292** **BOSTON UNIV** **5495**  
 UNDERSTANDING AND COPING WITH THE EFFECT OF 3D CLOUD STRUCTURE ON ARM DATA  
 06/13/2002 - 06/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* Y KNYZAKHIN  
*Tech. Officer:* GSFC/W WISCOMBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1522** **BOSTON UNIV** **5496**  
 DIRECT USE OF SATELLITE REMOTE SENSING IN THE ESTIMATION OF HYDROLOGIC TRANSPORTS.  
 05/22/1998 - 09/30/2001 FY02: -\$327 Total: \$134,542  
*Prin. Invest.:* G D SALVUCCI  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 31369** **BOSTON UNIV** **5497**  
 MODERATE RESOLUTION IMAGING SPECTROMETER INVESTIGATION - LAND COVER CHANGES  
 12/30/1991 - 06/14/2003 FY02: \$0 Total: \$5,389,303  
*Prin. Invest.:* W STRAHLER  
*Tech. Officer:* GSFC/H OSEROFF  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 96061** **BOSTON UNIV** **5498**  
 MODIS  
 09/27/1996 - 06/14/2003 FY02: \$0 Total: \$1,985,000  
*Prin. Invest.:* R B MYNENI  
*Tech. Officer:* GSFC/D TOLL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 1233** **BOSTON UNIV** **5499**  
 A BENCHMARK DATASET OF MULTIDIMENSIONAL EARTH SCIENCE SATELLITE DATA FOR TESTING OF LEARNING ALGORITHMS  
 03/30/2001 - 02/28/2003 FY02: \$0 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** **5500**  
 MICRO GRAVITY INDUCED CHANGES IN CONTROL OF MUSCLES  
 05/11/2001 - 05/31/2004 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* C J DE LUCA  
*Tech. Officer:* JSC/M ANDERSON  
*CASE Category:* 56 - MEDICAL

**NGT 1 52199** **BOSTON UNIV** **5501**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 07/20/1998 - 06/30/2001 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* K P HARLING, B DI BARTOLO  
*Tech. Officer:* LARC/J C BARNES, LARC/N P BARNES  
*CASE Category:* 13 - PHYSICS

**NGT 5 30223** **BOSTON UNIV** **5502**  
 RELATION BETWEEN INTERANNUAL VARIABILITY IN ATMOSPHERIC CO2, SEA (ENSO) AND LAND SURFACE TEMPERATURE  
 09/20/1999 - 08/31/2002 FY02: \$0 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** **5503**  
 URBANIZATION AS A COMPONENT OF GLOBAL CHANGE. STUDENT: ANNE-MARIE SCHNEIDE  
 08/14/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* C WOODSTOCK  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30405** **BOSTON UNIV** **5504**  
 ESTIMATION OF LAND SURFACE ENERGY BALANCE AND SURFACE PROPERTIES USING REMOTELY-SENSED OBSERVATION  
 08/16/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* M FRIEDL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30462** **BOSTON UNIV** **5505**  
 RETRIEVAL OF BIOMASS AND STRUCTURAL INFORMATION OF FORESTS FROM LIDAR WAVEFORMS USING TIME-DEPENDENT  
 08/21/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R MYNENI  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50288** **BOSTON UNIV** **5506**  
 SIMULATION OF PLASMA TURBULENCE IN THE AURORAL IONOSPHERE  
 06/26/2000 - 08/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* M OPPENHEIM  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50307** **BOSTON UNIV** **5507**  
 GENE EXPRESSION PROFILE OF UNLOADED SKELETAL MUSCLE - STUDENT: ERIC STEVENSON  
 07/06/2000 - 06/30/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* S KANDARIAN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



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**NGT 5 50309** **BOSTON UNIV** **5508**  
 A PROSTHETIC FOOT SOLE FOR THE MITIGATION OF BALANCE DEFICITS  
 CAUSED BY REDUCED PLANTAR SENSATION  
 07/07/2000 - 10/31/2002 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* L ODDSSON  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2386** **BRANDEIS UNIV** **5509**  
 NUCLEATION OF COLLOIDAL AND PROTEIN CRYSTALS IN THE VICINITY OF  
 A METASTABLE CRITICAL POINT  
 04/07/2000 - 11/30/2003 FY02: \$0 Total: \$170,000  
*Prin. Invest.:* D FRADEN  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1038** **BRANDEIS UNIV** **5510**  
 ADAPTATION IN ARTIFICIAL GRAVITY ENVIRONMENTS  
 06/25/1998 - 08/30/2001 FY02: \$0 Total: \$617,290  
*Prin. Invest.:* J LACKNER  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1263** **BRANDEIS UNIV** **5511**  
 DEVELOPING PROCEDURES FOR ALLEVIATING ASTRONAUTS POST  
 FLIGHT DISTURBANCE OF POSTURE AND LOCOMOTION  
 12/06/2000 - 11/30/2003 FY02: \$0 Total: \$309,386  
*Prin. Invest.:* J R LACKNER  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8559** **CLARK UNIV** **5512**  
 PIXELING THE SOCIAL USING REMOTELY SENSED INFORMATION IN  
 SOCIAL SCIENCE MODELS  
 07/08/1999 - 06/30/2002 FY02: \$0 Total: \$344,368  
*Prin. Invest.:* J GEOGHEGAN  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11134** **CLARK UNIV** **5513**  
 LCLUC-SYPR II  
 07/26/2001 - 07/31/2004 FY02: \$0 Total: \$99,824  
*Prin. Invest.:* B TURNER  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1270** **CLARK UNIV** **5514**  
 COFFEE HARVEST OPTIMIZATION USING UAV PLATFORMS FOR THE  
 ACQUISITION OF HIGH SPATIAL RESOLUTION REAL  
 06/07/2001 - 12/14/2002 FY02: \$0 Total: \$840,000  
*Prin. Invest.:* S HERWITZ  
*Tech. Officer:* ARC/S S WEGENER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 97** **CLARK UNIV** **5515**  
 INTEGRATED ASSESSMENT AND PROJECTION OF LAND-USE/ COVER  
 CHANGE IN THE SOUTHERN YUCATAN PENINSULAR  
 08/24/1999 - 08/31/2002 FY02: \$0 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** **5516**  
 DIAGNOSIS OF SPATIAL AND TEMPORAL PATTERNS OF DRY LAND-  
 ATMOSPHERE WATER EXCHANGE IN THE TROPICAL SAV  
 09/10/1997 - 08/31/2001 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* L LEWIS  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30147** **CLARK UNIV** **5517**  
 IDENTIFYING THE LAND-MANAGEMENT INSTS AND LANDSCAPE PATTERNS  
 GOVERNING SAVANNA FIRE REGI  
 08/31/1998 - 08/31/2002 FY02: \$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** **5518**  
 LINKING REMOTE SENSING AND SOCIAL ANALYSIS: CAUSAL INFLUENCES  
 OF TRANSITIONING ECONOMIES ON  
 08/28/1998 - 08/31/2001 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* B L TUNNER, 11, HAAN  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30197** **CLARK UNIV** **5519**  
 CONSERVATION IN THE SOUTHERN YUCATAN PENINSULAR REGION,  
 MEXICO: LINKING LANDSCAPE ECOLOGY AND SOCIAL  
 08/18/1999 - 08/31/2002 FY02: \$0 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** **5520**  
 SOCIALIZING MIOMBO GEOLOGY: CHANGE IN WOODLAND USE AND ITS  
 MEANING FOR SUSTAINABLE LIVELIHOODS/STUD  
 08/24/1999 - 08/31/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* B L TURNER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1796** **COLL OF THE HOLY CROSS** **5521**  
 FOR RESEARCH "TRANSIENT DENDRITIC SOLIDIFICATION EXPERIMENT"  
 03/07/2001 - 05/31/2003 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* M KOSS  
*Tech. Officer:* MSFC/A JACKSON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 1 2025** **HARVARD UNIV** **5522**  
 ANALYSIS OF INTERANNUAL AND LONG TERM VARIATIONS OF STRATO-  
 SPHERIC TRANSPORT OF OZONE AND DEVELOP-  
 03/19/1998 - 01/31/2001 FY02: \$0 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** **5523**  
 ANALYSIS AND MODELING OF PEM-TROPICS (B) DATA MY 1/3  
 02/02/1999 - 12/31/2001 FY02: \$0 Total: \$328,001  
*Prin. Invest.:* D J JACOB, J A LOGAN  
*Tech. Officer:* LARC/J RAPER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

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**NAG 1 2307** **HARVARD UNIV** **5524**  
 GLOBAL THREE-DIMENSIONAL MODELING STUDIES OF TROPOSPHERIC OZONE  
 06/28/2000 - 03/31/2003 FY02: \$0 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** **5525**  
 ANALYSIS OF ASIAN OUTFLOW OVER THE PACIFIC USING OBSERVATIONS FROM TRACE-P, NRA 00-OES-01  
 09/20/2000 - 06/30/2003 FY02: \$0 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** **5526**  
 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 FY02: \$0 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 1310** **HARVARD UNIV** **5527**  
 IN SITU MEASUREMENT OF CONCENTRATION OF ATMOSPHERIC CO<sub>2</sub> IN THE SGAE-3 OZONE LOSS & VALIDATION EXPER  
 03/19/1999 - 12/31/2002 FY02: \$0 Total: \$437,000  
*Prin. Invest.:* S C WOFSY  
*Tech. Officer:* ARC/C P SCOFIELD, ARC/R S HIPSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1417** **HARVARD UNIV** **5528**  
 BIOMECHANICS OF ARABIDOPSIS THALIANA WAVY ROOT DEVELOPMENT  
 07/11/2000 - 06/30/2003 FY02: \$0 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** **5529**  
 CONTROL OF CELL MECHANICS AND FUNCTION BY CELL MICROENVIRONMENT  
 07/26/2001 - 07/31/2003 FY02: \$0 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** **5530**  
 PHYSICS OF COLLOIDS IN SPACE PHYSICS OF COLLOIDS IN SPACE  
 08/02/1999 - 06/30/2004 FY02: \$0 Total: \$831,125  
*Prin. Invest.:* D WEITZ  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2376** **HARVARD UNIV** **5531**  
 MICROGRAVITY DRIVEN INSTABILITIES IN GAS-FLUIDIZED BEDS  
 03/27/2000 - 11/30/2003 FY02: \$0 Total: \$49,000  
*Prin. Invest.:* D A WEITZ  
*Tech. Officer:* GRC/B MOTIL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2381** **HARVARD UNIV** **5532**  
 FABRICATION OF PHOTONIC STRUCTURE WITH COLLOIDAL ENGINEERING  
 04/07/2000 - 11/30/2003 FY02: \$0 Total: \$136,000  
*Prin. Invest.:* D A WHITE  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2492** **HARVARD UNIV** **5533**  
 ENGINEERING OF NOVEL BIOCOLLOIDAL SUSPENSIONS ENGINEERING OF NOVEL BIOCOLLOIDAL SUSPENSIONS  
 10/17/2000 - 11/30/2003 FY02: \$0 Total: \$30,000  
*Prin. Invest.:* D A WEITZ  
*Tech. Officer:* GRC/D GRIFFIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3645** **HARVARD UNIV** **5534**  
 EVOLUTION OF PROTEROZOIC MICROORGANISMS AND ENVIRONMENTAL ATOMS, MOLECULES AND IONS  
 03/05/1997 - 05/31/2002 FY02: \$0 Total: \$353,808  
*Prin. Invest.:* D H KNOLL  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4348** **HARVARD UNIV** **5535**  
 ABSOLUTE TRANSITION PROBABILITIES FOR LINES IN THE ASTROPHYSICAL ATOMS, MOLECULES AND IONS  
 04/17/1997 - 12/31/2001 FY02: \$0 Total: \$426,197  
*Prin. Invest.:* A H DALGARNO  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4430** **HARVARD UNIV** **5536**  
 ISOTOPIC STUDIES OF SOLAR SYSTEMS ORIGINS  
 05/06/1997 - 02/28/2003 FY02: \$0 Total: \$178,000  
*Prin. Invest.:* D B JACOBSEN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4720** **HARVARD UNIV** **5537**  
 TUNGSTEN ISOTOPE STUDIES OF METEORITES  
 06/17/1997 - 03/31/2001 FY02: \$0 Total: \$75,000  
*Prin. Invest.:* D B JACOBSEN  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5279** **HARVARD UNIV** **5538**  
 DEVELOPMENT OF A HARD X-RAY IMAGING DETECTOR AND SURVEY TELESCOPE (EXITE 3) FOR AN LDB MISSION  
 05/31/2000 - 05/18/2003 FY02: \$0 Total: \$422,811  
*Prin. Invest.:* G GRINDLAY  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 7039** **HARVARD UNIV** **5539**  
 STRUCTURE AND EVOLUTION OF X-RAY CLUSTERS: THEORY AND IMPLICATIONS FOR AXAF-ATP  
 02/25/1998 - 02/14/2002 FY02: \$0 Total: \$269,824  
*Prin. Invest.:* A LOEB  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

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**NAG 5 7534** **HARVARD UNIV** **5540**  
 LONG-TERM NET ECOSYSTEM EXCHANGE AT THE BORE AS NO RTHERN  
 OLD BLACK SPRUCE SITE: MECHANISMS FOR  
 06/11/1998 - 05/31/2002 FY02: \$0 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** **5541**  
 FUNDING FOR 'INVESTIGATIONS OF THE GEODYNAMO USING SATELLITE  
 MAGNETIC FIELD OBSERVATIONS' (SENH98-0  
 07/22/1998 - 07/14/2002 FY02: \$0 Total: \$224,000  
*Prin. Invest.:* J BLOXHAM  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7768** **HARVARD UNIV** **5542**  
 STUDYING THE SUPERNOVA HISTORY OF THE UNIVERSE WITH THE NEXT  
 GENERATION SPACE TELESCOPE  
 01/11/1999 - 01/14/2002 FY02: \$0 Total: \$56,348  
*Prin. Invest.:* R KIRSHNER  
*Tech. Officer:* GSFC/E SMITH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7859** **HARVARD UNIV** **5543**  
 PHOTOABSORPTION CROSS SECTIONS AND THEIR TEMPERATURE DE-  
 PENDENCE FOR CO2 AND H2O IN THE 170 NM TO 20  
 01/06/1999 - 12/31/2001 FY02: \$0 Total: \$183,875  
*Prin. Invest.:* W H PARKINSON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8467** **HARVARD UNIV** **5544**  
 STUDIES OF STAR AND PLANETARY SYSTEM FORMATION  
 05/03/1999 - 07/31/2001 FY02: \$0 Total: \$20,288  
*Prin. Invest.:* A W CAMERON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8779** **HARVARD UNIV** **5545**  
 CLOUDS AND WATER VAPOR IN THE CLIMATE SYSTEM  
 08/30/1999 - 02/28/2001 FY02: \$0 Total: \$898,876  
*Prin. Invest.:* J ANDERSON  
*Tech. Officer:* GSFC/R CURRAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9019** **HARVARD UNIV** **5546**  
 1. H2 IN HH2: FLUORESCENCE OR COLLISIONS? - FUSE 2. NON-RADIATIVE  
 SHOCKS IN THE CYGNUS LOOP - FUSE  
 02/02/2000 - 01/31/2003 FY02: \$0 Total: \$61,100  
*Prin. Invest.:* J C RAYMOND  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9643** **HARVARD UNIV** **5547**  
 CHEMISTRY, AEROSOLS, AND CLIMATE: TROPOSPHERIC UNIFIED SIMU-  
 LATION (CACTUS)  
 06/28/2000 - 05/31/2003 FY02: \$0 Total: \$630,667  
*Prin. Invest.:* D J JACOB  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9823** **HARVARD UNIV** **5548**  
 MEASUREMENT, ANALYSIS, & MODELING OF THE SPATIAL & TEMPORAL  
 VARIABILITY OF OROGRAPHIC PRECIP.  
 07/24/2000 - 11/30/2002 FY02: \$0 Total: \$225,420  
*Prin. Invest.:* A P BARROS  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10040** **HARVARD UNIV** **5549**  
 ON THE ORIGIN OF DIPS IN 4U1915-05  
 10/03/2000 - 09/30/2002 FY02: \$0 Total: \$7,400  
*Prin. Invest.:* J E GRINDLAY  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10046** **HARVARD UNIV** **5550**  
 XMM OBSERVATIONS OF LARGE CORE CLUSTERS  
 09/28/2000 - 09/30/2002 FY02: \$0 Total: \$8,100  
*Prin. Invest.:* J E GRINDLAY  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10105** **HARVARD UNIV** **5551**  
 X-RAY SPECTROSCOPY OF LOW-LUMINOSITY ACTIVE GALACTIC NUCLEI  
 WITH XMM  
 12/18/2000 - 11/30/2001 FY02: \$0 Total: \$4,865  
*Prin. Invest.:* R NARAYAN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10484** **HARVARD UNIV** **5552**  
 ISOTOPIC STUDIES OF THE FORMATION & EARLY DIFFERENTIATION OF  
 PLANETS  
 03/05/2001 - 03/31/2004 FY02: \$0 Total: \$70,000  
*Prin. Invest.:* S JACOBSEN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10631** **HARVARD UNIV** **5553**  
 THE EVOLUTION OF ATMOSPHERIC OXYGEN AND THE COMPOSITION OF  
 SEAWATER  
 03/17/2001 - 03/14/2004 FY02: \$0 Total: \$150,000  
*Prin. Invest.:* H D HOLLAND  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10780** **HARVARD UNIV** **5554**  
 MODELS OF LOW-LUMINOSITY ACCRETION FLOWS (ATP 2000 )  
 04/20/2001 - 04/30/2004 FY02: \$0 Total: \$94,389  
*Prin. Invest.:* R NARAYAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10792** **HARVARD UNIV** **5555**  
 2001 7TH INTERNATIONAL PRECIPITATION CONFERENCE  
 04/24/2001 - 12/31/2001 FY02: \$0 Total: \$27,900  
*Prin. Invest.:* A P BARROS  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

MASSACHUSETTS

NASA'S UNIVERSITY PROGRAM

**NAG 5 10906 HARVARD UNIV 5556**  
 THE ORIGINS OF AUTOTROPHY: DISTRIBUTION, DIVERSITY AND EVOLU-  
 TION OF RUBISCO  
 05/22/2001 - 07/31/2004 FY02: \$0 Total: \$90,000  
*Prin. Invest.:* C M CAVANAUGH  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 11154 HARVARD UNIV 5557**  
 FLUXES OF CARBON, WATER, AND ENERGY IN A BOREAL FOREST-PEAT  
 ECOSYSTEM: SHORT TERM VARIANCE, LONG  
 08/02/2001 - 07/31/2004 FY02: \$0 Total: \$189,403  
*Prin. Invest.:* S C WOFYSY  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11270 HARVARD UNIV 5558**  
 EVALUATION AND INTERCOMPARISON OF TROPOSPHERIC CHE MISTRY  
 SIMULATIONS FOR GLOBAL MODEL INITIATIVE (GM)  
 08/22/2001 - 08/31/2004 FY02: \$0 Total: \$145,130  
*Prin. Invest.:* D JACOB  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11431 HARVARD UNIV 5559**  
 CONSTRAINTS OF CHEMICAL TRACERS ON THE GLOBAL BUDGETS OF  
 CO2 AND CH4  
 12/03/2001 - 11/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* M MCELROY  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11547 HARVARD UNIV 5560**  
 TOTAL WATER MEASUREMENTS USING IN SITU UV FRAGMENT FLUORES-  
 CENCE SPECTROSCOPY IN SUPPORT OF  
 01/14/2002 - 01/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* J ANDERSON  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11548 HARVARD UNIV 5561**  
 IN SITU WATER VAPOR MEASUREMENTS USING COUPLED UV FRAGMENT  
 FLUORESCENCE/ABSORPTION SPECTROSCOPY IN S  
 01/14/2002 - 01/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* J ANDERSON  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11638 HARVARD UNIV 5562**  
 CO2 MEASUREMENTS FROM THE WB-57F IN CRYSTAL-FACE  
 01/22/2002 - 01/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* S C WOFYSY  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11925 HARVARD UNIV 5563**  
 ISOTOPIC STUDIES OF SOLAR SYSTEM ORIGINS  
 03/27/2002 - 03/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S JACOBSEN  
*Tech. Officer:* GSFC/JBOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12041 HARVARD UNIV 5564**  
 THE SUNYAEV-ZEL'DOVICH EFFECT(S)  
 04/17/2002 - 04/26/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* M WHITE  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12140 HARVARD UNIV 5565**  
 GALAXY EVOLUTION IN A COSMOLOGICAL CONTEXT  
 05/06/2002 - 04/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L E HERNQUIST  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1680 HARVARD UNIV 5566**  
 "GLASS FORMATION, NUCLEATION AND DIFFUSION IN METALLIC MELTS"  
 06/06/2000 - 11/30/2003 FY02: \$0 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 5567**  
 RESEARCH ENTITLED, "STUDY OF METASTABILITY OF HYDROGEN  
 AGAINST A TRANSITION TO PRESSURE"  
 06/29/2001 - 07/15/2002 FY02: \$0 Total: \$99,972  
*Prin. Invest.:* I F SILVERA  
*Tech. Officer:* MSFC/S D BAI  
*CASE Category:* 43 - CHEMICAL ENGR

**NAS 1 18946 HARVARD UNIV 5568**  
 SAGE III SCIENCE SUPPORT; P.I. - WOFYSY  
 11/28/1989 - 01/31/2005 FY02: \$0 Total: \$503,930  
*Prin. Invest.:* S C WOFYSY  
*Tech. Officer:* LARC/G MADDREA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAS 5 02037 HARVARD UNIV 5569**  
 NRA FOR R & D ENTITLED "INSTRUMENT INCUBATOR PROGRAM, ICOS,  
 CAPS & CRDS: NEW TECHNIQUES  
 03/14/2002 - 03/13/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J ANDERSON  
*Tech. Officer:* GSFC/F PERI  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 2 1053 HARVARD UNIV 5570**  
 THE PLANETARY CONTEXT OF BIOLOGICAL EVOLUTION  
 09/14/1998 - 06/30/2003 FY02: \$0 Total: \$2,322,169  
*Prin. Invest.:* A H KNOLL  
*Tech. Officer:* ARC/R A GRYMES, ARC/W W DOLCI  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1236 HARVARD UNIV 5571**  
 PROBABILISTIC REASONING FOR COMPLEX DYNAMIC SYSTEM S  
 04/11/2001 - 02/28/2003 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* A J PFEFFER  
*Tech. Officer:* ARC/R A MORRIS, ARC/D J CLANCY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5505 HARVARD UNIV 5572**  
 COLLECTIVE INTELLIGENCE MECHANISM DESIGN FOR COMPLEX SYS-  
 TEMS  
 07/24/2002 - 11/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* D PARKES  
*Tech. Officer:* ARC/K TURNER, ARC/D WOLPERT  
*CASE Category:* 22 - COMPUTER SCIENCE

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## MASSACHUSETTS

<b>NCC 5 341</b>	<b>HARVARD UNIV</b>	<b>5573</b>		<b>NGT 5 30466</b>	<b>HARVARD UNIV</b>	<b>5581</b>	
NET ECOSYSTEM EXCHANGE OF CO2 AND H2O FROM PRIMARY TROPICAL FOREST IN CENTRAL AMAZONIA				UNDERSTANDING GLOBAL SOURCES OF CARBON MONOXIDE: AN INTEGRATED OBSERVATIONAL STRATEGY_STUDENT NAME			
07/07/1998 - 12/31/2002	FY02: \$0	Total: \$1,362,000		08/21/2002 - 08/31/2005	FY02: \$0	Total: \$0	
<i>Prin. Invest.:</i> S C WOFYSY				<i>Prin. Invest.:</i> D JACOB			
<i>Tech. Officer:</i> GSFC/D W DEERING				<i>Tech. Officer:</i> GSFC/M WEI			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER				<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			
<b>NCC 5 590</b>	<b>HARVARD UNIV</b>	<b>5574</b>		<b>NGT 5 50258</b>	<b>HARVARD UNIV</b>	<b>5582</b>	
CO2 BUDGET REGIONAL AIRBORNE STUDY (COBRA) - BRAZIL				STUDIES IN LOW TEMPERATURE ATOMIC PHYSICS USING A CRYOGENIC HYDROGEN MASER STUDENT: MARC HUMPHR			
11/01/2001 - 10/31/2004	FY02: \$0	Total: \$0		07/07/1999 - 06/30/2002	FY02: \$0	Total: \$66,000	
<i>Prin. Invest.:</i> S C WOFYSY				<i>Prin. Invest.:</i> W H PARKINSON			
<i>Tech. Officer:</i> GSFC/D W DEERING				<i>Tech. Officer:</i> GSFC/L SMITH			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER				<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			
<b>NGT 5 101</b>	<b>HARVARD UNIV</b>	<b>5575</b>		<b>NGT 8 52922</b>	<b>HARVARD UNIV</b>	<b>5583</b>	
NATURAL SELECTION IN ELEMENTS OF PHOTOSYNTHESIS STUDENT: LUCAS MIX				EFFECTIVENESS OF ENGINEERING DESIGN AND TECHNOLOGY BASED CHALLENGES ON URBAN MIDDLE SCHOOL STUDENTS			
05/25/2000 - 08/31/2003	FY02: \$0	Total: \$44,000		08/27/2002 - 08/31/2005	FY02: \$0	Total: \$0	
<i>Prin. Invest.:</i> C CAVANAUGH				<i>Prin. Invest.:</i> R PETERKIN			
<i>Tech. Officer:</i> GSFC/G A SOFFEN				<i>Tech. Officer:</i> MSFC/S NASH-STEVENSON			
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)				<i>CASE Category:</i> 21 - MATHEMATICS			
<b>NGT 5 30152</b>	<b>HARVARD UNIV</b>	<b>5576</b>		<b>NAG 1 2027</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5584</b>	
BIOLOGICAL AND PHYSICAL CONTROLS ON EVAPOTRANSPIRATION IN A MID-LATITUDE FOREST				LARGE-SCALE STRATOSPHERIC TRANSPORT PROCESSES MY 1/3			
08/28/1998 - 08/31/2001	FY02: \$0	Total: \$66,000		03/20/1998 - 08/28/2001	FY02: \$0	Total: \$414,501	
<i>Prin. Invest.:</i> S C WOFYSY, LIN				<i>Prin. Invest.:</i> R A PLUMB			
<i>Tech. Officer:</i> GSFC/M Y WEI				<i>Tech. Officer:</i> LARC/G L MADDREA, LARC/L R POOLE			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER				<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			
<b>NGT 5 30205</b>	<b>HARVARD UNIV</b>	<b>5577</b>		<b>NAG 1 2122</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5585</b>	
NITRIC ACID AND NITROGEN DIOXIDE FLUX MEASUREMENTS OVER A NORTH-AMERICAN FOREST/STUDENT: CASSANDRA H				UNSTRUCTURED MESH METHODS FOR THE SIMULATION OF HYPERSONIC FLOW			
08/19/1999 - 08/31/2002	FY02: \$0	Total: \$66,000		12/23/1998 - 03/31/2001	FY02: \$0	Total: \$190,766	
<i>Prin. Invest.:</i> S C WOFYSY				<i>Prin. Invest.:</i> J PERAIRE			
<i>Tech. Officer:</i> GSFC/M WEI				<i>Tech. Officer:</i> LARC/K L BIBB, LARC/K J WEILMUNSTER			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER				<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			
<b>NGT 5 30336</b>	<b>HARVARD UNIV</b>	<b>5578</b>		<b>NAG 1 2152</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5586</b>	
LABORATORY STUDIES OF TROPOSPHERIC SOURCES & SINKS OF THE HYDROXYL RADICAL: OXIDATION OF ALKENE				STUDIES OF TRACE GAS CHEMICAL CYCLES USING INVERSE METHODS & GLOBAL CHEMICAL TRANSPORT MODELS			
08/21/2000 - 08/31/2003	FY02: \$0	Total: \$44,000		02/25/1999 - 12/31/2001	FY02: \$0	Total: \$428,180	
<i>Prin. Invest.:</i> J ANDERSON				<i>Prin. Invest.:</i> R G PRINN			
<i>Tech. Officer:</i> GSFC/M WEI				<i>Tech. Officer:</i> LARC/G L MADDREA, LARC/L R POOLE			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER				<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			
<b>NGT 5 30366</b>	<b>HARVARD UNIV</b>	<b>5579</b>		<b>NAG 1 2173</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5587</b>	
CHARACTERIZING THE HYDROLOGICAL AND ENVIRONMENTAL CONTROLS ON THE CARBON BALANCE OF BOREAL FORESTS/AL				PHYS PROCESSES GOV'G ATMOSPHERIC TRACE CONSTITUENTS MEAS'D FROM A/C IN PEM-TROPICS-B (NRA-97-MTPE-04)			
08/13/2001 - 08/31/2004	FY02: \$0	Total: \$22,000		05/03/1999 - 02/28/2002	FY02: \$0	Total: \$445,112	
<i>Prin. Invest.:</i> S WOFYSY				<i>Prin. Invest.:</i> R E NEWELL			
<i>Tech. Officer:</i> GSFC/M WEI				<i>Tech. Officer:</i> LARC/J L RAPER, LARC/R J BENDURA			
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER				<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			
<b>NGT 5 30410</b>	<b>HARVARD UNIV</b>	<b>5580</b>		<b>NAG 1 2203</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5588</b>	
A NEW METHOD FOR IN SITU MEASUREMENTS OF THE ISOTOPE COMPOSITION OF WATER IN THE TROPICAL UPPER				TRACER EVOLUTION AT HIGHER LATITUDES IN WINTER (SOLVE)			
08/15/2001 - 08/31/2004	FY02: \$0	Total: \$22,000		06/17/1999 - 09/30/2001	FY02: \$0	Total: \$24,820	
<i>Prin. Invest.:</i> J ANDERSON				<i>Prin. Invest.:</i> R PLUMB			
<i>Tech. Officer:</i> GSFC/M WEI				<i>Tech. Officer:</i> LARC/G MADDREA			
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER				<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			

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**NAG 1 2239 MASSACHUSETTS INST OF TECHNOLOGY 5589**  
 REQUIREMENT ENGINEERING FOR SOFTWARE INTEGRITY AND SAFETY  
 (NRA 98-LARC-8)  
 09/23/1999 - 09/30/2002 FY02: \$0 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 5590**  
 DEVELOPMENT OF AN OUTPUT-BASED ADAPTIVE METHOD FOR MULTI-  
 DIMENSIONAL EULER AND NAVIER STOKES SIMUL-  
 02/29/2000 - 06/30/2002 FY02: \$0 Total: \$165,279  
*Prin. Invest.:* D L DARMOTAL  
*Tech. Officer:* LARC/J L THOMAS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2306 MASSACHUSETTS INST OF TECHNOLOGY 5591**  
 USE OF GTE, MOZAIC, SONE X AND UARS-MLS DATA IN UNDERSTANDING  
 TROPOSPHERIC CRITICAL TO MODEL DEV.  
 06/08/2000 - 03/31/2003 FY02: \$0 Total: \$180,000  
*Prin. Invest.:* R E NEWELL  
*Tech. Officer:* LARC/D L MODDREA  
*CASE Category:* 31 - ATMOSPHERICSCIENCE

**NAG 1 01025 MASSACHUSETTS INST OF TECHNOLOGY 5592**  
 PERFORMANCE AND RELIABILITY OPTIMIZATION FOR AERO- SPACE SYS-  
 TEMS SUBJECT TO UNCERTAINTY & DEGRADATIO  
 02/16/2001 - 12/31/2003 FY02: \$0 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 5593**  
 ACTIVE TAILORING OF A FLEXIBLE WING USING LANGLEY MACRO-FIBER  
 COMPOSITE (MFC) ACTUATORS  
 06/20/2001 - 12/31/2002 FY02: \$0 Total: \$39,988  
*Prin. Invest.:* C CESNIK  
*Tech. Officer:* LARC/H K WILKIE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02006 MASSACHUSETTS INST OF TECHNOLOGY 5594**  
 INVESTIGATE AIRCRAFT DYNAMIC STATE AND INTENT ROOMTS IN FUTURE  
 AIR TRAFFIC CONTROL ENVIRONMENTS  
 11/29/2001 - 11/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* R J HANSMAN  
*Tech. Officer:* LARC/R BARNYDT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02037 MASSACHUSETTS INST OF TECHNOLOGY 5595**  
 AN OUTPUT-BASED ADAPTIVE METHOD FOR MULTI- DIMENSIONAL EULER  
 AND NAVIER-STOKES  
 01/15/2002 - 01/15/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D L DARMOFAL  
*Tech. Officer:* LARC/J L THOMAS, LARC/E J NIELSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02038 MASSACHUSETTS INST OF TECHNOLOGY 5596**  
 IDENTIFICATION OF KEY CONSTRAINTS AND SYSTEM DYNAMICS IN THE  
 NAS TO SUPPORT EVALUATION  
 01/25/2002 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R J HANSMAN  
*Tech. Officer:* LARC/R E YACKOVETSKY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02040 MASSACHUSETTS INST OF TECHNOLOGY 5597**  
 CAPRI: USING A GEOMETRIC FOUNDATION FOR COMPUTA- TIONAL ANALY-  
 SIS AND DESIGN  
 01/18/2002 - 01/17/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R HAIMES  
*Tech. Officer:* LARC/W T JONES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 729 MASSACHUSETTS INST OF TECHNOLOGY 5598**  
 MODELING INFORMATION PROCESSING IN FLIGHT MANAGEM ENT  
 08/27/1991 - 06/30/2001 FY02: \$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 1136 MASSACHUSETTS INST OF TECHNOLOGY 5599**  
 SDSI IMPLEMENTATION  
 07/11/1997 - 11/30/2000 FY02: \$0 Total: \$153,149  
*Prin. Invest.:* R L RIVEST  
*Tech. Officer:* ARCY K LIU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1272 MASSACHUSETTS INST OF TECHNOLOGY 5600**  
 APPLYING ATC AUTOMATION TO ADDRESS ENVIRONMENTAL C ONSIDER-  
 ATIONS  
 12/22/1998 - 05/31/2002 FY02: \$0 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 5601**  
 HUMAN PERFORMANCE CONSIDERATIONS FOR SHARED INFORMATION IN  
 DATALINKED AIR TRAFFIC MANAGEMENT SYSTEM  
 03/03/1999 - 07/31/2003 FY02: \$0 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 5602**  
 SOFTWARE DESIGN FOR AIR-TRAFFIC CONTROL  
 07/19/1999 - 07/14/2001 FY02: \$0 Total: \$100,530  
*Prin. Invest.:* D N JACKSON, J CHAPIN  
*Tech. Officer:* ARCM M ESHOW, ARC/K Y TUNG-CATE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1350 MASSACHUSETTS INST OF TECHNOLOGY 5603**  
 EFFECT OF GROWTH STARVATION UNDER SIMULATED MICRO- GRAVITY  
 ON THE BACTERIAL STRESS & SECONDARY METAB  
 07/21/1999 - 07/14/2002 FY02: \$0 Total: \$599,947  
*Prin. Invest.:* A L DEMAIN  
*Tech. Officer:* ARCM M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1388 MASSACHUSETTS INST OF TECHNOLOGY 5604**  
 HYBRID ADAPTIVE METHODS FOR THE DEVELOPMENT OF MOD EL-BASED  
 AUTONOMOUS ROBOTIC SYSTEMS  
 12/01/1999 - 11/30/2001 FY02: \$0 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 5605**  
 MODELING & ANALYSIS OF MULTIPLE ALERTING SYSTEM IN TERACTIONS  
 07/26/2000 - 02/28/2003 FY02: \$0 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 5606**  
 SURFACE GENERATION & CARTESIAN MESH SUPPORT  
 02/27/2001 - 02/28/2003 FY02: \$0 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 5607**  
 SELF-DIRECTED COOPERATIVE PLANETARY ROVERS  
 03/16/2001 - 02/28/2003 FY02: \$0 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 5608**  
 UNIFYING MODEL-BASED SEQUENCE EXECUTION & FAULT PROTECTION  
 FOR SPACE VEHICLES  
 03/23/2001 - 03/14/2003 FY02: \$0 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 5609**  
 UNDERSTANDING THE DYNAMICS OF AGILE SMALL-SCALE ROTORCRAFT  
 05/09/2001 - 04/30/2002 FY02: \$0 Total: \$50,000  
*Prin. Invest.:* E FERON  
*Tech. Officer:* ARC/M B TISCHER, ARC/B R LAKINSMITH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1515 MASSACHUSETTS INST OF TECHNOLOGY 5610**  
 DEVELOPMENT OF STOCHASTIC MODELS AND MODULES AND INTERACTIVE  
 COMMUNICATION CAPABILITIES FOR THE MIT  
 08/08/2001 - 07/31/2002 FY02: \$0 Total: \$65,000  
*Prin. Invest.:* J P CLARKE  
*Tech. Officer:* ARC/L A MEYN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1540 MASSACHUSETTS INST OF TECHNOLOGY 5611**  
 INTERDISCIPLINARY ANALYSIS OF PRE CAMBRIAN ANIMAL FOSSILS FROM  
 SW CHINA  
 03/15/2002 - 02/28/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* Y L WANG  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1543 MASSACHUSETTS INST OF TECHNOLOGY 5612**  
 MODEL BASED HAZARD ANALYSIS RESEARCH  
 03/20/2002 - 03/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* N LEVESON  
*Tech. Officer:* ARC/M SHIRLEY, ARC/A WANG  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 2 1548 MASSACHUSETTS INST OF TECHNOLOGY 5613**  
 STOCHASTIC MODELS FOR THE MIT EXTENSIBLE AIR NETWORK SIMULATION  
 04/04/2002 - 02/21/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J P CLARKE  
*Tech. Officer:* ARC/L A MEYN, ARC/K ROTH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1552 MASSACHUSETTS INST OF TECHNOLOGY 5614**  
 MOTION PLANNING FOR AGILE MANEUVERING VEHICLES  
 04/11/2002 - 04/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* E FERON  
*Tech. Officer:* ARC/M TISCHLER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1554 MASSACHUSETTS INST OF TECHNOLOGY 5615**  
 ADVANCED NOISE ABATEMENT PROCEDURES FOR APPROACH  
 04/17/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J P CLARKE  
*Tech. Officer:* ARC/L TOBIAS, ARC/T J DAVIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 1879 MASSACHUSETTS INST OF TECHNOLOGY 5616**  
 MODELING OF PULSED PLASMA THRUSTER PLUMES  
 05/22/1996 - 11/30/2000 FY02: \$0 Total: \$483,000  
*Prin. Invest.:* J B HOWARD  
*Tech. Officer:* GRC/J E BROOKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2052 MASSACHUSETTS INST OF TECHNOLOGY 5617**  
 IDENTIFICATION AND CONTROL OF ROTATING STALL MODES IN AXIAL  
 COMPRESSORS  
 05/27/1997 - 03/31/2001 FY02: \$0 Total: \$669,476  
*Prin. Invest.:* J PADUANO  
*Tech. Officer:* GRC/M BRIGHT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2078 MASSACHUSETTS INST OF TECHNOLOGY 5618**  
 AERODYNAMICS OF ADVANCED SUBSONIC TRANSPORT INTEGRATED FAN  
 BYPASS DUCT SYSTEM AND ITS DESIGN  
 12/18/1997 - 08/31/2001 FY02: \$0 Total: \$211,012  
*Prin. Invest.:* C S TAN  
*Tech. Officer:* GRC/J J ADAMCZYK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2101 MASSACHUSETTS INST OF TECHNOLOGY 5619**  
 THREE-DIMENSIONAL AERODYNAMIC INSTABILITIES IN MULTISTAGE  
 AXIAL COMPRESSORS  
 12/23/1997 - 01/31/2003 FY02: \$0 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 5620**  
 AN INTEROMETRIC INVESTIGATION OF CONTACT LINE DYNAMICS IN  
 SPREADING POLYMER MELTS AND SOLUTIONS  
 04/21/1998 - 01/19/2003 FY02: \$0 Total: \$357,650  
*Prin. Invest.:* G H MCKINLEY  
*Tech. Officer:* GRC/N R HALL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

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**NAG 3 2178 MASSACHUSETTS INST OF TECHNOLOGY 5621**  
 INTEGRATED HUMAN CENTERED SYSTEMS ANALYSIS OF FUNCTIONAL REQUIREMENTS FOR COCKPIT ICING INFORMATION  
 07/08/1998 - 12/31/2002 FY02: \$0 Total: \$239,975  
*Prin. Invest.:* R J HANSMAN  
*Tech. Officer:* GRC/A REEHORST  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2320 MASSACHUSETTS INST OF TECHNOLOGY 5622**  
 AEROTHERMAL PROBABILISTIC DESIGN OF COMPRESSOR BLADES  
 01/13/2000 - 03/21/2003 FY02: \$0 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 5623**  
 CHARACTERIZATION OF AEROMECHANICS RESPONSE AND INSTABILITY IN FANS, COMPRESSORS, AND TURBINE BLADES  
 01/13/2000 - 01/13/2003 FY02: \$0 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 5624**  
 INTRA-ENGINE TRACE SPECIES CHEMISTRY INTRA-ENGINE TRACE SPECIES CHEMISTRY  
 11/21/2000 - 11/30/2001 FY02: \$0 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 5625**  
 MICROFABRICATED LIQUID ROCKET MOTORS MICROFABRICATED LIQUID ROCKET MOTORS  
 11/21/2000 - 11/30/2002 FY02: \$0 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 5626**  
 CAPRI USING A GEOMETRIC FOUNDATION FOR COMPUTATIONAL ANALYSIS AND DESIGN  
 01/17/2001 - 09/11/2002 FY02: \$0 Total: \$109,920  
*Prin. Invest.:* R HAIMES  
*Tech. Officer:* GRC/G FOLLEN  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2678 MASSACHUSETTS INST OF TECHNOLOGY 5627**  
 MODELING AND INTEGRATION OF ACTIVE INTERNAL FLOW CONTROL IN AERO-ENGINE COMPRESSORS  
 12/17/2001 - 09/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* D M GREITZER  
*Tech. Officer:* GRC/G WELCH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2685 MASSACHUSETTS INST OF TECHNOLOGY 5628**  
 ARCHITECTURES AND PROTOCOLS FOR NASA'S FUTURE SPACE NETWORKS  
 01/08/2002 - 12/20/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* D MODIANO  
*Tech. Officer:* GRC/O SANDS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2732 MASSACHUSETTS INST OF TECHNOLOGY 5629**  
 UNSTEADY COMPUTATIONAL CODE VALIDATION AND IMPACT OF UNSTEADY IMPELLER-DIFFUSER INTERACTIONS ON CENT  
 03/11/2002 - 12/25/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* D S TAN  
*Tech. Officer:* GRC/G SKOCH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2767 MASSACHUSETTS INST OF TECHNOLOGY 5630**  
 TURBOMACHINERY FOR LOW TO HIGH MACH NUMBER FLIGHT TURBOMACHINERY FOR LOW TO HIGH MACH NUMBER FLIGHT  
 04/11/2002 - 08/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D S TAN  
*Tech. Officer:* GRC/K SUDER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3558 MASSACHUSETTS INST OF TECHNOLOGY 5631**  
 ACCRETING BLACK HOLES - AN ALL OUT EFFORT  
 12/14/1996 - 12/14/2002 FY02: \$0 Total: \$182,003  
*Prin. Invest.:* W H LEWIN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3915 MASSACHUSETTS INST OF TECHNOLOGY 5632**  
 SOLAR SYSTEM DYNAMICS  
 02/21/1997 - 09/30/2002 FY02: \$0 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 5633**  
 SMALL MAIN-BELT SPECTROSCOPIC SURVEY  
 02/12/1997 - 12/31/2001 FY02: \$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 5634**  
 STELLAR OCCULTATION STUDIES OF PLUTO, TRITON  
 02/12/1997 - 11/30/2001 FY02: \$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 5635**  
 ADVANCED GLOBAL ATMOSPHERIC GASES EXPERIMENT (AGAG)  
 02/26/1997 - 01/31/2003 FY02: \$0 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 5636**  
 COLLISION PROCESSES INVOLVING ATMOSPHERIC FREE RADICAL INFRARED ABSORBERS  
 02/26/1997 - 09/30/2001 FY02: \$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 5637**  
 INVESTIGATION OF VENUS SURFACE PROPERTIES  
 03/10/1997 - 12/31/2001 FY02: \$0 Total: \$165,000  
*Prin. Invest.:* D G FORD  
*Tech. Officer:* GSFC/J G GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE



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<p><b>NAG 5 4434</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5638</b>  RESEARCH PARTICIPATION IN THE MARS ORBITING LASER  04/28/1997 - 12/31/2002      FY02: \$0      Total: \$409,282  <i>Prin. Invest.:</i> G H PETTENGILL  <i>Tech. Officer:</i> GSFC/D E SMITH  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 6710</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5647</b>  PHYSICAL MECHANISMS CONTROLLING UPPER TROPOSPHERIC WATER  VAPOR AS REVEALED BY MLS DATA FROM U  12/17/1997 - 11/30/2001      FY02: \$0      Total: \$278,000  <i>Prin. Invest.:</i> D NEWELL  <i>Tech. Officer:</i> GSFC/A DOUGLASS  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 4555</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5639</b>  PLANETARY TECTONICS AND VOLCANISM  06/23/1997 - 03/31/2002      FY02: \$0      Total: \$689,783  <i>Prin. Invest.:</i> D R ZUBER  <i>Tech. Officer:</i> GSFC/H BRINTON  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 7012</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5648</b>  JETS IN AGN: NUMERICAL SIMULATIONS IN RELATIVISTIC MHD - ATP  02/19/1998 - 02/28/2003      FY02: \$0      Total: \$182,915  <i>Prin. Invest.:</i> M H VAN PUTTEN  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 4768</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5640</b>  PHASE EQUILIBRIUM INVESTIGATIONS OF PLANETARY MATE  06/09/1997 - 06/30/2001      FY02: \$0      Total: \$180,000  <i>Prin. Invest.:</i> P L GROVE  <i>Tech. Officer:</i> HQ/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 7194</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5649</b>  ATLANTIC OCEAN PROCESSES FROM SUBPOLAR REGIONS TO THE  SOUTHERN SUBTROPICAL GYRE:MODEL/DATA COMPAR  03/26/1998 - 04/30/2001      FY02: \$0      Total: \$498,840  <i>Prin. Invest.:</i> P RIZZOLI  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 4806</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5641</b>  MARS OBSERVER LASER ALTIMETER  08/01/1997 - 07/31/2001      FY02: \$0      Total: \$970,797  <i>Prin. Invest.:</i> M T ZUBER  <i>Tech. Officer:</i> GSFC/D E SMITH  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 7279</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5650</b>  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      FY02: \$0      Total: \$10,125  <i>Prin. Invest.:</i> G W CLARK  <i>Tech. Officer:</i> GSFC/J SWANK  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 4989</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5642</b>  CENTER FOR QUANTITATIVE CARDIOVASCULAR PHYSIOLOGY, ANALYSIS  06/27/1997 - 08/31/2001      FY02: \$0      Total: \$575,000  <i>Prin. Invest.:</i> R COHEN  <i>Tech. Officer:</i> GSFC/V SCHNEIDER  <i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER</p>	<p><b>NAG 5 7475</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5651</b>  THE VALUE OF DISTRIBUTED MODELING TO FLOOD FORECASTING  06/18/1998 - 08/31/2002      FY02: \$0      Total: \$382,143  <i>Prin. Invest.:</i> R BRASS  <i>Tech. Officer:</i> GSFC/E ENGMAN  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 5271</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5643</b>  FIRST YEAR OF TWO YEAR EFFORT FIRST YEAR OF TWO YEAR EFFORT -  A PROGRAM OF  04/17/2000 - 10/01/2002      FY02: \$0      Total: \$740,000  <i>Prin. Invest.:</i> M SCHATTENBURG  <i>Tech. Officer:</i> GSFC/J C BRINTON  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 5 7487</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5652</b>  THIS PR PROVIDES FUNDING TO A MIT GRANT ON "PASSIVE MICROWAVE  STUDIES OF ATMOSPHERIC PRECIPITATION A  06/05/1998 - 03/31/2002      FY02: \$0      Total: \$355,000  <i>Prin. Invest.:</i> D STAEHLIN  <i>Tech. Officer:</i> GSFC/J C SHIUE  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 5329</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5644</b>  ADAPTATION OF GAS ELECTRON MULTIPLIER TECHNOLOGY FOR ROUTINE  03/29/2001 - 03/31/2004      FY02: \$0      Total: \$129,884  <i>Prin. Invest.:</i> A LEVINE  <i>Tech. Officer:</i> GSFC/J BRINTON  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 5 7525</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5653</b>  USE OF SATELLITE REMOTE SENSING TO STUDY THE ROLE OF RAINFALLS  IN TROPICAL CLIMATE  06/08/1998 - 12/31/2002      FY02: \$0      Total: \$311,993  <i>Prin. Invest.:</i> E ELTAHIR  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 5330</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5645</b>  ADVANCED SILICON DETECTORS FOR HIGH ENERGY ASTROPHYSICS  MISSIONS  07/09/2002 - 07/02/2004      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> G RICKER  <i>Tech. Officer:</i> GSFC/J BRINTON  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 5 7794</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5654</b>  INTERCALIBRATION AND CROSS-CORRELATION OF ACE AND WIND SOLAR  WIND DATA  12/10/1998 - 09/30/2002      FY02: \$0      Total: \$203,205  <i>Prin. Invest.:</i> D J LAZARUS  <i>Tech. Officer:</i> GSFC/D C LING  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 6063</b>      <b>MASSACHUSETTS INST OF TECHNOLOGY</b>      <b>5646</b>  VERTICAL ACCURACY IMPROVEMENT FOR VLBI AND GPS  08/01/1997 - 07/14/2001      FY02: \$0      Total: \$272,990  <i>Prin. Invest.:</i> A E NIELL  <i>Tech. Officer:</i> GSFC/H V FREY  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	

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**NAG 5 7839**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5655**  
 STRUCTURAL DYNAMICS & CONTROLS ANALYSES, SIMULATIO NS, AND  
 TESTBEDS FOR THENEXT GENERATION SPACE T  
 12/16/1998 - 05/31/2002      FY02: \$0      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**      **5656**  
 A SYNTHESIS OF THE GLOBAL WOCE OBSERVATIONS OF THE OCEANIC  
 CIRCULATION  
 12/10/1998 - 12/31/2001      FY02: \$0      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**      **5657**  
 A SERARCH FOR THE SOLAR SOURCES OF HIGH-SPEED SOLA R WIND  
 STREAMS  
 01/15/1999 - 12/14/2002      FY02: \$0      Total: \$288,490  
*Prin. Invest.:* D J LAZARUS  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8031**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5658**  
 REDUCTION AND SCIENTIFIC ANALYSIS OF DATA FROM IMP -8  
 01/19/1999 - 12/31/2002      FY02: \$0      Total: \$312,734  
*Prin. Invest.:* A J LAZARUS  
*Tech. Officer:* GSFC/J KING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8045**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5659**  
 SCIENTIFIC ANALYSIS OF DATA FOR THE ISTP/SOLARMAX PROGRAM  
 01/11/1999 - 01/14/2002      FY02: \$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**      **5660**  
 PULSAR WIND NEBULAE, SPACE VELOCITIES, & SUPERNOVA REMNANT  
 ASSOCIATIONS LTSA 98  
 01/13/1999 - 01/14/2004      FY02: \$0      Total: \$144,000  
*Prin. Invest.:* V M KASPI  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8368**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5661**  
 FORMATION AND EVOLUTION OF BINARY SYSTEMS CONTAINI NG COL-  
 LAPSED STARS (ATP 98)  
 03/01/1999 - 04/30/2003      FY02: \$0      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**      **5662**  
 THEORETICAL STUDIES OF BINARY SYSTEMS CONTAINING C OLLAPSED  
 STARS  
 04/16/1999 - 07/31/2001      FY02: \$0      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**      **5663**  
 TWO-WAY BIOSPHERE-ATMOSPHERE INTERACTIONS: THEIR IMPLICA-  
 TIONS FOR SATELLITE OBSERVATIONS OF REGIONA  
 06/14/1999 - 06/30/2002      FY02: \$0      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**      **5664**  
 DIRECT DEPOSITION OF OPTICAL BLOCKING FILTERS ON CCD X-RAY  
 DETECTORS  
 07/07/1999 - 09/30/2001      FY02: \$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**      **5665**  
 IMPLICATIONS OF LUNAR PROSPECTOR DATA FOR LUNAR GEOPHYSICS  
 07/20/1999 - 07/31/2002      FY02: \$0      Total: \$172,347  
*Prin. Invest.:* M T ZUBER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8720**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5666**  
 INVESTIGATION OF SOLAR WIND CORRELATIONS & MODIFI- CATIONS  
 NEAR EARTH USING MULTI-SPACECRAFT OBSERVA  
 08/03/1999 - 07/31/2002      FY02: \$0      Total: \$70,500  
*Prin. Invest.:* J I RICHARDSON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8776**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5667**  
 RESIN-SPINNING OF SYNTHETIC POLYMER FIBERS WITH SILK-LIKE PROP-  
 ERTIES  
 08/31/1999 - 08/31/2003      FY02: \$0      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**      **5668**  
 TEMPO OF THE PERMIAN MASS EXTINCTIONS & RECOVERIES  
 09/29/1999 - 04/01/2002      FY02: \$0      Total: \$228,000  
*Prin. Invest.:* S A BOWRING  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8887**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5669**  
 LABORATORY STUDIES OF HOMOGENEOUS & HETEROGENEOUS CHEMI-  
 CAL PROCESSES OF IMPORTANCE IN THE UPPER ATMOS  
 12/02/1999 - 12/31/2002      FY02: \$0      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**      **5670**  
 MODELING THE EXTENDED NEUTRAL ATMOSPHERE & PLASMA ENVIRON-  
 MENT NEAR SATURN/FOLLOW-ON TO NAG5-6129  
 01/18/2000 - 07/14/2003      FY02: \$0      Total: \$122,734  
*Prin. Invest.:* J D RICHARDSON  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERICSCIENCE

**NAG 5 9057 MASSACHUSETTS INST OF TECHNOLOGY 5671**  
 NEW GPS SITES ON THE ARABIAN PLATE TO EXPAND THE IGS NETWORK  
 & TO SUPPORT MEASUREMENTS OF THE RED  
 02/15/2000 - 02/28/2003 FY02: \$0 Total: \$18,000  
*Prin. Invest.:* R E REILINGER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9080 MASSACHUSETTS INST OF TECHNOLOGY 5672**  
 DEVELOPMENT OF SOLID-STATE LOCAL-OSCILLATOR SOURCE FOR TERA-  
 HERTZ FREQUENCIES  
 02/17/2000 - 02/28/2003 FY02: \$0 Total: \$282,000  
*Prin. Invest.:* Q HU  
*Tech. Officer:* GSFC/S NIEBUR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9117 MASSACHUSETTS INST OF TECHNOLOGY 5673**  
 SELF-ORGANIZED CRITICALITY, MULTIFRACTALS, & INTER MITTENT TUR-  
 BULENCE IN EARTH'S MAGNETOTAIL  
 02/24/2000 - 02/28/2003 FY02: \$0 Total: \$88,637  
*Prin. Invest.:* T CHANG  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9120 MASSACHUSETTS INST OF TECHNOLOGY 5674**  
 NEW ENERGETIC RADIO PULSARS: AN ARCHIVAL X-RAY SURVEY - ADP 99  
 02/29/2000 - 02/28/2002 FY02: \$0 Total: \$29,166  
*Prin. Invest.:* V M KASPI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9135 MASSACHUSETTS INST OF TECHNOLOGY 5675**  
 RXTE OBSERVATIONS OF BLACK HOLE CANDIDATES ADP99  
 02/28/2000 - 06/30/2002 FY02: \$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 5676**  
 APPLICATIONS OF AIRBORNE & ORBITAL LASER ALTIMETRY FOR COASTAL  
 PROCESSES & MARINE STATIC GRAVITY  
 02/29/2000 - 02/28/2002 FY02: \$0 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 5677**  
 LONG-TERM MONITORING OF ANOMALOUS X-RAY PULSARS WITH RXTE -  
 ADP 99  
 03/08/2000 - 03/14/2002 FY02: \$0 Total: \$58,265  
*Prin. Invest.:* D CHARKRABARTY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9184 MASSACHUSETTS INST OF TECHNOLOGY 5678**  
 ACCRETING NEUTRON STARS AS ASTROPHYSICAL LABORATOR IES  
 LTSA-99  
 03/07/2000 - 03/14/2005 FY02: \$0 Total: \$240,744  
*Prin. Invest.:* D CHARKRABARTY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9185 MASSACHUSETTS INST OF TECHNOLOGY 5679**  
 TIMING THE MILLISECOND X-RAY PULSAR WITH RXTE - ADP - 99  
 03/07/2000 - 03/14/2002 FY02: \$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 5680**  
 X-RAY PULSAR STUDIES WITH RXTE - ADP 99  
 03/08/2000 - 03/14/2003 FY02: \$0 Total: \$40,000  
*Prin. Invest.:* S RAPPAPORT  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9211 MASSACHUSETTS INST OF TECHNOLOGY 5681**  
 A SEARCH FOR EVIDENCE OF NON-THERMAL EMISSION FROM THE  
 SUPERNOVA REMNANTS 37A/B (ADP 99)  
 03/09/2000 - 03/14/2002 FY02: \$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 5682**  
 A MEASUREMENT OF THE NON-THERMAL X-RAY EMISSION OF THE  
 SUPERNOVA REMNANTRX J1713.7-3946 - ADP 99  
 03/09/2000 - 03/14/2002 FY02: \$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 5683**  
 A STUDY OF THE NON-THERMAL X-RAY EMISSION OF SHELL -TYPE  
 SUPERNOVA REMNANTS - LTSA99  
 03/09/2000 - 03/14/2005 FY02: \$0 Total: \$204,300  
*Prin. Invest.:* G ALLEN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9445 MASSACHUSETTS INST OF TECHNOLOGY 5684**  
 CARBONATE PLATFORM DEVELOPMENT & STROMATOLITE MORP HOGEN-  
 ESIS: CONSTRAINTS ON ENVIRONMENTAL & BIOLOGIC  
 05/01/2000 - 04/30/2004 FY02: \$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 5685**  
 PHASE EQUILIBRIUM INVESTIGATIONS OF PLANETARY MATERIALS  
 04/28/2000 - 06/30/2003 FY02: \$0 Total: \$122,000  
*Prin. Invest.:* T L GROVE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9616 MASSACHUSETTS INST OF TECHNOLOGY 5686**  
 SOLAR WIND ACCELERATION, HEATING, & EVOLUTION WITH WAVE-  
 PARTICLE  
 05/23/2000 - 04/30/2003 FY02: \$0 Total: \$107,441  
*Prin. Invest.:* T CHANG  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

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**NAG 5 9622 MASSACHUSETTS INST OF TECHNOLOGY 5687**  
 DEVELOPMENT OF 25-YEAR IMP 8 BOW SHOCK CROSSING LIST, INGESTION OF THIS LIST TO CDAREB, & ENHANCEMENT  
 05/19/2000 - 05/31/2003 FY02: \$0 Total: \$42,764  
*Prin. Invest.:* J RICHARDSON  
*Tech. Officer:* GSFC/J KING  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9637 MASSACHUSETTS INST OF TECHNOLOGY 5688**  
 THE USE OF TRMM LIS & GEOSTATIONARY IR DATA TO STUDY LAND-OCEAN DIFFERENCES IN CONVECTION & THEIR RE  
 07/07/2000 - 11/30/2002 FY02: \$0 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 5689**  
 APPLICATIONS OF TRMM PRODUCTS IN HYDROLOGIC STUDIES OVER THE AMAZON REGION  
 07/07/2000 - 11/30/2002 FY02: \$0 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 5690**  
 OPTICAL INTERFEROMETER STUDIES OF OTHER PLANETARY SYSTEMS  
 06/27/2000 - 12/31/2002 FY02: \$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 5691**  
 DISENTANGLING X-RAY EMISSION PROCESSES IN VELA-LIKE PULSARS  
 09/22/2000 - 01/31/2002 FY02: \$0 Total: \$36,625  
*Prin. Invest.:* B M GAENSLER  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10008 MASSACHUSETTS INST OF TECHNOLOGY 5692**  
 STUDYING THE INTERGALACTIC MEDIUM THROUGH X-RAY ABSORPTION LINES  
 09/25/2000 - 09/30/2003 FY02: \$0 Total: \$44,500  
*Prin. Invest.:* C R CANIZARES  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10107 MASSACHUSETTS INST OF TECHNOLOGY 5693**  
 XMM OBSERVATIONS OF LOW MASS GROUPS  
 12/01/2000 - 11/30/2002 FY02: \$0 Total: \$28,000  
*Prin. Invest.:* D S DAVIS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10192 MASSACHUSETTS INST OF TECHNOLOGY 5694**  
 XMM OBSERVATIONS OF BLACK-HOLE X-RAY BINARIES IN OUTBURST  
 12/28/2000 - 12/31/2002 FY02: \$0 Total: \$22,900  
*Prin. Invest.:* W LEWIN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10328 MASSACHUSETTS INST OF TECHNOLOGY 5695**  
 COMPOSITION OF HYDRATED M AND E-CLASS ASTEROIDS: A SEARCH FOR ANALOGS  
 01/26/2001 - 01/31/2002 FY02: \$0 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 5696**  
 RELIEF EVOLUTION IN TECTONICALLY ACTIVE MOUNTAIN RANGERS  
 02/08/2001 - 02/14/2003 FY02: \$0 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 5697**  
 AGENT BASED SOFTWARE FOR THE AUTONOMOUS CONTROL OF FORMATION FLYING SPACECRAFT PROPOSAL 864  
 03/07/2001 - 03/14/2004 FY02: \$0 Total: \$366,548  
*Prin. Invest.:* D P HOW  
*Tech. Officer:* GSFC/N J DENNEHY  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 10444 MASSACHUSETTS INST OF TECHNOLOGY 5698**  
 STELLAR OCCULTATION STUDIES OF SMALL BODIES IN THE OUTER SOLAR SYSTEM  
 02/20/2001 - 01/31/2004 FY02: \$0 Total: \$133,900  
*Prin. Invest.:* J ELLIOT  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10604 MASSACHUSETTS INST OF TECHNOLOGY 5699**  
 WATER OF HYDRATION ON C-CLASS ASTEROIDS: DOES SIZE MATTER  
 03/15/2001 - 03/14/2004 FY02: \$0 Total: \$35,934  
*Prin. Invest.:* A RIVKIN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10613 MASSACHUSETTS INST OF TECHNOLOGY 5700**  
 HIGH SENSITIVITY OPTICAL TECHNIQUES FOR ATMOSPHERIC SPECTROSCOPY, KINETICS, AND REMOTE SENSING  
 03/27/2001 - 03/31/2004 FY02: \$0 Total: \$76,121  
*Prin. Invest.:* J J STEINFELD  
*Tech. Officer:* GSFC/M KURYLO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10684 MASSACHUSETTS INST OF TECHNOLOGY 5701**  
 DYNAMICS OF LANDSCAPE CHANGE IN RAPIDLY ERODING REGIONS  
 03/30/2001 - 03/31/2004 FY02: \$0 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 5702**  
 A PARTICLE PHYSICS EXPERIMENT IN SPACE  
 04/06/2001 - 03/31/2003 FY02: \$0 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 5703**  
 APPLICATION OF EXPERIMENTAL PETROLOGY TO AID IN THE INTERPRE-  
 TATION OF THE MARS PATHFINDER ROCK  
 04/10/2001 - 04/30/2004 FY02: \$0 Total: \$40,000  
*Prin. Invest.:* T GROVE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10793 MASSACHUSETTS INST OF TECHNOLOGY 5704**  
 ATLANTIC OCEAN PROCESSES FROM SUBPOLAR REGIONS TO THE  
 SOUTHERN SUBTROPICAL GYRE: MODEL/DATA COMPAR  
 04/25/2001 - 10/31/2001 FY02: \$0 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 5705**  
 LOW-MASS X-RAY BINARIES WITH RXTE (ADP 2000)  
 05/03/2001 - 12/31/2002 FY02: \$0 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 5706**  
 MO&DA FOR THE FARADAY CUP PORTION OF THE WIND SWE EXPERIMENT  
 05/21/2001 - 05/31/2005 FY02: \$0 Total: \$120,000  
*Prin. Invest.:* A LAZARUS  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11113 MASSACHUSETTS INST OF TECHNOLOGY 5707**  
 PLANETARY TOPOGRAPHY AND GRAVITY  
 07/18/2001 - 07/31/2004 FY02: \$0 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 5708**  
 SDM VIRTUALNESS PROJECT  
 08/17/2001 - 11/30/2002 FY02: \$0 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 5709**  
 LARGE-SCALE ATMOSPHERIC TRANSPORT PROCESSES  
 08/17/2001 - 08/31/2004 FY02: \$0 Total: \$149,675  
*Prin. Invest.:* R A PLUMB  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11390 MASSACHUSETTS INST OF TECHNOLOGY 5710**  
 MICROWAVE OBSERVATIONS PRECIPITATION AND THE ATMOSPHERE  
 12/05/2001 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* D STAELIN  
*Tech. Officer:* GSFC/J C SHIUE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11536 MASSACHUSETTS INST OF TECHNOLOGY 5711**  
 SOLAR SYSTEM DYNAMICS  
 01/03/2002 - 12/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* J WISDOM  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11575 MASSACHUSETTS INST OF TECHNOLOGY 5712**  
 RESEARCH PARTICIPATION IN THE MARS ORBITING LASER ALTIMETER  
 EXPERIMENT  
 01/09/2002 - 01/14/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* G H PETTENGHILL  
*Tech. Officer:* GSFC/D E SMITH  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 11602 MASSACHUSETTS INST OF TECHNOLOGY 5713**  
 DIRECT ASSIMILATION OF REMOTELY SENSED LAND SURFACE TEMPERA-  
 TURE FOR THE ESTIMATION OF SURFACE  
 01/17/2002 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D ENTEKHABI  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11617 MASSACHUSETTS INST OF TECHNOLOGY 5714**  
 IDENTIFICATION OF AQUEOUS ALTERATION PRODUCTS ON LOW-ALBEDO  
 ASTEROIDS  
 01/17/2002 - 01/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A S RIVKIN  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11623 MASSACHUSETTS INST OF TECHNOLOGY 5715**  
 PROPAGATION OF INTERPLANETARY DISTURBANCES  
 01/22/2002 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* C WANG  
*Tech. Officer:* GSFC/T KUCERA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11650 MASSACHUSETTS INST OF TECHNOLOGY 5716**  
 PLANETARY GEOPHYSICS AND TECTONICS  
 01/29/2002 - 03/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M T ZUBER  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11683 MASSACHUSETTS INST OF TECHNOLOGY 5717**  
 GALACTIC BLACK HOLE CANDIDATE GRS 1758-258 IN THE OFF/SOFT STATE  
 01/31/2002 - 02/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* W LEWIN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11721 MASSACHUSETTS INST OF TECHNOLOGY 5718**  
 AN INVESTIGATION OF ENSEMBLE METHODS FOR DIRECT ASSIMILATION  
 OF REMOTE SENSING DATA  
 02/06/2002 - 02/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D B MCLAUGHLIN  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11746 MASSACHUSETTS INST OF TECHNOLOGY 5719**  
 ATLANTIC OCEAN TROPICAL/SUBTROPICAL PROCESSES FROM SEASONAL  
 TO THE DECADAL TIME SCALES: MODEL  
 02/22/2002 - 02/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* P RIZZOLI  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 33 - OCEANOGRAPHY

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**NAG 5 11878 MASSACHUSETTS INST OF TECHNOLOGY 5720**  
 AN XMM-NEWTON OBSERVATION OF THE NEW GALACTIC BLACK HOLE  
 XTE J1650-500  
 03/15/2002 - 03/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* W LEWIN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11930 MASSACHUSETTS INST OF TECHNOLOGY 5721**  
 XMM OBSERVATIONS OF X-RAY EMISSION FROM SUPERNOVAE  
 04/03/2002 - 03/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* W LEWIN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11933 MASSACHUSETTS INST OF TECHNOLOGY 5722**  
 A SYNTHESIS ON THE GLOBAL WOCCE OBSERVATIONS OF THE OCEANIC  
 GENERAL CIRCULATION  
 04/01/2002 - 03/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* C WUNSCH  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12099 MASSACHUSETTS INST OF TECHNOLOGY 5723**  
 STUDIES OF TRACE GAS CHEMICAL CYCLES USING OBSERVATIONS,  
 INVERSE METHODS AND GLOBAL CHEMICAL TRANSPORTS  
 07/31/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R G PRINN  
*Tech. Officer:* GSFC/P L DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12195 MASSACHUSETTS INST OF TECHNOLOGY 5724**  
 FORMATION CONTROL EXPERIMENTS INSIDE THE SPACE STATION  
 05/23/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D MILLER  
*Tech. Officer:* GSFC/R CARPENTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 12355 MASSACHUSETTS INST OF TECHNOLOGY 5725**  
 PHYSICAL CHARACTERIZATION OF THE NEO POPULATION  
 07/03/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R BINZEL  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12356 MASSACHUSETTS INST OF TECHNOLOGY 5726**  
 HYDROCARBON BIOMARKER STRATIGRAPHY OF C-ISOTOPIC EXCURSIONS  
 MARKING CHEMICAL CHANGES IN THE OCEAN  
 07/08/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R SUMMONS  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12377 MASSACHUSETTS INST OF TECHNOLOGY 5727**  
 CON-X EVENT DRIVEN CCD IMAGER TECHNOLOGY (EDCCD)  
 07/15/2002 - 07/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D RICKER  
*Tech. Officer:* GSFC/K HARTMAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 12490 MASSACHUSETTS INST OF TECHNOLOGY 5728**  
 CONSTRAINING OCEANIC SOURCES AND SINKS OF CO2 BY INVERSE  
 MODELING: A FIRST STEP TOWARD ASSIMILATION  
 08/28/2002 - 08/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* M FELLOWS  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 12515 MASSACHUSETTS INST OF TECHNOLOGY 5729**  
 ICAP 2002: INTERNATIONAL CONFERENCE ON ATOMIC PHYSICS  
 08/27/2002 - 08/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D PRITCHARD  
*Tech. Officer:* GSFC/D SPEARS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12522 MASSACHUSETTS INST OF TECHNOLOGY 5730**  
 FORMATION, EVOLUTION, AND POPULATION SYNTHESIS OF BINARY SYSTEMS  
 CONTAINING COLLAPSED STARS  
 08/22/2002 - 08/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S A RAPPORT  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1435 MASSACHUSETTS INST OF TECHNOLOGY 5731**  
 TOWARDS PRECISION EXPERIMENTS WITH BOSE-EINSTEIN CONDENSATES  
 02/03/1998 - 01/31/2003 FY02: \$0 Total: \$339,650  
*Prin. Invest.:* W KETTERLE  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 8 1487 MASSACHUSETTS INST OF TECHNOLOGY 5732**  
 IDENTIFICATION AND CONTROL OF GRAVITY RELATED DEFECT FORMATION  
 DURING MELT GROWTH OF ELECTROOPTIC  
 02/13/1998 - 01/31/2003 FY02: \$0 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 5733**  
 DIRECT USE OF SATELLITE REMOTE SENSING IN THE ESTIMATION OF  
 HYDROLOGIC TRANSPORTS  
 05/22/1998 - 08/31/2001 FY02: \$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 5734**  
 KINETIC EVOLUTION OF STABLE AND METASTABLE STATES IN PROTEIN  
 SOLUTIONS.  
 05/10/2000 - 11/30/2003 FY02: \$0 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 5735**  
 THE ROLE OF CONVECTION AND GROWTH COMPETITION IN PHASE  
 SELECTION IN MICROGRAVITY  
 05/11/2000 - 11/30/2003 FY02: \$0 Total: \$252,200  
*Prin. Invest.:* M C FLEMING  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 13 - PHYSICS

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<b>NAG 8 1688</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5736</b>	<b>NAG 9 1455</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5745</b>
FORCES DURING MANUFACTURE AND ASSEMBLY OF MICROSCALE DISCRETE ELECTRONIC COMPONENTS.			STUDY OF HELICON SOURCE OPERATION IN VASIMIR		
05/17/2000 - 11/30/2003	FY02: \$0	Total: \$162,962	09/06/2002 - 02/28/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> M CIMA			<i>Prin. Invest.:</i> K MOLVING, O BATISHCHEV		
<i>Tech. Officer:</i> MSFC/P DOTY			<i>Tech. Officer:</i> JSC/F CHANG-DIAZ		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 8 1689</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5737</b>	<b>NAS 1 02044</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5746</b>
FROM OXYGEN GENERATION TO METAL PRODUCTION: IN-SITU RESOURCE UTILIZATION BY MOLTEN OXIDE ELECTROLYSIS			FUNCTIONALLY SILENT AIRCRAFT TO TRANSFORM COMMERCIAL AIR TRANSPORTATION		
06/05/2000 - 11/30/2003	FY02: \$0	Total: \$125,500	04/12/2002 - 04/11/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R SADOWAY			<i>Prin. Invest.:</i> Z S SPAKOVSKY		
<i>Tech. Officer:</i> MSFC/P DOTY			<i>Tech. Officer:</i> LARC/R H THOMAS		
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 8 1768</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5738</b>	<b>NAS 2 02056</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5747</b>
INCREMENTAL FUNDING FOR TOWARDS PRECISION EXPERIMENTS WITH BOSE EINSTEIN CONDENSATES II			FUNDAMENTAL TECHNOLOGIES FOR DEVELOPMENT OF BIOMOLECULAR SENSORS		
05/14/2001 - 05/13/2005	FY02: \$0	Total: \$40,000	12/20/2001 - 12/20/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> W KETTERLE			<i>Prin. Invest.:</i> T M SWAGER		
<i>Tech. Officer:</i> MSFC/D HUBBARD			<i>Tech. Officer:</i> ARC/J W HINES, ARC/P P FUNG		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 56 - MEDICAL		
<b>NAG 8 1872</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5739</b>	<b>NAS 3 01153</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5748</b>
AUTOMATED EXTRACTION OF FLOW FEATURES			INTRA ENGINE TRACE SPECIES CHEMISTRY		
05/29/2002 - 05/31/2003	FY02: \$0	Total: \$0	05/09/2001 - 08/10/2004	FY02: \$0	Total: \$225,000
<i>Prin. Invest.:</i> R HAIMES			<i>Prin. Invest.:</i> I A WAITZ		
<i>Tech. Officer:</i> MSFC/S MILLER DORNEY			<i>Tech. Officer:</i> GRC/N S LIU		
<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 9 1003</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5740</b>	<b>NAS 5 02094</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5749</b>
MICROGRAVITY INVESTIGATION & CREW REACTION IN 0-G			ASTRO-E2 MISSION X-RAY IMAGING SPECTROMETER CHARGE COUPLED DEVICE SENSOR BASES & ANALOG ELECTRONICS		
04/29/1998 - 08/31/2002	FY02: \$0	Total: \$268,557	08/08/2002 - 02/28/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D J NEWMAN, S BECK			<i>Prin. Invest.:</i> W MAYER		
<i>Tech. Officer:</i> JSC/B WOOLFORD			<i>Tech. Officer:</i> GSFC/D MARGOLIES		
<i>CASE Category:</i> 56 - MEDICAL			<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR		
<b>NAG 9 1004</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5741</b>	<b>NAS 5 30612</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5750</b>
ADVANCED DISPLAYS & CONTROLS FOR 6 DOF ORIENTATION			ALL SKY MONITOR INSTRUMENTS		
05/06/1998 - 06/10/2002	FY02: \$0	Total: \$543,296	12/15/1989 - 01/31/2003	FY02: \$0	Total: \$27,357,767
<i>Prin. Invest.:</i> C M OMAN			<i>Prin. Invest.:</i> H BRADT		
<i>Tech. Officer:</i> JSC/J DETROVE			<i>Tech. Officer:</i> GSFC/W DAVIS		
<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 9 1089</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5742</b>	<b>NAS 5 31376</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5751</b>
ROBOTIC TECHNOLOGY AND FUTURE SPACE SUIT DEVELOPMENT			RECURSIVE ESTIMATION OF GEOGRAPHICAL PRODUCTS WITH AIRS/AMSU DATA (EOS INVESTIGATION)		
03/05/1999 - 02/28/2003	FY02: \$0	Total: \$562,946	01/10/1992 - 06/14/2003	FY02: \$0	Total: \$1,953,000
<i>Prin. Invest.:</i> D J NEWMAN			<i>Prin. Invest.:</i> D H STAELIN, P W ROSENKRANZ		
<i>Tech. Officer:</i> JSC/B J WOOLFORD			<i>Tech. Officer:</i> GSFC/E KREINS		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<b>NAG 9 1224</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5743</b>	<b>NAS 5 99007</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5752</b>
FOKKER-PLANCK STUDIES OF HELICON OPERATION-VASIMIR EXPERIMENT			GLAS SCIENCE TEAM		
03/23/2000 - 01/31/2002	FY02: \$0	Total: \$145,000	12/02/1998 - 12/01/2002	FY02: \$0	Total: \$465,000
<i>Prin. Invest.:</i> K MOLVING, O V BATISHCHAV			<i>Prin. Invest.:</i> T A HERRING		
<i>Tech. Officer:</i> JSC/F R CHANG-DIAZ			<i>Tech. Officer:</i> GSFC/G SMITH		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 9 1443</b>	<b>MASSACHUSETTS INST OF TECHNOLOGY</b>	<b>5744</b>			
AUTONOMOUS BEHAVIORS BY ROBOTIC ASSISTANTS					
08/09/2002 - 07/31/2004	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> C BREAZEAL					
<i>Tech. Officer:</i> JSC/R T SAVELY					
<i>CASE Category:</i> 22 - COMPUTER SCIENCE					

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**NAS 5 99181 MASSACHUSETTS INST OF TECHNOLOGY 5753**  
 TRIANA FARADAY CUP.  
 03/17/1999 - 01/01/2001 FY02: \$0 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 5754**  
 PROVIDE PERSONNEL, FACILITIES, & EQUIPMENT NECESSARY TO SUPPORT  
 THE SPACE GEODESY PROGRAM.  
 04/23/1999 - 04/22/2004 FY02: \$0 Total: \$3,942,622  
*Prin. Invest.:* G CARRIGAN  
*Tech. Officer:* GSFC/W WILDES  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 8 01129 MASSACHUSETTS INST OF TECHNOLOGY 5755**  
 CHANDRA PROGRAM - (SCIENCE INSTRUMENT) HIGH ENERGY TRANSMIS-  
 SION GRATING (HETG)  
 03/01/2002 - 09/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* C R CANIZARIES  
*Tech. Officer:* MSFC/M C SMITH, MSFC/M S OSBURNE  
*CASE Category:* 11 - ASTRONOMY

**NAS 8 38249 MASSACHUSETTS INST OF TECHNOLOGY 5756**  
 AXAF (HETGS)  
 07/13/1990 - 03/01/2002 FY02: \$200,000 Total: \$28,823,000  
*Prin. Invest.:* C R CANIZARES  
*Tech. Officer:* MSFC/M E ROSENTHAL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 9 00097 MASSACHUSETTS INST OF TECHNOLOGY 5757**  
 UNIQUE FLIGHT AND BASELINE DATA COLLECTION HARDWARE AND  
 DEVELOP  
 10/25/2000 - 10/25/2005 FY02: \$0 Total: \$774,887  
*Prin. Invest.:* C M OMAN  
*Tech. Officer:* JSC/D K BAUMAN  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NASW 4690 MASSACHUSETTS INST OF TECHNOLOGY 5758**  
 HIGH ENERGY TRANSIENT EXPERIMENT TO DETERMINE ORIGIN & NATURE  
 OF GAMMA-RAY BURSTS  
 03/30/1992 - 11/30/2002 FY02: \$0 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 5759**  
 AEROELASTIC ANALYSIS OF ACTIVE TWIST ROTOR SYSTEM FOR HELICOP-  
 TER VIBRATION REDUCTION  
 12/22/1998 - 10/31/2001 FY02: \$0 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 5760**  
 PHYSICAL PROCESSES INFLUENCING ATMOSPHERIC TRACE CONSTITU-  
 TENTS MEASURED FROM AIRCRAFT IN TRACE-P (IS NRA)  
 09/21/2000 - 06/30/2003 FY02: \$0 Total: \$302,433  
*Prin. Invest.:* R E NEWELL  
*Tech. Officer:* LARC/V E DELNORE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 570 MASSACHUSETTS INST OF TECHNOLOGY 5761**  
 PRINCIPAL INVESTIGATOR IN A BOX  
 12/29/1988 - 01/31/2001 FY02: -\$38 Total: \$2,098,271  
*Prin. Invest.:* L R YOUNG  
*Tech. Officer:* ARC/S LAU, ARC/D A ROSENTHAL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1121 MASSACHUSETTS INST OF TECHNOLOGY 5762**  
 MARSCAPE  
 05/21/1999 - 12/31/2001 FY02: \$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 5763**  
 IMPLEMENTATION ISSUES FOR DEPARTURE PLANNING SYSTEMS  
 12/07/1999 - 11/30/2002 FY02: \$0 Total: \$490,247  
*Prin. Invest.:* E FERON, R J HANSMAN  
*Tech. Officer:* ARC/S ATKINS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1209 MASSACHUSETTS INST OF TECHNOLOGY 5764**  
 DISTRIBUTED & CENTRALIZED CONFLICT MANAGEMENT UNDER TRAFFIC  
 FLOW MANAGEMENT CONSTRAINTS  
 12/04/2000 - 12/14/2002 FY02: \$0 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 5765**  
 APPROACHES TO HUMAN CENTERED SOFTWARE DEVELOPMENT  
 03/23/2001 - 02/28/2003 FY02: \$0 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 5766**  
 A HYBRID DISCRETE/CONTINUOUS SYSTEM FOR HEALTH MANAGEMENT  
 04/03/2001 - 02/28/2003 FY02: \$0 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 5767**  
 MULTI-RESOLUTION PLANNING IN LARGE UNCERTAIN ENVIRONMENTS  
 04/06/2001 - 02/28/2003 FY02: \$0 Total: \$129,000  
*Prin. Invest.:* L KAEHLING  
*Tech. Officer:* ARC/R MORRIS, ARC/D CLANCY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1269 MASSACHUSETTS INST OF TECHNOLOGY 5768**  
 USING CAPRI WITHIN NASA'S INTELLIGENT SYNTHESIS ENVIRONMENT  
 06/01/2001 - 04/30/2003 FY02: \$0 Total: \$74,975  
*Prin. Invest.:* R HAIMES  
*Tech. Officer:* ARC/M LIVINGSTON, ARC/D KONTINOS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 3 610 MASSACHUSETTS INST OF TECHNOLOGY 5769**  
 THE EXTENSIONAL RHEOLOGY OF NON-NEWTONIAN MATERIAL EXTEN-  
 SIONAL RHEOLOGY EXPERIMENT (ERE)  
 04/21/1998 - 02/09/2003 FY02: \$0 Total: \$740,000  
*Prin. Invest.:* G H MCKINLEY  
*Tech. Officer:* GRC/N R HALL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER



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**NCC 3 632**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5770**  
 MIT ENGINEERING INTERSHIP PROGRAM  
 06/30/1998 - 06/20/2002      FY02: \$0      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**      **5771**  
 HIGH SPECIFIC IMPULSE HALL THRUSTERS  
 03/21/2001 - 03/31/2004      FY02: \$0      Total: \$401,796  
*Prin. Invest.:* D MARTINEZ-SANCHEZ  
*Tech. Officer:* GRC/S OLESON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 5 244**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5772**  
 BIOGEOCHEMICAL CYCLES USING MODELS AND DATA  
 10/24/1997 - 06/30/2001      FY02: \$0      Total: \$727,000  
*Prin. Invest.:* J MARSHALL  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 416**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5773**  
 SOIL MOISTURE DATA ASSIMILATION FOR CONTINENTAL- SCALE LAND SURFACE HYDROLOGY APPLICATIONS  
 08/04/1999 - 07/31/2003      FY02: \$0      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**      **5774**  
 FABRICATION AND METROLOGY OF HIGH-PRECISION FOIL MIRROR MOUNTING ELEMENT CONSTELLATION X-PROPOSAL  
 01/08/2001 - 03/31/2002      FY02: \$0      Total: \$105,000  
*Prin. Invest.:* M SCHATTEBURG  
*Tech. Officer:* GSFC/R PETRE  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 625**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5775**  
 HIGH-PERFORMANCE ADAPTIVE SIMULATION FRAMEWORK FOR SPACE-WEATHER MODELING (SWMF).  
 03/06/2002 - 05/05/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* J MARSHALL  
*Tech. Officer:* GSFC/J FISCHER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 5 633**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5776**  
 MICROFABRICATED X-RAY OPTICS TECHNOLOGY DEVELOPMENT FOR THE CONSTELLATION-X MISSION  
 02/28/2002 - 03/31/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* M L SCHATTEBURG  
*Tech. Officer:* GSFC/R PETRE  
*CASE Category:* 11 - ASTRONOMY

**NCC 8 174**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5777**  
 R/S MICROGRAVITY TISSUE ENGINEERING  
 03/31/1999 - 11/30/2002      FY02: \$0      Total: \$2,339,763  
*Prin. Invest.:* L FREED  
*Tech. Officer:* JSC/N R PELLIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 1 02016**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5778**  
 GRADUATE STUDENT RESEARCHER PROGRAM (GSRP)  
 06/12/2002 - 08/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* K WILLCOX, T LAU  
*Tech. Officer:* LARC/B A SINGER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 3 52360**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5779**  
 GRADUATE STUDENT RESEARCHER PROGRAM GRADUATE STUDENT RESEARCHER PROGRAM  
 07/15/1999 - 06/30/2001      FY02: \$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**      **5780**  
 THE IMPACT OF GLACIAL EROSION ON THE RELIEF STRUCTURE OF MOUNTAIN BELTS STUDENT: SIMON BROCKLEHURS  
 08/19/1999 - 08/31/2002      FY02: \$0      Total: \$66,000  
*Prin. Invest.:* K X WHIPPLE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NGT 5 30189**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5781**  
 TEMPORAL VARIABILITY OF AIR - SEA GAS FLUXES: ESTIMATION & INCORPORATION INTO AN INVERSE MODEL OF  
 08/18/1999 - 08/31/2002      FY02: \$0      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**      **5782**  
 ADJOINT SENSITIVITY ANALYSIS OF THE COUPLED LAND- ATMOSPHERE SYSTEM/STUDENT:STEVEN A. MARGULIS  
 08/19/1999 - 08/31/2002      FY02: \$0      Total: \$66,000  
*Prin. Invest.:* D ENTEKHABI  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30212**      **MASSACHUSETTS INST OF TECHNOLOGY**      **5783**  
 THE SIGNATURE OF CLIMATIC & TECTONIC PROCESSES IN ALLUVIAL FANS: A NUMERICAL MODELING & REMOTE SENSING  
 08/20/1999 - 08/31/2003      FY02: \$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**      **5784**  
 MULTIPHASE AND HETEROGENEOUS PROCESSES IN ATMOSPHERIC CHEMISTRY  
 08/17/2000 - 08/31/2003      FY02: \$0      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**      **5785**  
 DYNAMICS & SCALES OF VARIABILITY IN THE LABRADOR SEA: STATE ESTIMATION USING AN EDDY-RESOLVING  
 08/21/2000 - 08/31/2003      FY02: \$0      Total: \$44,000  
*Prin. Invest.:* C WUNSCH  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

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**NGT 5 30339 MASSACHUSETTS INST OF TECHNOLOGY 5786**  
 EFFECTS OF VEGETATION DYNAMICS ON ARROYO & GULLY EVOLUTION &  
 SUCEPTABILITY TO CLIMATE CHANG  
 08/21/2000 - 08/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* R BRAS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30469 MASSACHUSETTS INST OF TECHNOLOGY 5787**  
 017 IMPACTS OF TROPICAL DEFORESTATION AND CLIMATE: OBSERVA-  
 TIONS OF ESHALLOW CLOUDS AND RAILF AN  
 08/21/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R BRAS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40075 MASSACHUSETTS INST OF TECHNOLOGY 5788**  
 MASSACHUSETTS SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2005 FY02: \$0 Total: \$475,000  
*Prin. Invest.:* L YOUNG  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50302 MASSACHUSETTS INST OF TECHNOLOGY 5789**  
 COMBUSTION SYNTHESIS OF FULLERENES AND FULLERENIC NANO-  
 STRUCTURES IN MICROGRAVITY/STUDENT: ANISH GOEL  
 07/06/2000 - 06/30/2002 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* J B HOWARD  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50306 MASSACHUSETTS INST OF TECHNOLOGY 5790**  
 THE KINETICS OF COMPETITIVE GROWTH DURING RAPID SOLIDIFICATION  
 OF TERNARY STEEL ALLOYS/STUDENT JOA  
 07/06/2000 - 06/30/2001 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* M FLEMINGS  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50411 MASSACHUSETTS INST OF TECHNOLOGY 5791**  
 MODEL-BASED EXECUTIVE FOR AUTONOMOUS SPACECRAFT STUDENT  
 NAME: SEUNG CHUNG  
 08/07/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* B C WILLIAMS  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50414 MASSACHUSETTS INST OF TECHNOLOGY 5792**  
 INVESTIGATION OF LIGHT STORAGE IN ATOMIC ENSEMBLES STUDENT:  
 JEAN A. HAGER  
 08/06/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R WALSWORTH  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52880 MASSACHUSETTS INST OF TECHNOLOGY 5793**  
 INDENTIFICATION AND CONTROL OF GRAVITY RELATED DEFECT FORMA-  
 TION DURING MELT GROWTH  
 09/09/1999 - 01/15/2003 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* A WITT  
*Tech. Officer:* MSFC/J DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52892 MASSACHUSETTS INST OF TECHNOLOGY 5794**  
 BALANCE OF PLANT DESIGN AND ANALYSIS FOR SPACE NUCLEAR POWER  
 OPTIONS  
 07/11/2000 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* M MARTINEZ-SANCHEZ  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 8635 MT HOLYOKE COLL 5795**  
 CO2 AND CH4 EXCHANGE IN NORTHERN PEATLANDS  
 01/07/1999 - 06/30/2002 FY02: \$0 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 COLL 5796**  
 SUMMERMATH NASA SCHOLARS PROGRAM  
 01/04/2001 - 12/31/2001 FY02: \$0 Total: \$80,000  
*Prin. Invest.:* J MORROW  
*Tech. Officer:* GSFC/C HOLLINGSWORTH  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 5 10424 MT HOLYOKE COLL 5797**  
 SYNCHROTRON CHARACTERIZATION OF HYDROGEN & FERRIC IRON IN  
 MARTIAN METEORITES  
 02/15/2001 - 02/28/2004 FY02: \$0 Total: \$34,000  
*Prin. Invest.:* D DYAR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11759 MT HOLYOKE COLL 5798**  
 SUMMERMATH NASA SCHOLARS PROGRAM  
 02/13/2002 - 01/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J MORROW  
*Tech. Officer:* GSFC/C HOLLINGSWORTH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1485 NORTHEASTERN UNIV 5799**  
 R/S MODELING OF MACROSCOPIC/MICROSCOPIC TRANSPORT AND  
 GROWTH PHENOMENA IN ZEOLITE CRYSTALS UNDER  
 04/27/1998 - 05/31/2001 FY02: \$0 Total: \$321,483  
*Prin. Invest.:* A SACCO  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1668 NORTHEASTERN UNIV 5800**  
 PHASE FIELD SIMULATIONS OF DENDRITIC GROWTH AT LOW UNDER-  
 COOLING: CONFRONTING THEORY AND EXPERIMENT.  
 05/23/2000 - 11/30/2003 FY02: \$0 Total: \$120,500  
*Prin. Invest.:* A KARMA  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1336 NORTHEASTERN UNIV 5801**  
 TEAM ORIENTED ROBOTIC EXPLORATION TASKS ON SCORPIO N AND K9  
 PLATFORMS  
 04/16/2002 - 01/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* F KIRCHNER  
*Tech. Officer:* ARC/S COLOMBANO, ARC/M BUALAT  
*CASE Category:* 22 - COMPUTER SCIENCE

## NASA'S UNIVERSITY PROGRAM

## MASSACHUSETTS

<b>NCC 8 139</b>	<b>NORTHEASTERN UNIV</b>	<b>5802</b>	<b>NAG 9 1182</b>	<b>TUFTS UNIV</b>	<b>5811</b>
RESEARCH "CENTER FOR ADVANCED MICROGRAVITY MATERIALS PROCESSING (CAMMP)"			MULTISENSOR ARRAY FOR MONITORING WATER QUALITY ON SPACE-CRAFT & PLANETARY HABITATS		
06/27/1997 - 10/31/2001	FY02: \$0	Total: \$8,913,655	12/20/1999 - 12/19/2002	FY02: \$0	Total: \$207,876
<i>Prin. Invest.:</i> A SACCO			<i>Prin. Invest.:</i> S P KOUNAVES		
<i>Tech. Officer:</i> MSFC/M NALL			<i>Tech. Officer:</i> JPL/D JAN		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER		
<b>NGT 5 122</b>	<b>NORTHEASTERN UNIV</b>	<b>5803</b>	<b>NCC 5 434</b>	<b>TUFTS UNIV</b>	<b>5812</b>
IMAGE PROCESSING TECHNIQUES FOR SATELLITE DATA USING RECONFIGURABLE TECHNOLOGY/STUDENT: HEATHER Q			THE SCIENCE AND ENGINEERING NASA SITE OF REMOTE SENSING (SENSORS).		
07/09/2001 - 09/14/2004	FY02: \$0	Total: \$22,000	09/22/1999 - 09/30/2003	FY02: \$0	Total: \$299,533
<i>Prin. Invest.:</i> M LEESER			<i>Prin. Invest.:</i> C ROGERS		
<i>Tech. Officer:</i> GSFC/M S BURRELL			<i>Tech. Officer:</i> GSFC/R E GABRYS		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 3 2563</b>	<b>TUFTS UNIV</b>	<b>5804</b>	<b>NAG 2 1197</b>	<b>UNIV OF MASSACHUSETTS WORCESTER</b>	<b>5813</b>
A SOLID STATE LI-ION BATTERY WITH A CONDUCTING POLYMER ANODE			EFFECTS OF GRAVITY ON CELL MOVEMENT & DEVELOPMENT		
03/13/2001 - 04/30/2003	FY02: \$0	Total: \$58,333	04/02/1998 - 10/31/2001	FY02: \$0	Total: \$502,651
<i>Prin. Invest.:</i> D B GOLDNER			<i>Prin. Invest.:</i> Y L WANG		
<i>Tech. Officer:</i> GRC/N HAGEDORN			<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY		
<i>CASE Category:</i> 12 - CHEMISTRY			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NAG 5 9725</b>	<b>TUFTS UNIV</b>	<b>5805</b>	<b>NAG 2 1438</b>	<b>UNIV OF MASSACHUSETTS WORCESTER</b>	<b>5814</b>
VERY LARGE ARRAY OBSERVATIONS IN SUPPORT OF HESS1			THE EFFECT OF HYPERGRAVITY ON RETINOIC ACID SIGNALING IN THE DEVELOPING EMBRYO		
07/06/2000 - 07/14/2001	FY02: \$0	Total: \$35,000	09/19/2000 - 09/30/2003	FY02: \$0	Total: \$245,929
<i>Prin. Invest.:</i> K R LANG			<i>Prin. Invest.:</i> P J MACCAFFERY		
<i>Tech. Officer:</i> GSFC/W J WAGNER			<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NAG 5 10350</b>	<b>TUFTS UNIV</b>	<b>5806</b>	<b>NAG 2 1495</b>	<b>UNIV OF MASSACHUSETTS WORCESTER</b>	<b>5815</b>
NASA'S COSMOS. FULLY FUNDS YEAR 1 OF 3			EFFECTS OF CHARITY ON THE STRUCTURE AND FUNCTION OF ANIMAL CELLS		
02/06/2001 - 02/14/2004	FY02: \$0	Total: \$40,000	07/09/2001 - 10/31/2003	FY02: \$147,246	Total: \$246,285
<i>Prin. Invest.:</i> K R LANG			<i>Prin. Invest.:</i> Y L WANG		
<i>Tech. Officer:</i> GSFC/P E HUNTER			<i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NAG 5 11605</b>	<b>TUFTS UNIV</b>	<b>5807</b>	<b>NAG 9 1356</b>	<b>UNIV OF MASSACHUSETTS WORCESTER</b>	<b>5816</b>
VLA OBSERVATIONS			MICROGRAVITY AND THE BIOLOGY OF NEURAL STEM CELLS		
01/22/2002 - 01/31/2005	FY02: \$0	Total: \$0	07/27/2001 - 09/30/2004	FY02: \$0	Total: \$47,000
<i>Prin. Invest.:</i> K LANG			<i>Prin. Invest.:</i> W J SCHWARTZ, T M SAVARESE, H PANG LOW		
<i>Tech. Officer:</i> GSFC/T KUCERA			<i>Tech. Officer:</i> JSC/D RISEN		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 56 - MEDICL		
<b>NAG 5 11806</b>	<b>TUFTS UNIV</b>	<b>5808</b>	<b>NGT 5 50374</b>	<b>UNIV OF MASSACHUSETTS WORCESTER</b>	<b>5817</b>
IN-SITU PLANETARY CHEMICAL ANALYSIS LABORATORY			GENETIC MANIPULATION OF CELL ADHESION PROTEINS TO MODIFY MECHANICAL RESPONSE AND TISSUE REMODELING		
02/28/2002 - 02/28/2005	FY02: \$0	Total: \$0	07/09/2001 - 06/30/2004	FY02: \$0	Total: \$22,000
<i>Prin. Invest.:</i> S KOUNAVES			<i>Prin. Invest.:</i> L BONASSAR		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GSFC/K BLANDING		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 8 1480</b>	<b>TUFTS UNIV</b>	<b>5809</b>	<b>NGT 5 50404</b>	<b>UNIV OF MASSACHUSETTS WORCESTER</b>	<b>5818</b>
STUDY OF DEVELOPMENT OF POLYMER STRUCTURE IN MICROGRAVITY USING ELLIPSOMETRY			CONTROLLING MECHANICS OF COLLAGEN GELS FOR CARTILAGE TISSUE ENGINEERING BY NON-ENZYMATIC GLYCATION		
02/27/1998 - 05/31/2002	FY02: \$0	Total: \$264,720	07/30/2002 - 07/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> P CEBE			<i>Prin. Invest.:</i> L BONASSAR		
<i>Tech. Officer:</i> MSFC/P M DOTY			<i>Tech. Officer:</i> GSFC/K BLANDING		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 8 1699</b>	<b>TUFTS UNIV</b>	<b>5810</b>			
RESEARCH STUDY HIERARCHICAL ASSEMBLY OF COLLAGEN					
06/05/2000 - 11/30/2003	FY02: \$0	Total: \$154,500			
<i>Prin. Invest.:</i> D L KAPLAN					
<i>Tech. Officer:</i> MSFC/P M DOTY					
<i>CASE Category:</i> 56 - MEDICL					

MASSACHUSETTS

NASA'S UNIVERSITY PROGRAM

**NAG 3 2426 UNIV OF MASSACHUSETTS 5819**  
 PHASE CHANGE IN LOW AND JITTERING GRAVITY ENVIRONMENT SIMULATED VIA ELECTROMAGNETIC FIELD  
 05/19/2000 - 11/30/2003 FY02: \$0 Total: \$100,694  
*Prin. Invest.:* D CHARMCHI  
*Tech. Officer:* GRC/H DEGROH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 8145 UNIV OF MASSACHUSETTS 5820**  
 AUTOMATED PROCESSING OF ISIS TOPSIDE IONOGRAMS INTO ELECTRON DENSITY PROFILES  
 02/04/1999 - 12/31/2002 FY02: \$0 Total: \$391,162  
*Prin. Invest.:* B REINISCH  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9611 UNIV OF MASSACHUSETTS 5821**  
 HALFWIDTHS & LINE SHIFTS OF WATER VAPOR TRANSITION IN THE 0.7 UM REGION  
 05/22/2000 - 05/31/2001 FY02: \$0 Total: \$20,000  
*Prin. Invest.:* R GAMACHE  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11064 UNIV OF MASSACHUSETTS 5822**  
 THEORY IN SUPPORT OF LABORATORY SPECTROSCOPY FOR AIRS, TES AND HIRDLS  
 06/28/2001 - 06/30/2004 FY02: \$0 Total: \$25,157  
*Prin. Invest.:* R R GAMACHE  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11792 UNIV OF MASSACHUSETTS 5823**  
 DIGITAL RADIO-FREQUENCY PLASMA WAVE INSTRUMENTS FOR MULTIPLE SATELLITE MISSIONS  
 02/28/2002 - 02/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* B W REINISCH  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1375 UNIV OF MASSACHUSETTS - AMHERST 5824**  
 MICROGRAVITY EFFECTS ON SEED DEVELOPMENT AND MATURATION  
 08/20/1999 - 08/31/2003 FY02: \$0 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 5825**  
 ON BOARD AUTONOMY FOR ROVERS  
 02/07/2000 - 01/31/2003 FY02: \$0 Total: \$94,780  
*Prin. Invest.:* S ZILBERSTEIN  
*Tech. Officer:* ARC/J BRESINA  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1551 UNIV OF MASSACHUSETTS - AMHERST 5826**  
 PLAN CONTINUATION ERRORS DURING AIRCRAFT APPROACH AND LANDING: SIMPLE HEURISTICS FOR COMBINING CONFLICTING  
 05/23/2002 - 08/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* D FISHER  
*Tech. Officer:* ARC/J M ORASANU, ARC/J NOWINSKI  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 3 2452 UNIV OF MASSACHUSETTS - AMHERST 5827**  
 EMBEDDED SENSORS FOR CONDITION MONITORING OF HELICOPTER GEARBOXES PROPOSAL #100-1355  
 06/01/2000 - 09/30/2003 FY02: \$0 Total: \$122,766  
*Prin. Invest.:* D DANAI  
*Tech. Officer:* GRC/D LEWICKI  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 4272 UNIV OF MASSACHUSETTS - AMHERST 5828**  
 A CRYOGENIC FREQUENCY MULTIPLIER CHAIN FOR 1000 GH  
 04/18/1997 - 12/31/2000 FY02: -\$1,088 Total: \$226,596  
*Prin. Invest.:* D R ERICKSON  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4373 UNIV OF MASSACHUSETTS - AMHERST 5829**  
 PLANETARY, TECTONICS, AREAL GEOLOGY, AND GEOLOGICAL RECORDS  
 04/25/1997 - 01/31/2003 FY02: \$0 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 5830**  
 SHOCK AND THERMAL HISTORY OF IRON AND CHONDRITIC METEORITES  
 06/11/1997 - 02/28/2002 FY02: \$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 5831**  
 STRUCTURAL AND GEOMORPHIC EVOLUTION OF THE MARTIAN CRATERS  
 07/24/1997 - 07/14/2001 FY02: \$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 5832**  
 UMASS PLANET EARTH EDUCATION PROGRAMS  
 08/01/1997 - 10/31/2000 FY02: \$0 Total: \$60,000  
*Prin. Invest.:* M STERNHEIM  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8184 UNIV OF MASSACHUSETTS - AMHERST 5833**  
 MARTIAN POLYGONAL TERRAIN: TESTS FOR SEDIMENTARY ORIGIN OF DEPOSITS  
 02/16/1999 - 03/14/2003 FY02: \$0 Total: \$51,300  
*Prin. Invest.:* G E MCGILL  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8197 UNIV OF MASSACHUSETTS - AMHERST 5834**  
 SCALABLE PARALLEL STATISTICAL INFERENCE AND MODEL COMPARISON USING LARGE DATABASES  
 02/04/1999 - 01/31/2003 FY02: \$0 Total: \$685,067  
*Prin. Invest.:* M WEIENBERG  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 8718</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5835</b>            BOUNDARY CONDITIONS FOR THE PALEOENVIRONMENT: THE CHEMISTRY            OF DENSE INTERSTELLAR CLOUDS &amp; COMETS            07/29/1999 - 10/14/2002            FY02: \$0            Total: \$159,277  <i>Prin. Invest.:</i> W M IRVINE  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10677</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5843</b>            MILLIMETER-WAVE AND RADIO STUDIES OF SOLAR SYSTEM BODIES            04/24/2001 - 04/30/2002            FY02: \$0            Total: \$77,200  <i>Prin. Invest.:</i> P SCHLOERB  <i>Tech. Officer:</i> GSFC/T MORGAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8909</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5836</b>            STRUCTURAL AND GEOMORPHIC EVOLUTION OF THE MARTIAN CRUST            01/04/2000 - 07/14/2003            FY02: \$0            Total: \$82,081  <i>Prin. Invest.:</i> G E MCGILL  <i>Tech. Officer:</i> GSFC/J GRANT  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10681</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5844</b>            ENVIRONMENTAL EVOLUTION: ORIGIN OF THE CHIMERIC EUKARYOTE            03/28/2001 - 03/31/2003            FY02: \$0            Total: \$100,000  <i>Prin. Invest.:</i> L MARGULIS  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8999</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5837</b>            THE HOT INTERSTELLAR MEDIUM_(LISA)            02/03/2000 - 01/31/2003            FY02: \$0            Total: \$205,886  <i>Prin. Invest.:</i> Q WANG  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10699</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5845</b>            PRINTED CIRCUIT DUAL-POL DUAL-FREQUENCY ANTENNA ELEMENTS FOR            ATIP INTEGRATED SENSOR MODULES            04/18/2001 - 09/30/2002            FY02: \$0            Total: \$82,500  <i>Prin. Invest.:</i> K CARVER  <i>Tech. Officer:</i> GSFC/T DOIRON  <i>CASE Category:</i> 45 - ELECTRICAL ENGR</p>
<p><b>NAG 5 9429</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5838</b>            X-RAY SOURCE POPULATION IN NEARBY DISK GALAXIES- ADP-99            04/11/2000 - 04/14/2003            FY02: \$0            Total: \$99,684  <i>Prin. Invest.:</i> Q WANG  <i>Tech. Officer:</i> GSFC/R OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10783</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5846</b>            0.2-1 KEV EMISSION FROM THE HOT INTERGALACTIC MEDIUM (ADP 2000)            04/23/2001 - 04/30/2003            FY02: \$0            Total: \$46,230  <i>Prin. Invest.:</i> Q WANG  <i>Tech. Officer:</i> GSFC/R OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 9630</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5839</b>            DUAL POL DUAL FREQUENCY ANTENNA ELEMENTS FOR INTEG RATED            SENSOR MODULES.            05/25/2000 - 04/30/2001            FY02: \$0            Total: \$59,772  <i>Prin. Invest.:</i> K CARVER  <i>Tech. Officer:</i> GSFC/T A DOIRON  <i>CASE Category:</i> 45 - ELECTRICAL ENGR</p>	<p><b>NAG 5 11465</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5847</b>            INTEGRATED TERAHERTZ HETERODYNE FOCAL PLANE ARRAY RECEIVERS            12/10/2001 - 12/31/2004            FY02: \$0            Total: \$0  <i>Prin. Invest.:</i> G NARAYANAN  <i>Tech. Officer:</i> GSFC/G STRINGFELLOW  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 9652</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5840</b>            CONTINUED GROUND-BASED MICROWAVE MEASUREMENTS OF OZONE            FOR THE NETWORK FOR DETECTION OF STRATOSPHER            05/26/2000 - 12/31/2002            FY02: \$0            Total: \$371,013  <i>Prin. Invest.:</i> A PARRISH  <i>Tech. Officer:</i> GSFC/M KURYLO  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 11649</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5848</b>            PLANETARY TECTONICS, AREAL GEOLOGY AND GEOLOGICAL HISTORY            01/29/2002 - 01/31/2005            FY02: \$0            Total: \$0  <i>Prin. Invest.:</i> G E MCGILL  <i>Tech. Officer:</i> GSFC/D SENSKE  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 10515</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5841</b>            SHOCK &amp; THERMAL HISTORY OF IRON, STONY IRON &amp; CHON DRITIC            METEORITES            03/05/2001 - 03/14/2003            FY02: \$0            Total: \$80,000  <i>Prin. Invest.:</i> J GOLDSTEIN  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 12 - CHEMISTRY</p>	<p><b>NAG 5 11778</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5849</b>            SHOCK AND THERMAL HISTORY OF IRON, STONY-IRON, AND CHONDIRTIC            METEORITES            02/21/2002 - 03/14/2005            FY02: \$0            Total: \$0  <i>Prin. Invest.:</i> J GOLDSTEIN  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 12 - CHEMISTRY</p>
<p><b>NAG 5 10649</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5842</b>            ASSESSING LANDFORMS AND LAND SURFACE CHANGE IN ACT IVE            MOUNTAINS WITH SR7M AND ENVISAT OBSERVATION            04/04/2001 - 04/14/2003            FY02: \$0            Total: \$117,715  <i>Prin. Invest.:</i> C C DUNCAN  <i>Tech. Officer:</i> GSFC/H V FREY  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 11855</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5850</b>            XMM OBSERVATIONS OF X-RAY EMISSION FROM SUPERNOVAE            03/27/2002 - 03/31/2003            FY02: \$0            Total: \$0  <i>Prin. Invest.:</i> S IMMMLER  <i>Tech. Officer:</i> GSFC/R MUSHOTZKY  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 11940</b>            <b>UNIV OF MASSACHUSETTS - AMHERST</b>            <b>5851</b>            A DEMONSTRATION OF FREQUENCY SELECTIVE BOLOMETER ARRAY FOR            GROUND-BASED ASTROPHYSICAL OBSERVATIONS            04/11/2002 - 04/14/2005            FY02: \$0            Total: \$0  <i>Prin. Invest.:</i> G WILSON  <i>Tech. Officer:</i> GSFC/E S CHENG  <i>CASE Category:</i> 11 - ASTRONOMY</p>	

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**NAG 5 12038**      **UNIV OF MASSACHUSETTS - AMHERST**      **5852**  
 EVOLUTION AND INTERACTION OF STRUCTURE IN GALAXIES  
 04/16/2002 - 04/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* M D WEINBERG  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 12158**      **UNIV OF MASSACHUSETTS - AMHERST**      **5853**  
 MARTIAN POLYGONAL TERRAIN: TESTS FOR SEDIMENTARY ORIGIN OF DEPOSITS  
 05/08/2002 - 05/14/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* G E MCGILL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 8 1694**      **UNIV OF MASSACHUSETTS - AMHERST**      **5854**  
 CAPILLARY WAVES AT INTERFACES: THE ROLE OF GRAVITY AND ELECTRIC FIELDS  
 06/01/2000 - 11/30/2003      FY02: \$0      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**      **5855**  
 "THIN FILM MOLECULAR SIEVE SYNTHESIS: PROCESSING MICROSTRUCTURE RELATIONSHIPS & EFFECTS OF GRAVITY"  
 06/06/2000 - 11/30/2003      FY02: \$0      Total: \$135,000  
*Prin. Invest.:* M TSAPATIS  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 49 – ENGINEERING, OTHER

**NAG 9 1379**      **UNIV OF MASSACHUSETTS - AMHERST**      **5856**  
 LEARNING TO EXPLOIT DYNAMICS FOR ROBOT MANIPULATORS  
 08/28/2001 - 07/31/2002      FY02: \$0      Total: \$22,000  
*Prin. Invest.:* M T ROSENSTEIN  
*Tech. Officer:* JSC/R SAVELY  
*CASE Category:* 46 – MECHANICAL ENGR

**NAG 9 1445**      **UNIV OF MASSACHUSETTS - AMHERST**      **5857**  
 INSTRUCTING ROBOTIC ASSISTANTS TO ACQUIRE AUTONOMOUS BEHAVIOR  
 07/30/2002 - 07/31/2004      FY02: \$0      Total: \$0  
*Prin. Invest.:* R A GRUPEN  
*Tech. Officer:* JSC/R SAVELY  
*CASE Category:* 22 – COMPUTER SCIENCE

**NAS 1 01058**      **UNIV OF MASSACHUSETTS - AMHERST**      **5858**  
 RESEARCH ENTITLED, "NEAR-QUANTUM-NOISE LIMITED HOT ELECTRON BOLOMETRIC HETERODYNE DETECTORS  
 06/20/2001 - 06/19/2004      FY02: \$0      Total: \$298,000  
*Prin. Invest.:* S K YNGVESSON  
*Tech. Officer:* LARC/M N ABEDIN  
*CASE Category:* 39 – ENVIRONMENTALSCI, OTHER

**NAS 3 00121**      **UNIV OF MASSACHUSETTS - AMHERST**      **5859**  
 ALLIANCE ICING RESEARCH STUDY  
 04/30/2000 - 11/15/2000      FY02: -\$116      Total: \$117,884  
*Prin. Invest.:* S SEKELSEY  
*Tech. Officer:* GRC/A REEHORST  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NAS 5 99133**      **UNIV OF MASSACHUSETTS - AMHERST**      **5860**  
 TWO DIMENSIONAL SYNTHETIC APARTURE RADIOMETER.  
 08/03/1999 - 09/30/2002      FY02: \$0      Total: \$201,912  
*Prin. Invest.:* K CARVER  
*Tech. Officer:* GSFC/D LEVINE  
*CASE Category:* 45 – ELECTRICAL ENGR

**NCC 2 1180**      **UNIV OF MASSACHUSETTS - AMHERST**      **5861**  
 MULTI-AGENT INFORMATION ENVIRONMENT FOR INTEGRATED DESIGN & ANALYSIS  
 05/16/2000 - 05/14/2002      FY02: \$0      Total: \$65,918  
*Prin. Invest.:* A DASCHMULCH  
*Tech. Officer:* ARC/M E LIVINGSTON  
*CASE Category:* 41 – AERONAUTICAL ENGR

**NCC 2 1265**      **UNIV OF MASSACHUSETTS - AMHERST**      **5862**  
 MULTI-AGENT REASONING & DISTRIBUTED SEARCH IN DESIGN OF COMPLEX AEROSPACE SYSTEMS  
 05/03/2001 - 04/30/2003      FY02: \$0      Total: \$105,000  
*Prin. Invest.:* A DESHMUKH  
*Tech. Officer:* ARC/M LIVINGSTON, ARC/F J TORRES  
*CASE Category:* 22 – COMPUTER SCIENCE

**NCC 2 1311**      **UNIV OF MASSACHUSETTS - AMHERST**      **5863**  
 SELF DIRECTED COOPERATIVE PLANETARY ROVERS  
 03/07/2002 - 02/28/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* S ZILBERSTEIN  
*Tech. Officer:* ARC/R A MORRIS, ARC/S LAU  
*CASE Category:* 22 – COMPUTER SCIENCE

**NCC 2 1348**      **UNIV OF MASSACHUSETTS - AMHERST**      **5864**  
 ESTIMATING EFFECTS OF PARAMETER UNCERTAINTY ON ANALYSIS NETWORKS  
 06/10/2002 - 05/31/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* A DESHMUKH  
*Tech. Officer:* ARC/M LIVINGSTON, ARC/J E MILTON  
*CASE Category:* 22 – COMPUTER SCIENCE

**NCC 2 1353**      **UNIV OF MASSACHUSETTS - AMHERST**      **5865**  
 INTEGRATION OF INTELLIGENT PROCESS MANAGEMENT AGENTS & THE INFORMATION POWER GRID  
 07/15/2002 - 06/14/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* A DESHMUKH  
*Tech. Officer:* ARC/M LIVINGSTON, ARC/J MELTON  
*CASE Category:* 22 – COMPUTER SCIENCE

**NGT 1 02008**      **UNIV OF MASSACHUSETTS - AMHERST**      **5866**  
 GRADUATE STUDENT RESEARCHER PROGRAM (GSRP)  
 06/06/2002 - 06/30/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* E B COUGHLIN, G S CONSTABLE  
*Tech. Officer:* LARC/D L THOMSEN  
*CASE Category:* 47 – METAL & MATERIALS ENGR

**NGT 2 52276**      **UNIV OF MASSACHUSETTS - AMHERST**      **5867**  
 A DECISION-THEORY APPROACH TO AUTONOMOUS PLANETARY CONTROL (STUDENT: DANIELSCOTT BERNSTEIN)  
 06/12/2001 - 06/30/2003      FY02: \$0      Total: \$22,000  
*Prin. Invest.:* S ZILBERSTEIN  
*Tech. Officer:* ARC/J BRESINA  
*CASE Category:* 22 – COMPUTER SCIENCE

## NASA'S UNIVERSITY PROGRAM

## MASSACHUSETTS

<p><b>NGT 5 30375</b>      <b>UNIV OF MASSACHUSETTS - AMHERST</b>      <b>5868</b>  REALIZING NETWORK SENSOR WEBS THROUGH THE DEVELOPMENT OF  THE REMOTE INSTRUMENT DEFINITION LANGUAGE  08/13/2001 - 08/31/2004      FY02: \$0      Total: \$22,000  Prin. Invest.: D MCLAUGHLIN  Tech. Officer: GSFC/M WEI  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG13 02042</b>      <b>UNIV OF MASSACHUSETTS-DARTHMOUTH</b>      <b>5876</b>  DEVELOPMENT OF REGIONAL FISHERIES/OCEANOGRAPHY APPLICATION  CENTERS FOR ALASKA &amp; MASSACHUSETTS  06/06/2002 - 06/05/2004      FY02: \$0      Total: \$0  Prin. Invest.: W S BROWN  Tech. Officer: SSC/M GIARDINO  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NGT 5 30412</b>      <b>UNIV OF MASSACHUSETTS - AMHERST</b>      <b>5869</b>  AIRBORNE CLOUD RADAR STUDIES: CLOUDSAT CALIBRATION AND  CLOUD/PRECIPITATION RETRIEVAL ALGORITHM DEVELOPMENT  08/14/2001 - 08/31/2004      FY02: \$0      Total: \$22,000  Prin. Invest.: S SEKELSKY  Tech. Officer: GSFC/M WEI  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 4046</b>      <b>WELLESLEY COLL</b>      <b>5877</b>  STRUCTURE AND DYNAMICS OF PLANETARY RINGS  03/10/1997 - 09/30/2001      FY02: \$0      Total: \$174,750  Prin. Invest.: R G FRENCH  Tech. Officer: GSFC/J G GRANT  CASE Category: 32 - GEOLOGICAL SCIENCE</p>
<p><b>NGT 9 32</b>      <b>UNIV OF MASSACHUSETTS - AMHERST</b>      <b>5870</b>  TRAINING GRANT  06/04/1998 - 08/31/2001      FY02: \$0      Total: \$66,000  Prin. Invest.: R E VAN EMMERIK  Tech. Officer: JSC/D G SICKOREZ  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 5 9059</b>      <b>WELLESLEY COLL</b>      <b>5878</b>  LABORATORY MEASUREMENTS OF SO2 AND N2 ABSORPTION SPECTRA  FOR PLANETARY ATMOSPHERES  02/15/2000 - 02/28/2003      FY02: \$0      Total: \$112,921  Prin. Invest.: D STARK  Tech. Officer: GSFC/D BOGAN  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NGT 9 61</b>      <b>UNIV OF MASSACHUSETTS - AMHERST</b>      <b>5871</b>  TASK &amp; SCALE APPROPRIATE CLOSED-LOOP INTERACTION IN THE FORCE  DOMAIN  05/28/2002 - 06/03/2003      FY02: \$0      Total: \$0  Prin. Invest.: R GRUPEN  Tech. Officer: JSC/R SAVELY  CASE Category: 22 - COMPUTER SCIENCE</p>	<p><b>NAG 5 10197</b>      <b>WELLESLEY COLL</b>      <b>5879</b>  DYNAMICS AND STRUCTURE OF PLANETARY RINGS  12/21/2000 - 12/31/2003      FY02: \$0      Total: \$46,500  Prin. Invest.: R G FRENCH  Tech. Officer: GSFC/D SENSKE  CASE Category: 11 - ASTRONOMY</p>
<p><b>NGT13 52756</b>      <b>UNIV OF MASSACHUSETTS BOSTON</b>      <b>5872</b>  GRADUATE STUDENT RESEARCHERS PROGRAM - EFFECTS OF COPEPOD  GRAZING ON COLORED DISSOLVED ORGANIC MATTER  06/12/2002 - 06/30/2003      FY02: \$0      Total: \$0  Prin. Invest.: J URBAN-RICH  Tech. Officer: SSC/R P TRAVIS  CASE Category: 54 - ENVIRONMENTAL BIOLOGY</p>	<p><b>NAG 5 6455</b>      <b>WOODS HOLE OCEANOGRAPHIC INST</b>      <b>5880</b>  MODELING MESOSCALE BIOGEOCHEMICAL PROCESSES IN A TROPICAL  CYCLONE SURROUNDING THE U.S. GULF OF MEXICO  11/04/1997 - 09/30/2001      FY02: \$0      Total: \$491,660  Prin. Invest.: D J MCGILLICUDDY  Tech. Officer: GSFC/J MARRA  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 6605</b>      <b>UNIV OF MASSACHUSETTS-DARTHMOUTH</b>      <b>5873</b>  INTERANNUAL PHYSICAL AND BIOLOGICAL VARIABILITY OF THE NORTH-  EAST U.S. COAST  12/11/1997 - 11/14/2000      FY02: \$0      Total: \$149,003  Prin. Invest.: J J BISAGNI  Tech. Officer: GSFC/J MARRA  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 7348</b>      <b>WOODS HOLE OCEANOGRAPHIC INST</b>      <b>5881</b>  STUDIES OF HEAT, SALT, AND RADIATIVE FLUXES IN THE ARCTIC USING  SATELLITE AND BUOY OBSERVATIONS  04/28/1998 - 04/30/2001      FY02: \$0      Total: \$185,000  Prin. Invest.: J YANG  Tech. Officer: GSFC/J COMISO  CASE Category: 33 - OCEANOGRAPHY</p>
<p><b>NAG 5 9752</b>      <b>UNIV OF MASSACHUSETTS-DARTHMOUTH</b>      <b>5874</b>  REGIONAL FISHERIES APPLICATION CENTER  06/22/2000 - 09/30/2002      FY02: \$0      Total: \$1,831,000  Prin. Invest.: B J ROTHSCCHILD  Tech. Officer: GSFC/D R KAHLE  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 7445</b>      <b>WOODS HOLE OCEANOGRAPHIC INST</b>      <b>5882</b>  OPTICAL CLASSIFICATION OF WATER TYPES FROM SEAWIFS DATA: A  HYBRID APPROACH USING BOTH SEMI-AUTOMATIC AND MANUAL  METHODS  06/04/1998 - 08/31/2002      FY02: \$0      Total: \$278,087  Prin. Invest.: H M SOSIK  Tech. Officer: GSFC/J W CAMPBELL  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 10125</b>      <b>UNIV OF MASSACHUSETTS-DARTHMOUTH</b>      <b>5875</b>  A PILOT INVESTIGATION OF LOW FREQUENCY CHLOROPHYLL &amp; PIGMENT  VARIABILITY OFF THE NORTHEAST COAST  12/12/2000 - 12/14/2002      FY02: \$0      Total: \$80,043  Prin. Invest.: J J BISAGNI  Tech. Officer: GSFC/J MARRA  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 7770</b>      <b>WOODS HOLE OCEANOGRAPHIC INST</b>      <b>5883</b>  STUDIES OF ANTARCTIC SEA ICE AND SOUTHERN OCEAN TEMPERATURE  MINIMUM LAYER USING SATELLITE AND ICEBERG DATA  10/22/1998 - 12/31/2001      FY02: \$0      Total: \$184,956  Prin. Invest.: R A KRISHFIELD  Tech. Officer: GSFC/E LINDSTROM  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>

MASSACHUSETTS

NASA'S UNIVERSITY PROGRAM

**NAG 5 8868**      **WOODS HOLE OCEANOGRAPHIC INST**      **5884**  
 BIOLOGICAL INTERPRETATION OF OCEAN COLOR: OBSERVATIONS &  
 MODELS FOR WATERS OF THE MID-ATLANTIC SHELF  
 01/10/2000 - 02/28/2003      FY02: \$0      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**      **5885**  
 ISOTOPIC BIOGEOCHEMISTRY  
 04/11/2000 - 04/30/2003      FY02: \$0      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**      **5886**  
 STUDYING THE ANNUAL & INTER-ANNUAL VARIABILITY IN OCEAN COLOR  
 USING SATELLITE DATA & GLOBAL MARINE  
 08/07/2000 - 09/30/2002      FY02: \$0      Total: \$114,739  
*Prin. Invest.:* D M GLOVER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11265**      **WOODS HOLE OCEANOGRAPHIC INST**      **5887**  
 REGIONAL CARBON CYCLE MODELING AT THE BERMUDA ATLANTIC  
 TIME-SERIES STUDY(BATS) SITE USING AN EDDY-R  
 08/31/2001 - 08/31/2004      FY02: \$0      Total: \$133,555  
*Prin. Invest.:* D MCGILICUDDY  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12403**      **WOODS HOLE OCEANOGRAPHIC INST**      **5888**  
 ASSESSING THE ROLE OF PHOTOCHEMICAL OXIDATION OF DO IN THE  
 UPPER OCEAN BASED ON CHARACTERIZATION OF  
 08/01/2002 - 07/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* L TRAYKOVSKI  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12444**      **WOODS HOLE OCEANOGRAPHIC INST**      **5889**  
 LONG-TERM SURFACE SALINITY MEASUREMENTS  
 08/12/2002 - 07/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* R SCHMITT  
*Tech. Officer:* GSFC/E LINDTSROM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12488**      **WOODS HOLE OCEANOGRAPHIC INST**      **5890**  
 CONSTRAINING OCEANIC SOURCES AND SINKS OF CO2 BY INVERSE  
 MODELING: A FIRST STEP TOWARD ASSIMILATION  
 08/27/2002 - 08/31/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* S C DONEY  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 12520**      **WOODS HOLE OCEANOGRAPHIC INST**      **5891**  
 THE INFLUENCE OF IRON AVAILABILITY AND PHYSICAL FORCING ON  
 SOUTHERN OCEAN PRIMARY PRODUCTIVITY  
 09/17/2002 - 08/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* S DONEY  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 5 00198**      **WOODS HOLE OCEANOGRAPHIC INST**      **5892**  
 R & D TO SUPPORT SIMBIOS PROJECT ORIGINAL POP 10/30/01  
 11/06/2000 - 11/30/2002      FY02: \$0      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**      **5893**  
 SEASONAL-TO-INTERANNUAL VARIATIONS IN THE INDIAN OCEAN USING  
 THE NSIPP OCEAN MODEL SIMULATIONS  
 12/02/1999 - 11/30/2001      FY02: \$0      Total: \$90,000  
*Prin. Invest.:* L YU  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 33 - OCEANOGRAPHY

**NGT 5 30206**      **WOODS HOLE OCEANOGRAPHIC INST**      **5894**  
 INTERPRETATION OF VARIABILITY IN WATER COLUMN OPTICAL PROPERTIES  
 THROUGH SINGLE-PARTICLE ANALYSIS  
 08/19/1999 - 08/31/2002      FY02: \$0      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**      **5895**  
 IRON CYCLING IN THE CALIFORNIA CURRENT SYSTEM: GEOCHEMICAL &  
 ECOLOGICAL MODELING/STUDENT: PAYAL PAR  
 08/24/2000 - 08/31/2003      FY02: \$0      Total: \$44,000  
*Prin. Invest.:* D M GLOVER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2395**      **WORCESTER POLYTECHNIC INST**      **5896**  
 STABILITY AND HEAT TRANSFER CHARACTERISTICS OF CONDENSING  
 FILMS IN REDUCED GRAVITY  
 04/14/2000 - 11/30/2003      FY02: \$0      Total: \$122,531  
*Prin. Invest.:* D C HERMANSON  
*Tech. Officer:* GRC/F CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2405**      **WORCESTER POLYTECHNIC INST**      **5897**  
 EXPERIMENTAL INVESTIGATION AND MODELING OF PULSED PLASMA  
 THRUSTER PLUMES  
 05/03/2000 - 04/30/2003      FY02: \$0      Total: \$105,538  
*Prin. Invest.:* D GATSONIS  
*Tech. Officer:* GRC/E J PENCIL  
*CASE Category:* 13 - PHYSICS

**NAG 3 2535**      **WORCESTER POLYTECHNIC INST**      **5898**  
 SPLASHING DROPLETS  
 01/25/2001 - 11/30/2003      FY02: \$0      Total: \$25,000  
*Prin. Invest.:* D TRYGGVASON  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2545**      **WORCESTER POLYTECHNIC INST**      **5899**  
 COMPUTATIONAL MODELING OF THE EFFECT OF SECONDARY FORCES ON  
 THE PHASE DISTRIBUTION IN DISPERSED MULTIPHASE FLOWS  
 02/22/2001 - 02/06/2004      FY02: \$0      Total: \$95,000  
*Prin. Invest.:* D TRYGGVASON  
*Tech. Officer:* GRC/D F CHAO  
*CASE Category:* 49 - ENGINEERING, OTHER



**NAG 3 2583 WORCESTER POLYTECHNIC INST 5900**  
 COMPUTATIONS OF BOILING IN MICROGRAVITY  
 04/04/2001 - 04/30/2002 FY02: \$0 Total: \$72,500  
*Prin. Invest.:* D TRYGGVASON  
*Tech. Officer:* GRC/D F CHAO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10712 WORCESTER POLYTECHNIC INST 5901**  
 STUDENT PROJECTS AT THE GODDARD SPACE FLIGHT CTR  
 04/06/2001 - 06/30/2002 FY02: \$0 Total: \$20,000  
*Prin. Invest.:* F J LOOFT  
*Tech. Officer:* GSFC/S J BRODEUR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11755 WORCESTER POLYTECHNIC INST 5902**  
 STUDENT PROJECTS AT THE GODDARD SPACE FLIGHT CTR  
 02/27/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* F J LOOFT  
*Tech. Officer:* GSFC/S J BRODEUR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 673 WORCESTER POLYTECHNIC INST 5903**  
 COMBUSTION CHARACTERISTICS OF FULLY-MODULATED, TURBULENT  
 DIFFUSION FLAMES IN REDUCED GRAVITY  
 02/23/1999 - 01/13/2003 FY02: \$0 Total: \$303,165  
*Prin. Invest.:* D C HERMANSON  
*Tech. Officer:* GRC/D P STOCKER  
*CASE Category:* 49 - ENGINEERING, OTHER

## MICHIGAN

**NAG 5 10118 ALMA COLL 5904**  
 ANALYSIS OF DATA FROM THE ER-2 CLOUD PHYSICS LIDAR SYSTEM  
 12/21/2000 - 12/31/2001 FY02: \$0 Total: \$15,000  
*Prin. Invest.:* J H GIBSON  
*Tech. Officer:* GSFC/M J MCGILL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11817 ALMA COLL 5905**  
 ANALYSIS OF DATA FROM THE ER-2 CLOUD PHYSICS LIDAR SYSTEM YEAR  
 1 OF 3.  
 03/15/2002 - 03/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J H GIBSON  
*Tech. Officer:* GSFC/M J MCGILL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10348 CALVIN COLL 5906**  
 SIMULATION OF GLOBAL GLACIO-ISOSTASY, EARTH DEFORMATION AND  
 SEA LEVEL CHANGES.  
 02/05/2001 - 01/31/2003 FY02: \$0 Total: \$41,623  
*Prin. Invest.:* J A CLARK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 1 01060 HOPE COLL 5907**  
 THEORETICAL INVESTIGATION OF THERMO-MECHANICAL BEHAVIOR OF  
 CARBON NANOTUBE-BASED COMPOSITES USING  
 04/05/2001 - 04/04/2004 FY02: \$0 Total: \$52,936  
*Prin. Invest.:* J PAWLOSKE  
*Tech. Officer:* LARC/T S GATES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2520 KETTERING UNIV 5908**  
 MODELING FOR UNDERSTANDING HIGH SPECIFIC IMPULSE HALL THRUSTERS  
 01/08/2001 - 09/30/2003 FY02: \$0 Total: \$59,531  
*Prin. Invest.:* S ROY  
*Tech. Officer:* GRC/M MANTENIEKS  
*CASE Category:* 13 - PHYSICS

**NAG 3 2638 KETTERING UNIV 5909**  
 ELECTRODE MODEL FOR MACHMPD THRUSTER SIMULATIONS ELECTRODE  
 MODEL FOR MACHMPD THRUSTER SIMULATIONS  
 06/21/2001 - 02/28/2003 FY02: \$0 Total: \$19,994  
*Prin. Invest.:* S ROY  
*Tech. Officer:* GRC/D REDDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 01048 MICHIGAN STATE UNIV 5910**  
 PARAMETRIC IDENTIFICATION OF NONLINEAR DYNAMICAL SYSTEMS  
 06/06/2001 - 09/30/2002 FY02: \$0 Total: \$34,799  
*Prin. Invest.:* B F FEENY  
*Tech. Officer:* LARC/W A SILVA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02061 MICHIGAN STATE UNIV 5911**  
 PENALTY-BASED INTERFACE TECHNOLOGY FOR PREDICTION OF DELAMINATION  
 GROWTH IN LAMINATED STRUCTURES  
 03/01/2002 - 02/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R C AVERILL  
*Tech. Officer:* LARC/C G DAVILA, LARC/J B RANSOM  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2234 MICHIGAN STATE UNIV 5912**  
 DEVELOPMENT AND IMPLEMENTATION OF A GLOBAL BLEED BOUNDARY  
 CONDITION  
 03/11/1999 - 01/20/2003 FY02: \$0 Total: \$189,150  
*Prin. Invest.:* T SHIH  
*Tech. Officer:* GRC/D DAVIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2472 MICHIGAN STATE UNIV 5913**  
 RESEARCHING EPOXY AND POLYIMIDE NANOCOMPOSITES USING NATURAL  
 AND SYNTHETIC CLAYS  
 07/07/2000 - 12/03/2002 FY02: \$0 Total: \$119,880  
*Prin. Invest.:* T J PINNAVAIA  
*Tech. Officer:* GRC/S G CAMPBELL  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2576 MICHIGAN STATE UNIV 5914**  
 AERODYNAMICS OF AIRFOILS WITH ICE ACCRETION: CFD SIMULATIONS  
 AND TECHNOLOGY ISSUES  
 03/26/2001 - 11/30/2003 FY02: \$0 Total: \$70,000  
*Prin. Invest.:* T SHIH  
*Tech. Officer:* GRC/Y CHOO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3218 MICHIGAN STATE UNIV 5915**  
 CCD SYSTEM TECHNOLOGY FOR EXTREMELY LOW BACKGROUND OBSERVATIONS  
 04/26/1996 - 09/30/2002 FY02: \$0 Total: \$497,500  
*Prin. Invest.:* E D LOH  
*Tech. Officer:* GSFC/E CHENG  
*CASE Category:* 13 - PHYSICS

## MICHIGAN

## NASA'S UNIVERSITY PROGRAM

**NAG 5 4810**                      **MICHIGAN STATE UNIV**                      **5916**  
 ACQUISITION AND ANALYSIS OF LARGE QUANTITIES OF LA MEASURING  
 TROPICAL LAND COVER CHANGE (NRA-MTPE-03  
 07/30/1997 - 06/30/2001                      FY02: \$0                      Total: \$631,178  
*Prin. Invest.:* D SKOLE  
*Tech. Officer:* GSFC/D WILLIAMS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6538**                      **MICHIGAN STATE UNIV**                      **5917**  
 CASE STUDIES AND DIAGNOSTIC MODELS OF THE INTER-ANNUAL DYNAM-  
 ICS OF DEFORESTATION IN SOUTHEAST ASIA  
 04/21/1998 - 09/30/2001                      FY02: \$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**                      **5918**  
 SOLAR CONVECTION AND OSCILLATIONS  
 01/12/1999 - 03/14/2002                      FY02: \$0                      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**                      **5919**  
 ENHANCING PROFESSIONAL DEVELOPMENT OF LANDSCAPE ECOLOGISTS  
 OF THE NEXT GENERATION  
 03/26/1999 - 02/28/2001                      FY02: \$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**                      **5920**  
 ATOMIC FORCE MICROSCOPE LITHOGRAPHY & BEEM INVESTIGATION OF  
 CARBON NANOTUBE INTERFACES  
 01/07/2000 - 01/14/2001                      FY02: \$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**                      **5921**  
 PATTERN TO PROCESS: RESEARCH AND APPLICATIONS FOR UNDER-  
 STANDING MULTIPLE INTERACTIONS & FEEDBACK ON  
 04/03/2000 - 04/30/2003                      FY02: \$0                      Total: \$374,150  
*Prin. Invest.:* R WALKER  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9276**                      **MICHIGAN STATE UNIV**                      **5922**  
 SYNTHESIS OF HYBRID CARBON NANOTUBE/DIAMOND FILMS  
 03/16/2000 - 05/14/2002                      FY02: \$0                      Total: \$20,000  
*Prin. Invest.:* D TOMANEK  
*Tech. Officer:* GSFC/H SHAW  
*CASE Category:* 13 - PHYSICS

**NAG 5 9286**                      **MICHIGAN STATE UNIV**                      **5923**  
 GOFCA DATA & INFORMATION FOR TROPICAL FOREST ASSESSMENT &  
 MANAGEMENT  
 03/16/2000 - 04/30/2003                      FY02: \$0                      Total: \$205,044  
*Prin. Invest.:* J QI  
*Tech. Officer:* HQ/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9563**                      **MICHIGAN STATE UNIV**                      **5924**  
 SOLAR SURFACE CONVECTION  
 05/09/2000 - 05/14/2003                      FY02: \$0                      Total: \$170,954  
*Prin. Invest.:* R F STEIN  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10200**                      **MICHIGAN STATE UNIV**                      **5925**  
 ENHANCING PROFESSIONAL DEVELOPMENT OF LANDSCAPE ECOLO-  
 GISTS OF THE NEXT GENERATION  
 12/21/2000 - 12/31/2002                      FY02: \$0                      Total: \$15,000  
*Prin. Invest.:* J LIU  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11319**                      **MICHIGAN STATE UNIV**                      **5926**  
 THE FORMATION AND EVOLUTION OF GLOBULAR CLUSTER SYSTEMS AND  
 IMPLICATIONS FOR THE FORMATION HISTORY  
 10/23/2001 - 06/30/2005                      FY02: \$134,260                      Total: \$137,260  
*Prin. Invest.:* S SEPF  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11320**                      **MICHIGAN STATE UNIV**                      **5927**  
 GLOBULAR CLUSTER FORMATION (ATP 99)  
 10/23/2001 - 06/30/2003                      FY02: \$134,927                      Total: \$134,927  
*Prin. Invest.:* S ZEPF  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11740**                      **MICHIGAN STATE UNIV**                      **5928**  
 GOFCA FOREST COVER CHARACTERISTICS AND CHANGES IMPLEMENTA-  
 TION TEAM MEETING PROPOSAL  
 02/13/2002 - 02/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D L SKOLE  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12450**                      **MICHIGAN STATE UNIV**                      **5929**  
 LOCAL SOLAR MAGNETIC FIELDS  
 08/20/2002 - 08/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R F STEIN  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12617**                      **MICHIGAN STATE UNIV**                      **5930**  
 SIMULATING THE EFFECTS OF "PLAN COLOMBIA" ON LAND USE AND LAND  
 COVER IN THE ECUADORIAN AMAZON: A COM  
 09/26/2002 - 09/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J MESSINA  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1575**                      **MICHIGAN STATE UNIV**                      **5931**  
 MICROGRAVITY REGULATION OF ONCOGENE EXPRESSION AND OSTEO-  
 BLAST DIFFERENTIATION.  
 02/17/1999 - 11/30/2002                      FY02: \$0                      Total: \$359,400  
*Prin. Invest.:* L R MCCABE  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

<p><b>NAG 8 1690</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5932</b>  INVESTIGATION OF SOLIDIFICATION PROCESS WITH CONVECTION USING  MESHLESS METHODS &amp; VERIFICATION  05/16/2000 - 11/30/2003                      FY02: \$0                      Total: \$140,061  <i>Prin. Invest.:</i> A BERNARD, M KOOCHEFAHANI, A DIAZ  <i>Tech. Officer:</i> MSFC/P DOTY  <i>CASE Category:</i> 47 - METAL &amp; MATERIALS ENGR</p>	<p><b>NGT 5 30166</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5940</b>  MAPPING THE SPATIAL DISTRIBUTION OF BAMBOO IN A GIANT PANDA  RESERVE: A STUDY OF THE RELATIONSHIP  09/01/1998 - 08/31/2001                      FY02: \$0                      Total: \$66,000  <i>Prin. Invest.:</i> J LIU  <i>Tech. Officer:</i> GSFC/M Y WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 9 1211</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5933</b>  WATER DRIVEN ALTERATION OF ROCKS &amp; MINERALS ON MARS ASTERIOIDS:  CLUES TO THE SEARCH FOR LIFE  04/04/2000 - 04/09/2002                      FY02: \$0                      Total: \$15,496  <i>Prin. Invest.:</i> M A VELBEL  <i>Tech. Officer:</i> JSC/D S MCKAY  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NGT 5 30340</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5941</b>  MODELING THE SOCIO-ECONOMIC DRIVERS OF LAND USE &amp; COVER  CHANGE IN SOUTH AFRICA: INTEGRATING SOCIAL S  08/21/2000 - 08/31/2001                      FY02: \$0                      Total: \$22,000  <i>Prin. Invest.:</i> D J CAMPBELL  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NCC 2 1274</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5934</b>  CENTER FOR GENOMIC AND EVOLUTIONARY STUDIES ON MICROBIAL  LIFE AT LOW TEMPERATURE  07/20/2001 - 06/30/2006                      FY02: \$0                      Total: \$376,075  <i>Prin. Invest.:</i> M THOMASHOW, J TIEDJE, L SEPULVEDA  <i>Tech. Officer:</i> ARC/R GRYMES, ARC/W W DOLCI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NGT 5 50150</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5942</b>  AN INTEGRATED ASSESSMENT OF THE CUMULATIVE IMPACTS OF ARCTIC  DEVELOPMENT  09/11/1997 - 08/31/2001                      FY02: \$0                      Total: \$66,000  <i>Prin. Invest.:</i> P WEBBER  <i>Tech. Officer:</i> HQ/A NURRIDIN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NCC 3 662</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5935</b>  INVESTIGATION OF DIFFUSION FLAME TIP INSTABILITY IN MICROGRAVITY  01/14/1999 - 01/03/2003                      FY02: \$0                      Total: \$273,339  <i>Prin. Invest.:</i> I S WICHMAN  <i>Tech. Officer:</i> GRC/S OLSON  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NGT 5 50378</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5943</b>  ON-LINE LEARNING OF SENSOR-IMAGE STABILIZATION INSPIRED BY THE  VESTIBULAR SYSTEM OF SQUIRREL  09/11/2001 - 09/14/2004                      FY02: \$0                      Total: \$22,000  <i>Prin. Invest.:</i> P PIERRE  <i>Tech. Officer:</i> GSFC/K BLANDING  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NCC 3 868</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5936</b>  HIGH-TEMPERATURE SHAPE-MEMORY ALLOY DEVELOPMENT FOR ACTUATION  ABOVE 500 C  02/28/2001 - 03/31/2004                      FY02: \$0                      Total: \$64,500  <i>Prin. Invest.:</i> D S GRUMMON  <i>Tech. Officer:</i> GRC/M V NATHAL  <i>CASE Category:</i> 47 - METAL &amp; MATERIALS ENGR</p>	<p><b>NGT13 52715</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5944</b>  NASA GRADUATE STUDENT RESEARCHER PROGRAM FOR STACEY A.C.  NELSON  10/01/1997 - 08/15/2001                      FY02: \$0                      Total: \$66,000  <i>Prin. Invest.:</i> P SORRANO  <i>Tech. Officer:</i> SSC/A JOYCE  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NCC 5 291</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5937</b>  MEASUREMENT AND MODELING OF THE INTER-ANNUAL DYNAMICS OF  DEFORESTATION AND REGROWTH IN THE BRAZIL  06/16/1998 - 12/31/2002                      FY02: \$0                      Total: \$961,952  <i>Prin. Invest.:</i> D SKOLE  <i>Tech. Officer:</i> GSFC/D DEERING  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 1 01004</b>                      <b>MICHIGAN TECHNOLOGICAL UNIV</b>                      <b>5945</b>  GRAPHITE NANOREINFORCEMENTS FOR AEROSPACE NANOCOMPOSITES  11/24/2000 - 09/30/2003                      FY02: \$0                      Total: \$74,932  <i>Prin. Invest.:</i> L DRZAL  <i>Tech. Officer:</i> LARC/J HINKLEY, LARC/T S GATES  <i>CASE Category:</i> 12 - CHEMISTRY</p>
<p><b>NCC 5 303</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5938</b>  CREATIVE &amp; INNOVATIVE WORKING PROTOTYPE EARTH SCIENCE INFORMATION  PARTNERSHIPS IN SUPPORT  04/09/1998 - 12/31/2002                      FY02: \$0                      Total: \$4,352,000  <i>Prin. Invest.:</i> D SKOLE  <i>Tech. Officer:</i> GSFC/M MAIDEN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 3 2088</b>                      <b>MICHIGAN TECHNOLOGICAL UNIV</b>                      <b>5946</b>  NUMERICAL STUDIES OF THE LDI AND THE LPP/LDI GAS TURBINE  COMBUSTOR CONCEPTS  12/23/1997 - 01/28/2002                      FY02: \$0                      Total: \$323,636  <i>Prin. Invest.:</i> S L YANG  <i>Tech. Officer:</i> GRC/R R TACINA  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NGT 1 52216</b>                      <b>MICHIGAN STATE UNIV</b>                      <b>5939</b>  GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  06/01/1999 - 06/30/2001                      FY02: \$0                      Total: \$44,000  <i>Prin. Invest.:</i> L M HUDY, A NAGUIB  <i>Tech. Officer:</i> LARC/W M HUMPHREYS, JR.  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 3 2759</b>                      <b>MICHIGAN TECHNOLOGICAL UNIV</b>                      <b>5947</b>  NUMERICAL STUDY OF LOW-EMISSION GAS-TURBINE COMBUSTOR  (PHASE V)  04/03/2002 - 03/04/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> D YANG  <i>Tech. Officer:</i> GRC/P PENKO  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>

## MICHIGAN

## NASA'S UNIVERSITY PROGRAM

**NAG 5 5278**                    **MICHIGAN TECHNOLOGICAL UNIV**                    **5948**  
OBSERVING AND MEASURING EARLY OPTICAL LIGHT CURVES FROM  
GAMMA-RAY BURSTS WITH LOTIS  
06/21/2000 - 12/31/2002                    FY02: \$0                    Total: \$20,000  
*Prin. Invest.:* R NEMIROFF  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 6310**                    **MICHIGAN TECHNOLOGICAL UNIV**                    **5949**  
LINEAR ADAPTIVE MIRROR TESTBED TO SUPPORT DIRECT DETECTION OF  
EXTRA-SOLAR PLANETS  
10/06/1997 - 06/14/2002                    FY02: \$0                    Total: \$224,768  
*Prin. Invest.:* D FTACLAS  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7051**                    **MICHIGAN TECHNOLOGICAL UNIV**                    **5950**  
LAKE SUPERIOR ICE FIELD MEASUREMENTS FOR C-BAND SA R BACK-  
SCATTER SIGNATURES AND ICE COVER AN  
03/12/1998 - 07/31/2002                    FY02: \$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**                    **5951**  
VOLCANIC PLUME ANALYSIS USING TOMS AND AVHRR DATA  
04/30/1998 - 03/31/2002                    FY02: \$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**                    **5952**  
FUNDING FOR 'APPLICATION OF TOMS DATA TO VOLCANIC HAZARD  
MITIGATION' (SENH98-0061)  
08/04/1998 - 07/31/2002                    FY02: \$0                    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**                    **5953**  
EARTH AND SPACE SCIENCES PROJECT SERVICES FOR NASA HPCC  
09/21/1999 - 01/31/2003                    FY02: \$0                    Total: \$563,516  
*Prin. Invest.:* D MERKEY  
*Tech. Officer:* GSFC/J R FISCHER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10568**                    **MICHIGAN TECHNOLOGICAL UNIV**                    **5954**  
ICE-SULFUR-ASH INTERACTIONS IN VOLCANIC CLOUDS: LABORATORY  
STUDIES OF ICE NUCLEATION  
03/12/2001 - 03/14/2004                    FY02: \$0                    Total: \$82,459  
*Prin. Invest.:* R SHAW  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11062**                    **MICHIGAN TECHNOLOGICAL UNIV**                    **5955**  
VALIDATION OF TOMS VOLCANIC AEROSOL & SO2 PRODUCTS USING  
MODIS & AVHRR  
06/27/2001 - 06/30/2004                    FY02: \$0                    Total: \$95,000  
*Prin. Invest.:* G BLUTH  
*Tech. Officer:* GSFC/R MVPETERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1478**                    **MICHIGAN TECHNOLOGICAL UNIV**                    **5956**  
R/S GRAVITY INDUCED SETTLING IN INTERCONNECTED LIQUID SOLID  
SYSTEMS  
02/18/1998 - 01/31/2003                    FY02: \$0                    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**                    **5957**  
COLLEEN RILEY "TWO-DIMENSIONAL CHARACTERIZATION OF VOLCANIC  
ASH-APPLICATIONS TO REMOTE SENSING ALGO  
07/22/1998 - 08/31/2001                    FY02: \$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**                    **5958**  
THE GROUNDING OF COMPOSITE MATERIALS & THE IMPACT ON  
EMC/STUDENT: DERIK C. LOVE  
05/31/2001 - 08/14/2004                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* E ROTHWELL  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2792**                    **OAKLAND UNIV**                    **5959**  
PROTECTION AGAINST UV & X-RAY CATARACTS USING DYNAMIC LIGHT  
SCATTERING AS A MARKER  
07/08/2002 - 06/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* F GIBLIN  
*Tech. Officer:* GRC/R ANSARI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 2042**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **5960**  
TROPOSPHERIC TRACE GAS BUDGETS: INTERACTIONS WITH AEROSOLS  
04/23/1998 - 02/22/2002                    FY02: \$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 2181**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **5961**  
DATA-BASED CLIMATOLOGIES AND STUDY OF THE OZONE BUDGET IN THE  
TROPOPAUSE  
03/31/1999 - 12/31/2002                    FY02: \$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**                    **5962**  
DESIGN STUDY OF A SYNTHETIC THINNED APERTURE RADIO METER FOR  
HURRICANE IMPACT PREDICTION  
04/05/2001 - 06/30/2002                    FY02: \$0                    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 1878**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **5963**  
SOOT FORMATION IN FREELY-PROPAGATING LAMINAR PREMIXED FLAMES  
05/20/1996 - 06/30/2001                    FY02: \$0                    Total: \$361,254  
*Prin. Invest.:* G M FAETH  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 46 - MECHANICAL ENGR

## NASA'S UNIVERSITY PROGRAM

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<b>NAG 3 1900</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5964</b>	<b>NAG 3 2330</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5972</b>
A STUDY OF NUCLEATE BOILING WITH FORCED CONVECTION IN MICROGRAVITY			LONG-TERM RELIABILITY OF HIGH-SPEED SIGE/SI HETERO JUNCTION BIPOLAR TRANSISTORS		
07/22/1996 - 07/21/2001	FY02: \$0	Total: \$199,920	02/10/2000 - 02/03/2001	FY02: \$0	Total: \$70,000
<i>Prin. Invest.:</i> P MERTE			<i>Prin. Invest.:</i> P BHATTACHARYA		
<i>Tech. Officer:</i> GRC/F CHIARAMONTE			<i>Tech. Officer:</i> GRC/G PONCHAK		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 45 - ELECTRICAL ENGR		
<b>NAG 3 2048</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5965</b>	<b>NAG 3 2332</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5973</b>
LAMINAR SOOT PROCESSES EXPERIMENT (LSP)			COMPUTATIONAL MODELING OF THE EFFECT OF SECONDARY FORCES ON THE PHASE DISTRIBUTION IN DISPERSED MULT		
05/06/1997 - 12/31/2000	FY02: \$0	Total: \$596,227	02/11/2000 - 11/30/2003	FY02: \$0	Total: \$60,000
<i>Prin. Invest.:</i> G M FAETH			<i>Prin. Invest.:</i> G TRYGGVASON		
<i>Tech. Officer:</i> GRC/D URBAN			<i>Tech. Officer:</i> GRC/D F CHAO		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 3 2082</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5966</b>	<b>NAG 3 2356</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5974</b>
STRATEGY 2000: RECRUITMENT, RETENTION, RECOGNITIO N: A BALANCED APPROACH TO DIVERSITY AND EXCELLENC			AGGREGATION AND GELATION IN SUSPENSIONS OF ANISOME TRIC PARTICLES: STUDIES OF COLLOIDAL PLATELETS AN		
09/30/1997 - 02/01/2003	FY02: \$0	Total: \$255,760	03/15/2000 - 11/30/2003	FY02: \$0	Total: \$126,000
<i>Prin. Invest.:</i> D E SCOTT, J W JONES			<i>Prin. Invest.:</i> M D SOLOMON		
<i>Tech. Officer:</i> GRC/A GONZALEZ, GRC/S A MERRITT			<i>Tech. Officer:</i> GRC/F P CHIARAMONTE		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 3 2134</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5967</b>	<b>NAG 3 2404</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5975</b>
MICROSCOPIC VISUALIZATION OF FLUID FLOWN IN EVAPOR ATION DROP-LETS AND ELECTRO-OSMOTIC FLOWS			LAMINAR SOORT PROCESSES (LSP) LAMINAR SOORT PROCESSES (LSP)		
03/03/1998 - 01/05/2002	FY02: \$0	Total: \$385,850	04/27/2000 - 12/31/2002	FY02: \$0	Total: \$218,228
<i>Prin. Invest.:</i> R G LARSON			<i>Prin. Invest.:</i> G M FAETH		
<i>Tech. Officer:</i> GRC/D W GRIFFIN			<i>Tech. Officer:</i> GRC/D URBAN		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NAG 3 2162</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5968</b>	<b>NAG 3 2406</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5976</b>
COMPUTATIONS OF BOILING IN MICROGRAVITY COMPUTATIONS OF BOILING IN MICROGRAVITY			USING NONLINEARITY AND CONTACT LINES TO CONTROL FLUID FLOW IN MICROGRAVITY		
04/27/1998 - 02/09/2002	FY02: \$0	Total: \$266,000	04/27/2000 - 11/30/2003	FY02: \$0	Total: \$106,882
<i>Prin. Invest.:</i> G TRYGGVASON, D JACOMIN			<i>Prin. Invest.:</i> M PERLIN		
<i>Tech. Officer:</i> GRC/D F CHAO			<i>Tech. Officer:</i> GRC/C LEK		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 3 2196</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5969</b>	<b>NAG 3 2497</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5977</b>
FLUID MECHANICS OF CAPILLARY-ELASTIC INSTABILITIES IN THE MICROGRAVITY ENVIRONMENT			MODELING THE PERFORMANCE AND LIFETIME OF ION THRUS TERS		
09/03/1998 - 03/31/2002	FY02: \$0	Total: \$293,766	10/27/2000 - 10/31/2002	FY02: \$0	Total: \$50,653
<i>Prin. Invest.:</i> J B GROTBORG			<i>Prin. Invest.:</i> I D BOYD		
<i>Tech. Officer:</i> GRC/D F CHAO			<i>Tech. Officer:</i> GRC/G SOULAS		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR		
<b>NAG 3 2216</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5970</b>	<b>NAG 3 2530</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5978</b>
USE OF LASER INDUCED FLOURESCENCE TO CHARACTERIZE DISCHARGE CATHODE EROSIONS OFAN ION ENGINES			LONG TERM RELIABILITY OF HIGH SPEED SIGE/SI HETERO JUNCTON BIPOLAR TRANSISTORS		
01/14/1999 - 01/24/2003	FY02: \$0	Total: \$124,999	01/23/2001 - 01/31/2003	FY02: \$0	Total: \$69,886
<i>Prin. Invest.:</i> A D GALLIMORE			<i>Prin. Invest.:</i> P BHATTACHARYA		
<i>Tech. Officer:</i> GRC/J S SOVEY			<i>Tech. Officer:</i> GRC/G E PONCHAK		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 45 - ELECTRICAL ENGR		
<b>NAG 3 2307</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5971</b>	<b>NAG 3 2582</b>	<b>UNIV OF MICHIGAN - ANN ARBOR</b>	<b>5979</b>
DEVELOPMENT OF A TWO-STAGE ION THRUSTER DEVELOPMENT OF A TWO-STAGE ION THRUSTER			APPLICATION OF NANOTUBES TO WEIGHT REDUCTION IN RO TOCRAFT DRIVE SYSTEMS		
12/03/1999 - 11/23/2002	FY02: \$0	Total: \$70,000	04/02/2001 - 10/01/2001	FY02: \$0	Total: \$60,032
<i>Prin. Invest.:</i> A D GALLIMORE			<i>Prin. Invest.:</i> P P FRIEDMAN		
<i>Tech. Officer:</i> GRC/R S JANKOVSKY			<i>Tech. Officer:</i> GRC/W MORALES		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		

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**NAG 3 2604**                      **UNIV OF MICHIGAN - ANN ARBOR**                      **5980**  
 ADVANCED VIBRATION ANALYSIS TOOLS AND NEW STRATEGIES FOR  
 ROBUST DESIGN OF TURBINE ENGINE ROTORS  
 05/23/2001 - 05/31/2005                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* C PIERRE  
*Tech. Officer:* GRC/O MEHMED  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2708**                      **UNIV OF MICHIGAN - ANN ARBOR**                      **5981**  
 MICROFLUIDIC & DIELECTRIC PROCESSING OF DNA MICROFLUIDIC &  
 DIELECTRIC PROCESSING OF DNA  
 02/13/2002 - 02/04/2006                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R G LARSON  
*Tech. Officer:* GRC/D W GRIFFIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2740**                      **UNIV OF MICHIGAN - ANN ARBOR**                      **5982**  
 FLUID DYNAMICS & INTERFACIAL STABILITY OF PULMONARY AIRWAY  
 CLOSURE AND REOPENING IN MICROGRAVITY  
 03/12/2002 - 02/12/2006                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J B GROTBORG  
*Tech. Officer:* GRC/C LEK  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2787**                      **UNIV OF MICHIGAN - ANN ARBOR**                      **5983**  
 NOVEL BIOMEDICAL DEVICES UTILIZING LIGHT EMITTING NANOSTRUC-  
 TURES  
 05/31/2002 - 05/15/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R S GOLDMAN  
*Tech. Officer:* GRC/M SCARDELLETTI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2800**                      **UNIV OF MICHIGAN - ANN ARBOR**                      **5984**  
 INVESTIGATION OF INLET FLOWS AT HIGH MACH NUMBERS INVESTIGA-  
 TION OF INLET FLOWS AT HIGH MACH NUMBERS  
 08/12/2002 - 10/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D E GEISTER  
*Tech. Officer:* GRC/A R PORRO  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 2869**                      **UNIV OF MICHIGAN - ANN ARBOR**                      **5985**  
 STAR FORMATION STUDIES: DYNAMICS AND INFRARED SIGNATURES  
 01/12/1995 - 07/14/2001                      FY02: \$0                      Total: \$225,000  
*Prin. Invest.:* F C ADAMS  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4007**                      **UNIV OF MICHIGAN - ANN ARBOR**                      **5986**  
 DYNAMICAL VARIATIONS IN THE MESOSPHERE AND LOWER T AND  
 INTERANNUAL VARIABILITY  
 03/06/1997 - 09/30/2001                      FY02: \$0                      Total: \$213,729  
*Prin. Invest.:* D D SKINNER  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 4381**                      **UNIV OF MICHIGAN - ANN ARBOR**                      **5987**  
 STUDIES OF TENUOUS PLANETARY ATMOSPHERES  
 04/29/1997 - 12/31/2001                      FY02: \$0                      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**                      **5988**  
 A PROGRAM FOR RESEARCH IN PLANETARY ATMOSPHERES: P COUPLED  
 CLOUD PHYSICS  
 05/23/1997 - 12/31/2001                      FY02: \$0                      Total: \$249,000  
*Prin. Invest.:* P K ATREYA  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 5030**                      **UNIV OF MICHIGAN - ANN ARBOR**                      **5989**  
 SOLAR AND MAGNETOSPHERIC INPUTS TO THE MLTI REGION  
 03/03/1995 - 03/05/2005                      FY02: \$0                      Total: \$502,974  
*Prin. Invest.:* J KOZYRA  
*Tech. Officer:* GSFC/R PLESS  
*CASE Category:* 13 - PHYSICS

**NAG 5 5049**                      **UNIV OF MICHIGAN - ANN ARBOR**                      **5990**  
 TIDI - A TIMED DOPPLER INTERFEROMETER NEW AWARD  
 12/04/1995 - 01/17/2006                      FY02: \$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**                      **5991**  
 STUDY OF AN IMAGING CALORIMETER FOR ACCESS FUNDING FOR FIRST  
 YEAR OF GRANT  
 03/05/1998 - 03/31/2002                      FY02: \$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**                      **5992**  
 GRANT NAG5-5230 - HIGH ENERGY ANTIMATTER TELESCOPE (HEAT) PI  
 PROF. GREGORY TARLE'  
 03/16/1999 - 03/11/2003                      FY02: \$0                      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**                      **5993**  
 FIRST YEAR OF THREE YEAR EFFORT/ SOUNDING ROCKET UV MEASURE-  
 MENTS  
 04/11/2000 - 03/23/2003                      FY02: \$0                      Total: \$150,000  
*Prin. Invest.:* J T CLARK  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5281**                      **UNIV OF MICHIGAN - ANN ARBOR**                      **5994**  
 CONTEMPORANEOUS OPTICAL DETECTION OF GAMMA-RAY BURSTS  
 06/14/2000 - 06/07/2003                      FY02: \$0                      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**                      **5995**  
 GRANT NAG5-5304 CONSTRUCTION OF A HIGH PFR PULSED KU-BAND  
 RADAR FOR MEASUREMENTS OF SEA SURFACE SLOP  
 09/27/2000 - 02/28/2002                      FY02: \$0                      Total: \$30,000  
*Prin. Invest.:* K SARABANDI  
*Tech. Officer:* WFF/D C VANDEMARK, WFF/E J WALSH  
*CASE Category:* 45 - ELECTRICAL ENGR

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<p><b>NAG 5 6471</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>5996</b>  ENERGETIC PARTICLE PROPAGATION IN THE NEW MODEL FOR THE  HELIOSPHERIC MAGNETIC FIELD  11/17/1997 - 10/31/2000                      FY02: \$0                      Total: \$120,196  Prin. Invest.: T ZURBUCHEN  Tech. Officer: GSFC/J LING  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 8458</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>6004</b>  MODELING OF X-RAY CLUSTERS (ATP 98)  04/15/1999 - 04/14/2003                      FY02: \$0                      Total: \$124,000  Prin. Invest.: A E EVRARD  Tech. Officer: GSFC/R J OLIVERSEN  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 7474</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>5997</b>  HIGH RESOLUTION DOPPLER IMAGER - OPERATIONS AND ALGORITHM  MAINTENANCE  06/23/1998 - 06/30/2001                      FY02: \$0                      Total: \$672,000  Prin. Invest.: W SKINNER  Tech. Officer: GSFC/C H JACKMAN  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 8630</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>6005</b>  HIERARCHICAL INVESTIGATION OF SOCIOECONOMIC DRIVER OF DEC-  ADAL SCALE LAND-COVER CHANGES IN THE UPPER  08/11/1999 - 04/30/2001                      FY02: \$0                      Total: \$73,879  Prin. Invest.: D G BROWN  Tech. Officer: GSFC/J RANSON  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 7557</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>5998</b>  GGS/POLAR TIDE CO-INVESTIGATOR PROGRAM MO&amp;DA SUPPLEMENTAL  FUNDS  06/25/1998 - 06/30/2001                      FY02: \$0                      Total: \$124,000  Prin. Invest.: A NAGEY  Tech. Officer: GSFC/R HOFFMAN  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 8661</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>6006</b>  MOISTURE TRANSPORT AND RADIOBRIGHTNESS MODELS FOR COMPLEX  VEGETATION  07/01/1999 - 06/30/2003                      FY02: \$0                      Total: \$307,050  Prin. Invest.: A W ENGLAND  Tech. Officer: GSFC/P T HOUSER  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 7681</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>5999</b>  DEFINING A CLIMATOLOGY AND THE EFFECTS OF ABSORBING AEROSOLS-  MODELS AND MEASUREMENTS  09/04/1998 - 08/31/2002                      FY02: \$0                      Total: \$480,000  Prin. Invest.: J PENNER  Tech. Officer: GSFC/M I MISHCHENKO  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 8715</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>6007</b>  DYNAMICS IN THE COMET ENVIRONMENT  08/03/1999 - 06/30/2003                      FY02: \$0                      Total: \$70,500  Prin. Invest.: D J SCHEERES  Tech. Officer: GSFC/J BOYCE  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 7858</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>6000</b>  MEASUREMENT OF ABSOLUTE DIFFERENTIAL CROSS SECTIONS FOR THE  COLLISIONS OF ELECTRONS WITH PLANETARY  01/05/1999 - 03/31/2001                      FY02: \$0                      Total: \$127,100  Prin. Invest.: D SHYN  Tech. Officer: GSFC/R BEEBE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 8719</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>6008</b>  HIERARCHICAL INVESTIGATION OF SOCIOECONOMIC DRIVERS OF DEC-  ADAL SCALE LAND-COVER CHANGES IN THE UPPER  08/02/1999 - 04/30/2001                      FY02: \$0                      Total: \$51,250  Prin. Invest.: D G BROWN  Tech. Officer: GSFC/J RANSON  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 7860</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>6001</b>  THE SOLAR SYSTEM BEYOND PLUTO  01/06/1999 - 12/31/2001                      FY02: \$0                      Total: \$152,586  Prin. Invest.: D M BERNSTEIN  Tech. Officer: GSFC/T MORGAN  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 8845</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>6009</b>  CASSINI-HUYGENS GAS CHROMATOGRAPH MASS SPECTROMETER SCI-  ENCE SUPPORT  10/25/1999 - 10/31/2002                      FY02: \$0                      Total: \$50,000  Prin. Invest.: S K ATREYA  Tech. Officer: GSFC/W T KASPRZAK  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 8080</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>6002</b>  STATE-TO-STATE RATE CONSTANTS FOR COMPUTATION OF NON-LTE  INFRARED RADIATIVE TRANSFER IN THE M  01/15/1999 - 08/01/2002                      FY02: \$0                      Total: \$279,500  Prin. Invest.: D R BARKER  Tech. Officer: GSFC/M MELLOTT  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 8930</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>6010</b>  SOLID EARTH AND NATURAL HAZARDS RESEARCH AND APPLICATIONS  01/13/2000 - 01/14/2003                      FY02: \$0                      Total: \$150,000  Prin. Invest.: K SARABANDI  Tech. Officer: GSFC/H V FREY  CASE Category: 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 8238</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>6003</b>  MASSIVE BLACK HOLES AND THE CENTERS OF GALAXIES (LTA98)  02/25/1999 - 02/28/2002                      FY02: \$0                      Total: \$261,042  Prin. Invest.: D O RICHSTONE  Tech. Officer: GSFC/D K WEST  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 8942</b>                      <b>UNIV OF MICHIGAN - ANN ARBOR</b>                      <b>6011</b>  THE DISTRIBUTION OF GASES IN THE INNER COMAE OF COMETS  01/14/2000 - 01/14/2003                      FY02: \$0                      Total: \$220,000  Prin. Invest.: M R COMBI  Tech. Officer: GSFC/D BOGAN  CASE Category: 11 - ASTRONOMY</p>

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**NAG 5 8946**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6012**  
 STUDIES OF SOLAR WIND INTERACTION AND IONOSPHERIC PROCESSES  
 AT VENUS AND MARS  
 01/14/2000 - 03/31/2003                    FY02: \$0                    Total: \$179,923  
*Prin. Invest.:* A NAGY  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8993**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6013**  
 DYNAMICS IN THE EROS ENVIRONMENT  
 01/24/2000 - 12/31/2001                    FY02: \$0                    Total: \$66,124  
*Prin. Invest.:* D J SCHEERES  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9017**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6014**  
 DYNAMICS OF THE ASTEROID ENVIRONMENT  
 02/02/2000 - 03/31/2002                    FY02: \$0                    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**                    **6015**  
 DO ELLIPTICAL GALAXY COOLING FLOWS ACTUALLY COOL? - FUSE  
 02/03/2000 - 02/14/2002                    FY02: \$0                    Total: \$31,000  
*Prin. Invest.:* J N BREGMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9406**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6016**  
 HIGH PERFORMANCE PARALLEL METHODS FOR SPACE WEATHER SIMU-  
 LATION  
 04/10/2000 - 04/30/2003                    FY02: \$0                    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**                    **6017**  
 A MASSIVELY PARALLEL PARTICLE CODE FOR RARIFIED IONIZED &  
 NEUTRAL GAS FLOWS IN EARTH & PLANETARY  
 04/18/2000 - 04/14/2003                    FY02: \$0                    Total: \$233,600  
*Prin. Invest.:* M COMBI  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9762**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6018**  
 DESIGN STUDY OF A SYNTHETIC APERTURE PRECIPITATION RADIOMETER  
 08/03/2000 - 07/31/2002                    FY02: \$0                    Total: \$248,283  
*Prin. Invest.:* C RUF  
*Tech. Officer:* GSFC/C M PRINCIPE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 9980**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6019**  
 METAL ENRICHMENT MECHANISMS IN ABELL 2199 & ABELL 3571  
 09/13/2000 - 09/14/2003                    FY02: \$0                    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**                    **6020**  
 THE NATURE OF THE X-RAY EMISSION IN SA BULGES  
 09/13/2000 - 09/14/2003                    FY02: \$0                    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**                    **6021**  
 A MODULAR CODE FOR A COMM VERSION OF THE MICHIGAN LSP/R  
 MODEL  
 10/31/2000 - 04/30/2002                    FY02: \$0                    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**                    **6022**  
 NOZOMI NEUTRAL MASS SPECTROMETER SCIENCE SUPPORT  
 12/12/2000 - 12/14/2004                    FY02: \$0                    Total: \$15,000  
*Prin. Invest.:* S K ATREYA  
*Tech. Officer:* GSFC/W T KASPRZAK  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10181**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6023**  
 NOZOMI NEUTRAL MASS SPECTROMETER SCIENCE SUPPORT - DEVELOP-  
 ING UPPER ATMOSPHERIC, EXOSPHERIC MODELS  
 01/18/2001 - 01/31/2005                    FY02: \$0                    Total: \$15,000  
*Prin. Invest.:* A F NAGY  
*Tech. Officer:* GSFC/W T KASPRZAK  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 10297**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6024**  
 PHYSICAL RESPONSE OF THE INNER MAGNETOSPHERE TO GE OFFEC-  
 TIVE SOLAR WIND DRIVERS: ENERGY DISSIPATION  
 02/15/2001 - 01/31/2002                    FY02: \$0                    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**                    **6025**  
 SELF-RELIANT, HIGH RESOLUTION IMAGING USING FORMAT ION FLYING  
 SPACECRAFT  
 02/07/2001 - 02/14/2004                    FY02: \$0                    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**                    **6026**  
 ASUMICHIGAN COLLABORATION: THE ABUNDANCE & ISOTOPIC COMPO-  
 SITION OF HG IN EXTRATERRESTRIAL MATERIAL  
 03/09/2001 - 03/14/2004                    FY02: \$0                    Total: \$20,000  
*Prin. Invest.:* J BLUM  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10765**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6027**  
 X-RAY ABSORPTION STUDIES; COOLING FLOWS (LTS-2000)  
 04/23/2001 - 04/30/2006                    FY02: \$0                    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**                    **6028**  
 CONCEPT STUDY FOR THE "THE HEAVY NUCLEI EXPLORER" (HNX)  
 MISSION AO-99-OSS-05  
 04/30/2001 - 04/30/2002                    FY02: \$0                    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 6029**  
 RXTE OBSERVATIONS OF SELECTED BLAZARS - ADP - 99  
 04/23/2001 - 04/30/2004 FY02: \$0 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 6030**  
 HIGH RESOLUTION DOPPLER IMAGER - OPERATIONS AND ALGORITHM  
 MAINTENANCE.  
 05/02/2001 - 11/30/2002 FY02: \$0 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 6031**  
 SUPERPOSED EPOCH ANALYSIS OF RING CURRENT GEO- EFFECTIVE-  
 NESS RELATED TO SOLAR WIND & PLASMA SHEET  
 05/07/2001 - 05/14/2004 FY02: \$0 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 6032**  
 POLAR/TIDE  
 05/07/2001 - 05/14/2004 FY02: \$0 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 6033**  
 2001: A SPACETIME ODYSSEY  
 05/29/2001 - 05/31/2002 FY02: \$0 Total: \$12,500  
*Prin. Invest.:* K FREESE  
*Tech. Officer:* GSFC/D GOLOMBEK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10975 UNIV OF MICHIGAN - ANN ARBOR 6034**  
 A PREDICTIVE MODEL FOR THE MAGNETIC FIELD IN THE HELIOSPHERE  
 05/29/2001 - 05/31/2004 FY02: \$0 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 6035**  
 SOLAR WIND STRUCTURE IN THE INNER HELIOSPHERE: RATIONALE FOR  
 THE LOCATION OF THE SENTINEL MISSION  
 06/06/2001 - 05/31/2004 FY02: \$0 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 6036**  
 RESEARCH IN PLANETARY ATMOSPHERES-JUPITER & TITAN  
 06/08/2001 - 09/14/2004 FY02: \$0 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 6037**  
 INTEGRATED MODELING STUDY OF THE EFFECTS OF MAGNETOSPHERIC  
 FORCING ON THE JOVIAN IONOSPHERE-THERMOS  
 06/11/2001 - 05/30/2002 FY02: \$0 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 6038**  
 MODELING OF COMETARY ATMOSPHERES  
 06/12/2001 - 06/14/2004 FY02: \$0 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 6039**  
 DYNAMICAL STUDIES OF THE MIDDLE ATMOSPHERE USING HIGH RESO-  
 LUTION DOPPLER IMAGER OBSERVATIONS  
 07/09/2001 - 10/14/2002 FY02: \$0 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 6040**  
 MODELING SIBERIAN BOREAL FOREST LAND-COVER CHANGE AND CAR-  
 BON UNDER CHANGING ECONOMIC PARADIGMS  
 07/20/2001 - 08/14/2004 FY02: \$0 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 6041**  
 MGS MAG/ER DATA ANALYSIS USING A TIME AND MAGNETIC FIELD  
 DEPENDENT ELECTRON TRANSPORT MODEL  
 08/08/2001 - 08/31/2004 FY02: \$0 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 6042**  
 DEVELOPING LAND COVER SCENARIOS IN METROPOLITAN AND NON-  
 METROPOLITAN MICHIGAN  
 08/23/2001 - 08/31/2004 FY02: \$0 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 6043**  
 TRACE GAS/AEROSOL INTERACTIONS AND GMI MODELING SUPPORT  
 08/22/2001 - 08/31/2004 FY02: \$0 Total: \$100,051  
*Prin. Invest.:* J PENNER  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11406 UNIV OF MICHIGAN - ANN ARBOR 6044**  
 VEGETATION CORRECTED SRM - DERIVED DIGITAL ELEVATION MODELS.  
 12/06/2001 - 12/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* C DOBSON  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

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**NAG 5 11414**      **UNIV OF MICHIGAN - ANN ARBOR**      **6045**  
 THE PLANET-B NEUTRAL MASS SPECTROMETER: THERMO- SPHERE-  
 IONOSPHERE STUDIES USING THE MTGM.  
 01/03/2002 - 10/14/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* S W BOUGHER  
*Tech. Officer:* GSFC/W T KASPRZAK  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11448**      **UNIV OF MICHIGAN - ANN ARBOR**      **6046**  
 THE SUPERNOVA HEATING RATE IN SPIRAL GALAXIES.  
 12/14/2001 - 12/14/2002      FY02: \$0      Total: \$0  
*Prin. Invest.:* J N BREGMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11483**      **UNIV OF MICHIGAN - ANN ARBOR**      **6047**  
 THE TRUTH ABOUT COOLING FLOWS IN ELLIPTICAL GALAXIES FUSE 2000  
 12/14/2001 - 12/14/2002      FY02: \$0      Total: \$0  
*Prin. Invest.:* J N BREGMAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11580**      **UNIV OF MICHIGAN - ANN ARBOR**      **6048**  
 THE SURFACE CLIMATE SIGNAL IN THE CONTEXT OF LSP/R ADIOBRIGHT-  
 NESS MODEL- BASED ESTIMATES OF LAND ATM  
 01/14/2002 - 01/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* A W ENGLAND  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11609**      **UNIV OF MICHIGAN - ANN ARBOR**      **6049**  
 NEXT GENERATION LIGHTWEIGHT RAINFALL RADIOMETER SY  
 NTHETICALLY-THINNED APERTURE RADIOMETER (NGLRR)  
 01/31/2002 - 01/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* C RUF  
*Tech. Officer:* GSFC/C PRINCIPE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 11639**      **UNIV OF MICHIGAN - ANN ARBOR**      **6050**  
 DYNAMICS OF THE ASTEROID ENVIRONMENT  
 01/22/2002 - 01/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* D J SCHEERES  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11674**      **UNIV OF MICHIGAN - ANN ARBOR**      **6051**  
 THE STUDY OF BIOMASS EMISSIONS FOR DEFINING RADIATIVE FORCING  
 OF CLIMATE  
 01/30/2002 - 01/31/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* J PENNER  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11748**      **UNIV OF MICHIGAN - ANN ARBOR**      **6052**  
 WORKSHOP PLANNING PROPOSAL FOR A REGIONAL GOFC WORKSHOP"  
 GOFC SATELLITE INFORMATION PRODUCTS FOR FO  
 02/25/2002 - 02/28/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* K BERGEN  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11831**      **UNIV OF MICHIGAN - ANN ARBOR**      **6053**  
 OBSERVATIONAL AND THEORETICAL ANALYSIS OF THE MAGNETOSPHERE'S  
 DYNAMIC RESPONSE TO SOLAR WIND DRIV  
 03/06/2002 - 02/28/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* J U KOZYRA  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11905**      **UNIV OF MICHIGAN - ANN ARBOR**      **6054**  
 PLANETS FORMATION AMONG THE NEAREST YOUNG STARS  
 04/10/2002 - 03/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* R JAYAWARDHANA  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11973**      **UNIV OF MICHIGAN - ANN ARBOR**      **6055**  
 HIGH RESOLUTION X-RAY PROPERTIES OF BL LACS: AN XMM SURVEY  
 04/10/2002 - 04/14/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* M F ALLER  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12040**      **UNIV OF MICHIGAN - ANN ARBOR**      **6056**  
 INVESTIGATION OF THE STORM-SUB-STORM RELATIONSHIP USING UVI  
 IMAGES, GROUND BASE MANAGERMENTS AND  
 04/17/2002 - 04/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* R CLAUER  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12084**      **UNIV OF MICHIGAN - ANN ARBOR**      **6057**  
 ANALYSIS AND ARCHIVAL OF HRDI DATA.  
 04/24/2002 - 04/30/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* W SKINNER  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12146**      **UNIV OF MICHIGAN - ANN ARBOR**      **6058**  
 STORM-TIME AND SOLAR CYCLE EFFECTS IN THE HIGH-LATITUDE  
 MAGNETOSPHERE-IONOSPHERE COUPLING  
 05/14/2002 - 05/14/2004      FY02: \$0      Total: \$0  
*Prin. Invest.:* V O PAPTASHVILI  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12171**      **UNIV OF MICHIGAN - ANN ARBOR**      **6059**  
 COMPLEX ORGANIC AND BIOMARKER ANALYSIS USING TIME OF FLIGHT  
 MASS SPECTROMETRY  
 05/09/2002 - 05/14/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* J WAITE  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12176**      **UNIV OF MICHIGAN - ANN ARBOR**      **6060**  
 TEMPORAL AND SPATIAL DEVELOPMENT OF THE RING CURRENT: MODEL  
 IMPROVEMENTS AND VALIDATION ANALYSIS  
 05/13/2002 - 05/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* C CLAEUR  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<p><b>NAG 5 12415</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6061</b>  COMETARY HYDROGEN OBSERVATIONS WITH SOHO SWAN  07/25/2002 - 07/31/2005                    FY02: \$0                    Total: \$0  Prin. Invest.: M R COMBI  Tech. Officer: GSFC/J HILLMAN  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAS 2 02069</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6070</b>  BIOSENSORS FOR REAL TIME MONITORING OF RADIATION I NCUCED BIOLOGIC  03/28/2002 - 03/27/2005                    FY02: \$0                    Total: \$0  Prin. Invest.: J R BAKER  Tech. Officer: ARC/J W HINES, ARC/P P FUNG  CASE Category: 56 - MEDICL</p>
<p><b>NAG 5 12442</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6062</b>  MGS RADIO SCIENCE ELECTRON DENSITY PROFILES AND IM PLECTIONS FOR THE NEUTRAL ATMOSPHERE  08/07/2002 - 08/14/2003                    FY02: \$0                    Total: \$0  Prin. Invest.: S W BOUGHER  Tech. Officer: GSFC/J M BOYCE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAS 5 99174</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6071</b>  PROVIDE SUPPORT, DESIGN, DEVELOPMENT OF THE NGIMS EXPERIMENT FOR THE COMET NUCLEUS TOUR (CONTOUR)  04/02/1999 - 08/25/2002                    FY02: \$0                    Total: \$1,904,362  Prin. Invest.: G ARIGNAN  Tech. Officer: GSFC/J RICHARDS  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 12567</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6063</b>  IMPROVED MARS UPPER ATMOSPHERE CLIMATOLOGY  09/25/2002 - 03/31/2004                    FY02: \$0                    Total: \$0  Prin. Invest.: S BOUGHER  Tech. Officer: GSFC/J BOYCE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAS 8 99127</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6072</b>  R/S ICARUS SATELLITE FOR PROSEDS  06/23/1999 - 09/30/2002                    FY02: \$0                    Total: \$400,213  Prin. Invest.: G E GILCHRIST  Tech. Officer: MSFC/K J WELZYN  CASE Category: 42 - ASTRONAUTICAL ENGR</p>
<p><b>NAG 8 1725</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6064</b>  FIELD-REVERSED END PLUGING FOR THE GASDYNAMIC MIRROR MACHINE  07/26/2000 - 06/30/2001                    FY02: \$0                    Total: \$20,000  Prin. Invest.: T KAMMASH  Tech. Officer: MSFC/W F EMRICH  CASE Category: 46 - MECHANICAL ENGR</p>	<p><b>NAS 8 99128</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6073</b>  RESEARCH ENTITLED PROCEEDS UMPHS PHASE D &amp; E  07/30/1999 - 09/30/2002                    FY02: \$0                    Total: \$1,040,693  Prin. Invest.: B GILCHRIST  Tech. Officer: MSFC/J L BALATICE, MSFC/L JOHNSON  CASE Category: 42 - ASTRONAUTICAL ENGR</p>
<p><b>NAG 9 1154</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6065</b>  IMPACT OF MICROGRAVITY ON DRUG AND NUTRIENT ABSORPTION  02/03/2000 - 01/31/2003                    FY02: \$0                    Total: \$352,052  Prin. Invest.: G L AMIDON  Tech. Officer: JSC/C LLOYD  CASE Category: 61 - PSYCHOLOGY BIOLOGY</p>	<p><b>NCC 1 01050</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6074</b>  RESPONSE OF STRONGLY ANISOTROPIC LAMINATED PANELS UNDER COMBINED LOADS  05/08/2001 - 08/31/2002                    FY02: \$0                    Total: \$50,148  Prin. Invest.: A P WAAS  Tech. Officer: LARC/M P NEMETH  CASE Category: 47 - METAL &amp; MATERIALS ENGR</p>
<p><b>NAG 9 1167</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6066</b>  DEVELOP ADVANCED MILLIMETERWAVE INTERFEROMETER FOR PLASMA DIAGNOSTICS  09/22/1999 - 06/30/2002                    FY02: \$0                    Total: \$44,000  Prin. Invest.: B E GILCHRIST  Tech. Officer: JSC/F R CHANG-DIAZ  CASE Category: 42 - ASTRONAUTICAL ENGR</p>	<p><b>NCC 1 02045</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6075</b>  ACTIVE AEROELASTIC INVESTIGATION OF AN ADVANCED ACTIVE TWIST ROTOR SYSTEM  09/05/2002 - 09/30/2005                    FY02: \$0                    Total: \$0  Prin. Invest.: C E GESNIK  Tech. Officer: LARC/M L WILBUR  CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 9 1251</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6067</b>  OPTICAL SEARCHES FOR GEOSYNCHRONOUS ORBITAL DEBRIS  08/01/2000 - 07/31/2002                    FY02: \$0                    Total: \$106,787  Prin. Invest.: P O SEITZER  Tech. Officer: JSC/E G STANSBERY  CASE Category: 11 - ASTRONOMY</p>	<p><b>NCC 2 856</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6076</b>  EFFECTS OF MICROGRAVITY ON DEVELOPMENT OF THIGH MUSCLES  05/25/1994 - 12/31/2001                    FY02: \$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)</p>
<p><b>NAG 9 1373</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6068</b>  AN OPTICAL SURVEY FOR SPACE DEBRIS IN GEOSYNCHRONOUS  08/15/2001 - 09/30/2002                    FY02: \$0                    Total: \$229,381  Prin. Invest.: P O SEITZER  Tech. Officer: JSC/E G STANSBERY  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NCC 2 5442</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6077</b>  THE EVOLUTION AND DISPERSAL OF PROTOSTELLAR DISKS  07/11/2001 - 06/30/2003                    FY02: \$0                    Total: \$14,833  Prin. Invest.: F C ADAMS  Tech. Officer: ARC/D J HOLLENBACH, ARC/K R BELL  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG13 99024</b>                    <b>UNIV OF MICHIGAN - ANN ARBOR</b>                    <b>6069</b>  FOREST STRUCTURE FROM MULTI-SPECTRAL FUSION SAME  08/25/1999 - 08/18/2003                    FY02: \$0                    Total: \$430,010  Prin. Invest.: M DOBSON  Tech. Officer: SSC/R MCKELLIP  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	

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**NCC 3 474**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6078**  
 INVESTIGATION OF DROOP FORMATION BY VORTEX RING IN MICROGRAVITY  
 05/20/1996 - 12/31/2000                    FY02: \$0                    Total: \$299,337  
*Prin. Invest.:* L P BERNAL  
*Tech. Officer:* GRC/J B MCGUILLEN  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 482**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6079**  
 RADIANT EXTINCTION OF GASOUS DIFFUSION FLAMES  
 06/15/1996 - 12/14/2002                    FY02: \$0                    Total: \$359,000  
*Prin. Invest.:* A ATREYA  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 13 - PHYSICS

**NCC 3 656**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6080**  
 FLAME VORTEX INTERACTIONS IN MICROGRAVITY TO ASSES S THE THEORY OF FLAME STRETCH  
 01/12/1999 - 12/03/2002                    FY02: \$0                    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**                    **6081**  
 FLOW/SOOT-FORMATION IN NONBOUYANT LAMINAR DIFFUSIO N FLAMES  
 01/21/1999 - 12/29/2002                    FY02: \$0                    Total: \$257,365  
*Prin. Invest.:* G M FAETH  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 663**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6082**  
 TURBULENT FLAME PROCESSES VIA VORTEX-RING DIFFUSIO N FLAME INTERACTION  
 01/15/1999 - 12/30/2002                    FY02: \$0                    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**                    **6083**  
 GAS SEPARATION & PRESSURIZATION FOR EXTRATERRESTRI AL EXPLO- RATION  
 07/07/1999 - 12/31/2001                    FY02: \$0                    Total: \$40,000  
*Prin. Invest.:* M KAVIANY  
*Tech. Officer:* GRC/E S NELSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 790**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6084**  
 SYSTEM ON A CHIP: ACTIVE COMPONENTS OF THE RF FRO NT END  
 04/04/2000 - 02/28/2003                    FY02: \$0                    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**                    **6085**  
 LOW COST, LOW POWER COMPONENTS FOR TRANSMIT/RECEIVE PHASE ARRAY ANTENNAS  
 12/20/2000 - 12/31/2001                    FY02: \$0                    Total: \$226,564  
*Prin. Invest.:* L P KATEHI  
*Tech. Officer:* GRC/G E PONCHAK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 296**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6086**  
 RADAR REMOTE SENSING OF LAND-COVER AND BIOMASS IN THE AMAZON  
 06/16/1998 - 12/31/2002                    FY02: \$0                    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**                    **6087**  
 COLLABORATIVE EDUCATION AND PUBLIC OUTREACH ACTIVI TIES BY WINDOWS TO THEUNIVERSE PROJECT IN SUPPORT  
 02/24/1999 - 02/28/2001                    FY02: \$0                    Total: \$50,000  
*Prin. Invest.:* L FISK  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NCC 5 614**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6088**  
 HIGH-PERFORMANCE ADAPTIVE SIMULATION FRAMEWORK FOR SPACE- WEATHER MODELING (SWMF)  
 03/04/2002 - 03/03/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* T GOMBOSI  
*Tech. Officer:* GSFC/J FISCHER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 5 632**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6089**  
 A HIGH-PERFORMANCE SOFTWARE FRAMEWORK & INTEROPERA BLE APPLICATIONS FOR THE RAPID ADVANCEMENT OF EA  
 02/27/2002 - 02/28/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* Q F STOUT  
*Tech. Officer:* GSFC/A DA SILVA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 8 181**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6090**  
 GLOBAL SIMULATIONS OF CORE PLASMA DENSITIES, COMPOSITION AND TEMPERATURE. NASA NRA98-OSS-03.  
 06/07/1999 - 06/06/2002                    FY02: \$0                    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**                    **6091**  
 SEARCHING EXTRASOLAR PLANETS USING DIFFERENTIAL PH OTOMETRY  
 07/23/1999 - 07/14/2002                    FY02: \$0                    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**                    **6092**  
 SIMULTANEOUS VIBRATION & BVI NOISE REDUCTION IN RO TORCRAFT USING ACTIIVIELY CONTROLLED TRAILING-EDGE  
 08/11/2000 - 08/31/2003                    FY02: \$0                    Total: \$44,000  
*Prin. Invest.:* P P FRIEDMAN  
*Tech. Officer:* ARC/W WARMBRODT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 3 52348**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6093**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT RESEARCHERS PROGRAM  
 06/15/1999 - 08/31/2002                    FY02: \$0                    Total: \$53,200  
*Prin. Invest.:* A GALLIMORE  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

## NASA'S UNIVERSITY PROGRAM

MICHIGAN

**NGT 3 52349 UNIV OF MICHIGAN - ANN ARBOR 6094**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RESEARCH PROGRAM  
 06/23/1999 - 08/31/2002 FY02: \$0 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 6095**  
 GRADUATE STUDENT PROGRAM GRADUATE STUDENT PROGRAM  
 06/14/2000 - 08/31/2003 FY02: \$0 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 6096**  
 GRADUATE STUDENT RESEARCHER'S PROGRAM GRADUATE STUDENT RESEARCHER'S PROGRAM  
 04/09/2001 - 06/24/2003 FY02: \$0 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 6097**  
 GRADUATE STUDENT RESEARCH  
 06/07/2001 - 06/30/2003 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* W J DAHM  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 4 52421 UNIV OF MICHIGAN - ANN ARBOR 6098**  
 MULTIVARIABLE NONLINEAR IDENTIFICATION MULTIVARIABLE NONLINEAR IDENTIFICATION  
 05/11/2000 - 06/30/2002 FY02: \$0 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 6099**  
 GRADUATE RESEARCH - AEROELASTICITY AND AEROELASTIC SCALING OF HYPERSONIC VEHICLES  
 07/17/2001 - 06/30/2003 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* P FRIEDMAN  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 124 UNIV OF MICHIGAN - ANN ARBOR 6100**  
 DEVELOPMENT AND TESTING OF THE FAST IMAGING PLASMA SPECTROMETER (STUDENT: PATRICK KOEHN)  
 06/07/2001 - 08/31/2003 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* L A FISK  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 135 UNIV OF MICHIGAN - ANN ARBOR 6101**  
 PROMPT OPTICAL OBSERVATIONS OF GAMMA-RAY BURSTS WITH ROTSE-III. (STUDENT: ELI RYKOFF)  
 06/17/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* C W AKERLOF  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 30172 UNIV OF MICHIGAN - ANN ARBOR 6102**  
 THE USE OF REMOTE SENSING METHODS FOR STUDYING FIRE-INDUCED LAND COVER CHANGES IN BOREAL FORESTS  
 09/04/1998 - 05/31/2002 FY02: \$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 6103**  
 COMPUTATIONAL METHODS FOR ADVANCED CLIMATE MODEL PREDICTIONS: A STUDY OF ADOPTIVE GRID TECHNIQUES  
 08/23/2000 - 08/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* J PENNER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30432 UNIV OF MICHIGAN - ANN ARBOR 6104**  
 QUANTIFICATION OF FOREST STRUCTURE IN SUPPORT OF TERRESTRIAL CARBON AND ECOSYSTEM (STUDENT: WAYNE)  
 08/15/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* C DOBSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40062 UNIV OF MICHIGAN - ANN ARBOR 6105**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATIONAL AND FELLOWSHIP PROGRAM.  
 03/15/1997 - 01/31/2001 FY02: \$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 6106**  
 MICHIGAN SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 03/15/2001 - 01/31/2005 FY02: \$0 Total: \$475,000  
*Prin. Invest.:* A D GALLIMORE  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50255 UNIV OF MICHIGAN - ANN ARBOR 6107**  
 A HYBRID KINETIC FLUID MODEL FOR THE ATMOSPHERE OF PLUTO  
 STUDENT: AYLISHA REINARD  
 06/21/1999 - 06/30/2002 FY02: \$0 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 6108**  
 DEVELOPMENT OF A NEW SOLID STATE DETECTOR FOR THE STUDY OF SOLAR WIND COMPOSITION/STUDENT: SUSAN LEP  
 05/08/2001 - 06/30/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* L FISK  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50412 UNIV OF MICHIGAN - ANN ARBOR 6109**  
 PLUME STUDIES OF FEED THRUSTER SYSTEMS - STUDENT NAME: ANTON VANDERWYST  
 08/07/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* I D BOYD  
*Tech. Officer:* GSFC/K B LANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## MICHIGAN

## NASA'S UNIVERSITY PROGRAM

**NGT 8 52864**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6110**  
 IDENTIFICATION OF LONG TERM CHANGE IN SOCIETY AND SETTLEMENT  
 OF THE KHABUR DRAINAGE  
 07/28/1998 - 12/01/2003                    FY02: \$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**                    **6111**  
 NUCLEAR THERMAL PROPULSION FOR SPACE EXPLORATION  
 05/04/2000 - 08/31/2003                    FY02: \$0                    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**                    **6112**  
 DEVELOPMENT OF FIELD EMITTER ARRAY OF ELECTRODYNAMIC TETHER  
 05/04/2000 - 06/30/2003                    FY02: \$0                    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**                    **6113**  
 DEV OF COMPUTER MODELS FOR NUCLEAR-BASED MAGNETOHYDRO-  
 DYNAMIC POWER CYCLES  
 05/25/2001 - 06/30/2002                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* I BOYD  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 8 52917**                    **UNIV OF MICHIGAN - ANN ARBOR**                    **6114**  
 DEV THE ELECTRODYNAMIC TETHER PROPULSION CONCEPT BEYOND  
 THE PROSEDS MISSION  
 04/22/2002 - 07/01/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* B GILCHRIST  
*Tech. Officer:* MSFC/S NASH-STEVESON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 02105**                    **WAYNE STATE UNIV**                    **6115**  
 FROM ATOMS TO SPACE - WSU PROPOSAL DATED 6/11/02  
 07/16/2002 - 06/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G W AUNER  
*Tech. Officer:* LARC/R R ANTCLIFF, LARC/T R SUTTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1279**                    **WAYNE STATE UNIV**                    **6116**  
 DEVELOPMENT OF STRATEGIES & TOOLS FOR ANALYSIS & CONTROL OF  
 LARGE AIR TRAFFIC MANAGEMENT SYSTEMS  
 01/05/1999 - 12/31/2001                    FY02: \$0                    Total: \$90,000  
*Prin. Invest.:* F LIN  
*Tech. Officer:* ARC/G MEYER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 2 1503**                    **WAYNE STATE UNIV**                    **6117**  
 EFFECTS OF MICROGRAVITY ON PREIMPLANTATION MOUSE DEVELOP-  
 MENT  
 07/12/2001 - 07/14/2003                    FY02: \$0                    Total: \$89,600  
*Prin. Invest.:* D A RAPPOLEE  
*Tech. Officer:* ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1532**                    **WAYNE STATE UNIV**                    **6118**  
 MULTI AGENT HYBRID CONTROL APPROACH TO AIR TRAFFIC CONTROL  
 01/31/2002 - 01/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* F LIN  
*Tech. Officer:* ARC/G MEYER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2180**                    **WAYNE STATE UNIV**                    **6119**  
 CHARACTERIZATION OF MULTI-JUNCTION SOLAR CELLS CHARACTERIZA-  
 TION OF MULTI-JUNCTION SOLAR CELLS  
 07/18/1998 - 01/04/2002                    FY02: \$0                    Total: \$225,000  
*Prin. Invest.:* P WOODYARD  
*Tech. Officer:* GRC/D BRINKER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2313**                    **WAYNE STATE UNIV**                    **6120**  
 A DESIGN AND ANALYSIS TOOL FOR PULSE DETONATION ENGINES  
 12/29/1999 - 02/04/2003                    FY02: \$0                    Total: \$237,384  
*Prin. Invest.:* S YU  
*Tech. Officer:* GRC/P C JORGENSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2542**                    **WAYNE STATE UNIV**                    **6121**  
 DIRECT CALCULATIONS OF PLUME DYNAMICS AND ACOUSTICS OF A  
 PULSE DETONATION ENGINE BY THE SPACE-TIME  
 02/12/2001 - 02/04/2002                    FY02: \$0                    Total: \$46,999  
*Prin. Invest.:* S YU  
*Tech. Officer:* GRC/P C JORGENSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2801**                    **WAYNE STATE UNIV**                    **6122**  
 CHARACTERIZATION OF MULTI-JUNCTION SOLAR CELLS IN THE STRATO-  
 SPHERE  
 08/13/2002 - 11/30/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J R WOODYARD  
*Tech. Officer:* GRC/D B SNYDER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 9 1183**                    **WAYNE STATE UNIV**                    **6123**  
 DEVELOPMENT OF HUMAN FACTORS ANALYSIS OF ADVANCED 3D VISUALI-  
 ZATION FOR TELEPRESENCE  
 01/15/2000 - 01/14/2003                    FY02: \$0                    Total: \$248,723  
*Prin. Invest.:* L ZAMORANO  
*Tech. Officer:* JSC/B WOOLFORD  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1432**                    **WAYNE STATE UNIV**                    **6124**  
 ADVANCED DIAGNOSTIC ULTRASOUND IN MICROGRAVITY  
 06/20/2002 - 03/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* S A DULCHAVSKY  
*Tech. Officer:* JSC/C GUIDRY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 1189**                    **WAYNE STATE UNIV**                    **6125**  
 FROM BIOLOGICAL INFORMATION PROCESSING TO ADAPTABLE ROBOTRY:  
 PRINCIPLES, MODELS & BIOMIMETIC DESIGN  
 07/14/2000 - 07/14/2003                    FY02: \$0                    Total: \$150,000  
*Prin. Invest.:* K PETER ZAUNER  
*Tech. Officer:* ARC/S P COLOMBANO, ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

## NASA'S UNIVERSITY PROGRAM

MINNESOTA

**NCC 2 1318**                      **WAYNE STATE UNIV**                      **6126**  
 HUMAN FACTORS IN INTER ORGANIZATION PROCESSES  
 03/01/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A BATTEAU  
*Tech. Officer:* ARC/B KANKI, ARC/M CONNORS  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 3 960**                      **WAYNE STATE UNIV**                      **6127**  
 SIMULATION OF PLUME DYNAMICS OF A PULSE DETONATION ENGINE BY  
 THE SPACE-TIME CE/SE/ METHOD  
 05/01/2002 - 04/24/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S YU  
*Tech. Officer:* GRC/P JORGENSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01023**                      **WESTERN MICHIGAN UNIV**                      **6128**  
 DSMC SIMULATIONS OF LAMINAR FLOW BREAKDOWN ON SPACE TRANS-  
 PORT SYSTEMS  
 04/02/2001 - 02/28/2004                      FY02: \$0                      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**                      **6129**  
 A UNIFIED LES/RANS APPROACH USING THE CE/SE METHOD  
 01/22/2001 - 01/17/2002                      FY02: \$0                      Total: \$61,000  
*Prin. Invest.:* W W LIU  
*Tech. Officer:* GRC/S CHANG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10448**                      **WESTERN MICHIGAN UNIV**                      **6130**  
 IMPROVED SIMULATIONS OF ASTROPHYSICAL PLASMAS: COMPUTATION  
 OF NEW ATOMIC DATA  
 02/20/2001 - 02/28/2004                      FY02: \$0                      Total: \$70,000  
*Prin. Invest.:* T GORCZYCA  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 13 - PHYSICS

**NCC 2 1246**                      **WESTERN MICHIGAN UNIV**                      **6131**  
 FRACTAL & GEOSTATISTICAL METADATA FOR MONITORING GLOBAL  
 CHANGE USING REMOTE SENSING IMAGERY  
 04/17/2001 - 05/31/2003                      FY02: \$0                      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 1 02012**                      **BETHEL COLL**                      **6132**  
 ANALYSIS OF THE ADVANTAGES & LIMITATIONS OF A STATIONARY IMAGING  
 FOURIER TRANSFORM SPECTROMETER  
 12/05/2001 - 10/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B P BEECKEN  
*Tech. Officer:* LARC/M G MLYNCZAK  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8626**                      **CONCORDIA COLL IN MOORHEAD**                      **6133**  
 MARS SOLAR BALLOON GAS CHROMATOGRAPH MASS SPECTROMETER  
 06/24/1999 - 06/30/2001                      FY02: \$0                      Total: \$5,000  
*Prin. Invest.:* H L MANNING  
*Tech. Officer:* GSFC/P R MAHAFFY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7366**                      **MOORHEAD STATE UNIV**                      **6134**  
 ELECTROCHEMICAL STUDY OF SILICATE MELT STRUCTURE AND COMPO-  
 NENT ACTIVITIES  
 05/15/1998 - 05/31/2002                      FY02: \$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**                      **6135**  
 SEARCH FOR CHEMICAL DIVERSITY IN COMETRAY VOLATILE S  
 08/20/2001 - 08/31/2004                      FY02: \$0                      Total: \$16,400  
*Prin. Invest.:* M WOMACK  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2242**                      **UNIV OF MINNESOTA**                      **6136**  
 STRUCTURING FORMAL ROOMS SPECIFICATIONS FOR REUSE AND PROD-  
 UCT FAMILIES -- NRA 98-LARC-8  
 09/28/1999 - 06/30/2001                      FY02: \$0                      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**                      **6137**  
 FURTHER DEVELOPMENT & DEPLOYMENT OF NANOMETER AEROSOL SIZE  
 ANALYZER (NASA) TO SUPPORT EXCAVATE  
 06/15/2001 - 07/12/2002                      FY02: \$0                      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**                      **6138**  
 REAL-TIME MOTION PATH PLANNING FOR AUTONOMOUS ROTOCRAFT  
 08/04/2000 - 08/31/2003                      FY02: \$0                      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**                      **6139**  
 COMPREHENSIVE COMPUTER SIMULATION OF AIR TRAFFIC SYSTEM  
 04/09/2001 - 03/31/2003                      FY02: \$0                      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**                      **6140**  
 ATOMIC FORCE MICROSCOPY OF THERMAL INSULATION MATERIALS WITH  
 AEROGELS  
 04/13/2001 - 06/30/2002                      FY02: \$0                      Total: \$13,646  
*Prin. Invest.:* J MAPS  
*Tech. Officer:* ARC/L J SALERNO, ARC/S M JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 3 2435**                      **UNIV OF MINNESOTA**                      **6141**  
 FEASIBILITY STUDY OF A MICROSCALE PARTICULATE CLASSIFIER (MIPAC)  
 05/31/2000 - 09/30/2002                      FY02: \$0                      Total: \$75,000  
*Prin. Invest.:* D H PUI  
*Tech. Officer:* GRC/P S GREENBERG  
*CASE Category:* 49 - ENGINEERING, OTHER

## MINNESOTA

## NASA'S UNIVERSITY PROGRAM

**NAG 3 2468**                      **UNIV OF MINNESOTA**                      **6142**  
 DEVELOPMENT OF A LOW-COST, SOFTWARE RECONFIGURABLE LABORATORY FOR FIRST COURSE ON ELECTRIC DRIVES A  
 06/26/2000 - 08/31/2003                      FY02: \$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**                      **6143**  
 NEW POLYMER ELECTROLYTE SYSTEMS  
 05/01/2001 - 05/31/2004                      FY02: \$0                      Total: \$125,000  
*Prin. Invest.:* W H SMYRL  
*Tech. Officer:* GRC/N H HAGEDORN  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 3735**                      **UNIV OF MINNESOTA**                      **6144**  
 STUDY FOR AN AURORAL MULTI-PROBE SATELLITE MISSION  
 03/03/1997 - 02/28/2002                      FY02: \$0                      Total: \$200,000  
*Prin. Invest.:* D A CATTELL  
*Tech. Officer:* GSFC/R HOWARD  
*CASE Category:* 13 - PHYSICS

**NAG 5 5172**                      **UNIV OF MINNESOTA**                      **6145**  
 A VERY HIGH TIME RESOLUTION ROCKET INVESTIGATION OF IONOSPHERIC PLASMA PHYSICS ASSOCIATED WITH ATMOSPHERIC  
 03/30/1998 - 03/31/2002                      FY02: \$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**                      **6146**  
 TIME DEPENDENT SIMULATION OF NONLINEAR COSMIC-RAY ACCELERATION IN SHOCKS: A POWERFUL NEW APPROACH  
 03/26/1998 - 08/31/2001                      FY02: \$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**                      **6147**  
 PHASE A GRANT STUDY FOR IMEX PROJECT P I - PROF J WYGANT  
 10/08/1998 - 10/31/2003                      FY02: \$0                      Total: \$557,085  
*Prin. Invest.:* J WYGANT  
*Tech. Officer:* GSFC/D PIERCE  
*CASE Category:* 13 - PHYSICS

**NAG 5 6191**                      **UNIV OF MINNESOTA**                      **6148**  
 TITLE: MORPHOLOGICAL ANALYSIS OF BRAIDED RIVERS U  
 08/13/1997 - 05/31/2001                      FY02: \$0                      Total: \$84,254  
*Prin. Invest.:* E FOUFOULA-GEORGI  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7094**                      **UNIV OF MINNESOTA**                      **6149**  
 RARE GAS AND NITROGEN STUDIES ON LUNAR, METEORITIC, AND SELECTED TERRESTRIAL MATERIALS  
 05/20/1998 - 03/14/2002                      FY02: \$0                      Total: \$652,000  
*Prin. Invest.:* R O PEPIN  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7462**                      **UNIV OF MINNESOTA**                      **6150**  
 SOLAR WIND COUPLING TO THE MAGNETOSPHERE: ANALYSIS OF MULTISPACECRAFT OBSERVATIONS IN SOLAR WIND  
 11/12/1998 - 12/31/2001                      FY02: \$0                      Total: \$260,721  
*Prin. Invest.:* N LIN  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7599**                      **UNIV OF MINNESOTA**                      **6151**  
 REGIONAL HYDROLOGIC SIMULATION MODEL TO STUDY AQUIFER-ATMOSPHERE INTERACTIONS ON INTERANNUAL-DECADE  
 07/21/1998 - 06/30/2002                      FY02: \$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**                      **6152**  
 SPATIO-TEMPORAL ORGANIZATION AND SPACE-TIME DOWNSCALING OF TROPICAL RAINFALL  
 10/27/1998 - 10/31/2002                      FY02: \$0                      Total: \$227,819  
*Prin. Invest.:* E FOUFOULA-GEORGI  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7906**                      **UNIV OF MINNESOTA**                      **6153**  
 INFRARED IMAGING PHOTOMETRY AND POLARIMETRY OF COMETS  
 12/10/1998 - 09/30/2002                      FY02: \$0                      Total: \$220,944  
*Prin. Invest.:* D J JONES  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7917**                      **UNIV OF MINNESOTA**                      **6154**  
 BIG FOOT--CHARACTERIZING LAND COVER, LAI AND NPP AT THE LANDSCAPE SCALE FOR EOS/MODIS VALIDATION  
 12/09/1998 - 12/31/2002                      FY02: \$0                      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**                      **6155**  
 GEOTAIL OBSERVATIONS OF EXB FLOWS AND ASSOCIATED LOW FREQUENCY WAVES IN THE MAGNETOTAIL AND THEIR D  
 01/21/1999 - 01/31/2001                      FY02: \$0                      Total: \$84,000  
*Prin. Invest.:* C A CATTELL  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8082**                      **UNIV OF MINNESOTA**                      **6156**  
 THEORETICAL STUDY OF ULF WAVES IN THE MAGNETOTAIL  
 01/22/1999 - 04/30/2002                      FY02: \$0                      Total: \$285,981  
*Prin. Invest.:* D L LYSAK  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8205**                      **UNIV OF MINNESOTA**                      **6157**  
 STUDY OF SUBSTORM ASSOCIATED ULF AND VLF WAVES IN THE MAGNETOTAIL USING SPACECRAFT DATA  
 02/08/1999 - 02/14/2003                      FY02: \$0                      Total: \$167,693  
*Prin. Invest.:* D LIN  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY



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**NAG 5 8869**                      **UNIV OF MINNESOTA**                      **6158**  
 LABORATORY STUDIES OF THE KINETICS OF ATMOSPHERIC REACTIONS  
 OF HALOGENATED ALKOXY RADICALS  
 01/10/2000 - 12/31/2002                      FY02: \$0                      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**                      **6159**  
 PHASE-A AND BRIDGE PHASE STUDY OF STEREO/WAVES ACCOMMODA-  
 TION  
 03/09/2000 - 12/31/2002                      FY02: \$0                      Total: \$582,150  
*Prin. Invest.:* K GOETZ  
*Tech. Officer:* GSFC/M KAISER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9221**                      **UNIV OF MINNESOTA**                      **6160**  
 QUASARS AS PROBES (L TSA 99)  
 03/14/2000 - 05/31/2005                      FY02: \$9,000                      Total: \$225,561  
*Prin. Invest.:* E SKILLMAN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9254**                      **UNIV OF MINNESOTA**                      **6161**  
 THEORETICAL STUDIES OF ALFVEN WAVE INTERACTION WITH THE  
 IONOSPHERE  
 03/13/2000 - 04/30/2003                      FY02: \$0                      Total: \$152,132  
*Prin. Invest.:* R LYSAK  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9312**                      **UNIV OF MINNESOTA**                      **6162**  
 MAPPING & MODELING FOREST CHANGE IN A BOREAL LAND SCAPE  
 03/20/2000 - 04/30/2003                      FY02: \$0                      Total: \$199,934  
*Prin. Invest.:* J PASTOR  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9349**                      **UNIV OF MINNESOTA**                      **6163**  
 BALLOON BORNE OBSERVATIONS OF THE POLARIZATION ANI SOTROPY  
 OF THE COSMIC MICROWAVE BACKGROUND RADIAT  
 03/28/2000 - 03/31/2003                      FY02: \$0                      Total: \$284,000  
*Prin. Invest.:* S HANANY  
*Tech. Officer:* GSFC/J FROGEL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9407**                      **UNIV OF MINNESOTA**                      **6164**  
 ENHANCING & ARCHIVING THE APS CATALOG OF THE POSS I  
 04/10/2000 - 04/30/2003                      FY02: \$0                      Total: \$233,400  
*Prin. Invest.:* R HUMPHREYS  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10178**                      **UNIV OF MINNESOTA**                      **6165**  
 CONTINUED ANALYSIS OF ISTEP WIND/WAVES DATA  
 01/18/2001 - 02/29/2004                      FY02: \$0                      Total: \$151,619  
*Prin. Invest.:* K GOETZ  
*Tech. Officer:* GSFC/M L KAISER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10274**                      **UNIV OF MINNESOTA**                      **6166**  
 DATA ANALYSIS OF THE UNIV. MINNESOTA PORTION OF THE URAP  
 EXPERIMENT ON THE ULYSSES SPACECRAFT  
 01/16/2001 - 12/31/2003                      FY02: \$0                      Total: \$90,024  
*Prin. Invest.:* P J KELLOGG  
*Tech. Officer:* GSFC/R J MACDOWALL  
*CASE Category:* 13 - PHYSICS

**NAG 5 10509**                      **UNIV OF MINNESOTA**                      **6167**  
 RHEOLOGY OF PLANETARY MATERIALS: IMPLICATIONS FOR TECTONICS  
 OF TERRESTRIAL PLANETS  
 03/01/2001 - 03/31/2004                      FY02: \$0                      Total: \$84,900  
*Prin. Invest.:* D L KOHLSTEDT  
*Tech. Officer:* GSFC/D SENKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10569**                      **UNIV OF MINNESOTA**                      **6168**  
 SPATIAL VARIABILITY IN LAND-ATMOSPHERE INTERACTION COUPLING A  
 NEW GENERATION LARGE-EDDY SIMULATION  
 03/12/2001 - 03/14/2004                      FY02: \$0                      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**                      **6169**  
 SELF-CONSISTENT EVOLUTION OF COSMIC-RAY SHOCKS (ATP 2000)  
 04/24/2001 - 04/30/2004                      FY02: \$0                      Total: \$61,343  
*Prin. Invest.:* T W JONES  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11124**                      **UNIV OF MINNESOTA**                      **6170**  
 DETERMINING THE IMPORTANCE OF ENERGY TRANSFER BETWEEN MAG-  
 NETOSPHERIC REGIONS VIA MHD WAVES USING  
 07/19/2001 - 07/14/2004                      FY02: \$0                      Total: \$185,000  
*Prin. Invest.:* C A CATTELL  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11130**                      **UNIV OF MINNESOTA**                      **6171**  
 LAND USE, CARBON AND WATER IN THE UPLANDS OF SOUTH EASTER  
 NORTH AMERICA  
 08/02/2001 - 07/14/2004                      FY02: \$0                      Total: \$79,866  
*Prin. Invest.:* P BOLSTAD  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11262**                      **UNIV OF MINNESOTA**                      **6172**  
 DEVELOPMENT OF ENVIRONMENTAL INDICATORS FOR THE US GREAT  
 LAKES USING REMOTE SENSING TECHNOLOGY  
 08/27/2001 - 08/31/2005                      FY02: \$0                      Total: \$75,000  
*Prin. Invest.:* G NIEMI  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11325**                      **UNIV OF MINNESOTA**                      **6173**  
 STEREO/WAVES PHASE-C INSTRUMENT DESIGN STUDY  
 11/28/2001 - 01/01/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K GOETZ  
*Tech. Officer:* GSFC/ML KAISER  
*CASE Category:* 11 - ASTRONOMY

## MINNESOTA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11723**                      **UNIV OF MINNESOTA**                      **6174**  
 EVOLUTIONARY HISTORIES OF NOBLE GASES AND OTHER VOLATILES IN  
 SOLAR-SYSTEM MATERIALS  
 02/11/2002 - 03/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R O PEPIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11801**                      **UNIV OF MINNESOTA**                      **6175**  
 PARAMETERIZATION OF REGIONAL SCALE FLUXES: INTEGRATING FIELD  
 AND LABORATORY MEASUREMENTS WITH LARG  
 03/07/2002 - 03/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* F FORTE-AGEL  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11856**                      **UNIV OF MINNESOTA**                      **6176**  
 STUDY OF WAVE MODE CONVERSION AT THE MAGNETOPAUSE USING  
 SPACECRAFT AND GROUND DATA  
 03/08/2002 - 03/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* N LIN  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11868**                      **UNIV OF MINNESOTA**                      **6177**  
 THEORETICAL STUDIES OF ULF WAVES IN THE MAGNETOTAIL  
 03/18/2002 - 04/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R L LYSAK  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11971**                      **UNIV OF MINNESOTA**                      **6178**  
 A SPECTRUM OF IV&V MODELING TECHNIQUES  
 04/05/2002 - 11/14/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M HEIMDAHL  
*Tech. Officer:* GSFC/K MCGILL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 8 1258**                      **UNIV OF MINNESOTA**                      **6179**  
 ATOMISTIC SIMULATIONS OF CADMIUM TELLURIDE  
 04/15/1996 - 04/14/2002                      FY02: \$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**                      **6180**  
 SELF-ASSEMBLY OF HEPATOCYTE SPHEROIDS IN MICRO-GRAVITY  
 06/19/1997 - 11/30/2001                      FY02: \$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**                      **6181**  
 THEORETICAL ANALYSIS OF 3D TRANSIENT CONVECTION AND SEGREGA-  
 TION  
 02/06/1998 - 01/31/2003                      FY02: \$0                      Total: \$487,750  
*Prin. Invest.:* J J DERBY, A J YECKEL  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1519**                      **UNIV OF MINNESOTA**                      **6182**  
 SUBGRID SCALE PRECIPITATION VARIABILITY OVER THE MISSISSIPPI  
 RIVER BASIN  
 05/01/1998 - 04/30/2002                      FY02: \$0                      Total: \$317,495  
*Prin. Invest.:* E FOUFOULA-GEORGIOU  
*Tech. Officer:* MSFC/J ARNOLD  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 8 1676**                      **UNIV OF MINNESOTA**                      **6183**  
 FIRST PRINCIPLES CALCULATIONS OF MOLTEN II-IV COMPOUNDS AND  
 THEIR SOLIDIFICATION BEHAVIOR  
 05/01/2000 - 11/30/2003                      FY02: \$0                      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**                      **6184**  
 GENESIS DISCOVERY MISSION  
 05/06/1998 - 04/30/2003                      FY02: \$0                      Total: \$309,322  
*Prin. Invest.:* R O PEPIN  
*Tech. Officer:* JSC/E K STANSBERY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 1218**                      **UNIV OF MINNESOTA**                      **6185**  
 LIQUID COOLING GARMENT FOR SPACE SUIT  
 03/03/2000 - 01/31/2003                      FY02: \$0                      Total: \$373,786  
*Prin. Invest.:* V KOSCHEYER  
*Tech. Officer:* JSC/R TREVINO  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1222**                      **UNIV OF MINNESOTA**                      **6186**  
 WORST CASE ANALYSIS OF THE X38 V201 FLIGHT CONTROL SYSTEM  
 03/24/2000 - 03/24/2001                      FY02: \$0                      Total: \$40,918  
*Prin. Invest.:* G J BALAS  
*Tech. Officer:* JSC/S R MUNDY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG13 99002**                      **UNIV OF MINNESOTA**                      **6187**  
 THE UPPER MIDWEST REGIONAL EARTH SCIENCE APPLICATION CENTER  
 02/03/1999 - 02/02/2003                      FY02: \$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**                      **6188**  
 INTEGRATING SATELLITE REMOTE SENSING INTO FOREST INVENTORY  
 AND MANAGEMENT  
 08/13/1999 - 10/31/2002                      FY02: \$116,083                      Total: \$405,000  
*Prin. Invest.:* M BAUER  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 5 32994**                      **UNIV OF MINNESOTA**                      **6189**  
 SCIENTIFIC AND TECHNICAL SUPPORT FOR THE UNIFIED RADIO AND  
 PLASMA WAVE INVESTIGATION  
 02/08/1996 - 12/31/2000                      FY02: \$0                      Total: \$571,329  
*Prin. Invest.:* K GOETZ, P J KELLOGG  
*Tech. Officer:* GSFC/R J MACDOWELL  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## NASA'S UNIVERSITY PROGRAM

## MINNESOTA

**NCC 1 337** **UNIV OF MINNESOTA** **6190**  
 APPLICATION OF LINEAR PARAMETER-VARYING TECHNIQUES TO SAFETY-  
 CRITICAL AIRCRAFT FLIGHT SYSTEMS  
 07/20/1999 - 07/14/2003 FY02: \$0 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 1231** **UNIV OF MINNESOTA** **6191**  
 DISCOVERY OF CHANGES FROM THE GLOBAL CARBON CYCLE & CLIMATE  
 SYSTEM USING DATA MINING  
 03/28/2001 - 02/28/2003 FY02: \$0 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** **6192**  
 INTELLIGENT SPECIFICATION-CENTERED TEST-CASE GENERATION RE-  
 VIEW IDENTIFIER  
 04/04/2001 - 02/28/2003 FY02: \$0 Total: \$108,000  
*Prin. Invest.:* M HEIMDAHL  
*Tech. Officer:* ARC/R MORRIS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1335** **UNIV OF MINNESOTA** **6193**  
 TEST CASE GENERATION USING AN EXPLICIT STATE MODEL CHECKER  
 04/16/2002 - 10/14/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* M HEIMDAHL  
*Tech. Officer:* ARC/M LOWRY, ARC/S LAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5393** **UNIV OF MINNESOTA** **6194**  
 ADVANCED MODELS FOR HIGH ENTHALPY FLOW SIMULATIONS  
 08/16/2000 - 09/14/2002 FY02: \$0 Total: \$113,572  
*Prin. Invest.:* G V CANDLER  
*Tech. Officer:* ARC/J OLEJNICZAK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 652** **UNIV OF MINNESOTA** **6195**  
 MEASUREMENTS IN A TRANSITIONAL BOUNDARY LAYER UNDER LOW-  
 PRESSURE TURBINE AIRFOIL CONDITIONS  
 11/10/1998 - 12/31/2002 FY02: \$0 Total: \$182,306  
*Prin. Invest.:* T W SIMON  
*Tech. Officer:* GRC/D E ASHPIS  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 811** **UNIV OF MINNESOTA** **6196**  
 ULTRA-COMPACT, SOFT-SWITCHING POWER SUPPLIES WITH HIGH EFFI-  
 CIENCY FOR ELECTRIC PROPULSION  
 07/13/2000 - 06/14/2003 FY02: \$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** **6197**  
 ULTRA COMPACT SOFT SWITCHING POWER SUPPLIES WITH HIGH  
 EFFICIENCY FOR ELECTRIC PROPULSION  
 01/26/2001 - 01/14/2003 FY02: \$0 Total: \$138,000  
*Prin. Invest.:* N MOHAN  
*Tech. Officer:* GRC/T T PETERSON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 316** **UNIV OF MINNESOTA** **6198**  
 INSTALIZING MTPE DATA FOR LAND & ENVIRONMENTAL MANAGEMENT  
 04/11/1998 - 02/28/2003 FY02: \$0 Total: \$727,000  
*Prin. Invest.:* T BURK  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 102** **UNIV OF MINNESOTA** **6199**  
 SPECTROSCOPIC VARIABILITY IN ETA CARINAE (STUDENT: NATHAN SMITH)  
 05/25/2000 - 06/30/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* K DAVIDSON  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 30111** **UNIV OF MINNESOTA** **6200**  
 THE IMPACTS OF A SALT CEDAR (TAMARIX RAMOSISSIMA) INVASION ON  
 COMMUNITIES, ECOSYSTEM PROCESSES  
 08/28/1998 - 08/31/2002 FY02: \$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** **6201**  
 ECOSYSTEM RESPONSE TO CLIMATIC CHANGE: A COMPARATIVE STUDY  
 OF FOREST-LAKE ECOSYSTEMS ON DIFFERENT SITES  
 10/01/1997 - 02/28/2001 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* M DAVIS  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40086** **UNIV OF MINNESOTA** **6202**  
 MINNESOTA SPACE GRANT COLL & FELLOWSHIP PROGRAM  
 02/16/2001 - 02/28/2005 FY02: \$0 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** **6203**  
 STUDY OF LONG RANGE QUANTUM COHERENCE IN THE BOSE- LIQUID  
 HELIUM FOUR.  
 09/05/1997 - 06/30/2001 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* HALLEY  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50250** **UNIV OF MINNESOTA** **6204**  
 SOUTHERN GALACTIC PLANE SURVEY AT 21 CM STUDENT: NAOMI M.  
 MCCLURE-G  
 06/08/1999 - 09/30/2001 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* J DICKEY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50293** **UNIV OF MINNESOTA** **6205**  
 A PARTICLE SIMULATION STUDY OF SOLITARY WAVES IN THE  
 MAGNETOSPHERE/STUDENT: JAMES CRUMLEY  
 06/26/2000 - 06/30/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* R LYSAK  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## MISSISSIPPI

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50312**                      **UNIV OF MINNESOTA**                      **6206**  
 THE ELECTRODYNAMICS OF THE INNER MAGNETOSPHERE DUR ING  
 MAJOR GEOMAGNETIC STORMS/STUDENT: DOUGLASROW  
 08/07/2000 - 07/31/2001                      FY02: -\$3,733                      Total: \$18,267  
*Prin. Invest.:* J WYGANT  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50344**                      **UNIV OF MINNESOTA**                      **6207**  
 MAXIPOL: MEASURING THE POLARIZATION ANISTROPHY OF THE COSMIC  
 MICROWAVE BACKGROUND/STUDENT: BRADLEY  
 05/14/2001 - 06/30/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* S HANAY  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50346**                      **UNIV OF MINNESOTA**                      **6208**  
 A MULTIWAVELENGTH STUDY OF THE INTERSTELLAR MEDIUM OF LOW-  
 METALLICITY/STUDENT: JOHN CANNON  
 05/07/2001 - 08/30/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* E SKILLMAN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01054**                      **WINONA STATE UNIV**                      **6209**  
 ACCELERATED TESTING OF POLYMERIC COMPOSITES: CORR ELATION OF  
 SCALE-UP EFFECTS ON VISOELASTIC  
 03/30/2001 - 04/30/2003                      FY02: \$0                      Total: \$60,864  
*Prin. Invest.:* B ABDEL-MAGID  
*Tech. Officer:* LARC/T S GATES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

## MISSISSIPPI

**NAG13 98005**                      **ALCORN STATE UNIV**                      **6210**  
 THERMAL-HYDRAULIC MATERIAL PRE-CONSTRUCTION ANALYSIS OF THE  
 NEW SSME TEST DIFFUSER  
 03/31/1998 - 09/30/2001                      FY02: \$0                      Total: \$264,392  
*Prin. Invest.:* S ACEIL  
*Tech. Officer:* JSC/B ST. CYR  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG13 98010**                      **ALCORN STATE UNIV**                      **6211**  
 STRENGTHENING PRE-SERVICE AND IN-SERVICE TEACHER EDUCATION IN  
 MATHEMATICS, SCIENCE & TECHNOLOGY  
 06/12/1998 - 06/10/2001                      FY02: \$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**                      **6212**  
 NETWORK VISUALIZATION IN THREE-DIMENSIONS (NETVIZ)  
 05/22/2001 - 05/14/2002                      FY02: \$0                      Total: \$35,000  
*Prin. Invest.:* Q MALLUHI  
*Tech. Officer:* ARC/B A BIEGEL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2277**                      **JACKSON STATE UNIV**                      **6213**  
 INTELLIGENT INTERFACE TO THE NUMERICAL SIMULATORS (IINS) OF THE  
 AEROSPACE TRANSPORTATION ENGINES.  
 07/21/1999 - 07/31/2002                      FY02: \$0                      Total: \$105,847  
*Prin. Invest.:* D MITRA  
*Tech. Officer:* GRC/D F NOGA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1867**                      **JACKSON STATE UNIV**                      **6214**  
 NON-CONTRACT PRECISION ACTUATION AND STRUCTURAL CONTROL  
 USING OPTO-MECHANICAL ACTUATORS  
 06/25/2002 - 06/25/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* H R SHIH, F A OKOJIE  
*Tech. Officer:* MSFC/W LOVE, MSFC/E ORDONEZ  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG13 02056**                      **JACKSON STATE UNIV**                      **6215**  
 SCIENCE AND TECHNOLOGY ENHANCEMENT PRE-COLL PRO GRAM  
 09/19/2002 - 09/18/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A K MOHAMED  
*Tech. Officer:* SSC/R P TRAVIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 98007**                      **JACKSON STATE UNIV**                      **6216**  
 PACE/MSET SAME  
 06/10/1998 - 08/30/2001                      FY02: \$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**                      **6217**  
 MASTAP PROJECT: A MODEL FOR IMPROVING THE PRE- SERVICE TRAIN-  
 ING OF MIDDLE SCHOOL MATH TEACHERS  
 02/23/1999 - 02/22/2002                      FY02: \$0                      Total: \$598,800  
*Prin. Invest.:* H GORE  
*Tech. Officer:* SSC/A JOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 99012**                      **JACKSON STATE UNIV**                      **6218**  
 STUDIES OF OCEAN-ATMOSPHERIC INTERACTIONS AND ASSOCIATED  
 TROPICAL CYCLONES/HURRICANES OF GULF ME  
 03/17/1999 - 03/16/2003                      FY02: \$0                      Total: \$300,000  
*Prin. Invest.:* R REDDY  
*Tech. Officer:* JSC/R MILLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG13 99013**                      **JACKSON STATE UNIV**                      **6219**  
 SATELLITE ANALYSIS OF GULF COAST ATMOSPHERE MOSITURE AND  
 TROPOSPHERIC AEROSOLS  
 03/24/1999 - 12/31/2002                      FY02: \$0                      Total: \$299,988  
*Prin. Invest.:* P CROFT  
*Tech. Officer:* JSC/J JENNER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 1296**                      **JACKSON STATE UNIV**                      **6220**  
 NETWORK STORAGE MANAGEMENT IN THE DATA GRID ENVIRO NMENT  
 11/20/2001 - 11/14/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* Q MALLUHI  
*Tech. Officer:* ARC/B A BIEGEL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5398**                      **JACKSON STATE UNIV**                      **6221**  
 COMPUTATIONAL STUDY ON EVOLUTION OF LIFE: INVESTI GATION OF  
 NON-CLASICAL BASE 5-AZACYTOSINE & ITS D  
 09/21/2000 - 09/30/2002                      FY02: \$0                      Total: \$14,000  
*Prin. Invest.:* J LESZCZYNSKI  
*Tech. Officer:* ARC/A POHORILLE, ARC/M FONDA  
*CASE Category:* 12 - CHEMISTRY

## NASA'S UNIVERSITY PROGRAM

MISSISSIPPI

<b>NCC 5 667</b>	<b>JACKSON STATE UNIV</b>	<b>6222</b>	<b>NAG 5 11127</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6230</b>
SCIENCE AND MATHEMATICS INITIATIVE FOR LEARNING EN HANCEMENT			DELTA AREA SCIENCE & TECHNOLOGY ACADEMY		
08/22/2002 - 08/31/2005	FY02: \$0	Total: \$0	07/26/2001 - 07/14/2004	FY02: \$0	Total: \$70,000
<i>Prin. Invest.:</i> C CRAIG			<i>Prin. Invest.:</i> B JOINER		
<i>Tech. Officer:</i> GSFC/M MATEU			<i>Tech. Officer:</i> GSFC/M MATHEWS		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 1 2038</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6223</b>	<b>NAG 8 1566</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6231</b>
INVESTIGATION OF ROBUST DESIGN CONCEPTS FOR COMPO- SITE			NOVEL APPROACHES REGARDING PROTEIN SOLUBILITY		
ROTORCRAFT FUSELAGE STRUCTURES			02/23/1999 - 11/30/2003	FY02: \$0	Total: \$346,550
03/26/1998 - 05/31/2001	FY02: \$0	Total: \$135,283	<i>Prin. Invest.:</i> W W WILSON, A ASONOV		
<i>Prin. Invest.:</i> M RAIS-BHANI			<i>Tech. Officer:</i> MSFC/B V GUYNES		
<i>Tech. Officer:</i> LARC/D J BAKER, LARC/D R AMBUR			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<b>NAG 8 1837</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6232</b>
<b>NAG 1 02099</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6224</b>	HIGH THROUGHPUT SCREEN OF PROTEIN-PROTEIN INTER- ACTIONS BY		
INVESTIGATION INTO SENSITIVITY ANALYSIS AND RELIABILITY BASED			MICROCHIP SPACE		
DESIGN OPTIMIZATION OF COMPOSITE CIRCU			08/22/2001 - 11/30/2004	FY02: \$0	Total: \$32,000
05/23/2002 - 05/22/2003	FY02: \$0	Total: \$0	<i>Prin. Invest.:</i> W W WILSON		
<i>Prin. Invest.:</i> M RAIS-ROHANI			<i>Tech. Officer:</i> MSFC/B GUYNES		
<i>Tech. Officer:</i> LARC/D J BAKER, LARC/D R AMBUR			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<b>NAG 8 1883</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6233</b>
<b>NAG 2 1232</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6225</b>	FRACTURE ANALYSIS OF SEMI-ELLIPTICAL SURFACE CRACK S IN DUCTILE		
PHYSICS-BASED MANEUVERING PREDICTION OF TILT ROTOR AIRCRAFT			MATERIALS		
06/24/1998 - 01/31/2002	FY02: \$0	Total: \$870,726	08/23/2002 - 08/23/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D L WHITEFIELD, L K TAYLOR, W R BRILEY			<i>Prin. Invest.:</i> S R DANIEWICZ, J C NEWMAN		
<i>Tech. Officer:</i> ARC/R C STRAWN, ARC/W F FEIREISEN			<i>Tech. Officer:</i> MSFC/W GREGG		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NAG 3 1699</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6226</b>	<b>NAG13 99018</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6234</b>
COMPUTATIONAL FLUID DYNAMICS OF ROTATING MACHINERY USING			LEAF AREA AND VOLUME ESTIMATES IN LOBLOLLY PINE FOREST DERIVED		
TRUBO			FROM AERIAL IMAGING LIDAR		
01/23/1995 - 10/21/2002	FY02: \$0	Total: \$629,999	07/30/1999 - 11/01/2002	FY02: \$0	Total: \$247,132
<i>Prin. Invest.:</i> J M JANUS, D WHITEFIELD, T M SWAFFORD			<i>Prin. Invest.:</i> S ROBERTS		
<i>Tech. Officer:</i> GRC/D L HUFF			<i>Tech. Officer:</i> SSC/R MCKELLIP		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 3 2176</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6227</b>	<b>NAS 3 00181</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6235</b>
DEVELOPMENT OF A PARALLEL TURBOMACHINERY FLOW SOLV ER			MODIFICATION OF TURBO SOFTWARE		
06/22/1998 - 01/31/2002	FY02: \$0	Total: \$225,000	09/29/2000 - 10/01/2005	FY02: \$0	Total: \$325,000
<i>Prin. Invest.:</i> W R BRILEY			<i>Prin. Invest.:</i> J CHEN, D L WHITEFIELD, R BRILEY		
<i>Tech. Officer:</i> GRC/E R MCFARLAND			<i>Tech. Officer:</i> GRC/E MCFARLAND, GRC/D VAN ZANTE		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 3 2235</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6228</b>	<b>NAS13 98033</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6236</b>
INTEGRATED GEOMETRY/GRID/SIMULATION SOFTWARE FOR S INGLE AND			RESEARCH & DEVELOPMENT NASA AND RESIDENT AGENCIES		
MULTI-ELEENT AIRFOILS WITH ICE ACCRETIO			03/23/1998 - 03/22/2003	FY02: \$41,000	Total: \$14,762,852
02/22/1999 - 06/30/2002	FY02: \$0	Total: \$210,313	<i>Prin. Invest.:</i> L RITCHIE, BULLINGTON, D WIESENBURG		
<i>Prin. Invest.:</i> B K SONI			<i>Tech. Officer:</i> SSC/D POWE		
<i>Tech. Officer:</i> GRC/Y K CHOO			<i>CASE Category:</i> 33 - OCEANOGRAPHY		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<b>NCC13 99001</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6237</b>
<b>NAG 3 2562</b>	<b>MISSISSIPPI STATE UNIV</b>	<b>6229</b>	ROLE OF LAND-GRANT UNIV IN APPLICATIONS OF REMOTE SENSING		
ICEWING - A MESH GENERATION SYSTEM FOR COMPLEX THR EE-			02/19/1999 - 03/21/2004	FY02: \$0	Total: \$12,500,000
DIMENSIONAL ICED WING CONFIGURATIONS			<i>Prin. Invest.:</i> D SHAW, N M COX		
03/05/2001 - 04/22/2003	FY02: \$0	Total: \$61,087	<i>Tech. Officer:</i> SSC/R MCKELLIP		
<i>Prin. Invest.:</i> D THOMPSON			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<i>Tech. Officer:</i> GRC/Y K CHOO			<b>NAG 5 9197</b>	<b>MISSISSIPPI VALLEY STATE UNIV.</b>	<b>6238</b>
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			MISSISSIPPI VALLEY STATE UNIV PACE PROGRAM		
			03/09/2000 - 02/28/2003	FY02: \$0	Total: \$199,659
			<i>Prin. Invest.:</i> C G BLAND		
			<i>Tech. Officer:</i> GSFC/M STOUTSENBERGER		
			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

## MISSISSIPPI

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9535**                      **MISSISSIPPI VALLEY STATE UNIV.**                      **6239**  
 INTEGRATING REMOTE SENSING/GIS TECHNOLOGY & RSCH INTO MSET  
 EDUCATION  
 05/01/2000 - 05/14/2002                      FY02: \$0                      Total: \$200,000  
*Prin. Invest.:* C BLAND  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 98004**                      **MISSISSIPPI VALLEY STATE UNIV.**                      **6240**  
 RESPONSE OF A LEAF AND CANOPY SPECTRAL REFLECTANCE TO  
 DROUGHT STRESS IN SOYBEANS  
 03/31/1998 - 09/30/2001                      FY02: \$0                      Total: \$299,352  
*Prin. Invest.:* R BAHADUR  
*Tech. Officer:* JSC/G CARTER  
*CASE Category:* 55 - AGRICULTURE

**NAG13 99003**                      **MISSISSIPPI VALLEY STATE UNIV.**                      **6241**  
 IMPROVING TEACHERS AND STUDENTS ACHIEVEMENT IN MATHEMATICS  
 AND SCIENCE  
 02/17/1999 - 08/17/2002                      FY02: \$0                      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.**                      **6242**  
 RESPONSE OF SOYBEAN LEAF & CANOPY SPECTRAL REFLECT ANCE TO  
 CHELATE ASSISTED LEAD JUTEXTRACTOPM  
 09/01/1999 - 09/27/2002                      FY02: \$0                      Total: \$199,920  
*Prin. Invest.:* R BAHDUR  
*Tech. Officer:* JSC/R TRAVIS  
*CASE Category:* 55 - AGRICULTURE

**NCC 5 665**                      **MISSISSIPPI VALLEY STATE UNIV.**                      **6243**  
 DEVELOPING AND IMPROVING TEACHER EDUCATION IN MATH EMATICS,  
 SCIENCE, AND TECHNOLOGY  
 08/22/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* O CATHEY  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7671**                      **UNIV OF MISSISSIPPI - MEDICAL CENTER**                      **6244**  
 FUNDING FOR 'THE UTILITY OF LOW COST THERMAL SENSORS IN  
 ARCHAEOLOGICALRESEARCH' (SENH98-0125)  
 09/01/1998 - 02/28/2001                      FY02: \$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**                      **6245**  
 THE UNIV OF MS REMOTE SENSING AND SPACE LAW CENTER OF  
 EXCELLENCE  
 04/06/2000 - 04/05/2003                      FY02: \$500,000                      Total: \$1,000,000  
*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**                      **6246**  
 THE UNIV OF MISSISSIPPI GEOINFORMATICS CENTER  
 05/08/2000 - 09/30/2002                      FY02: \$0                      Total: \$1,826,459  
*Prin. Invest.:* G EASSON  
*Tech. Officer:* SSC/N SOVIK  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG13 01004**                      **UNIV OF MISSISSIPPI - UNIV**                      **6247**  
 NEW GRANT AWARD GEOSPATIAL INFORMATION TECHNOLOGY EDUCA-  
 TION:  
 07/12/2001 - 07/02/2006                      FY02: \$0                      Total: \$1,000,000  
*Prin. Invest.:* J JOHNSON, P LAWHEAD  
*Tech. Officer:* SSC/D P POWE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG13 02052**                      **UNIV OF MISSISSIPPI - UNIV**                      **6248**  
 UNIV OF MISSISSIPPI GEOINFORMATICS CENTER (UMGS)  
 08/23/2002 - 09/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G EASSON  
*Tech. Officer:* SSCIT VANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 405**                      **UNIV OF MISSISSIPPI - UNIV**                      **6249**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/17/1999 - 12/31/2001                      FY02: \$0                      Total: \$450,000  
*Prin. Invest.:* P SUKANEK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 574**                      **UNIV OF MISSISSIPPI - UNIV**                      **6250**  
 MISSISSIPPI NASA EPSCOR PROGRAM  
 09/26/2001 - 07/31/2004                      FY02: \$0                      Total: \$258,000  
*Prin. Invest.:* P SUKANEK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40098**                      **UNIV OF MISSISSIPPI - UNIV**                      **6251**  
 MISSISSIPPI SPACE GRANT COLL AND FELLOWSHIP PRO GRAM  
 02/28/2001 - 02/28/2005                      FY02: \$0                      Total: \$464,544  
*Prin. Invest.:* P SUKANEK  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9770**                      **UNIV OF SOUTHERN MISSISSIPPI**                      **6252**  
 OPTICAL ASSESSMENT OF BIOGEOCHEMICAL PROPERTIES IN COASTAL  
 WATERS WITH APPLICATION TO MULTI-SPECTRAL  
 07/12/2000 - 01/31/2002                      FY02: \$0                      Total: \$58,216  
*Prin. Invest.:* S E LOHRENZ  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 10668**                      **UNIV OF SOUTHERN MISSISSIPPI**                      **6253**  
 EXPLORING THE RELATIONSHIP BETWEEN SIZE AND CATALYTIC CAPAC-  
 ITY OF RNA CATALYSTS  
 03/21/2001 - 03/31/2004                      FY02: \$0                      Total: \$167,200  
*Prin. Invest.:* F HUANG  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1466**                      **UNIV OF SOUTHERN MISSISSIPPI**                      **6254**  
 FRONTAL POLYMERIZATION IN MICROGRAVITY  
 02/10/1998 - 12/31/2002                      FY02: \$0                      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**                    **6255**  
 "PHASE SEPARATION AND SELF-ASSEMBLY OF LIQUID CRYSTALS AND  
 POLYMER DISPERSIONS"  
 06/05/2000 - 11/30/2003                    FY02: \$0                    Total: \$125,500  
*Prin. Invest.:* J WHITEHEAD  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1858**                    **UNIV OF SOUTHERN MISSISSIPPI**                    **6256**  
 FRONTAL POLYMERIZATION IN MICROGRAVITY RESEARCH  
 02/22/2002 - 09/30/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J A POJMAN  
*Tech. Officer:* MSFC/M BODIFORD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG13 01005**                    **UNIV OF SOUTHERN MISSISSIPPI**                    **6257**  
 A PROPOSAL TO DEVELOP AND OPERATE A COASTAL ZONE APPLICATIONS  
 CENTER/ADVANCED GIS/REMOTE SENSING  
 07/30/2001 - 06/30/2003                    FY02: \$0                    Total: \$2,993,400  
*Prin. Invest.:* W HAWKINS  
*Tech. Officer:* SSC/M THOMAS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## MISSOURI

**NAG 1 02027**                    **SAINT LOUIS UNIV**                    **6258**  
 TRANSITION-SENSITIZED TURBULENCE MODELS FOR COMPRESSIBLE  
 AND INCOMPRESSIBLE FLOW  
 12/18/2001 - 12/31/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* W D THACKER  
*Tech. Officer:* LARC/T B GATSKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2469**                    **SAINT LOUIS UNIV**                    **6259**  
 INVESTIGATION OF THERMAL PROCESSING ON THE PROPERTIES OF  
 PS304, A SOLID LUBRICANT COATING  
 06/27/2000 - 06/14/2001                    FY02: \$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**                    **6260**  
 INVESTIGATION OF THERMAL PROCESSING ON THE PROPERTIES OF  
 PS305, A SOLID LUBRICANT COATING  
 08/02/2001 - 06/16/2002                    FY02: \$0                    Total: \$31,007  
*Prin. Invest.:* P A BENOY  
*Tech. Officer:* GRC/C DELLACORTE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1852**                    **SAINT LOUIS UNIV**                    **6261**  
 INVESTIGATION OF AIRPORT TO SPACEPORT TRANSITION  
 10/30/2001 - 01/30/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* C RAHAIM  
*Tech. Officer:* MSFC/E SHAW  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 1 01003**                    **SAINT LOUIS UNIV**                    **6262**  
 FORMULATION OF A TRANSITION-SENSITIZED TURBULENCE MODEL  
 12/19/2000 - 12/31/2001                    FY02: \$0                    Total: \$35,000  
*Prin. Invest.:* W D THACKER  
*Tech. Officer:* LARC/T B GATSKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01037**                    **UNIV OF MISSOURI - COLUMBIA**                    **6263**  
 DESIGN & EXPERIMENTAL VERIFICATION OF DEPLOYABLE/ INFLATABLE  
 ULTRA-LIGHTWEIGHT STRUCTURES  
 06/08/2001 - 05/31/2004                    FY02: \$0                    Total: \$79,054  
*Prin. Invest.:* P PAI  
*Tech. Officer:* LARC/W K BELVIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 02085**                    **UNIV OF MISSOURI - COLUMBIA**                    **6264**  
 AIRFRAME-NOISE MODELING AND CONTROL  
 04/22/2002 - 09/10/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* O V VASILYEV, V CHELLABOINA  
*Tech. Officer:* LARC/M R KHORRAMI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 2 1372**                    **UNIV OF MISSOURI - COLUMBIA**                    **6265**  
 SIGNALING OF MUSCLE ATROPHY WITH UNLOADING  
 08/17/1999 - 08/31/2003                    FY02: \$0                    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 3 2670**                    **UNIV OF MISSOURI - COLUMBIA**                    **6266**  
 INTERPLANETARY TRAJECTOR OPTIMIZATION PROGRAM FOR ELECTRIC  
 PROPULSION SPACECRAFT  
 12/03/2001 - 11/01/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* C KLUEVER  
*Tech. Officer:* GRC/S OLESON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 4607**                    **UNIV OF MISSOURI - COLUMBIA**                    **6267**  
 VESTIBULAR ONTOGENY, ADAPTATION, AND THE EFFECTS OF LOADING IN  
 THE RAT  
 05/19/1997 - 11/14/2001                    FY02: \$0                    Total: \$296,020  
*Prin. Invest.:* T A JONES  
*Tech. Officer:* GSFC/M AVERNER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 8344**                    **UNIV OF MISSOURI - COLUMBIA**                    **6268**  
 BAYESIAN HIERARCHICAL AIR-SEA INTERACTION MODELING : DEVELOP-  
 MENT AND APPLICATION IN THE LABR  
 04/13/1999 - 05/31/2002                    FY02: \$0                    Total: \$51,413  
*Prin. Invest.:* C K WIKLE  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 9145**                    **UNIV OF MISSOURI - COLUMBIA**                    **6269**  
 ANDEAN MOUNTAIN BUILDING: AN INTEGRATED TOPO GRAPH GPS, SEIS-  
 MOLOGICAL AND NUMERICAL STUDY  
 03/07/2000 - 03/14/2003                    FY02: \$0                    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**                    **6270**  
 EVOLUTION OF THE RIBOZYME RNASE P RNA BY TRANSCRIPTION  
 05/04/2000 - 04/30/2003                    FY02: \$0                    Total: \$233,040  
*Prin. Invest.:* F SCHMIDT  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

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**NAG 5 10720**                    **UNIV OF MISSOURI - COLUMBIA**                    **6271**  
 MOBILE WIRELESS ACCESS TO LOW RESOLUTION PICTURE TAKING (LRPT)  
 NOAA WEATHER IMAGES  
 05/03/2001 - 05/14/2004                    FY02: \$0                    Total: \$50,000  
*Prin. Invest.:* C CHEN  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11081**                    **UNIV OF MISSOURI - COLUMBIA**                    **6272**  
 20-YEAR ELEVATION CHANGE OF THE SOUTHERN GREENLAND ICE SHEET  
 FROM SATELLITE RADAR ALTIMETRY  
 07/10/2001 - 06/30/2003                    FY02: \$0                    Total: \$48,977  
*Prin. Invest.:* C DAVIS  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12284**                    **UNIV OF MISSOURI - COLUMBIA**                    **6273**  
 AWARD OF FUNDS FOR MULTI-USE SCIENTIFIC EQUIPMENT  
 06/12/2002 - 05/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G CHIPENDALE  
*Tech. Officer:* GSFC/L CHAMBERS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12300**                    **UNIV OF MISSOURI - COLUMBIA**                    **6274**  
 HUMAN HEALTH FROM EARTH TO SPACE: A NASA-MU PARTNERSHIP FOR  
 UNDERSTANDING SEX DIFFERENCE  
 06/20/2002 - 06/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M HAY  
*Tech. Officer:* GSFC/L CHAMBERS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12482**                    **UNIV OF MISSOURI - COLUMBIA**                    **6275**  
 TECHNOLOGY ASSESSMENT AND READINESS CRITIQUES FOR THE APPLI-  
 CATIONS PROGRAM INVESTMENT PORTFOLIO  
 08/26/2002 - 08/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* V KAUP  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1741**                    **UNIV OF MISSOURI - COLUMBIA**                    **6276**  
 TRAJECTORY OPTIMIZATION PROGRAM FOR NEAR-EARTH LOW-THRUST  
 SPACECRAFT  
 11/01/2000 - 08/31/2002                    FY02: \$0                    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**                    **6277**  
 DESIGN & THERMAL CONTROL OF ADVANCED SPACE SUITS  
 03/24/2000 - 03/31/2003                    FY02: \$0                    Total: \$89,999  
*Prin. Invest.:* S NAIR, J B MILES  
*Tech. Officer:* JSC/C H LIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1230**                    **UNIV OF MISSOURI - COLUMBIA**                    **6278**  
 CONSTRUCT THE LIFE SCIENCES CENTER  
 09/29/2000 - 08/31/2005                    FY02: \$0                    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**                    **6279**  
 CENTER FOR LOCAL AND REGIONAL GOVERNMENT APPLICATIONS  
 (CLARA)  
 03/13/2000 - 11/30/2002                    FY02: \$0                    Total: \$324,999  
*Prin. Invest.:* D D HIPPLE  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99014**                    **UNIV OF MISSOURI - COLUMBIA**                    **6280**  
 INST FOR THE COMMERCIAL DEVELOPMENT OF REMOTE SENSING TECH-  
 NOLOGY (ICREST)  
 04/19/1999 - 12/31/2001                    FY02: \$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**                    **6281**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) (PREVIOUS  
 GRANT NO. NGT-1-52239)  
 05/25/2001 - 06/30/2002                    FY02: \$0                    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**                    **6282**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/26/2000 - 06/30/2001                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* O VASILYEV  
*Tech. Officer:* LARC/T B GATSKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 8 52914**                    **UNIV OF MISSOURI - COLUMBIA**                    **6283**  
 ROBUST GUIDANCE SCHEMES FOR THE LANDING PHASE OF A REYSABKE  
 KAYBCG VEHICLE  
 05/30/2002 - 07/01/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* C KLUEVER  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT13 52747**                    **UNIV OF MISSOURI - COLUMBIA**                    **6284**  
 REMOTE SENSING INFO. PRODUCTS FROM HIGH RESOLUTION SATELLITE  
 IMAGERY FOR LOCAL GOV. APP'S  
 06/08/2001 - 06/30/2004                    FY02: \$0                    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**                    **6285**  
 MODELING OF INTERACTION BETW PERMEABILITY & DAMAGE IN PMC  
 LAMINATES FOR THE NASA RLV  
 04/05/2001 - 04/04/2004                    FY02: \$0                    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**                    **6286**  
 HIGH-SPEED PROPULSION SYSTEM MODELING AND ANALYSIS  
 08/29/2001 - 08/28/2004                    FY02: \$0                    Total: \$60,001  
*Prin. Invest.:* D W RIGGINS  
*Tech. Officer:* LARC/C R MCCLINTON, LARC/S H STACK  
*CASE Category:* 41 - AERONAUTICAL ENGR



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**NAG 1 02094**                      **UNIV OF MISSOURI - ROLLA**                      **6287**  
 DEPOSITION OF PIEZOELECTRIC FILMS ON THIN POLYMERIC SUBSTRATES  
 05/02/2002 - 12/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R W SCHWARTZ  
*Tech. Officer:* LARC/Q A SHAMS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2340**                      **UNIV OF MISSOURI - ROLLA**                      **6288**  
 STUDIES IN ACOUSTIC PROPAGATION AND RADIATION STUDIES IN ACOUSTIC PROPAGATION AND RADIATION  
 02/25/2000 - 01/31/2002                      FY02: \$0                      Total: \$75,381  
*Prin. Invest.:* W EVERSMAN  
*Tech. Officer:* GRC/E ENVIA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2357**                      **UNIV OF MISSOURI - ROLLA**                      **6289**  
 CHARACTERIZATION OF ENVIRONMENTAL DURABILITY OF A POLYMER MATRIX COMPOSITE  
 03/15/2000 - 04/01/2002                      FY02: \$0                      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**                      **6290**  
 SECOND-LAW BASED PERFORMED OF AEROSPACE TURBOSHAF T ENIGNES & ENGINE COMPONENTS  
 05/11/2001 - 06/30/2002                      FY02: \$0                      Total: \$59,999  
*Prin. Invest.:* D W RIGGINS  
*Tech. Officer:* GRC/D THURMAN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2718**                      **UNIV OF MISSOURI - ROLLA**                      **6291**  
 TURBOFAN NOISE PROPAGATION AND RADIATION AT HIGH F REQUENCIES  
 02/22/2002 - 09/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W EVERSMAN  
*Tech. Officer:* GRC/D KOCH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 12244**                      **UNIV OF MISSOURI - ROLLA**                      **6292**  
 SEX, SPACE AND ENVIRONMENTAL ADAPTATION: A NATIONAL WORKSHOP TO DEFINE RESEARCH PRIORITIES REGARDING  
 05/30/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M HAY  
*Tech. Officer:* GSFC/L CHAMBERS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12589**                      **UNIV OF MISSOURI - ROLLA**                      **6293**  
 DESIGN AND TEST OF A TETHERED PAIR OF SATELLITES: EQUIPMENT REQUIREMENTS  
 09/19/2002 - 11/14/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* H J PERNICKA  
*Tech. Officer:* GSFC/J A LEITNER  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 8 1465**                      **UNIV OF MISSOURI - ROLLA**                      **6294**  
 KINETICS OF NUCLEATION AND CRYSTAL GROWTH IN GLASS FORMING METALS IN MICROGRAVITY  
 02/10/1998 - 02/14/2004                      FY02: \$0                      Total: \$617,880  
*Prin. Invest.:* D E DAY, C S RAY  
*Tech. Officer:* MSFC/M PURVEY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1805**                      **UNIV OF MISSOURI - ROLLA**                      **6295**  
 ROBUST ADAPTIVE CRITIC BASED NEUROCONTROLLERS FOR REUSABLE LAUNCH VEHICLES  
 07/25/2001 - 07/31/2002                      FY02: \$0                      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**                      **6296**  
 ADAPTIVE CRITIC BASED RECONFIGURABLE CONTROLLER  
 02/14/2001 - 01/31/2003                      FY02: \$0                      Total: \$60,000  
*Prin. Invest.:* S N BALAKRISHNAN  
*Tech. Officer:* GSFC/J J TOTAH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5423**                      **UNIV OF MISSOURI - ROLLA**                      **6297**  
 AN ANALYTICAL METHOD FOR DESIGN & AMANUFACTURING T O CAPTURE POTENTIAL FAILURE MODES IN HIGH RISK AE  
 02/26/2001 - 02/28/2003                      FY02: \$0                      Total: \$50,640  
*Prin. Invest.:* R B STONE  
*Tech. Officer:* ARC/H Y TUMER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5490**                      **UNIV OF MISSOURI - ROLLA**                      **6298**  
 PREDICTING AND SIMULATING MONITORED FAILURE SIGNAL S: COMPUTATION AND EXPERIMENTATION  
 05/21/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D A MCADAMS  
*Tech. Officer:* ARC/H Y TUMER, ARC/S LAU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 40060**                      **UNIV OF MISSOURI - ROLLA**                      **6299**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATIONAL COLLEGE AND FELLOWSHIP PROGRAM.  
 03/04/1997 - 02/28/2001                      FY02: \$0                      Total: \$807,500  
*Prin. Invest.:* F FINIASH  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40112**                      **UNIV OF MISSOURI - ROLLA**                      **6300**  
 MISSOURI SPACE GRANT COLLEGE & FELLOWSHIP PROGRAM  
 03/06/2001 - 02/28/2005                      FY02: \$0                      Total: \$212,500  
*Prin. Invest.:* F FINIASH  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52916**                      **UNIV OF MISSOURI - ROLLA**                      **6301**  
 ROBUST NONLINEAR GUIDANCE/CONTROL FOR REUSABLE LAUNCH VEHICLES  
 05/30/2002 - 07/01/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S N BALAKRISHNAN  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2592**                      **UNIV OF MISSOURI - SAINT LOUIS**                      **6302**  
 THE THERMO-CHEMISTRY OF HIGH ENERGY DENSITY MISSILE FUELS  
 04/23/2001 - 02/28/2002                      FY02: \$0                      Total: \$30,000  
*Prin. Invest.:* J CHICKOS  
*Tech. Officer:* GRC/M J ZEHE  
*CASE Category:* 12 - CHEMISTRY

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**NAG 3 2797 UNIV OF MISSOURI - SAINT LOUIS 6303**  
 THE THERMOCHEMISTRY OF HIGH ENERGY DENSITY MISSILE FUELS  
 07/26/2002 - 09/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* J S CHICKOS  
*Tech. Officer:* GRC/M ZEHE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 12013 UNIV OF MISSOURI - SAINT LOUIS 6304**  
 METHANE AND AMMONIA OVERTONE ABSORPTION SPECTRA  
 04/22/2002 - 04/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J J O'BRIEN  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1457 WASHINGTON UNIV - ST. LOUIS 6305**  
 DEFORMABLE WAKE DYNAMICS FOR IMPROVED MANEUVERING FLIGHT  
 SIMULATION  
 03/07/2001 - 07/31/2003 FY02: \$0 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 6306**  
 MULTISENSORY INTERACTIONS TO DISCRIMINATE GRAVITY FROM TRANS-  
 LATIONAL ACCELERATIONS  
 07/31/2001 - 06/30/2003 FY02: \$0 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 6307**  
 EVOLUTION OF ANTHROPOD NEURAL PATTERN  
 07/06/2001 - 06/30/2003 FY02: \$76,222 Total: \$152,445  
*Prin. Invest.:* J B SKEATH  
*Tech. Officer:* ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 1910 WASHINGTON UNIV - ST. LOUIS 6308**  
 GAS - PHASE COMBUSTION SYNTHESIS OF METAL AND ERAM IC NANO-  
 PARTICLES  
 06/24/1996 - 06/22/2001 FY02: \$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 6309**  
 DEVELOPMENT OF A MICROSCALE PARTICULATE CLASSIFIER (MIPAC)  
 06/01/2001 - 12/31/2002 FY02: \$0 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 6310**  
 STRUCTURE AND EVOLUTION OF OUTER PLANET SATELLITES  
 03/19/1997 - 10/31/2002 FY02: \$0 Total: \$151,632  
*Prin. Invest.:* W B MCKINNON  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4098 WASHINGTON UNIV - ST. LOUIS 6311**  
 ISOTOPIC STRUCTURES AND FINE-SCALE CHRONOLOGY IN P  
 06/23/1997 - 03/31/2002 FY02: \$0 Total: \$427,000  
*Prin. Invest.:* D A PODOSEK  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4173 WASHINGTON UNIV - ST. LOUIS 6312**  
 LUNAR AND PLANETARY SURFACE DYNAMICS AND EARLY HIS  
 06/02/1997 - 12/14/2000 FY02: \$0 Total: \$645,000  
*Prin. Invest.:* D HOHENBERG  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 4435 WASHINGTON UNIV - ST. LOUIS 6313**  
 PARTICIPATION IN THE DATA ANALYSIS AND SCIENCE ACT ORBITING  
 LASER ALTIMETER (MOLA) & THE MARS GLOBAL  
 04/28/1997 - 12/31/2002 FY02: \$0 Total: \$560,000  
*Prin. Invest.:* R J PHILLIPS  
*Tech. Officer:* GSFC/D E SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4448 WASHINGTON UNIV - ST. LOUIS 6314**  
 PLANETARY INTERIOR MODELLING AND TECTONIC IMPLICAT  
 05/08/1997 - 12/31/2002 FY02: \$0 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 6315**  
 KINETICS OF THERMOCHEMICAL REACTIONS IMPORTANT IN SULFUR  
 CYCLE  
 05/29/1997 - 12/31/2002 FY02: \$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 6316**  
 CHEMICAL WEATHERING KINETICS OF BASALT ON VENUS  
 05/30/1997 - 02/14/2002 FY02: \$0 Total: \$227,838  
*Prin. Invest.:* D FEGLEY  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 5078 WASHINGTON UNIV - ST. LOUIS 6317**  
 BASIC RESEARCH ON THE COMPOSITION OF HEAVY COSMIC RAYS: TIGER  
 05/03/1996 - 05/31/2002 FY02: \$0 Total: \$1,812,700  
*Prin. Invest.:* R W BINNS  
*Tech. Officer:* GSFC/H C NEDDLEMAN, GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5110 WASHINGTON UNIV - ST. LOUIS 6318**  
 DEVELOPMENT OF SIFTER WITH SIMULTANEOUS TRACKING AND CALO-  
 RIMETRY  
 02/12/1997 - 05/31/2001 FY02: \$0 Total: \$410,000  
*Prin. Invest.:* R BINNS  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 5154 WASHINGTON UNIV - ST. LOUIS 6319**  
 ULTRA HEAVY AND HEAVY COSMIC-RAY MEASUREMENTS ON ACCESS  
 03/26/1998 - 06/30/2001 FY02: \$0 Total: \$112,160  
*Prin. Invest.:* W R BINNS  
*Tech. Officer:* GSFC/H NEEDLEMAN  
*CASE Category:* 13 - PHYSICS

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<b>NAG 5 5215</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6320</b>	<b>NAG 5 7696</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6328</b>
A PROPOSAL FOR CONVERSION OF THE TRANS-IRON GALACTIC ELEMENT RECORDER (TIGER) PIHINK			HYDROTHERMAL ECOSYSTEMS IN A PLANETARY CONTEXT		
12/01/1998 - 11/30/2002	FY02: \$0	Total: \$529,732	09/17/1998 - 01/31/2002	FY02: \$0	Total: \$425,728
<i>Prin. Invest.:</i> P HINK			<i>Prin. Invest.:</i> E L SHOCK		
<i>Tech. Officer:</i> GSFC/B MERRITT			<i>Tech. Officer:</i> GSFC/M MEYER		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 5296</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6321</b>	<b>NAG 5 8056</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6329</b>
SIFTER SCINTILLATING FIBER TELESCOPE FOR ENERGETIC			DEFORMATION OF THE EUROPEAN ICE SHELL BY TIDAL AND CONVECTION STRESSES		
06/12/2000 - 06/30/2002	FY02: \$0	Total: \$64,000	01/15/1999 - 01/31/2003	FY02: \$0	Total: \$103,000
<i>Prin. Invest.:</i> W R BINNS			<i>Prin. Invest.:</i> W B MCKINNON		
<i>Tech. Officer:</i> WFF/B A MERRITT			<i>Tech. Officer:</i> GSFC/R BEEBE		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 5343</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6322</b>	<b>NAG 5 8336</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6330</b>
BASIC RESEARCH ON THE COMPOSITION OF HEAVY COSMIC RAYS - THE TRANS-IRON GALACTICELEMENT RECORDER EX			SOLID STATE AND MASS SPECTROMETRIC MEASUREMENT OF EXTRATERRESTRIAL MATERIALS		
01/17/2002 - 11/30/2004	FY02: \$0	Total: \$0	02/24/1999 - 02/28/2003	FY02: \$0	Total: \$1,981,000
<i>Prin. Invest.:</i> R BINNS			<i>Prin. Invest.:</i> T J BERNATOWICZ		
<i>Tech. Officer:</i> GSFC/B MERRITT			<i>Tech. Officer:</i> HQ/J BOYCE		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 5357</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6323</b>	<b>NAG 5 8536</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6331</b>
CONTINUED DEVELOPMENT OF SCINTILLATING FIBER DETECTORS FOR GAMMA-RAY ASTRONOMY.			DEVELOPMENT OF HIGH QUANTUM EFFICIENCY UV/BLUE PHOTO CATHODE EPITAXIAL SEMICONDUCTOR HETEROSTRUCTURE		
08/05/2002 - 04/30/2003	FY02: \$0	Total: \$0	07/08/1999 - 07/14/2002	FY02: \$0	Total: \$576,028
<i>Prin. Invest.:</i> R BINNS			<i>Prin. Invest.:</i> D LEOPOLD		
<i>Tech. Officer:</i> WFF/B MERRITT			<i>Tech. Officer:</i> GSFC/G MUCKLOW		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 12 - CHEMISTRY		
<b>NAG 5 6125</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6324</b>	<b>NAG 5 8568</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6332</b>
ACOUSTIC COMPOSITION EXPERIMENT FOR DETERMINING H2 RATIO IN THE ATMOSPHERES OF THE JOVIAN PLANETS			THE HIGH ENERGY X-RAY IMAGING SURVEY (HEXIS)		
08/04/1997 - 07/14/2003	FY02: \$0	Total: \$467,327	05/24/1999 - 05/31/2001	FY02: \$0	Total: \$45,000
<i>Prin. Invest.:</i> D FEGLEY			<i>Prin. Invest.:</i> P L HINK		
<i>Tech. Officer:</i> GSFC/B CAMPBELL			<i>Tech. Officer:</i> GSFC/L KALUZIENSKI		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 5 6366</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6325</b>	<b>NAG 5 8609</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6333</b>
CHEMICAL MODELS OF THE PRESENT AND PRIMORDIAL ATMOSPHERES OF GIANT PLANETS JUPITER, SATURN, URANUS AND NEPTUNE			SYNTHESIZING LUNAR PROSPECTOR, CLEMENTINE, AND APOLO GEOCHEMICAL DATA TO UNDERSTAND THE GEOLOGY OF		
09/22/1997 - 12/31/2002	FY02: \$0	Total: \$283,926	06/10/1999 - 06/30/2003	FY02: \$0	Total: \$176,000
<i>Prin. Invest.:</i> D FEGLEY			<i>Prin. Invest.:</i> R L KOROTEV		
<i>Tech. Officer:</i> GSFC/J BERGSTRALH			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 7140</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6326</b>	<b>NAG 5 8717</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6334</b>
OPTICAL DESIGN AND BREADBOARD OF A RAMAN SPECTROMETER			GLOBAL CHEMICAL REACTOR OF PROTOPLANETARY DISK		
03/13/1998 - 03/31/2001	FY02: \$0	Total: \$267,726	08/10/1999 - 07/31/2002	FY02: \$0	Total: \$68,000
<i>Prin. Invest.:</i> L HASKIN			<i>Prin. Invest.:</i> J T GLEAVES		
<i>Tech. Officer:</i> GSFC/B CAMPBELL			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 7613</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6327</b>	<b>NAG 5 8729</b>	<b>WASHINGTON UNIV - ST. LOUIS</b>	<b>6335</b>
DYNAMICS OF WETLANDS AMONG ENGINEERED PORTIONS OF MISSOURI RIVER SYSTEM			PURCHASE AND INSTALLATION OF NANOSIMS 50		
07/22/1998 - 01/31/2002	FY02: \$0	Total: \$360,000	08/10/1999 - 07/31/2002	FY02: \$0	Total: \$1,083,000
<i>Prin. Invest.:</i> R E ARVIDSON			<i>Prin. Invest.:</i> R M WALKER		
<i>Tech. Officer:</i> GSFC/H V FREY			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		

## MISSOURI

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8899**                    **WASHINGTON UNIV - ST. LOUIS**                    **6336**  
 DEFORMATION OF THE EUROPEAN ICE SHELL BY TIDAL AND CONVECTIVE  
 STRESSES: CONSTRAINTS FROM GEM DATA  
 01/13/2000 - 01/31/2003                    FY02: \$0                    Total: \$69,000  
*Prin. Invest.:* W MCKINNON  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8905**                    **WASHINGTON UNIV - ST. LOUIS**                    **6337**  
 COMPOSITION, LITHOLOGY, AND HETEROGENEITY OF THE LUNAR CRUST  
 USING REMOTE-SENSING OF IMPACT-BASIN  
 01/21/2000 - 01/31/2003                    FY02: \$0                    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**                    **6338**  
 LUNAR & PLANETARY SURFACE DYNAMICS & EARLY HISTORY  
 04/14/2000 - 12/14/2002                    FY02: \$0                    Total: \$441,000  
*Prin. Invest.:* C M HOHENBERG  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9449**                    **WASHINGTON UNIV - ST. LOUIS**                    **6339**  
 STUDIES OF PRESOLAR MATERIALS AND SOLAR NEBULA STRUCTURE AND  
 EVOLUTION  
 04/12/2000 - 04/30/2003                    FY02: \$0                    Total: \$156,000  
*Prin. Invest.:* F PODOSEK  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9801**                    **WASHINGTON UNIV - ST. LOUIS**                    **6340**  
 ORIGIN & EVOLUTION OF THE SOLAR SYSTEM: MICROANALYTICAL  
 STUDIES OF METEORITES & INTERPLANETARY DUST  
 07/14/2000 - 02/28/2003                    FY02: \$0                    Total: \$387,000  
*Prin. Invest.:* R M WALKER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10158**                    **WASHINGTON UNIV - ST. LOUIS**                    **6341**  
 WASHINGTON UNIV-REGIONAL PLANETARY IMAGE FACILITY  
 12/18/2000 - 12/31/2003                    FY02: \$0                    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**                    **6342**  
 SPACE-BASED GRAVITATIONAL-WAVE OBSERVATIONS AS TOOLS FOR  
 TESTING GENERAL RELATIVITY  
 12/20/2000 - 12/31/2003                    FY02: \$0                    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**                    **6343**  
 HYDROGEOLOGY OF BASINS ON MARS  
 01/03/2001 - 01/14/2002                    FY02: \$0                    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**                    **6344**  
 INTEGRATED STUDY OF THE GEOLOGY, COMPOSITION, & ORIGIN OF  
 LUNAR MARE BASALTS  
 01/04/2001 - 01/14/2004                    FY02: \$0                    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**                    **6345**  
 THE HISTORY OF PRESOLAR GRAINS  
 02/16/2001 - 02/28/2004                    FY02: \$0                    Total: \$386,000  
*Prin. Invest.:* T BERNATOWICZ  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10485**                    **WASHINGTON UNIV - ST. LOUIS**                    **6346**  
 GEOCHEMICAL & PETROLOGIC ANALYSIS & MODELING OF LUNAR ROCKS  
 & REGOLITHS  
 03/06/2001 - 03/14/2004                    FY02: \$0                    Total: \$250,000  
*Prin. Invest.:* L HASKIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10513**                    **WASHINGTON UNIV - ST. LOUIS**                    **6347**  
 ISOTOPIC STRUCTURES & FINE-SCALE CHRONOLOGY IN PLANETARY  
 MATERIALS  
 03/05/2001 - 03/31/2004                    FY02: \$0                    Total: \$114,000  
*Prin. Invest.:* F PODOSEK  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10533**                    **WASHINGTON UNIV - ST. LOUIS**                    **6348**  
 MAJOR EQUIPMENT: GAMMA-RAY DETECTORS FOR NEUTRON ACTIVATION  
 ANALYSIS ASSOCIATED WITH PROPOSAL "GE  
 04/06/2001 - 08/31/2002                    FY02: \$0                    Total: \$44,200  
*Prin. Invest.:* L HASKIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 10553**                    **WASHINGTON UNIV - ST. LOUIS**                    **6349**  
 KINETICS OF THERMOCHEMICAL GAS-SOLID REACTIONS IMPORTANT FOR  
 VOLATILE RETENTION IN THE SOLAR NE  
 03/09/2001 - 03/14/2004                    FY02: \$0                    Total: \$60,000  
*Prin. Invest.:* B FEGLEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10703**                    **WASHINGTON UNIV - ST. LOUIS**                    **6350**  
 ENHANCED LASER RAMAN SPECTROSCOPY FOR PLANETARY  
 SURFACE MINERALOGY, PETROLOGY, AND DETECTION OF  
 04/09/2001 - 03/31/2004                    FY02: \$0                    Total: \$186,674  
*Prin. Invest.:* L HASKIN  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10802**                    **WASHINGTON UNIV - ST. LOUIS**                    **6351**  
 CONCEPT STUDY FOR THE "THE HEAVY NUCLEI EXPLORER" (HNX)  
 MISSION AO-99-OSS-05  
 04/30/2001 - 04/30/2002                    FY02: \$0                    Total: \$127,300  
*Prin. Invest.:* W BINNS  
*Tech. Officer:* GSFC/J R BYRD  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

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<p><b>NAG 5 11037</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6352</b>            KINETICS OF THE THERMOCHEMICAL REACTIONS IMPORTANT IN THE            VENUS ATMOSPHERIC SULFUR CYCLE            06/12/2001 - 06/14/2002                    FY02: \$0                    Total: \$93,000  <i>Prin. Invest.:</i> B FEGLEY  <i>Tech. Officer:</i> GSFC/D BOGAN  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 11958</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6360</b>            CHEMICAL MODELS OF THE GAS GIANT PLANETS            04/02/2002 - 03/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> B FEGLEY  <i>Tech. Officer:</i> GSFC/J HILLMAN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 11050</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6353</b>            CHEMICAL WEATHERING REACTIONS ON VENUS            06/18/2001 - 05/31/2004                    FY02: \$0                    Total: \$60,000  <i>Prin. Invest.:</i> B FEGLEY, JR  <i>Tech. Officer:</i> GSFC/D BOGAN  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 12114</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6361</b>            REDUCED CARBON AND WATER SEEKER: A SURVEY INSTRUMENT            04/26/2002 - 04/30/2004                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> A WANG  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 11202</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6354</b>            INTEGRATED GEODYNAMICAL AND HYDROGEOLOGICAL HISTORY OF            MARS            08/14/2001 - 08/14/2004                    FY02: \$0                    Total: \$65,000  <i>Prin. Invest.:</i> R J PHILLIPS  <i>Tech. Officer:</i> GSFC/J M BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 8 1682</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6362</b>            "STUDIES OF NUCLEATION AND GROWTH, SPECIFIC HEAT AND VISCOSITY            OF UNDER COOLED MELTS OF ALLOYS"            05/01/2000 - 11/30/2003                    FY02: \$0                    Total: \$239,579  <i>Prin. Invest.:</i> K F KELTON  <i>Tech. Officer:</i> MSFC/P DOTY  <i>CASE Category:</i> 47 - METAL &amp; MATERIALS ENGR</p>
<p><b>NAG 5 11517</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6355</b>            STRUCTURE AND EVOLUTION OF OUTER PLANET SATELLITES            12/31/2001 - 12/31/2004                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> W B MCKINNON  <i>Tech. Officer:</i> GSFC/D SENSKE  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 9 1006</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6363</b>            GENESIS: NOBLE GAS MEASUREMENTS PHASE B            04/29/1998 - 07/31/2003                    FY02: \$0                    Total: \$244,900  <i>Prin. Invest.:</i> C M HOHENBERG  <i>Tech. Officer:</i> JSC/K E CYR  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 11545</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6356</b>            ISOTOPIIC STUDIES OF STARDUST            01/04/2002 - 02/28/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> E ZINNER  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 12 - CHEMISTRY</p>	<p><b>NAG 9 1010</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6364</b>            GENESIS DISCOVERY MISSION            05/05/1998 - 11/08/2002                    FY02: \$0                    Total: \$56,600  <i>Prin. Invest.:</i> F A PODOSEK  <i>Tech. Officer:</i> JSC/E K STANSBERY  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 11574</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6357</b>            PARTICIPATION IN THE DATA ANALYSIS AND SCIENCE ACTIVITIES OF THE            MARS ORBITING LASER ALTIMETER (MGS            01/07/2002 - 12/31/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> R PHILLIPS  <i>Tech. Officer:</i> GSFC/D E SMITH  <i>CASE Category:</i> 42 - AERONAUTICAL ENGR</p>	<p><b>NAS 3 00094</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6365</b>            NRA CONTRACT FOR "SEARCH FOR EFFECTS OF ELECTROSTATIC            POTENTIAL ON CLOCKS IN THE FRAME OF REFERENCE            12/27/1999 - 12/26/2000                    FY02: \$0                    Total: \$99,985  <i>Prin. Invest.:</i> M S CONRAD, H I RINGERMACHER  <i>Tech. Officer:</i> GRC/M MILLIS  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 11620</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6358</b>            DYNAMICS OF DURICRUST ON MARS            01/22/2002 - 01/31/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> R E ARVIDSON  <i>Tech. Officer:</i> GSFC/D S SENSKE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NCC 3 697</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6366</b>            FLAME DESIGN - A NOVEL APPROACH TO CLEAN, EFFICIENT DIFFUSION            FLAMES            03/26/1999 - 01/13/2003                    FY02: \$0                    Total: \$186,032  <i>Prin. Invest.:</i> R L AXELBAUM  <i>Tech. Officer:</i> GRC/D L URBAN  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 11865</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6359</b>            DEVELOPMENT OF NEW ANALYTICAL TECHNIQUES FOR THE MICROANALYSIS            OF EXTRATERRESTRIAL MATERIALS            03/20/2002 - 03/31/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> F S STADERMANN  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NCC 3 777</b>                    <b>WASHINGTON UNIV - ST. LOUIS</b>                    <b>6367</b>            OPTIMIZING THE CORBA COMPONENT MODEL FOR HIGH-PERFORMANCE            AND REAL-TIME APPLICATIONS            02/24/2000 - 01/20/2003                    FY02: \$0                    Total: \$100,842  <i>Prin. Invest.:</i> D L LEVINE  <i>Tech. Officer:</i> GRC/R W CLAUS  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>

## MONTANA

## NASA'S UNIVERSITY PROGRAM

**NCC 8 85**                    **WASHINGTON UNIV - ST. LOUIS**                    **6368**  
 COMPOSITION EFFECTS ON PHASE FORMATION & STABILITY  
 04/22/1996 - 04/21/2001                    FY02: \$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**                    **6369**  
 COOPERATIVE AGREEMENT ENTITLED "IMAGING CALORIMETER FOR ACCESS (ICAY)"  
 07/10/1998 - 07/09/2001                    FY02: \$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 5 50170**                    **WASHINGTON UNIV - ST. LOUIS**                    **6370**  
 GRADUATE STUDENT RESEARCH IN X-RAY ASTRONOMY  
 05/22/1998 - 06/30/2001                    FY02: \$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**                    **6371**  
 GRADUATE STUDENT RSCH IN COSMIC RAY ASTROPHYSICS  
 06/03/1999 - 06/30/2003                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* M ISRAEL  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50348**                    **WASHINGTON UNIV - ST. LOUIS**                    **6372**  
 HYDROTHERMAL ECOSYSTEMS AS ANALOGS IN THE STUDY OF ASTROBIOLOGY & EARLY LIFE ON EARTH/STUDENT: D. ME  
 05/07/2001 - 06/30/2004                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* J AMEND  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50386**                    **WASHINGTON UNIV - ST. LOUIS**                    **6373**  
 STUDIES OF THE COMPOSITION OF HEAVY COSMIC RAYS (STUDENT: LAUREN SCOTT)  
 06/03/2002 - 06/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M ISRAEL  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50402**                    **WASHINGTON UNIV - ST. LOUIS**                    **6374**  
 DYNAMICS OF A GTO-ESCAPE SOLAR SAIL  
 06/12/2002 - 06/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M SWARTOUT  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1851**                    **WILLIAM JEWELL COLL**                    **6375**  
 MOLECULAR PROBE FLUORESCENCE MONITORING OF POLYMER ZATION  
 09/27/2001 - 08/31/2002                    FY02: \$0                    Total: \$27,957  
*Prin. Invest.:* P BUNTON  
*Tech. Officer:* MSFC/M P BODIFORD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## MONTANA

**NAG 2 1323**                    **MONTANA STATE UNIV**                    **6376**  
 SPATIO-SPECTRAL HOLOGRAPHY FOR HIGH BANDWIDTH CORR ELATORS  
 04/29/1999 - 04/30/2003                    FY02: \$0                    Total: \$5,096,000  
*Prin. Invest.:* L H SPANGLER  
*Tech. Officer:* ARC/V C VANDERBILT, ARC/D KOGA  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 4576**                    **MONTANA STATE UNIV**                    **6377**  
 CENTER FOR EDUCATIONAL RESOURCES  
 05/13/1997 - 05/31/2001                    FY02: \$0                    Total: \$999,975  
*Prin. Invest.:* G TUTHILL  
*Tech. Officer:* GSFC/M V PHELPS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6110**                    **MONTANA STATE UNIV**                    **6378**  
 MAGNETIC HELICITY AND THE SOLAR DYNAMO  
 07/28/1997 - 07/31/2003                    FY02: \$0                    Total: \$975,776  
*Prin. Invest.:* D CANFIELD  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8807**                    **MONTANA STATE UNIV**                    **6379**  
 CENTER FOR STUDYING LIFE IN EXTREME ENVIRONMENTS  
 09/03/1999 - 08/31/2004                    FY02: \$0                    Total: \$7,002,000  
*Prin. Invest.:* T R MCDERMOTT  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8824**                    **MONTANA STATE UNIV**                    **6380**  
 MOLECULAR AND GEOCHEMICAL ANALYSIS OF HOT SPRING CYANOBACTERIAL & CHLOROFLEXUS MATS AS STROMATOLITE  
 09/22/1999 - 10/31/2002                    FY02: \$0                    Total: \$194,200  
*Prin. Invest.:* D M WARD  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9300**                    **MONTANA STATE UNIV**                    **6381**  
 MONITORING FOREST RESPONSE TO PAST & FUTURE GLOBAL CHANGE IN GREATER YELLOWSTONE  
 04/07/2000 - 04/30/2003                    FY02: \$0                    Total: \$207,168  
*Prin. Invest.:* A HANSEN  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9806**                    **MONTANA STATE UNIV**                    **6382**  
 CHANGING LANDSCAPED IN RURAL AMERICA  
 07/13/2000 - 08/31/2001                    FY02: \$0                    Total: \$15,000  
*Prin. Invest.:* A HANSEN  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10489**                    **MONTANA STATE UNIV**                    **6383**  
 THE X-RAY BRIGHT POINT: A CASE STUDY IN RECONNECTI ON  
 03/07/2001 - 02/28/2006                    FY02: \$0                    Total: \$91,029  
*Prin. Invest.:* D LONGCOPE  
*Tech. Officer:* GSFC/W WALTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

MONTANA

**NAG 5 10997**                      **MONTANA STATE UNIV**                      **6384**  
 MOSES: A SLITLESS MULTI-ORDER SOLAR EXTREME ULTRA VIOLET  
 SPECTROGRAPH FOR FAST IMAGING SPECTROSCOPY  
 06/08/2001 - 05/31/2004                      FY02: \$0                      Total: \$248,122  
*Prin. Invest.:* C C KANKELBORG  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 11158**                      **MONTANA STATE UNIV**                      **6385**  
 LAND USE LAND CHANGE AROUND PROTECTED AREAS IN LCLUC SITES:  
 SYNTHESIS OF RATES, CONSEQUENCES FOR  
 08/01/2001 - 08/14/2004                      FY02: \$0                      Total: \$61,425  
*Prin. Invest.:* A HANSEN  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11467**                      **MONTANA STATE UNIV**                      **6386**  
 EXPERIMENTAL TESTS OF RELATIVITY  
 12/13/2001 - 12/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R HELLINGS  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11469**                      **MONTANA STATE UNIV**                      **6387**  
 SPECTRUM OF CONTINUOUS GRAVITATIONAL WAVE BACKGRO UND  
 12/13/2001 - 12/14/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R HELLINGS  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11873**                      **MONTANA STATE UNIV**                      **6388**  
 MAGNETIC HELICITY AND THE SOLAR DYNAMO  
 03/15/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R C CANFIELD  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12079**                      **MONTANA STATE UNIV**                      **6389**  
 THERMAL EVOLUTION AND RELATED PROBLEMS OF NEUTRON STARS  
 05/07/2002 - 04/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S TSURUTA  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12081**                      **MONTANA STATE UNIV**                      **6390**  
 DESIGNS FOR A VIRTUAL SOLAR OBSERVATORY  
 04/23/2002 - 10/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P MARTENS  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1399**                      **MONTANA STATE UNIV**                      **6391**  
 LARGE SCALE ORGANIZATION OF ACTIVE REGION MAGNETIC FIELDS  
 08/11/1997 - 08/10/2002                      FY02: \$0                      Total: \$184,330  
*Prin. Invest.:* R C CANFIELD  
*Tech. Officer:* MSFC/M J HAGYARD, MSFC/G A GARY  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1082**                      **MONTANA STATE UNIV**                      **6392**  
 RAPID BACTERIAL TESTING FOR SPACECRAFT WATER  
 03/03/1999 - 03/31/2003                      FY02: \$0                      Total: \$286,278  
*Prin. Invest.:* B H PYLE  
*Tech. Officer:* JPL/D JAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 2 1073**                      **MONTANA STATE UNIV**                      **6393**  
 COMPARATIVE STUDIES OF MICROBIAL MATS: COMM COMPOSITION,  
 PHYSIOLOGICAL & ORGANIC GEOCHEMICAL P  
 12/08/1998 - 12/31/2003                      FY02: \$0                      Total: \$155,454  
*Prin. Invest.:* D M WARD  
*Tech. Officer:* ARC/D J DES MARAIS, ARC/B BEBOUT  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NCC 2 1143**                      **MONTANA STATE UNIV**                      **6394**  
 BACTERIAL PHYSIOLOGY & VIRULENCE ON EARTH & IN MIC ROGRAVITY  
 09/19/1999 - 08/31/2003                      FY02: \$0                      Total: \$325,621  
*Prin. Invest.:* B H PYLE  
*Tech. Officer:* ARC/M F VASQUES, ARC/P D SAVAGE  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 1181**                      **MONTANA STATE UNIV**                      **6395**  
 STUDENT-MENTOR PROJECTS IN SUPPORT OF NASA SHARP PROGRAM  
 EXPERIMENTS  
 05/23/2000 - 12/31/2001                      FY02: \$0                      Total: \$91,357  
*Prin. Invest.:* D CAIRNS  
*Tech. Officer:* ARC/P KOLODZIEJ, ARC/D J RASKY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5437**                      **MONTANA STATE UNIV**                      **6396**  
 A MINIATURE RAMAN SPECTROMETER FOR FIELD EVALUATIO N IN  
 ANTARCTICA AS AN ANALOGUE OF PUTATIVE MARTIA  
 06/25/2001 - 05/31/2002                      FY02: \$0                      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**                      **6397**  
 EFFECTS OF STAND-REPLACING FIRE ON MYCORRHIZAL COM MUNITIES  
 07/16/2001 - 06/30/2003                      FY02: \$0                      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**                      **6398**  
 MONTANA EPSCOR PROGRAM  
 09/12/1997 - 02/28/2002                      FY02: \$0                      Total: \$1,800,000  
*Prin. Invest.:* W HISCOCK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 410**                      **MONTANA STATE UNIV**                      **6399**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/18/1999 - 05/31/2002                      FY02: \$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**                      **6400**  
 MONTANA NASA EPSCOR PROGRAM  
 08/17/2001 - 07/31/2004                      FY02: \$0                      Total: \$463,300  
*Prin. Invest.:* W HISCOCK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## MONTANA

## NASA'S UNIVERSITY PROGRAM

**NCC 9 44**                      **MONTANA STATE UNIV**                      **6401**  
 TECHNOLOGY TRANSFER & COMMERCIALIZATION CTR FOR THE ROCKY  
 MOUNTAINS & UPPER PLAINS  
 06/01/1996 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W SWEARINGEN  
*Tech. Officer:* JSC/K LASSMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 01012**                      **MONTANA STATE UNIV**                      **6402**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 02/28/2001 - 06/30/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* V H SCHMIDT  
*Tech. Officer:* LARC/J HARRISON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 40092**                      **MONTANA STATE UNIV**                      **6403**  
 MONTANA SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 02/28/2001 - 02/28/2005                      FY02: \$0                      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**                      **6404**  
 ECOLOGY & NITROGEN BIOGEOCHEMISTRY OF ANANTARCTIC LAKE  
 ICE/STUDENT: AARON D. HALL  
 06/27/2000 - 08/31/2003                      FY02: \$0                      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**                      **6405**  
 STEP CAREERS IN RESEARCH EXPLORATION PROGRAM  
 02/29/2000 - 02/28/2003                      FY02: \$0                      Total: \$31,730  
*Prin. Invest.:* T MOON  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1890**                      **ROCKY MOUNTAIN COLL**                      **6406**  
 FEEDBACK MECHANISMS AFFECTING INTERANNUAL VARIABILITY OF  
 THE TROPICAL HYDROLOGIC CYCLE & ENERGY  
 09/23/2002 - 09/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S MCDANIEL  
*Tech. Officer:* MSFC/F ROBINSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9102**                      **SALISH KOOTENAI COLL**                      **6407**  
 EARTH SYSTEM SCIENCE STUDENT RESEARCH EXPERIENCES AT SALISH  
 KOOTENAI COLL  
 03/02/2000 - 01/31/2003                      FY02: \$0                      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 COLL**                      **6408**  
 NORTHERN ROCKY MOUNTAIN TRIBAL PATHWAY TO ACADEMIC EXCEL-  
 LENCE PROGRAM  
 03/03/2000 - 03/14/2003                      FY02: \$0                      Total: \$200,000  
*Prin. Invest.:* J M GOBERT  
*Tech. Officer:* GSFC/M STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9368**                      **SALISH KOOTENAI COLL**                      **6409**  
 NASA NATIVE EARTH SYSTEMS SCIENCE CURRICULUM PROJECT (NESCP)  
 04/03/2000 - 03/31/2003                      FY02: \$0                      Total: \$308,847  
*Prin. Invest.:* J M GOBERT  
*Tech. Officer:* GSFC/B MEESON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9541**                      **SALISH KOOTENAI COLL**                      **6410**  
 RELATIVISTIC DISSIPATIVE FLUID THEORIES OF NEUTRON STARS  
 06/08/2000 - 06/14/2003                      FY02: \$0                      Total: \$48,051  
*Prin. Invest.:* T OLSON  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 21 - MATHEMATICS

**NAG 5 10144**                      **SALISH KOOTENAI COLL**                      **6411**  
 ASTRONOMY & ASTROPHYSICS COURSE DEVELOPMENT AT SAL ISH  
 KOOTENAI COLL  
 12/11/2000 - 12/31/2002                      FY02: \$0                      Total: \$12,852  
*Prin. Invest.:* T S OLSON  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 44 - CIVIL ENGR

**NAG 5 12205**                      **SALISH KOOTENAI COLL**                      **6412**  
 CENTER FOR REMOTE SENSING OF TRIBAL LANDS: NASA GO DDARD  
 RESEARCH EXPERIENCE FOR SKU STUDENTS  
 05/29/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T S OLSON  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1531**                      **UNIV OF MONTANA**                      **6413**  
 UNDERSTANDING THE EFFECT OF LAND COVER CLASSIFICATION ON  
 MODEL ESTIMATES OF REGIONAL CARBONCYCLING  
 01/03/2002 - 12/14/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J S KIMBALL  
*Tech. Officer:* ARC/C S POTTER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8599**                      **UNIV OF MONTANA**                      **6414**  
 THE IMPACT OF VEGETATION CHANGES IN THE SAHEL ON REGIONAL  
 SCALE HYDROLOGY  
 06/21/1999 - 06/30/2002                      FY02: \$0                      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**                      **6415**  
 EARTH SCIENCE ENTERPRISE RESEARCH PROGRAM  
 02/15/2000 - 02/14/2003                      FY02: \$0                      Total: \$199,675  
*Prin. Invest.:* W R SNYDER  
*Tech. Officer:* GSFC/B MEESON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9332**                      **UNIV OF MONTANA**                      **6416**  
 DEVELOPMENT SPRAWL IMPACTS ON THE TERRESTRIAL CARBON DYNAM-  
 ICS OF THE UNITED STATES  
 03/23/2000 - 04/30/2003                      FY02: \$0                      Total: \$77,873  
*Prin. Invest.:* R NEMANI  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



## NASA'S UNIVERSITY PROGRAM

NEBRASKA

**NAG 5 9333** **UNIV OF MONTANA** **6417**  
 MONITORING BOREAL LANDCOVER AND ECOSYSTEM DYNAMICS AT RE-  
 GIONAL SCALES USING INTEGRATED SPACEBORNE  
 03/23/2000 - 04/30/2003 FY02: \$0 Total: \$34,000  
*Prin. Invest.:* J KIMBALL  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11256** **UNIV OF MONTANA** **6418**  
 A SATELLITE MICROWAVE REMOTE SENSING MEASURE OF HI GH LATI-  
 TUDE GROWING SEASONS FOR IMPROVED ASSESS  
 08/16/2001 - 08/31/2004 FY02: \$0 Total: \$165,352  
*Prin. Invest.:* S RUNNING  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11525** **UNIV OF MONTANA** **6419**  
 AUTOMATED TESTING AND QUANTITATIVE TESTING EVALUA TION OF  
 REAL-TIME SYSTEMS USING SIMULATION  
 01/08/2002 - 01/14/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* D HENRY  
*Tech. Officer:* GSFC/K MCGILL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 12540** **UNIV OF MONTANA** **6420**  
 EOS NATURAL RESOURCE/EDUCATION TRAINING CENTER  
 09/04/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* S W RUNNING  
*Tech. Officer:* GSFC/W TURNER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12624** **UNIV OF MONTANA** **6421**  
 EOS EDUCATION PROJECT/CONGRESSIONAL EARMARK  
 09/30/2002 - 09/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R VAN DEN POL  
*Tech. Officer:* GSFC/W TURNER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1112** **UNIV OF MONTANA** **6422**  
 INST FOR THE STUDY OF BIOMAKERS IN ASTROMATERIALS  
 05/11/1999 - 05/13/2003 FY02: \$0 Total: \$38,353  
*Prin. Invest.:* N C HINMAN  
*Tech. Officer:* JSC/E K GIBSON  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG13 02002** **UNIV OF MONTANA** **6423**  
 DEVELOPING A BIOSPHERIC NOWCAST AND FORECAST CAPAB ILITY FOR  
 THE CONTERMINIOUS U.S.  
 11/30/2001 - 09/28/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* R NEMANI  
*Tech. Officer:* SSC/C HALL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 5 31368** **UNIV OF MONTANA** **6424**  
 EOS MODIS INVESTIGATION FROM DR. STEVE RUNNING  
 01/07/1992 - 06/14/2003 FY02: \$0 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** **6425**  
 INTELLIGENT PARAMETERIZATION & REAL-TIME EXECUTION OF ECOSYS-  
 TEM MODELS  
 05/07/2001 - 11/30/2002 FY02: \$0 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** **6426**  
 AUTOMATED TESTING OF MATRIX MODELS  
 09/07/2000 - 02/28/2001 FY02: \$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** **6427**  
 INTERNATIONAL EOS NATURAL RESOURCE TRAINING CENTER  
 02/19/1999 - 08/31/2002 FY02: \$0 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** **6428**  
 FORECASTING THE EFFECTS OF CLIMATE CHANGE ON EMERG ING  
 INFECTIOUS DISEASE: A HANTAVIRUS MODEL  
 08/14/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* S RUNNING  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50225** **UNIV OF MONTANA** **6429**  
 MODELING NOVEL FT-IR SPECTROSCOPIC MEASUREMENTS OF OXYGEN-  
 ATED HYDROCARBON LEVELS FROM BIO  
 09/29/1998 - 08/31/2002 FY02: \$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** **6430**  
 BIOGEOCHEMISTRY OF RECREATIONAL GRASSLANDS STUDENT: CRISTINA  
 MILESI  
 08/17/2000 - 08/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* S RUNNING  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NEBRASKA

**NAG 2 1353** **CREIGHTON UNIV** **6431**  
 EFFECTS OF GRAVITY ON VESTIBULAR DEVELOPMENT IN MI CE  
 07/22/1999 - 07/31/2003 FY02: \$0 Total: \$484,874  
*Prin. Invest.:* B FRITSZCH  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVR)

**NAG 1 01087** **UNIV OF NEBRASKA - LINCOLN** **6432**  
 OPTIMAL EXPERIMENTAL DESIGN FOR THERMAL CHARACTER- IZATION OF  
 FUNCTIONALLY GRADEDMATERIALS  
 05/30/2001 - 09/30/2002 FY02: \$0 Total: \$29,437  
*Prin. Invest.:* K D COLE  
*Tech. Officer:* LARC/M L BLOXXER  
*CASE Category:* 45 - ELECTRICAL ENGR

## NEBRASKA

## NASA'S UNIVERSITY PROGRAM

**NAG 3 2219**                      **UNIV OF NEBRASKA - LINCOLN**                      **6433**  
 ATOMIC OXYGEN ULTRAVIOLET, AND THERMAL CYCLING EFFECTS ON  
 SPACE MATERIALS  
 12/28/1998 - 10/31/2002                      FY02: \$0                      Total: \$145,001  
*Prin. Invest.:* J A WOOLLAM  
*Tech. Officer:* GRC/D A JAWORSKE  
*CASE Category:* 13 - PHYSICS

**NAG 5 6506**                      **UNIV OF NEBRASKA - LINCOLN**                      **6434**  
 MRK 42 AND MRK 957: TWO EXTREME NARROW-LINE STRONG FE II  
 EMITTING QUASARS - ASCA PROPOSAL AO5  
 11/17/1997 - 10/31/2002                      FY02: \$0                      Total: \$17,800  
*Prin. Invest.:* M GASKELL  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6990**                      **UNIV OF NEBRASKA - LINCOLN**                      **6435**  
 CHARACTERIZATION AND IMPROVEMENT OF EOS LAND PRODUCTS  
 USING MEASUREMENTS AT AMERIFLUX GRASSLAND AND  
 02/25/1998 - 02/28/2003                      FY02: \$0                      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**                      **6436**  
 "COMPRESSION FOR LAND USE DATA". GSFC CONTROL NO. 5-3491.  
 FUNDS FOR UNSOLICITED PROPOSAL W/UNIV NE  
 07/09/1999 - 09/30/2001                      FY02: \$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**                      **6437**  
 ROBUST COMPRESSION FOR LAND USE DATA  
 07/28/2000 - 09/30/2002                      FY02: \$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**                      **6438**  
 "CONTEXT BASED COMPRESSION SCHEME"  
 04/05/2001 - 07/14/2002                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* K SAYOOD  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11147**                      **UNIV OF NEBRASKA - LINCOLN**                      **6439**  
 CONSEQUENCES OF INSTAL CHANGE: LAND-COVER DYNAMICS IN KAZA-  
 KHSTAN 1960-2000  
 07/31/2001 - 08/14/2004                      FY02: \$0                      Total: \$89,949  
*Prin. Invest.:* A GITELSON  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12277**                      **UNIV OF NEBRASKA - LINCOLN**                      **6440**  
 MULTISTAGE COMPRESSION  
 07/11/2002 - 08/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K SAYOOD  
*Tech. Officer:* GSFC/P YEH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1310**                      **UNIV OF NEBRASKA - LINCOLN**                      **6441**  
 USE OF FEMTOSECOND LASERS IN THE CURATION & ALLOCATION OF  
 SAMPLES COLLECTED BY UPCOMING PLANET  
 06/06/2001 - 06/08/2004                      FY02: \$0                      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**                      **6442**  
 TRANSPORT IN QUANTUM STRUCTURES: QUASI TWO DIMENSIONAL  
 DEVICES  
 01/11/1999 - 12/31/2001                      FY02: \$0                      Total: \$126,973  
*Prin. Invest.:* S BANDYOPADHYAY  
*Tech. Officer:* ARCM MEYAPPAN  
*CASE Category:* 13 - PHYSICS

**NCC 5 169**                      **UNIV OF NEBRASKA - LINCOLN**                      **6443**  
 THE NEBRASKA INITIATIVE FOR AEROSPACE RESEARCH AND DEVELOP-  
 MENT  
 12/05/1996 - 05/14/2002                      FY02: \$0                      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**                      **6444**  
 "AMERICA'S FARM" A PROTOTYPE FOR OTHER NATIONAL CYBER-  
 EDUCATIONAL SITES IN RESPONSE TO NASA COOPERATION  
 09/20/1999 - 09/30/2002                      FY02: \$0                      Total: \$518,228  
*Prin. Invest.:* D C RUNDQUIST  
*Tech. Officer:* GSFC/R E GABRYS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC13 98003**                      **UNIV OF NEBRASKA - LINCOLN**                      **6445**  
 AN INITIATIVE TO CREATE AN AFFILIATED RESEARCH CENTER PROGRAM  
 08/17/1998 - 03/31/2002                      FY02: \$0                      Total: \$622,399  
*Prin. Invest.:* RUNDQUIST  
*Tech. Officer:* SSCIA PEEK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30358**                      **UNIV OF NEBRASKA - LINCOLN**                      **6446**  
 LANDFORM EVOLUTION OF THE LOWER MISSISSIPPI RIVER VALLEY IN  
 RESPONSE TO DEGLACIATION/STUDENT: TAMMY  
 08/23/2000 - 08/31/2003                      FY02: \$0                      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**                      **6447**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/13/1999 - 09/30/2001                      FY02: \$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**                      **6448**  
 NEBRASKA NASA EPSCOR PROGRAM  
 07/20/2001 - 07/31/2004                      FY02: \$0                      Total: \$700,000  
*Prin. Invest.:* B D BOWEN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

NEVADA

**NGT 5 40037 UNIV OF NEBRASKA-OMAHA 6449**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLL AND FELLOWSHIP PROGRAM.  
 02/13/1997 - 02/28/2001 FY02: \$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 6450**  
 NEBRASKA SPACE GRANT COLL & FELLOWSHIP PROGRAM  
 03/01/2001 - 02/28/2005 FY02: \$0 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 6451**  
 MICROPHYSICS AND RADIATIVE PROPERTIES OF CIRRUS: INSTRUMENTATION AND ANALYSIS/PREVIOUS # NAG-1-1707  
 04/01/1998 - 08/03/2002 FY02: \$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 6452**  
 CLOUD CONDENSATION NUCLEI FIRE III MY 1/2  
 04/19/1999 - 06/03/2002 FY02: \$0 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 6453**  
 INTEGRATING MODELING AND REMOTE SENSING FOR MONITORING POTENTIAL RESPONSES TO CLIMATE CHANGE  
 01/20/1999 - 12/31/2002 FY02: \$0 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 6454**  
 IN SITU MICROPHYSICAL OBSERVATIONS IN SUPPORT OF THE TRMM/KWAJEX FIELD CAMPAIGN  
 01/03/1999 - 09/30/2002 FY02: \$0 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 6455**  
 ANALYSIS AND INTEGRATION OF IN SITU MICROPHYSICAL OBSERVATIONS FROM THE TRMM/KWAJEX FIELD CAMPAIGN  
 06/22/2000 - 06/14/2003 FY02: \$0 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 6456**  
 AN AQUEOUS GEOCHEMICAL MODEL FOR COLD PLANETS  
 02/20/2001 - 02/28/2004 FY02: \$0 Total: \$65,000  
*Prin. Invest.:* G M MARION  
*Tech. Officer:* GSFC/D SENSE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 8 1718 UNIV. OF NEVADA - DESERT RES. INST, RENO 6457**  
 RESEARCH ENTITLED, "SHEAR FLOW STABILIZED LASER-IGNITED Z-PINCH"  
 04/27/2000 - 04/26/2003 FY02: \$0 Total: \$67,000  
*Prin. Invest.:* F WINTERBERG  
*Tech. Officer:* MSFC/F THIO  
*CASE Category:* 13 - PHYSICS

**NAG13 02017 UNIV. OF NEVADA - DESERT RES. INST, RENO 6458**  
 DEVELOPMENT AND TRANSFER OF INSAR AND GPS APPLICATIONS TO LOCAL GOVERNMENT IN NEVADA  
 03/05/2002 - 09/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* J W BELL  
*Tech. Officer:* SSC/W GRAHAM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 486 UNIV. OF NEVADA - DESERT RES. INST, RENO 6459**  
 HYPERSPECTRAL MONITORING OF INVASIVE NON-NATIVE PLANT SPECIES  
 04/06/2000 - 09/30/2002 FY02: \$18,252 Total: \$129,218  
*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 6460**  
 NATIONAL SPACE GRANT COLL & FELLOWSHIP PROGRAM  
 01/24/1997 - 02/28/2001 FY02: -\$7,595 Total: \$793,530  
*Prin. Invest.:* J V TARANIK  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 6727 UNIV OF NEVADA - LAS VEGAS 6461**  
 LABORATORY STUDIES OF THERMAL ENERGY CHARGE TRANSFER OF CARBON, IRON, SULPHUR, AND NITROGEN IONS IN  
 12/11/1997 - 12/31/2001 FY02: \$0 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 6462**  
 DEVELOPMENT OF THE CONTENT-BASED IMAGE QUERYING TO OLS: TOWARD ADVANCED DATABASES FOR ASTRONOMICAL  
 04/17/2000 - 04/14/2003 FY02: \$0 Total: \$80,000  
*Prin. Invest.:* S LATIFI  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11990 UNIV OF NEVADA - LAS VEGAS 6463**  
 LABORATORY STUDIES OF THERMAL ENERGY CHARGE TRANSFER OF MULTIPLY CHARGED IONS IN ASTROPHYSICAL  
 04/10/2002 - 03/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* V KWONG, V KWONG  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 5 31231 UNIV OF NEVADA - LAS VEGAS 6464**  
 STIS CO-INVESTIGATOR SUPPORT  
 08/30/1991 - 12/31/2002 FY02: \$0 Total: \$1,023,301  
*Prin. Invest.:* D WEISTROP  
*Tech. Officer:* GSFC/D VITAGLIANO  
*CASE Category:* 11 - ASTRONOMY

## NEVADA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 6881**                      **UNIV OF NEVADA - RENO**                      **6465**  
 NUMERICAL GEOMECHANICS STUDIES OF PLANETARY FAULTING  
 02/27/1998 - 12/31/2000                      FY02: \$0                      Total: \$164,302  
*Prin. Invest.:* R SCHULTZ  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8267**                      **UNIV OF NEVADA - RENO**                      **6466**  
 GEOMETRY AND MECHANICS OF FAULTING ON MARS  
 02/24/1999 - 06/30/2002                      FY02: \$0                      Total: \$279,000  
*Prin. Invest.:* R SCHULTZ  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9001**                      **UNIV OF NEVADA - RENO**                      **6467**  
 COMPREHENSIVE STRUCTURAL MODEL FOR PLANETARY WRINKLE  
 RIDGES  
 02/03/2000 - 06/30/2003                      FY02: \$0                      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**                      **6468**  
 CONCURRENT ANALYSIS OF MULTI- & HYPERSPECTRAL DATA SETS OF  
 ANTARCTICA  
 02/25/2000 - 12/31/2001                      FY02: \$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**                      **6469**  
 ALTERATION MINERALOGY OF MARS: SPECTROSCOPIC ANALYSIS AND  
 INTERPRETATION  
 04/27/2000 - 04/30/2001                      FY02: \$0                      Total: \$55,100  
*Prin. Invest.:* W CALVIN  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9467**                      **UNIV OF NEVADA - RENO**                      **6470**  
 AN AQUEOUS GEOCHEMICAL MODEL FOR COLD PLANETS  
 04/18/2000 - 04/14/2001                      FY02: \$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**                      **6471**  
 GLOBAL ASSESSMENT OF VOLCANIC DEBRIS FLOW HAZARDS FROM  
 SPACE: EVALUATION OF NEW MULTISPECTRAL AND HYPERSPECTRAL  
 04/27/2000 - 03/31/2003                      FY02: \$0                      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**                      **6472**  
 ICES & ALTERATION MINERALS IN THE SOLAR SYSTEM: SPECTROSCOPIC  
 ANALYSIS & INTERPRETATION  
 01/29/2001 - 01/31/2002                      FY02: \$0                      Total: \$43,000  
*Prin. Invest.:* W CALVIN  
*Tech. Officer:* GSFC/D SENKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10926**                      **UNIV OF NEVADA - RENO**                      **6473**  
 GEOMECHANICS STUDIES OF PLANETARY FAULTING: MECHANISMS OF  
 DEFORMATION ON MARS AND EUROPA  
 05/14/2001 - 06/30/2002                      FY02: \$0                      Total: \$36,000  
*Prin. Invest.:* R A SCHULTZ  
*Tech. Officer:* GSFC/D A SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11447**                      **UNIV OF NEVADA - RENO**                      **6474**  
 GEOMECHANICS OF SOFT ROCK FAULTING ON MARS  
 12/21/2001 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R A SCHULTZ  
*Tech. Officer:* GSFC/D A SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11491**                      **UNIV OF NEVADA - RENO**                      **6475**  
 MARS ALTERATION ANALOGS: ACID WEATHERING OF BASALTIC ANDES-  
 ITES AND IRON FORMATION  
 12/27/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W CALVIN  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 12222**                      **UNIV OF NEVADA - RENO**                      **6476**  
 FUTURE MECHANICAL MODELING OF MARTIAN STRUCTURES & THE 4-D  
 TECTONICS THARSIS  
 05/20/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R A SCHULTZ  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12223**                      **UNIV OF NEVADA - RENO**                      **6477**  
 SPECTRAL PROPERTIES OF THE NORTH POLAR REGION OF MARS  
 05/20/2002 - 05/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W M CALVIN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1340**                      **UNIV OF NEVADA - RENO**                      **6478**  
 STEM CELL PLASTICITY UNDER SIMULATED MICROGRAVITY  
 08/01/2001 - 09/30/2004                      FY02: \$0                      Total: \$51,000  
*Prin. Invest.:* G ALMEIDA-PORADA  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 43 - CHEMICAL ENGR

**NCC 2 5408**                      **UNIV OF NEVADA - RENO**                      **6479**  
 MEASURING CHANGES IN LOCAL VOLUMETRIC BONE DENSITY  
 11/24/2000 - 11/14/2002                      FY02: \$0                      Total: \$23,750  
*Prin. Invest.:* E WANG  
*Tech. Officer:* ARC/R T WHALEN, ARC/E M HOLTON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NCC 2 5443**                      **UNIV OF NEVADA - RENO**                      **6480**  
 TESTING/DIRECT OSMOTIC CONCENTRATION  
 07/16/2001 - 01/31/2003                      FY02: \$0                      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

## NASA'S UNIVERSITY PROGRAM

## NEW HAMPSHIRE

**NCC 2 5503**                      **UNIV OF NEVADA - RENO**                      **6481**  
 ALLOCATION OF ATTENTIONAL RESOURCES IN THE COCKPIT ENVIRONMENT  
 07/19/2002 - 07/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M A CROGNALE  
*Tech. Officer:* ARC/J B MULLIGAN, ARC/L STONE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 3 750**                      **UNIV OF NEVADA - RENO**                      **6482**  
 ACOUSTIC TOMOGRAPHY FOR JET ENGINES/TURBINES: PRO OF OF CONCEPT  
 12/15/1999 - 09/30/2002                      FY02: \$0                      Total: \$119,564  
*Prin. Invest.:* J A KLEPPE  
*Tech. Officer:* GRC/G FRALICK  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 30385**                      **UNIV OF NEVADA - RENO**                      **6483**  
 EVAPORATION AND CARBON DIOXIDE FLUX MEASUREMENTS AT THE SALAR DE ATACAMA, NORTHERN CHILE/STE  
 08/13/2001 - 08/31/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* S TYLER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40113**                      **UNIV OF NEVADA - RENO**                      **6484**  
 NEVADA SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 03/12/2001 - 02/28/2005                      FY02: \$7,595                      Total: \$213,720  
*Prin. Invest.:* J V TARANIK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50362**                      **UNIV OF NEVADA - RENO**                      **6485**  
 SYNTHESIS OF HYPERSPECTRAL AND MULTISPECTRAL IMAGE DATA FOR THE IDENTIFICATION OF FOSSIL AND ACTIVE  
 05/31/2001 - 06/30/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* W CALVIN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 397**                      **UNIV OF NEVADA SYSTEM**                      **6486**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/24/1999 - 06/30/2002                      FY02: \$0                      Total: \$450,000  
*Prin. Invest.:* J TARANIK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 583**                      **UNIV OF NEVADA SYSTEM**                      **6487**  
 NEVADA NASA EPSCOR PROGRAM  
 08/27/2001 - 08/31/2004                      FY02: \$0                      Total: \$508,600  
*Prin. Invest.:* J V TARANIK  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NEW HAMPSHIRE

**NAG 2 1420**                      **DARTMOUTH COLL**                      **6488**  
 TRANSCRIPTIONAL REGULATIONS & EVOLUTION OF BILATERAL BODY PLANS  
 07/13/2000 - 12/31/2002                      FY02: \$0                      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)

**NAG 5 4529**                      **DARTMOUTH COLL**                      **6489**  
 DISPERSIVE ALFVEN DYNAMICS OF THE MAGNETOSPHERE-IO  
 05/09/1997 - 08/31/2001                      FY02: \$0                      Total: \$251,535  
*Prin. Invest.:* D LOTKO  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5238**                      **DARTMOUTH COLL**                      **6490**  
 SOUNDING OF THE ION ENERGIZATION REGION: RESOLVING AMBIGUITIES (SIERRA)  
 05/11/1999 - 05/10/2003                      FY02: \$0                      Total: \$166,055  
*Prin. Invest.:* J W LABELLE  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5239**                      **DARTMOUTH COLL**                      **6491**  
 FIRST YEAR FUNDING FOR "ROCKET AURORAL CORRELATOR EXPERIMENT (RACE) PI DR. JAMES LABELLE  
 05/19/1999 - 05/18/2003                      FY02: \$0                      Total: \$263,637  
*Prin. Invest.:* J W LABELLE  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5318**                      **DARTMOUTH COLL**                      **6492**  
 HIGH BANDWIDTH AURORAL ROCKET (HI-BAR) HIGH BANDWIDTH AURORAL ROCKET (HI-BAR)  
 02/14/2001 - 02/12/2004                      FY02: \$0                      Total: \$69,098  
*Prin. Invest.:* J W LABELLE  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5367**                      **DARTMOUTH COLL**                      **6493**  
 SVALBARD EISCAT ROCKET STUDY OF ION OUTFLOWS (SERS IO)  
 07/29/2002 - 07/21/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M LESSARD  
*Tech. Officer:* GSFC/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5382**                      **DARTMOUTH COLL**                      **6494**  
 SVALBARD EISCAT ROCKET STUDY OF ION OUTFLOWS: SER IO  
 07/29/2002 - 07/21/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K LYNCH  
*Tech. Officer:* GSFC/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 7185**                      **DARTMOUTH COLL**                      **6495**  
 APPROXIMATELY TWO-DIMENSIONAL, COHERENT STRUCTURES IN SPACE PLASMAS: THE INVERSE PROBLEM  
 03/25/1998 - 03/31/2002                      FY02: \$0                      Total: \$213,222  
*Prin. Invest.:* B U SONNERUP  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7442**                      **DARTMOUTH COLL**                      **6496**  
 A THEORETICAL STUDY OF THE GLOBAL GEOSPACE SYSTEM  
 06/02/1998 - 09/30/2001                      FY02: \$0                      Total: \$585,630  
*Prin. Invest.:* M HUDSON  
*Tech. Officer:* GSFC/S CURTIS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## NEW HAMPSHIRE

## NASA'S UNIVERSITY PROGRAM

**NAG 5 7689**                      **DARTMOUTH COLL**                      **6497**  
 NONADIABATIC CHANGES IN RADIATION BELT POPULATIONS  
 09/14/1998 - 09/30/2001                      FY02: \$0                      Total: \$215,592  
*Prin. Invest.:* M K HUDSON  
*Tech. Officer:* GSFC/D EVANS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7803**                      **DARTMOUTH COLL**                      **6498**  
 MULTIPPOINT, MULTI-INSTRUMENT STUDY OF AURORAL ALFVENIC PRO-  
 CESSSES (SEC GI PROGRAM) NRA-98-03-S  
 11/09/1998 - 03/31/2002                      FY02: \$0                      Total: \$284,369  
*Prin. Invest.:* W LOTKO  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8441**                      **DARTMOUTH COLL**                      **6499**  
 RESEARCH:"ULTRA LOW FREQUENCY MAGNETOSPHERIC PHYSI CS-  
 ...".FIRST YEAR OF THREE YEAR FUNDING CYCLE. P  
 04/08/1999 - 04/14/2003                      FY02: \$0                      Total: \$980,048  
*Prin. Invest.:* W LOTKO  
*Tech. Officer:* GSFC/J M GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 9225**                      **DARTMOUTH COLL**                      **6500**  
 THE FORMATION OF THE MILKY WAY AND ITS SATELLITE GALAXIES (LTA  
 99)  
 03/15/2000 - 03/14/2005                      FY02: \$0                      Total: \$121,649  
*Prin. Invest.:* B CHABOYER  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9470**                      **DARTMOUTH COLL**                      **6501**  
 RIVER FLOODING AND GLOBAL ENVIRONMENTAL CHANGE: A MULTI-  
 SENSOR APPROACH  
 04/14/2000 - 04/30/2003                      FY02: \$0                      Total: \$329,437  
*Prin. Invest.:* R BRAKENRIDGE  
*Tech. Officer:* GSFC/P HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10216**                      **DARTMOUTH COLL**                      **6502**  
 IMPACTS OF IONOSPHERIC ACTIVITY ON ULTRA-LOW-FREQU ENCY AU-  
 RORAL ELECTRODYNAMICS  
 01/05/2001 - 01/14/2004                      FY02: \$0                      Total: \$78,513  
*Prin. Invest.:* A V STRELTSOV  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10219**                      **DARTMOUTH COLL**                      **6503**  
 A LOW-COST ROCKET-BORNE IMAGER FOR STUDIES OF AURO RAL FINE  
 STRUCTURES  
 01/05/2001 - 01/14/2003                      FY02: \$0                      Total: \$69,891  
*Prin. Invest.:* M R LESSARD  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10953**                      **DARTMOUTH COLL**                      **6504**  
 EARLY FLOOD DETECTION USING QUICKSCAT AND THE DART MOUTH  
 FLOOD OBSERVATORY  
 05/18/2001 - 05/31/2003                      FY02: \$0                      Total: \$59,686  
*Prin. Invest.:* G BRAKENRIDGE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11712**                      **DARTMOUTH COLL**                      **6505**  
 A THEORETICAL STUDY OF THE GLOBAL GEOSPACE SYSTEM  
 02/21/2002 - 01/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M K HUDSON  
*Tech. Officer:* GSFC/S A CURTIS  
*CASE Category:* 13 - PHYSICS

**NAG 5 11735**                      **DARTMOUTH COLL**                      **6506**  
 ULTRA-LOW-FREQUENCY MAGNETOSPHERIC PHYSICS.  
 02/28/2002 - 03/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W LOTKO  
*Tech. Officer:* GSFC/J M GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 11825**                      **DARTMOUTH COLL**                      **6507**  
 MASS DENSITY ALONG FIELD LINES  
 03/07/2002 - 03/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R E DENTON  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 12005**                      **DARTMOUTH COLL**                      **6508**  
 RECONSTRUCTION OF COHERENT TWO-DIMENSIONAL SPACE P LASMA  
 STRUCTURES  
 04/11/2002 - 04/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B O SONNERUP  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12202**                      **DARTMOUTH COLL**                      **6509**  
 A STUDY OF GEOMAGNETIC STORMS USING GLOBAL MHD AND KENTIC  
 RADIATION BELTSIMULATIONS  
 05/15/2002 - 05/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M K HUDSON  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12325**                      **DARTMOUTH COLL**                      **6510**  
 ONE YEAR FUNDING FOR UNSOLICITED PROPOSAL "MODIS RAPID RE-  
 SPONSE CAPABILITIES: APPLICATION TO FLOOD  
 08/12/2002 - 08/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G BRAKENRIDGE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 8 1590**                      **DARTMOUTH COLL**                      **6511**  
 R/S IN SITU OPTICAL WAVEGUIDES FOR MONITORING AND MODIFYING  
 PROTEIN CRYSTAL GROWTH  
 01/28/1999 - 09/30/2002                      FY02: \$0                      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 COLL**                      **6512**  
 LIFE SCIENCES DATA ARCHIVE SCIENTIFIC SUPPORT  
 03/15/1999 - 09/30/2002                      FY02: \$0                      Total: \$261,091  
*Prin. Invest.:* J BUCKEY  
*Tech. Officer:* JSC/D BELL  
*CASE Category:* 56 - MEDICL

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## NEW HAMPSHIRE

<b>NAG 9 1387</b>	<b>DARTMOUTH COLL</b>	<b>6513</b>	<b>NAG 5 5212</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6521</b>
OTOACOUSTIC HEARING OF SPACE STATION CREWS			ULDB COMPTON TELESCOPE MISSION		
09/24/2001 - 08/31/2004	FY02: \$0	Total: \$85,004	09/22/1998 - 06/30/2002	FY02: \$0	Total: \$60,000
<i>Prin. Invest.:</i> J BUCKLEY			<i>Prin. Invest.:</i> J M RYAN		
<i>Tech. Officer:</i> JSC/C LLOYD			<i>Tech. Officer:</i> WFF/B A MERRITT		
<i>CASE Category:</i> 56 - MEDICL			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG13 00041</b>	<b>DARTMOUTH COLL</b>	<b>6514</b>	<b>NAG 5 5234</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6522</b>
LIMITED AREA OPERATIONAL COASTAL OCEAN MODELS SAME			DUST DARTS PI DR. KRISTINA LYNCH		
09/06/2000 - 09/05/2002	FY02: \$0	Total: \$234,724	02/12/1999 - 12/31/2002	FY02: \$0	Total: \$353,595
<i>Prin. Invest.:</i> D R LYNCH			<i>Prin. Invest.:</i> K LYNCH		
<i>Tech. Officer:</i> SSC/C DEL CASTILLO			<i>Tech. Officer:</i> GSFC/W JOHNSON		
<i>CASE Category:</i> 33 - OCEANOGRAPHY			<i>CASE Category:</i> 13 - PHYSICS		
<b>NCC 1 01045</b>	<b>DARTMOUTH COLL</b>	<b>6515</b>	<b>NAG 5 5237</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6523</b>
DATA-BASED OPTIMAL CONTROL & FAULT DETECTION TECHNIQUES FOR AEROSPACE SYSTEMS			SOUNDING OF THE ION ENERGIZATION REGION: RESOLVING AMBIGUITIES (SIERRA)		
06/12/2001 - 02/14/2004	FY02: \$0	Total: \$56,000	05/11/1999 - 11/10/2003	FY02: \$0	Total: \$424,715
<i>Prin. Invest.:</i> M Q PHAN			<i>Prin. Invest.:</i> R L ARNOLDY		
<i>Tech. Officer:</i> LARC/D D MOERDER			<i>Tech. Officer:</i> GSFC/W B JOHNSON		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 13 - PHYSICS		
<b>NGT 5 50403</b>	<b>DARTMOUTH COLL</b>	<b>6516</b>	<b>NAG 5 5324</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6524</b>
SIMULATING THREE DIMENSIONAL RADIATION BELT DYNAMICS/STUDENT: KARA PERRY			A WIDE FIELD-OF-VIEW HARD X-RAY POLARIMETER FOR STUDYING GAMMA-RAY BURSTS		
07/15/2002 - 06/30/2005	FY02: \$0	Total: \$0	03/21/2001 - 12/31/2003	FY02: \$0	Total: \$75,000
<i>Prin. Invest.:</i> M HUDSON			<i>Prin. Invest.:</i> M L MCCONNELL		
<i>Tech. Officer:</i> GSFC/J SPANN			<i>Tech. Officer:</i> GSFC/B A MERRITT		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 13 - PHYSICS		
<b>NCC 5 384</b>	<b>SAINT ANSELM COLL</b>	<b>6517</b>	<b>NAG 5 5326</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6525</b>
GROUND-BASED TESTING OF A PROTOTYPE HOLOGRAPHIC AT MO-SPHERIC SCANNER FOR ENVIRONMENTAL REMOTESENSIN			DEVELOPMENT OF CZT STRIP DETECTORS FOR HARD X-RAY IMAGING WITH MARGIE		
03/05/1999 - 08/31/2002	FY02: \$0	Total: \$34,700	03/21/2001 - 12/31/2004	FY02: \$0	Total: \$130,000
<i>Prin. Invest.:</i> D GUERRA			<i>Prin. Invest.:</i> J M RYAN		
<i>Tech. Officer:</i> GSFC/A J NEGRİ			<i>Tech. Officer:</i> GSFC/B A MERRITT		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 4785</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6518</b>	<b>NAG 5 5327</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6526</b>
AN INTEGRATED SYSTEM FOR WATER BUDGET CLOSURE OVER MASS: A TRMM VALIDATION EFFORT			DEVELOPMENT OF CZT STRIP DETECTORS FOR HARD X-RAY AND GAMMA-RAY IMAGING SPECTROSCOPY PI PRO		
07/03/1997 - 12/31/2001	FY02: \$0	Total: \$234,500	08/09/2001 - 12/31/2003	FY02: \$0	Total: \$250,000
<i>Prin. Invest.:</i> C VOROSMARTY			<i>Prin. Invest.:</i> J RYAN		
<i>Tech. Officer:</i> GSFC/O W THIELE			<i>Tech. Officer:</i> WFF/B MERRITT		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 5117</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6519</b>	<b>NAG 5 5358</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6527</b>
THE TIGRE INSTRUMENT FOR INTERMEDIATE-ENERGY GAMMA-RAY ASTRO-ONOMY FOR 0.3 TO 100MEV			CONTINUED DEVELOPMENT OF SCINTILLATING FIBER DETEC TORS FOR GAMMA-RAY ASTRONOMY.		
04/18/1997 - 11/30/2002	FY02: \$0	Total: \$175,972	07/15/2002 - 04/30/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J RYAN			<i>Prin. Invest.:</i> J RYAN		
<i>Tech. Officer:</i> GSFC/H NEEDLEMAN, GSFC/B A MERRITT			<i>Tech. Officer:</i> GSFC/B MERRITT		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 5147</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6520</b>	<b>NAG 5 5381</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6528</b>
MINUTE OF ARC RESOLUTION GAMMA-RAY IMAGING EXPERIMENT (MARGIE)			SVBALBARD EISCAT ROCKET STUDY OF ION OUTFLOWS: SER SIO		
07/02/1997 - 06/30/2001	FY02: \$0	Total: \$150,000	07/29/2002 - 07/21/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J RYAN			<i>Prin. Invest.:</i> K LYNCH		
<i>Tech. Officer:</i> GSFC/H NEEDLEMAN			<i>Tech. Officer:</i> GSFC/J BRINTON		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 13 - PHYSICS		

## NEW HAMPSHIRE

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**NAG 5 6137** UNIV OF NEW HAMPSHIRE - DURHAM 6529  
 TRANSFER FUNDS TO UNIV OF NEW HAMPSHIRE IN S ENTITLED:  
 CHANGES IN BIOGEOCHEMICAL CYCLES  
 08/11/1997 - 05/31/2002 FY02: \$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 6530  
 DEVELOPMENT OF A PARTICLE BACKSCATTERING ALGORITHM CONCUR-  
 RENT SHIP MEASUREMENTS, AND GLOBAL BIOGEOCH  
 09/10/1997 - 08/31/2002 FY02: \$0 Total: \$425,983  
*Prin. Invest.:* W S BROWN  
*Tech. Officer:* GSFC/E A LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6452** UNIV OF NEW HAMPSHIRE - DURHAM 6531  
 SATELLITE-BASED SYSTEMS FOR MONITORING BIOGEOCHEMI CAL  
 FLUXES BETWEEN THECONTINENTAL LAND MASS AND C  
 11/04/1997 - 12/31/2000 FY02: \$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 6532  
 ATMOSPHERIC IMPACTS OF AGRICULTURE: INTEGRATION OF REMOTE  
 SENSING AND BIOGEOCHEMICAL MODELS FOR T  
 11/18/1997 - 12/31/2001 FY02: \$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 6533  
 RADAR-BASED MEASURE OF INTERANNUAL VEGETATION PHEN OLOGY  
 FOR MONITORING GLOBAL CHANGES RESPONSES OF  
 11/19/1997 - 11/30/2000 FY02: \$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 6534  
 WIND/SWE CONTINUED INVESTIGATIONS  
 02/17/1998 - 01/14/2001 FY02: \$0 Total: \$459,155  
*Prin. Invest.:* R TORBERT  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 13 - PHYSICS

**NAG 5 6935** UNIV OF NEW HAMPSHIRE - DURHAM 6535  
 GRANT  
 02/04/1998 - 07/31/2001 FY02: \$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 6536  
 SCALING PEATLAND CO2 AND CH4 FLUXES FROM CHAMBERS TO THE  
 BOREAS NORTH- ERN AND SOUTHERN STUDY AREAS  
 05/21/1998 - 04/30/2001 FY02: \$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 6537  
 STUDIES OF INTERSTELLAR PICKUP IONS IN THE SOLAR W IND  
 06/05/1998 - 04/30/2001 FY02: \$0 Total: \$220,600  
*Prin. Invest.:* P A ISENBERG  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7631** UNIV OF NEW HAMPSHIRE - DURHAM 6538  
 QUANTIFYING THE ATMOSPHERIC IMPACTS OF PADDY RICE AGRICULTURE  
 IN CHINA  
 08/10/1998 - 09/30/2002 FY02: \$0 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 6539  
 ION ACCELERATION AND TRANSPORT IN IMPULSIVE AND GR ADUAL SOLAR  
 FLARES  
 12/14/1998 - 03/31/2002 FY02: \$0 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 6540  
 SMALL SCALE STRUCTURE OF AURORAL ELECTRIC CURRENTS -- A GUEST  
 INVESTI- GATOR PROPOSAL TO THE FAST  
 12/15/1998 - 12/31/2001 FY02: \$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 6541  
 ELECTRIC FIELDS AND RING CURRENT ENERGIZATION (SEC GI PROGRAM)  
 11/06/1998 - 12/31/2001 FY02: \$0 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 6542  
 INVESTIGATION OF POLAR CAP AND RING CURRENT PRECIP ITATION  
 01/07/1999 - 01/14/2001 FY02: -\$870 Total: \$59,825  
*Prin. Invest.:* R B TOBBERT  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 8228** UNIV OF NEW HAMPSHIRE - DURHAM 6543  
 "THEORETICAL STUDIES OF THE SOLAR ATMOSPHERE AND S OLAR  
 WIND".  
 02/24/1999 - 03/14/2003 FY02: \$0 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 6544  
 A WATER BUDGET CLOSURE SYSTEM TO SUPPORT LBA HYDRO METEO-  
 ROLOGY AND ECOLOGY STUDIES  
 04/08/1999 - 04/14/2003 FY02: \$0 Total: \$328,145  
*Prin. Invest.:* C J VOROSMARTY  
*Tech. Officer:* GSFC/P T HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



**NAG 5 8641** UNIV OF NEW HAMPSHIRE - DURHAM 6545  
 AN APD READOUT SCHEME FOR A SOLAR NEUTRON TRACKING DEVICE.  
 07/08/1999 - 06/30/2002 FY02: \$0 Total: \$368,600  
*Prin. Invest.:* M L MCCONNELL  
*Tech. Officer:* GSFC/F HERRERO  
*CASE Category:* 13 - PHYSICS

**NAG 5 8683** UNIV OF NEW HAMPSHIRE - DURHAM 6546  
 THE CONTRIBUTION OF SATELLITE RADAR ALTIMETRY TO THE DETERMI-  
 NATION OF RIVER DISCHARGE & LAKE/RESSER  
 07/23/1999 - 07/14/2003 FY02: \$80,859 Total: \$213,058  
*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 6547  
 CONVERSION SURFACE TECHNOLOGY FOR LOW ENERGY NEUTRAL ATOM  
 IMAGING.  
 09/14/1999 - 06/30/2002 FY02: \$0 Total: \$352,372  
*Prin. Invest.:* J QUINN  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8828** UNIV OF NEW HAMPSHIRE - DURHAM 6548  
 "COOPERATION BETWEEN IGBP AND LAB: MEETING THE INTERNATIONAL  
 CHALLENGE"  
 09/08/1999 - 03/14/2003 FY02: \$0 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 6549  
 MAGNETIC RECONNECTION IN SOLAR FLARES  
 05/16/2000 - 11/14/2001 FY02: \$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 6550  
 A REGIONAL INTEGRATED MONITORING SYSTEM FOR THE HYDROLOGY  
 OF THE PAN-ARCTIC MASS  
 05/23/2000 - 04/30/2002 FY02: \$0 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 6551  
 CONSOLIDATING THE VELA-REGION 1.809 MEV RESULTS  
 06/05/2000 - 08/14/2002 FY02: \$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 6552  
 LONG DURATION SOLAR OBSERVATIONS WITH COMPTEL  
 06/15/2000 - 06/14/2001 FY02: \$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 6553  
 CLUSTER ELECTRON DRIFT INSTRUMENT (EDI).  
 09/20/2000 - 10/31/2003 FY02: \$60,000 Total: \$927,315  
*Prin. Invest.:* J M QUINN  
*Tech. Officer:* GSFC/M GOLDSTEIN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10135** UNIV OF NEW HAMPSHIRE - DURHAM 6554  
 PREDICTING CHANGES IN REGIONAL & GLOBAL BIOGEO- CHEMICAL  
 CYCLES  
 02/14/2001 - 12/31/2003 FY02: \$0 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 6555  
 HARD X-RAY POLARIMETRY OF SOLAR FLARES WITH HESSI  
 12/28/2000 - 12/31/2003 FY02: \$0 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 6556  
 A SATELLITE-BASED SYSTEM FOR MONITORING FLUXES BETWEEN THE  
 CONTINENTAL LAND MASS & COASTAL OCEANS  
 02/05/2001 - 12/31/2001 FY02: \$0 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 6557  
 GGS/WIND MISSION MISSIONS OPERATIONS AND DATA ANALYSIS PHASE.  
 02/05/2001 - 02/14/2002 FY02: \$0 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 6558  
 CONSTELLATION PATHFINDER TECHNOLOGY DEVELOPMENT: SYSTEMS  
 INTEGRATION AND MANUFACTURABILITY.  
 03/12/2001 - 03/14/2003 FY02: \$0 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 6559  
 PARTICLE ENERGIZATION IN REVERSE AURORA  
 02/27/2001 - 02/28/2004 FY02: \$0 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 6560  
 A NEW KINETIC MODEL FOR CORONAL HEATING AND GENERATION OF  
 THE FAST SOLAR WIND BY ION-CYCLOTRON  
 04/27/2001 - 04/30/2004 FY02: \$0 Total: \$94,021  
*Prin. Invest.:* P A ISENBERG  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NEW HAMPSHIRE

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**NAG 5 10883**      **UNIV OF NEW HAMPSHIRE - DURHAM**      **6561**  
 AN ASSESSMENT OF THE FEASIBILITY OF PREDICTING MAJOR GEOMAGNETIC DISTURBANCES FROM MONITORS IN  
 05/03/2001 - 04/30/2004      FY02: \$0      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**      **6562**  
 LOCAL INTERSTELLAR MEDIUM PARAMETERS  
 05/10/2001 - 05/31/2004      FY02: \$0      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**      **6563**  
 NUMERICAL TESTS OF ERUPTIVE CME MODELS  
 05/29/2001 - 05/31/2004      FY02: \$0      Total: \$53,067  
*Prin. Invest.:* T G FORBES  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10988**      **UNIV OF NEW HAMPSHIRE - DURHAM**      **6564**  
 THE ROLE OF KINETICS IN NEARLY PERPENDICULAR CASCADES  
 06/05/2001 - 05/31/2004      FY02: \$0      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**      **6565**  
 LAND-USE CHANGE IN TEMPERATE EAST ASIA: LAND COVER CHANGE IMPACTS ON CARBON FLUXES AND LAND PRODUCTIVITY  
 08/03/2001 - 07/31/2004      FY02: \$0      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**      **6566**  
 AIR-SEA FLUX OF CO<sub>2</sub>: EFFECTS OF SMALL-SCALE VARIABILITY ON LARGE-SCALE ESTIMATES  
 08/17/2001 - 08/31/2004      FY02: \$0      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**      **6567**  
 SCALING FOREST CARBON FLUX MEASUREMENTS FROM SITES TO LANDSCAPES: A HYPERSPECTRAL ANALYSIS OF F  
 08/31/2001 - 08/31/2004      FY02: \$0      Total: \$268,075  
*Prin. Invest.:* S OLLINGER  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11750**      **UNIV OF NEW HAMPSHIRE - DURHAM**      **6568**  
 A GLOBAL RAPID INTEGRATED MONITORING SYSTEM FOR WATER CYCLE AND WATER RESOURCE ASSESSMENT (GLOBAL  
 02/13/2002 - 02/14/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* C VOROSMARTY  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11797**      **UNIV OF NEW HAMPSHIRE - DURHAM**      **6569**  
 RESEARCH: "THEORETICAL STUDIES ON THE SOLAR ATMOSPHERE AND SOLAR WIND", A PART OF NASA'S SEC THEORY  
 04/29/2002 - 02/28/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* J V HOLLWEG  
*Tech. Officer:* GSFC/J M GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 11803**      **UNIV OF NEW HAMPSHIRE - DURHAM**      **6570**  
 "GGS WIND"  
 03/07/2002 - 03/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* R TORBERT  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11820**      **UNIV OF NEW HAMPSHIRE - DURHAM**      **6571**  
 SUPERPOSED EPOCH ANALYSIS OF THE PLASMA SHEET  
 03/01/2002 - 06/30/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* R L KAUFMANN  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 12189**      **UNIV OF NEW HAMPSHIRE - DURHAM**      **6572**  
 SOLAR WIND-MAGNETOSPHERE-IONOSPHERE COUPLING: OBSERVATIONS DURING MAGNETIC CONJUNCTIONS OF  
 05/14/2002 - 06/30/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* C FARRUGIA  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12252**      **UNIV OF NEW HAMPSHIRE - DURHAM**      **6573**  
 JOINT CENTER FOR EARTH SCIENCES EDUCATIONAL INITIATIVE  
 06/05/2002 - 05/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* B MOORE  
*Tech. Officer:* GSFC/V V SALOMONSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 12365**      **UNIV OF NEW HAMPSHIRE - DURHAM**      **6574**  
 MULTISENSOR MEASUREMENTS OF THE TEMPORAL AND SPATIAL PATTERN OF ICE SHEET ACCUMULATION  
 07/22/2002 - 07/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* M FAHNESTOCK  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12369**      **UNIV OF NEW HAMPSHIRE - DURHAM**      **6575**  
 WORKFORCE DEVELOPMENT IN REMOTE SENSING  
 07/10/2002 - 06/30/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* D BARTLETT  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12402**      **UNIV OF NEW HAMPSHIRE - DURHAM**      **6576**  
 QUANTIFYING THE ROLE OF OCEANIC ECOLOGICAL PROVINCES IN ASSESSING SEASONAL AND INTERANNUAL VARIATION  
 07/23/2002 - 07/31/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* M DOWELL  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

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<b>NAG 5 12408</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6577</b>	
MELT CONTRIBUTIONS TO MASS CHANGE FOR THE GREENLAND ICE SHEET			
08/01/2002 - 07/31/2005	FY02: \$0	Total: \$0	
<i>Prin. Invest.:</i> M FAHNESTOCK			
<i>Tech. Officer:</i> GSFC/W ABDALATI			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NAG 5 12451</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6578</b>	
SATELLITE-BASED SYSTEM FOR MONITORING BIOGEOCHEMICAL FLUXES BETWEEN THE CONTINENTAL LAND MASS AND T			
08/15/2002 - 08/14/2003	FY02: \$0	Total: \$0	
<i>Prin. Invest.:</i> C VOROSMARTY			
<i>Tech. Officer:</i> GSFC/C TREES			
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			
<b>NAG 5 12493</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6579</b>	
DEVELOPMENT AND TESTING OF A NEW ANGLE DETECTING INCLINED SENSOR(ADIS) SYSTEM			
08/27/2002 - 08/31/2005	FY02: \$0	Total: \$0	
<i>Prin. Invest.:</i> J J CONNELL			
<i>Tech. Officer:</i> GSFC/W WAGNER			
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			
<b>NAS 5 00132</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6580</b>	
STEREO PHASE A CONCEPT STUDY FOR INSTANT MEASUREMENTS OF PARTICLES & CME TRANSIENT (IMPACT)			
02/22/2000 - 10/31/2004	FY02: \$0	Total: \$1,323,609	
<i>Prin. Invest.:</i> A GALVIN			
<i>Tech. Officer:</i> GSFC/A HARPER			
<i>CASE Category:</i> 13 - PHYSICS			
<b>NAS 5 26645</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6581</b>	
DEFINITION PHASE OF THE DETECTOR SUBSYSTEM FOR THE COMPTEL			
08/19/1981 - 09/30/2002	FY02: \$0	Total: \$30,541,653	
<i>Prin. Invest.:</i> J RYAN			
<i>Tech. Officer:</i> GSFC/J NORRIS			
<i>CASE Category:</i> 11 - ASTRONOMY			
<b>NAS 5 96063</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6582</b>	
MODIS-EOS DEVELOPMENT OF ALGORITHMS			
07/16/1996 - 06/14/2003	FY02: \$50,000	Total: \$1,206,000	
<i>Prin. Invest.:</i> J CAMPBELL			
<i>Tech. Officer:</i> GSFC/D TOLL, GSFC/B CONBOY			
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			
<b>NCC 1 298</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6583</b>	
PEM-TROPICS B MY 1/2			
04/30/1998 - 07/31/2001	FY02: \$0	Total: \$818,000	
<i>Prin. Invest.:</i> R W TALBOT, J E DIBB			
<i>Tech. Officer:</i> LARC/J M HOELL, JR., LARC/R J BENDURA			
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			
<b>NCC 1 410</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6584</b>	
TRACE-P DC-8 AND P3-B AIRCRAFT MY 1/3			
09/13/2000 - 06/30/2003	FY02: \$0	Total: \$379,907	
<i>Prin. Invest.:</i> R W TALBOT			
<i>Tech. Officer:</i> LARC/J L RAPER, SR			
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			
<b>NCC 1 02023</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6585</b>	
TROPOSPHERIC METHANE OVER THE PACIFIC BASIC DURING TRACE-P			
04/04/2002 - 01/04/2003	FY02: \$0	Total: \$0	
<i>Prin. Invest.:</i> K B BARTLETT			
<i>Tech. Officer:</i> LARC/G W SACHSE, LARC/G S DISKIN			
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			
<b>NCC 5 226</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6586</b>	
TROPICAL BIOCHEMISTRY & NASA LBA ECOLOGY SCIENCE S			
09/10/1997 - 12/31/2001	FY02: \$0	Total: \$656,894	
<i>Prin. Invest.:</i> D BARTLETT			
<i>Tech. Officer:</i> GSFC/D WICKLAND			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NCC 5 304</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6587</b>	
WEB BASED SYSTEM FOR TERRESTRIAL ENVIRONMENTAL RESEARCH			
04/22/1998 - 12/31/2002	FY02: \$0	Total: \$3,385,000	
<i>Prin. Invest.:</i> B MOORE			
<i>Tech. Officer:</i> GSFC/M MAIDEN			
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			
<b>NCC 5 338</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6588</b>	
MODELING THE BIOGEOCHEMICAL SYSTEM OF THE TERRESTRIAL AMAZON: ISSUES FOR SUSTAINABILITY			
06/23/1998 - 12/31/2002	FY02: \$0	Total: \$1,023,276	
<i>Prin. Invest.:</i> B MOORE, 111			
<i>Tech. Officer:</i> GSFC/D W DEERING			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NCC 5 357</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6589</b>	
SOIL BIOGEOCHEMISTRY OF CARBON, NUTRIENTS AND TRACE GAS IN THE AMAZON REGION OF BRAZIL: FIELD AND			
08/03/1998 - 12/31/2002	FY02: \$0	Total: \$1,034,065	
<i>Prin. Invest.:</i> P CRILL			
<i>Tech. Officer:</i> GSFC/D E WICKLAND			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NCC 5 477</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6590</b>	
EVALUATION OF HYPERSPECTRAL REQUIREMENTS FOR REMOTE ESTIMATION OF FOREST ECOSYSTEM COMPOSITION			
03/22/2000 - 03/31/2003	FY02: \$2,500	Total: \$123,860	
<i>Prin. Invest.:</i> M E MARTIN			
<i>Tech. Officer:</i> GSFC/S G UNGAR			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NCC 5 499</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6591</b>	
"LENA/IMAGE" MO&DA - ON-ORBIT EVALUATION & VALIDATION OF THE LENA INSTRUMENT OPERATION & DATA			
05/03/2000 - 01/31/2001	FY02: \$0	Total: \$28,065	
<i>Prin. Invest.:</i> J M QUINN			
<i>Tech. Officer:</i> GSFC/T E MOORE			
<i>CASE Category:</i> 11 - ASTRONOMY			
<b>NCC 5 587</b>	<b>UNIV OF NEW HAMPSHIRE - DURHAM</b>	<b>6592</b>	
VALIDATING, SCALING AND PARAMETERIZING A FOREST REGROWTH MODEL FOR THE AMAZON REGION USING AIRCRAFT			
08/30/2001 - 08/31/2004	FY02: \$0	Total: \$281,397	
<i>Prin. Invest.:</i> M DUCKEY			
<i>Tech. Officer:</i> GSFC/D WICKLAND			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			

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**NCC 5 608**                    **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6593**  
 ECOSYSTEM RESPIRATION AND TRACE GAS EXCHANGE IN UN DISTURBED  
 AND SELECTIVELY LOGGED FORESTS  
 12/10/2001 - 12/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* P CRILL  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30349**                    **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6594**  
 SOURCE APPORTIONMENT OF ANTHROPOGENIC AEROSOLS CON TRIBUT-  
 ING TO DIRECT RADIATIVE FORCING IN SOUTHERN  
 08/24/2000 - 02/28/2003                    FY02: \$0                    Total: \$44,000  
*Prin. Invest.:* J E DIBB  
*Tech. Officer:* GSFC/M WEITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40088**                    **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6595**  
 NEW HAMPSHIRE SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 02/21/2001 - 02/28/2005                    FY02: \$0                    Total: \$685,546  
*Prin. Invest.:* D BARTLETT  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50379**                    **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6596**  
 SOUNDING ROCKET STUDY OF RETURN CURRENT REGION AURORA  
 (STUDENT: ELIZABETH MACDONAL  
 05/13/2002 - 06/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* K A LYNCH  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50381**                    **UNIV OF NEW HAMPSHIRE - DURHAM**                    **6597**  
 INTERSTELLAR HE+ PICKUP ION VELOCITY DISTRIBUTION MODELING AND  
 ANALYSIS (STUDENT: LUKAS SAUL)  
 05/21/2002 - 06/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* E MOBIUS  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

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**NAG 1 01110**                    **NEW JERSEY INST OF TECHNOLOGY**                    **6598**  
 NANOCOMPOSITES BASED ON LIQUID CRYSTALLINE POLYMERS  
 08/30/2001 - 09/30/2004                    FY02: \$0                    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**                    **6599**  
 GRAVITY AND GRANULAR MATERIALS GRAVITY AND GRANULAR MATERI-  
 ALS  
 03/24/2000 - 11/30/2003                    FY02: \$0                    Total: \$20,333  
*Prin. Invest.:* L KONDIC  
*Tech. Officer:* GRC/A WILKENSEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2459**                    **NEW JERSEY INST OF TECHNOLOGY**                    **6600**  
 DATA ANALYSIS FOR REAL-TIME/POST FLIGHT HEALTH MON ITORING OF  
 PROPULSION SYSTEMS  
 06/07/2000 - 08/31/2002                    FY02: \$0                    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**                    **6601**  
 DATA MINING AND OPTIMIZATION TOOLS FOR ENGINE COND ITION MONI-  
 TORING  
 07/19/2000 - 03/31/2002                    FY02: \$0                    Total: \$94,022  
*Prin. Invest.:* D P DHAWAN  
*Tech. Officer:* GRC/J LITT  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 5 7085**                    **NEW JERSEY INST OF TECHNOLOGY**                    **6602**  
 STATISTICAL STUDIES OF FILAMENT DIAPPEARANCES BY A NALYZING  
 FULL-DISK YOHKOH SXT AND BBSO HX DATA  
 03/13/1998 - 10/14/2001                    FY02: \$0                    Total: \$105,906  
*Prin. Invest.:* H WANG  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7454**                    **NEW JERSEY INST OF TECHNOLOGY**                    **6603**  
 EARTHSHINE MEASUREMENTS OF GLOBAL ATMOSPHERIC PROP ERTIES  
 07/23/1998 - 07/31/2001                    FY02: \$0                    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**                    **6604**  
 SOHO/BBSO COORDINATED STUDY ON MAGNETIC RECONNECTI ON IN  
 THE QUIET SUN  
 12/22/1998 - 08/31/2002                    FY02: \$0                    Total: \$232,363  
*Prin. Invest.:* H WANG  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 8485**                    **NEW JERSEY INST OF TECHNOLOGY**                    **6605**  
 INTERACTION OF WAVES AND CONVECTION IN THE SUN  
 05/04/1999 - 10/31/2002                    FY02: \$0                    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**                    **6606**  
 STUDIES OF SMALL-SCALE DYNAMICS BY JOINT TRACE AND BBSO  
 OBSERVATIONS  
 04/20/2000 - 12/31/2002                    FY02: \$0                    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**                    **6607**  
 SOURCES OF SOLAR IRRADIANCE VARIATION  
 05/02/2000 - 10/30/2001                    FY02: \$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**                    **6608**  
 STUDIES OF SOLAR MAGNETIC FIELDS & SOLAR ACTIVITY  
 06/26/2000 - 05/31/2003                    FY02: \$0                    Total: \$525,155  
*Prin. Invest.:* P R GOODE  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

## NASA'S UNIVERSITY PROGRAM

## NEW JERSEY

<p><b>NAG 5 9730</b>      <b>NEW JERSEY INST OF TECHNOLOGY</b>      <b>6609</b>  NEW GRANT GLOBAL ASYMMETRIES IN SOLAR INTERIOR FROM SOHO  06/22/2000 - 06/30/2001      FY02: \$0      Total: \$73,307  Prin. Invest.: P GOODE  Tech. Officer: GSFC/J GURMAN  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 8 1714</b>      <b>NEW JERSEY INST OF TECHNOLOGY</b>      <b>6617</b>  HIGH TEMPERATURE PHASES AND PHASE EQUILIBRIA IN REACTIVE  MOLTEN METAL-BASED SYSTEMS  05/04/2000 - 11/30/2003      FY02: \$0      Total: \$149,750  Prin. Invest.: E DREIZIN  Tech. Officer: MSFC/P DOTY  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 9738</b>      <b>NEW JERSEY INST OF TECHNOLOGY</b>      <b>6610</b>  NEW GRANT STUDY OF FILAMENT ERUPTIONS AND CORONAL MASS  EJECTIONS BY SOHO  07/18/2000 - 07/31/2001      FY02: \$0      Total: \$100,440  Prin. Invest.: H WANG  Tech. Officer: GSFC/J GURMAN  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NCC 3 746</b>      <b>NEW JERSEY INST OF TECHNOLOGY</b>      <b>6618</b>  DETAILED REACTION MECHANISMS AND PARTICLE INTERACT ION IN  BURNING TWO-PHASE SYSTEMS  12/07/1999 - 06/30/2001      FY02: \$0      Total: \$53,363  Prin. Invest.: E L DREIZEN  Tech. Officer: GRC/R F FRIEDMAN  CASE Category: 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 10212</b>      <b>NEW JERSEY INST OF TECHNOLOGY</b>      <b>6611</b>  MICROWAVE IMAGING SPECTROSCOPY OF SOLAR FLARES IN SUPPORT  OF HESSI  01/03/2001 - 12/31/2003      FY02: \$0      Total: \$78,945  Prin. Invest.: D E GARY  Tech. Officer: GSFC/W WAGNER  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 9103</b>      <b>PASSAIC COUNTY COMM COLL</b>      <b>6619</b>  PANTHER PROJECT (PATERSON &amp; NASA TOGETHER FOR HIGH EXPECTA-  TIONS &amp; RESULTS)  03/10/2000 - 02/28/2003      FY02: \$0      Total: \$200,000  Prin. Invest.: R EPSTEIN  Tech. Officer: HQ/STOUTSENBERGER  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 10891</b>      <b>NEW JERSEY INST OF TECHNOLOGY</b>      <b>6612</b>  STUDY OF OVSA MICROWAVES AND HESSI HARD X-RAYS  05/10/2001 - 05/31/2004      FY02: \$0      Total: \$47,208  Prin. Invest.: J LEE  Tech. Officer: GSFC/J GURMAN  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 1 2291</b>      <b>PRINCETON UNIV</b>      <b>6620</b>  ADAPTIVE AND OPTIMAL CONTROLLER DESIGNS FOR UNCER- TAIN AERO-  SPACE STRUCTURES  04/13/2000 - 12/01/2000      FY02: \$0      Total: \$45,000  Prin. Invest.: M Q PHAN  Tech. Officer: LARC/P G MAGHAMI  CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 5 10894</b>      <b>NEW JERSEY INST OF TECHNOLOGY</b>      <b>6613</b>  EPHEMERAL REGIONS AND CANCELLING MAGNETIC FEATURES  05/14/2001 - 05/31/2004      FY02: \$0      Total: \$46,245  Prin. Invest.: J CHAE  Tech. Officer: GSFC/J GURMAN  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 1 01010</b>      <b>PRINCETON UNIV</b>      <b>6621</b>  SELF-HEALING ORGANIC/INORGANIC NANOCOMPOSITES  01/10/2001 - 12/31/2003      FY02: \$0      Total: \$125,000  Prin. Invest.: A AKSAY  Tech. Officer: WFF/T L STCLAIR  CASE Category: 12 - CHEMISTRY</p>
<p><b>NAG 5 10910</b>      <b>NEW JERSEY INST OF TECHNOLOGY</b>      <b>6614</b>  HESSI-BBSO JOINT STUDIES OF SOLAR FLARES  05/24/2001 - 05/31/2004      FY02: \$0      Total: \$74,971  Prin. Invest.: H WANG  Tech. Officer: GSFC/J GURMAN  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 2 1327</b>      <b>PRINCETON UNIV</b>      <b>6622</b>  DEVELOPMENT OF UNSTRUCTURED METHODS FOR EFFICIENT AERODY-  NAMIC SIMULATION &amp; DESIGN  05/21/1999 - 03/14/2003      FY02: \$0      Total: \$205,335  Prin. Invest.: T J BAKER, A J SMITS  Tech. Officer: ARC/S E CLIFF  CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 5 11007</b>      <b>NEW JERSEY INST OF TECHNOLOGY</b>      <b>6615</b>  EARTHSHINE MEASUREMENTS OF THE EARTH'S ALBEDO  06/29/2001 - 06/30/2004      FY02: \$0      Total: \$73,505  Prin. Invest.: P R GOODE  Tech. Officer: GSFC/W WAGNER  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 2 1400</b>      <b>PRINCETON UNIV</b>      <b>6623</b>  STUDIES IN ROTORCRAFT SYSTEM IDENTIFICATION  03/28/2000 - 09/30/2001      FY02: \$0      Total: \$22,500  Prin. Invest.: H C CURTIS  Tech. Officer: ARC/M B TISCHLER  CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 5 11875</b>      <b>NEW JERSEY INST OF TECHNOLOGY</b>      <b>6616</b>  MICROWAVE IMAGING OF SOLAR FLARES AND ACTIVE REGIO NS WITH  THE OWENS VALLEYSOLAR ARRAY  03/15/2002 - 03/14/2005      FY02: \$0      Total: \$0  Prin. Invest.: D E GARY  Tech. Officer: GSFC/W WAGNER  CASE Category: 13 - PHYSICS</p>	<p><b>NAG 2 1475</b>      <b>PRINCETON UNIV</b>      <b>6624</b>  PIERZOELECTRIC MICROCANTILEVERS WITH NANOSCOPIC CO ATINGS A  BREAKTHROUGH SENSING TECHNOLOGY  04/20/2001 - 04/14/2003      FY02: \$0      Total: \$598,740  Prin. Invest.: I AKSAY  Tech. Officer: ARC/M MEYYAPPAN, ARC/H PATRIDGE  CASE Category: 22 - COMPUTER SCIENCE</p>

## NEW JERSEY

## NASA'S UNIVERSITY PROGRAM

**NAG 2 1579**                      **PRINCETON UNIV**                      **6625**  
 RESEARCH ON ROTORCRAFT MODELING  
 09/06/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* H C CURTISS  
*Tech. Officer:* ARC/M TISCHLER, ARC/B LAKINSMITH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2248**                      **PRINCETON UNIV**                      **6626**  
 THE CONTROL AND DYNAMICS OF HARD SPHERE COLLOIDAL DISPERSIONS  
 03/30/1999 - 02/23/2004                      FY02: \$0                      Total: \$1,032,500  
*Prin. Invest.:* P M CHALKIN  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2380**                      **PRINCETON UNIV**                      **6627**  
 ELECTROHYDRODYNAMIC FLOWS IN ELECTROCHEMICAL SYSTEMS  
 04/06/2000 - 11/30/2003                      FY02: \$0                      Total: \$150,250  
*Prin. Invest.:* D A SAVILLE  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2473**                      **PRINCETON UNIV**                      **6628**  
 FUEL SULFUR ISSUES AND SOX/NOX/COX HOT SECTION INTERACTIONS  
 07/12/2000 - 09/30/2001                      FY02: \$0                      Total: \$100,087  
*Prin. Invest.:* D L DRYER  
*Tech. Officer:* GRC/M RABINOWITZ  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2665**                      **PRINCETON UNIV**                      **6629**  
 COMPUTATIONAL TOOLS FOR THE DESIGN OF ADVANCED COATING SYSTEMS FOR 3000F  
 11/08/2001 - 09/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D J SROLOVITZ  
*Tech. Officer:* GRC/B GOOD  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 616**                      **PRINCETON UNIV**                      **6630**  
 INTERSTELLAR MEDIUM ABSORPTION PROFILE SPECTROGRAPH (IMAPS)  
 01/01/1983 - 10/31/2002                      FY02: \$0                      Total: \$10,722,665  
*Prin. Invest.:* E B JENKINS  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 3364**                      **PRINCETON UNIV**                      **6631**  
 ORIGIN AND EVOLUTION OF DUST IN ELLIPTICAL GALAXIES  
 08/28/1996 - 08/31/2001                      FY02: \$0                      Total: \$151,000  
*Prin. Invest.:* G R KNAPP  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6591**                      **PRINCETON UNIV**                      **6632**  
 EVALUATION AND INTERCOMPARISON OF THREE-DIMENSIONAL GLOBAL MARINE CARBON CYCLE MODELS  
 11/07/1997 - 12/31/2000                      FY02: \$0                      Total: \$172,804  
*Prin. Invest.:* J L SARMIENTO  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6734**                      **PRINCETON UNIV**                      **6633**  
 IMAGING THE CELESTIAL EQUATOR AT 12 MICRONS AND 2.5 MICRONS AND COMPARISON ON WITH FIVE COL  
 12/16/1997 - 12/31/2001                      FY02: \$0                      Total: \$45,000  
*Prin. Invest.:* G KNAPP  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7030**                      **PRINCETON UNIV**                      **6634**  
 INTERSTELLAR STUDIES - ATP  
 02/17/1998 - 02/14/2002                      FY02: \$0                      Total: \$297,933  
*Prin. Invest.:* B T DRAINE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7066**                      **PRINCETON UNIV**                      **6635**  
 DYNAMICS OF THE GALAXY, GLOBULAR CLUSTERS, AND THE LOCAL GROUP - ATP  
 02/26/1998 - 02/28/2002                      FY02: \$0                      Total: \$229,480  
*Prin. Invest.:* S D TREMAINE  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7154**                      **PRINCETON UNIV**                      **6636**  
 FORMATION AND EVOLUTION OF GROUPS AND FILAMENTS - ATP  
 03/16/1998 - 03/14/2003                      FY02: \$0                      Total: \$348,752  
*Prin. Invest.:* D N SPERGEL  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7297**                      **PRINCETON UNIV**                      **6637**  
 A TERRESTRIAL WATER AND ENERGY BUDGET FOR THE BOREAL STUDY REGION SCALE USING FIELD MEASUREMENTS, R  
 04/21/1998 - 04/30/2002                      FY02: \$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**                      **6638**  
 LONG-TERM ORBITAL EVOLUTION IN PLANETARY SYSTEMS AND PROTOPLANETARY DISKS  
 04/22/1998 - 04/30/2001                      FY02: \$0                      Total: \$217,000  
*Prin. Invest.:* S D TREMAINE  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7544**                      **PRINCETON UNIV**                      **6639**  
 HYDROLOGY OF EXTREME FLOODS FOR THE UNITED STATES EAST OF THE ROCKY MOUNTAINS  
 06/23/1998 - 09/30/2001                      FY02: \$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**                      **6640**  
 DEVELOPMENT AND EVALUATION OF RADAR DATA QUALITY CONTROL ALGORITHMS  
 10/28/1998 - 10/31/2001                      FY02: \$0                      Total: \$254,471  
*Prin. Invest.:* J A SMITH  
*Tech. Officer:* GSFC/O W THIELE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## NASA'S UNIVERSITY PROGRAM

NEW JERSEY

<b>NAG 5 8084</b>	<b>PRINCETON UNIV</b>	<b>6641</b>	<b>NAG 5 9635</b>	<b>PRINCETON UNIV</b>	<b>6649</b>
PRIMARY AND SECONDARY ANISOTROPIES OF COSMIC MICRO WAVE BACKGROUND			TMI SOIL MOISTURE PATHFINDER DATA STUDY		
01/19/1999 - 02/28/2002	FY02: \$0	Total: \$270,664	06/05/2000 - 05/31/2003	FY02: \$0	Total: \$90,002
<i>Prin. Invest.:</i> U SELJAK			<i>Prin. Invest.:</i> E WOOD		
<i>Tech. Officer:</i> GSFC/D K WEST			<i>Tech. Officer:</i> GSFC/J DODGE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 8365</b>	<b>PRINCETON UNIV</b>	<b>6642</b>	<b>NAG 5 9748</b>	<b>PRINCETON UNIV</b>	<b>6650</b>
STUDYING THE EVOLUTION OF X-RAY CLUSTERS OF GALAXIES USING LARGE-SCALE HIGH RESOLUTION COSMOLOGIC			"SATELLITE ATTITUDE ESTIMATION WITH THE TWO STEP OPTIMAL ESTIMATOR"		
03/15/1999 - 03/14/2003	FY02: \$0	Total: \$363,066	07/14/2000 - 02/28/2002	FY02: \$0	Total: \$50,000
<i>Prin. Invest.:</i> R CEN			<i>Prin. Invest.:</i> N KASDIN		
<i>Tech. Officer:</i> GSFC/D K WEST			<i>Tech. Officer:</i> GSFC/R HARMAN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 5 8385</b>	<b>PRINCETON UNIV</b>	<b>6643</b>	<b>NAG 5 9810</b>	<b>PRINCETON UNIV</b>	<b>6651</b>
EVOLUTION AND DYNAMICS OF PROTOSTELLAR DISKS			REGIONAL CONTRIBUTION TO THE GLOBAL TROPOSPHERIC OZONE BUDGET-GLOBAL MODELING AND DATA ANALYSIS		
03/03/1999 - 02/28/2003	FY02: \$0	Total: \$125,000	07/18/2000 - 07/14/2003	FY02: \$0	Total: \$61,844
<i>Prin. Invest.:</i> J GOODMAN			<i>Prin. Invest.:</i> D L MAUZERALL		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GSFC/P DECOLA		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 8676</b>	<b>PRINCETON UNIV</b>	<b>6644</b>	<b>NAG 5 9891</b>	<b>PRINCETON UNIV</b>	<b>6652</b>
ATMOSPHERIC AEROSOL EVOLUTION AND EXCHANGE			USE OF TRMM DATA TO EVALUATE BENEFITS OF POST-2002 GLOBAL PRECIPITATION MISSION FOR LAND SURFACE HYD		
07/08/1999 - 07/14/2003	FY02: \$0	Total: \$322,129	08/23/2000 - 08/31/2003	FY02: \$0	Total: \$126,000
<i>Prin. Invest.:</i> L RUSSELL			<i>Prin. Invest.:</i> E F WOOD		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> GSFC/R J LAWRENCE		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 9274</b>	<b>PRINCETON UNIV</b>	<b>6645</b>	<b>NAG 5 10456</b>	<b>PRINCETON UNIV</b>	<b>6653</b>
EARLY IDENTIFICATION & INTERPRETATION OF QUASAR/AGN MICROLENSING EVENT: PROBES OF ACCRETIONDISK			RESONANT & SECULAR ORBITAL DYNAMICS OF PLANETS, PLANETESIMALS & SATELLITES		
03/15/2000 - 03/14/2003	FY02: \$0	Total: \$173,240	02/21/2001 - 02/28/2004	FY02: \$0	Total: \$60,000
<i>Prin. Invest.:</i> E TURNER			<i>Prin. Invest.:</i> S TREMAINE		
<i>Tech. Officer:</i> GSFC/R OLIVERSEN			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 9284</b>	<b>PRINCETON UNIV</b>	<b>6646</b>	<b>NAG 5 10481</b>	<b>PRINCETON UNIV</b>	<b>6654</b>
FINDING THE BARYONS: MATCHING COSMOLOGICAL PREDICTIONS WITH THE X-RAY SKY			MICROWAVE ANISOTROPY PROBE (MAP) INVESTIGATION PHASE III COMPLETION & PHASE IV DATA ANALYSIS		
04/17/2000 - 04/30/2003	FY02: \$0	Total: \$210,344	03/01/2001 - 07/31/2004	FY02: \$0	Total: \$381,540
<i>Prin. Invest.:</i> J P OSTRIKER			<i>Prin. Invest.:</i> L PAGE		
<i>Tech. Officer:</i> GSFC/R J OLIVERSEN			<i>Tech. Officer:</i> GSFC/C BENNET		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 9414</b>	<b>PRINCETON UNIV</b>	<b>6647</b>	<b>NAG 5 10811</b>	<b>PRINCETON UNIV</b>	<b>6655</b>
UNDERSTANDING WATER, CLIMATE AND GLOBAL CHANGE: A GEWEX GLOBAL WATER AND ENERGY PATHFINDER DATA SET			INTERSTELLAR STUDIES OF DUST AND GAS (ATP 2000)		
04/11/2000 - 04/14/2003	FY02: \$0	Total: \$95,448	04/30/2001 - 04/30/2004	FY02: \$0	Total: \$60,000
<i>Prin. Invest.:</i> E WOOD			<i>Prin. Invest.:</i> B T DRAINE		
<i>Tech. Officer:</i> GSFC/J DODGE			<i>Tech. Officer:</i> GSFC/R J OLIVERSEN		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 9486</b>	<b>PRINCETON UNIV</b>	<b>6648</b>	<b>NAG 5 10933</b>	<b>PRINCETON UNIV</b>	<b>6656</b>
TERRESTRIAL HYDROLOGY & CLIMATE STUDIES USING EOS- ERA DATA			MODELING AND SIMULATION OF THE MAXIM PATHFINDER MISSION: PRECISION SPACECRAFT FORMATION CONTROL		
04/17/2000 - 03/31/2003	FY02: \$0	Total: \$153,958	06/04/2001 - 10/31/2002	FY02: \$0	Total: \$50,000
<i>Prin. Invest.:</i> E WOOD			<i>Prin. Invest.:</i> J KASDIN		
<i>Tech. Officer:</i> GSFC/P HOUSER			<i>Tech. Officer:</i> GSFC/F L MARKLEY		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR		

## NEW JERSEY

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11094**                      **PRINCETON UNIV**                      **6657**  
 PARALLAXES OF RED GIANT STARS (ADP 2000)  
 07/10/2001 - 07/14/2003                      FY02: \$0                      Total: \$38,391  
*Prin. Invest.:* G R KNAPP  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11111**                      **PRINCETON UNIV**                      **6658**  
 LAND SURFACE MODELING STUDIES IN SUPPORT OF AQUA AMSR-E  
 VALIDATION AQUA-0088-0029  
 07/12/2001 - 08/31/2004                      FY02: \$0                      Total: \$46,591  
*Prin. Invest.:* E F WOOD  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11136**                      **PRINCETON UNIV**                      **6659**  
 TESTING COSMOLOGICAL MODELS WITH QSO ABSORBERS (L TSA 2000)  
 07/20/2001 - 09/30/2006                      FY02: \$0                      Total: \$88,745  
*Prin. Invest.:* T M TRIPP  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11301**                      **PRINCETON UNIV**                      **6660**  
 USING REMOTE SENSING AND OCEAN MEASUREMENTS TO CON TRAIN  
 CARBON FLUXES IN THE SOUTHERN OCEAN  
 08/31/2001 - 08/31/2003                      FY02: \$0                      Total: \$155,253  
*Prin. Invest.:* M BENDER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11489**                      **PRINCETON UNIV**                      **6661**  
 ANALYSIS OF COSMIC MICROWAVE BACKGROUND DATA (L TSA 2001)  
 12/27/2001 - 12/31/2006                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* U SELJAK  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11610**                      **PRINCETON UNIV**                      **6662**  
 "EVALUATION OF HYDROLOGIC REMOTE SENSING OBSERVATIONS FOR  
 IMPROVED WEATHER PREDICTION"  
 01/31/2002 - 01/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E F WOOD  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11664**                      **PRINCETON UNIV**                      **6663**  
 EVOLUTION AND DYNAMICS OF PROTOSTELLAR DISKS  
 02/11/2002 - 02/28/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J GOODMAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11884**                      **PRINCETON UNIV**                      **6664**  
 LAND INFORMATION SYSTEM  
 03/27/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E WOOD  
*Tech. Officer:* GSFC/C D PETERS-LIDARD  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11947**                      **PRINCETON UNIV**                      **6665**  
 O VI IN THE LMC HALO - FUSE 2001  
 04/01/2002 - 03/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D V BOWEN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11983**                      **PRINCETON UNIV**                      **6666**  
 SMALL SCALE ANISOTROPIES IN COSMIC MICROWAVE BACKGROUND  
 04/12/2002 - 04/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* U SELJAK  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12015**                      **PRINCETON UNIV**                      **6667**  
 MGCM SIMULATIONS OF MARTIAN CLIMATE  
 04/22/2002 - 09/19/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R Q WILSON  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12212**                      **PRINCETON UNIV**                      **6668**  
 SEARCH FOR PLANETS WITH GRAVITATIONAL MICROLENSING & PLAN-  
 ETARY TRANSITS  
 05/15/2002 - 05/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B PACZYNSKI  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12387**                      **PRINCETON UNIV**                      **6669**  
 CLIMATE VARIABILITY ON DECADAL & LONGER TIMESCALES  
 07/17/2002 - 07/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G PHILANDER  
*Tech. Officer:* GSFC/S HAKKINEN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 12398**                      **PRINCETON UNIV**                      **6670**  
 AN INTEGRATED FORWARD AND INVERSE MODELING APPROACH TO  
 THE PREDICTION OF PHYTOPLANKTON BLOOMS  
 07/23/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J SARMIENTO  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12519**                      **PRINCETON UNIV**                      **6671**  
 USING FUSE TO MEASURE THE GALACTIC HALO'S O VI INTENSITY  
 08/21/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E L JENKINS  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12542**                      **PRINCETON UNIV**                      **6672**  
 INTERANNUAL VARIABILITY IN TRANS-PACIFIC TRANSPORT OF POLLUTION  
 08/29/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D MAUZERALL  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12544**                      **PRINCETON UNIV**                      **6673**  
 CONSTRAINING OCEANIC SOURCES AND SINKS OF CO2 BY INVERSE  
 MODELING: A FIRST STEP TOWARD ASSIMILATION  
 08/30/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J SARMIENTO  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 8 1368**                      **PRINCETON UNIV**                      **6674**  
 ELECTROHYDRODYNAMICS OF SUSPENSIONS  
 05/30/1997 - 11/30/2000                      FY02: \$0                      Total: \$389,000  
*Prin. Invest.:* D SAVILLE  
*Tech. Officer:* MSFC/D NOENER  
*CASE Category:* 12 - CHEMISTRY



## NASA'S UNIVERSITY PROGRAM

## NEW JERSEY

<p><b>NAG 8 1517</b>                      <b>PRINCETON UNIV</b>                      <b>6675</b>  TERRESTRIAL HYDROLOGY AND CLIMATE STUDIES USING EOS-ERA DATA  (CATEGORY 2)  05/07/1998 - 04/30/2002                      FY02: \$0                      Total: \$715,753  Prin. Invest.: E F WOOD  Tech. Officer: MSFC/J ARNOLD  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NGT 5 30113</b>                      <b>PRINCETON UNIV</b>                      <b>6683</b>  CHANGE IN FOREST COVER OF NANG RONG, THAILAND: AN INTEGRATED  PRGM OF LANDSCAPE ANALYSIS, EMPIRICAL S  10/01/1997 - 08/31/2001                      FY02: \$0                      Total: \$66,000  Prin. Invest.: S HUBBELL  Tech. Officer: GSFC/M WEI  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAS 5 30110</b>                      <b>PRINCETON UNIV</b>                      <b>6676</b>  SPACE TELESCOPE IMAGING SPECTROGRAPH PROGRAM SUPPORT  06/17/1987 - 12/31/2004                      FY02: \$0                      Total: \$1,114,245  Prin. Invest.: E JENKINS  Tech. Officer: GSFC/D VITAGLINO  CASE Category: 11 - ASTRONOMY</p>	<p><b>NGT 5 30134</b>                      <b>PRINCETON UNIV</b>                      <b>6684</b>  RESPONSE OF ENSO TO MODULATIONS IN TROPICAL CLIMAT  E/STUDENT:WITTENBERG  09/04/1998 - 08/31/2001                      FY02: \$0                      Total: \$44,000  Prin. Invest.: G PHILANDER  Tech. Officer: GSFC/M Y WEI  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAS 5 96021</b>                      <b>PRINCETON UNIV</b>                      <b>6677</b>  MICROWAVE ANISOTROPY PROBE INVESTIGATION (PHASE I DEFINITION  STUDY)  06/28/1996 - 05/30/2001                      FY02: \$0                      Total: \$9,368,566  Prin. Invest.: D WILKINSON  Tech. Officer: GSFC/R CUDDAPAH  CASE Category: 11 - ASTRONOMY</p>	<p><b>NGT 5 30137</b>                      <b>PRINCETON UNIV</b>                      <b>6685</b>  TRANSBOUNDARY AIR POLLUTION IN ASIA/STUDENT:HOLLOWA Y  09/04/1998 - 08/31/2001                      FY02: \$0                      Total: \$66,000  Prin. Invest.: H LEVY, 11  Tech. Officer: GSFC/M Y WEI  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NCC 1 01010</b>                      <b>PRINCETON UNIV</b>                      <b>6678</b>  DEV OF A DESIGN METHODOLOGY FOR RECONFIGURABLE FLIGHT CON-  TROL SYSTEMS  02/27/2001 - 02/28/2002                      FY02: \$0                      Total: \$50,992  Prin. Invest.: I A AKSAY  Tech. Officer: LARC/E J SIOCHI, LARC/T L ST. CLAIR  CASE Category: 12 - CHEMISTRY</p>	<p><b>NGT 5 30333</b>                      <b>PRINCETON UNIV</b>                      <b>6686</b>  THE INTERACTION BETWEEN THE ABYSSAL CIRCULATION &amp; THE WIND  DRIVEN OCEAN DYNAMICS &amp; EFFECTS ON THE CL  08/16/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  Prin. Invest.: G PHILANDER  Tech. Officer: GSFC/M WEI  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NCC 1 02037</b>                      <b>PRINCETON UNIV</b>                      <b>6679</b>  UNIV RESEARCH ENGINEERING AND TECHNOLOGY INST (URETI) BIOIN-  SPIRED MULTIFUNCTIONAL NANOCOMPOSITE  08/19/2002 - 08/18/2007                      FY02: \$0                      Total: \$0  Prin. Invest.: I A AKSAY  Tech. Officer: LARC/T R SUTTER  CASE Category: 41 - AERONAUTICAL ENGR</p>	<p><b>NGT 5 30341</b>                      <b>PRINCETON UNIV</b>                      <b>6687</b>  ELEPHANTS, FIRE &amp; VEGETATION CHANGE IN SOUTHERN AFRICAN  WOODLANDS/STUDENT: RICARDO HOLDO  08/21/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  Prin. Invest.: A DOBSON  Tech. Officer: GSFC/M WEI  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NCC 3 670</b>                      <b>PRINCETON UNIV</b>                      <b>6680</b>  STRUCTURE AND RESPONSE OF SPHERICAL DIFFUSION FLAMES  02/08/1999 - 12/29/2002                      FY02: \$0                      Total: \$433,750  Prin. Invest.: C K LAW  Tech. Officer: GRC/K SACKSTEDER  CASE Category: 49 - ENGINEERING, OTHER</p>	<p><b>NGT 5 30356</b>                      <b>PRINCETON UNIV</b>                      <b>6688</b>  MODELING MARINE DENITRIFICATION &amp; N2 FIXATION STUDENT: CURTIS  DEUTSCH  08/24/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  Prin. Invest.: J SARMIENTO  Tech. Officer: GSFC/M WEI  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NCC 3 687</b>                      <b>PRINCETON UNIV</b>                      <b>6681</b>  AERODYNAMICS AND CHEMICAL KINETICS OF PREMIXED FLAMES AT HIGH  PRESSURE  03/12/1999 - 01/03/2003                      FY02: \$0                      Total: \$339,000  Prin. Invest.: C K LAW  Tech. Officer: GRC/D SACKSTEDER  CASE Category: 49 - ENGINEERING, OTHER</p>	<p><b>NGT 5 50333</b>                      <b>PRINCETON UNIV</b>                      <b>6689</b>  ROLE OF GLOBAL SNOW COVER EXTENT ON CLIMATE VARIABILITY &amp;  PREDICTABILITY STUDENT: RADHIKA WIJETUNG  08/17/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  Prin. Invest.: E F WOOD  Tech. Officer: GSFC/M WEI  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NCC 3 735</b>                      <b>PRINCETON UNIV</b>                      <b>6682</b>  SCIENTIFIC SUPPORT FOR A SPACE SHUTTLE DROPLET BURNING EXPERI-  MENT  09/30/1999 - 11/30/2002                      FY02: \$0                      Total: \$502,248  Prin. Invest.: F L DRYER  Tech. Officer: GRC/D L URBAN  CASE Category: 46 - MECHANICAL ENGR</p>	<p><b>NGT 5 50356</b>                      <b>PRINCETON UNIV</b>                      <b>6690</b>  LITHIUM LORENTZ FORCE ACCELERATOR RESEARCH FOR HIGH POWER  STEADY-STATE SPACE PROPULSION (STUDENT:  05/23/2001 - 08/31/2004                      FY02: \$0                      Total: \$22,000  Prin. Invest.: E CHOUJIRI  Tech. Officer: GSFC/K BLANDING  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>

## NEW JERSEY

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50370**                      **PRINCETON UNIV**                      **6691**  
 OPTICALLY-TUNABLE COLLOIDAL CRYSTALLIZATION (STUDENT: W. RISTEN-  
 PART)  
 06/13/2001 - 08/31/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* D SAVILLE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50383**                      **PRINCETON UNIV**                      **6692**  
 GRAVITATIONAL LENSING OF COSMIC MICROWAVE BACK- GROUND (STU-  
 DENT: CHRISTOPHER HIRATA)  
 05/20/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* U SELJAK  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50407**                      **PRINCETON UNIV**                      **6693**  
 KINETICS OF COLLOIDAL CRYSTALLIZATION  
 07/31/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W RUSSEL  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2521**                      **ROWAN UNIV**                      **6694**  
 GRAVITATIONAL INFLUENCES ON FLAME PROPAGATION THROUGH NON  
 UNIFORM PREMIXED GAS SYSTEMS  
 01/10/2001 - 11/30/2004                      FY02: \$0                      Total: \$10,745  
*Prin. Invest.:* D MARCHESE  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 6776**                      **ROWAN UNIV**                      **6695**  
 RESEARCH IN PLANETARY ASTRONOMY  
 01/09/1998 - 06/30/2002                      FY02: \$0                      Total: \$246,728  
*Prin. Invest.:* D KLASSEN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9593**                      **ROWAN UNIV**                      **6696**  
 FUNDING FOR PROFESSOR KAREN MAGEE-SAUER, DEPT OF CHEMISTRY  
 & PHYSICS; PRODUCTION DATA PROCESSING  
 06/07/2000 - 05/31/2003                      FY02: \$0                      Total: \$8,900  
*Prin. Invest.:* K MAGEE-SAUER  
*Tech. Officer:* GSFC/M J MUMMA  
*CASE Category:* 13 - PHYSICS

**NAG 5 11076**                      **ROWAN UNIV**                      **6697**  
 CLOUDS OF MARS-AN IRFT/MGS COMPARISON  
 08/06/2001 - 08/14/2004                      FY02: \$0                      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**                      **6698**  
 SAGE II VALIDATION WITH A GLOBAL LIDAR NETWORK MY 1/3  
 03/10/1999 - 12/31/2000                      FY02: \$0                      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**                      **6699**  
 NANOCOMPOSITES BASED ON LIQUID CRYSTALLINE POLYMERS  
 04/13/1999 - 10/31/2001                      FY02: \$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**                      **6700**  
 NIGHTTIME POLAR CLOUD PARAMETERS RETRIEVED FROM SATELLITE  
 SOUNDER AND IMAGE DATA  
 06/15/2000 - 06/30/2002                      FY02: \$0                      Total: \$68,099  
*Prin. Invest.:* J A FRANCIS  
*Tech. Officer:* LARC/P MINNIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1234**                      **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                      **6701**  
 SELF ADAPTIVE SOFTWARE FOR AUTOMATED DESIGN OF COM PLEX  
 ENGINEERING SYSTEMS  
 07/24/1998 - 06/30/2002                      FY02: \$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**                      **6702**  
 THE EFFECT OF GRAVITY ON THE MECHANICS OF FLUIDIZE D BEDS  
 03/16/2000 - 11/30/2003                      FY02: \$0                      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**                      **6703**  
 IN-SITU ULTRA-HIGH VACUUM SCANNING PROBE MICROSCOPY STUDIES  
 OF THE POLYMER ANODE/LIPON INTERFACE  
 04/17/2001 - 05/31/2003                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* D H GAROFALINI  
*Tech. Officer:* GRC/N HAGEDORN  
*CASE Category:* 13 - PHYSICS

**NAG 5 3432**                      **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                      **6704**  
 DETERMINING THE HUBBLE CONSTANT USING X-RAY, OPTIC IONS OF  
 CLUSTER  
 10/30/1996 - 09/30/2003                      FY02: \$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**                      **6705**  
 ISOTOPIC INVESTIGATIONS OF EXTRATERRESTRIAL MATERI  
 04/11/1997 - 02/28/2002                      FY02: \$0                      Total: \$339,000  
*Prin. Invest.:* D F HERZOG  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4597**                      **RUTGERS ST UNIV N.J.-INCLUDES PSCTWY**                      **6706**  
 TRANSIENT HEATING IN THE SOLAR ACCRETION DISK  
 05/15/1997 - 02/28/2001                      FY02: \$0                      Total: \$190,000  
*Prin. Invest.:* R H HEWINS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

## NEW JERSEY

**NAG 5 6011 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6707**  
 "NJ-NSCORT FOR BIOGENERATIVE LIFE SUPPORT SYSTEM  
 07/23/1997 - 04/30/2001 FY02: \$0 Total: \$5,084,998  
 Prin. Invest.: H JANES  
 Tech. Officer: GSFC/G FOGLEMAN  
 CASE Category: 59 - LIFE SCIENCE, OTHER

**NAG 5 6037 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6708**  
 BLACK HOLES AND GALAXY DYNAMICS  
 10/08/1997 - 10/14/2002 FY02: \$0 Total: \$454,000  
 Prin. Invest.: D MERRITT  
 Tech. Officer: GSFC/D K WEST  
 CASE Category: 11 - ASTRONOMY

**NAG 5 7015 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6709**  
 THEORETICAL ISSUES FOR INTERPRETING COSMIC MICROWAVE BACK-  
 GROUND MAPS\_ATP  
 02/17/1998 - 04/30/2001 FY02: \$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 6710**  
 UV SOLID STATE DETECTORS  
 05/04/1998 - 04/14/2002 FY02: \$0 Total: \$301,004  
 Prin. Invest.: C L JOSEPH  
 Tech. Officer: GSFC/W WAGNER  
 CASE Category: 11 - ASTRONOMY

**NAG 5 7564 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6711**  
 EVALUATION OF SNOW WATER EQUIVALENT ACROSS GRASSLAND RE-  
 GIONS  
 06/30/1998 - 06/30/2001 FY02: \$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 6712**  
 THE IMPACTS OF LAND-USE/LAND-COVER CHANGE IN AMAZONIA ON  
 HYDROMETEOROLOGICAL PROCESS  
 03/01/1999 - 06/30/2001 FY02: \$0 Total: \$300,000  
 Prin. Invest.: R AVISSAR  
 Tech. Officer: GSFC/E T ENGMAN  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9046 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6713**  
 ORIGIN AND EVOLUTION OF MASSIVE BLACK HOLES IN GALAXIES - (ATP  
 99)  
 03/06/2000 - 05/31/2002 FY02: \$0 Total: \$196,783  
 Prin. Invest.: D MERRITT  
 Tech. Officer: GSFC/R J OLIVERSEN  
 CASE Category: 11 - ASTRONOMY

**NAG 5 9340 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6714**  
 ATMOSPHERIC IRON FLUXES TO THE OCEAN: SEASONAL PATTERNS AND  
 LINKAGE TO PHYTOPLANKTON BLOOMS  
 04/11/2000 - 04/30/2003 FY02: \$0 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 6715**  
 IN SITU SYNCHROTRON MICROXANES MEASUREMENTS OF OXIDATION  
 STATES OF SOLARSYSTEM MATERIALS  
 04/28/2000 - 04/30/2003 FY02: \$0 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 6716**  
 SUPPORT FOR THE NASA-HYDROMETEOROLOGY SCIENCE TEAM OFFICE  
 07/11/2000 - 07/14/2001 FY02: \$0 Total: \$49,475  
 Prin. Invest.: R AVISSAR  
 Tech. Officer: GSFC/P R HOUSER  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9787 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6717**  
 ESTABLISHING AND IMPROVING A TRACEABLE, TIME-DEPENDENT PRI-  
 MARY PRODUCTION ALGORITHM FOR GENERATING  
 07/14/2000 - 07/14/2001 FY02: \$0 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 6718**  
 VOLCANIC ERUPTIONS AND CLIMATE  
 07/18/2000 - 07/31/2003 FY02: \$0 Total: \$120,000  
 Prin. Invest.: A ROBECK  
 Tech. Officer: GSFC/K BERGMAN  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9847 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6719**  
 OCEAN CARBON FLUX: TRANSPORT & BURIAL WITHIN THE WESTERN &  
 EASTERN U.S. COASTAL ZONES  
 07/31/2000 - 07/31/2003 FY02: \$0 Total: \$191,250  
 Prin. Invest.: D HAIDVOGEL  
 Tech. Officer: GSFC/E LINSTROM  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9927 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6720**  
 XMM SPECTRO-IMAGERY OF TWO YOUNG EJECTA-DOMINATED SNRS:  
 KEPLER & W49B  
 09/07/2000 - 09/14/2003 FY02: \$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 6721**  
 CONFRONTING THE COMPLEXITY OF GALAXY CLUSTERS WITH LENSING,  
 SZ, & XMM DATA  
 09/12/2000 - 09/14/2003 FY02: \$0 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 6722**  
 XMM STUDIES OF A NEW SAMPLE OF YOUNG EJECTA-DOMINATED  
 GALACTIC SNRS  
 09/14/2000 - 08/31/2003 FY02: \$0 Total: \$45,061  
 Prin. Invest.: J P HUGHES  
 Tech. Officer: GSFC/R MUSHOTZKY  
 CASE Category: 11 - ASTRONOMY

## NEW JERSEY

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10003 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6723**  
 BLACK HOLES IN EARLY TYPE GALAXIES: INCIDENCE, FORMATION AND EVOLUTION  
 09/25/2000 - 08/31/2004 FY02: \$0 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 6724**  
 SPACE ASTROPHYSICS RESEARCH & ANALYSIS PROGRAM  
 01/02/2001 - 12/31/2004 FY02: \$0 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 6725**  
 HOT-ELECTRON DETECTORS: RECORD SENSITIVITY DUE TO CONTROLLABLE ELECTRON-PHONON COUPLING IN SUPERCONDUCTORS  
 02/01/2001 - 01/14/2004 FY02: \$0 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 6726**  
 SIMULATION & ANALYSIS OF METEORITIC MATERIAL  
 02/28/2001 - 02/28/2004 FY02: \$0 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 6727**  
 TRANSIENT HEATING IN THE SOLAR ACCRETION DISK  
 02/28/2001 - 02/28/2004 FY02: \$0 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 6728**  
 REDUCTION OF BACKGROUND SIGNALS IN ORGANIC OR ORGANIC SOLID STATE DETECTORS  
 04/26/2001 - 04/30/2002 FY02: \$0 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 6729**  
 EFFECTS OF RADIATION ON DESORPTION OF ALKALIS FROM MINERAL & ICE SURFACES: RELATION TO ORIGINS OF ALKALIS  
 06/13/2001 - 06/14/2004 FY02: \$0 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 6730**  
 USING REMOTE SENSING AND OCEAN OXYGEN MEASUREMENTS TO CONSTRAIN CARBON FLUXES IN THE SOUTHERN OCEAN  
 09/10/2001 - 09/14/2004 FY02: \$0 Total: \$78,581  
*Prin. Invest.:* P G FALKONSKI  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11403 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6731**  
 A HYBRID APPROACH FOR EVALUATING AND PREDICTING INTERACTIONS BETWEEN THE SEASONAL SNOW PACK AND THE ATMOSPHERE  
 11/28/2001 - 11/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* D A ROBINSON  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11437 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6732**  
 TOWARDS A BILLION COUNTS/SECOND PHOTON COUNTER WITH HIGH QUANTUM EFFICIENCY  
 12/03/2001 - 12/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* C L JOSEPH  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11719 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6733**  
 ISOTOPIC INVESTIGATIONS OF EXTRATERRESTRIAL MATERIALS  
 02/06/2002 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* G F HERZOG  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11720 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6734**  
 AN IMPROVED GCM SIMULATION OF THE ARCTIC HYDROLOGIC CYCLE USING SATELLITE-DERIVED PRODUCTS  
 02/08/2002 - 02/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J R MILLER  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1513 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6735**  
 SPATIAL & TEMPORAL VARIABILITY OF SOIL MOISTURE & ITS RELATION TO WATER & ENERGY BALANCES IN A MONSON CLIMATE  
 06/01/1998 - 05/31/2002 FY02: \$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 6736**  
 RESEARCH ON STRESS-DRIVEN INSTABILITY ON HELIUM-4 CRYSTALS  
 04/27/2001 - 03/31/2005 FY02: \$0 Total: \$100,444  
*Prin. Invest.:* H KOJIMA  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 3 967 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6737**  
 STRUCTURE AND RESPONSE OF SPHERICAL DIFFUSION FLAMES  
 05/22/2002 - 05/19/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D D TSE  
*Tech. Officer:* GRC/K SACKSTEDER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 476 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6738**  
 COOPERATIVE RESEARCH IN REGIONAL & GLOBAL CLIMATE VARIABILITY  
 03/17/2000 - 03/31/2001 FY02: \$0 Total: \$657,181  
*Prin. Invest.:* R AVISSAR  
*Tech. Officer:* GSFC/R STOTHERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## NASA'S UNIVERSITY PROGRAM

NEW JERSEY

**NCC 5 553 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6739**  
 RESEARCH IN REGIONAL & GLOBAL CLIMATE VARIABILITY  
 04/24/2001 - 03/31/2006 FY02: \$0 Total: \$700,000  
*Prin. Invest.:* A ROBOCK  
*Tech. Officer:* GSFC/R B STOTHERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 50229 RUTGERS ST UNIV N.J.-INCLUDES PSCTWY 6740**  
 CROP MODELING FOR MULTIPLE CROP PRODUCTION AND CONTROL FOR  
 ADVANCED LIFE SUPPORT SYSTEMS  
 11/04/1998 - 08/31/2001 FY02: \$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 6741**  
 DEVELOPMENT OF A HAPTIC INTERFACE FOR REMOTE OPERATIONS IN  
 SPACE, MEDICINE AND VIRTUAL REALITY, USI  
 06/12/2001 - 08/30/2004 FY02: \$0 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 6742**  
 SPATIALLY RESOLVED X-RAY SPECTROSCOPY OF YOUNG SUPERNOVA  
 REMNANTS/STUDENT: CARA RAKOWSKI  
 07/05/2001 - 06/30/2004 FY02: \$0 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 6743**  
 A STUDY OF TELECONNECTIONS USING A NESTED GCM-RCM & SATELLITE  
 OBSERVATIONS  
 04/06/2000 - 06/30/2001 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* R AVISSAR  
*Tech. Officer:* GSFC/K BERGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 5344 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6744**  
 VERY-LARGE-FOCAL-PLANE PHOTOCATHODE-BASED IMAGE SENSORS  
 FOR OWL  
 01/16/2002 - 01/07/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* C JOSEPH  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 9833 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6745**  
 ULTRAVIOLET TESTIN OF GAN ARRAYS AS DESCRIBED IN THE PROPOSAL  
 "GAN ULTRAVIOLET ARRAYS"  
 07/26/2000 - 10/31/2003 FY02: \$0 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 6746**  
 GLOBAL MODELING AND ANALYSIS OF NONMETHANE HYDROCARBONS,  
 OXYGENATED HYDROCARBONS, AND ANTHROPOG  
 08/16/2001 - 08/31/2002 FY02: \$0 Total: \$81,221  
*Prin. Invest.:* Y WANG  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11356 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6747**  
 REPRESENTING KEY PHYTOPLANKTON GROUPS IN OCEAN CARBON  
 CYCLE MODELS  
 09/25/2001 - 09/30/2004 FY02: \$0 Total: \$124,826  
*Prin. Invest.:* P G FALKOWSKI  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11585 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6748**  
 A POLAR-SPECIFIC 20-YEAR DATA SET OF CLOUD FRACTION AND HEIGHT  
 DERIVED FROM SATELLITE RADIANCES  
 01/25/2002 - 01/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* J A FRANCIS  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11714 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6749**  
 A DYNAMICAL STUDY OF THE VIRGO AND FORNAX CLUSTERS (LTS A 2001)  
 02/27/2002 - 05/31/2007 FY02: \$0 Total: \$0  
*Prin. Invest.:* P J COTE  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12148 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6750**  
 IN SITU SYNCHROTRON MICROXANES MEASUREMENTS OF OXIDATION  
 STATES OF SOLARSYSTEM MATERIALS  
 05/23/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J S DELANEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12435 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6751**  
 NEW JERSEY ECOCOMPLEX LIFE SUPPORT CENTER PROJECT  
 08/08/2002 - 07/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* H JANES  
*Tech. Officer:* GSFC/L P CHAMBERS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1283 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6752**  
 MOLECULAR CHARACTERIZATION OF EUBACTERIA IN THE BIOLOGICAL  
 WATER PROCESSOR  
 02/22/2001 - 02/21/2004 FY02: \$0 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 6753**  
 CHARACTERIZATION OF HYDROPONICALLY GROWN APOGEE WHEAT  
 FLOUR  
 06/18/2001 - 10/31/2001 FY02: \$0 Total: \$16,100  
*Prin. Invest.:* J L KOKINI  
*Tech. Officer:* JSC/V KLOERIS  
*CASE Category:* 43 - CHEMICAL ENGR

**NAS 5 99138 RUTGERS STATE UNIV OF NJ NEW BRUNSWICK 6754**  
 AIRBORNE (LIFT) METHOD FOR MEASURING PHOTOSYNTHETIC PERFOR-  
 MANCE & PRIMARY PRODUCTIVITY.  
 04/15/1999 - 04/15/2002 FY02: \$0 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**     **6755**  
 INTEGRATING MULTIPLE SOURCES OF INFORMATION IN TEX T MINING  
 04/20/2001 - 05/31/2003     FY02: \$0     Total: \$80,000  
*Prin. Invest.:* H HIRSCH  
*Tech. Officer:* ARC/M SCHWABACHER, ARC/J COUGHLAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT13 52758**     **RUTGERS STATE UNIV OF NJ NEW BRUNSWICK**     **6756**  
 GRADUATE STUDENT RESEARCHERS PROGRAM - DYNAMIC INT ERAC-  
 TIONS OF HOLOCENE SUBSISTENCE STRATEGIES AND  
 06/27/2002 - 06/30/2003     FY02: \$0     Total: \$0  
*Prin. Invest.:* D HARRIS  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 71 - ANTHROPOLOGY

**NAG 5 8971**     **STEVENS INST OF TECHNOLOGY**     **6757**  
 ELECTRON-IMPACT DISSOCIATION AND EXCITATION OF MOLECULES AND  
 MOLECULAR IONS  
 01/28/2000 - 12/31/2002     FY02: \$0     Total: \$116,714  
*Prin. Invest.:* K BECKER  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1063**     **STEVENS INST OF TECHNOLOGY**     **6758**  
 INVESTIGATION OF AMBIENT PRESSURE  
 01/05/1999 - 07/05/2002     FY02: \$0     Total: \$428,983  
*Prin. Invest.:* G P KORFIATIS  
*Tech. Officer:* JSC/J GRAF  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NGT 5 40096**     **STEVENS INST OF TECHNOLOGY**     **6759**  
 NEW JERSEY SPACE GRANT COLL AND FELLOWSHIP PROG RAM  
 02/28/2001 - 02/28/2005     FY02: \$0     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**     **6760**  
 MURINE DEVELOPMENT: CELLULAR & MOLECULAR ANALYSIS  
 08/02/1999 - 07/14/2003     FY02: \$0     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**     **6761**  
 GLUCOSE KINETICS AND MUSCLE ATROPHY  
 09/21/1999 - 09/22/2003     FY02: \$0     Total: \$148,027  
*Prin. Invest.:* T P STEIN  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 56 - MEDICL

**NCC 2 1354**     **UNIV OF MEDICINE AND DENTISTRY**     **6762**  
 GLUCOSE KINETICS AND MUSCLE ATROPHY  
 07/23/2002 - 07/31/2003     FY02: \$0     Total: \$0  
*Prin. Invest.:* T P STEIN  
*Tech. Officer:* ARC/C E WADE, ARC/A ROMA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 50335**     **UNIV OF MEDICINE AND DENTISTRY**     **6763**  
 TRANSCRIPTIONAL REGULATION OF DIFFERENTIATING OSTE  
 OBLASTS/STUDENT: RICHARD D'ALONZO  
 10/16/2000 - 10/01/2001     FY02: \$0     Total: \$22,000  
*Prin. Invest.:* N C PARTRIDGE  
*Tech. Officer:* HQ/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1556**     **UNIV. OF MEDICINE & DENTISTRY-NJ.**     **6764**  
 EFFECTS OF MICROGRAVITY ON ZEBRAFISH VESTIBULAR DE VELOPMENT  
 04/30/2002 - 04/14/2003     FY02: \$0     Total: \$0  
*Prin. Invest.:* S J MOORMAN  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

## NEW MEXICO

**NAG 9 1066**     **COLL OF SANTA FE**     **6765**  
 MOBILE SCIENCE PROJECT PACE/ MSET  
 01/07/1999 - 12/31/2001     FY02: \$0     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**     **6766**  
 NEW MEXICO CONNECTIONS: CONNECTING PEOPLE, PLACES AND RE-  
 SEARCH  
 12/08/2000 - 08/13/2001     FY02: \$0     Total: \$64,956  
*Prin. Invest.:* S NUTTER  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1255**     **EASTERN NEW MEXICO UNIV - MAIN CAMPUS**     **6767**  
 SMET CAMP  
 08/12/2000 - 09/30/2001     FY02: \$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**     **6768**  
 ESTABLISH A COMM BASED NATIVE AMERICAN AGRHIC ULTURE RE-  
 SEARCH AND DEVELOPMENT CENTER  
 06/22/2000 - 01/15/2002     FY02: \$0     Total: \$98,854  
*Prin. Invest.:* S SULNA  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 55 - AGRICULTURE

**NAG 8 1860**     **INST AMER INDIAN & AK NATIVE CULTURE & DEV**     **6769**  
 SANTA FE INDIAN SCHOOL COMM BASED NATIVE AMERICAN AGRICULTURE  
 RESEARCH AND DEV CENTER  
 06/28/2002 - 06/28/2005     FY02: \$0     Total: \$0  
*Prin. Invest.:* W COFFEY  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 55 - AGRICULTURE

**NAG 5 8734**     **NEW MEXICO HIGHLANDS UNIV**     **6770**  
 CCD PHOTOMETRY OF THE VESTA FAMILY OF ASTEROIDS & AN ANALYSIS  
 OF THEIRIMPACT ORIGIN  
 08/26/1999 - 07/31/2003     FY02: \$0     Total: \$217,699  
*Prin. Invest.:* D V RYAN  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1639**     **NEW MEXICO HIGHLANDS UNIV**     **6771**  
 DEVELOPMENT OF NOVEL THERMOSTABLE PHOTOREFRACTIVE POLY-  
 MERS AND SOL-GEL MATERIALS  
 12/21/1999 - 12/20/2002     FY02: \$0     Total: \$290,006  
*Prin. Invest.:* R D CLARK, M SANGHADASA  
*Tech. Officer:* MSFC/B G PENN  
*CASE Category:* 13 - PHYSICS

## NASA'S UNIVERSITY PROGRAM

## NEW MEXICO

<b>NAG 8 1708</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6772</b>	<b>NAG 9 1394</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6781</b>
ALLIANCE FOR NONLINEAR OPTICS			JSC ASTROBIOLOGY INST		
03/01/2000 - 02/28/2003	FY02: \$0	Total: \$1,000,000	08/09/2002 - 08/11/2005	FY02: \$0	Total: \$0
<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/D SMCKAY, JSC/L M ARMENDARIZ		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER		
<b>NAG 9 1139</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6773</b>	<b>NAG 9 1409</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6782</b>
AMERICAN INDIAN SCIENCE & TECH EDUCATION CONSORTIUM			NMHU STUDENT RESEARCHERS-DEVELOP SKILLS&MOTIVATION TO EN-		
08/31/1999 - 08/30/2001	FY02: \$0	Total: \$278,000	ABLE STDNTS TO GRAD & EMPHASIZE ON SMET		
<i>Prin. Invest.:</i> J C'DE BACA			08/01/2002 - 07/31/2003	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> JSC/L M ARMENDARIZ			<i>Prin. Invest.:</i> E RYAN, J C'DEBACA		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>Tech. Officer:</i> JSC/L M ARMENDARIZ		
			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 9 1168</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6774</b>	<b>NAG 9 1921</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6783</b>
JSC ASTROBIOLOGY INST			EDUCATIONAL OUTREACH		
09/28/1999 - 09/29/2002	FY02: \$0	Total: \$292,100	05/23/2000 - 05/31/2001	FY02: \$0	Total: \$18,803
<i>Prin. Invest.:</i> J C DEBACA, J R JUAREZ			<i>Prin. Invest.:</i> J R JUAREZ		
<i>Tech. Officer:</i> JSC/D S MCKAY, JSC/L ARMENDARIZ			<i>Tech. Officer:</i> JSC/L ARMENDARIZ		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 9 1260</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6775</b>	<b>NAG 9 1922</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6784</b>
STUDIES ON THE IMPACT OF CERRO GRANDE & VIVEASH FOREST FIRES			HYDROCODE SIMULATIONS OF PAROUS ASTEROID IMPACTS		
09/07/2000 - 09/30/2004	FY02: \$0	Total: \$151,095	05/23/2000 - 08/30/2002	FY02: \$0	Total: \$24,997
<i>Prin. Invest.:</i> J R JUAREZ			<i>Prin. Invest.:</i> J R JUAREZ		
<i>Tech. Officer:</i> JSC/G HENDERSEN			<i>Tech. Officer:</i> JSC/L ARMENDARIZ		
<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>6776</b>	<b>NAG 3 2688</b>	<b>NEW MEXICO INST OF MINING &amp; TECH</b>	<b>6785</b>
REACHING OUT FOR SCIENCE, MATHEMATICS & TECHNOLOGY STUDENTS			ANALYSIS OF THE EFFECT OF SURFACE MODIFICATION ON POLYIMIDE		
06/26/2001 - 06/26/2004	FY02: \$0	Total: \$19,528	COMPOSITES COATED WITH EROSION RESISTANT		
<i>Prin. Invest.:</i> J R JUAREZ			01/10/2002 - 08/31/2004	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> JSC/L M ARMENDARIZ			<i>Prin. Invest.:</i> D A HIRSCHFELD		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>Tech. Officer:</i> GRC/J K SUTTER		
			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NAG 9 1369</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6777</b>	<b>NAG 5 4139</b>	<b>NEW MEXICO INST OF MINING &amp; TECH</b>	<b>6786</b>
EDUCATIONAL OUTREACH			OBSERVATIONS & ANALYSIS OF ATMOSPHERIC HYDROXYL		
07/30/2001 - 07/31/2004	FY02: \$0	Total: \$19,000	03/17/1997 - 03/14/2001	FY02: \$0	Total: \$176,882
<i>Prin. Invest.:</i> J JUAREZ			<i>Prin. Invest.:</i> K MINSCHWANNER		
<i>Tech. Officer:</i> WFF/P BAKER, JSC/L M 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 1374</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6778</b>	<b>NAG 5 7109</b>	<b>NEW MEXICO INST OF MINING &amp; TECH</b>	<b>6787</b>
AISTEC PROJECT			GROUND BASED MEASUREMENTS OF TOTAL OZONE, CLOUD PR OPER-		
08/09/2001 - 08/12/2002	FY02: \$0	Total: \$100,000	TIES, AND UV DOSES		
<i>Prin. Invest.:</i> J CAIBACA			03/25/1998 - 03/31/2002	FY02: \$0	Total: \$107,153
<i>Tech. Officer:</i> JSC/K KRISHEN, JSC/L ARMENDARIZ			<i>Prin. Invest.:</i> D R MINSCHWANER		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>Tech. Officer:</i> GSFC/J HERMAN		
			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 9 1375</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6779</b>	<b>NAG 5 9328</b>	<b>NEW MEXICO INST OF MINING &amp; TECH</b>	<b>6788</b>
HYDROCODE SIMULATIGRS OF POROUS ASTEROID IMPACTS			INFLUENCE OF LAND-ATMOSPHERE INTERACTIONS ON VARIA BILITY OF		
08/09/2001 - 08/12/2002	FY02: \$0	Total: \$25,000	THE NORTH AMERICAN MONSOON		
<i>Prin. Invest.:</i> J R JUAREZ			04/03/2000 - 04/30/2003	FY02: \$0	Total: \$140,754
<i>Tech. Officer:</i> JSC/L ARMENDARIZ			<i>Prin. Invest.:</i> E E SMALL		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>Tech. Officer:</i> GSFC/D WICKLAND		
			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 9 1393</b>	<b>NEW MEXICO HIGHLANDS UNIV</b>	<b>6780</b>			
HYDRAZINE AIR FILTRATION SYSTEM					
01/04/2002 - 01/03/2005	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> J C DE BACA					
<i>Tech. Officer:</i> JSC/L M ARMENDARIZ					
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER					

## NEW MEXICO

## NASA'S UNIVERSITY PROGRAM

**NAG 9 1106**      **NEW MEXICO INST OF MINING & TECH**      **6789**  
 THE SEARCH FOR MICROBIAL BIOMARKERS IN TERRESTRIAL DEPOSITS  
 05/10/1999 - 05/09/2004      FY02: \$0      Total: \$66,000  
*Prin. Invest.:* T L KIEFT  
*Tech. Officer:* JSC/F K GIBSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30169**      **NEW MEXICO INST OF MINING & TECH**      **6790**  
 COMBINED SIMULATION OF ALPINE GLACIERS AND CLOSED-BASIN LAKES:  
 THE KEY TO DETERMINING THE LONG-TERM  
 09/01/1998 - 08/31/2001      FY02: \$0      Total: \$66,000  
*Prin. Invest.:* F M PHILLIPS, PLUMMER  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1334**      **NEW MEXICO STATE UNIV - LAS CRUCES**      **6791**  
 XENOPUS INNER EAR ORGAN INFORMATION IN AN ALTERED GRAVITY  
 ENVIRONMENT  
 07/08/1999 - 06/30/2003      FY02: \$0      Total: \$299,141  
*Prin. Invest.:* E E SERRANO  
*Tech. Officer:* ARC/C E WADE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 1562**      **NEW MEXICO STATE UNIV - LAS CRUCES**      **6792**  
 TOWARD A MODEL OF ORGANIZATIONAL RISK: CRITICAL FACTORS AT THE  
 TEAM LEVEL  
 05/28/2002 - 11/30/2002      FY02: \$0      Total: \$0  
*Prin. Invest.:* N J COOKE  
*Tech. Officer:* ARC/J ORASANU, ARC/M CONNORS  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 2 6007**      **NEW MEXICO STATE UNIV - LAS CRUCES**      **6793**  
 THEORETICAL & OBSERVATIONAL STUDIES OF SOLAR & EXTRA SOLAR  
 PLANETARY ATMOSPHERES  
 10/16/1996 - 06/30/2001      FY02: \$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**      **6794**  
 CAREER OPPORTUNITIES IN MATHEMATICS, ENGINEERING, TECHNOLOGY,  
 & SCIENCE (COMETS) PROGRAMS  
 03/09/1999 - 03/31/2002      FY02: \$0      Total: \$299,001  
*Prin. Invest.:* G V GARCIA  
*Tech. Officer:* ARC/A CARDENAS, ARC/G S LEE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 6053**      **NEW MEXICO STATE UNIV - LAS CRUCES**      **6795**  
 RIOSOFT CONSORTIUM - INFRASTRUCTURE FOR SOFTWARE UTILIZING  
 NMSU  
 10/31/2001 - 09/30/2002      FY02: \$0      Total: \$0  
*Prin. Invest.:* N R PRASAD  
*Tech. Officer:* ARC/B J COLLINS, ARC/A CARDENAS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2793**      **NEW MEXICO STATE UNIV - LAS CRUCES**      **6796**  
 IP-COMPLIANT SATELLITE ARCHITECTURE STUDY IP-COMPLIANT SATEL-  
 LITE ARCHITECTURE STUDY  
 07/03/2002 - 06/04/2004      FY02: \$0      Total: \$0  
*Prin. Invest.:* D HORAN  
*Tech. Officer:* GRC/R SLYWCZAK  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 4 231**      **NEW MEXICO STATE UNIV - LAS CRUCES**      **6797**  
 POWER BEAMING DEMONSTRATOR POWER BEAMING DEMONSTRATOR  
 08/20/2002 - 07/09/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* S B HOTTMAN  
*Tech. Officer:* DFRC/D BUSHMAN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3842**      **NEW MEXICO STATE UNIV - LAS CRUCES**      **6798**  
 MODELLING X-RAY CLUSTERS: EVOLUTION AND REALISTIC  
 02/25/1997 - 02/28/2001      FY02: \$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**      **6799**  
 MODEL ATMOSPHERES AND SPECTRA FOR EXTRASOLAR GIANT  
 06/26/1997 - 06/14/2001      FY02: \$0      Total: \$127,500  
*Prin. Invest.:* D MARLEY  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 5159**      **NEW MEXICO STATE UNIV - LAS CRUCES**      **6800**  
 AN IMAGING SILICON CALORIMETER FOR USE ON ACCESS INCREMENTAL  
 FUNDING FOR FIRST YEAR OF GRANT  
 03/26/1998 - 12/31/2002      FY02: \$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**      **6801**  
 FIRST YEAR FUNDING FOR NAG5-5226  
 07/06/1999 - 12/31/2002      FY02: \$0      Total: \$428,000  
*Prin. Invest.:* S J STOCHAJ  
*Tech. Officer:* WSTF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5351**      **NEW MEXICO STATE UNIV - LAS CRUCES**      **6802**  
 ESTABLISHMENT AND OPERATION OF THE SUBORBITAL CENTER OF  
 EXCELLENCE.  
 01/18/2002 - 11/30/2004      FY02: \$0      Total: \$0  
*Prin. Invest.:* S HOTTMAN  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 7524**      **NEW MEXICO STATE UNIV - LAS CRUCES**      **6803**  
 TRANSPORTATION OF ENERGETIC PARTICLES IN THE GALAXY - AP-  
 PROVED UNDER NRA 97-OSS-12  
 06/09/1998 - 06/14/2002      FY02: \$0      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**      **6804**  
 A PROPOSAL TO ASSIST IN THE INTERPRETATION OF DATA FROM THE  
 COSMIC RAY ISOTOPE SPECTROMETER EXPERIM  
 12/10/1998 - 12/31/2002      FY02: \$0      Total: \$117,422  
*Prin. Invest.:* D R WEBBER  
*Tech. Officer:* GSFC/D C LING  
*CASE Category:* 11 - ASTRONOMY



## NASA'S UNIVERSITY PROGRAM

## NEW MEXICO

<p><b>NAG 5 7904</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6805</b>  ADVANCED IR IMAGING OF SATURN  12/03/1998 - 11/30/2002      FY02: \$0      Total: \$160,726  <i>Prin. Invest.:</i> D J CHANOVER  <i>Tech. Officer:</i> GSFC/T MORGAN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11311</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6813</b>  NMSU PARTICIPATORY PROJECT IN MESSENGER EXPLORATION AND NSIP  DEVELOPMENT OF STUDENT SCIENCE  09/07/2001 - 09/14/2003      FY02: \$0      Total: \$30,000  <i>Prin. Invest.:</i> H BAPTISTE  <i>Tech. Officer:</i> GSFC/J HARRINGTON  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8242</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6806</b>  TESTING INFLATION AND DARK MATTER WITH NEW DATA, MODELS, AND  METHODS (ATP98)  02/19/1999 - 02/28/2003      FY02: \$0      Total: \$67,392  <i>Prin. Invest.:</i> A KLYPIN  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 12068</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6814</b>  RIOSoft - TECHNOLOGY FOR INTEGRATED BIOLOGICAL PEST MANAGE-  MENT IN AGRICULTURE  05/22/2002 - 05/31/2003      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> N R PRASAD  <i>Tech. Officer:</i> GSFC/M CAULFIELD  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>
<p><b>NAG 5 8803</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6807</b>  EFFECTS OF RHEOLOGY ON THE DYNAMICS AND THERMAL EVOLUTION  OF MARS AND VENUS  01/06/2000 - 01/14/2003      FY02: \$0      Total: \$93,600  <i>Prin. Invest.:</i> V SOLOMATOV  <i>Tech. Officer:</i> GSFC/J GRANT  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 5 12123</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6815</b>  INVESTIGATION OF PHYSICAL PROCESSES INVOLVED IN THE INTERAN-  NUAL VARIABILITY OF MARTIAN DUST  04/30/2002 - 04/30/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> J R MURPHY  <i>Tech. Officer:</i> GSFC/J HILLMAN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 8919</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6808</b>  MODEL ATMOSPHERES AND SPECTRA FOR EXTRASOLAR GIANT PLANETS  AND BROWN DWARFS  01/21/2000 - 06/14/2003      FY02: \$0      Total: \$148,515  <i>Prin. Invest.:</i> M MARLEY  <i>Tech. Officer:</i> GSFC/D BOGAN  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 8 1710</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6816</b>  NANOMETER LASER SPECTROSCOPY USING FRACTAL MEDIA  03/08/2000 - 03/07/2003      FY02: \$0      Total: \$199,995  <i>Prin. Invest.:</i> C YING  <i>Tech. Officer:</i> MSFC/W LOVE  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 9273</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6809</b>  MODEL ATMOSPHERES AND SPECTRA OF THE L-DWARFS (ATP 99)  03/15/2000 - 03/14/2003      FY02: \$0      Total: \$86,127  <i>Prin. Invest.:</i> M S MARLEY  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 9 1291</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6817</b>  STUDY TOWARD A HAND HELD VOLATILE ORGANIC ANALYZER FOR MARS  MISSION  04/19/2001 - 12/31/2002      FY02: \$0      Total: \$202,180  <i>Prin. Invest.:</i> G A EICEMAN  <i>Tech. Officer:</i> JSC/D M RUSSO  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 9323</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6810</b>  "THE CENTER FOR SPACE TELEMETERING AND TELECOMMUNICATIONS  SYSTEMS", AT THE NEW MEXICO STATE UNIVER  03/31/2000 - 04/30/2003      FY02: \$0      Total: \$1,060,000  <i>Prin. Invest.:</i> S HORAN  <i>Tech. Officer:</i> GSFC/W H MILLER  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NAG13 02046</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6818</b>  PYROTECHNICALLY OPERATED VALVES FOR TESTING AND FLIGHT  08/09/2002 - 06/30/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> E G CONLEY  <i>Tech. Officer:</i> SSC/W ST. CYR  <i>CASE Category:</i> 45 - ELECTRICAL ENGR</p>
<p><b>NAG 5 10578</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6811</b>  IMPACTS AND THE THERMAL EVOLUTION OF MARS  03/19/2001 - 02/28/2004      FY02: \$0      Total: \$30,000  <i>Prin. Invest.:</i> V SOLOMATOV  <i>Tech. Officer:</i> GSFC/J M BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAS 5 02083</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6819</b>  RESEARCH INTO THE EARTH'S ULTRAVIOLET NIGHTGLOW FOR DETECT-  ING ULTRA-HIGH ENERGY COSMIC RAY PARTICLES  06/19/2002 - 06/18/2003      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> S J STOCHAJ, R HULL  <i>Tech. Officer:</i> GSFC/L M BARBER  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 11164</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6812</b>  DETERMINATION OF MARTIAN POLAR DUST FLUX FROM TES OPACITY  OBSERVATIONS  08/06/2001 - 08/14/2003      FY02: \$0      Total: \$22,000  <i>Prin. Invest.:</i> J R MURPHY  <i>Tech. Officer:</i> GSFC/J M BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAS 5 02087</b>      <b>NEW MEXICO STATE UNIV - LAS CRUCES</b>      <b>6820</b>  DESIGN, MANUFACTURE TEST, &amp; DELIVERY OF 1 PROTOFLIGHT MODEL  ANTENNA ASSEMBLY &amp; 4 FLIGHT ANTENNA  06/04/2002 - 02/28/2003      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> B BLEVINS  <i>Tech. Officer:</i> GSFC/A RODRIGUEZ  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>

## NEW MEXICO

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**NAS 5 98009**      **NEW MEXICO STATE UNIV - LAS CRUCES**      **6821**  
 BALLOON SERVICES  
 02/17/1998 - 02/28/2003      FY02: \$30,000      Total: \$55,717,659  
*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**      **6822**  
 SIMULATIONS OF EXTENSIVE AIRWHOWERS USING BEOWULF- CLASS SYSTEMS  
 09/30/1999 - 08/31/2002      FY02: \$0      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**      **6823**  
 MATHEMATICS AND SCIENCE EDUCATORS FOR THE FUTURE  
 03/02/2000 - 02/28/2003      FY02: \$0      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**      **6824**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLL AND FELLOWSHIPPROGRAM.  
 03/04/1997 - 04/30/2002      FY02: \$0      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**      **6825**  
 NEW MEXICO SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 02/16/2001 - 02/14/2005      FY02: \$0      Total: \$475,000  
*Prin. Invest.:* P HYNES  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT13 52752**      **NEW MEXICO STATE UNIV - LAS CRUCES**      **6826**  
 CHARACTERIZATION OF DEFORMED PYROVALVE HOUSING CHARACTERIZATION OF DEFORMED PYROVALVE HOUSING  
 06/20/2002 - 06/30/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* E G CONLEY  
*Tech. Officer:* SSC/R P TRAVIS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 10143**      **SOUTHWESTERN INDIAN POLYTECHNIC INST**      **6827**  
 STARS ON EARTH, PROVIDING UNDERREPRESENTED NEW MEXICO HIGH SCHOOL STUDENTS WITH RESEARCH EXPER  
 01/18/2001 - 12/31/2003      FY02: \$0      Total: \$160,000  
*Prin. Invest.:* K GCHACHU  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1407**      **SOUTHWESTERN INDIAN POLYTECHNIC INST**      **6828**  
 SIPI PACE/MSET PROGRAM  
 06/27/2002 - 06/30/2004      FY02: \$0      Total: \$0  
*Prin. Invest.:* C L ABEITA  
*Tech. Officer:* JSC/L M ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1312**      **UNIV OF ALBUQUERQUE**      **6829**  
 NASA TRAINING PROJECT  
 09/24/2001 - 09/30/2004      FY02: \$0      Total: \$450,200  
*Prin. Invest.:* R A LAFARGE  
*Tech. Officer:* JSC/L M ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1439**      **UNIV OF ALBUQUERQUE**      **6830**  
 EXPERIMENTAL STUDIES OF PLANETARY MAGMAS AT HIGH P RESSURE  
 07/26/2002 - 06/30/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* C B AGEE  
*Tech. Officer:* JSC/E K STANSBERY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 9 1449**      **UNIV OF ALBUQUERQUE**      **6831**  
 EXPERIMENTAL STUDIES-HIGH PRESSURE LABORATOARY RES EARCY  
 08/02/2002 - 06/30/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* C B AGEE  
*Tech. Officer:* JSC/E K STANSBERY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 1 2018**      **UNIV OF NEW MEXICO-ALBUQUERQUE**      **6832**  
 SIMULATION OF FLOW CONTROL USING DEFORMABLE SURFACES  
 03/17/1998 - 03/16/2001      FY02: \$0      Total: \$299,945  
*Prin. Invest.:* C R TRUMAN  
*Tech. Officer:* LARC/R D JOSLIN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1196**      **UNIV OF NEW MEXICO-ALBUQUERQUE**      **6833**  
 NASA CENTER FOR AUTONOMOUS CONTROL ENGINEERING (AC ) AT THE U/NNM  
 03/26/1998 - 12/14/2000      FY02: \$0      Total: \$3,434,241  
*Prin. Invest.:* M JAMSHIDI, R LUMIA  
*Tech. Officer:* ARC/G S LEE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1437**      **UNIV OF NEW MEXICO-ALBUQUERQUE**      **6834**  
 CHARACTERIZATION & ANALYSIS OF ADVANCED THERMAL PROTECTION MATERIALS  
 09/13/2000 - 08/14/2003      FY02: \$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**      **6835**  
 NASA GROUP UNIV RESEARCH CENTER SECOND FIVE YEARS  
 05/01/2001 - 08/14/2002      FY02: \$0      Total: \$760,000  
*Prin. Invest.:* P DORATO  
*Tech. Officer:* ARC/A CARDENAS, ARC/A R GROSS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1516**      **UNIV OF NEW MEXICO-ALBUQUERQUE**      **6836**  
 CHARACTERIZATION AND ANALYSIS OF ULTRAHIGH TEMPERATURE CERAMICS  
 08/15/2001 - 07/31/2003      FY02: \$0      Total: \$30,000  
*Prin. Invest.:* R E LOEHMAN  
*Tech. Officer:* ARC/D ELLERBY, ARC/S JOHNSON  
*CASE Category:* 47 - METAL & MATERIALS ENGR

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## NEW MEXICO

<p><b>NAG 2 1547</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6837</b>  INTEGRATING THE STOCHASTIC LEARNING AUTOMATA PARADIGM AND  DISTRIBUTED NEURO FUZZY TECHNIQUES INTO A  04/05/2002 - 05/14/2003      FY02: \$0      Total: \$0  Prin. Invest.: M JAMSHIDI  Tech. Officer: ARC/R MORRIS, ARC/S LAU  CASE Category: 22 - COMPUTER SCIENCE</p>	<p><b>NAG 5 8454</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6845</b>  HIGH PERFORMANCE DATA COMPRESSION VLSI ARCHITECTURE; GSFC  CONTROL NO. 3474  04/20/1999 - 04/30/2002      FY02: \$0      Total: \$460,000  Prin. Invest.: G MAKI  Tech. Officer: GSFC/W H MILLER  CASE Category: 49 - ENGINEERING, OTHER</p>
<p><b>NAG 2 1553</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6838</b>  ADVANCED THERMAL PROTECTION MATERIALS BASED ON ULTRA HIGH  TEMPERATURE CERAMICS  04/16/2002 - 04/14/2003      FY02: \$0      Total: \$0  Prin. Invest.: R LOEHMAN  Tech. Officer: ARC/D T ELLERBY  CASE Category: 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 5 8804</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6846</b>  MARTIN IMPACT CRATER HYDROTHERMAL SYSTEMS, CLUES FROM THE  LONAR CRATER, INDIA.  01/06/2000 - 01/14/2003      FY02: \$0      Total: \$48,945  Prin. Invest.: H NEWSOM  Tech. Officer: GSFC/D SENSKE  CASE Category: 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 3 1976</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6839</b>  NEW PHENOMENA IN STRONGLY COUNTERFLOWING HE-II  10/22/1996 - 09/30/2003      FY02: \$0      Total: \$354,000  Prin. Invest.: S T BOYD, R V DUNCAN, M J ADVIAANS  Tech. Officer: GRC/B S SINGH  CASE Category: 13 - PHYSICS</p>	<p><b>NAG 5 8821</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6847</b>  BIOMIMETIC SELF-ASSEMBLY OF HARDENED (NACRE-LIKE) COMPOSITE  COATINGS FOR TRANSHAB  09/21/1999 - 08/31/2002      FY02: \$0      Total: \$492,748  Prin. Invest.: J BRINKER  Tech. Officer: GSFC/R CROUCH  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 3 2543</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6840</b>  HIGH EFFICIENCY THERMOELECTRIC RADIOISOTOPE POWER SYSTEMS  02/15/2001 - 12/31/2003      FY02: \$29,509      Total: \$131,509  Prin. Invest.: M EL-GENK  Tech. Officer: GRC/R L CATALDO  CASE Category: 45 - ELECTRICAL ENGR</p>	<p><b>NAG 5 9402</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6848</b>  "BIT PLANE ENCODER/DECODER FOR HPDC", FOR THE UNIVERSITY OF  NEW MEXICO, CONTROL #5-3524.  04/25/2000 - 06/30/2002      FY02: \$0      Total: \$720,000  Prin. Invest.: G MAKI  Tech. Officer: GSFC/W H MILLER  CASE Category: 49 - ENGINEERING, OTHER</p>
<p><b>NAG 3 2626</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6841</b>  EXPERIMENTS WITH BOUNDARY CONDITIONS FOR JET FLOW SIMULA-  TIONS  06/01/2001 - 04/30/2002      FY02: \$0      Total: \$6,943  Prin. Invest.: T HAGSTROM  Tech. Officer: GRC/J GOODRICH  CASE Category: 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 5 9463</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6849</b>  MICROBEAM STUDIES OF PLANETARY MATERIALS  04/18/2000 - 02/14/2003      FY02: \$0      Total: \$516,800  Prin. Invest.: J J PAPIKE  Tech. Officer: GSFC/J BOYCE  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 3 2692</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6842</b>  COMPUTATIONAL METHODS FOR JET NOISE SIMULATION COMPUTATIONAL  METHODS FOR JET NOISE SIMULATION  01/11/2002 - 09/30/2004      FY02: \$0      Total: \$0  Prin. Invest.: D HAGSTROM  Tech. Officer: GRC/J W GOODRICH  CASE Category: 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 5 9469</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6850</b>  RECONFIGURABLE DATA PATH PROCESSOR  04/17/2000 - 06/30/2002      FY02: \$0      Total: \$510,000  Prin. Invest.: G DONOHOE  Tech. Officer: GSFC/P YEH  CASE Category: 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 4441</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6843</b>  PETROLOGY OF PRESOLAR DUST AND ALTERATION IN CHONDRITE  04/28/1997 - 03/31/2002      FY02: \$0      Total: \$559,000  Prin. Invest.: D J RIETMEIJER  Tech. Officer: GSFC/J M BOYCE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 9704</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6851</b>  SOFTWARE DEVELOPMENT ENVIRONMENT FOR A RECONFIGURABLE  PROCESSOR  06/22/2000 - 07/31/2002      FY02: \$0      Total: \$483,010  Prin. Invest.: G W DONOHOE  Tech. Officer: GSFC/W H MILLER  CASE Category: 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 6999</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6844</b>  RIPARIAN ECOSYSTEM RESTORATION: EFFECTS OF FLOODING AND  VEGETATION TYPE ON ANNUAL EVAPOTRANSPIRATION  02/17/1998 - 02/14/2002      FY02: \$0      Total: \$700,000  Prin. Invest.: C N DAHM  Tech. Officer: GSFC/A C JANETOS  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9798</b>      <b>UNIV OF NEW MEXICO-ALBUQUERQUE</b>      <b>6852</b>  FORMATION AND ALTERATION HISTORIES OF CHONDRITIC MATERIAL  07/13/2000 - 06/30/2003      FY02: \$0      Total: \$125,000  Prin. Invest.: A BREARLEY  Tech. Officer: GSFC/J BOYCE  CASE Category: 11 - ASTRONOMY</p>

## NEW MEXICO

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10337 UNIV OF NEW MEXICO-ALBUQUERQUE 6853**  
 "ULTRA-LOW POWER RADIATION TOLERANT CMOS VLSI", RENEWAL OF  
 GRANT NAG5-9152, PROPOSAL CONTROL #5-35  
 02/07/2001 - 03/14/2002 FY02: \$0 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 6854**  
 NEUTRON AND HIGH ENERGY PARTICLE DETECTION WITH CRYOGENICS  
 CALORIMETERS  
 02/01/2001 - 01/14/2004 FY02: \$0 Total: \$132,997  
*Prin. Invest.:* S BOYD  
*Tech. Officer:* GSFC/M LI  
*CASE Category:* 13 - PHYSICS

**NAG 5 10372 UNIV OF NEW MEXICO-ALBUQUERQUE 6855**  
 SEMICONDUCTOR- RING -LASER-BASED ROTATION SENSORS PROPOSAL  
 #293.  
 02/15/2001 - 02/14/2004 FY02: \$0 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 6856**  
 SOLID STATE OPTICAL REFRIGERATORS FOR SPACE MISSIONS, PRO-  
 POSAL #214  
 03/27/2001 - 03/14/2004 FY02: \$0 Total: \$300,000  
*Prin. Invest.:* R I EPSTEIN  
*Tech. Officer:* GSFC/E R CANAVAN  
*CASE Category:* 13 - PHYSICS

**NAG 5 10918 UNIV OF NEW MEXICO-ALBUQUERQUE 6857**  
 HELIOSEISMIC METROLOGY  
 05/14/2001 - 05/31/2004 FY02: \$0 Total: \$114,667  
*Prin. Invest.:* S JEFFERIES  
*Tech. Officer:* GSFC/J GURMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 10960 UNIV OF NEW MEXICO-ALBUQUERQUE 6858**  
 HIGH PERFORMANCE ULTRA-LOW POWER RADIATION TOLERANT CMOS  
 VLSI  
 06/11/2001 - 06/14/2002 FY02: \$0 Total: \$407,038  
*Prin. Invest.:* G K MAKI  
*Tech. Officer:* GSFC/P YEP  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11496 UNIV OF NEW MEXICO-ALBUQUERQUE 6859**  
 MARTIAN IMPACT CRATER HYDROTHERMAL SYSTEMS, CLUES FROM THE  
 LONAR CRATER,INDIA, AND OTHER TERRESTRIAL  
 12/27/2001 - 12/31/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* H E NEWSOM  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11555 UNIV OF NEW MEXICO-ALBUQUERQUE 6860**  
 GEOCHRONOLOGY OF PLANETARY MATERIALS: A PETROLOGIC AP-  
 PROACH  
 01/09/2002 - 01/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L BORG  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11561 UNIV OF NEW MEXICO-ALBUQUERQUE 6861**  
 THE VIRTUAL COLLABORATIVE CLINIC: AN EARTH-BASED MODEL FOR  
 SPACE MEDI- CINE APPLICATIONS FOR INTERN  
 01/17/2002 - 01/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* P J BOYCE  
*Tech. Officer:* GSFC/L P CHAMBERS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11762 UNIV OF NEW MEXICO-ALBUQUERQUE 6862**  
 PETROLOGY OF HIERARCHICAL DUST ACCRETION IN AGGREGATE IDPS  
 02/19/2002 - 03/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* F J RIETMEIJER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11764 UNIV OF NEW MEXICO-ALBUQUERQUE 6863**  
 EXTRATERRESTRAL STUDIES USING NUCLEAR INTERACTIONS  
 02/19/2002 - 03/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R C REEDY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11862 UNIV OF NEW MEXICO-ALBUQUERQUE 6864**  
 MECHANISMS AND KINETICS OF AQUEOUS ALTERATION REACTIONS IN  
 CHONDRITIC METEORITES  
 03/11/2002 - 03/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* A BREARLY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11976 UNIV OF NEW MEXICO-ALBUQUERQUE 6865**  
 ACQUISITION OF AN ELECTRON MICROPROBE  
 04/08/2002 - 04/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J J PIPIKE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12364 UNIV OF NEW MEXICO-ALBUQUERQUE 6866**  
 THE STRUCTURAL CHANGES OF TROPICAL CYCLONES UPON INTERAC-  
 TION WITH VERTICAL WIND SHEAR  
 07/22/2002 - 07/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* E A RITCHIE-TYO  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1664 UNIV OF NEW MEXICO-ALBUQUERQUE 6867**  
 RESEARCH  
 06/01/2000 - 05/31/2003 FY02: \$0 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 6868**  
 BASIC AWARD FOR RESEARCH STUDY ENTITLED, "SURFACE PHYSICS  
 WITH HELIUM CRYSTALS IN MICROGRAVITY"  
 04/24/2001 - 04/29/2003 FY02: \$0 Total: \$80,000  
*Prin. Invest.:* A V BABKIN  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## NASA'S UNIVERSITY PROGRAM

NEW YORK

**NAG 9 995**            **UNIV OF NEW MEXICO-ALBUQUERQUE**            **6869**  
 DESIGN & DEVELOP INTELLIGENT BIOMIMETIC ROBOTS  
 03/12/1998 - 07/30/2001            FY02: \$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**            **6870**  
 STIMULUS FOR STUDENTS TO STUDY PRE COLL MATH  
 05/28/1998 - 07/31/2002            FY02: \$0            Total: \$297,351  
*Prin. Invest.:* H E NEWSOM  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1111**            **UNIV OF NEW MEXICO-ALBUQUERQUE**            **6871**  
 INST FOR THE STUDY OF BIOMARKERS IN ASTROMATERIALS  
 05/14/1999 - 05/13/2003            FY02: \$0            Total: \$150,000  
*Prin. Invest.:* J J PAPIKE  
*Tech. Officer:* JSC/E K GIBSON  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 9 1303**            **UNIV OF NEW MEXICO-ALBUQUERQUE**            **6872**  
 PHOTOVOLTAIC DIRECT DRIVE ICE STORAGE REFRIGERATION CONCEPT  
 06/06/2001 - 06/06/2002            FY02: \$0            Total: \$0  
*Prin. Invest.:* R FOSTER  
*Tech. Officer:* JSC/M K EWERT  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1324**            **UNIV OF NEW MEXICO-ALBUQUERQUE**            **6873**  
 ADVANCED CO2 REMOVAL SYSTEM USING AMINE FUNCTIONALIZED  
 MEMBRANES  
 07/20/2001 - 07/19/2003            FY02: \$0            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**            **6874**  
 MULTIPLE PR'S FOR THIS ACTION: 132514,132514F BREAKTHROUGH PRO-  
 PULSION PHYSICS  
 01/19/2000 - 04/09/2002            FY02: \$0            Total: \$170,353  
*Prin. Invest.:* K J MALLOY  
*Tech. Officer:* GRC/M G MILLIS  
*CASE Category:* 13 - PHYSICS

**NCC 1 02008**            **UNIV OF NEW MEXICO-ALBUQUERQUE**            **6875**  
 ADVANCED PARTICLE RADIATION TRANSPORT METHODS  
 02/04/2002 - 02/03/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* A PRINJA  
*Tech. Officer:* LARC/R C SINGLETERRY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 309**            **UNIV OF NEW MEXICO-ALBUQUERQUE**            **6876**  
 PERFORMING A REGIONAL ASSESSMENT & PROTOTYPING INTERNET  
 ACCESSIBLE MTPPE PRODUCTS TO THE UPPER RIO  
 04/09/1998 - 02/28/2003            FY02: \$0            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**            **6877**  
 PREPARATION FOR UNVIERSITY OF STUDENTS IN UNDEGRAD UATE  
 EDUCATION  
 07/01/1998 - 07/31/2003            FY02: \$0            Total: \$1,996,587  
*Prin. Invest.:* L CROSSEY  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC13 98002**            **UNIV OF NEW MEXICO-ALBUQUERQUE**            **6878**  
 AFFILIATED RESEARCH CENTER PROGRAM-COMMERCIAL RE- MOTE SENS-  
 ING PARTNERSHIPS WITH INDUSTRY  
 08/11/1998 - 08/10/2002            FY02: \$0            Total: \$574,681  
*Prin. Invest.:* S A MORAIN, S A MORAIN  
*Tech. Officer:* SSC/A PEEK  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 1 02017**            **UNIV OF NEW MEXICO-ALBUQUERQUE**            **6879**  
 GRADUATE STUDENT RESEARCHER PROGRAM (GSRP)  
 06/18/2002 - 06/30/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* R LAFARGE  
*Tech. Officer:* LARC/M V RUIZ  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 30227**            **UNIV OF NEW MEXICO-ALBUQUERQUE**            **6880**  
 CLIMATIC WATER BALANCE AND THE DYNAMICS OF PINYON- JUNIPER  
 09/19/2000 - 08/31/2001            FY02: \$0            Total: \$14,000  
*Prin. Invest.:* B MILNE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52915**            **UNIV OF NEW MEXICO-ALBUQUERQUE**            **6881**  
 A STUDY OF ROCKING RIDID BLOCKS  
 05/24/2002 - 06/30/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* T ROSS  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 44 - CIVIL ENGR

**NGT 9 31**            **UNIV OF NEW MEXICO-ALBUQUERQUE**            **6882**  
 TRAINING GRANT  
 06/03/1998 - 08/01/2001            FY02: \$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

**NAG 5 11863**            **BARNARD COLL**            **6883**  
 "8TH MEETING OF THE SOCIETY FOR RESEARCH ON BIOLOGICAL  
 RHYTHMS  
 03/12/2002 - 03/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* R SILVER  
*Tech. Officer:* GSFC/L P CHAMBERS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7473**            **CAYUGA COUNTY COMM COLL**            **6884**  
 DEFINING EARTH SYSTEM ENTERPRISE INFO NEEDS & PILOT PROGRAMS  
 FOR UTILIZATION BY LOCAL GOVERNMENT  
 06/15/1998 - 06/14/2003            FY02: \$0            Total: \$3,450,000  
*Prin. Invest.:* R BROWN  
*Tech. Officer:* GSFC/W CAMPBELL  
*CASE Category:* 22 - COMPUTER SCIENCE

## NEW YORK

## NASA'S UNIVERSITY PROGRAM

**NAG13 00043 CAYUGA COUNTY COMM COLL 6885**  
 SPATIAL INFORMATION TECHNOLOGY CENTER AT FULTON MONTGOMERY  
 COMM COLL  
 09/27/2000 - 09/26/2003 FY02: \$0 Total: \$1,491,400  
*Prin. Invest.:* R FRESTOPKIK  
*Tech. Officer:* SSC/D POWE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 00044 CAYUGA COUNTY COMM COLL 6886**  
 PHASE III: DEPLOYING ESE PILOT INFORMATION PROGRAMS FOR STATE &  
 LOCAL GOVERNMENT IN THE NORTHEAST  
 09/27/2000 - 09/26/2003 FY02: \$0 Total: \$10,110,000  
*Prin. Invest.:* R BROWER  
*Tech. Officer:* SSC/M MICK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 02053 CAYUGA COUNTY COMM COLL 6887**  
 SPATIAL INFORMATION TECHNOLOGY CENTER AT FULTON MONTGOMERY  
 COMM COLL THIRDEYEAR OPERATION  
 08/23/2002 - 09/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* M FLINTON  
*Tech. Officer:* SSC/W DAMAGGIO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11546 CITY UNIV NEW YORK KINGSBOROUGH COMM COLL 6888**  
 PETROLOGIC-GEOCHEMICAL STUDIES OF PRIMITIVE SOLAR SYSTEM MA-  
 TERIALS  
 01/08/2002 - 01/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M WEISBERG  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2268 CITY UNIV OF NY HERBERT H. LEHMAN COLL 6889**  
 MATHEMATICS, SCIENCE AND TECHNOLOGY WITH EXCELLENCE IN  
 RESEARCH: A SCIENCE AND TECHNOLOGY ENTRY PR  
 05/17/1999 - 08/31/2002 FY02: \$0 Total: \$300,000  
*Prin. Invest.:* A L ROTHSETIN  
*Tech. Officer:* GRC/R F LAWRENCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7532 CITY UNIV COLL OF NEW YORK YORK COLL 6890**  
 LET'S DO SCIENCE  
 06/11/1998 - 05/31/2001 FY02: \$0 Total: \$583,704  
*Prin. Invest.:* J SCHLEIN  
*Tech. Officer:* GSFC/M STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10152 CITY UNIV COLL OF NEW YORK YORK COLL 6891**  
 YORK COLL OBSERVATORY EDUCATIONAL OUTREACH SVC. TO THE COLL &  
 THE PUBLIC SCHOOL COMM  
 12/08/2000 - 12/31/2003 FY02: \$0 Total: \$154,000  
*Prin. Invest.:* M SPERGEL  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 1 2028 CITY UNIV OF NEW YORK CITY COLL 6892**  
 EIGENSTRUCTURE ASSIGNMENT FOR FAULT TOLERANT FLIGHT CONTROL  
 DESIGN  
 03/09/1998 - 01/31/2002 FY02: \$0 Total: \$298,796  
*Prin. Invest.:* K SOBEL  
*Tech. Officer:* LARC/S M JOSHI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2259 CITY UNIV OF NEW YORK CITY COLL 6893**  
 IRA (INSTAL RESEARCH AWARD) PROGRAM TRANSFER NAGW5-6952  
 01/19/2000 - 11/30/2002 FY02: \$0 Total: \$1,000,000  
*Prin. Invest.:* R A ALFANO  
*Tech. Officer:* LARC/N P BARNES, LARC/J C BARNES  
*CASE Category:* 13 - PHYSICS

**NAG 3 2074 CITY UNIV OF NEW YORK CITY COLL 6894**  
 PICOSECOND GATED OPTICAL IMAGING OF DENSE FUEL SPRAYS  
 09/17/1997 - 07/15/2001 FY02: \$0 Total: \$299,322  
*Prin. Invest.:* P P HO  
*Tech. Officer:* GRC/K J BREISACHER, GRC/L LIQU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2163 CITY UNIV OF NEW YORK CITY COLL 6895**  
 HIGH RESOLUTION EXPERIMENTS OF COMPRESSIBLE TURBULENCE  
 INTERACTING WITH EXPANSION OR SHOCK WAVES  
 08/24/1998 - 04/05/2001 FY02: \$0 Total: \$300,000  
*Prin. Invest.:* Y ANDREPOULOS  
*Tech. Officer:* GRC/D O DAVIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2167 CITY UNIV OF NEW YORK CITY COLL 6896**  
 USING SURFACTANTS TO ENHANCE THERMOCAPILLARY MIGRATION OF  
 BUBBLES & DROPS & FACILITATE DROP SPREAD  
 05/26/1998 - 09/30/2001 FY02: \$0 Total: \$299,820  
*Prin. Invest.:* C MALDARELLI, R BALASUBRAMANIAN  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2258 CITY UNIV OF NEW YORK CITY COLL 6897**  
 SCIENCE AND TECHNOLOGY TEACHERS FOR THE NEXT MILLENNIUM  
 PHASE II (MASTAP)  
 05/03/1999 - 03/22/2002 FY02: \$0 Total: \$600,000  
*Prin. Invest.:* L P JOHNSON  
*Tech. Officer:* GRC/R F LAWRENCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2259 CITY UNIV OF NEW YORK CITY COLL 6898**  
 ULTRASONIC ASSESSMENT OF IMPACT-INDUCED DAMAGE AND MICRO-  
 CRACKING IN POLYMER MATRIX COMPOSITES  
 05/05/1999 - 01/31/2003 FY02: \$0 Total: \$200,000  
*Prin. Invest.:* B LIAW  
*Tech. Officer:* GRC/K J BOWLES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2335 CITY UNIV OF NEW YORK CITY COLL 6899**  
 MOLECULAR DYNAMICS OF FLUID-SOLID SYSTEMS MOLECULAR DYNAM-  
 ICS OF FLUID-SOLID SYSTEMS  
 02/17/2000 - 11/30/2003 FY02: \$0 Total: \$75,085  
*Prin. Invest.:* D KOPLIK  
*Tech. Officer:* GRC/F P CHIARMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2698 CITY UNIV OF NEW YORK CITY COLL 6900**  
 PARTICLE SEGREGATION IN A FLOWING CONCENTRATED SUSPENSION  
 SUBJECT TO HIGH-GRADIENT STRONG ELECTRIC  
 01/29/2002 - 10/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D ACHRIVOS  
*Tech. Officer:* GRC/M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

## NASA'S UNIVERSITY PROGRAM

NEW YORK

**NAG 3 2720** CITY UNIV OF NEW YORK CITY COLL 6901  
 USING REMOBILIZING SURFICANTS TO ENHANCE THE THERM OCAPIL-  
 LARY MIGRATION OF BUBBLES RETARDED BY THE A  
 02/27/2002 - 09/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D MALDARELLI  
*Tech. Officer:* GRC/M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 4911** CITY UNIV OF NEW YORK CITY COLL 6902  
 ADVANCING MINORITIES IN SCIENCE AND ENGINEERING ED  
 07/16/1997 - 08/31/2001 FY02: \$0 Total: \$633,325  
*Prin. Invest.:* J BARBA  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7129** CITY UNIV OF NEW YORK CITY COLL 6903  
 ROBUST ALGORITHMS FOR IMAGE REGISTRATION  
 03/11/1998 - 09/30/2001 FY02: \$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 COLL 6904  
 HIGH DENSITY SOLID STATE MEMORIES  
 03/11/1998 - 03/14/2002 FY02: \$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 COLL 6905  
 WINDS, WATER BUDGETS, AND STABLE ISOTOPES IN TROPICAL CY-  
 CLONES USING TRMM AND QUICKSCAT  
 12/14/1998 - 12/14/2002 FY02: \$0 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 COLL 6906  
 THE STUDENT POLARIMETER AEROSOL & CLOUD EXPERIMENT (SPACE)  
 06/20/2000 - 12/31/2001 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* F MOSHARY  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10845** CITY UNIV OF NEW YORK CITY COLL 6907  
 ADVANCING MINORITIES IN SCIENCE AND ENGINEERING EDUCATION  
 05/01/2001 - 05/14/2002 FY02: \$0 Total: \$157,608  
*Prin. Invest.:* J BARBA  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11690** CITY UNIV OF NEW YORK CITY COLL 6908  
 CIO MEASUREMENTS & ANALYSIS IN THE NETWORK FOR THE DETECTION  
 OF STRATOSPHERIC CHANGE  
 01/31/2002 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* P M SOLOMON  
*Tech. Officer:* GSFC/M KURYLO  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11813** CITY UNIV OF NEW YORK CITY COLL 6909  
 COMBINING ACTIVE & PASSIVE OPTICAL REMOTE SENSING TECHNIQUES  
 TO MEASURE TROPOSPHERIC AEROSOL PROFILE  
 03/05/2002 - 03/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* B GROSS  
*Tech. Officer:* GSFC/B CARLSON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 607** CITY UNIV OF NEW YORK CITY COLL 6910  
 THE SYNERGISM OF ELECTORRHEOLOGICAL RESPONSE, DIELECTRO-  
 PHORESIS AND SHEAR-INDUCED DIFFUSION IN FLOW  
 04/07/1998 - 07/31/2002 FY02: \$0 Total: \$296,250  
*Prin. Invest.:* A ACRIVOS  
*Tech. Officer:* GRC/F D CHIARAMONTE  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 5 98** CITY UNIV OF NEW YORK CITY COLL 6911  
 AN URBAN COLLABORATION FOR NETWORK CONNECTIVITY AND INTER-  
 NET ACCESS  
 09/13/1995 - 11/14/2000 FY02: \$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 COLL 6912  
 COOPERATIVE RESEARCH & EDUCATION PROGRAM: INST ON CLIMATE  
 AND PLANETS  
 06/23/1998 - 12/31/2000 FY02: \$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 COLL 6913  
 INTEGRATION OF RESEARCH AND EDUCATION IN REMOTE SENSING AND  
 ENVIRONMENTAL CLIMATE RESEA  
 07/15/1998 - 06/30/2003 FY02: \$0 Total: \$2,000,000  
*Prin. Invest.:* R KHANBILVARDI  
*Tech. Officer:* HQ/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 425** CITY UNIV OF NEW YORK CITY COLL 6914  
 ATMOSPHERIC/OCEAN & ENVIRONMENTAL SCIENCE RESEARCH PRO-  
 GRAM PHASE II. RESEARCH FOUNDATION OF CUNY  
 08/27/1999 - 08/31/2001 FY02: \$0 Total: \$0  
*Prin. Invest.:* L P JOHNSON  
*Tech. Officer:* GSFC/J HANSEN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 5 427** CITY UNIV OF NEW YORK CITY COLL 6915  
 AN INTEGRATED ATMOSPHERIC, WATER & LAND-COVER/LAND-USE RE-  
 SEARCH & TRAINING PROGRAM COMBINING ON-SIT  
 09/03/1999 - 08/31/2001 FY02: \$0 Total: \$0  
*Prin. Invest.:* F MOSHAIR  
*Tech. Officer:* GSFC/A LACIS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 520** CITY UNIV OF NEW YORK CITY COLL 6916  
 COOPERATIVE RESEARCH & EDUCATION PROGRAM: INST. ON CLIMATE &  
 PLANETS.  
 11/02/2000 - 12/31/2002 FY02: \$0 Total: \$349,123  
*Prin. Invest.:* N A PARKER  
*Tech. Officer:* GSFC/L TRAVIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## NEW YORK

## NASA'S UNIVERSITY PROGRAM

**NCC 5 530** CITY UNIV OF NEW YORK CITY COLL 6917  
 AN URBAN COLLABORATION FOR NETWORKS CONNECTIVITY & INTERNET  
 ACCESS/MUSPINNRTS PROGRAM.  
 02/01/2001 - 01/31/2004 FY02: \$0 Total: \$399,765  
*Prin. Invest.:* S AUSTIN  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10645** CITY UNIV OF NEW YORK SYSTEM 6918  
 EVALUATION OF SNOW WATER EQUIVALENT ACROSS GRASS LAND RE-  
 GIONS - HUNTER COLL  
 03/20/2001 - 06/30/2001 FY02: \$0 Total: \$0  
*Prin. Invest.:* A FREI  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12280** CITY UNIV OF NEW YORK SYSTEM 6919  
 ADVANCING MINORITIES IN SCIENCE AND ENGINEERING EDUCATION  
 06/11/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J BARBA  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 654** CITY UNIV OF NEW YORK SYSTEM 6920  
 TECHNOLOGY INTEGRATED PROGRAM FOR PREPARATION OF T OMOR-  
 ROW'S MSET TEACHERS  
 08/19/2002 - 08/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* M WEINER  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2393** CLARKSON UNIV 6921  
 QUANTIFICATION OF ENERGY RELEASE IN COMPOSITE STRUC TURES  
 04/18/2000 - 09/30/2002 FY02: \$0 Total: \$49,529  
*Prin. Invest.:* D MINNETYAN  
*Tech. Officer:* GRC/C C CHAMIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2394** CLARKSON UNIV 6922  
 TEST-FREE FRACTURE TOUGHNESS, REF. #00169 TEST-FREE FRACTURE  
 TOUGHNESS, REF. #00169  
 04/18/2000 - 09/30/2002 FY02: \$0 Total: \$50,554  
*Prin. Invest.:* D MINNETYAN  
*Tech. Officer:* GRC/C C CHAMIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2609** CLARKSON UNIV 6923  
 COMPUTATIONAL SIMULATION OF COMPOSITE STRUCTURAL FA TIGUE  
 05/16/2001 - 05/31/2004 FY02: \$0 Total: \$25,118  
*Prin. Invest.:* D MINNETYAN  
*Tech. Officer:* GRC/C C CHAMIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2703** CLARKSON UNIV 6924  
 MOTION OF DROPS ON SURFACES WITH WETTABILITY GRADIENTS  
 02/07/2002 - 11/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R SUBRAMAIAH  
*Tech. Officer:* GRC/M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2717** CLARKSON UNIV 6925  
 CONSTITUTIVE RELATION IN TRANSITIONAL GRANULAR FLOW WS, REF  
 #01233  
 02/27/2002 - 12/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D H SHEN  
*Tech. Officer:* GRC/R D GREEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 8 1482** CLARKSON UNIV 6926  
 R/S IMPROVED CRYSTAL QUALITY BY DETACHED SOLIDIFICATION IN  
 MICROGRAVITY  
 02/12/1998 - 01/31/2003 FY02: \$0 Total: \$340,417  
*Prin. Invest.:* L L REGEL  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1703** CLARKSON UNIV 6927  
 RESIDUAL GAS EFFECTS ON DETACHED SOLIDIFICATION IN MICROGRAV-  
 ITY  
 06/22/2000 - 11/28/2003 FY02: \$0 Total: \$135,000  
*Prin. Invest.:* W R WILCOX  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 12 - CHEMISTRY

**NGT 1 52214** CLARKSON UNIV 6928  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) YEAR 1  
 06/10/1999 - 06/30/2002 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* M N GLAUSER  
*Tech. Officer:* LARC/C S YAO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52222** CLARKSON UNIV 6929  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/29/1999 - 06/30/2002 FY02: \$0 Total: \$56,001  
*Prin. Invest.:* R F SCHMIT, M GLAUSER  
*Tech. Officer:* LARC/J JUANG, LARC/L HORTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1345** COLUMBIA UNIV 6930  
 DEVELOPMENT & FUNCTION OF THE MOUSE VESTIBULAR SYSTEM IN THE  
 ABSENCE OF GRAVITY PERCEPTION  
 07/16/1999 - 07/14/2003 FY02: \$0 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 6931  
 X-RAY ASTRONOMY  
 07/23/1990 - 06/30/2001 FY02: \$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 6932  
 SN 1987A: FORMATION OF A SUPERNOVA REMNANT  
 12/11/1996 - 12/14/2001 FY02: \$0 Total: \$583,500  
*Prin. Invest.:* A P CROTTS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY



<b>NAG 5 4649</b>	<b>COLUMBIA UNIV</b>	<b>6933</b>	<b>NAG 5 6450</b>	<b>COLUMBIA UNIV</b>	<b>6941</b>
EARLY DIFFERENTIATION OF THE MOON: EXPERIMENTAL AND			PRODUCTION AND ANALYSIS OF GLOBAL WAVE AND PHOTOSYNTHETICALLY ACTIVE SURFACE IRRADIANCE FIELDS U		
06/11/1997 - 11/30/2002	FY02: \$0	Total: \$710,000	10/31/1997 - 06/30/2002	FY02: \$0	Total: \$485,933
<i>Prin. Invest.:</i> D LONGHI			<i>Prin. Invest.:</i> J A BISHOP		
<i>Tech. Officer:</i> GSFC/D NAVA			<i>Tech. Officer:</i> GSFC/J A MARRA		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 33 - OCEANOGRAPHY		
<b>NAG 5 5123</b>	<b>COLUMBIA UNIV</b>	<b>6934</b>	<b>NAG 5 6876</b>	<b>COLUMBIA UNIV</b>	<b>6942</b>
X-RAY SPECTROSCOPIC LABORATORY EXPERIMENTS IN SUPPORT OF THE NASA X-RAY ASTRONOMY PROGRAM			INFLUENCE OF ARCTIC SEA ICE ON NATURAL AND ANTHROPOGENICALLY-INDUCED CLIMATE VARIABILITY		
02/20/1997 - 05/31/2003	FY02: \$0	Total: \$708,400	01/30/1998 - 03/31/2003	FY02: \$0	Total: \$235,200
<i>Prin. Invest.:</i> S M KAHN			<i>Prin. Invest.:</i> D G MARTINSON		
<i>Tech. Officer:</i> GSFC/W B JOHNSON			<i>Tech. Officer:</i> GSFC/S GOGINENI		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 5254</b>	<b>COLUMBIA UNIV</b>	<b>6935</b>	<b>NAG 5 6877</b>	<b>COLUMBIA UNIV</b>	<b>6943</b>
HIGH-PERFORMANCE MULTILAYER COATINGS FOR THE NEXT GENERATION OF HIGH-RESOLUTION X-RAY OPTICS			MONSOONS, TIDAL MIXING AND PRODUCTIVITY IN THE BAN DA SEA, INDONESIA		
02/22/2000 - 02/03/2003	FY02: \$0	Total: \$380,000	02/10/1998 - 12/31/2001	FY02: \$0	Total: \$554,232
<i>Prin. Invest.:</i> D L WINDT			<i>Prin. Invest.:</i> T TAKAHASHI		
<i>Tech. Officer:</i> GSFC/W B JOHNSON			<i>Tech. Officer:</i> GSFC/J MARRA		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 5260</b>	<b>COLUMBIA UNIV</b>	<b>6936</b>	<b>NAG 5 7044</b>	<b>COLUMBIA UNIV</b>	<b>6944</b>
THERMALLY-FORMED GALASS OPTICS FOR X-RAY AND GAMMA-RAY MISIONS			ASSESSING CURRENT AND POTENTIAL USE OF CLIMATE FOR ECAS TS FOR COMMUNAL FARM MANAGEMENT IN ZIMBABWE		
02/18/2000 - 02/10/2003	FY02: \$0	Total: \$374,000	03/05/1998 - 08/31/2001	FY02: \$0	Total: \$102,621
<i>Prin. Invest.:</i> C J HAILEY			<i>Prin. Invest.:</i> M A CANE		
<i>Tech. Officer:</i> GSFC/W B JOHNSON			<i>Tech. Officer:</i> GSFC/D RIND		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 5261</b>	<b>COLUMBIA UNIV</b>	<b>6937</b>	<b>NAG 5 7461</b>	<b>COLUMBIA UNIV</b>	<b>6945</b>
MEASUREMENTS, CALCULATIONS, AND ASTROPHYSICAL IMPLICATIONS OF NEW LOW TEMPERATURE DIELECTRONIC			POLYNYAS, PREDATORS AND PACK ICE VARIABILITY IN THE SOUTHERN OCEAN		
02/11/2000 - 02/10/2003	FY02: \$0	Total: \$233,040	10/26/1998 - 12/31/2002	FY02: \$0	Total: \$249,868
<i>Prin. Invest.:</i> D W SAVIN			<i>Prin. Invest.:</i> S S JACOBS		
<i>Tech. Officer:</i> GSFC/W B JOHNSON			<i>Tech. Officer:</i> GSFC/S GOGINENI		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 5275</b>	<b>COLUMBIA UNIV</b>	<b>6938</b>	<b>NAG 5 7687</b>	<b>COLUMBIA UNIV</b>	<b>6946</b>
FUNDING FOR PHASE 1 OF SPACE PROJECT FUNDING FOR PHASE 1 OF SPACE PROJECT			SURFACE SOLAR RADIATION SOLAR BASE		
04/17/2000 - 04/13/2006	FY02: \$0	Total: \$299,510	09/17/1998 - 08/31/2001	FY02: \$0	Total: \$300,429
<i>Prin. Invest.:</i> B CAIRNS			<i>Prin. Invest.:</i> G KUKLA		
<i>Tech. Officer:</i> GSFC/D L PIERCE			<i>Tech. Officer:</i> GSFC/M IMISHCHENKO		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 5280</b>	<b>COLUMBIA UNIV</b>	<b>6939</b>	<b>NAG 5 7737</b>	<b>COLUMBIA UNIV</b>	<b>6947</b>
DEVELOPMENT OF XENON TIME PROJECTION CHAMBERS FOR PRECISE COMPTON IMAGING OF ASTROPHYSICAL LINES			SCIENCE AND CALIBRATION SUPPORT FOR THE REFLECTING GRATING SPECTROMETER ON THE X-RAY MULTI-MIRROR M		
05/31/2000 - 12/31/2002	FY02: \$0	Total: \$757,500	10/01/1998 - 03/31/2004	FY02: \$0	Total: \$2,033,750
<i>Prin. Invest.:</i> E APRILE			<i>Prin. Invest.:</i> S M KAHN		
<i>Tech. Officer:</i> GSFC/B A MERRITT			<i>Tech. Officer:</i> GSFC/N E WHITE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 6035</b>	<b>COLUMBIA UNIV</b>	<b>6940</b>	<b>NAG 5 7814</b>	<b>COLUMBIA UNIV</b>	<b>6948</b>
SURFING THE HIGH DENSITY UNIVERSE			NEW ASCA AND ROSAT OBSERVATIONS OF ROTATION-POWERED PULSARS - ADP 98		
10/03/1997 - 09/30/2002	FY02: \$0	Total: \$486,800	12/03/1998 - 12/14/2001	FY02: \$0	Total: \$72,728
<i>Prin. Invest.:</i> D HELFAND			<i>Prin. Invest.:</i> J P HALPERN		
<i>Tech. Officer:</i> GSFC/D K WEST			<i>Tech. Officer:</i> GSFC/D K WEST		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		

## NEW YORK

## NASA'S UNIVERSITY PROGRAM

**NAG 5 7922** COLUMBIA UNIV 6949  
EFFECT OF HISTORICAL AND PROJECTED CLIMATE CHANGE ON SOUTH-  
ERN OCEAN SEA ICE AND ANTARCTIC MASSBALAN  
12/21/1998 - 12/31/2002 FY02: \$0 Total: \$93,000  
*Prin. Invest.:* D MARTINSON  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7935** COLUMBIA UNIV 6950  
THE NATURE OF RADIO-QUIET X-RAY PULSARS IN SUPERNOVA REM-  
NANTS \_\_\_\_ (L TSA-98)  
12/14/1998 - 12/31/2003 FY02: \$0 Total: \$339,196  
*Prin. Invest.:* E V GOTTHELF  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7977** COLUMBIA UNIV 6951  
ACCRETION RATES IN CATAclySMIC VARIABLES (ADP98)  
12/23/1998 - 12/31/2001 FY02: \$0 Total: \$106,810  
*Prin. Invest.:* J O PATTERSON  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8675** COLUMBIA UNIV 6952  
HYDRODYNAMIC INSTABILITIES AND EDDY-MEAN FLOW INTERACTION IN  
THE SOUTHERN OCEAN  
07/08/1999 - 07/14/2001 FY02: \$0 Total: \$131,482  
*Prin. Invest.:* D L WITTER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8725** COLUMBIA UNIV 6953  
SEASONAL AND INTERANNUAL VARIABILITY OF AIR-SEA-ICE COUPLING  
PROCESSES IN THE SUBPOLAR SOUTHERN OCEAN  
08/04/1999 - 08/31/2002 FY02: \$0 Total: \$184,254  
*Prin. Invest.:* X YUAN  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8848** COLUMBIA UNIV 6954  
FIRST YEAR FUNDING FOR SENH99-0121, LANDSLIDE MECHANISMS &  
HAZARD ASSESSMENT IN MOUNTAIN REGIONS  
12/16/1999 - 12/31/2002 FY02: \$0 Total: \$315,761  
*Prin. Invest.:* J K WEISSEL  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9056** COLUMBIA UNIV 6955  
CONTINENT-WIDE ESTIMATION AND CALIBRATION OF CATCHMENT HY-  
DROLOGIC PARAMETERS USING SRTM AND LASER  
02/15/2000 - 02/28/2003 FY02: \$0 Total: \$71,693  
*Prin. Invest.:* C P STARK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9060** COLUMBIA UNIV 6956  
IMPROVED ESTIMATES OF ANTARCTIC ICE SHEET VOLUME BASED ON  
INVERSION OF GRAVITY DATA & OTHER POTENTIALS  
02/10/2000 - 02/14/2002 FY02: \$0 Total: \$139,000  
*Prin. Invest.:* R E BELL  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9094** COLUMBIA UNIV 6957  
TESTING FOR X-RAY PERIODICITIES IN SEYFERT GALAXIES - ADP 99  
02/18/2000 - 02/28/2002 FY02: \$0 Total: \$22,152  
*Prin. Invest.:* J P HALPERN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9095** COLUMBIA UNIV 6958  
ASCA OBSERVATIONS OF HIGH-ENERGY GAMMA-RAY SOURCES - ADP 99  
02/18/2000 - 02/28/2002 FY02: \$0 Total: \$49,911  
*Prin. Invest.:* J P HALPERN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9136** COLUMBIA UNIV 6959  
ON THE EVOLUTION OF YOUNG NEUTRON STARS: ANOMALOUS COMPACT  
OBJECTS WITHIN SUPERNOVA REMNANTS  
03/01/2000 - 02/28/2003 FY02: \$0 Total: \$102,862  
*Prin. Invest.:* E V GOTTHELF  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9581** COLUMBIA UNIV 6960  
UNRAVELING THE PHYSICAL CONDITIONS IN THE SOLAR ATMOSPHERE:  
EXPERIMENTAL AND THEORETICAL RATES FOR  
05/09/2000 - 04/30/2003 FY02: \$0 Total: \$206,052  
*Prin. Invest.:* D W SAVIN  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9615** COLUMBIA UNIV 6961  
HIGH-PERFORMANCE MULTILAYER X-RAY OPTICS FOR SOLAR PHYSICS  
05/23/2000 - 04/30/2003 FY02: \$0 Total: \$144,069  
*Prin. Invest.:* D WINDT  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9653** COLUMBIA UNIV 6962  
CONSOLIDATING THE VELA-REGION 1.809 MEV RESULTS  
05/31/2000 - 08/31/2001 FY02: \$0 Total: \$6,500  
*Prin. Invest.:* U OBERLACK  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9759** COLUMBIA UNIV 6963  
ASSIMILATION OF REMOTELY SENSED SNOW OBSERVATIONS INTO THE  
NSIPP LAND SURFACE MODEL  
06/26/2000 - 06/30/2003 FY02: \$0 Total: \$103,447  
*Prin. Invest.:* M STIEGLITZ  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9870** COLUMBIA UNIV 6964  
SURVEYING THE GALACTIC PLANE WITH XMM  
09/29/2000 - 09/30/2002 FY02: \$0 Total: \$61,000  
*Prin. Invest.:* D HELFAND  
*Tech. Officer:* GSFC/P ATKINS  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 9898</b>                      <b>COLUMBIA UNIV</b>                      <b>6965</b>  THE NATURE OF ISOLATED NEUTRON STARS AND THE EQUATION OF STATE AT SUPRA-NUCLEAR DENSITY  09/06/2000 - 09/14/2002                      FY02: \$0                      Total: \$8,500  Prin. Invest.: F B PAERELS  Tech. Officer: GSFC/R F MUSHOTZKY  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11049</b>                      <b>COLUMBIA UNIV</b>                      <b>6973</b>  RECOMBINATION RATES OF METHYL RADICALS AT LOW TEMPERATURES IN HYDROGEN. (LOW TEMPERATURE PHOTOCHEMISTRY)  06/18/2001 - 05/31/2004                      FY02: \$0                      Total: \$65,000  Prin. Invest.: R BERSOHN  Tech. Officer: GSFC/D J BOGAN  CASE Category: 12 - CHEMISTRY</p>
<p><b>NAG 5 9911</b>                      <b>COLUMBIA UNIV</b>                      <b>6966</b>  AN ULTRA-MAGNETIZED X-RAY PULSAR IN THE SUPERNOVA REMNANT KES 73  09/05/2000 - 09/30/2002                      FY02: \$0                      Total: \$27,365  Prin. Invest.: E V GOTTHELF  Tech. Officer: GSFC/R M MUSHOTZKY  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11215</b>                      <b>COLUMBIA UNIV</b>                      <b>6974</b>  MESOSCALE CIRCULATION AND ECOSYSTEM PROCESSES OFF WESTERN AUSTRALIA: A SYNERGISTIC APPROACH OF REMOTE SENSING  08/13/2001 - 09/30/2003                      FY02: \$0                      Total: \$243,481  Prin. Invest.: O ANDERSON  Tech. Officer: GSFC/J MARRA  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 9928</b>                      <b>COLUMBIA UNIV</b>                      <b>6967</b>  COMPOSITE SUPERNOVA REMNANTS: HOME TO THE YOUNGEST NEUTRON STARS  09/07/2000 - 09/14/2002                      FY02: \$0                      Total: \$23,459  Prin. Invest.: D J HELFAND  Tech. Officer: GSFC/D F MUSHOTZKY  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11357</b>                      <b>COLUMBIA UNIV</b>                      <b>6975</b>  TIME VARIATIONS OF THE NET AIR-SEA CO2 FLUX  09/25/2001 - 09/30/2004                      FY02: \$0                      Total: \$87,100  Prin. Invest.: T TAKAHASHI  Tech. Officer: GSFC/J MARRA  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 9929</b>                      <b>COLUMBIA UNIV</b>                      <b>6968</b>  AN X-RAY SPECTROSCOPIC DETERMINATION OF THE HUBBLE CONSTANT  09/07/2000 - 09/14/2002                      FY02: \$0                      Total: \$24,619  Prin. Invest.: F B PAERLES  Tech. Officer: GSFC/D F MUSHOTZKY  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11530</b>                      <b>COLUMBIA UNIV</b>                      <b>6976</b>  INTEGRATED CIRRUS REMOTE SENSING USING MULTIANGLE, MULTISPECTRAL POLARIMETRIC MEASUREMENTS  01/09/2002 - 11/30/2003                      FY02: \$0                      Total: \$0  Prin. Invest.: B CAIRNS  Tech. Officer: GSFC/D ANDERSON  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 9946</b>                      <b>COLUMBIA UNIV</b>                      <b>6969</b>  TAKING THE PULSE OF OUR YOUNGEST NEIGHBORHOOD NEUTRON STAR  09/06/2000 - 09/14/2002                      FY02: \$0                      Total: \$32,900  Prin. Invest.: D J HELFAND  Tech. Officer: GSFC/R F MUSHOTZKY  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11697</b>                      <b>COLUMBIA UNIV</b>                      <b>6977</b>  MODELING STUDY OF THE EFFECT OF CARBONACEOUS INCLUSIONS AND SULFATE AEROSOLS ON THE CLOUD RADIATIVE FORCING  02/07/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  Prin. Invest.: S MENON  Tech. Officer: GSFC/P R HOUSER  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 9950</b>                      <b>COLUMBIA UNIV</b>                      <b>6970</b>  A POSSIBLE IDENTIFICATION OF THE EGRET SOURCE 2EG J2227+6122  09/07/2000 - 08/31/2002                      FY02: \$0                      Total: \$30,662  Prin. Invest.: J P HALPERN  Tech. Officer: GSFC/R MUSHOTZKY  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 11799</b>                      <b>COLUMBIA UNIV</b>                      <b>6978</b>  SCALING ANALYSIS &amp; CATCHMENT PROCESSING OF TOPOGRAPHIC DATA FOR A GCM LAND SURFACE MODEL  03/01/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  Prin. Invest.: C P STARK  Tech. Officer: GSFC/R KOSTER  CASE Category: 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 10082</b>                      <b>COLUMBIA UNIV</b>                      <b>6971</b>  THE X-RAY TEMPERATURE FUNCTION AND STRUCTURE OF CLUSTERS AT Z=0.6-1  11/06/2000 - 11/14/2002                      FY02: \$0                      Total: \$5,625  Prin. Invest.: C A SCHARF  Tech. Officer: GSFC/R MUSHOTZKY  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 12074</b>                      <b>COLUMBIA UNIV</b>                      <b>6979</b>  EARLY DIFFERENTIATION OF THE MOON: EXPERIMENTAL &amp; MODELLING STUDIES  04/23/2002 - 05/31/2005                      FY02: \$0                      Total: \$0  Prin. Invest.: J LONGHI  Tech. Officer: GSFC/J BOYCE  CASE Category: 12 - CHEMISTRY</p>
<p><b>NAG 5 10607</b>                      <b>COLUMBIA UNIV</b>                      <b>6972</b>  USING A CLOUD-RESOLVING MODEL TO UNDERSTAND LARGE-SCALE VARIATIONS IN TROPICAL RAINFALL: A NOVEL APPROACH  03/15/2001 - 03/14/2004                      FY02: \$0                      Total: \$95,576  Prin. Invest.: A SOBEL  Tech. Officer: GSFC/M WEI  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 12586</b>                      <b>COLUMBIA UNIV</b>                      <b>6980</b>  THE ANTARCTIC DIPOLE: INTERACTION WITH POLAR/EXTRA POLAR CLIMATE VARIATIONS AND ITS PREDICTION  09/18/2002 - 09/14/2005                      FY02: \$0                      Total: \$0  Prin. Invest.: X YUAN  Tech. Officer: GSFC/W ABDALATI  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>

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## NASA'S UNIVERSITY PROGRAM

**NAG 9 1148** COLUMBIA UNIV 6981  
 INDIVIDUAL SUSCEPTIBILITY TO RADIATION EFFECTS  
 09/14/1999 - 09/30/2003 FY02: \$0 Total: \$734,218  
*Prin. Invest.:* E J HALL  
*Tech. Officer:* JSC/F A CUCINOTTA  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAS 2 02039** COLUMBIA UNIV 6982  
 TRANSLATION OF DISEASE MARKERS INTO BULLUMINESCENT SIGNALS-  
 BASIC RESEARCH  
 12/20/2001 - 11/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* D W LANDY  
*Tech. Officer:* ARC/P P FUNG  
*CASE Category:* 56 - MEDICL

**NAS 5 97164** COLUMBIA UNIV 6983  
 ACRIM SCIENCE TEAM  
 04/21/1997 - 04/20/2003 FY02: \$0 Total: \$2,049,807  
*Prin. Invest.:* R C WILSON  
*Tech. Officer:* GSFC/V GRIFFIN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAS 5 98162** COLUMBIA UNIV 6984  
 EOSDIS SEDAC  
 07/01/1998 - 06/30/2003 FY02: \$0 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 6985  
 SEASONAL-TO-INTERANNUAL PREDICTION PROJECT  
 07/21/1997 - 06/30/2001 FY02: \$0 Total: \$220,892  
*Prin. Invest.:* M STIEGLITZ  
*Tech. Officer:* GSFC/R KOSTER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 485** COLUMBIA UNIV 6986  
 MODELING OF OCEAN CIRCULATION AND ATMOSPHERIC CHEMICAL SYS-  
 TEMS.  
 03/30/2000 - 06/30/2001 FY02: \$0 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 6987  
 INTERDISCIPLINARY RESEARCH ON CLIMATE VARIABILITY AND CLIMATE  
 CHANGE  
 07/21/2000 - 07/31/2003 FY02: \$0 Total: \$1,302,543  
*Prin. Invest.:* M CHANDLER  
*Tech. Officer:* GSFC/D RIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 510** COLUMBIA UNIV 6988  
 LAND SURFACE MODEL DEVELOPMENT FOR THE NASA SEASONAL TO  
 INTERANNUAL PREDICTION PROJECT  
 08/21/2000 - 08/14/2003 FY02: \$0 Total: \$177,298  
*Prin. Invest.:* M STIEGLITZ  
*Tech. Officer:* GSFC/R KOSTER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 546** COLUMBIA UNIV 6989  
 INTERDISCIPLINARY GLOBAL CHANGE RESEARCH  
 04/04/2001 - 03/31/2004 FY02: \$0 Total: \$862,710  
*Prin. Invest.:* L M DRUYAN  
*Tech. Officer:* GSFC/A LACIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 547** COLUMBIA UNIV 6990  
 MODELING OF OCEAN CIRCULATION AND ATMOSPHERIC CHEMICAL  
 SYSTEMS  
 04/06/2001 - 03/31/2004 FY02: \$0 Total: \$927,415  
*Prin. Invest.:* C K CHU  
*Tech. Officer:* GSFC/R B STOTHERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 549** COLUMBIA UNIV 6991  
 "ICP: RESEARCH EDUCATION PROGRAM"  
 04/09/2001 - 05/31/2002 FY02: \$0 Total: \$169,981  
*Prin. Invest.:* C HARRIS  
*Tech. Officer:* GSFC/B CARLSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 558** COLUMBIA UNIV 6992  
 MODELING OF ATMOSPHERIC CIRCULATION AND CHEMISTRY.  
 06/06/2001 - 02/28/2004 FY02: \$0 Total: \$329,203  
*Prin. Invest.:* L M POLVANI  
*Tech. Officer:* GSFC/R STOTHERS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 30167** COLUMBIA UNIV 6993  
 VARIABILITY OF BIOGEOCHEMICAL REGIMES IN THE ROSS SEA: AN  
 ANALYSIS USING HIGH RESOLUTION SEA SURFACE  
 09/02/1998 - 08/31/2002 FY02: \$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 6994  
 HIGH RESOLUTION MILLENNIAL SCALE HISTORY OF HUDSON VALLEY, NY  
 FORESTS: CLIMATE & ENVIRONMENTAL INFL  
 09/19/2000 - 08/31/2002 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* D PETEET  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30374** COLUMBIA UNIV 6995  
 INCREASING HAZARD IN GREATER CARACAS, VENEZUELA: I NTERAC-  
 TIONS OFS NEOTECTONICS, LANDSLIDES AN  
 08/13/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* W MENKE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30391** COLUMBIA UNIV 6996  
 SENSITIVITY AND RESPONSE OF ICE-OCEAN-ATMOSPHERE I NTERAC-  
 TIONS IN THE SOUTH PACIFIC SECTOR OF THE  
 08/14/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* D MARTINSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

<p><b>NGT 5 30442</b>                      <b>COLUMBIA UNIV</b>                      <b>6997</b>  IMPACTS OF THE NORTH ATLANTIC OSCILLATION ON PLANK TONIC ECOSYSTEMS AND THE CARBON CYCLE:  08/21/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> M VISBECK  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 3 1993</b>                      <b>CORNELL UNIV</b>                      <b>7005</b>  SIMULATION OF CRACK GROWTH IN SPIRAL-BEVEL GEARS  12/11/1996 - 01/01/2002                      FY02: \$0                      Total: \$289,961  <i>Prin. Invest.:</i> A R INGRAFFEA  <i>Tech. Officer:</i> GRC/D G LOWICKI  <i>CASE Category:</i> 46 - MECHANICAL ENGR</p>
<p><b>NGT 5 30465</b>                      <b>COLUMBIA UNIV</b>                      <b>6998</b>  AN IMPROVED SCHEME FOR INITIALIZATION OF AN ENSO F ORECASTING MODEL:USINGSINGULAR VECTOR ANALYSIS TO  08/21/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> M A CANE  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 3 2112</b>                      <b>CORNELL UNIV</b>                      <b>7006</b>  STUDIES OF GAS-PARTICLE INTERATIONS IN A MICROGRAVITY FLOW CELL  01/15/1998 - 12/31/2001                      FY02: \$0                      Total: \$686,517  <i>Prin. Invest.:</i> M LOUGE  <i>Tech. Officer:</i> GRC/R HAKIMAZADEH  <i>CASE Category:</i> 46 - MECHANICAL ENGR</p>
<p><b>NGT 5 50323</b>                      <b>COLUMBIA UNIV</b>                      <b>6999</b>  PREDICTION OF MOSQUITO ABUNDANCE WITH A LAND SURFACE HYDROLOGY MODEL &amp; LANDSAT THERMATIC MAPPER IMA  08/17/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  <i>Prin. Invest.:</i> M CANE  <i>Tech. Officer:</i> GSFC/M WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 3 2224</b>                      <b>CORNELL UNIV</b>                      <b>7007</b>  HIGH PRESSURE COMBUSTION OF AN UNSUPPORTED SOOTING FUEL DROPLET IN MICROGRAVITY  01/12/1999 - 11/11/2002                      FY02: \$0                      Total: \$211,972  <i>Prin. Invest.:</i> T AVEDISIAN  <i>Tech. Officer:</i> GRC/D L DIETRICH  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NGT 5 50353</b>                      <b>COLUMBIA UNIV</b>                      <b>7000</b>  X-RAY SPECTROSCOPIC INVESTIGATIONS OF OUTFLOWS IN ACTIVE GALACTIC NUCLEI  05/11/2001 - 06/30/2004                      FY02: \$0                      Total: \$22,000  <i>Prin. Invest.:</i> S KAHN  <i>Tech. Officer:</i> GSFC/K E BLANDING  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 3 2349</b>                      <b>CORNELL UNIV</b>                      <b>7008</b>  TURBULENCE-INDUCED COALESCENCE OF AEROSOL PARTICLES  03/23/2000 - 11/30/2003                      FY02: \$0                      Total: \$145,000  <i>Prin. Invest.:</i> D L KOCH  <i>Tech. Officer:</i> GRC/H K NAHRA  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NGT 5 50392</b>                      <b>COLUMBIA UNIV</b>                      <b>7001</b>  HARD X-RAY OBSERVATION OF YOUNG SUPERNOVA REMNANTS STUDENT: JAMES CHONKO  05/23/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> C HAILEY  <i>Tech. Officer:</i> HQ/K BLANDING  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 3 2353</b>                      <b>CORNELL UNIV</b>                      <b>7009</b>  SHEET FLOWS, AVALANCHES, AND DUNE EVOLUTION ON EARTH AND MARS  03/14/2000 - 11/30/2003                      FY02: \$0                      Total: \$103,140  <i>Prin. Invest.:</i> D T JENKINS  <i>Tech. Officer:</i> GRC/F P CHIARMONTE  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 1 01034</b>                      <b>CORNELL UNIV</b>                      <b>7002</b>  NANOTUBE SENSORS  02/28/2001 - 04/30/2002                      FY02: \$0                      Total: \$100,000  <i>Prin. Invest.:</i> P L MCEUEN  <i>Tech. Officer:</i> LARC/S K KAHNG  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NAG 3 2440</b>                      <b>CORNELL UNIV</b>                      <b>7010</b>  RAPIDLY SHEARED BUBBLY SUSPENSION RAPIDLY SHEARED BUBBLY SUSPENSION  05/31/2000 - 04/30/2005                      FY02: \$0                      Total: \$273,000  <i>Prin. Invest.:</i> D L KOCH  <i>Tech. Officer:</i> GRC/H K NAHRA  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 1 02001</b>                      <b>CORNELL UNIV</b>                      <b>7003</b>  DEVELOPMENT OF TECHNOLOGIES FOR MODELING DAMAGE IN STIFFENED THIN SHELL STRUCTURES  10/18/2001 - 10/31/2004                      FY02: \$50,606                      Total: \$50,606  <i>Prin. Invest.:</i> A R INGRAFFEA  <i>Tech. Officer:</i> LARC/D YOUNG  <i>CASE Category:</i> 46 - MECHANICAL ENGR</p>	<p><b>NAG 3 2705</b>                      <b>CORNELL UNIV</b>                      <b>7011</b>  GAS-PARTICLE INTERACTIONS IN A MICROGRAVITY FLOW CELL #OSP 41286  02/27/2002 - 12/31/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> D LOUGE  <i>Tech. Officer:</i> GRC/M HASAN  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 1 02051</b>                      <b>CORNELL UNIV</b>                      <b>7004</b>  COMPUTATIONAL MICRO-MECHANICAL INVESTIGATIONS OF CRACK INITIATION IN METALLIC POLYCRYSTALS  02/04/2002 - 03/31/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> A R INGRAFFEA  <i>Tech. Officer:</i> LARC/E H GLAESSGEN, LARC/I S RAJU  <i>CASE Category:</i> 47 - METAL &amp; MATERIALS ENGR</p>	<p><b>NAG 3 2713</b>                      <b>CORNELL UNIV</b>                      <b>7012</b>  DYNAMICS AND STABILITY OF CAPILLARY SYSTEMS: MOVING LIQUIDS BY DESIGN  02/25/2002 - 11/30/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> D STEEN  <i>Tech. Officer:</i> GRC/M HASAN  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>

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**NAG 5 3427**                      **CORNELL UNIV**                      **7013**  
 DEVELOPMENT AND APPLICATION OF NEW TOOLS FOR STATI DISCRETE  
 ASTROPHYSICAL DATA  
 09/26/1996 - 09/30/2001                      FY02: \$0                      Total: \$522,253  
*Prin. Invest.:* T J LOREDO  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3626**                      **CORNELL UNIV**                      **7014**  
 PHYSICAL STUDIES OF PLANETARY AND SATELLITE SURFACE  
 02/12/1997 - 10/31/2001                      FY02: \$0                      Total: \$511,150  
*Prin. Invest.:* J VEVERKA  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3639**                      **CORNELL UNIV**                      **7015**  
 STUDY OF THE EFFECTS OF PHOTOMETRIC GEOMETRY ON SP MEASURE-  
 MENTS  
 02/12/1997 - 12/31/2001                      FY02: \$0                      Total: \$247,500  
*Prin. Invest.:* P HELFENSTEIN  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3862**                      **CORNELL UNIV**                      **7016**  
 STUDIES OF THERMAL STRUCTURES AND MOTIONS OF PLANE  
 01/24/1997 - 11/30/2001                      FY02: \$0                      Total: \$547,161  
*Prin. Invest.:* D J GIERABCH  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3910**                      **CORNELL UNIV**                      **7017**  
 PHYSICAL PROCESSES IN PLANETARY RINGS  
 03/07/1997 - 12/31/2001                      FY02: \$0                      Total: \$683,100  
*Prin. Invest.:* D A BURNS  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4205**                      **CORNELL UNIV**                      **7018**  
 STUDIES IN PLANETARY GEOSCIENCES  
 03/19/1997 - 03/31/2002                      FY02: \$0                      Total: \$459,323  
*Prin. Invest.:* S W SQUIRES  
*Tech. Officer:* GSFC/J G GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4333**                      **CORNELL UNIV**                      **7019**  
 MARS SURFACE MINERALOGY FROM HST AND MARINER 6.7 I  
 04/25/1997 - 04/30/2001                      FY02: \$0                      Total: \$133,200  
*Prin. Invest.:* D F BELL  
*Tech. Officer:* GSFC/P ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 5233**                      **CORNELL UNIV**                      **7020**  
 SIERRA PI DR. PAUL KINTNER  
 02/10/1999 - 03/31/2002                      FY02: \$0                      Total: \$513,147  
*Prin. Invest.:* P M KINTNER  
*Tech. Officer:* MSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5244**                      **CORNELL UNIV**                      **7021**  
 FIRST YEAR OF A THREE GRANT NAG5-5244 PI DR. MICHAEL C. KELLEY  
 03/29/1999 - 03/31/2003                      FY02: \$0                      Total: \$189,538  
*Prin. Invest.:* M C KELLEY  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5366**                      **CORNELL UNIV**                      **7022**  
 SVALBARD EISCAT RADAR SOUNDING OF ION OUTFLOWS: SE RSIO  
 06/19/2002 - 06/12/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P KINTNER  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5370**                      **CORNELL UNIV**                      **7023**  
 ELECTRODYNAMICS OF THE NIGHTTIME EQUATORIAL ELECTR OBJECT: THE  
 EFFECTS OF WINDS AND WAVES  
 06/19/2002 - 06/12/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L GELINAS  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5380**                      **CORNELL UNIV**                      **7024**  
 ROCKET INVESTIGATION OF ELECTRODYNAMICS AND SCATTE RING LAY-  
 ERS IN THE BOTTOMSIDE EQUATORIAL REGIO  
 06/25/2002 - 06/19/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D HYSELL  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6273**                      **CORNELL UNIV**                      **7025**  
 BIOLOGICAL AND PHYSICAL CONTROLS OF PRIMARY PRODUC SUBSE-  
 QUENT FATE IN THE GEORGES BANK REGION: AN IN  
 08/29/1997 - 04/30/2001                      FY02: \$0                      Total: \$218,223  
*Prin. Invest.:* G CHARLES  
*Tech. Officer:* GSFC/J JODER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6495**                      **CORNELL UNIV**                      **7026**  
 DEVELOPMENT OF 256X256 SI:SB AND SI:AS BIBIB DETEC TORS FOR SOFIA  
 10/31/1997 - 12/31/2002                      FY02: \$0                      Total: \$840,000  
*Prin. Invest.:* D L HERTER  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7497**                      **CORNELL UNIV**                      **7027**  
 UNDERSTANDING METEOROLOGICAL CONTROLS OF GLACIER M ASS  
 BALANCE  
 06/29/1998 - 06/30/2002                      FY02: \$0                      Total: \$270,000  
*Prin. Invest.:* K H COOK  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7864**                      **CORNELL UNIV**                      **7028**  
 JUPITER CLOUD STRUCTURE AND DYNAMICS STUDIES  
 01/12/1999 - 12/31/2001                      FY02: \$0                      Total: \$182,000  
*Prin. Invest.:* D J GIERASCH  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8010**                      **CORNELL UNIV**                      **7029**  
 DIGITAL MAPPING OF JOVAIN CLOUD MOTIONS  
 01/13/1999 - 01/14/2002                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* P HELFENSTEIN  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

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**NAG 5 8070**                      **CORNELL UNIV**                      **7030**  
 WATER DETECTION ON ASTEROIDS: ARE THE VISIBLE REBANDS REALLY A  
 GOOD PROXY?  
 01/29/1999 - 02/28/2002                      FY02: \$0                      Total: \$89,364  
*Prin. Invest.:* D S HOWELL  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8188**                      **CORNELL UNIV**                      **7031**  
 UNDERGRADUATE COURSE ON SATELLITE REMOTE SENSING I N BIOLOGI-  
 CAL OCEANOGRAPHY  
 03/04/1999 - 09/30/2001                      FY02: \$0                      Total: \$151,501  
*Prin. Invest.:* B MONGER  
*Tech. Officer:* GSFC/J CAMPBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8282**                      **CORNELL UNIV**                      **7032**  
 SEPARATION & ANALYSIS OF TES ATMOSPHERIC TEMPERATU RES AS  
 COMPONENT FIELDS: ZONAL MEANS, THERMA  
 02/19/1999 - 02/28/2002                      FY02: \$0                      Total: \$200,800  
*Prin. Invest.:* D J BANDFIELD  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8356**                      **CORNELL UNIV**                      **7033**  
 ASTROPHYSICS OF FAST MOVING NEUTRON STARS (ATP98)  
 03/11/1999 - 03/14/2003                      FY02: \$0                      Total: \$329,504  
*Prin. Invest.:* D F CHERNOFF  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8484**                      **CORNELL UNIV**                      **7034**  
 MATTER IN STRONG MAGNETIC FIELDS AND THERMAL RADIA TION FROM  
 ISOLATED NEUTRON STARS (ATP - 98)  
 05/11/1999 - 05/14/2002                      FY02: \$0                      Total: \$197,114  
*Prin. Invest.:* D LAI  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8673**                      **CORNELL UNIV**                      **7035**  
 A SCANNING DOUBLE HALF-WAVE INTERFEROMETER FOR SOFIA  
 07/09/1999 - 07/14/2002                      FY02: \$0                      Total: \$315,665  
*Prin. Invest.:* G J STACEY  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8775**                      **CORNELL UNIV**                      **7036**  
 ENGINEERING CONTROL OF BIOMOLECULAR MOTOR POWERED  
 NANO-CHEMICAL DEVICE  
 09/01/1999 - 08/31/2002                      FY02: \$0                      Total: \$326,772  
*Prin. Invest.:* C MONTEEMAGNO  
*Tech. Officer:* GSFC/S DAVISON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9034**                      **CORNELL UNIV**                      **7037**  
 RADAR SYNTHESIS IMAGING OF SMALL BODIES  
 02/07/2000 - 02/14/2003                      FY02: \$0                      Total: \$122,850  
*Prin. Invest.:* B CAMPBELL  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9047**                      **CORNELL UNIV**                      **7038**  
 ACCRETION TO MAGNETIZED ROTATING NEUTRON STARS (ATP 99)  
 03/09/2000 - 03/14/2003                      FY02: \$0                      Total: \$116,752  
*Prin. Invest.:* R LOVELACE  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9067**                      **CORNELL UNIV**                      **7039**  
 SCALING & CROSS CORRELATION STUDIES OF LAND SLIDES  
 02/17/2000 - 02/28/2003                      FY02: \$0                      Total: \$120,000  
*Prin. Invest.:* D L TURCOTTE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9140**                      **CORNELL UNIV**                      **7040**  
 INVESTIGATION OF CELESTIAL SOLID ANALOGS  
 02/29/2000 - 02/28/2003                      FY02: \$0                      Total: \$116,520  
*Prin. Invest.:* A SIEVERS  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9199**                      **CORNELL UNIV**                      **7041**  
 ELECTRON AND ION ACCELERATION ASSOCIATED WITH ALFVENIC STRUC-  
 TURES  
 03/09/2000 - 03/14/2003                      FY02: \$0                      Total: \$153,500  
*Prin. Invest.:* C E SEYLER  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9492**                      **CORNELL UNIV**                      **7042**  
 STUDIES OF VOLCANISM AND TECTONISM ON MARS AND THE MOON  
 04/17/2000 - 04/14/2003                      FY02: \$0                      Total: \$68,250  
*Prin. Invest.:* D L TURCOTTE  
*Tech. Officer:* GSFC/J A GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9594**                      **CORNELL UNIV**                      **7043**  
 PARTICIPATION IN SHOEMAKER-LEVY 9 IMPACT MODELING INVESTIGATION  
 06/08/2000 - 06/14/2003                      FY02: \$0                      Total: \$107,147  
*Prin. Invest.:* J HARRINGTON  
*Tech. Officer:* GSFC/L D DEMING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9612**                      **CORNELL UNIV**                      **7044**  
 NEW ALGORITHMS FOR MAGNETOMETER ORBIT AND ATTITUDE ESTIMA-  
 TION  
 05/26/2000 - 05/31/2002                      FY02: \$0                      Total: \$60,008  
*Prin. Invest.:* D PSIAKI  
*Tech. Officer:* GSFC/R HARMAN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9735**                      **CORNELL UNIV**                      **7045**  
 MAGNETOHYDRODYNAMICS AND PLASMA PHENOMENA IN PROTE STEL-  
 LAR SYSTEMS  
 06/21/2000 - 06/30/2003                      FY02: \$0                      Total: \$45,200  
*Prin. Invest.:* R LOVELACE  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

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**NAG 5 9774**                      **CORNELL UNIV**                      **7046**  
 SUB-PIXEL DETECTABILITY OF MATERIALS AT THE PATH FINDER LANDING  
 SITE: IMPLICATIONS FOR MARTIAN SURF  
 06/30/2000 - 06/30/2003                      FY02: \$0                      Total: \$140,000  
*Prin. Invest.:* J F BELL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9794**                      **CORNELL UNIV**                      **7047**  
 DETERMINATION OF AERODYNAMIC ROUGHNESS FROM SUR- FACE-  
 BASES STEREO IMAGING  
 07/11/2000 - 07/14/2003                      FY02: \$0                      Total: \$85,100  
*Prin. Invest.:* R J SULLIVAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10168**                      **CORNELL UNIV**                      **7048**  
 SURFACES OF PLANETS, SATELLITES, AND ASTEROIDS  
 01/04/2001 - 11/30/2002                      FY02: \$0                      Total: \$39,000  
*Prin. Invest.:* P THOMAS  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10289**                      **CORNELL UNIV**                      **7049**  
 THERMAL EMISSION SPECTRAL MODELING WITH APPLICA- TIONS TO  
 ASTEROIDS AND METEORITES  
 01/29/2001 - 01/31/2002                      FY02: \$0                      Total: \$16,000  
*Prin. Invest.:* B E CLARK  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10356**                      **CORNELL UNIV**                      **7050**  
 QUANTUM WELL ELECTRON GAIN STRUCTURES FOR IMPROVED INFRA-  
 RED DETECTOR READ NOISE  
 02/07/2001 - 01/31/2003                      FY02: \$0                      Total: \$293,057  
*Prin. Invest.:* S EIKENBERRY  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10434**                      **CORNELL UNIV**                      **7051**  
 OPERATE THE SPACECRAFT PLANETARY IMAGING FACILITY AT CORNELL  
 02/16/2001 - 02/28/2006                      FY02: \$0                      Total: \$37,000  
*Prin. Invest.:* J VEVERKA  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10438**                      **CORNELL UNIV**                      **7052**  
 THE IRREGULAR SATELLITE SYSTEMS OF THE GIANT PLANETS  
 02/20/2001 - 02/28/2004                      FY02: \$0                      Total: \$54,000  
*Prin. Invest.:* P NICHOLSON  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10574**                      **CORNELL UNIV**                      **7053**  
 EVALUATION OF DUST AVALANCHES AND HIGH-ALTITUDE AEOLIAN FEAT-  
 URES  
 03/13/2001 - 03/14/2004                      FY02: \$0                      Total: \$45,000  
*Prin. Invest.:* R SULLIVAN  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10579**                      **CORNELL UNIV**                      **7054**  
 DUST LIFTING & TRANSPORT ON MARS: ANALYSIS OF MGS DATA WITH A  
 MESOSCALE MODEL  
 03/19/2001 - 02/28/2004                      FY02: \$0                      Total: \$71,000  
*Prin. Invest.:* P GIERASCH  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10580**                      **CORNELL UNIV**                      **7055**  
 OBSERVATIONAL STUDY OF THE MARS POLAR VORTEX  
 03/19/2001 - 02/28/2004                      FY02: \$0                      Total: \$60,000  
*Prin. Invest.:* B CONRATH  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10584**                      **CORNELL UNIV**                      **7056**  
 ELASTIC PROPERTIES OF FILMS OF WATER & NOBLE GASES CONDENSED  
 AT LOW TEMPERATURES  
 03/13/2001 - 05/31/2003                      FY02: \$0                      Total: \$45,000  
*Prin. Invest.:* R O POHL  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10636**                      **CORNELL UNIV**                      **7057**  
 MINERALOGY AND WEATHERING HISTORY OF THE MARTIAN SURFACE  
 03/17/2001 - 03/14/2004                      FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* J F BELL, III  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10848**                      **CORNELL UNIV**                      **7058**  
 UNDERGRADUATE COURSE ON SATELLITE REMOTE SENSING IN BIOLOGI-  
 CAL OCEANOGRAPHY  
 05/03/2001 - 04/14/2002                      FY02: \$0                      Total: \$89,482  
*Prin. Invest.:* B MONGER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11424**                      **CORNELL UNIV**                      **7059**  
 TOPOGRAPHIC SIGNALS OF CENTRAL ANDEAD TECTONIC  
 11/28/2001 - 11/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B L ISACKS  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11480**                      **CORNELL UNIV**                      **7060**  
 DYNAMICS OF SMALL SOLAR SYSTEM BODIES: PLANETARY RINGS, DUST,  
 ASTEROIDS, AND SATELLITES  
 12/19/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J A BURNS  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11492**                      **CORNELL UNIV**                      **7061**  
 STUDY OF THE EFFECTS OF PHOTOMETRIC GEOMETRY ON SP ECTRAL  
 REFLECTANCE MEASUREMENTS  
 12/27/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P HELFENSTEIN  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE



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<b>NAG 5 11514</b>	<b>CORNELL UNIV</b>	<b>7062</b>	<b>NAG 5 12211</b>	<b>CORNELL UNIV</b>	<b>7071</b>
PHYSICAL STUDIES OF PLANETARY AND SATELLITE SURFAC ES			DUAL FREQUENCY GPS SOFTWARE RECEIVER DEVELOPMENT		
12/31/2001 - 12/31/2004	FY02: \$0	Total: \$0	05/20/2002 - 05/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J VERERKA			<i>Prin. Invest.:</i> M PSIAKI		
<i>Tech. Officer:</i> GSFC/D SENKSE			<i>Tech. Officer:</i> GSFC/J Q SPANN		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 11515</b>	<b>CORNELL UNIV</b>	<b>7063</b>	<b>NAG 5 12231</b>	<b>CORNELL UNIV</b>	<b>7072</b>
DYNAMICAL STUDIES OF PLANETARY RINGS AND SATELLITE S			VALIDATION OF THE ION-F FORMATION FLIGHT HARDWARE AND SOFT-WARE		
12/31/2001 - 12/31/2004	FY02: \$0	Total: \$0	06/04/2002 - 11/14/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> P D NICHOLSON			<i>Prin. Invest.:</i> M CAMPBELL		
<i>Tech. Officer:</i> GSFC/D SENSKE			<i>Tech. Officer:</i> GSFC/L COX		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR		
<b>NAG 5 11819</b>	<b>CORNELL UNIV</b>	<b>7064</b>	<b>NAG 5 12332</b>	<b>CORNELL UNIV</b>	<b>7073</b>
THIS PROPOSED HIGH ALTITUDE WORK WILL EXPLORE THE USE OF			OLIGONUCLEOTIDE TEMPLATES AND PEPTIDE BOND FORMATION: A NEW		
TECHNIQUES DEVELOPED FOR LOW EARTH ORBITING			APPROACH		
03/01/2002 - 02/28/2003	FY02: \$0	Total: \$0	07/08/2002 - 06/30/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> M L PSIAKI			<i>Prin. Invest.:</i> D A USHER		
<i>Tech. Officer:</i> GSFC/S KANT			<i>Tech. Officer:</i> GSFC/M MEYER		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 11919</b>	<b>CORNELL UNIV</b>	<b>7065</b>	<b>NAG 5 12470</b>	<b>CORNELL UNIV</b>	<b>7074</b>
EULER DYNAMICS-BASED ESTIMATION ALGORITHMS FOR SPA CECRAFT			LATITUDE-RESOLVED AO SPECTRA OF NEPTUNE & URANUS: CIRCULATION		
ATTITUDE AND RATE DETERMINATION			MONITORING		
03/28/2002 - 03/31/2004	FY02: \$0	Total: \$0	08/14/2002 - 08/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D PSIAKI			<i>Prin. Invest.:</i> D J BANFIELD		
<i>Tech. Officer:</i> GSFC/R R HARMAN			<i>Tech. Officer:</i> GSFC/J HILLMAN		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 12034</b>	<b>CORNELL UNIV</b>	<b>7066</b>	<b>NAG 8 1445</b>	<b>CORNELL UNIV</b>	<b>7075</b>
THERMAL RADIATION FROM STRONGLY MAGNETIZED NEUTRON STARS			STUDIES OF FREE RADICALS		
04/12/2002 - 04/14/2005	FY02: \$0	Total: \$0	02/16/1998 - 01/31/2003	FY02: \$0	Total: \$583,500
<i>Prin. Invest.:</i> D LAI			<i>Prin. Invest.:</i> D M LEE		
<i>Tech. Officer:</i> GSFC/M SALAMON			<i>Tech. Officer:</i> MSFC/J W POE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 12082</b>	<b>CORNELL UNIV</b>	<b>7067</b>	<b>NAG 8 1518</b>	<b>CORNELL UNIV</b>	<b>7076</b>
ASTROSTATISTICAL TOOLS IN PYTHON			MESOSCALE LANDSURFACE HEAT FLUX VARIABILITY OVER THE SOUTH-ERN GCIP AREA FROM ATMOSPHERIC SOUNDINGS		
04/23/2002 - 04/30/2005	FY02: \$0	Total: \$0	06/01/1998 - 05/31/2002	FY02: \$0	Total: \$343,000
<i>Prin. Invest.:</i> T LOREDO			<i>Prin. Invest.:</i> W BRUTSAERT		
<i>Tech. Officer:</i> GSFC/P E HUNTER			<i>Tech. Officer:</i> MSFC/J ARNOLD		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 12089</b>	<b>CORNELL UNIV</b>	<b>7068</b>	<b>NAG 8 1574</b>	<b>CORNELL UNIV</b>	<b>7077</b>
DEVELOPMENT OF GPS TRANSLATOR INSTRUMENTATION			IMPURITY EFFECTS IN MACROMOLECULAR CRYSTAL GROWTH		
04/30/2002 - 04/30/2004	FY02: \$0	Total: \$0	01/05/1999 - 11/30/2002	FY02: \$0	Total: \$192,150
<i>Prin. Invest.:</i> P M KINTNER			<i>Prin. Invest.:</i> R THORNE		
<i>Tech. Officer:</i> GSFC/J SPANN			<i>Tech. Officer:</i> MSFC/B GUYNES		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NAG 5 12164</b>	<b>CORNELL UNIV</b>	<b>7069</b>	<b>NAG 8 1666</b>	<b>CORNELL UNIV</b>	<b>7078</b>
INVESTIGATION OF PLASMA TURBULENCE IN THE EQUATORIAL IONO-SPHERE			INFLUENCE OF HOMOGENEITY AND FRAGILITY ON THE DYNAMICAL PROPERTIES OF GLASSY NETWORKS.		
06/13/2002 - 02/29/2004	FY02: \$0	Total: \$0	05/12/2000 - 09/30/2003	FY02: \$0	Total: \$159,500
<i>Prin. Invest.:</i> D L HYSELL			<i>Prin. Invest.:</i> A J SIEVERS		
<i>Tech. Officer:</i> GSFC/M MELLOTT			<i>Tech. Officer:</i> MSFC/P DOTY		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NAG 5 12187</b>	<b>CORNELL UNIV</b>	<b>7070</b>			
TRANSIENT AND FORCED WAVES IN MARS' ATMOSPHERE					
05/14/2002 - 05/14/2005	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> D BANFIELD					
<i>Tech. Officer:</i> GSFC/J BOYCE					
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER					

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**NAG 8 1671**                      **CORNELL UNIV**                      **7079**  
 ON THE CONTROL OF THE EFFECTS OF GRAVITY ON THE SOLIDIFICATION  
 MICROSTRUCTURES USING OPTIMALLY DESIGNED  
 06/16/2000 - 12/31/2003                      FY02: \$0                      Total: \$135,250  
*Prin. Invest.:* N ZABARAS  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 8 1759**                      **CORNELL UNIV**                      **7080**  
 BIODEGRADABLE POLYMERS  
 05/02/2001 - 03/31/2005                      FY02: \$0                      Total: \$74,084  
*Prin. Invest.:* C A BATT, E P GIANNELIS  
*Tech. Officer:* MSFC/D S HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1778**                      **CORNELL UNIV**                      **7081**  
 MICROSCALE MIXER FOR PROTEIN FOLDING  
 05/02/2001 - 12/31/2005                      FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* L POLLACK  
*Tech. Officer:* MSFC/DHUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1831**                      **CORNELL UNIV**                      **7082**  
 R/S "MACROMOLECULAR CRYSTAL GROWTH: TECHNIQUES, DEVELOP-  
 MENT, FUNDAMENTAL STUDIES, AND APPS.  
 08/30/2001 - 11/30/2004                      FY02: \$0                      Total: \$131,000  
*Prin. Invest.:* R E THORNE  
*Tech. Officer:* MSFC/G GUYNES  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NASW 00005**                      **CORNELL UNIV**                      **7083**  
 PRINCIPAL INVESTIGATOR & CO'S NASA'S CONTOUR DISCOVERY MISSION  
 07/03/2000 - 12/31/2002                      FY02: \$0                      Total: \$905,497  
*Prin. Invest.:* J F VEVERKA  
*Tech. Officer:* JPL/D B JARRETT  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 1201**                      **CORNELL UNIV**                      **7084**  
 DO INTEGRINS MEDIATE THE SKELETAL RESPONSES TO ALTERED  
 LOADING IN VIVO (SUB-PROJECT B)  
 09/12/2000 - 09/30/2003                      FY02: \$0                      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**                      **7085**  
 SYNTHETIC & MICROBIAL FOOD INGREDIENTS FOR LONG DURATION  
 SPACE MISSIONS  
 08/27/2001 - 07/31/2003                      FY02: \$0                      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 3 797**                      **CORNELL UNIV**                      **7086**  
 PARTICLE SEGREGATION IN COLLISIONAL SHEARING FLOWS PARTICLE  
 SEGREGATION IN COLLISIONAL SHEARINGFLOW  
 05/18/2000 - 04/30/2005                      FY02: \$0                      Total: \$309,996  
*Prin. Invest.:* J JENKINS  
*Tech. Officer:* GRC/F P CHARIAMONTE 111  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 832**                      **CORNELL UNIV**                      **7087**  
 HIGH TEMPERATURE POLYIMIDE NANOCOMPOSITES HIGH TEMPERATURE  
 POLYIMIDE NANOCOMPOSITES  
 01/04/2001 - 12/31/2002                      FY02: \$0                      Total: \$67,850  
*Prin. Invest.:* D P GIANNELIS  
*Tech. Officer:* GRC/M MEADOR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 5 298**                      **CORNELL UNIV**                      **7088**  
 CARBON AND NUTRIENT STOCKS, SOIL WATER DYNAMICS, AND TRACE  
 GAS FLUXES IN ABANDONED PASTURES AND AGRICULTURE  
 06/16/1998 - 12/31/2002                      FY02: \$0                      Total: \$995,177  
*Prin. Invest.:* E FERNANDES  
*Tech. Officer:* GSFC/D DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 375**                      **CORNELL UNIV**                      **7089**  
 RADIATIVE STUDIES OF PLANETARY ATMOSPHERES  
 01/19/1999 - 02/14/2002                      FY02: \$0                      Total: \$273,854  
*Prin. Invest.:* B J CONRATH  
*Tech. Officer:* GSFC/F M FLASAR  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 539**                      **CORNELL UNIV**                      **7090**  
 OUTER PLANETS, ATMOSPHERIC STRUCTURE AND PARTICIPATION IN  
 CIRS  
 02/12/2001 - 02/14/2004                      FY02: \$0                      Total: \$170,000  
*Prin. Invest.:* P J GIERASCH  
*Tech. Officer:* GSFC/F M FLASAR  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 563**                      **CORNELL UNIV**                      **7091**  
 DEVELOPMENT OF GPS SOFTWARE RECEIVER ALGORITHMS FOR USE IN  
 HIGH-ALTITUDE SPACECRAFT NAVIGATION  
 06/12/2001 - 06/30/2002                      FY02: \$0                      Total: \$40,000  
*Prin. Invest.:* M L PSIAKI  
*Tech. Officer:* GSFC/B L EDWARDS  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 5 622**                      **CORNELL UNIV**                      **7092**  
 RADIATIVE STUDIES OF PLANETARY ATMOSPHERES  
 01/16/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B J CONRATH  
*Tech. Officer:* GSFC/F M FLASAR  
*CASE Category:* 11 - ASTRONOMY

**NCC 9 89**                      **CORNELL UNIV**                      **7093**  
 COORDINATE ANALYSIS AND CALIBRATION STUDIES  
 07/20/1999 - 07/19/2002                      FY02: \$0                      Total: \$30,000  
*Prin. Invest.:* R V MORRIS, J F BELL  
*Tech. Officer:* JSC/R V MORRIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 02011**                      **CORNELL UNIV**                      **7094**  
 GRADUATE STUDENT RESEARCHER PROGRAM (GSRP)  
 06/12/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S B POPE, M A SINGER  
*Tech. Officer:* LARC/P J DRUMMOND  
*CASE Category:* 21 - MATHEMATICS

## NASA'S UNIVERSITY PROGRAM

NEW YORK

<b>NGT 3 52362</b>	<b>CORNELL UNIV</b>	<b>7095</b>	<b>NGT10 52623</b>	<b>CORNELL UNIV</b>	<b>7103</b>
NASA GRADUATE STUDENT RESEARCHERS PROGRAM NASA GRADUATE STUDENT RESEARCHERS PROGRAM			GRADUATE STUDENT RESEARCHER'S PROGRAM		
06/07/2000 - 06/30/2003	FY02: \$0	Total: \$44,000	08/23/1999 - 06/30/2003	FY02: \$0	Total: \$66,000
<i>Prin. Invest.:</i> D KOCH			<i>Prin. Invest.:</i> L ALBRIGHT		
<i>Tech. Officer:</i> GRC/H K NAHRA			<i>Tech. Officer:</i> KSC/RWHEELER		
<i>CASE Category:</i> 43 - CHEMICAL ENGR			<i>CASE Category:</i> 55 - AGRICULTURE		
<b>NGT 5 30126</b>	<b>CORNELL UNIV</b>	<b>7096</b>	<b>NAG 5 11780</b>	<b>HOFSTRA UNIV</b>	<b>7104</b>
INTERFEROMETRIC SAR MEASUREMENTS OF SEISMIC & INTERSEISMIC STRAIN NEAR A MAJOR SEISMIC GAP IN PERU			STUDIES OF THE EFFECT OF RAINFALL OVER THE OCEAN ON THE SEAWINDS SCATTEROMETER & RAINRATE ESTIMATES		
10/10/1997 - 08/31/2001	FY02: \$0	Total: \$66,000	02/28/2002 - 02/28/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> B ISACKS			<i>Prin. Invest.:</i> D WEISSMAN		
<i>Tech. Officer:</i> GSFC/G ASRAR			<i>Tech. Officer:</i> GSFC/E LINDTSROM		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NGT 5 30210</b>	<b>CORNELL UNIV</b>	<b>7097</b>	<b>NAG13 02015</b>	<b>HOFSTRA UNIV</b>	<b>7105</b>
HAVE WE GROSSLY UNDERESTIMATED METHANE PRODUCTION & CONSUMPTION? APPLICATION OF A NEW STABLE ISOTOPE			SCATTEROMETER DERIVED OPERATIONAL WINDS, SURFACE PRESSURES AND RAIN		
08/20/1999 - 08/31/2002	FY02: \$0	Total: \$46,200	12/18/2001 - 09/18/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> L O HEDIN			<i>Prin. Invest.:</i> D E WEISSMAN		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> SSC/R MILLER		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NGT 5 30461</b>	<b>CORNELL UNIV</b>	<b>7098</b>	<b>NAG 5 9311</b>	<b>INTER AMERICAN UNIV OF PR AGUADILLA CAMPUS</b>	<b>7106</b>
LANDSCAPE EVOLUTION GRADIENTS IN THE CENTRAL ANDERSON FOREARC BETWEEN 12 SAND 32 S. SOUTHERN PERU AND			PRECOLL AWARENESS IN MATHY AND SCIENCE PROGRAM		
08/21/2002 - 08/31/2005	FY02: \$0	Total: \$0	03/22/2000 - 02/28/2003	FY02: \$0	Total: \$172,161
<i>Prin. Invest.:</i> T JORDAN			<i>Prin. Invest.:</i> R GONZALEZ		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> HQ/M STOUTSENBERGER		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 5 40078</b>	<b>CORNELL UNIV</b>	<b>7099</b>	<b>NAG 5 11398</b>	<b>IONA COLL</b>	<b>7107</b>
NEW YORK SPACE GRANT COLL & FELLOWSHIP PROGRAM			"HDO ON MARS."		
02/09/2001 - 01/31/2005	FY02: \$0	Total: \$490,696	11/28/2001 - 11/30/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> Y TERZIAN			<i>Prin. Invest.:</i> R NOVAK		
<i>Tech. Officer:</i> GSFC/D D DETROYE			<i>Tech. Officer:</i> GSFC/M J MUMMA		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 13 - PHYSICS		
<b>NGT 5 50375</b>	<b>CORNELL UNIV</b>	<b>7100</b>	<b>NAG 5 9889</b>	<b>MARIST COLL</b>	<b>7108</b>
BONE ADAPTATION TO PRECISELY CONTROLLED CYCLIC LOADING (STUDENT: JAMES FRITTON)			PERSISTENCE & INFECTIVITY OF CYANOPHAGE FROM POLAR ENVIRONMENTS: IMPLICATIONS FOR PLANETARY PROTECTION		
06/29/2001 - 07/31/2004	FY02: \$0	Total: \$22,000	08/30/2000 - 06/30/2003	FY02: \$0	Total: \$70,650
<i>Prin. Invest.:</i> M H VAN DER MUELEN			<i>Prin. Invest.:</i> R KEPNER		
<i>Tech. Officer:</i> GSFC/K BLANDING			<i>Tech. Officer:</i> GSFC/M MEYER		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 5 50390</b>	<b>CORNELL UNIV</b>	<b>7101</b>	<b>NAG 5 9256</b>	<b>MEDGAR EVERS COLL</b>	<b>7109</b>
INFRARED TRANSMISSION SPECTROSCOPY AND TIME-SERIES PHOTOMETRY OF EXTRA-SOLAR PLANET ATMOSPHERES/MICHA			MEDGAR EVERS COLL AERONAUTICS AND EARTH SCIENCE ACADEMY		
05/23/2002 - 07/31/2005	FY02: \$0	Total: \$0	03/15/2000 - 02/28/2003	FY02: \$0	Total: \$200,000
<i>Prin. Invest.:</i> J HOUCK			<i>Prin. Invest.:</i> L JOHNSON		
<i>Tech. Officer:</i> HQ/K BLANDING			<i>Tech. Officer:</i> HQ/M STOUTSENBERGER		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 8 52897</b>	<b>CORNELL UNIV</b>	<b>7102</b>	<b>NAG 5 10142</b>	<b>MEDGAR EVERS COLL</b>	<b>7110</b>
UNDERSTANDING THE COVARIABILITY OF AFRICAN AND INDIAN SUMMER RAINFALL			THE NEW YORK CITY SPACE SCIENCE RESEARCH ALLIANCE		
05/25/2001 - 06/30/2002	FY02: \$0	Total: \$22,000	12/19/2000 - 12/31/2003	FY02: \$0	Total: \$245,000
<i>Prin. Invest.:</i> K H COOK			<i>Prin. Invest.:</i> L P JOHNSON		
<i>Tech. Officer:</i> MSFC/S NASH-STEVENSON			<i>Tech. Officer:</i> GSFC/P SAKIMOTO		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NGT 2 946</b>	<b>MT SINAI SCH OF MED OF THE CUNY</b>	<b>7111</b>	<b>NAG 2 946</b>	<b>MT SINAI SCH OF MED OF THE CUNY</b>	<b>7111</b>
ANATOMICAL STUDIES OF CENTRAL VESTIBULAR ADAPTATION			ANATOMICAL STUDIES OF CENTRAL VESTIBULAR ADAPTATION		
01/10/1995 - 03/31/2002	FY02: \$0	Total: \$694,832	01/10/1995 - 03/31/2002	FY02: \$0	Total: \$694,832
<i>Prin. Invest.:</i> G R HOLSTEIN, G R HOLSTEIN			<i>Prin. Invest.:</i> G R HOLSTEIN, G R HOLSTEIN		
<i>Tech. Officer:</i> ARC/W E HINDS, ARC/C M WINGET			<i>Tech. Officer:</i> ARC/W E HINDS, ARC/C M WINGET		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		

## NEW YORK

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**NAG 2 1191** MT SINAI SCH OF MED OF THE CUNY 7112  
 NITRIC OXIDE SIGNALING IN HYPERGRAVITY IN DUCED NE URONAL  
 PLASTICITY  
 03/23/1998 - 08/31/2002 FY02: \$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 7113  
 VESTIBULAR INFLUENCES ON AUTONOMIC CARDIOVASCULAR  
 09/08/1997 - 12/31/2001 FY02: \$0 Total: \$848,810  
*Prin. Invest.:* H KAUFMANN  
*Tech. Officer:* GSFC/V SCHNEIDER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1173** MT SINAI SCH OF MED OF THE CUNY 7114  
 NEUROLAB COMPLETION PROPOSAL: ANATOMICAL STUDIES O F CENTRAL  
 VESTIBULAR ADAPTATION  
 04/17/2000 - 03/31/2003 FY02: \$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 7115  
 VALIDATION CENTRIFUGATION AS A COUNTER MEASURE FOR OTOLIGH  
 DECONDITIONING DURIN SPACEFLIGHT  
 06/14/2001 - 09/30/2004 FY02: \$0 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 7116  
 EFFECTS OF GRAVITY ON POSTNATL MOTOR DEVELOPMENT  
 12/22/1994 - 07/31/2001 FY02: \$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 7117  
 GRAVITATION & DEVELOPMENT MOTRICITY  
 07/26/2000 - 07/31/2002 FY02: \$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 7118  
 JOINT CENTER FOR COMPUTATIONAL MODELING (JCCM)  
 08/04/1998 - 12/31/2001 FY02: \$0 Total: \$203,000  
*Prin. Invest.:* M BERGER  
*Tech. Officer:* GSFC/D S SPICER  
*CASE Category:* 21 - MATHEMATICS

**NAG 5 9246** NEW YORK UNIV 7119  
 SENSITIVITY OF THE ATMOSPHERIC SHOWERS OF EXTREMEL Y HIGH  
 ENERGY COSMIC RAYS TO UNKNOWN ASPECTS OF  
 03/14/2000 - 03/14/2003 FY02: \$0 Total: \$194,118  
*Prin. Invest.:* G FARRAR  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9871** NEW YORK UNIV 7120  
 AN INVESTIGATION OF THE PREDICTABILITY OF THE NSIPP FORECAST  
 SYSTEM  
 08/08/2000 - 08/14/2003 FY02: \$0 Total: \$185,000  
*Prin. Invest.:* R KLEEMAN  
*Tech. Officer:* GSFC/M REINECKER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11669** NEW YORK UNIV 7121  
 TOOLS FOR GALAXY ASTROPHYSICS WITH SIRTf (LTSa 200 1)  
 01/28/2002 - 01/31/2007 FY02: \$0 Total: \$0  
*Prin. Invest.:* D W HOGG  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12100** NEW YORK UNIV 7122  
 PROBING COSMOLOGY WITH DEEP SURVEYS  
 04/24/2002 - 04/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R SCOCCIMARRO  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12419** NEW YORK UNIV 7123  
 ICE-SHELF OCEAN INTERACTIONS ALONG THE WESTERN ANTARTIC PEN-  
 INSULA  
 08/07/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D HOLLAND  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12427** NEW YORK UNIV 7124  
 AN INVESTIGATION OF PREDICTABILITY OF THE NSIPP FO RECAST  
 SYSTEM.  
 08/19/2002 - 08/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R KLEEMAN  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 9 1024** NEW YORK UNIV 7125  
 CANCER RISK MECHAHANISM FOLLOWING REPEATED EXPOSURE TO  
 HIGH LET RADIATION  
 06/04/1998 - 08/30/2002 FY02: \$0 Total: \$589,334  
*Prin. Invest.:* F J BURNS  
*Tech. Officer:* JSC/F A CUCINOTTA  
*CASE Category:* 56 - MEDICL

**NCC 2 5417** NEW YORK UNIV 7126  
 SOFTWARE FOR IMAGE DISCRIMINABILITY & QUALITY MODE LING  
 02/15/2001 - 05/31/2001 FY02: \$0 Total: \$63,912  
*Prin. Invest.:* M LANDY  
*Tech. Officer:* ARC/A J AHUMADA, ARC/J B MULLIGAN  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 5472** NEW YORK UNIV 7127  
 VISION MODELING FOR THE SYNTHETIC VISION PROJECT  
 10/25/2001 - 10/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* M S LANDY  
*Tech. Officer:* ARC/B L BEARD, ARC/D FOYLE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

<b>NCC 2 5513</b>	<b>NEW YORK UNIV</b>	<b>7128</b>			
USER INTERFACES FOR IMAGE DISCRIMINABILITY MODELS					
08/02/2002 - 07/31/2003	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> M S LANDY					
<i>Tech. Officer:</i> ARC/A J AHUMADA, ARC/A B WATSON					
<i>CASE Category:</i> 61 - PSYCHOLOGY BIOLOGY					
<b>NGT 8 52893</b>	<b>NEW YORK UNIV</b>	<b>7129</b>			
NANOTOOLS FROM BIOLOGY: ANTIBODY TECHNOLOGY APPLIED TO CARBON NANOTUBE PROCESSING					
06/28/2000 - 10/30/2001	FY02: \$0	Total: \$22,000			
<i>Prin. Invest.:</i> S WILSON					
<i>Tech. Officer:</i> MSFC/S NASH-STEVEN					
<i>CASE Category:</i> 12 - CHEMISTRY					
<b>NCC 8 182</b>	<b>NIAGARA UNIV</b>	<b>7130</b>			
ALGORITHM DEVELOPMENT AND SCIENCES ANALYSIS OF STANDARD DATA PRODUCTS FROM LIGHTNING INSTR. SPACE					
04/26/1999 - 07/31/2003	FY02: \$0	Total: \$67,514			
<i>Prin. Invest.:</i> W BOECK					
<i>Tech. Officer:</i> MSFC/R BLAKESLEE					
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE					
<b>NAG 3 2533</b>	<b>POLYTECHNIC UNIV - BROOKLYN,NY</b>	<b>7131</b>			
REFLECTION & REFRACTION OF SOUND WAVES THROUGH GLOW DISCHARGES					
01/25/2001 - 12/31/2002	FY02: \$0	Total: \$65,000			
<i>Prin. Invest.:</i> M OTUGEN					
<i>Tech. Officer:</i> GRC/D B ZAMAN					
<i>CASE Category:</i> 46 - MECHANICAL ENGR					
<b>NAG 3 2679</b>	<b>POLYTECHNIC UNIV - BROOKLYN,NY</b>	<b>7132</b>			
MICRO-OPTICAL DISTRIBUTED SENSORS FOR AERO PROPULSION APPLICATIONS					
12/17/2001 - 09/30/2004	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> D OTUGEN					
<i>Tech. Officer:</i> GRC/R SEASHOLTZ					
<i>CASE Category:</i> 49 - ENGINEERING, OTHER					
<b>NAG 5 11365</b>	<b>POLYTECHNIC UNIV - BROOKLYN,NY</b>	<b>7133</b>			
ALGORITHMS AND ARCHITECTURES FOR CONTROL OF DISTRIBUTED SPACECRAFT FORMATIONS					
10/05/2001 - 09/30/2003	FY02: \$47,535	Total: \$47,535			
<i>Prin. Invest.:</i> V KAPILA					
<i>Tech. Officer:</i> GSFC/J A LEITNER					
<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR					
<b>NAG 8 1370</b>	<b>POLYTECHNIC UNIV - BROOKLYN,NY</b>	<b>7134</b>			
R/S "DIFFUSION, VISCOSITY AND CRYSTAL GROWTH OF PROTEINS IN MICROGRAVITY"					
05/28/1997 - 02/28/2002	FY02: \$0	Total: \$431,000			
<i>Prin. Invest.:</i> A MYERSON					
<i>Tech. Officer:</i> MSFC/B GUYNES, MSFC/J MAYO					
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER					
<b>NAG 8 1455</b>	<b>POLYTECHNIC UNIV - BROOKLYN,NY</b>	<b>7135</b>			
R/S THERMODYNAMIC & SPECTROSCOPIC STUDIES OF SECONDARY NUCLEATION IN MICROGRAVITY					
02/01/1998 - 07/31/2002	FY02: \$0	Total: \$282,667			
<i>Prin. Invest.:</i> A S MEYERSON					
<i>Tech. Officer:</i> MSFC/C TALLEY					
<i>CASE Category:</i> 43 - CHEMICAL ENGR					
<b>NGT 8 52879</b>	<b>POLYTECHNIC UNIV - BROOKLYN,NY</b>	<b>7136</b>			
GRADUATE STUDENT RESEARCH PROGRAM DEVELOPMENT OF HEALTH MONITORING TECHNIQUES FOR AEROSPACE					
09/08/1999 - 10/30/2002	FY02: \$0	Total: \$22,000			
<i>Prin. Invest.:</i> F LIN					
<i>Tech. Officer:</i> MSFC/J DOWDY					
<i>CASE Category:</i> 44 - CIVIL ENGR					
<b>NAG 1 2089</b>	<b>RENSSELAER POLYTECHNIC INST</b>	<b>7137</b>			
EVOLUTION IN DECENTRALIZED EMERGENT COMPUTATION MY 1/2					
07/08/1998 - 05/30/2001	FY02: \$0	Total: \$264,639			
<i>Prin. Invest.:</i> P HAJELA, K E JANSEN					
<i>Tech. Officer:</i> LARC/J SOBIESKI, LARC/J R ROGERS					
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR					
<b>NAG 1 02089</b>	<b>RENSSELAER POLYTECHNIC INST</b>	<b>7138</b>			
DEVELOPMENT OF HIGH PERFORMANCE AVALANCHE PHOTO- DETECTORS (1/7-2.5UM) USING LATTICE MATCHED GAL-X					
05/01/2002 - 04/30/2003	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> P DJUTTA					
<i>Tech. Officer:</i> LARC/M N ABEDIN					
<i>CASE Category:</i> 13 - PHYSICS					
<b>NAG 3 2351</b>	<b>RENSSELAER POLYTECHNIC INST</b>	<b>7139</b>			
THEORETICAL AND EXPERIMENTAL INVESTIGATION OF THE STABILITY OF AN EVAPORATING CONSTRAINED VAPOR BUBBLE					
03/24/2000 - 11/30/2003	FY02: \$0	Total: \$81,500			
<i>Prin. Invest.:</i> D C WAYNER					
<i>Tech. Officer:</i> GRC/R SKARDA					
<i>CASE Category:</i> 49 - ENGINEERING, OTHER					
<b>NAG 3 2383</b>	<b>RENSSELAER POLYTECHNIC INST</b>	<b>7140</b>			
R & D WORK ON THE CONSTRAINED VAPOR BUBBLE SYSTEM FOR A MICROGRAVITY EXPERIMENT					
04/18/2000 - 04/21/2005	FY02: \$0	Total: \$314,250			
<i>Prin. Invest.:</i> P C WAGNER					
<i>Tech. Officer:</i> GRC/J SKARDA					
<i>CASE Category:</i> 43 - CHEMICAL ENGR					
<b>NAG 3 2525</b>	<b>RENSSELAER POLYTECHNIC INST</b>	<b>7141</b>			
THE PREPARATION OF SIC NANOTUBES & NANOLAYERS #207 -01-253B					
01/17/2001 - 01/23/2003	FY02: \$0	Total: \$127,311			
<i>Prin. Invest.:</i> D INTERRANTE					
<i>Tech. Officer:</i> GRC/D LARKIN					
<i>CASE Category:</i> 12 - CHEMISTRY					
<b>NAG 3 2552</b>	<b>RENSSELAER POLYTECHNIC INST</b>	<b>7142</b>			
MINORITY ENGINEERING PROGRAM MINORITY ENGINEERING PROGRAM					
03/06/2001 - 12/01/2001	FY02: \$0	Total: \$30,000			
<i>Prin. Invest.:</i> M D SMITH					
<i>Tech. Officer:</i> GRC/T ROGERS					
<i>CASE Category:</i> 49 - ENGINEERING, OTHER					
<b>NAG 3 2714</b>	<b>RENSSELAER POLYTECHNIC INST</b>	<b>7143</b>			
DYNAMICS AND STABILITY OF CAPILLARY SYSTEMS: MOVING LIQUIDS BY DESIGN					
02/25/2002 - 11/30/2005	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> D HIRSA					
<i>Tech. Officer:</i> GRC/M M HASAN					
<i>CASE Category:</i> 49 - ENGINEERING, OTHER					

**NAG 5 7598**                    **RENSSELAER POLYTECHNIC INST**                    **7144**  
 ORIGIN OF LIFE: INTERSTELLAR MOLECULES TO INTRONS  
 07/15/1998 - 12/31/2002                    FY02: \$0                    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**                    **7145**  
 THE NATURE AND EVOLUTION OF INTERSTELLAR & CIRCUMSTELLAR ICES  
 & ORGANIC MATTER  
 12/01/1998 - 12/31/2003                    FY02: \$0                    Total: \$47,724  
*Prin. Invest.:* D C WHITTET  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8976**                    **RENSSELAER POLYTECHNIC INST**                    **7146**  
 PARTICIPATING SCIENTIST: ANALYSIS OF THE MSI/NIS SPECTRA OF EROS  
 01/24/2000 - 03/31/2002                    FY02: \$0                    Total: \$70,887  
*Prin. Invest.:* M J GAFFEY  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9148**                    **RENSSELAER POLYTECHNIC INST**                    **7147**  
 AN INVENTORY OF CARBONACEOUS MOLECULES IN INTERSTELLAR ICES  
 & THEIR RELATION TO COMETS  
 03/03/2000 - 03/14/2003                    FY02: \$0                    Total: \$108,558  
*Prin. Invest.:* D WHITTET  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 9607**                    **RENSSELAER POLYTECHNIC INST**                    **7148**  
 A LABORATORY INVESTIGATION OF PHOTOCHEMICAL PROCESSES ON  
 TITAN  
 05/12/2000 - 05/14/2002                    FY02: \$0                    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**                    **7149**  
 CHARACTERIZATIONS OF ASTEROID\_SURFACE MATERIALS: METEORITE  
 PARENT BODIES & ASTEROID EVOLUTION  
 02/01/2001 - 02/14/2003                    FY02: \$0                    Total: \$50,000  
*Prin. Invest.:* D J GAFFEY  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11662**                    **RENSSELAER POLYTECHNIC INST**                    **7150**  
 ENANTIOMERIC EXCESSES IN THE EARLY SOLAR SYSTEM-THE ROLE OF  
 CIRCULARLY POLARIZED RADIATION  
 02/07/2002 - 02/14/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D WHITTET  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1468**                    **RENSSELAER POLYTECHNIC INST**                    **7151**  
 R/S EVOLUTION OF LOCAL MICROSTRUCTURES SPATIAL INSTABILITIES OF  
 CORSENING CLUSTERS  
 02/24/1998 - 01/31/2003                    FY02: \$0                    Total: \$401,259  
*Prin. Invest.:* M E GLICKSMAN  
*Tech. Officer:* MSFC/L B JETER  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1696**                    **RENSSELAER POLYTECHNIC INST**                    **7152**  
 FOLLOW-ON RESEARCH ACTIVITIES FOR THE RENSSELAER ISOTHERMAL  
 DENDRITIC GROWTH EXPERIMENT (RIDGE)  
 05/15/2000 - 11/30/2003                    FY02: \$0                    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**                    **7153**  
 EXPERIMENTAL INVESTIGATION INTO ADVANCED PROPULSION FORTH  
 GENERATION SPACE TRANSPORTATION  
 04/12/2001 - 03/31/2004                    FY02: \$0                    Total: \$99,000  
*Prin. Invest.:* L N MYRABO, H NAGAMATSU  
*Tech. Officer:* MSFC/J W LEHNER  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 5494**                    **RENSSELAER POLYTECHNIC INST**                    **7154**  
 CREATION OF ENCAPSULATED SPECIES IN FULLERENE AND DIAMOND  
 BASED NANOSTRUCTURES  
 06/05/2002 - 05/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* P M AJAYAN  
*Tech. Officer:* ARC/T R GOVINDAN, ARC/A GRADY-HEISER  
*CASE Category:* 13 - PHYSICS

**NCC 8 97**                    **RENSSELAER POLYTECHNIC INST**                    **7155**  
 SPACE AND GROUND BASED CRYSTAL GROWTH USING MAGNETICALLY  
 COUPLED BAFFLE  
 06/13/1996 - 12/31/2003                    FY02: \$0                    Total: \$796,247  
*Prin. Invest.:* A G OSTROGORSKY  
*Tech. Officer:* MSFC/D SCHAEFER  
*CASE Category:* 13 - PHYSICS

**NGT 3 52341**                    **RENSSELAER POLYTECHNIC INST**                    **7156**  
 POWDER LUBRICATED JOURNAL BEARING DEVELOPMENT  
 06/29/1998 - 08/31/2001                    FY02: \$0                    Total: \$64,000  
*Prin. Invest.:* J A TICHY  
*Tech. Officer:* GRC/D MONTEGANI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50382**                    **RENSSELAER POLYTECHNIC INST**                    **7157**  
 MAIN BELT ASTEROIDS: COMPOSITIONAL EVIDENCE FOR DYNAMIC  
 EARLY SOLAR SYSTEM PROCESSES/STUDENT: PAUL  
 05/20/2002 - 06/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M GAFFEY  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2484**                    **ROCHESTER INST OF TECHNOLOGY**                    **7158**  
 SPIN-ON GLASSY ELECTROLYTES FOR THIN-FILM MICROELECTRONIC  
 BATTERIES  
 09/11/2000 - 11/30/2002                    FY02: \$0                    Total: \$46,182  
*Prin. Invest.:* D P RAFFAELLE  
*Tech. Officer:* GRC/N HAGEDORN  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2593**                    **ROCHESTER INST OF TECHNOLOGY**                    **7159**  
 DEVELOPMENT OF ADVANCED GRAVITY-INDEPENDENT HIGH HEAT FLUX  
 PHASE CHANGE HEAT EXCHANGER TECH & DESIGN  
 05/11/2001 - 06/30/2003                    FY02: \$0                    Total: \$42,462  
*Prin. Invest.:* D RAFFAELLE  
*Tech. Officer:* GRC/S BAILEY  
*CASE Category:* 13 - PHYSICS

**NAG 3 2595** ROCHESTER INST OF TECHNOLOGY 7160  
 QUANTUM DOT DEVICE CHARACTERIZATION AND DEVELOPMENT T  
 04/30/2001 - 05/31/2004 FY02: \$0 Total: \$50,000  
*Prin. Invest.:* D P RAFFAELLE  
*Tech. Officer:* GRC/S BAILEY  
*CASE Category:* 13 - PHYSICS

**NAG 3 2596** ROCHESTER INST OF TECHNOLOGY 7161  
 SIC SOLAR CELLS SIC SOLAR CELLS  
 04/30/2001 - 05/31/2002 FY02: \$0 Total: \$36,889  
*Prin. Invest.:* D RAFFAELLE  
*Tech. Officer:* GRC/S BAILEY  
*CASE Category:* 13 - PHYSICS

**NAG 5 9090** ROCHESTER INST OF TECHNOLOGY 7162  
 A PROGRAM TO DEVELOP HYBRIDIZED 2K X 2K SI PIN ARRAYS FOR SPACE  
 02/17/2000 - 01/31/2003 FY02: \$0 Total: \$679,700  
*Prin. Invest.:* Z NINKOV  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10051** ROCHESTER INST OF TECHNOLOGY 7163  
 FOREST FIRES IMAGING EXPERIMENT SYSTEMS  
 09/29/2000 - 08/31/2003 FY02: \$0 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 7164  
 SYNERGISTIC APPLICATIONS OF EO-1 AND LANDSAT 7 FOR CANOPY  
 TEMPERA  
 06/06/2001 - 06/14/2003 FY02: \$0 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 7165  
 YEAR ONE OF SOLICITED PROPOSAL ENTITLED, "LANDSAT RADIOMETRIC  
 CALIBRATION: TOWARDS A 20 YEAR RECORD  
 08/29/2001 - 08/31/2004 FY02: \$0 Total: \$94,989  
*Prin. Invest.:* J SCHOTT  
*Tech. Officer:* GSFC/B L MARKHAM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 02051** ROCHESTER INST OF TECHNOLOGY 7166  
 WILDFIRE AIRBORNE SENSOR PROGRAM (WASP)  
 09/10/2002 - 11/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* MCKEOWN  
*Tech. Officer:* SSC/M GIARDINO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 786** ROCHESTER INST OF TECHNOLOGY 7167  
 INTEGRATED POWER SOURCES INTEGRATED POWER SOURCES  
 03/23/2000 - 04/30/2003 FY02: \$0 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 7168  
 SOLID STATE LITHIUM POLYMER ELECTROLYTE DEVELOPMENT T  
 06/07/2000 - 05/31/2001 FY02: \$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 7169  
 THIN FILM SOLAR CELL PROCESSING AND DEVELOPMENT THIN FILM  
 SOLAR CELL PROCESSING AND DEVELOPMENT  
 06/07/2000 - 05/31/2001 FY02: \$0 Total: \$70,000  
*Prin. Invest.:* D P RAFFAELLE  
*Tech. Officer:* GRC/A HEPP  
*CASE Category:* 13 - PHYSICS

**NCC 3 937** ROCHESTER INST OF TECHNOLOGY 7170  
 SCANNING, TUNNELING OPTICAL RESONANCE MICROSCOPY ( STORM)  
 02/12/2002 - 01/24/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D P RAFFAELLE  
*Tech. Officer:* GRC/D BAILEY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 953** ROCHESTER INST OF TECHNOLOGY 7171  
 WIDE BANDGAP SPACE PHOTOVOLTAICS DEVELOPMENT WIDE BANDGAP  
 SPACE PHOTOVOLTAICS DEVELOPMENT  
 04/11/2002 - 03/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D RAFFAELLE  
*Tech. Officer:* GRC/G LANDIS  
*CASE Category:* 13 - PHYSICS

**NCC 3 956** ROCHESTER INST OF TECHNOLOGY 7172  
 HIGH PURITY SINGLE WALL NANOTUBE ANODES HIGH PURITY SINGLE  
 WALL NANOTUBE ANODES  
 05/02/2002 - 04/17/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D P RAFFAELLE  
*Tech. Officer:* GRC/A F HEPP  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC13 98001** ST UN NY COL-ENV SCI & FORESTRY 7173  
 A CENTER FOR EXPLORING AND DEVELOPING COMMERCIAL APPLICA-  
 TIONS OF REMOTE SENSING AND GEO-SPATIAL TEC  
 09/01/1998 - 12/31/2002 FY02: \$0 Total: \$500,000  
*Prin. Invest.:* P HOPKINS  
*Tech. Officer:* SSC/N SOVIK  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 01003** STATE U NY COLL OF ENVIR SCI & FORESTRY 7174  
 APPLYING REMOTE SENSING TO FOREST MANAGEMENT IN ST ATE  
 AGENCIES  
 06/01/2001 - 05/31/2002 FY02: \$0 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 7175  
 DETECTING INTERACTIONS BETWEEN VEGETATION AND THE THE NORTH-  
 EASTERN UNITED STATES  
 09/12/1997 - 12/31/2001 FY02: \$0 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 7176  
 CASE STUDY INVESTIGATIONS OF LARGE-AMPLITUDE INERT IA-GRAVITY  
 WAVE ENVIRONMENTS AND MESOSCALE  
 06/03/1998 - 06/30/2001 FY02: \$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 7177  
 GENETIC COMPLEXITY IN THE RNA WORLD: AN EXAMINATION OF THE  
 GENETIC LOAD IN RNA POPULATIONS  
 10/06/1999 - 09/30/2001 FY02: \$0 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 7178  
 TECHNOLOGY & POLICY ASPECTS OF APPLYING REMOTE SENSING TO  
 FOREST MANAGEMENT IN STATE AGENCIES  
 05/31/2000 - 05/31/2001 FY02: \$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 7179  
 DEVELOPING & TESTING OF NEW TECHNIQUES FOR CONSERVATION  
 BIOGEOPHYSICAL MINERALEXPLORATION  
 06/19/2000 - 11/30/2003 FY02: \$0 Total: \$114,589  
*Prin. Invest.:* H MASSONE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11008** STATE UNIV OF NEW YORK - ALBANY 7180  
 RELATIONSHIP BETWEEN CORE CONVECTIVE STRUCTURE AND INTEN-  
 SITY CHANGE IN TROPICAL CYCLONES  
 06/06/2001 - 06/14/2004 FY02: \$0 Total: \$80,000  
*Prin. Invest.:* J MOLINARI  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG13 02043** STATE UNIV OF NEW YORK - ALBANY 7181  
 APPLYING REMOTE SENSING TO FOREST MANAGEMENT IN STATE AGEN-  
 CIES  
 08/01/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* P F HOPKINS  
*Tech. Officer:* SSC/M GIARDINO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 1 18942** STATE UNIV OF NEW YORK - ALBANY 7182  
 SAGE III SCIENCE SUPPORT - P.I. - DR. V. MOHNEN  
 01/31/1990 - 01/31/2005 FY02: \$0 Total: \$587,630  
*Prin. Invest.:* V MOHNEN  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R MCMASTER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5380** STATE UNIV OF NEW YORK - ALBANY 7183  
 A PRELIMINARY TEST OF THE CO2 RECTIFIER HYPOTHESIS USING  
 EXISTING UPPER TROPOSPHERIC MEASUREMENTS...  
 04/15/2000 - 10/14/2002 FY02: \$0 Total: \$48,710  
*Prin. Invest.:* M KRITZ  
*Tech. Officer:* ARC/L PFISLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5504** STATE UNIV OF NEW YORK - ALBANY 7184  
 ANALYSIS OF CARBON DIOXIDE AND RADON MEASUREMENTS MADE IN THE  
 UPPER TROPOSPHERE OVER THE UNITED STATE  
 07/19/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* M KRITZ  
*Tech. Officer:* ARC/L PFISTER, ARC/R S HIRSKIND  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 3 891** STATE UNIV OF NEW YORK - ALBANY 7185  
 POLYTYPE MAPPING AND DEFECT CHARACTERIZATION IN SILICON CAR-  
 BIDE HETEROEPIAXIAL STRUCTURES  
 06/04/2001 - 04/30/2003 FY02: \$0 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 7186  
 PERIODIC, TRANSIENT, AND SPATIALLY INHOMOGENEOUS INFLUENCES  
 ON C EXCHANGE IN AMAZONIA  
 06/23/1998 - 12/31/2002 FY02: \$0 Total: \$1,157,862  
*Prin. Invest.:* D R FRITZJARRALD  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30431** STATE UNIV OF NEW YORK - ALBANY 7187  
 PHOTOCHEMICAL MINERALIZATION OF DISSOLVED ORGANIC MATTER AND  
 THE GLOBAL CARBON CYCLE (STUDENT: EMIL  
 08/26/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D KIEBER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9069** STATE UNIV OF NEW YORK - BINGHAMTON 7188  
 USE OF ROTATIONAL & GRAVITATIONAL OBSERVATIONS TO INFER CORE-  
 MANTLE COUPLING & LONG TIDAL PERIODS  
 03/08/2000 - 05/31/2002 FY02: \$0 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 7189  
 RELIABILITY CRITERIA-BASED FLIGHT SYSTEM CONTROL MY 1/3  
 04/30/1999 - 01/31/2002 FY02: \$0 Total: \$159,254  
*Prin. Invest.:* N WU  
*Tech. Officer:* LARC/C M BELCASTRO, LARC/C M BELCASTRO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 02009** STATE UNIV OF NEW YORK - BINGHAMTON 7190  
 FAULT TOLERANT CONTROL OF AEROSPACE VEHICLES  
 02/12/2002 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* N E WU  
*Tech. Officer:* LARC/C M BELCASTRO  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2238** STATE UNIV OF NEW YORK - BUFFALO 7191  
 FILTERED MASS DENSITY FUNCTION FOR DESIGN SIMULATIONS OF  
 HIGH SPEED AIRBREATHING PROPULSION SYS.  
 09/20/1999 - 08/31/2002 FY02: \$0 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 7192  
 A NEW SEMI-ACTIVE APPROACH FOR DYNAMIC RESPONSE MODIFICATION  
 OF HELICOPTERS  
 08/11/2000 - 08/31/2002 FY02: \$0 Total: \$46,994  
*Prin. Invest.:* G LEE  
*Tech. Officer:* ARC/C TUNG  
*CASE Category:* 41 - AERONAUTICAL ENGR



## NASA'S UNIVERSITY PROGRAM

NEW YORK

<p><b>NAG 3 2225</b> STATE UNIV OF NEW YORK - BUFFALO 7193 LARGE EDDY SIMULATION OF GRAVITATIONAL EFFECTS ON TRANSITIONAL AND TURBULENT GAS-JET DIFFUSION FLAME 01/22/1999 - 08/10/2003 FY02: \$0 Total: \$263,911 <i>Prin. Invest.:</i> D GIVI <i>Tech. Officer:</i> GRC/K R SACKSTEDER <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NGT 1 52185</b> STATE UNIV OF NEW YORK - BUFFALO 7201 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) 05/12/1998 - 06/30/2002 FY02: \$0 Total: \$66,001 <i>Prin. Invest.:</i> K E LEWIS <i>Tech. Officer:</i> LARC/J SOBIESKI <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 5 9390</b> STATE UNIV OF NEW YORK - BUFFALO 7194 THE PLANETARY GEOLOGY AND GEOPHYSICS UNDERGRADUATE RESEARCH PROGRAM 04/04/2000 - 04/14/2003 FY02: \$0 Total: \$148,600 <i>Prin. Invest.:</i> T GREGG <i>Tech. Officer:</i> GSFC/J A GRANT <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>	<p><b>NGT 1 52228</b> STATE UNIV OF NEW YORK - BUFFALO 7202 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) 04/18/2000 - 12/31/2001 FY02: \$0 Total: \$22,001 <i>Prin. Invest.:</i> K E LEWIS, T J HALECKI <i>Tech. Officer:</i> LARC/S L PADULA <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 9619</b> STATE UNIV OF NEW YORK - BUFFALO 7195 VOLCANIC EVOLUTION &amp; EROSIONAL HISTORY OF TYRRHENA &amp; HADRIACA PATERAE, MARS 05/18/2000 - 05/14/2003 FY02: \$0 Total: \$109,200 <i>Prin. Invest.:</i> T GREGG <i>Tech. Officer:</i> GSFC/J BOYCE <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 1 2040</b> STATE UNIV OF NEW YORK - STONY BROOK 7203 SPARC DATA CENTER MY 1/3 03/27/1998 - 12/31/2000 FY02: \$0 Total: \$179,288 <i>Prin. Invest.:</i> M A GELLER <i>Tech. Officer:</i> LARC/G L MADDREA, LARC/L R POOLE <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 9873</b> STATE UNIV OF NEW YORK - BUFFALO 7196 A NEW CLASS OF UNNATURAL FOLDING OLIGOMERS: HELICES WITH NANO-SIZED CAVITIES 08/10/2000 - 08/31/2003 FY02: \$0 Total: \$233,822 <i>Prin. Invest.:</i> B GONG <i>Tech. Officer:</i> GSFC/S DAVISON <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 1 2065</b> STATE UNIV OF NEW YORK - STONY BROOK 7204 OCEAN BUOY SHORTWAVE (OBS): A DATA SET FOR SATELLITE RETRIEVAL AND GCM VALIDATION 05/01/1998 - 11/30/2000 FY02: \$0 Total: \$126,278 <i>Prin. Invest.:</i> R A WALISER <i>Tech. Officer:</i> LARC/D S MCDUGAL, LARC/J L RAPER <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 10608</b> STATE UNIV OF NEW YORK - BUFFALO 7197 REMOTE SENSING OF GROUND WATER: CALIBRATION OF ENVIRONMENTAL GROUND WATER FLOW MODELS TO SATELLITE 03/15/2001 - 03/14/2004 FY02: \$0 Total: \$115,418 <i>Prin. Invest.:</i> M BECKER <i>Tech. Officer:</i> GSFC/M BECKER <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 1 2166</b> STATE UNIV OF NEW YORK - STONY BROOK 7205 SAGE II RESEARCH ON THE CONTROLLING PROCESSES OF UPPER TROPOSPHERIC &amp; STRATOSPHERIC WATER VAPOR 03/17/1999 - 06/14/2003 FY02: \$0 Total: \$273,000 <i>Prin. Invest.:</i> M A GELLER <i>Tech. Officer:</i> LARC/G L MADDREA, LARC/L R POOLE <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 11835</b> STATE UNIV OF NEW YORK - BUFFALO 7198 EVOLUTION OF WESTERN HESPERIA PLANUM, MARS 03/06/2002 - 02/28/2005 FY02: \$0 Total: \$0 <i>Prin. Invest.:</i> T K GREGG <i>Tech. Officer:</i> GSFC/D SENSKE <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 1 01052</b> STATE UNIV OF NEW YORK - STONY BROOK 7206 CENTER FOR EMERGING TECHNOLOGIES: LONG ISLAND TECHNOLOGY CENTER 03/30/2001 - 04/14/2003 FY02: \$0 Total: \$997,800 <i>Prin. Invest.:</i> Y SHAMASH <i>Tech. Officer:</i> LARC/R R ANTCLIFF <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 12409</b> STATE UNIV OF NEW YORK - BUFFALO 7199 ASSESSMENT, MONITORING, AND MODELING OF LOCAL AND THEIR IMPACTS ON GROUNDWATER RESOURCES, ECOSYSTEM 08/01/2002 - 07/31/2004 FY02: \$0 Total: \$0 <i>Prin. Invest.:</i> M SULTAN <i>Tech. Officer:</i> GSFC/G GUTMAN <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 2 1325</b> STATE UNIV OF NEW YORK - STONY BROOK 7207 APPLICATIONS OF COMPUTATIONAL GEOMETRY IN AIR TRAFFIC MANAGEMENT 05/19/1999 - 08/31/2002 FY02: \$0 Total: \$85,000 <i>Prin. Invest.:</i> J S MITCHELL <i>Tech. Officer:</i> ARC/G MEYER <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NGT 1 01034</b> STATE UNIV OF NEW YORK - BUFFALO 7200 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2 06/22/2001 - 06/30/2003 FY02: \$0 Total: \$22,000 <i>Prin. Invest.:</i> K LEWIS <i>Tech. Officer:</i> LARC/S L PADULA <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NAG 2 1379</b> STATE UNIV OF NEW YORK - STONY BROOK 7208 EFFECT OF SIMULATED MICROGRAVITY ON ACTIVATED TRANSCRIPTION 08/16/1999 - 02/28/2003 FY02: \$0 Total: \$206,623 <i>Prin. Invest.:</i> M A MORROW <i>Tech. Officer:</i> ARC/M M AVERNER, ARC/R D MACELROY <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>

## NEW YORK

## NASA'S UNIVERSITY PROGRAM

**NAG 2 1517** STATE UNIV OF NEW YORK - STONY BROOK 7209  
ELUCIDATING THE MOLECULAR EVENTS OF BONE MECHANORECEPTION  
08/31/2001 - 08/14/2003 FY02: \$0 Total: \$139,589  
*Prin. Invest.:* M HADJIARYROU  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2693** STATE UNIV OF NEW YORK - STONY BROOK 7210  
MICROSTRUCTURAL ENGINEERING AND AN INTEGRATED PROCESSING  
APPROACH FOR REVOLUTIONARY TBC'S  
02/12/2002 - 01/09/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* C C BERNDT  
*Tech. Officer:* GRC/J J ELDRIDGE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 3718** STATE UNIV OF NEW YORK - STONY BROOK 7211  
LABORATORY SPECTROSCOPIC MEASUREMENTS RELEVANT TO RE-  
SEARCH  
01/24/1997 - 02/28/2003 FY02: \$0 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 7212  
OPTIMIZATION OF A BIOCHEMICAL COUNTERMEASURE  
02/12/1997 - 02/14/2002 FY02: \$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 7213  
CIO MEASUREMENTS AND ANALYSIS IN THE NETWORK FOR T STRATO-  
SPHERIC CHANGE  
05/06/1997 - 03/31/2002 FY02: \$0 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 7214  
STRATOSPHERIC AND MESOSPHERIC TRACE GAS STUDIES USING MM-WAVE  
RECEIVERS  
03/21/1997 - 12/31/2001 FY02: \$0 Total: \$555,549  
*Prin. Invest.:* R L DE ZAFRA  
*Tech. Officer:* GSFC/M J KURYLO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6601** STATE UNIV OF NEW YORK - STONY BROOK 7215  
DEVELOPMENT AND VALIDATION OF A TROPICAL ISOPRENE EMISSION  
MODEL  
12/09/1997 - 03/31/2002 FY02: \$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 7216  
STUDIES OF EXCITED SPECIES IN PLANETARY UPPER ATMOSPHERES  
01/30/1998 - 08/14/2002 FY02: \$0 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 7217  
UARS INVESTIGATIONS OF WAVE-COUPLING IN THE MIDDLE ATMOSPHERE  
03/03/1998 - 02/14/2001 FY02: \$0 Total: \$225,003  
*Prin. Invest.:* D A GELLER  
*Tech. Officer:* GSFC/A DOUGLASS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7978** STATE UNIV OF NEW YORK - STONY BROOK 7218  
A COMPREHENSIVE STUDY OF NEUTRON STAR PHOTOSPHERES \_  
(LTSA98)  
01/06/1999 - 12/31/2003 FY02: \$0 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 7219  
COSMIC RAYS IN INTERPLANETARY SPACE  
02/04/1999 - 05/15/2001 FY02: \$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 7220  
SEDIMENTARY GEOCHEMISTRY OF MARTIAN SAMPLES FROM THE PATH-  
FINDER MISSION  
02/16/1999 - 08/31/2001 FY02: \$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 7221  
SYSTEMATIC STUDY OF EXPLOSIONS IN CORE COLLAPSE SUPERNOVA -  
REOB. DUE TO PI TRANSFER FROM NAG5-3099  
03/08/1999 - 12/31/2000 FY02: \$0 Total: \$28,837  
*Prin. Invest.:* F M SWETSY  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 8980** STATE UNIV OF NEW YORK - STONY BROOK 7222  
WERNER BANDS OF H<sub>2</sub> IN CIRCUMSTELLAR ENVIRONMENTS OF SE-  
LECTED CLASSICAL TAURI STARS - FUSE  
01/24/2000 - 01/31/2002 FY02: \$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 7223  
SORPTION OF SIMPLE ORGANIC MOLECULES ONTO PYRITE: POSSIBLY AN  
IMPORTANT STEP IN THE ORIGIN OF LIFE  
02/08/2000 - 12/31/2001 FY02: \$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 7224  
A SELF-CONSISTENT GLOBAL VELOCITY GRADIENT TENSOR FIELD MODEL  
02/10/2000 - 02/14/2002 FY02: \$0 Total: \$170,000  
*Prin. Invest.:* W E HOLT  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

<p><b>NAG 5 9680</b> STATE UNIV OF NEW YORK - STONY BROOK 7225 THE STABILITY OF ORBITAL CONFIGURATIONS AND THE ULTIMATE CONFIGURATIONS OF PLANETARY AND SATELLITE 06/21/2000 - 06/14/2003 FY02: \$0 Total: \$30,000 <i>Prin. Invest.:</i> J J LISSAUR <i>Tech. Officer:</i> GSFC/J BOYCE <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 10995</b> STATE UNIV OF NEW YORK - STONY BROOK 7233 COSMIC RAYS IN INTERPLANETARY SPACE: SCATTERING THEORY IN THREE DIMENSIONAL TURBULENCE 05/31/2001 - 05/31/2004 FY02: \$0 Total: \$117,926 <i>Prin. Invest.:</i> M A FORMAN <i>Tech. Officer:</i> GSFC/W WAGNER <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 9786</b> STATE UNIV OF NEW YORK - STONY BROOK 7226 TRAVEL SUPPORT AND WAVAS PROJECT SUPPORT OF SPARC 07/11/2000 - 07/31/2001 FY02: \$0 Total: \$34,726 <i>Prin. Invest.:</i> M A GELLER <i>Tech. Officer:</i> GSFC/P DECOLA <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 11033</b> STATE UNIV OF NEW YORK - STONY BROOK 7234 INTRASEASONAL VARIABILITY IN THE INDIAN OCEAN 06/08/2001 - 06/30/2004 FY02: \$0 Total: \$59,976 <i>Prin. Invest.:</i> D WALISER <i>Tech. Officer:</i> GSFC/E LINDSTROM <i>CASE Category:</i> 33 - OCEANOGRAPHY</p>
<p><b>NAG 5 9958</b> STATE UNIV OF NEW YORK - STONY BROOK 7227 THE EVOLUTION OF STELLAR CORONAE FROM THE PMS THROUGH THE ZAMS 09/13/2000 - 09/14/2002 FY02: \$0 Total: \$45,000 <i>Prin. Invest.:</i> F M WALTER <i>Tech. Officer:</i> GSFC/R MUSHOTZKY <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 11240</b> STATE UNIV OF NEW YORK - STONY BROOK 7235 TROPICAL UPWELLING AND STRATOSPHERIC WATER VAPOR VARIABILITY 08/15/2001 - 08/31/2004 FY02: \$0 Total: \$73,956 <i>Prin. Invest.:</i> M GELLER <i>Tech. Officer:</i> GSFC/P DECOLA <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 10284</b> STATE UNIV OF NEW YORK - STONY BROOK 7228 VERTICAL PROFILES OF LATENT HEATING IN TRMM: VALIDATION &amp; ASSIMILATION IN THE GEOS DATA ASSIMILATION 01/31/2001 - 01/31/2004 FY02: \$0 Total: \$50,000 <i>Prin. Invest.:</i> M ZHANG <i>Tech. Officer:</i> GSFC/R J LAWRENCE <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 11615</b> STATE UNIV OF NEW YORK - STONY BROOK 7236 PROPOSAL FOR SPARK DATA CENTER 01/17/2002 - 01/31/2005 FY02: \$0 Total: \$0 <i>Prin. Invest.:</i> M GELLER <i>Tech. Officer:</i> GSFC/P DECOLA <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 10318</b> STATE UNIV OF NEW YORK - STONY BROOK 7229 THE EARLY EVOLUTION OF THE CIRCUMSTELLAR ENVIRONMENT OF SOLAR-LIKE STARS FUSE 2000 01/25/2001 - 01/31/2002 FY02: \$0 Total: \$36,000 <i>Prin. Invest.:</i> F M WALTER <i>Tech. Officer:</i> GSFC/G SONNEBORN <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 12070</b> STATE UNIV OF NEW YORK - STONY BROOK 7237 MODELS OF PLANETARY THERMOSPHERES/IONOSPHERES 04/18/2002 - 04/30/2005 FY02: \$0 Total: \$0 <i>Prin. Invest.:</i> J L FOX <i>Tech. Officer:</i> GSFC/J HILLMAN <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 10506</b> STATE UNIV OF NEW YORK - STONY BROOK 7230 SURFICIAL PROCESSES ON MARS: AN EXPERIMENTAL APPROACH 03/05/2001 - 02/28/2003 FY02: \$0 Total: \$60,000 <i>Prin. Invest.:</i> S MCLENNAN <i>Tech. Officer:</i> GSFC/J BOYCE <i>CASE Category:</i> 12 - CHEMISTRY</p>	<p><b>NAG 5 12441</b> STATE UNIV OF NEW YORK - STONY BROOK 7238 THE PECULIAR B STAR HD 28867E 08/06/2002 - 08/14/2003 FY02: \$0 Total: \$0 <i>Prin. Invest.:</i> F M WALTER <i>Tech. Officer:</i> GSFC/G SONNEBORN <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 10583</b> STATE UNIV OF NEW YORK - STONY BROOK 7231 SEDIMENTARY GEOCHEMISTRY ON MARS 03/19/2001 - 02/28/2004 FY02: \$0 Total: \$28,000 <i>Prin. Invest.:</i> S MCLENNAN <i>Tech. Officer:</i> GSFC/J M BOYCE <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 8 1698</b> STATE UNIV OF NEW YORK - STONY BROOK 7239 MICROGRAVITY PROCESSING OF POLYMER THIN FILMS 06/02/2000 - 11/30/2003 FY02: \$0 Total: \$135,000 <i>Prin. Invest.:</i> M RAFAILOVICH <i>Tech. Officer:</i> MSFC/P DOTY <i>CASE Category:</i> 12 - CHEMISTRY</p>
<p><b>NAG 5 10772</b> STATE UNIV OF NEW YORK - STONY BROOK 7232 EARLY BATSE GRB AFTERGLOWS (ADP 2000) 04/26/2001 - 04/30/2002 FY02: \$0 Total: \$10,000 <i>Prin. Invest.:</i> R A WIJERS <i>Tech. Officer:</i> GSFC/R J OLIVERSEN <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 8 1700</b> STATE UNIV OF NEW YORK - STONY BROOK 7240 DEFECTS NUMERICALLY DECREASED (DENUDE) 08/07/2000 - 11/30/2003 FY02: \$0 Total: \$92,500 <i>Prin. Invest.:</i> D LARSON <i>Tech. Officer:</i> MSFC/P M DOTY <i>CASE Category:</i> 13 - PHYSICS</p>
	<p><b>NAG 9 1433</b> STATE UNIV OF NEW YORK - STONY BROOK 7241 LOW INTENSITY MECHANICAL COUNTERMEASURE TO PROHIBIT OSTEO- POROSIS DURING LONGTERM SPACEFLIGHT 06/19/2002 - 02/28/2003 FY02: \$0 Total: \$0 <i>Prin. Invest.:</i> C RUBIN <i>Tech. Officer:</i> JSC/S MCCOLLUM <i>CASE Category:</i> 56 - MEDICAL</p>

## NEW YORK

## NASA'S UNIVERSITY PROGRAM

**NAS 1 98142 STATE UNIV OF NEW YORK - STONY BROOK 7242**  
 CERES SCIENCE INVESTIGATIONS  
 10/29/1998 - 10/31/2003 FY02: \$0 Total: \$494,914  
*Prin. Invest.:* R D CESS  
*Tech. Officer:* LARC/B A WIELICKI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 3 957 STATE UNIV OF NEW YORK - STONY BROOK 7243**  
 HIGH RESOLUTION TRIPLE-AXIS X-RAY DIFFRACTION (HRT XD) AND  
 SYNCHROTRON WHITE BEAM X-RAY TOPOGRAPHY (  
 04/24/2002 - 01/07/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D DUDLEY  
*Tech. Officer:* GRC/R OKOJIE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 5 342 STATE UNIV OF NEW YORK - STONY BROOK 7244**  
 INTERDISCIPLINARY GLOBAL CHANGE RESEACH  
 06/23/1998 - 03/14/2002 FY02: \$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 7245**  
 COMBINED SYNCHROTRON WHITE X-RAY TOPOGRAPHY & HIGH RESOLU-  
 TION TRIPLE AXIS X-RAY DIFFRACTION CHARACTE  
 04/22/1996 - 03/31/2001 FY02: \$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 7246**  
 RESEARCH ENTITLED "ORBITAL PROCESSING OF EUTECTICS  
 06/13/1996 - 10/31/2001 FY02: \$0 Total: \$656,249  
*Prin. Invest.:* D LARSON  
*Tech. Officer:* MSFC/T TURNER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 30124 STATE UNIV OF NEW YORK - STONY BROOK 7247**  
 ENVIRONMENTAL CONTROLS OVER 2-METHYL-3-BUTEN-2-01  
 09/30/1997 - 08/31/2001 FY02: \$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 7248**  
 EVOLUTION OF THE THREE-DIMENSIONAL MOISTURE STRUCTURE ASSO-  
 CIATED WITH THE LIFE CYCLE OF THE MADDEN  
 08/17/2000 - 08/31/2003 FY02: \$0 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 7249**  
 TRACE ELEMENT ANALYSIS OF COSMIC DUST  
 04/04/2000 - 06/30/2003 FY02: \$0 Total: \$91,700  
*Prin. Invest.:* G J FLYNN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11904 STATE UNIV OF NEW YORK COL - PLATTSBURGH 7250**  
 SYNCHROTRON-BASED X-RAY MICROANALYSIS FACILITY FOR CHEMICAL  
 AND MINERALOGICAL CHARACTERIZATION  
 04/25/2002 - 04/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* G J FLYNN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12358 STATE UNIV OF NEW YORK COL - PLATTSBURGH 7251**  
 CARBON IDENTIFICATION AND CHARACTERIZATION IN INTE RPLANETARY  
 DUST PARTICLES: AN EXAMINATION  
 07/09/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* G J FLYNN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1109 STATE UNIV OF NEW YORK COL - PLATTSBURGH 7252**  
 JSC ASTROBIOLOGY INST  
 05/11/1999 - 05/13/2003 FY02: \$0 Total: \$75,000  
*Prin. Invest.:* G J FLYNN  
*Tech. Officer:* JSC/E K GIBSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 4691 STATE UNIV OF NEW YORK COLL - PURCHASE 7253**  
 CARBON AND NITROGEN ABUNDANCES IN INTERPLANETARY TO PRE-  
 BIOTIC ORGANIC MATTER ON EARTH  
 06/26/1997 - 10/31/2001 FY02: \$0 Total: \$73,550  
*Prin. Invest.:* D J FLYNN  
*Tech. Officer:* GSFC/M A MEYER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 9370 STATE UNIV OF NEW YORK COLL - PURCHASE 7254**  
 VALIDATION AND IMPROVEMENT OF DAO ANALYSES USING FLIGHT DATA  
 RECORDER OBSERVATIONS  
 04/12/2000 - 03/31/2003 FY02: \$0 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 COLL - PURCHASE 7255**  
 EXPERIMENTAL STUDY OF THE IMPACT DISRUPTION OF MET EORITIC  
 SAMPLES: PARENT BODY FRAGMENTATION & THE  
 01/11/2001 - 01/14/2004 FY02: \$0 Total: \$30,000  
*Prin. Invest.:* G FLYNN  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2464 STATE UNIV OF NEW YORK COLL, BUFFALO 7256**  
 DYNAMICS OF AEROSOL PARTICLES IN STATIONARY ISOTROPIC TURBU-  
 LENCE  
 06/16/2000 - 11/30/2003 FY02: \$0 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 COLL, BUFFALO 7257**  
 PLANETARY GEOLOGY AND GEOPHYSICS UNDERGRADUATE RES  
 05/13/1997 - 03/31/2001 FY02: \$0 Total: \$204,086  
*Prin. Invest.:* GREGG  
*Tech. Officer:* GSFC/J G GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## NASA'S UNIVERSITY PROGRAM

NEW YORK

<b>NAG 5 7579</b>	<b>STATE UNIV OF NEW YORK COLL, BUFFALO</b>	<b>7258</b>	<b>NAG 5 9093</b>	<b>SYRACUSE UNIV</b>	<b>7266</b>
FUNDING FOR 'DEBRIS FLOW HAZARD ASSESSMENT, PICO D E ORIZABA, MEXICO' (SENH98-0089)			ENERGETICS OF MOLECULAR HYDROGEN FORMATION		
08/04/1998 - 07/31/2002	FY02: \$0	Total: \$300,000	02/17/2000 - 01/31/2003	FY02: \$0	Total: \$135,940
<i>Prin. Invest.:</i> M F SHERIDAN			<i>Prin. Invest.:</i> G VIDALI		
<i>Tech. Officer:</i> GSFC/H V FREY			<i>Tech. Officer:</i> GSFC/P CRANE		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 7581</b>	<b>STATE UNIV OF NEW YORK COLL, BUFFALO</b>	<b>7259</b>	<b>NAG 5 11227</b>	<b>SYRACUSE UNIV</b>	<b>7267</b>
FUNDING FOR 'TEPHROSTRATIGRAPHIC AND SATELLITE IMA GERY ANALYSIS OF THE KAMCHATKAN SHORELINE...' (SE			APPLY SENSE, ANALYZE, INTERPRET AND DECIDE (SAID) TO THE DEVELOPMENT OF INTELLIGENT ALGORITHMS& SYS		
08/04/1998 - 01/31/2002	FY02: \$0	Total: \$100,000	08/13/2001 - 08/14/2003	FY02: \$0	Total: \$997,800
<i>Prin. Invest.:</i> M BURSİK			<i>Prin. Invest.:</i> P K VARSHNEY		
<i>Tech. Officer:</i> GSFC/H V FREY			<i>Tech. Officer:</i> GSFC/E J MASUOKA		
<i>CASE Category:</i> 32 - GEOLOGICALSCIENCE			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 5 10648</b>	<b>STATE UNIV OF NEW YORK COLL, BUFFALO</b>	<b>7260</b>	<b>NAG 5 11438</b>	<b>SYRACUSE UNIV</b>	<b>7268</b>
ANALYSIS OF VOCANOTECTONICS DEFORMATION & VOLCANIC HAZARDS USING TOPSAR & SRTM, MONO BASIN CALIFORNI			MOLECULE FORMATION ON DUST GRAIN ANALOGUES: STUDY OF KINETICS AND ENERGETICS		
04/02/2001 - 04/14/2003	FY02: \$0	Total: \$35,000	12/04/2001 - 12/31/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> M I BURSİK			<i>Prin. Invest.:</i> G VIDALI		
<i>Tech. Officer:</i> GSFC/H V FREY			<i>Tech. Officer:</i> GSFC/H HASAN		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 11331</b>	<b>STATE UNIV OF NEW YORK COLL, BUFFALO</b>	<b>7261</b>	<b>NAG 5 12391</b>	<b>SYRACUSE UNIV</b>	<b>7269</b>
ATTITUDE DETERMINATION SCHEMES FOR THE CEGANS SENSORS			FABRICATION OF LINBO3 CYLINDER "D" SHAPED FIBER		
09/27/2001 - 11/30/2001	FY02: \$0	Total: \$5,900	07/22/2002 - 07/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J CRASSIDIS			<i>Prin. Invest.:</i> D KORNREIGH		
<i>Tech. Officer:</i> GSFC/D A QUINN			<i>Tech. Officer:</i> GSFC/H SHAW		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 12179</b>	<b>STATE UNIV OF NEW YORK COLL, BUFFALO</b>	<b>7262</b>	<b>NAS 3 00172</b>	<b>SYRACUSE UNIV</b>	<b>7270</b>
DEVELOPMENT OF AUTOMATED SPACECRAFT ALIGNMENT AND CALIBRATION ALGORITHMS			ENHANCED 3D VISCOUS INVERSE DESIGN CFD CODE		
05/10/2002 - 05/14/2003	FY02: \$0	Total: \$0	11/03/2000 - 09/30/2002	FY02: \$0	Total: \$141,504
<i>Prin. Invest.:</i> J CRASSIDIS			<i>Prin. Invest.:</i> N AVAILABLE		
<i>Tech. Officer:</i> GSFC/R HARMAN			<i>Tech. Officer:</i> GRC/C COLES-HAMILTON		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 3 2419</b>	<b>SYRACUSE UNIV</b>	<b>7263</b>	<b>NCC 1 01004</b>	<b>SYRACUSE UNIV</b>	<b>7271</b>
MEASUREMENT OF TURBULENT PRESSURE AND TEMPERATURE FLUCTUATIONS IN A GAS TURBINE COMBUSTOR			AN ADVANCED INTERACTIVE DISCOVERY ENVIRONMENT FOR ENGINEERING EDUCATION		
05/11/2000 - 03/31/2003	FY02: \$0	Total: \$158,710	02/07/2001 - 12/31/2003	FY02: \$0	Total: \$998,000
<i>Prin. Invest.:</i> D LAGRAFF			<i>Prin. Invest.:</i> B D DAVIDSON, E D LIDDY		
<i>Tech. Officer:</i> GRC/D A POVINELLI			<i>Tech. Officer:</i> LARC/R D BRAUN, LARC/K A CANNON		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 3 2427</b>	<b>SYRACUSE UNIV</b>	<b>7264</b>	<b>NAG 2 1142</b>	<b>UNIV OF ROCHESTER</b>	<b>7272</b>
RAPIDLY SHEARED BUBBLY SUSPENSIONS RAPIDLY SHEARED BUBBLY SUSPENSIONS			PROPOSAL FOR INFRARED SUBMILLIMETER, AND RADIO ASTRONOMY		
05/24/2000 - 04/30/2005	FY02: \$0	Total: \$136,500	07/22/1997 - 05/31/2002	FY02: \$0	Total: \$1,479,766
<i>Prin. Invest.:</i> D SANGANI			<i>Prin. Invest.:</i> W J FORREST, J L PIPHER		
<i>Tech. Officer:</i> GRC/H K NAHRA			<i>Tech. Officer:</i> ARC/C R MCCREIGHT, ARC/R E MCMURRAY		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 6822</b>	<b>SYRACUSE UNIV</b>	<b>7265</b>	<b>NAG 2 1280</b>	<b>UNIV OF ROCHESTER</b>	<b>7273</b>
STUDIES OF REACTIONS ON INTERSTELLAR GRAIN ANALOGUES IN A UV-RICH ENVIRONMENT			DEVELOPMENT OF DETECTOR ARRAYS FOR LOW-BACKGROUND SPACE ASTRONOMY		
01/12/1998 - 12/31/2001	FY02: \$0	Total: \$229,476	01/12/1999 - 02/28/2002	FY02: \$0	Total: \$195,000
<i>Prin. Invest.:</i> G VIDALI			<i>Prin. Invest.:</i> W J FORREST		
<i>Tech. Officer:</i> GSFC/H HASAN			<i>Tech. Officer:</i> ARC/C R MCCREIGHT		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 45 - ELECTRICAL ENGR		

## NORTH CAROLINA

## NASA'S UNIVERSITY PROGRAM

**NAG 2 1452**                    **UNIV OF ROCHESTER**                    **7274**  
 DEVELOPMENT OF OPTIMIZED 1K X 1K MULTIPLEXER FOR N GST  
 02/01/2001 - 12/31/2002                    FY02: \$0                    Total: \$450,000  
*Prin. Invest.:* W J FORREST  
*Tech. Officer:* ARC/C R MCCREIGHT, ARC/R E MCMURRAY, JR  
*CASE Category:* 11 - ASTRONOMY

**NAG 2 1533**                    **UNIV OF ROCHESTER**                    **7275**  
 DEVELOPMENT OF 10 UM HGCDTE DETECTOR ARRAYS FOR PA SSVILY  
 COOLED SPACE MISSIONS  
 02/12/2002 - 01/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* W J FORREST, J L PIPHER  
*Tech. Officer:* ARC/C R MCCREIGHT, ARC/R E MCMURRAY  
*CASE Category:* 11 - ASTRONOMY

**NAG 3 2348**                    **UNIV OF ROCHESTER**                    **7276**  
 LIQUID CRYSTAL POINT-DIFFRACTION INTERFEROMETER (L CPDI) MATE-  
 RIALS AND DEVICES FOR MICROGRAVITY FLUI  
 03/08/2000 - 11/30/2003                    FY02: \$0                    Total: \$131,776  
*Prin. Invest.:* K MARSHALL  
*Tech. Officer:* GRC/D GRIFFIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 6119**                    **UNIV OF ROCHESTER**                    **7277**  
 SUNSPOT DYNAMICS  
 08/08/1997 - 08/31/2001                    FY02: \$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**                    **7278**  
 DEVELOPMENT OF LOW DARK CURRENT, HIGH QUANTUM EFFI R PAS-  
 SIVELY COOLED SPACE EXPERIMENTS  
 08/21/1997 - 06/30/2003                    FY02: \$110,000                    Total: \$715,562  
*Prin. Invest.:* J L PIPHER  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8428**                    **UNIV OF ROCHESTER**                    **7279**  
 THE PHYSICS OF RADIATIVE MHD JETS: A NUMERICAL STUDY OF MAGNE-  
 TIZED YSO OUTFLOWS  
 06/02/1999 - 06/14/2003                    FY02: \$0                    Total: \$278,780  
*Prin. Invest.:* A FRANK  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8642**                    **UNIV OF ROCHESTER**                    **7280**  
 DEVELOPMENT OF 2 - 10 MICRON HGCDTE ARRAYS FOR EXP LORER  
 MISSIONS AND SOFIA.  
 07/08/1999 - 06/30/2002                    FY02: \$0                    Total: \$492,402  
*Prin. Invest.:* J L PIPHER  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9351**                    **UNIV OF ROCHESTER**                    **7281**  
 DEVELOPMENT OF EXTRINSIC GERMANIUM BLOCKED-IMPURIT Y-BAND  
 DETECTOR ARRAYSFOR FAR-INFRARED ASTRONOMY  
 03/30/2000 - 12/31/2002                    FY02: -\$64,054                    Total: \$233,946  
*Prin. Invest.:* D M WATSON  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 13 - PHYSICS

**NAG 5 10429**                    **UNIV OF ROCHESTER**                    **7282**  
 NGST DETECTOR ARRAY TESTING AT THE UNIV OF R OCHESTER  
 02/22/2001 - 02/28/2003                    FY02: \$0                    Total: \$183,000  
*Prin. Invest.:* D J FORREST  
*Tech. Officer:* GSFC/M GREENHOUSE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11557**                    **UNIV OF ROCHESTER**                    **7283**  
 MULTISENSORY INTERACTIONS SUBSERVING ORIENTING BEH AVIOR  
 01/09/2002 - 03/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G PAIGE  
*Tech. Officer:* GSFC/G FOGLEMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1382**                    **UNIV OF ROCHESTER**                    **7284**  
 EN VIVO HEMOPOIESIS IN 3-DIMENSIONAL HUMAN BONE MARROW  
 CULTURE UNDER SIMULATED MICROGRAVITY  
 07/09/1997 - 07/08/2001                    FY02: \$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**                    **7285**  
 CIRCADIAN RYTHMS AN DCONTROL OF HEMATOPOIESIS  
 07/27/2001 - 09/30/2004                    FY02: \$0                    Total: \$79,000  
*Prin. Invest.:* J H WU  
*Tech. Officer:* JSC/D RISEN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NGT 5 104**                    **UNIV OF ROCHESTER**                    **7286**  
 THE NUCLEATION OF REFRACTORY VAPORS & ITS IMPACT ON ASTRO-  
 PHYSICAL PROCESSES/STUDENT: DANIEL MARTINE  
 05/25/2000 - 08/31/2003                    FY02: \$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**                    **7287**  
 EXPERIMENTAL EFFOR FOR THE OBSERVATION OF MACROSCO PIC  
 QUANTUM COHERENCE IN AN RF - SQUID  
 05/25/2001 - 05/31/2004                    FY02: \$0                    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**                    **7288**  
 IMPACT OF MODEL UNCERTAINTY ON SPATIAL COMPENSATN IN STRUC-  
 TURAL ACOUSTIC CONTROL  
 03/27/2001 - 12/31/2003                    FY02: \$0                    Total: \$50,535  
*Prin. Invest.:* R L CLARK  
*Tech. Officer:* LARC/R H CABELL  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01062**                    **DUKE UNIV**                    **7289**  
 THE MECHANICS OF FLAPPING FLIGHT  
 04/11/2001 - 01/31/2004                    FY02: \$0                    Total: \$35,723  
*Prin. Invest.:* K C HALL  
*Tech. Officer:* LARC/D E COX  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1377** **DUKE UNIV** **7290**  
 EVOLUTION OF GENE REGULATORY SYSTEM: STRUCTURAL & FUNCTIONAL ANALYSES OF EVOLUTIONARY DIVERSIFICATION  
 08/19/1999 - 09/30/2002 FY02: \$0 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** **7291**  
 DENSITY EQUILIBRATION IN FLUIDS NEAR THE LIQUID-VAPOR CRITICAL POINT  
 04/22/1996 - 04/30/2003 FY02: \$0 Total: \$350,000  
*Prin. Invest.:* H MEYER  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2372** **DUKE UNIV** **7292**  
 GRAVITY AND GRANULAR MATERIALS GRAVITY AND GRANULAR MATERIALS  
 04/07/2000 - 11/30/2003 FY02: \$0 Total: \$168,650  
*Prin. Invest.:* R P BEHRINGER  
*Tech. Officer:* GRC/R A WILKINSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2627** **DUKE UNIV** **7293**  
 MODELING OF UNSTEADY THREE-DIMENSIONAL FLOWS IN MULTISTAGE MACHINES  
 06/07/2001 - 04/02/2005 FY02: \$0 Total: \$18,243  
*Prin. Invest.:* K C HALL  
*Tech. Officer:* GRC/A P KURKOV  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 3665** **DUKE UNIV** **7294**  
 A STUDY OF CARBON MONOXIDE USING TRACE CONSTITUENT DATA ASSIMILATION: A NEW APPROACH IN GLOBAL ...  
 01/15/1997 - 12/31/2000 FY02: \$0 Total: \$646,175  
*Prin. Invest.:* P KABIBHATLA  
*Tech. Officer:* GSFC/R ROOD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8533** **DUKE UNIV** **7295**  
 TO WHAT EXTENT CAN INCREASED EVAPOTRANSPIRATION DUE TO GROUNDWATER BASED IRRIGATION IN THE GREAT  
 07/02/1999 - 07/14/2003 FY02: \$0 Total: \$233,754  
*Prin. Invest.:* S ROJSTACZER  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9348** **DUKE UNIV** **7296**  
 PHYSICAL VARIABILITY, ECOSYSTEM RESPONSE & BIOGEOCHEMICAL CONSEQUENCES IN THE PACIFIC OCEAN: UNDERSTANDING  
 03/28/2000 - 04/30/2003 FY02: \$0 Total: \$303,262  
*Prin. Invest.:* R T BARBER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9605** **DUKE UNIV** **7297**  
 CONTINUED DEVELOPMENT & APPLICATION OF DATA ASSIMILATION TECHNIQUES FOR TROPOSPHERIC CHEMISTRY STUDIES  
 05/31/2000 - 05/31/2003 FY02: \$0 Total: \$338,430  
*Prin. Invest.:* P KASIBHATLA  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10270** **DUKE UNIV** **7298**  
 MAGNETOSPHERIC, IONOSPHERIC, & ATMOSPHERIC EFFECT OF INTENSE LIGHTNING-GENERATED ELECTROMAGNETIC  
 01/08/2001 - 01/14/2004 FY02: \$0 Total: \$73,976  
*Prin. Invest.:* S CUMMER  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11400** **DUKE UNIV** **7299**  
 SUPPORT FOR THE NASA-HYDROMETEOROLOGY SCIENCE TEAM OFFICE  
 01/10/2002 - 07/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R AVISSAR  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11401** **DUKE UNIV** **7300**  
 THE IMPACTS OF LAND-USE/LAND-COVER CHANGE IN AMAZONIA ON HYDROMETEOROLOGICAL PROCESSES AT  
 01/10/2002 - 02/28/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R AVISSAR  
*Tech. Officer:* GSFC/P HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11402** **DUKE UNIV** **7301**  
 A STUDY OF TELECONNECTIONS USING A NESTED GCM-RCM & SATELLITE OBSERVATIONS  
 02/05/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R AVISSAR  
*Tech. Officer:* GSFC/Y SUD  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11680** **DUKE UNIV** **7302**  
 IMPACT OF FIELD-SCALE HETEROGENEITY IN SURFACE MOISTURE AND VEGETATION COVER ON REGIONAL SCALE FLUX  
 01/31/2002 - 01/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J ALBERTSON  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12072** **DUKE UNIV** **7303**  
 MAGNETOSPHERIC RADIO TOMOGRAPHY: OBSERVABLES, ALGORITHMS, AND EXPERIMENTAL ANALYSIS  
 04/19/2002 - 04/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* S A CUMMER  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12336** **DUKE UNIV** **7304**  
 THE HIERARCHICAL STRUCTURE OF ORGANISMS: IS THERE ANY INCREASING TENDENCY IN EVOLUTION?  
 07/15/2002 - 06/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* D MCSHEA  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12497** **DUKE UNIV** **7305**  
 "CONSTRUCTING GRIDDED GLOBAL MAPS FOR ISLSCP II"  
 08/29/2002 - 02/28/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* R B JACKSON  
*Tech. Officer:* GSFC/B W MEESON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NORTH CAROLINA

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1581** **DUKE UNIV** **7306**  
 R/S DIFFERENTIATION AND MAINTENANCE OF SKELETAL AND CARDIAC  
 MUSCLE IN SIMULATED GRAVITY  
 04/28/1999 - 11/30/2002 FY02: \$0 Total: \$400,000  
*Prin. Invest.:* W E KRAUS  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 8 1715** **DUKE UNIV** **7307**  
 RESEARCH ENTITLED: DYNAMIC STRUCTURAL MODELING AND AND  
 TESTING OF THIN-FILM STRUCTURE.  
 03/23/2000 - 06/02/2003 FY02: \$0 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 1781** **DUKE UNIV** **7308**  
 QUANTUM COHERENCE IN ULTRACOLD FERMIONIC VAPORS  
 05/01/2001 - 04/30/2005 FY02: \$0 Total: \$70,000  
*Prin. Invest.:* J E THOMAS  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 9 83** **DUKE UNIV** **7309**  
 PREBREATHE REDUCTION PROTOCOL  
 03/11/1999 - 04/01/2003 FY02: \$0 Total: \$425,000  
*Prin. Invest.:* R VANN  
*Tech. Officer:* JSC/M GERNHARDT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 02009** **DUKE UNIV** **7310**  
 GRADUATE STUDENT RESEARCHER PROGRAM (GSRP)  
 06/12/2002 - 05/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L VIRGIN, D HOLLAND  
*Tech. Officer:* LARC/K BELVIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 69** **DUKE UNIV** **7311**  
 A REGIONAL ASSESSMENT OF THE RATE AND DIRECTION OF CHANGE IN  
 SOIL ORGANIC CARBON POOLS DUE TO LAND  
 05/28/1998 - 09/14/2001 FY02: \$0 Total: \$62,100  
*Prin. Invest.:* B SCHLESINGER  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30355** **DUKE UNIV** **7312**  
 EFFECTS OF PRECIPITATION VARIABILITY & DESERTIFICATION ON WATER  
 DYNAMICS IN ARID LANDS: A PATCH & LA  
 08/24/2000 - 08/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* J REYNOLDS  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30379** **DUKE UNIV** **7313**  
 THE INFLUENCE OF IRRIGATION ON WARM SEASON PRECIPITATION IN  
 THE GREW PLAINS/NATHAN J. MOORE  
 08/13/2001 - 08/31/2004 FY02: \$0 Total: \$21,412  
*Prin. Invest.:* S ROJSTACZER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30397** **DUKE UNIV** **7314**  
 MECHANISMS CONTROLLING THE RESPONSE OF DETRITIFICATION TO  
 ANTHROPOGENIC NITROGEN DEPOSITION (STUDENT  
 08/14/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* W H SCHLESSINGER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30472** **DUKE UNIV** **7315**  
 MONITORING AND MODELING THE RESPONSE OF COASTAL ECOSYSTEMS  
 AND CARBON STORAGE TO RISING SEA LEVEL  
 08/27/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* N L CHRISTENSEN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50224** **DUKE UNIV** **7316**  
 VARYING EOLIAN DUST INPUTS AND SPATIOTEMPORAL PATTERNS OF  
 CHANGE ON CARIBBEAN CORAL REEFS  
 09/29/1998 - 08/31/2001 FY02: \$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** **7317**  
 CYTOSKELETAL CONTRIBUTIONS TO CHANGES IN ELASTICITY OF MAM-  
 MALIAN MYOCYTES AFTER CYCLIC MECHANICAL  
 07/07/1999 - 06/30/2001 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* G TRUSKEY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 6045** **EAST CAROLINA UNIV** **7318**  
 SC2000/SC2001 COMPUTATIONAL SCIENCE LEADERSHIP PROGRAM FOR  
 HIGH SCHOOL TEACHERS  
 08/23/2000 - 07/31/2002 FY02: \$0 Total: \$108,000  
*Prin. Invest.:* J C HUSKAMP  
*Tech. Officer:* ARC/J P ZIEBARTH, ARC/M J LEON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG13 02034** **EAST CAROLINA UNIV** **7319**  
 EVALUATING THE EFFECTS OF BOTTOM TRAWLS IN THE PAMLICO RIVER,  
 NC: AN APPLICATION OF REMOTE SENSING  
 02/26/2002 - 02/24/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D CORBETT  
*Tech. Officer:* SSC/R MILLER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 1 01027** **EAST CAROLINA UNIV** **7320**  
 THE LIVES, CAREERS, AND ENGINEERING ACCOMPLISHMENTS OF  
 WILBUR AND ORVILLE WRIGHT  
 03/13/2001 - 12/31/2002 FY02: \$0 Total: \$91,874  
*Prin. Invest.:* L TISE  
*Tech. Officer:* LARC/S E MASSENBERG  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1165** **EAST CAROLINA UNIV** **7321**  
 HYPERGRAVITY EFFECTS ON THE MATERNAL-FETAL SYSTEM  
 03/27/2000 - 03/14/2003 FY02: \$0 Total: \$58,902  
*Prin. Invest.:* H W BURDEN  
*Tech. Officer:* ARC/A E RONCA  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)



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<b>NAG 1 2229</b>	<b>ELIZABETH CITY STATE UNIV</b>	<b>7322</b>	<b>NCC 5 533</b>	<b>ELIZABETH CITY STATE UNIV</b>	<b>7330</b>
A PILOT COMPUTER AIDED DESIGN AND MANUFACTUREING CURRICULM THAT PROMOTES ENGINEERING			ECSU - NRTS CONTINUATION/MUSPIN NRTS PROGRAM.		
09/15/1999 - 07/31/2001	FY02: \$0	Total: \$200,001	02/01/2001 - 01/31/2004	FY02: \$0	Total: \$357,694
<i>Prin. Invest.:</i> E LAWRENCE			<i>Prin. Invest.:</i> L HAYDEN		
<i>Tech. Officer:</i> LARC/G D REESE			<i>Tech. Officer:</i> GSFC/J HARRINGTON		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 3 2150</b>	<b>ELIZABETH CITY STATE UNIV</b>	<b>7323</b>	<b>NAG 1 2227</b>	<b>FAYETTEVILLE STATE UNIV</b>	<b>7331</b>
CONTROLLING CHAOS IN JOSEPHSON JUNCTION CONTROLLING CHAOS IN JOSEPHSON JUNCTION			TEACHING INTEGRATED MATHEMATICS AND SCIENCE WITH TECHNOLOGY AND NASA RESOURCES: A PARTNERSHIP		
04/07/1998 - 05/31/2002	FY02: \$0	Total: \$244,272	08/23/1999 - 07/31/2001	FY02: \$0	Total: \$200,001
<i>Prin. Invest.:</i> D SENGUPTA, S K KANA, K D EDOH			<i>Prin. Invest.:</i> I EDWARDS		
<i>Tech. Officer:</i> GRC/IM ANDRO, GRC/E J PETRIK			<i>Tech. Officer:</i> LARC/S MASSENBERG		
<i>CASE Category:</i> 21 - MATHEMATICS			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 3 2556</b>	<b>ELIZABETH CITY STATE UNIV</b>	<b>7324</b>	<b>NAG 1 02107</b>	<b>FAYETTEVILLE STATE UNIV</b>	<b>7332</b>
AIR TRAFFIC ANALYSIS AIR TRAFFIC ANALYSIS			PRE-COLL PROGRAM - HUMAN SPACE FLIGHT INST		
03/01/2001 - 02/28/2002	FY02: \$0	Total: \$35,000	07/25/2002 - 09/30/2002	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D PENDHARKAR			<i>Prin. Invest.:</i> L EDWARDS		
<i>Tech. Officer:</i> GRC/D C ROBINSON			<i>Tech. Officer:</i> LARC/R A HATHAWAY		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 21 - MATHEMATICS		
<b>NAG 5 9371</b>	<b>ELIZABETH CITY STATE UNIV</b>	<b>7325</b>	<b>NAG 5 9155</b>	<b>FAYETTEVILLE STATE UNIV</b>	<b>7333</b>
MATHEMATICS OF THE GREAT DISMAL SWAMP			MATHEMATICS/SCIENCE EDUCATION CENTER PRECOLL PROGRAM		
04/06/2000 - 03/31/2003	FY02: \$0	Total: \$203,776	03/03/2000 - 02/28/2003	FY02: \$0	Total: \$200,000
<i>Prin. Invest.:</i> L HAYDEN			<i>Prin. Invest.:</i> L EDWARDS		
<i>Tech. Officer:</i> GSFC/B MEESON			<i>Tech. Officer:</i> GSFC/M STOUTSENBERGER		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 9372</b>	<b>ELIZABETH CITY STATE UNIV</b>	<b>7326</b>	<b>NAG 3 2300</b>	<b>JOHNSON C. SMITH UNIV</b>	<b>7334</b>
YOU BE THE SCIENTIST WITH SATELLITE IMAGERY IN EX/ EC COMMUNITIES			THE DEVELOPMENT OF A PASSIVE MILLIMETER WAVE IMAGING SYSTEM WITH SUPER-RESOLUTION		
04/06/2000 - 03/31/2003	FY02: \$0	Total: \$189,791	11/16/1999 - 12/31/2002	FY02: \$0	Total: \$195,192
<i>Prin. Invest.:</i> L B HAYDEN			<i>Prin. Invest.:</i> D E MILLER		
<i>Tech. Officer:</i> GSFC/B MEESON			<i>Tech. Officer:</i> GRC/D M BLANKSON		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 5 11842</b>	<b>ELIZABETH CITY STATE UNIV</b>	<b>7327</b>	<b>NAG 1 2225</b>	<b>NORTH CAROLINA A&amp;T STATE UNIV</b>	<b>7335</b>
PLANNING AND DEVELOPMENT OF CONFERENCE ACTIVITIES RELATING TO PUBLIC SCHOOL CURRICULA ENHANCEMENT US			ACCESS TO SPACE THROUGH RESEARCH AND EDUCATION MY 1/2		
03/11/2002 - 03/14/2003	FY02: \$0	Total: \$0	08/24/1999 - 12/31/2001	FY02: \$0	Total: \$200,000
<i>Prin. Invest.:</i> W PORTER			<i>Prin. Invest.:</i> F FERGUSON		
<i>Tech. Officer:</i> GSFC/D MENCHAN			<i>Tech. Officer:</i> LARC/R S CALLOWAY, LARC/B K OUTLAW		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 5 12554</b>	<b>ELIZABETH CITY STATE UNIV</b>	<b>7328</b>	<b>NAG 1 02077</b>	<b>NORTH CAROLINA A&amp;T STATE UNIV</b>	<b>7336</b>
CLONING, EXPRESSION AND GROWTH OF H.PYLORI PROTEIN CRYSTALS IN MICROGRAVITY.			PERF EVAL & MODELING OF AFFORDABLE COMPOSITES MANUFACTURED USING STITCHING & Z-PINNING PROCESSES		
09/12/2002 - 09/30/2003	FY02: \$0	Total: \$0	04/05/2002 - 04/04/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D BANERJEE			<i>Prin. Invest.:</i> A D KELKAR		
<i>Tech. Officer:</i> GSFC/J L HARRINGTON			<i>Tech. Officer:</i> LARC/R A HATHAWAY		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NCC 5 121</b>	<b>ELIZABETH CITY STATE UNIV</b>	<b>7329</b>	<b>NAG 2 1413</b>	<b>NORTH CAROLINA A&amp;T STATE UNIV</b>	<b>7337</b>
REGIONAL NETWORK RESOURCES AND TRAINING SITE AT ECSU			MOTION PLANNING IN A SOCIETY OF INTELLIGENT MOBILE AGENTS		
08/15/1995 - 08/14/2001	FY02: \$0	Total: \$2,639,000	07/05/2000 - 06/14/2002	FY02: \$0	Total: \$120,416
<i>Prin. Invest.:</i> L HAYDEN			<i>Prin. Invest.:</i> A C ESTERLINE		
<i>Tech. Officer:</i> GSFC/J HARRINGTON			<i>Tech. Officer:</i> ARC/M G SHATTO		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NCC 5 121</b>	<b>ELIZABETH CITY STATE UNIV</b>	<b>7329</b>	<b>NAG 2 1430</b>	<b>NORTH CAROLINA A&amp;T STATE UNIV</b>	<b>7338</b>
REGIONAL NETWORK RESOURCES AND TRAINING SITE AT ECSU			COMBUSTION SENSORS: GAS TURBINE APPLICATIONS		
08/15/1995 - 08/14/2001	FY02: \$0	Total: \$2,639,000	08/16/2000 - 12/31/2001	FY02: \$0	Total: \$143,397
<i>Prin. Invest.:</i> L HAYDEN			<i>Prin. Invest.:</i> M HUMAN		
<i>Tech. Officer:</i> GSFC/J HARRINGTON			<i>Tech. Officer:</i> ARC/G ZILLIAC		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 46 - MECHANICAL ENGR		

## NORTH CAROLINA

## NASA'S UNIVERSITY PROGRAM

**NAG 2 1469**      **NORTH CAROLINA A&T STATE UNIV**      **7339**  
 EXAMINING THE PILOT & CONTROLLER PERFORMANCE DATA WHEN IN A  
 FREE FLIGHT WITH WEATHER PHENOMENON  
 04/12/2001 - 08/14/2002      FY02: \$0      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**      **7340**  
 RONALD E. MCNAIR GRADUATE RESEARCH FELLOWSHIP PROG RAM  
 02/22/1999 - 05/14/2002      FY02: \$0      Total: \$970,500  
*Prin. Invest.:* R M SALAMI, L SHARPE  
*Tech. Officer:* ARC/A CARDENAS, ARC  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 2 6061**      **NORTH CAROLINA A&T STATE UNIV**      **7341**  
 NASA RONALD E MCNAIR GRADUATE RESEARCH FELLOWSHIP PROGRAM  
 08/15/2002 - 08/14/2004      FY02: \$0      Total: \$0  
*Prin. Invest.:* J MONROE  
*Tech. Officer:* ARC/A CARDENAS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2165**      **NORTH CAROLINA A&T STATE UNIV**      **7342**  
 DEVELOPMENT OF A STRUCTURAL DAMAGE DIAGNOSTIC AND MONITOR-  
 ING SYSTEM FOR ROCKETENGINES PHASE I: DAMA  
 06/11/1998 - 10/31/2000      FY02: \$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**      **7343**  
 ADVANCED CROSS ENTERPRISE TECHNOLOGY  
 04/05/2001 - 03/11/2004      FY02: \$0      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**      **7344**  
 CARBON FIBER REINFORCED CERAMIC COMPOSITES FOR PRO PULSION  
 APPLICATION  
 09/21/2001 - 10/31/2002      FY02: \$0      Total: \$5,000  
*Prin. Invest.:* D N SHIVAKUMAR  
*Tech. Officer:* GRC/M R FREEDMAN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2782**      **NORTH CAROLINA A&T STATE UNIV**      **7345**  
 STUDY OF GAASSBN ALLOYS FOR SOLAR CELL APPLICATION S  
 05/24/2002 - 06/23/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* W COLLIS  
*Tech. Officer:* GRC/R F LAWRENCE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 4 152**      **NORTH CAROLINA A&T STATE UNIV**      **7346**  
 INVESTIGATION OF AERO SERVO STRUCTURAL INTERACTIO IN AERO-  
 SPACE APPLICATIONS  
 03/23/1998 - 09/18/2002      FY02: \$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**      **7347**  
 DEVELOPMENT AND EVALUATION OF FAULT-TOLERANT FLIGHT CONTROL  
 SYSTEMS  
 06/26/2000 - 06/14/2003      FY02: \$0      Total: \$200,000  
*Prin. Invest.:* D D SONG  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 7158**      **NORTH CAROLINA A&T STATE UNIV**      **7348**  
 SELF-TIMED SYNCHRONOUS DIGITAL SYSTEM DESIGN  
 03/11/1998 - 12/31/2002      FY02: \$0      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**      **7349**  
 NATIONAL CONFERENCE OF BLACK PHYSICS STUDENTS  
 03/06/2000 - 03/14/2001      FY02: \$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**      **7350**  
 LOW-POWER RF SOI-CMOS TECHNOLOGY FOR DISTRIBUTED SENSOR  
 NETWORKS  
 04/11/2000 - 08/30/2003      FY02: \$0      Total: \$100,000  
*Prin. Invest.:* N DOGAN  
*Tech. Officer:* GSFC/J MALONE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1632**      **NORTH CAROLINA A&T STATE UNIV**      **7351**  
 POLYMERIZATION OF ADVANCED THERMOSETS IN MICRO- GRAVITY TO  
 DEVELOP ULTRA LOW LOSS PLOYMERS  
 09/17/1999 - 07/31/2002      FY02: \$0      Total: \$99,983  
*Prin. Invest.:* A KENNEDY  
*Tech. Officer:* MSFC/A BEAM, MSFC/W LOVE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1646**      **NORTH CAROLINA A&T STATE UNIV**      **7352**  
 STRUCTURAL HEALTH MONITORING OF AEROSPACE VEHICLES  
 09/30/1999 - 09/30/2001      FY02: \$0      Total: \$200,000  
*Prin. Invest.:* N  
*Tech. Officer:* MSFC/A BEAM, MSFC/W LOVE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1865**      **NORTH CAROLINA A&T STATE UNIV**      **7353**  
 INVESTIGATION OF THE NEXT-GENERATION DESIGN TOOL FOR AERO-  
 SPACE NRA01OEOP  
 05/29/2002 - 05/28/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* S WANG  
*Tech. Officer:* MSFC/W LOVE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 9 1402**      **NORTH CAROLINA A&T STATE UNIV**      **7354**  
 "ANALYTIC SOLUTION ALGORITHMS & SIMULATION FOR COMPRESSIBLE  
 FLOW MODELS: COMPUTATIONAL BENCHMARKS"  
 03/01/2002 - 02/28/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* D CLEMENCE  
*Tech. Officer:* JSC/L M ARMENDARIZ  
*CASE Category:* 21 - MATHEMATICS

## NASA'S UNIVERSITY PROGRAM

## NORTH CAROLINA

**NAG10 317** NORTH CAROLINA A&T STATE UNIV 7355  
 A WIRELESS RADIO LOCATION SYSTEM FOR USE IN AN IND OOR ENVIRONMENT  
 06/17/2002 - 06/13/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D DUNN  
*Tech. Officer:* KSC/D ABRAHAM  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 3 01197** NORTH CAROLINA A&T STATE UNIV 7356  
 8CM, AND 30CM CARBON-CARBON GRIDS, USING INNOVATIV E MANUFAC-  
 TURING PROCESS  
 08/14/2001 - 05/28/2004 FY02: \$0 Total: \$40,000  
*Prin. Invest.:* K SHIVAKUMAR  
*Tech. Officer:* GRC/T HAAG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 1 255** NORTH CAROLINA A&T STATE UNIV 7357  
 THE CENTER FOR AEROSPACE RESEARCH: A NASA CENTER OF EXCEL-  
 LENCE  
 05/13/1997 - 12/31/2002 FY02: \$0 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 7358  
 INTEGRATION OF NASA RESEARCHIN UNDERGRAD EDUCATION IN MATH-  
 EMATICS, SCIENCE, ENGINEERING & TECHNOLOGY  
 08/24/2001 - 06/30/2003 FY02: \$0 Total: \$701,721  
*Prin. Invest.:* J D MONROE  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 4 105** NORTH CAROLINA A&T STATE UNIV 7359  
 ON THE PREVIEWED CONTROL ACTION FOR AIRCRAFT FLYING QUALITIES  
 07/25/1996 - 03/30/2001 FY02: \$0 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 7360  
 INTEGRATION OF NASA RESEARCH INTO UNDERGRADUATE ED UCATION  
 IN MATHEMATICSSSCIENCE, ENGINEERING AND TE  
 06/29/1998 - 02/28/2002 FY02: \$0 Total: \$1,500,000  
*Prin. Invest.:* J D MONROE  
*Tech. Officer:* GSFC/B WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 4 52409** NORTH CAROLINA A&T STATE UNIV 7361  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/04/1999 - 10/31/2001 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* S CHANDRA, S WYLIE  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2804** NORTH CAROLINA CENTRAL UNIV 7362  
 INTEGRATION OF NANOTECHNOLOGY AND COMPUTATIONAL MO DELING  
 NASA RELATED RESEARCH INTO THE UNDERGRADUA  
 09/19/2002 - 09/22/2006 FY02: \$0 Total: \$0  
*Prin. Invest.:* B V VIAHOVIC  
*Tech. Officer:* GRC/R F LAWRENCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2216** NORTH CAROLINA STATE UNIV. - RALEIGH 7363  
 ALGORITHMIC ENHANCEMENTS FOR THE VULCAN NAVIER- STOKES  
 SOLVER  
 08/09/1999 - 08/31/2002 FY02: \$0 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 7364  
 AN INVESTIGATION OF TERMINAL GUIDANCE & CONTROL TECHNIQUES  
 FOR A ROBOTIC MARSLANDER  
 08/06/1999 - 05/15/2001 FY02: \$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 01002** NORTH CAROLINA STATE UNIV. - RALEIGH 7365  
 LEVELS OF AUTOMTION IN THE COMMERCIAL AIRCRAFT COCKPIT AND  
 PILOT SITUATION AWARENESS  
 12/06/2000 - 12/31/2001 FY02: \$0 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 7366  
 HUMAN RESPONSE ADAPTV AUTOMATN EARLY SENSOR/INFO ACQ FUNC &  
 LATER STGS OF INFO PROCESSG IN SYS OPS  
 04/19/2001 - 12/31/2001 FY02: \$0 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 7367  
 MODEL DEVELOPMENT FOR HIGH PERFORMANCE PIEZO- CERAMIC-  
 BASED ACTUATORS  
 03/22/2001 - 08/28/2002 FY02: \$0 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 7368  
 ACTIVE SHIELDING & CONTROL OF ENVIRONMENTAL NOISE  
 04/19/2001 - 12/31/2001 FY02: \$0 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 7369  
 UNINHABITED AERIAL VEHICLES (UAV) FLIGHT CONTROL USING DISTRIB-  
 UTED ACTUATION & SENSING  
 05/18/2001 - 09/30/2003 FY02: \$0 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 7370  
 MULTISCALE MODELING OF NANOCOMPOSITES  
 06/19/2001 - 06/30/2003 FY02: \$0 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 7371**  
 A COMPUTATIONAL INTELLIGENT (CI) APPROACH TO THE PRECISION MARS  
 LANDER PROBLEM  
 08/09/2001 - 05/15/2002 FY02: \$0 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 7372**  
 POST-STALL FLIGHT UNSTEADY AERODYNAMIC STUDY AND GAIN-  
 SCHEDULED CONTROLLER DESIGN  
 08/16/2001 - 08/31/2004 FY02: \$0 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 7373**  
 ENHANCEMENT OF BUCKLING LOAD WITH THE USE OF ACTIVE MATERIALS  
 09/27/2001 - 11/30/2002 FY02: \$0 Total: \$26,106  
*Prin. Invest.:* F G YUAN  
*Tech. Officer:* LARC/D R AMBER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 02007 NORTH CAROLINA STATE UNIV. - RALEIGH 7374**  
 CHARACTERIZING PRETURBULENCE ENVIRONMENT SENSOR DEV, NEW HAZ-  
 ARD ALGORITHMS & EXPERIMENTAL FLT PLANNING  
 11/30/2001 - 11/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* M L KAPLAN  
*Tech. Officer:* LARC/F H PROCTOR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 02031 NORTH CAROLINA STATE UNIV. - RALEIGH 7375**  
 RESEARCH ON AERODYNAMIC HEATING AT HYPERSONIC SPEEDS USING  
 UNSTRUCTURED GRIDS  
 01/10/2002 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* F R DEJARNETTE, K J WEILMUNSTER, H H HAMILTON  
*Tech. Officer:* LARC/R A THOMPSON  
*CASE Category:* 41 - AERONAUTICALENGNR

**NAG 1 02052 NORTH CAROLINA STATE UNIV. - RALEIGH 7376**  
 SOLUTION ADAPTIVE SCHEMES FOR THE VULCAN NAVIER-STOKES  
 SOLVER  
 02/12/2002 - 02/11/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J R EDWARDS, D S MCRAE  
*Tech. Officer:* LARC/J A WHITE  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 1 02056 NORTH CAROLINA STATE UNIV. - RALEIGH 7377**  
 AUTH IN ADAPTIVE AUTOMATION APPLIED TO VARIOUS STAGES OF  
 HUMAN-MACHINE SYS INFORMATION PROCESSING  
 02/25/2002 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* D B KABER  
*Tech. Officer:* LARC/L J PRINZEL, LARC/M D EUNKING  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 1 02080 NORTH CAROLINA STATE UNIV. - RALEIGH 7378**  
 MODEL DEVELOPMENT FOR HIGHPERFORMANCE PIEZOCERAMIC-BASED  
 ACUTATORS  
 04/01/2002 - 03/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R C SMITH  
*Tech. Officer:* LARC/J S HARRISON  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 02086 NORTH CAROLINA STATE UNIV. - RALEIGH 7379**  
 LOAD TRANSFER AND FRACTURE OF CARBON NANOTUBES MY 1/3  
 04/22/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* F G YUAN  
*Tech. Officer:* LARC/E SAETHER, LARC/E H GLAESSGEN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 02091 NORTH CAROLINA STATE UNIV. - RALEIGH 7380**  
 CHITIN-BASED MECHANICAL PROPERTIES EVALUATION  
 05/01/2002 - 05/15/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* F G YUAN  
*Tech. Officer:* LARC/R L SPELLMAN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 2 1281 NORTH CAROLINA STATE UNIV. - RALEIGH 7381**  
 VISUAL FACTORS AFFECTING PILOT'S JUDGEMENTS OF TRAJECTORY-TO-  
 TOUCHDOWN DURING EMERGENCY LANDINGS  
 01/11/1999 - 12/31/2001 FY02: \$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 7382**  
 PHOSPHOINOSITIDE SIGNALING AND PLANT GRAVITROPISM: A TRANS-  
 GENIC APPROACH  
 07/16/2001 - 07/14/2003 FY02: \$0 Total: \$47,006  
*Prin. Invest.:* I Y PERERA  
*Tech. Officer:* ARC/M M AVERNER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1566 NORTH CAROLINA STATE UNIV. - RALEIGH 7383**  
 A GENOMIC ANALYSIS OF PLANT GRAVITY SENSING AND RESPONSE  
 06/12/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* C BROWN  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2658 NORTH CAROLINA STATE UNIV. - RALEIGH 7384**  
 THREE-DIMENSIONAL NUMERICAL SIMULATION OF ROCKET-BASED  
 COMBINED-CYCLE ENGINE RESPONSE DURING MODE T  
 01/25/2002 - 01/24/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J R EDWARDS  
*Tech. Officer:* GRC/C J STEFFEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2706 NORTH CAROLINA STATE UNIV. - RALEIGH 7385**  
 INVESTIGATION OF INTERACTIONS BETWEEN BIOCONVECTION AND  
 NATURAL CONVECTION AND BIOFILM GROWTH IN PO  
 02/12/2002 - 02/11/2006 FY02: \$0 Total: \$0  
*Prin. Invest.:* A V KUJNETSOV  
*Tech. Officer:* GRC/R D GREEN  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 3743 NORTH CAROLINA STATE UNIV. - RALEIGH 7386**  
 NASA SPECIALIZED CENTER OF RESEARCH AND TRAINING IN BIOLOGY  
 03/19/1997 - 03/14/2003 FY02: \$0 Total: \$4,028,631  
*Prin. Invest.:* E DAVIES  
*Tech. Officer:* GSFC/D P LISKOWSKY  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 5 6586** NORTH CAROLINA STATE UNIV. - RALEIGH 7387  
REFINING REMOTE SENSING ESTIMATES OF NUTRIENT CONC ENTRA-  
TIONS BASED ON TEMPERATURE  
11/07/1997 - 10/31/2002 FY02: \$0 Total: \$189,527  
*Prin. Invest.:* D KAMYKOWSKI  
*Tech. Officer:* GSFC/C A TREES  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 7153** NORTH CAROLINA STATE UNIV. - RALEIGH 7388  
X-RAY EMISSION AND DYNAMICS OF SUPERNOVA REMNANTS - ATP  
03/31/1998 - 03/31/2002 FY02: \$0 Total: \$382,170  
*Prin. Invest.:* S P REYNOLDS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8215** NORTH CAROLINA STATE UNIV. - RALEIGH 7389  
EDUCATIONAL OUTREACH FOR RESEARCH "PRODUCTION OF ENERGETIC  
PARTICLES AT HELIOSPHERIC SHOCKS". THIS  
03/04/1999 - 10/31/2000 FY02: \$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 7390  
SEAWIFS DATA COLLECTION, CALIBRATION & PROCESSING FOR THE  
INDIAN OCEAN  
12/06/1999 - 12/31/2002 FY02: \$0 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 7391  
SOFTWARE PACKAGE FOR ANALYSIS OF THERMAL X-RAY SPECTRA OF  
SUPERNOVA REMNANTS  
04/17/2000 - 04/14/2002 FY02: \$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 7392  
X-RAY EMISSION AND DYNAMICS OF SUPERNOVA REMNANTS (ATP 2000)  
05/15/2001 - 05/14/2004 FY02: \$0 Total: \$140,000  
*Prin. Invest.:* S P REYNOLDS  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11830** NORTH CAROLINA STATE UNIV. - RALEIGH 7393  
DRIVERS OF LANDCOVER AND LANDUSE CHANGE ASSOCIATED WITH  
LAND RESTITUTION POLICIES IN GAU  
02/28/2002 - 02/28/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S WALSH  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 8 1479** NORTH CAROLINA STATE UNIV. - RALEIGH 7394  
R/S GROWTH AND PROPERTIES OF CARBON  
03/19/1998 - 04/30/2003 FY02: \$0 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 7395  
OPTICAL CHARACTERIZATION OF GAS PHASE CHEMISTRY AND SURFACE  
CHEMISTRY DURING HIGH PRESSURE PROCESS  
05/09/2000 - 12/31/2003 FY02: \$0 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 7396  
MODELS OF MASS TRANSPORT DURING MICROGRAVITY CRYSTAL  
GROWTH OF ALLOYED SEMICONDUCTORS  
07/10/2001 - 11/30/2002 FY02: \$40,000 Total: \$76,000  
*Prin. Invest.:* N MA  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1087** NORTH CAROLINA STATE UNIV. - RALEIGH 7397  
INTEGRATED PRESSURE BLADDER-RESTRAINT STRUCTURE FOR AD-  
VANCED EXTRAVEHICULAR MOBILITY UNIT  
02/12/1999 - 02/11/2003 FY02: \$0 Total: \$81,144  
*Prin. Invest.:* M H MOHAMAD  
*Tech. Officer:* JSC/C H LIN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 9 1423** NORTH CAROLINA STATE UNIV. - RALEIGH 7398  
DEVELOP SELF-CALIBRATING DISSOLVED OXYGEN MICROSENS OR ARRAY  
06/13/2002 - 10/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* C KIM  
*Tech. Officer:* JSC/D JAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG10 308** NORTH CAROLINA STATE UNIV. - RALEIGH 7399  
CAPTURING SELECTED LECTURES FROM THE COURSE "SPACE BIOLOGY"  
IN DIGITAL FORMAT: PHASE I  
09/24/2001 - 09/16/2003 FY02: \$0 Total: \$38,338  
*Prin. Invest.:* D S BROWN  
*Tech. Officer:* KSC/J LETCHWORTH  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAS 1 01082** NORTH CAROLINA STATE UNIV. - RALEIGH 7400  
HEALTH MONITORING OF RLV AIRFRAME STRUCTURES  
05/30/2001 - 05/31/2003 FY02: \$0 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 7401  
SAGE III SCIENCE INVESTIGATION SUPPORT; P.I. PROFESSOR SAXENA  
10/06/1989 - 01/31/2005 FY02: \$0 Total: \$613,937  
*Prin. Invest.:* V SAXENA  
*Tech. Officer:* LARC/G MADDREA  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 1 407** NORTH CAROLINA STATE UNIV. - RALEIGH 7402  
RESEARCH ON STREAMLINES AND AERODYNAMIC HEATING FOR UN-  
STRUCTURED GRIDS ON HIGH SPEED VEHICLES  
08/28/2000 - 06/30/2001 FY02: -\$125 Total: \$24,550  
*Prin. Invest.:* F R DEJARNETTE  
*Tech. Officer:* LARC/H H HAMILTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

## NORTH CAROLINA

## NASA'S UNIVERSITY PROGRAM

**NCC 1 01008 NORTH CAROLINA STATE UNIV. - RALEIGH 7403**  
 UAV (UNINHABITED AERIAL VEHICLE) FLIGHT TESTING 4 ADVANCED  
 TECHNOLOGY CONCEPTS  
 11/28/2000 - 11/30/2003 FY02: \$0 Total: \$54,917  
*Prin. Invest.:* N CHOKANI, C E HALL, S N HEINZEN  
*Tech. Officer:* LARC/A E WASHBURN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 02040 NORTH CAROLINA STATE UNIV. - RALEIGH 7404**  
 DEVELOPMENT AND FLIGHT TEST VALIDATION OF A AUTO RETURN  
 FUNCTION  
 07/16/2002 - 07/15/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* C E HALL, N CHOKANI, S N HEINZEN  
*Tech. Officer:* LARC/E B JACKSON, LARC/D D VICROY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 5506 NORTH CAROLINA STATE UNIV. - RALEIGH 7405**  
 VIRTUAL MOLECULAR DESIGN OF SMART NANOPOROUS MATERIALS  
 INSPIRED BY NUEROFILAMENT STRUCTURE AND FUNC  
 08/01/2002 - 07/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D W BRENNER  
*Tech. Officer:* ARC/H PARTRIDGE, ARC/M MEYYAPPAN  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 8 95 NORTH CAROLINA STATE UNIV. - RALEIGH 7406**  
 FUNDAMENTAL ASPECTS OF VAPOR DEPOSITION AND ETCHING UNDER  
 DIFFUSION CONTROLLED TRANSPORT  
 05/31/1996 - 08/31/2001 FY02: \$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 7407**  
 APPLICATION OF REMOTE SENSING TECHNOLOGIES IN THE FOREST  
 SECTOR  
 10/28/1998 - 10/27/2003 FY02: \$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 7408**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 05/16/2001 - 06/30/2004 FY02: \$0 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 7409**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/04/2001 - 06/30/2004 FY02: \$0 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 7410**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/22/2001 - 06/30/2003 FY02: \$0 Total: \$12,000  
*Prin. Invest.:* H T BANKS  
*Tech. Officer:* LARC/W P WINFREE  
*CASE Category:* 21 - MATHEMATICS

**NGT 1 02004 NORTH CAROLINA STATE UNIV. - RALEIGH 7411**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/06/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* H T BANKS, N L GIBSON  
*Tech. Officer:* LARC/E R GENERAZIO  
*CASE Category:* 21 - MATHEMATICS

**NGT 1 02010 NORTH CAROLINA STATE UNIV. - RALEIGH 7412**  
 GRADUATE STUDENT RESEARCHERS PROGRAM / NEW AWARD  
 06/06/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* H K KHACHATOORIAN, R N ORNAN  
*Tech. Officer:* LARC/P TROUTMAN  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NGT 1 02032 NORTH CAROLINA STATE UNIV. - RALEIGH 7413**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 01/08/2002 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* F R DEKARMETTE  
*Tech. Officer:* LARC/R HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52196 NORTH CAROLINA STATE UNIV. - RALEIGH 7414**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/22/1998 - 06/30/2001 FY02: \$0 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 7415**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/22/2000 - 06/30/2001 FY02: \$0 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 7416**  
 GSRP TRAINING GRANT - KRISTY DYER - THERMAL AND NON-THERMAL  
 PHYSICS OF OUNGUPERNOVA REMNANTS  
 05/27/1998 - 08/14/2002 FY02: \$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 7417**  
 CONSTRAINING CARBON MONOXIDE SOURCES BY MODELING ITS STABLE  
 ISOTOPES  
 10/24/1997 - 08/31/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* D REICHLER  
*Tech. Officer:* GSFC/A GHASSEM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30192 NORTH CAROLINA STATE UNIV. - RALEIGH 7418**  
 WATER, HEAT AND SALT BUDGET IN THE NORTHERN INDIAN  
 OCEAN/STUDENT: WEI SHI  
 08/19/1999 - 08/31/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* J M MORRISON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

## NORTH CAROLINA

**NGT 5 40011** NORTH CAROLINA STATE UNIV. - RALEIGH 7419  
TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLL AND FELLOWSHIP PROGRAM.  
01/30/1997 - 02/28/2002 FY02: \$0 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 7420  
NORTH CAROLINA SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
03/02/2001 - 02/28/2005 FY02: \$0 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 7421  
SCIENTISTS PLUS ALLIES CONTRIBUTING TO EDUCATION (SPACE)  
09/25/2001 - 08/31/2002 FY02: \$0 Total: \$99,364  
*Prin. Invest.:* P PIERCE RAMSEY  
*Tech. Officer:* LARC/R HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9195** SHAW UNIV 7422  
SHAW UNIV MSET PRE-COLL EXPERIENCE  
03/10/2000 - 02/28/2003 FY02: \$0 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 7423  
CHEMICAL MODIFICATION OF NANOTUBES FOR COMPOSITES  
06/08/2000 - 05/31/2003 FY02: \$0 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 7424  
SCIENCE AND TECHNOLOGY OF NEW CARBON NANOTUBE- BASED COMPOSITES  
04/17/2001 - 01/31/2004 FY02: \$0 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 7425  
BONE MATRIX CHANGES DURING SKELETAL UNLOADING & RE LOADING  
08/15/2000 - 10/31/2002 FY02: \$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 6278** UNIV OF NORTH CAROLINA - CHAPEL HILL 7426  
GREENHOUSE GAS (N2O, CH4) EXCHANGE AND N CYCLING D FERTILIZED (FACE) TEMPERATE FOREST  
09/12/1997 - 08/31/2001 FY02: \$0 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 7427  
LABORATORY STUDIES OF THE OPTICAL CONSTANTS & MICR OPHYSICAL PROPERTIES OF STRATOSPHERIC & UPPER TR  
01/06/2000 - 12/31/2002 FY02: \$0 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 7428  
SIMULATING OF LAND USE DYNAMICS IN SE ASIA: A CELL ULAR AUTOMATA APPROACH  
08/21/2001 - 08/31/2004 FY02: \$0 Total: \$187,891  
*Prin. Invest.:* R RINDFUSS  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12504** UNIV OF NORTH CAROLINA - CHAPEL HILL 7429  
MOREHEAD PLANETARIUM AND SCIENCE CENTER  
08/21/2002 - 08/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R R GOLWALS  
*Tech. Officer:* GSFC/L BILBROUGH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1580** UNIV OF NORTH CAROLINA - CHAPEL HILL 7430  
QUANTITATIVE, MULVARIATE METHOD/PRE-FLIGHT OPTI- MIATION, & POST-FLIGHT EVAL. MACR CRYSTAL GROWTH.  
02/04/1999 - 11/30/2002 FY02: \$100,000 Total: \$601,677  
*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 7431  
NOVEL PROPERTIES OF CARBON NANOTUBES AND RELATED NANOSTRUCTURES  
03/23/2000 - 09/14/2002 FY02: \$0 Total: \$170,000  
*Prin. Invest.:* J LU  
*Tech. Officer:* ARC/M MEYYAPPAN  
*CASE Category:* 13 - PHYSICS

**NCC 2 5499** UNIV OF NORTH CAROLINA - CHAPEL HILL 7432  
LOW DIMENSION NANOSTRUCTURES & SYSTEMS FOR DEVICES AND SENSORS  
07/09/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J LU  
*Tech. Officer:* ARC/H PARTRIDGE, ARC/M MEYYAPPAN  
*CASE Category:* 13 - PHYSICS

**NCC 5 295** UNIV OF NORTH CAROLINA - CHAPEL HILL 7433  
AGRICULTURAL COLONIZATION ON THE ECUADORIAN AMAZON : POPULATION, BIOPHYSICAL AND GEOGRAPHICAL FACTOR  
06/12/1998 - 12/31/2002 FY02: \$0 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 7434  
RADON-222 AND STABLE CARBON ISOTOPE TRACING OF CAR BON EXCHANGE AND TRACE GAS FLUXES IN OLD GROWTH A  
06/17/1998 - 12/31/2002 FY02: \$0 Total: \$782,600  
*Prin. Invest.:* C S MARTENS  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NORTH DAKOTA

## NASA'S UNIVERSITY PROGRAM

**NGT 5 30177 UNIV OF NORTH CAROLINA - CHAPEL HILL 7435**  
 THE MIGRATION ORIGINS OF DEFORESTATION IN A PROTECTED AREA:  
 COLONIZATION/CLEAR-CUTTING, AND CORN IN  
 08/12/1999 - 08/31/2002 FY02: \$0 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 7436**  
 WIND DRIVEN TRANSPORT PROCESSES OFF THE OREGON COAST:  
 DIRECT AND REMOTE SENSING OF COASTAL OCEAN PR  
 08/14/2001 - 08/31/2004 FY02: \$0 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 7437**  
 DISTRIBUTED HYDROLOGICAL MODELING OF URBANIZING ECOSYSTEMS:  
 INVESTIGATING THE IMPACT OF URBANIZATION  
 08/14/2001 - 08/31/2004 FY02: \$0 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 7438**  
 MONOLAYER-PROTECTED CLUSTERS: NEW AND UNUSUAL NANO METER-  
 SCALE ELECTRONICS MATERIALS/STUDENT WORK  
 07/07/2000 - 09/30/2001 FY02: \$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 7439**  
 HIGH-TROPHIC LEVEL ECOSYSTEM RESPONSE TO CLIMATE CHANGE IN  
 THE ANTARCTIC PENINSULA  
 01/25/1999 - 12/31/2001 FY02: \$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 7440**  
 SELF-REPORTING SPACE CORPS: EDIBLE BIOSENSORS  
 04/27/2001 - 10/31/2002 FY02: \$0 Total: \$57,000  
*Prin. Invest.:* C N STEWART  
*Tech. Officer:* JSC/D RUSSO  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG 5 12537 UNIV OF NORTH CAROLINA, CHARLOTTE 7441**  
 DEVELOPING MODEL INSTRUCTIONAL LABORATORIES TO DECREASE THE  
 SHORTAGE AND INCREASE THE RETENTION OF STUDENTS  
 09/11/2002 - 09/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* W R VEAL  
*Tech. Officer:* GSFC/L BILLBROUGH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52901 UNIV OF NORTH CAROLINA, CHARLOTTE 7442**  
 CHARACTERIZATION OF X-RAY OPTICS MANUFACTURE AND ITS APPLICA-  
 TION TO WOLTERMICROSCOPE OPTICS.  
 05/25/2001 - 08/01/2002 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* S SMITH  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 2 1203 WAKE FOREST UNIV 7443**  
 FOCUS AS A MODEL SYSTEM TO STUDY THE ROLE OF SUXIN TRANSPORT  
 & THE ACTIN CYTOSKELETON IN GRAVITY...  
 04/06/1998 - 04/30/2003 FY02: \$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 7444**  
 REGULATION OF AUXIN TRANSPORT BY PHOSPHORYLATION AND FLA-  
 VONOIDS DURING GRAVITROPISM IN ARABIDOPSIS  
 07/20/2001 - 07/31/2003 FY02: \$0 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 2515 WINSTON-SALEM STATE UNIV 7445**  
 GENERIC DIVIDE AND CONQUER INTERNET-BASED GENERIC DIVIDE AND  
 CONQUER INTERNET-BASED  
 12/22/2000 - 12/21/2003 FY02: \$0 Total: \$51,839  
*Prin. Invest.:* D RADENSKI  
*Tech. Officer:* GRC/G J FOLLEN  
*CASE Category:* 22 - COMPUTER SCIENCE

## NORTH DAKOTA

**NAG13 02007 NORTH DAKOTA STATE UNIV 7446**  
 NASA SPACE GRANT/LAND GRANT EXTENSION GEOSPATIAL EDUCATION  
 PROGRAM  
 11/29/2001 - 09/15/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* J NOWATZKI  
*Tech. Officer:* SSC/A PEEK  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 4 52424 NORTH DAKOTA STATE UNIV 7447**  
 GRAD STUDENT RESEARCH PROJECT (GSRP)-PROPOSED TITLE: ADAPTIVE MULTI-SCALE  
 ALGORITHMS FOR NONLINEAR ESTIMATION OF AEROSPACE SYSTEMS  
 09/26/2000 - 09/25/2001 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* Y XU  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 9 1413 TURTLE MOUNTAIN COMM COLL 7448**  
 A RESERVATION COLLABORATION INITIATIVE FOR PRE-COLLEGE  
 09/04/2002 - 09/08/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* C DAVIS  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 02035 TURTLE MOUNTAIN COMM COLL 7449**  
 NASA-NORTH DAKOTA CONNECTION - A TRIBAL SCHOOL DISTANCE  
 LEARNING INITIATIVE TURTLE MOUNTAIN COMMUNITY  
 07/01/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* L J HENRY  
*Tech. Officer:* LARC/R M STARR  
*CASE Category:* 21 - MATHEMATICS

**NAG 5 3616 UNIV OF NORTH DAKOTA 7450**  
 A PUBLIC ACCESS RESOURCE CENTER (PARC) EMPOWERING TO USE  
 EOSDI IMPLEMENTATION PHASE  
 11/22/1996 - 06/30/2003 FY02: \$0 Total: \$4,816,924  
*Prin. Invest.:* G A SEIELSTAD  
*Tech. Officer:* GSFC/J J COLLIER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



## NASA'S UNIVERSITY PROGRAM

OHIO

**NAG 5 5340**                      **UNIV OF NORTH DAKOTA**                      **7451**  
 EVALUATION OF NASA POLARIMETRIC (NPOL) RADAR OBSERVATIONS  
 COLLECTED DURING THE KEYS AREA MICROPHYSIC  
 07/16/2001 - 12/31/2002                      FY02: \$0                      Total: \$74,217  
*Prin. Invest.:* P KUCERA  
*Tech. Officer:* WFF/J GERLACH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7950**                      **UNIV OF NORTH DAKOTA**                      **7452**  
 CO2 BUDGET AND RECTIFICATION AIRBORNE STUDY--NORTH AMERICA  
 (COBRA--NA)  
 12/21/1998 - 12/14/2002                      FY02: -\$79                      Total: \$180,171  
*Prin. Invest.:* C A GRAINGER  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9656**                      **UNIV OF NORTH DAKOTA**                      **7453**  
 MICROPHYSICAL CHARACTERISTICS OF CLOUDS DURING THE TRMM  
 FIELD CAMPAIGNS  
 06/05/2000 - 05/31/2003                      FY02: \$0                      Total: \$101,655  
*Prin. Invest.:* C A GRAINGER  
*Tech. Officer:* HQ/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11509**                      **UNIV OF NORTH DAKOTA**                      **7454**  
 AIRBORNE MEASUREMENTS IN SUPPORT OF CRYSTAL-FACE  
 01/02/2002 - 12/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M POELLOT  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12054**                      **UNIV OF NORTH DAKOTA**                      **7455**  
 A PUBLIC ACCESS RESOURCE CENTER (PARC) EMPOWERING THE GEN-  
 ERAL PUBLIC TO USE EOSDIS - IMPLEMENTATION  
 04/22/2002 - 04/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G SEIELSTAD  
*Tech. Officer:* GSFC/A TUYAHOV  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 283**                      **UNIV OF NORTH DAKOTA**                      **7456**  
 CLOUD ELECTRIC FIELDS AND MICROPHYSICS STUDIES CLOUD ELECTRIC  
 FIELDS AND MICROPHYSICS STUDIES  
 05/23/2000 - 06/03/2003                      FY02: \$0                      Total: \$821,054  
*Prin. Invest.:* D GRAINGER  
*Tech. Officer:* KSC/F J MERCERET  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG13 01006**                      **UNIV OF NORTH DAKOTA**                      **7457**  
 NORTHERN GREAT PLAINS CENTER OF PEOPLE AND THE ENVIRONMENT  
 07/30/2001 - 04/30/2003                      FY02: \$0                      Total: \$1,496,700  
*Prin. Invest.:* G A SEIESTAD  
*Tech. Officer:* SSC/B A SPIERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 02047**                      **UNIV OF NORTH DAKOTA**                      **7458**  
 NORTHERN GREAT PLAINS CENTER FOR PEOPLE AND THE ENVIRONMENT  
 07/11/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G SEIELSTAD  
*Tech. Officer:* SSC/J ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99006**                      **UNIV OF NORTH DAKOTA**                      **7459**  
 NORTHERN GREAT PLAINS REGIONAL EARTH SCIENCE APPLICATIONS  
 CENTER  
 03/01/1999 - 02/28/2003                      FY02: \$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**                      **7460**  
 A PUBLIC ACCESS RESOURCE CTR(PARC)EMPOWERING THE GENERAL  
 PUBLIC TO USE EOSDIS(PHASE III-OPERATIONS)  
 04/11/1998 - 02/28/2003                      FY02: \$0                      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**                      **7461**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/14/1999 - 04/30/2002                      FY02: \$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**                      **7462**  
 A MULTI-USE AIRBORNE RESEARCH FACILITY  
 06/20/2000 - 06/30/2003                      FY02: \$0                      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**                      **7463**  
 NORTH DAKOTA NASA EPSCOR PROGRAM  
 08/16/2001 - 08/14/2004                      FY02: \$0                      Total: \$125,000  
*Prin. Invest.:* S L DE SILVA  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40117**                      **UNIV OF NORTH DAKOTA**                      **7464**  
 NORTH DAKOTA SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 03/08/2001 - 02/28/2005                      FY02: \$0                      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**                      **7465**  
 PROPOSED TRIAL OF FRESHLY COLLECTED LANDSAT 7 TM DATA FOR  
 REMOTE SENSING APPLICATIONS IN NORTHWEST  
 05/31/2000 - 09/30/2001                      FY02: \$0                      Total: \$105,000  
*Prin. Invest.:* D K VINCENT  
*Tech. Officer:* GRC/T M SCOTT  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 3 2790**                      **BOWLING GREEN STATE UNIV**                      **7466**  
 HYBRID DIESEL VEHICLE PROJECT HYBRID DIESEL VEHICLE PROJECT  
 07/01/2002 - 09/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B D PIERSOL  
*Tech. Officer:* GRC/S RIDDLEBAUGH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1186**                      **BOWLING GREEN STATE UNIV**                      **7467**  
 PATHOGEN REDUCTION ON LETTTUCE AND RADISHES USING HYDROGEN PEROXIDE  
 01/10/2000 - 11/30/2001                      FY02: \$0                      Total: \$18,412  
*Prin. Invest.:* D L HENTGES  
*Tech. Officer:* JSC/N L KLOERIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 3 99202**                      **BOWLING GREEN STATE UNIV**                      **7468**  
 PURCHASE OF DYNAMIC ELECTRIC MOTOR LOAD SIMULATOR  
 09/24/1999 - 12/31/2000                      FY02: \$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**                      **7469**  
 DISCRETE FILEDS FOR AIR TRAFFIC MANAGEMENT  
 07/01/1999 - 03/31/2003                      FY02: \$0                      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**                      **7470**  
 EFFECTS OF MICROGRAVITY ON ZEBRAFISH VESTIBULAR DE VELOPMENT  
 07/23/1999 - 04/30/2002                      FY02: \$0                      Total: \$305,164  
*Prin. Invest.:* S J MOORMAN  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2160**                      **CASE WESTERN RESERVE UNIV**                      **7471**  
 STABILITY LIMITS AND DYNAMICS OF NONAXISYMMETRIC L LIQUID BRIDGES  
 04/24/1998 - 05/31/2001                      FY02: \$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**                      **7472**  
 ESTABLISH THE GLENNAN MICROSYSTEM INITIATIVE ESTABLISH THE GLENNAN MICROSYSTEM INITIATIVE  
 09/25/1998 - 01/01/2001                      FY02: \$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**                      **7473**  
 THE FEASIBILITY OF APPLYING TOMOGRAPHIC TECHNIQUES IN THE ICING RESEARCH WIND TUNNEL  
 11/19/1998 - 10/18/2003                      FY02: \$0                      Total: \$144,967  
*Prin. Invest.:* S H IZEN  
*Tech. Officer:* GRC/C R MERCER  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2243**                      **CASE WESTERN RESERVE UNIV**                      **7474**  
 ADVANCEMENT OR TRANSDUCER SENSOR SYSTEM FOR CRACK CON-TAMINATION DETECTION  
 03/12/1999 - 07/30/2002                      FY02: \$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**                      **7475**  
 MODELING OF BALLISTIC IMPACT BEHAVIOR OF INCONEL 7 18 ALLOYS WITH APPLICATIONS TO ENGINE BLADE CONTA  
 12/30/1999 - 07/01/2002                      FY02: \$0                      Total: \$161,932  
*Prin. Invest.:* V PRAKASH  
*Tech. Officer:* GRC/J PEREIRA  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2331**                      **CASE WESTERN RESERVE UNIV**                      **7476**  
 CANDLE FLAMES IN MICROGRAVITY CANDLE FLAMES IN MICROGRAVITY  
 02/10/2000 - 04/30/2003                      FY02: \$0                      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**                      **7477**  
 SATELLITE AND TERRESTRIAL NETWORK ANALYSIS SATELLITE AND TER-RESTRIAL NETWORK ANALYSIS  
 04/13/2000 - 05/31/2001                      FY02: \$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**                      **7478**  
 INSITU MONITORING OF BIOLOGICAL MATERIAL USING LOW -COHERENCE INTERFEROMETRIC SENSORS  
 11/13/2000 - 09/30/2002                      FY02: \$0                      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**                      **7479**  
 TIME DEPENDENT NUMERICAL SIMULATIONS OF SOLIDIFIC ATION PRO-CESSSES  
 02/09/2001 - 02/05/2003                      FY02: \$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**                      **7480**  
 RESEARCH INIATIVE IN SPACE COMMUNICATIONS AND NETW ORKS  
 03/30/2001 - 09/30/2002                      FY02: \$0                      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**                      **7481**  
 ANALYSIS OF DROPLET SPLASHING IN AIRCRAFT ICING CO NDITIONS  
 04/02/2001 - 08/31/2002                      FY02: \$0                      Total: \$47,774  
*Prin. Invest.:* J D ALEXANDER  
*Tech. Officer:* GRC/M G POTAPCZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2620**                      **CASE WESTERN RESERVE UNIV**                      **7482**  
 INVESTIGATION OF ROTARY BLOOD PUMP FLOW USING PIV INVESTIGA-TION OF ROTARY BLOOD PUMP FLOW USING PIV  
 06/29/2001 - 10/31/2003                      FY02: \$0                      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**                    **7483**  
 INKJET METHODOLOGIES FOR THE FABRICATION OF SECONDARY  
 LITHIUM-ION MICROBATTERIES INCORPORATING NANO  
 08/17/2001 - 11/30/2002                    FY02: \$0                    Total: \$41,700  
*Prin. Invest.:* D A SCHERSON  
*Tech. Officer:* GRC/D L BRITTON  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2677**                    **CASE WESTERN RESERVE UNIV**                    **7484**  
 ULTRA-SAFE PROPULSION: MODELING HIGH STRAIN RATE DEFORMATION,  
 FRACTURE, AND IMPACT BEHAVIOR OF ADVA  
 01/22/2002 - 12/14/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* V PRAKASH  
*Tech. Officer:* GRC/IJ M PEREIRA  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2742**                    **CASE WESTERN RESERVE UNIV**                    **7485**  
 FLOW AND DISTRIBUTION OF FLUID PHASES THROUGH POROUS PLANT  
 GROWTH MEDIA IN MICROGRAVITY  
 03/19/2002 - 12/31/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J ALEXANDER  
*Tech. Officer:* GRC/M M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2794**                    **CASE WESTERN RESERVE UNIV**                    **7486**  
 MODELING OF BALLISTIC IMPACT BEHAVIOR OF INCONEL 718 ALLOYS  
 WITH APPLICATIONS TO ENGINE BLADE CONTACT  
 07/30/2002 - 07/09/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* V PRAKASH  
*Tech. Officer:* GRC/IJ PEREIRA  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2799**                    **CASE WESTERN RESERVE UNIV**                    **7487**  
 WIRELESS PROXIMITY NETWORKS FOR NASA APPLICATIONS WIRELESS  
 PROXIMITY NETWORKS FOR NASA APPLICATIONS  
 08/13/2002 - 03/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* F L MERAT  
*Tech. Officer:* GRC/K BHASIN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2807**                    **CASE WESTERN RESERVE UNIV**                    **7488**  
 MICROMINIATURE MONITOR FOR VITAL ELECTROLYTE AND METABOLITE  
 LEVELS OF ASTRONAUTS  
 09/12/2002 - 07/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D GRATZL  
*Tech. Officer:* GRC/M NALL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2808**                    **CASE WESTERN RESERVE UNIV**                    **7489**  
 IN VIVO BIOLUMINESCENT MOLECULAR IMAGING WITH APPLICATION TO  
 THE STUDY OF SECRETORY CLUSTERIN, A PROTEIN  
 09/19/2002 - 07/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D L WILSON  
*Tech. Officer:* GRC/M NALL  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 4 222**                    **CASE WESTERN RESERVE UNIV**                    **7490**  
 STABILITY AND PERFORMANCE EVALUATION OF LEARNING IN ARTIFICIAL  
 NEURAL NETWORKS  
 03/27/2002 - 03/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* K LOPARO  
*Tech. Officer:* DFRC/D MACKALL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 6715**                    **CASE WESTERN RESERVE UNIV**                    **7491**  
 AN ELECTRON MICROSCOPY SURVEY OF CARBONATE-BEARING REGIONS  
 OF ALH84001  
 12/10/1997 - 11/30/2000                    FY02: \$0                    Total: \$120,000  
*Prin. Invest.:* R HARVEY  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7019**                    **CASE WESTERN RESERVE UNIV**                    **7492**  
 THE EVOLUTION OF GALAXIES HARBORING CENTRAL MASSIVE BLACK  
 HOLES - ATP  
 02/19/1998 - 02/14/2003                    FY02: \$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**                    **7493**  
 FEASIBILITY STUDY OF PLANS TO USE THE SUN AS A GRAVITATIONAL  
 LENS FOR ASTRONOMY  
 06/27/2001 - 06/30/2003                    FY02: \$0                    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**                    **7494**  
 RECOVERY AND STUDY OF ANTARCTIC MARTIAN METEORITES  
 07/18/2001 - 07/14/2004                    FY02: \$0                    Total: \$186,415  
*Prin. Invest.:* R HARVEY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1270**                    **CASE WESTERN RESERVE UNIV**                    **7495**  
 DETERMINATION OF THE SURFACE ENERGY OF LIQUID CRYSTALS  
 05/03/1996 - 05/31/2001                    FY02: -\$74                    Total: \$279,926  
*Prin. Invest.:* C ROSENBLATT, P L TAYLOR  
*Tech. Officer:* MSFC/C R TALLEY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1727**                    **CASE WESTERN RESERVE UNIV**                    **7496**  
 PROPOSAL "VIBRATION AND G-JITTER: TRANSPORT DISTURBANCES DUE  
 TO RESIDUAL ACCELERATION/LOW GRAVITY."  
 06/19/2000 - 11/30/2003                    FY02: \$0                    Total: \$139,837  
*Prin. Invest.:* J I ALEXANDER  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 8 1779**                    **CASE WESTERN RESERVE UNIV**                    **7497**  
 SIMULATED MICROGRAVITY MEASUREMENT TECHNIQUES FOR THE  
 STUDY OF DYNAMIC EFFECTS IN PHOSPHOLIPID SURFACES  
 04/24/2001 - 04/30/2005                    FY02: \$0                    Total: \$80,000  
*Prin. Invest.:* C ROSENBLATT, P L TAYLOR  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICALSCIENCE, OTHER

**NCA 3 201**                    **CASE WESTERN RESERVE UNIV**                    **7498**  
 GLENNAN MICROSYSTEMS INITIATIVE FY00 PROJECTS GLENNAN MICRO-  
 SYSTEMS INITIATIVE FY00PROJECTS  
 05/12/2000 - 12/31/2002                    FY02: \$0                    Total: \$2,352,471  
*Prin. Invest.:* M MEHREGANY, C LIU  
*Tech. Officer:* GRC/L G MATUS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 587**                      **CASE WESTERN RESERVE UNIV**                      **7499**  
 TIME DEPENDENT NUMERICAL SIMULATIONS OF SOLIDIFICATION PROCESSES  
 01/01/1998 - 12/31/2002                      FY02: \$0                      Total: \$362,842  
*Prin. Invest.:* P L TAYLOR  
*Tech. Officer:* GRC/A CHIT  
*CASE Category:* 13 - PHYSICS

**NCC 3 633**                      **CASE WESTERN RESERVE UNIV**                      **7500**  
 COMBUSTION OF SOLID FUEL IN VERY LOW SPEED OXYGEN STREAMS  
 06/30/1998 - 09/02/2003                      FY02: \$0                      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**                      **7501**  
 A STUDY OF THE TIME-DEPENDENT RESPONSE OF CERAMIC MATERIALS  
 11/23/1998 - 11/01/2002                      FY02: \$0                      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**                      **7502**  
 LOW STRETCH DIFFUSION FLAMES LOW STRETCH DIFFUSION FLAMES  
 01/12/1999 - 12/08/2002                      FY02: \$0                      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**                      **7503**  
 FLAME SPREADING IN PARTIAL GRAVITY FLAME SPREADING IN PARTIAL GRAVITY  
 02/03/1999 - 01/03/2003                      FY02: \$0                      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**                      **7504**  
 DEVELOPMENT OF ADVANCED SENSORS FOR BANTAM VEHICLE APPLICATIONS  
 02/24/1999 - 01/31/2002                      FY02: \$0                      Total: \$220,000  
*Prin. Invest.:* C LUI  
*Tech. Officer:* GRC/G W HUNTER  
*CASE Category:* 43 - CHEMICAL ENGR

**NCC 3 681**                      **CASE WESTERN RESERVE UNIV**                      **7505**  
 THERMO-PHYSICAL PROPERTIES OF MOLTEN SEMICONDUCTORS  
 02/24/1999 - 02/17/2002                      FY02: \$0                      Total: \$5,000  
*Prin. Invest.:* D H MATTHIESEN  
*Tech. Officer:* GRC/A CHAIT  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 701**                      **CASE WESTERN RESERVE UNIV**                      **7506**  
 DENTRITIC GROWTH AND COARSENING PHENOMENA IN SOLIDIFICATION  
 04/20/1999 - 05/31/2003                      FY02: \$0                      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**                      **7507**  
 RAPID MANUFACTURING MONOLITHIC SILICON NITRIDE THRUST CELLS  
 07/12/1999 - 12/31/2001                      FY02: \$0                      Total: \$486,052  
*Prin. Invest.:* J D CRAWLEY  
*Tech. Officer:* GRC/J LANG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 766**                      **CASE WESTERN RESERVE UNIV**                      **7508**  
 LONG TERM DURABILITY OF MATERIALS FOR AEROSPACE APPLICATIONS  
 01/24/2000 - 12/11/2002                      FY02: \$0                      Total: \$259,332  
*Prin. Invest.:* I E LOCCI  
*Tech. Officer:* GRC/M V NATHAL  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 772**                      **CASE WESTERN RESERVE UNIV**                      **7509**  
 THE DEVELOPMENT OF SOLID STATE CO AND CO2 SENSOR FOR FIRE PROTECTION APPLICATIONS  
 02/11/2000 - 01/23/2002                      FY02: \$0                      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**                      **7510**  
 GAS EVOLUTION EFFECT ON MASS TRANSFER IN ROTATING ELECTRO-CHEMICAL CELLS UNDER MICROGRAVITY CONDITION  
 08/17/2000 - 11/30/2003                      FY02: \$0                      Total: \$98,155  
*Prin. Invest.:* Y KAMOTANI  
*Tech. Officer:* GRC/D GREEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 830**                      **CASE WESTERN RESERVE UNIV**                      **7511**  
 ADVANCED COPPER ALLOYS FOR REGENERATIVELY COOLED ROCKET ENGINE COMBUSTION CHAMBERLINERS  
 12/08/2000 - 12/13/2002                      FY02: \$0                      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**                      **7512**  
 SOOT FORMATION IN PURELY CURVED PREMIXED FLAMES & LAMINAR FLAME SPEEDS OF SOOT FORMING FLAMES  
 01/16/2001 - 11/30/2004                      FY02: \$0                      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**                      **7513**  
 NOVEL STRUCTURAL AND FUNCTIONAL CERAMICS  
 01/17/2001 - 01/21/2003                      FY02: \$0                      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**                      **7514**  
 TECHNOLOGIES FOR ACTIVE CLEARANCE CONTROL  
 05/22/2001 - 11/30/2001                      FY02: \$0                      Total: \$44,995  
*Prin. Invest.:* S M PHILLIPS  
*Tech. Officer:* GRC/B STEINETZ  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 893**                      **CASE WESTERN RESERVE UNIV**                      **7515**  
 THE PACKAGING OF HIGH TEMPERATURE SIC BASED ELECTRONICS  
 05/22/2001 - 12/31/2001                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C C LIU  
*Tech. Officer:* GRC/H HUNTER  
*CASE Category:* 43 - CHEMICAL ENGR

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<p><b>NCC 3 895</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7516</b>  THERMALLY STABLE OHMIC CONTACTS ON 6H-SIC THERMALLY STABLE  OHMIC CONTACTS ON 6H-SIC  06/01/2001 - 04/30/2003                      FY02: \$0                      Total: \$59,400  <i>Prin. Invest.:</i> P PIROUZ  <i>Tech. Officer:</i> GRC/R OKOJIE  <i>CASE Category:</i> 13 - PHYSICS</p>	<p><b>NCC 3 976</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7524</b>  REGENERATIVE ADAPTIVE SEAL TECHNOLOGY REGENERATIVE ADAPTIVE  SEAL TECHNOLOGY  06/28/2002 - 09/30/2002                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> J CRAWLEY  <i>Tech. Officer:</i> GRC/B M STEINETZ  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NCC 3 898</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7517</b>  CERAMIC CANTED COIL SPRINGS FOR AEROSPACE SEALING APPLICA-  TIONS  07/31/2001 - 10/02/2002                      FY02: \$0                      Total: \$83,111  <i>Prin. Invest.:</i> J D CAWLEY  <i>Tech. Officer:</i> GRC/P DUNLAP  <i>CASE Category:</i> 46 - MECHANICAL ENGR</p>	<p><b>NCC 3 983</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7525</b>  THE DEVELOPMENT OF CHEMICAL SENSORS FOR BIOMEDICAL AND  ENVIRONMENTAL APPLICATIONS  07/25/2002 - 01/09/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> C LIU  <i>Tech. Officer:</i> GRC/G W HUNTER  <i>CASE Category:</i> 43 - CHEMICAL ENGR</p>
<p><b>NCC 3 915</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7518</b>  FABRICATION OF SILICON CARBIDE-BASED MICROMIRROR DEVICES FOR  OPTICAL APPLICATIONS  09/18/2001 - 07/31/2003                      FY02: \$30,000                      Total: \$30,000  <i>Prin. Invest.:</i> C A ZORMAN  <i>Tech. Officer:</i> GRC/K MIYOSHI  <i>CASE Category:</i> 47 - METAL &amp; MATERIALS ENGR</p>	<p><b>NCC 3 984</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7526</b>  CONTROLLED-RELEASE MICROSYSTEMS FOR PHARMACOLOGICAL  AGENT DELIVERY  09/12/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> C ZORMAN  <i>Tech. Officer:</i> GRC/M M NALL  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NCC 3 927</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7519</b>  MICROCHEMICAL AND GASEOUS SENSORS USING CARBON NANOTUBES  AND MEMS FABRICATION TECHNOLOGY  01/03/2002 - 09/30/2004                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> C LIU  <i>Tech. Officer:</i> GRC/J D WRBANEK  <i>CASE Category:</i> 43 - CHEMICAL ENGR</p>	<p><b>NCC 3 985</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7527</b>  ACOUSTICALLY INDUCED MICRODAMAGE TO PREVENT BONE LOSS  09/12/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> D DAVY  <i>Tech. Officer:</i> GRC/J MYERS  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NCC 3 941</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7520</b>  THE DEVELOPMENT OF SOLID STATE CO AND CO2 SENSOR FOR FIRE  PROTECTION APPLICATIONS  02/20/2002 - 10/31/2002                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> C LIU  <i>Tech. Officer:</i> GRC/G W HUNTER  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NCC 3 999</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7528</b>  DEVELOPMENT OF ADVANCED OIL-FREE TURBOMACHINERY, PERFORMANCE  CHARACTERISTICS OF AIR-LUBRICATED COMP  09/13/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> J M PRAHL  <i>Tech. Officer:</i> GRC/J M LUCERO  <i>CASE Category:</i> 46 - MECHANICAL ENGR</p>
<p><b>NCC 3 944</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7521</b>  DEVELOPMENT OF ADVANCED SENSORS FOR SECOND GENERATION  VEHICLE APPLICATIONS  03/11/2002 - 10/31/2002                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> C LIU  <i>Tech. Officer:</i> GRC/G W HUNTER  <i>CASE Category:</i> 43 - CHEMICAL ENGR</p>	<p><b>NCC 3 1001</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7529</b>  REMOTE AND ON-BOARD DETECTION, DIAGNOSES AND TREATMENT OF  SERIOUS CARDIAC DYSRHYTHMIAS  09/23/2002 - 02/22/2006                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> D S ROSENBAUM  <i>Tech. Officer:</i> GRC/D W YORK  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NCC 3 955</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7522</b>  RAPID MANUFACTURING MONOLITHIC SILICON NITRIDE THROUGH USE CELLS  05/09/2002 - 01/15/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> J D CAWLEY  <i>Tech. Officer:</i> GRC/J LANG  <i>CASE Category:</i> 47 - METAL &amp; MATERIALS ENGR</p>	<p><b>NCC 3 1004</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7530</b>  THE PACKAGING OF HIGH TEMPERATURE SILICON CARBIDE (SiC) BASED  ELECTRONICS  09/16/2002 - 12/15/2002                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> C LIU  <i>Tech. Officer:</i> GRC/G W HUNTER  <i>CASE Category:</i> 46 - MECHANICAL ENGR</p>
<p><b>NCC 3 969</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7523</b>  DENDRITIC FORMATION AND CLOUD MICROPHYSICS PHENOMENA  06/03/2002 - 05/31/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> P L TAYLOR  <i>Tech. Officer:</i> GRC/A CHAIT  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NCC 3 1005</b>                      <b>CASE WESTERN RESERVE UNIV</b>                      <b>7531</b>  SLURRY INFILTRATION DURING THE PROCESSING OF FIBER-WOVEN  CERAMIC MATRIX COMPOSITES: EXPERIMENTAL AND  09/18/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> J D ALEXANDER  <i>Tech. Officer:</i> GRC/F HURWITZ  <i>CASE Category:</i> 46 - MECHANICAL ENGR</p>

**NCC 8 152**                      **CASE WESTERN RESERVE UNIV**                      **7532**  
 DIFFUSION PROCESSES IN MOLTEN SEMICONDUCTORS  
 06/12/1998 - 03/31/2003                      FY02: \$0                      Total: \$1,769,997  
*Prin. Invest.:* D H MATTHIESEN  
*Tech. Officer:* MSFC/J BRUNSON  
*CASE Category:* 13 - PHYSICS

**NGT 3 52350**                      **CASE WESTERN RESERVE UNIV**                      **7533**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RE-  
 SEARCH PROGRAM  
 06/23/1999 - 06/30/2002                      FY02: \$0                      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**                      **7534**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RE-  
 SEARCH PROGRAM  
 06/24/1999 - 08/31/2001                      FY02: \$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**                      **7535**  
 GRADUATE STUDENT RESEARCH  
 06/07/2001 - 06/30/2002                      FY02: \$0                      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**                      **7536**  
 A MANTIS-LIKE ROBOT FOR AGILE OPERATION IN EXTREME  
 ENVIRONMENTS/STUDENT: DANIEL KINGSLEY  
 06/15/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* R QUINN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 50369**                      **CASE WESTERN RESERVE UNIV**                      **7537**  
 COMBUSTION OF BLACK LIQUOR DEPOSITS  
 06/13/2001 - 06/30/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* J TIEN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50413**                      **CASE WESTERN RESERVE UNIV**                      **7538**  
 TRI MODAL LOCOMOTION FOR A HEXAPOD LEGGED ROBOT STUDENT:  
 THOMAS ALLEN  
 08/06/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R QUINN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 996**                      **CENTRAL STATE UNIV - OHIO**                      **7539**  
 ANALYSIS AND DEVELOPMENT OF A SIC PIEZORESISTIVE P ROBE FOR  
 MEASURING TURBULENT INTENSITY IN A HIGH  
 09/10/2002 - 08/05/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T V REID  
*Tech. Officer:* GRC/G FRALICK  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 1828**                      **CLEVELAND STATE UNIV**                      **7540**  
 ULTRA-LOW-COST ROOM TEMPERATURE SIC THIN FILM  
 04/08/1996 - 05/31/2002                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* C GORADIA, M FAUR  
*Tech. Officer:* GRC/S G BAILEY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2040**                      **CLEVELAND STATE UNIV**                      **7541**  
 FPGA BASED RECONFIGURABLE PACKET SWITCH TEST BED  
 04/29/1997 - 07/31/2001                      FY02: \$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**                      **7542**  
 MINORITY ENGINEERING PROGRAM PIPELINE  
 09/17/1997 - 09/30/2002                      FY02: \$0                      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**                      **7543**  
 MAPPING THE POSITION DEPENDENCE OF THE LIQUID WATE R CONTENT  
 02/18/1999 - 12/31/2001                      FY02: \$0                      Total: \$14,000  
*Prin. Invest.:* J LOCK  
*Tech. Officer:* GRC/C R MERCER  
*CASE Category:* 13 - PHYSICS

**NAG 3 2296**                      **CLEVELAND STATE UNIV**                      **7544**  
 REAL TIME MONITORING SYSTEM  
 09/30/1999 - 05/12/2002                      FY02: \$0                      Total: \$59,450  
*Prin. Invest.:* D M KOCHER  
*Tech. Officer:* GRC/D WHITE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2326**                      **CLEVELAND STATE UNIV**                      **7545**  
 DEVELOPMENT OF A FAST ANALYSIS TOOL FOR THE INTERN ATIONAL  
 SPACE STATION (ISS) USING SOFT COMPUTING  
 02/04/2000 - 02/20/2003                      FY02: \$0                      Total: \$113,500  
*Prin. Invest.:* P P LIN  
*Tech. Officer:* GRC/K JULES  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2423**                      **CLEVELAND STATE UNIV**                      **7546**  
 OPTICAL SCATTERING CHARACTERIZATION FOR THE GLENNA N MICRO-  
 SYSTEMS MICROSCALE PARTICULATE CLASSIFIER  
 05/12/2000 - 04/15/2002                      FY02: \$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**                      **7547**  
 DEVELOPMENT OF A MULTI-DIMENSIONAL STIRLING ENGINE CODE FOR  
 THERMODYNAMICS PERFORMANCE  
 08/02/2000 - 07/31/2004                      FY02: \$0                      Total: \$262,453  
*Prin. Invest.:* D IBRAHIM  
*Tech. Officer:* GRC/L THIEMENE  
*CASE Category:* 46 - MECHANICAL ENGR

<p><b>NAG 3 2509</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7548</b>            THE INTEGRATION OF LEGACY APPLICATIONS WITH CORBA THE INTEGRA-            TION OF LEGACY APPLICATIONS WITH CORBA            11/30/2000 - 11/16/2001                      FY02: \$0                      Total: \$52,997  <i>Prin. Invest.:</i> J SANG  <i>Tech. Officer:</i> GRC/C KIM  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>	<p><b>NAG 3 2672</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7556</b>            TRANSITIONING ACOUSTO-ULTRASONICS TO NEW PRACTITIO NERS            12/11/2001 - 02/28/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> J HEMANN  <i>Tech. Officer:</i> GRC/G Y BAAKLINI  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 3 2514</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7549</b>            STRUCTURAL MODELING OF ENGINE COMPONENTS AND MATER IAL            PROCESSES            12/18/2000 - 12/31/2002                      FY02: \$0                      Total: \$153,697  <i>Prin. Invest.:</i> J HEMANN  <i>Tech. Officer:</i> GRC/H E KAUTZ  <i>CASE Category:</i> 47 - METAL &amp; MATERIALS ENGR</p>	<p><b>NAG 3 2683</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7557</b>            X-RAY TOMOGRAPHY AND ULTRASONIC SPECTROSCOPY BASED RE-            SEARCH FOR AEROSPACE MATERIALS            01/04/2002 - 01/02/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> J HEMANN  <i>Tech. Officer:</i> GRC/G Y BAAKLINI  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 3 2531</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7550</b>            POWER EFFICIENT REFLECTARRAY COMMUBICATIONS SYSTEM MODULA-            TIOBN            01/23/2001 - 12/31/2002                      FY02: \$0                      Total: \$33,832  <i>Prin. Invest.:</i> F XIONG  <i>Tech. Officer:</i> GRC/R R ROMANOFSKY  <i>CASE Category:</i> 45 - ELECTRICAL ENGR</p>	<p><b>NAG 3 2684</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7558</b>            THERMOGRAPHIC AND ULTRASONIC RESEARCH ON AEROSPACE MATERI-            ALS            01/04/2002 - 01/02/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> J HEMANN  <i>Tech. Officer:</i> GRC/G Y BAAKLINI  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 3 2573</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7551</b>            ROTODYNAMIC ANALYSIS AND FEASIBILITY STUDY OF A DI SK SPIN            FACILITY            03/22/2001 - 02/28/2003                      FY02: \$0                      Total: \$28,000  <i>Prin. Invest.:</i> J T SAWICKI  <i>Tech. Officer:</i> GRC/H KAUTZ  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NAG 3 2699</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7559</b>            OPTIMAL FILTERING FOR TURBOFAN HEALTH ESTIMATION OPTIMAL FIL-            TERING FOR TURBOFAN HEALTH ESTIMATION            01/29/2002 - 09/30/2004                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> D SIMON  <i>Tech. Officer:</i> GRC/N  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 3 2607</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7552</b>            HIGH-LEVEL QUANTUM CHEMICAL CALCULATIONS ON PONTEN TIAL JET            FUELS            06/12/2001 - 03/14/2002                      FY02: \$0                      Total: \$30,000  <i>Prin. Invest.:</i> D W BALL  <i>Tech. Officer:</i> GRC/M J ZEHE  <i>CASE Category:</i> 12 - CHEMISTRY</p>	<p><b>NAG 3 2745</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7560</b>            UNSTEADY PROBABILISTIC ANALYSIS OF TURBOMACHINERY UNSTEADY            PROBABILISTIC ANALYSIS OF TURBOMACHINERY            04/17/2002 - 03/11/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> R GORLA  <i>Tech. Officer:</i> GRC/J J RUSICK  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 3 2619</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7553</b>            ROBUST TIMING SYNCHRONIZATION IN AERONAUTICAL MOBI LE COMMU-            NICATIONS SYSTEMS            05/23/2001 - 08/31/2002                      FY02: \$0                      Total: \$14,000  <i>Prin. Invest.:</i> F XIONG  <i>Tech. Officer:</i> GSFC/K CHUN  <i>CASE Category:</i> 45 - ELECTRICAL ENGR</p>	<p><b>NAG 3 2774</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7561</b>            A THEORETICAL LIGHT SCATTERING MODEL OF NANOPARTIC LE LASER            TWEEZERS            05/01/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> J LOCK  <i>Tech. Officer:</i> GRC/A DECKER  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 3 2631</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7554</b>            INERTING AIRCRAFT FUEL SYSTEMS USING EXHAUST GASSE S            06/13/2001 - 05/31/2002                      FY02: \$0                      Total: \$60,000  <i>Prin. Invest.:</i> D G NEHEMANN  <i>Tech. Officer:</i> GRC/K KUNDU  <i>CASE Category:</i> 12 - CHEMISTRY</p>	<p><b>NAG 3 2802</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7562</b>            MATERIALS ENABLED TECHNOLOGIES FOR USE IN POWER DE VICES FOR            AEROSPACE APPLICATIONS            09/16/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> D HEHEMANN  <i>Tech. Officer:</i> GRC/S G BAILEY  <i>CASE Category:</i> 12 - CHEMISTRY</p>
<p><b>NAG 3 2664</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7555</b>            TIME-SERIES THEMATIC MAPPER DATA AS A TOOL TO MODE L URBAN            SPRAWL IN NORTHEAST OHIO            11/08/2001 - 09/30/2002                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> D CLAPHAM  <i>Tech. Officer:</i> GRC/T M SCOTT  <i>CASE Category:</i> 54 - ENVIRONMENTAL BIOLOGY</p>	<p><b>NAG 8 1584</b>                      <b>CLEVELAND STATE UNIV</b>                      <b>7563</b>            R/S ACOUSTICALLY ASSISTED BIOREACTOR FOR TERRESTRIAL AND MI-            CROGRAVITY APPLICATIONS.            01/14/1999 - 11/30/2003                      FY02: \$30,000                      Total: \$421,850  <i>Prin. Invest.:</i> J M BELOVICH  <i>Tech. Officer:</i> MSFC/B GUYNES  <i>CASE Category:</i> 61 - PSYCHOLOGY BIOLOGY</p>

**NASW 02023**                      **CLEVELAND STATE UNIV**                      **7564**  
 CONTRACTOR WILL PROVIDE SERVICES FOR THE NASA ENGINEERING  
 AND TRAINING PROGRAM  
 06/27/2002 - 06/26/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A LIOU  
*Tech. Officer:* HO/J MATURO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 521**                      **CLEVELAND STATE UNIV**                      **7565**  
 THE EFFECTS OF MULTIPLE SCATTERING IN PHOTON CORRE LEATION  
 SPECTROSCOPY  
 12/26/1996 - 11/30/2001                      FY02: \$0                      Total: \$294,000  
*Prin. Invest.:* J A LOCK  
*Tech. Officer:* GRC/A CHAIT  
*CASE Category:* 13 - PHYSICS

**NCC 3 581**                      **CLEVELAND STATE UNIV**                      **7566**  
 ULTRASONIC SCANNER CONTROL AND DATA ACQUISITION  
 12/09/1997 - 12/31/2002                      FY02: \$0                      Total: \$537,242  
*Prin. Invest.:* J HEMANN  
*Tech. Officer:* GRC/H KAUTZ  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 582**                      **CLEVELAND STATE UNIV**                      **7567**  
 THE DEVELOPMENT OF ENGINEERING TOMOGRAPHY FOR MONO LITHIC  
 AND COMPOSITE MATERIALS AND COMPONENTS  
 12/09/1997 - 12/31/2002                      FY02: \$0                      Total: \$520,141  
*Prin. Invest.:* J HEMANN  
*Tech. Officer:* GRC/H E KAUTZ  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 595**                      **CLEVELAND STATE UNIV**                      **7568**  
 SIMULATION AND PERFORMANCE ANALYSIS OF HYBRID SATE LLITE-  
 TERRESTRIAL NETWORKS  
 01/12/1998 - 02/27/2003                      FY02: \$0                      Total: \$376,038  
*Prin. Invest.:* V K KONANGI  
*Tech. Officer:* GRC/T M WALLETT, GRC/K B BHASIN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 647**                      **CLEVELAND STATE UNIV**                      **7569**  
 THE STUDY OF THE APPLICATION OF MODERN METHODS OF CONTROL  
 AND INTERFACE TO SCIENTIFIC EFFORTS  
 09/04/1998 - 09/30/2001                      FY02: \$0                      Total: \$246,970  
*Prin. Invest.:* G L KRAMERICH  
*Tech. Officer:* GRC/J M MULLINS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 699**                      **CLEVELAND STATE UNIV**                      **7570**  
 DEVELOPMENT OF DIGITAL CONTROL TECHNOLOGY FOR POWE R MAN-  
 AGEMENT AND DISTRIBUTION SYSTEMS  
 04/02/1999 - 05/14/2002                      FY02: \$0                      Total: \$437,669  
*Prin. Invest.:* Z GAO  
*Tech. Officer:* GRC/J F SOEDER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 740**                      **CLEVELAND STATE UNIV**                      **7571**  
 PHYSICAL PROPERTIES AND DURABILITY OF NEW MATERIAL S FOR SPACE  
 AND COMMERCIAL APPLICATIONS  
 10/21/1999 - 01/15/2003                      FY02: \$0                      Total: \$179,561  
*Prin. Invest.:* P HAMBOURGER  
*Tech. Officer:* GRC/S K RUTLEDGE  
*CASE Category:* 13 - PHYSICS

**NCC 3 749**                      **CLEVELAND STATE UNIV**                      **7572**  
 ADVANCED MATERIALS DEVELOPMENT, EVALUATION, AND MO DELING  
 FOR PROPULSION APPLICATIONS  
 02/14/2000 - 02/28/2003                      FY02: \$0                      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**                      **7573**  
 EPR INVESTIGATIONS OF SILANE POLYMERIZATIONS EPR INVESTIGA-  
 TIONS OF SILANE POLYMERIZATIONS  
 12/30/1999 - 11/30/2002                      FY02: \$0                      Total: \$198,279  
*Prin. Invest.:* J MASNOVI  
*Tech. Officer:* GRC/S R LEVINE  
*CASE Category:* 43 - CHEMICAL ENGR

**NCC 3 761**                      **CLEVELAND STATE UNIV**                      **7574**  
 DESIGN LIFE METHODOLOGIES AND COMPUTER ALGORITHMS FOR THE  
 ANALYSIS OF COMPONENTS FABRIATED FROM CERA  
 01/11/2000 - 01/22/2002                      FY02: \$0                      Total: \$129,946  
*Prin. Invest.:* S F DUFFY  
*Tech. Officer:* GRC/J MANDERSCHIED  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 764**                      **CLEVELAND STATE UNIV**                      **7575**  
 SIMULATION AND PERFORMANCE ANALYSIS OF THE AERONAU TICAL  
 TELECOMMUNICATION NETWORK  
 01/14/2000 - 03/14/2003                      FY02: \$0                      Total: \$142,222  
*Prin. Invest.:* V K KONANGI  
*Tech. Officer:* GRC/R KERCZEWSKI  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 817**                      **CLEVELAND STATE UNIV**                      **7576**  
 NEW SOLID POLYMER ELECTROLYTES FOR IMPROVED LITHIU M BATTER-  
 IES  
 07/24/2000 - 07/31/2001                      FY02: \$0                      Total: \$140,509  
*Prin. Invest.:* D G HEHEMANN  
*Tech. Officer:* GRC/A E HEPP  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 818**                      **CLEVELAND STATE UNIV**                      **7577**  
 STUDY ON DAMPING EFFECTS ON CONVECTION DURING DIRE CTIONAL  
 SOLIDIFICATION  
 07/24/2000 - 07/09/2001                      FY02: \$0                      Total: \$24,000  
*Prin. Invest.:* D TEWARI  
*Tech. Officer:* GRC/H DEGROH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 829**                      **CLEVELAND STATE UNIV**                      **7578**  
 SOLUTAL REDISTRIBUTION DURING DIRECTIONAL SOLIDIFI CATION  
 10/10/2000 - 08/31/2002                      FY02: \$0                      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**                      **7579**  
 DEVELOPMENT OF HIGH TEMPERATURE LOW THERMAL CONDUCTIVITY  
 ENVIRONMENTAL & THERMAL BARRIER COATING  
 01/23/2001 - 12/23/2002                      FY02: \$0                      Total: \$145,309  
*Prin. Invest.:* S N TEWARI  
*Tech. Officer:* GRC/L GREENBAUER-SENG  
*CASE Category:* 47 - METAL & MATERIALS ENGR



## NASA'S UNIVERSITY PROGRAM

OHIO

**NCC 3 862**                      **CLEVELAND STATE UNIV**                      **7580**  
 ENVIRONMENTAL DURABILITY OF MATERIALS FOR SPACE TRANSPORTATION  
 02/14/2001 - 11/15/2002                      FY02: \$0                      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**                      **7581**  
 DYE-SENSITIZED SOLAR CELLS FOR SPACE POWER DYE-SENSITIZED SOLAR CELLS FOR SPACE POWER  
 02/27/2001 - 09/03/2003                      FY02: \$0                      Total: \$70,000  
*Prin. Invest.:* J D HARRIS  
*Tech. Officer:* GRC/S G BAILEY  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 876**                      **CLEVELAND STATE UNIV**                      **7582**  
 FORMULATION & EVALUATION OF ORGANO-PHOSPHATE SOLUTIONS FOR HIGH TEMPERATURE LUBRICATION  
 03/14/2001 - 05/20/2002                      FY02: \$0                      Total: \$26,168  
*Prin. Invest.:* J E GATICA  
*Tech. Officer:* GRC/W MORALES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 883**                      **CLEVELAND STATE UNIV**                      **7583**  
 ANALYSIS & CHARACTERIZATION OF ADVANCED MATERIALS FOR AEROSPACE APPLICATIONS  
 03/29/2001 - 03/31/2003                      FY02: \$0                      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**                      **7584**  
 INVESTIGATION OF THE UTILIZATION OF MODERN INDUSTRIAL METHODS, PROCESSES, ERGONOMICS, AND THE INTER  
 08/13/2001 - 09/30/2004                      FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* G L KRAMERICH  
*Tech. Officer:* GRC/J MULLINS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 909**                      **CLEVELAND STATE UNIV**                      **7585**  
 REFLECTIVITY FREQUENCY RESPONSE OF IN-FIBER BRAGG GRATINGS  
 08/16/2001 - 07/31/2002                      FY02: \$0                      Total: \$5,000  
*Prin. Invest.:* J A LOCK  
*Tech. Officer:* GRC/G ADAMOVSKY  
*CASE Category:* 13 - PHYSICS

**NCC 3 914**                      **CLEVELAND STATE UNIV**                      **7586**  
 THERMAL TESTING OF FIBER OPTIC BRAGG GRATINGS UNDER DYNAMIC EXCITATION  
 09/18/2001 - 12/30/2002                      FY02: \$0                      Total: \$8,000  
*Prin. Invest.:* D FLANAGAN  
*Tech. Officer:* GRC/D ADAMOVSKY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 3 931**                      **CLEVELAND STATE UNIV**                      **7587**  
 ADVANCED DIGITAL CONTROL TECHNOLOGY FOR POWER MANAGEMENT AND DISTRIBUTION SYSTEMS  
 01/16/2002 - 12/18/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* Z GAO  
*Tech. Officer:* GRC/J F SOEDER  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 939**                      **CLEVELAND STATE UNIV**                      **7588**  
 DAMPING CONCEPTS FOR ROTATING BLADES AND ROTORDYNAMICS  
 02/13/2002 - 01/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S N TEWARI  
*Tech. Officer:* GRC/R V MINER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 971**                      **CLEVELAND STATE UNIV**                      **7589**  
 STUDY OF HOMOGENEOUS CATALYTIC EFFECTS IN ORGANIC SOLUTIONS OF PHOSPHATES AND TRANSITION METALS  
 06/17/2002 - 06/11/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J E GATICA  
*Tech. Officer:* GRC/W MORALES  
*CASE Category:* 43 - CHEMICAL ENGR

**NGT 3 52387**                      **CLEVELAND STATE UNIV**                      **7590**  
 GRADUATE STUDY RESEARCH - DEVELOPMENT OF A NONLINEAR MULTIVARIABLE CONTROL STRUCTURE FOR ADVANCED P  
 08/19/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* Z GAO  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 10233**                      **COLL OF WOOSTER**                      **7591**  
 MULTIWAVELENGTH OBSERVATIONS OF HERCULES X-1; EUVE MINI-GRANT, #97-MINIGRANT-002  
 01/25/2001 - 01/31/2002                      FY02: \$0                      Total: \$9,639  
*Prin. Invest.:* B BOROSON  
*Tech. Officer:* GSFC/K HARTNETT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10396**                      **COLL OF WOOSTER**                      **7592**  
 WIND IONIZATION IN HIGH MASS X-RAY BINARIES FUSE  
 02/12/2001 - 02/14/2002                      FY02: \$0                      Total: \$36,200  
*Prin. Invest.:* B BOROSON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1433**                      **COLL OF WOOSTER**                      **7593**  
 TURBIDITY AND UNIVERSALITY AROUND A LIQUID-LIQUID CRITICAL POINT  
 02/06/1998 - 01/31/2003                      FY02: \$0                      Total: \$149,500  
*Prin. Invest.:* D T JACOBS  
*Tech. Officer:* MSFC/J W POE  
*CASE Category:* 13 - PHYSICS

**NAG 3 1778**                      **CUYAHOGA COMM COLL**                      **7594**  
 MENTOR INTERSHIP PARTNERSHIP PROGRAM  
 08/16/1995 - 06/30/2002                      FY02: -\$1                      Total: \$99,821  
*Prin. Invest.:* R L MOSS  
*Tech. Officer:* GRC/F H YARRIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2663**                      **CUYAHOGA COMM COLL**                      **7595**  
 NASA/CCC SCHOLARSHIP PROGRAM NASA/CCC SCHOLARSHIP PROGRAM  
 10/23/2001 - 10/22/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T L BUTLER  
*Tech. Officer:* GRC/R ROMERO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12154**                      **CUYAHOGA COMM COLL**                      **7596**  
 HIGH TECH ACADEMY  
 05/23/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A JOHNSON  
*Tech. Officer:* GSFC/C HOLLINGSWORTH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 02059**                      **CUYAHOGA COMM COLL**                      **7597**  
 PRESERVING FINGER LAKES FOR THE FUTURE  
 09/27/2002 - 09/25/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R BROWER  
*Tech. Officer:* SSC/M MICK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 3 98099**                      **CUYAHOGA COMM COLL**                      **7598**  
 REPLICA OF SCIENCE ENGRG MATH. & AEROSPACE ACADEMY (SEMAA) IN  
 CONNECTION W/NAS3-97168 (MAEL)  
 06/30/1998 - 12/31/2001                      FY02: \$0                      Total: \$9,583,920  
*Prin. Invest.:* L L DARLING  
*Tech. Officer:* GRC/R L BONDURANT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4341**                      **DENISON UNIV**                      **7599**  
 LAB SPECTROSCOPY CH4 AND H2  
 04/23/1997 - 11/30/2001                      FY02: \$0                      Total: \$112,808  
*Prin. Invest.:* D E MICKELSON  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11966**                      **DENISON UNIV**                      **7600**  
 LAB SPECTROSCOPY OF CH4,H2 AND H2O  
 04/04/2002 - 03/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M E MICKELSON  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2768**                      **HEIDELBERG COLL**                      **7601**  
 SCIENCE FACILITIES INITIATIVE SCIENCE FACILITIES INITIATIVE  
 04/24/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D A KRIEGER  
*Tech. Officer:* GRC/F SAVINO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2564**                      **JOHN CARROLL UNIV**                      **7602**  
 LIGHTING INNOVATIONS INST SUPPORT OF THE MEMS INCANDESCENT  
 LIGHT SOURCE PROJECT  
 03/12/2001 - 01/31/2002                      FY02: \$0                      Total: \$45,000  
*Prin. Invest.:* R L HANSLER  
*Tech. Officer:* GRC/S WRBANEK  
*CASE Category:* 13 - PHYSICS

**NCC 3 945**                      **JOHN CARROLL UNIV**                      **7603**  
 LIGHTING INNOVATIONS INST SUPPORT OF THE MEMS INCANDESCENT  
 LIGHT SOURCE PROJECT IN 2002.  
 03/15/2002 - 02/06/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R L HANSLER  
*Tech. Officer:* GRC/M L TUMA  
*CASE Category:* 13 - PHYSICS

**NCC 3 948**                      **JOHN CARROLL UNIV**                      **7604**  
 DEVELOPMENT OF MEMS WHITELIGHT SOURCE DEVELOPMENT OF MEMS  
 WHITELIGHT SOURCE  
 05/02/2002 - 12/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R HANSLER  
*Tech. Officer:* GRC/M L TUMA  
*CASE Category:* 13 - PHYSICS

**NAG 2 1497**                      **KENT STATE UNIV**                      **7605**  
 THE EFFECTS OF MICROGRAVITY ON THE ECOLOGY OF BIOFILM  
 BACTERIA  
 07/05/2001 - 06/30/2003                      FY02: \$0                      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**                      **7606**  
 LANDSCAPE PARAMETERIZATION AND CLASSIFICATION FOR VISUALIZA-  
 TION OF LANDSAT ETM - OHIOVIEW  
 05/09/2000 - 07/20/2001                      FY02: \$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**                      **7607**  
 LIQUID CRYSTAL BASED BEAM STEERING DEVICE AND OPTICAL TELE-  
 SCOPES  
 02/08/2001 - 01/15/2004                      FY02: \$0                      Total: \$211,293  
*Prin. Invest.:* P BROS  
*Tech. Officer:* GRC/J POUCH  
*CASE Category:* 13 - PHYSICS

**NAG 5 11266**                      **KENT STATE UNIV**                      **7608**  
 HYDRODYNAMIC INSTABILITIES AND EDDY-MEAN FLOW INTERACTION IN  
 THE SOUTHERN OCEAN  
 09/10/2001 - 07/14/2003                      FY02: \$0                      Total: \$69,108  
*Prin. Invest.:* D L WITTER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 9 1389**                      **KENT STATE UNIV**                      **7609**  
 BED REST & NEUROVASCULAR FUNCTION  
 11/23/2001 - 10/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D D MACLEAN, M D LAWRENCE  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 56 - MEDICAL

**NCC 3 563**                      **KENT STATE UNIV**                      **7610**  
 THIN FILM BATTERIES  
 06/17/1997 - 01/31/2001                      FY02: \$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**                      **7611**  
 E-BEAM SENSITIVE POLYIMIDES E-BEAM SENSITIVE POLYIMIDES  
 07/02/1999 - 09/21/2003                      FY02: \$0                      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**                      **7612**  
 THIN FILM TECHNOLOGY FOR SPACE POWER THIN FILM TECHNOLOGY  
 FOR SPACE POWER  
 09/23/1999 - 02/28/2001                      FY02: \$0                      Total: \$99,994  
*Prin. Invest.:* D CHOWDHURY  
*Tech. Officer:* GRC/A HEPP  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## NASA'S UNIVERSITY PROGRAM

OHIO

**NAG 2 1017** **MIAMI UNIV** **7613**  
GRAVPERCEPTION IN STARCH-DEFICIENT PLANTS IN BIOR ACK  
10/31/1995 - 12/31/2001 FY02: \$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** **7614**  
BUILDING AND ENHANCING AN OHIOVIEW GEOSPATIAL DIGI TAL LIBRARY  
FOR K-12, HIGHER EDUCATION AND THEGE  
05/22/2000 - 05/15/2001 FY02: \$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** **7615**  
ANALYSIS OF A NOVEL SENSORY MECHANISM IN ROOT PHOT OTROPISM  
09/05/2000 - 04/30/2003 FY02: \$0 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** **7616**  
THE EFFECT OF HYPERGRAVITY ON BONE CELL CULTURES  
11/16/1998 - 07/31/2002 FY02: \$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** **7617**  
A FUZZY CONTROLLER REMOTE POWER SWITCH  
04/19/2001 - 07/08/2001 FY02: \$0 Total: \$2,500  
*Prin. Invest.:* F L GRISMORE  
*Tech. Officer:* GRC/R BUTTON  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 02066** **OHIO STATE UNIV** **7618**  
MODELING FOR ULTRASONIC HEALTH MONITORING OF FOAMS WITH  
EMBEDDED SENSORS  
03/14/2002 - 03/13/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* S I ROKHLIN  
*Tech. Officer:* LARC/W T YOST  
*CASE Category:* 13 - PHYSICS

**NAG 2 1411** **OHIO STATE UNIV** **7619**  
ANALYSIS OF THE INTERACTION OF ENVIRONMENTAL SIGNA L TRASDUCTION  
PATHWAYS USING TRASDUCTION  
06/21/2000 - 06/14/2003 FY02: \$0 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 2138** **OHIO STATE UNIV** **7620**  
ULTRASOUND THERMAL FIELD IMAGING OF OPAQUE FLUIDS ULTRA  
SOUND THERMAL FIELD IMAGING OF OPAQUE FLUIDS  
03/06/1998 - 12/31/2002 FY02: \$0 Total: \$332,700  
*Prin. Invest.:* C D ANDERECK  
*Tech. Officer:* GRC/D W GRIFFIN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2316** **OHIO STATE UNIV** **7621**  
MAGNETIC NOZZLE STUDIES FOR ADVANCED ROCKET PROPUL SION  
01/07/2000 - 06/21/2002 FY02: \$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** **7622**  
COMPUTATIONAL NONEQUILIBRIUM PLASMA DYNAMICS COMPUTATIONAL  
NONEQUILIBRIUM PLASMA DYNAMICS  
02/23/2000 - 06/30/2002 FY02: \$0 Total: \$80,000  
*Prin. Invest.:* I ADAMOVICH  
*Tech. Officer:* GRC/S J SCHNEIDER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2410** **OHIO STATE UNIV** **7623**  
DEMONSTRATING THE VALUE OF SATELLITE INFORMATION F OR DEVEL-  
OPMENT AND PLANNING IN APPALACHIAN OHIO -  
05/11/2000 - 05/31/2001 FY02: \$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** **7624**  
OHIOVIEW WORK (2 PROPOSALS) DESIGN OF A USER FRIEN DLY DATA  
MINING APPROACH FOR GEO-REFERENCED IMAGE  
05/04/2000 - 09/30/2001 FY02: \$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** **7625**  
OHIO VIEW PRODUCT DEFINITION WORKSHOPS OHIO VIEW PRODUCT  
DEFINITION WORKSHOPS  
05/31/2000 - 07/30/2001 FY02: \$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** **7626**  
PLASMA THRUSTERS RESEARCH (PARTS I AND III) PLASMA THRUSTERS  
RESEARCH (PARTS I AND III)  
05/19/2000 - 05/18/2002 FY02: \$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** **7627**  
CHARACTERIZATION OF COMPOSITE RESPONSE AT HIGH RAT ES OF  
LOADING  
01/09/2001 - 11/30/2001 FY02: \$0 Total: \$45,070  
*Prin. Invest.:* GILAT  
*Tech. Officer:* GRC/R K GOLDBERG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2549** **OHIO STATE UNIV** **7628**  
THERMALLY STABLE OHMIC CONTRACTS ON 4H & 6H-SIC MICRODEVICES  
FOR HIGH TEMPERATURE APPLICATION  
02/26/2001 - 02/28/2003 FY02: \$0 Total: \$40,477  
*Prin. Invest.:* L BRILLSON  
*Tech. Officer:* GRC/R S OKOJIE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2675**                      **OHIO STATE UNIV**                      **7629**  
 ATOMIC SCALE MODELING OF THE STRUCTURE & DYNAMICS OF DISLOCATIONS IN COMPLEX ALLOYS AT HIGH TEMPERATURES  
 12/14/2001 - 12/14/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M J MILLS  
*Tech. Officer:* GRC/R D NOEBE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2700**                      **OHIO STATE UNIV**                      **7630**  
 DENDRITIC CRYSTAL GROWTH DENDRITIC CRYSTAL GROWTH  
 01/29/2002 - 01/17/2006                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S TANVEER  
*Tech. Officer:* GRC/M M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2748**                      **OHIO STATE UNIV**                      **7631**  
 STUDY OF HIGH STRAIN RATE RESPONSE OF COMPOSITES STUDY OF HIGH STRAIN RATE RESPONSE OF COMPOSITES  
 03/21/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A GILAT  
*Tech. Officer:* GRC/R GOLDBERG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 3 2788**                      **OHIO STATE UNIV**                      **7632**  
 MAGNETOGASDYNAMIC POWER EXTRACTION AND FLOW CONDITIONING FOR A GAS TURBINE ENGINEERING EVALUATION  
 06/10/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* I V ADAMOVIICH  
*Tech. Officer:* GRC/S J SCHNEIDER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 3525**                      **OHIO STATE UNIV**                      **7633**  
 QUASAR ABSORPTION IN THE UV: PROBING THE INTERGALACTIC MEDIUM  
 11/13/1996 - 03/14/2003                      FY02: \$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**                      **7634**  
 MILLIMETER AND SUBMILLIMETER SPECTROSCOPY OF MOLECULAR IMPRINTS  
 03/03/1997 - 12/31/2002                      FY02: \$0                      Total: \$622,013  
*Prin. Invest.:* F C DEELUCIA  
*Tech. Officer:* GSFC/M J KURYLO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6001**                      **OHIO STATE UNIV**                      **7635**  
 SATELLITE AND MODEL ANALYSIS OF THE ATMOSPHERIC MOISTURE CONTENT AT HIGH LATITUDES  
 09/10/1997 - 07/31/2001                      FY02: \$0                      Total: \$368,150  
*Prin. Invest.:* D BROMWICH  
*Tech. Officer:* HQ/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6817**                      **OHIO STATE UNIV**                      **7636**  
 SPATIAL AND TEMPORAL VARIABILITY OF NET ANNUAL ACCUMULATION AND CLIMATE IN GREENLAND  
 01/07/1998 - 01/31/2001                      FY02: \$0                      Total: \$305,113  
*Prin. Invest.:* E S MOSLEY-THOMPSON  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7150**                      **OHIO STATE UNIV**                      **7637**  
 STANDARD & NONSTANDARD STELLAR MODELS: IMPLICATIONS FOR CLUSTER AGES AND LATE EVOLUTIONARY STAGES  
 04/02/1998 - 09/14/2002                      FY02: \$0                      Total: \$300,142  
*Prin. Invest.:* M H PINSONNEAULT  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7252**                      **OHIO STATE UNIV**                      **7638**  
 SUBMILLIMETER LABORATORY INVESTIGATIONS: SPECTROSCOPY & COLLISIONS  
 05/07/1998 - 04/30/2002                      FY02: \$0                      Total: \$150,360  
*Prin. Invest.:* E HERBST  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7286**                      **OHIO STATE UNIV**                      **7639**  
 SHIFTING BOUNDARIES OF THE ANTARCTIC ICE SHEET  
 10/19/1998 - 10/31/2002                      FY02: \$0                      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**                      **7640**  
 FUNDING FOR GRAVITY & TIME VARYING GRAVITY FIELD RECOVERY (SENH98-0144)  
 08/04/1998 - 07/31/2002                      FY02: \$0                      Total: \$300,000  
*Prin. Invest.:* C K SHUM  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7685**                      **OHIO STATE UNIV**                      **7641**  
 EDUCATIONAL OUTREACH FOR THE LANDSAT-7 MISSION SCIENCE OFFICE  
 09/11/1998 - 06/30/2002                      FY02: \$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**                      **7642**  
 MODELING AND OBSERVATIONAL STUDY OF THE GLOBAL ATMOSPHERIC IMPACTS OF ANTARCTIC SEA ICE ANOMALIES  
 10/20/1998 - 12/31/2002                      FY02: \$0                      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**                      **7643**  
 THE GLACIER DYNAMICS AND MASS FLUX OF ANTARCTIC ICE STREAMS FROM RADARSAT INSAR  
 11/23/1998 - 12/31/2002                      FY02: \$0                      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**                      **7644**  
 RADIATIVE AND COLLISIONAL ATOMIC DATA FOR UV AND OPTICAL ASTRONOMY  
 12/10/1998 - 12/31/2002                      FY02: \$0                      Total: \$157,868  
*Prin. Invest.:* D K PRADHAN  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 8397</b>                      <b>OHIO STATE UNIV</b>                      <b>7645</b>            PROBING THE PHYSICS OF VARIABLE ACTIVE GALACTIC NU CLEI            04/16/1999 - 10/31/2003                      FY02: \$0                      Total: \$248,500  <i>Prin. Invest.:</i> B M PETERSON  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 9538</b>                      <b>OHIO STATE UNIV</b>                      <b>7653</b>            RADARSAT ANTARCTIC MAPPING PROJECT: ANTARCTIC IMAG ING CAM-            PAIGN 2            05/23/2000 - 05/31/2005                      FY02: \$0                      Total: \$1,395,371  <i>Prin. Invest.:</i> K JEZEK  <i>Tech. Officer:</i> GSFC/W ABDALATI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8423</b>                      <b>OHIO STATE UNIV</b>                      <b>7646</b>            ATOMIC PROCESSES IN X-RAY ASTROPHYSICS (ATP 98)            04/15/1999 - 04/14/2003                      FY02: \$0                      Total: \$189,346  <i>Prin. Invest.:</i> A K PRADHAN  <i>Tech. Officer:</i> GSFC/D K WEST  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 5 9596</b>                      <b>OHIO STATE UNIV</b>                      <b>7654</b>            A REGIONAL INTEGRATED MONITORING SYSTEM FOR THE HYDROLOGY            OF THE PAN-ARCTIC LAND MASS            05/11/2000 - 04/30/2003                      FY02: \$0                      Total: \$68,336  <i>Prin. Invest.:</i> D BROMWICH  <i>Tech. Officer:</i> GSFC/P HOUSER  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NAG 5 8455</b>                      <b>OHIO STATE UNIV</b>                      <b>7647</b>            BAYESIAN HIERARCHICAL AIR-SEA INTERACTION MODELING : DEVELOP-            MENT AND APPLICATION TO THE LABR            04/12/1999 - 05/31/2003                      FY02: \$0                      Total: \$49,620  <i>Prin. Invest.:</i> K N BERLINER  <i>Tech. Officer:</i> GSFC/E LIDSTROM  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9883</b>                      <b>OHIO STATE UNIV</b>                      <b>7655</b>            LITHOSPHERIC ANALYSIS OF SATELLITE MAGNETOMETER OBSERVATION            08/24/2000 - 08/31/2002                      FY02: \$0                      Total: \$25,000  <i>Prin. Invest.:</i> R R VON FRESE  <i>Tech. Officer:</i> GSFC/P TAYLOR  <i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 5 8608</b>                      <b>OHIO STATE UNIV</b>                      <b>7648</b>            RADARSAT: THE ANTARCTIC MAPPING PROJECT            06/10/1999 - 06/30/2001                      FY02: \$0                      Total: \$432,220  <i>Prin. Invest.:</i> K C JEZEK  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9936</b>                      <b>OHIO STATE UNIV</b>                      <b>7656</b>            LIFTING THE SHROUD AROUND BROAD ABSORPTION LINE QUASARS WITH            XMM            09/06/2000 - 09/14/2002                      FY02: \$0                      Total: \$37,300  <i>Prin. Invest.:</i> S MATHUR  <i>Tech. Officer:</i> GSFC/R MUSHOTZKY  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8632</b>                      <b>OHIO STATE UNIV</b>                      <b>7649</b>            MODELING GREENLAND OUTLET GLACIERS            06/28/1999 - 06/30/2001                      FY02: \$0                      Total: \$70,761  <i>Prin. Invest.:</i> C DER VEEN  <i>Tech. Officer:</i> GSFC/E LINDSTROM  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 9937</b>                      <b>OHIO STATE UNIV</b>                      <b>7657</b>            X-RAY SPECTRA OF Z&gt;4 QUASARS            09/06/2000 - 09/14/2002                      FY02: \$0                      Total: \$30,000  <i>Prin. Invest.:</i> S MATHUR  <i>Tech. Officer:</i> GSFC/R MUSHOTZKY  <i>CASE Category:</i> 11 - ASTRONOMY</p>
<p><b>NAG 5 8913</b>                      <b>OHIO STATE UNIV</b>                      <b>7650</b>            ABSORBING OUTFLOWS IN AGN PI TRANSFER FROM SAO            06/22/2000 - 09/30/2001                      FY02: \$0                      Total: \$217,314  <i>Prin. Invest.:</i> S MATHUR  <i>Tech. Officer:</i> GSFC/R OLIVERSEN  <i>CASE Category:</i> 21 - MATHEMATICS</p>	<p><b>NAG 5 10112</b>                      <b>OHIO STATE UNIV</b>                      <b>7658</b>            MAPPING ANTARCTIC ICE SHEET MARGINS AND SNOW MELT ZONES OVER            DECADAL TIME SCALES FOR UNDERSTANDING            11/21/2000 - 11/14/2003                      FY02: \$0                      Total: \$88,537  <i>Prin. Invest.:</i> K JEZEK  <i>Tech. Officer:</i> GSFC/K PARTINGTON  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 9335</b>                      <b>OHIO STATE UNIV</b>                      <b>7651</b>            A GEOPHYSICAL APPROACH TO STUDY THE ROLE OF ICE SHEET MASS            BALANCE IN GLOBAL SEA LEVEL CHANGE            03/30/2000 - 04/30/2003                      FY02: \$0                      Total: \$297,461  <i>Prin. Invest.:</i> C K SHUM  <i>Tech. Officer:</i> GSFC/K PARTINGTON  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 10160</b>                      <b>OHIO STATE UNIV</b>                      <b>7659</b>            SATELLITE AND MODEL ANALYSIS OF THE ATMOSPHERIC MOISTURE BUD-            GET IN HIGH LATTITUDES            12/20/2000 - 03/31/2002                      FY02: \$0                      Total: \$78,767  <i>Prin. Invest.:</i> D BROMWICH  <i>Tech. Officer:</i> GSFC/W ABDALATI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 9518</b>                      <b>OHIO STATE UNIV</b>                      <b>7652</b>            REGIONAL SCALE METEOROLOGICAL ANALYSIS &amp; PREDICTION USING GPS            OCCULTATION &amp; EOS DATA            05/10/2000 - 04/30/2003                      FY02: \$0                      Total: \$432,015  <i>Prin. Invest.:</i> D BROMWICH  <i>Tech. Officer:</i> GSFC/R KAKAR  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 10199</b>                      <b>OHIO STATE UNIV</b>                      <b>7660</b>            AIRBORNE GEOPHYSICS AND REMOTE SENSING APPLIED TO STUDY            GREENLAND ICE DYNAMICS            12/21/2000 - 12/31/2001                      FY02: \$0                      Total: \$63,604  <i>Prin. Invest.:</i> B CSATHO  <i>Tech. Officer:</i> GSFC/W ABDALATI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>

**NAG 5 10207**                      **OHIO STATE UNIV**                      **7661**  
 SUBMILLIMETER LABORATORY INVESTIGATIONS: SPECTROS COPY & COL-  
 LISIONS  
 01/03/2001 - 12/31/2003                      FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* E HERBST  
*Tech. Officer:* GSFC/G STRINGFELLO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10266**                      **OHIO STATE UNIV**                      **7662**  
 SPATIAL AND TEMPORAL VARIABILITY OF GREENLAND ACCUMULATION  
 AND CLIMATE FROM THE PARCA CORES  
 01/09/2001 - 12/31/2001                      FY02: \$0                      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**                      **7663**  
 DETERMINING ICE SHEET ACCUMULATION RATES FROM RADAR REMOTE  
 SENSING  
 01/12/2001 - 01/14/2002                      FY02: \$0                      Total: \$54,903  
*Prin. Invest.:* K JEZEK  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10320**                      **OHIO STATE UNIV**                      **7664**  
 FUV SPECTROSCOPY OF NARROW LINE SEYFERT 1 GALAXIES FUSE 2000  
 01/30/2001 - 01/31/2003                      FY02: \$0                      Total: \$83,900  
*Prin. Invest.:* S MATHUR  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10619**                      **OHIO STATE UNIV**                      **7665**  
 NEAR REAL-TIME GPS/LEO PRECISION ORBIT DETERMINATION FOR  
 OPERATIONAL WEATHER FORECASTING WITH GPS  
 03/19/2001 - 03/31/2004                      FY02: \$0                      Total: \$117,889  
*Prin. Invest.:* D BRZEZINSKA  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10678**                      **OHIO STATE UNIV**                      **7666**  
 SEARCHING FOR EXTRA-SOLAR SYSTEM PLANETS USING GRAVITATIONAL  
 MICROLENSING  
 04/24/2001 - 04/30/2004                      FY02: \$0                      Total: \$45,000  
*Prin. Invest.:* D DEPOY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10978**                      **OHIO STATE UNIV**                      **7667**  
 MODELLING GREENLAND OUTLET GLACIERS  
 05/29/2001 - 05/31/2003                      FY02: \$0                      Total: \$41,805  
*Prin. Invest.:* C V DER VEEN  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11383**                      **OHIO STATE UNIV**                      **7668**  
 MOBILE SENSOR WEB FOR POLAR ICE SHEET MEASUREMENTS  
 11/01/2001 - 10/31/2006                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K JEZEK  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11462**                      **OHIO STATE UNIV**                      **7669**  
 ATOMIC DATA FOR MULTI-WAVELENGTH SPECTRAL FORMATION  
 12/10/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A K PRADHAN  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11749**                      **OHIO STATE UNIV**                      **7670**  
 "UNDERSTANDING RECENT MASS CHANGES OF THE GREENLAND ICE  
 SHEET"  
 02/12/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C J VAN DER VEEN  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11794**                      **OHIO STATE UNIV**                      **7671**  
 SATELLITE AND MODEL ANALYSIS OF THE ATMOSPHERIC MOISTURE  
 BUDGET IN HIGH LATITUDES - BRIDGE FUNDING  
 02/28/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D BROMWICH  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11984**                      **OHIO STATE UNIV**                      **7672**  
 THEORETICAL X-RAY ATOMIC ASTROPHYSICS AND SPECTROS COPY: THE  
 RMAX NETWORK  
 04/12/2002 - 04/14/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A K PRADHAN  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12290**                      **OHIO STATE UNIV**                      **7673**  
 COMPUTER HARDWARE UPGRADES IN SUPPORT OF ICE SHEET DATA  
 PROCESSING AND ANALYSIS  
 06/20/2002 - 06/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K JEZEK  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12407**                      **OHIO STATE UNIV**                      **7674**  
 MODELING MASS BALANCE GREENLAND AND ANTARCTIC ICE SHEET  
 08/01/2002 - 07/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D BROMWICH  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12585**                      **OHIO STATE UNIV**                      **7675**  
 DETERMINATION AND CHARACTERIZATION OF 20TH CENTURY GLOBAL  
 SEA LEVEL RISE  
 09/17/2002 - 09/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C K SHUM  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 8 1441**                      **OHIO STATE UNIV**                      **7676**  
 GRAVITATIONAL EFFECTS IN BOSE-EINSTEIN CONDENSATE OF ATOMIC  
 GASES  
 03/06/1998 - 01/31/2003                      FY02: \$0                      Total: \$213,250  
*Prin. Invest.:* T HO  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

## NASA'S UNIVERSITY PROGRAM

OHIO

**NAG 8 1470**                      **OHIO STATE UNIV**                      **7677**  
 R/S INTERDIFFUSION IN THE PRESENCE OF FREE CONVECTION  
 03/26/1998 - 01/31/2003                      FY02: \$0                      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**                      **7678**  
 FUNDAMENTAL STUDIES OF CRYSTAL GROWTH OF MICROPOROUS MATERIALS  
 06/05/2000 - 11/30/2003                      FY02: \$0                      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**                      **7679**  
 QUANTUM GASES IN NOVEL ENVIRONMENTS: OPTICAL LATTICES AND RAPIDLY ROTATING POTENTIALS  
 05/01/2001 - 04/30/2004                      FY02: \$0                      Total: \$25,000  
*Prin. Invest.:* T L HO  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 9 1005**                      **OHIO STATE UNIV**                      **7680**  
 ORIENTATION FOR INTERVENTION: SUPPORTING MISSION AWARENESS IN SPACE OPERATIONS  
 05/06/1998 - 06/30/2002                      FY02: \$0                      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**                      **7681**  
 DEVELOPMENT OF GRAVITY SENSITIVE PLANT CELLS CERATODON IN MICROGRAVITY  
 07/14/1999 - 11/30/2002                      FY02: \$0                      Total: \$325,354  
*Prin. Invest.:* F SACK  
*Tech. Officer:* KSC/G ETHERIDGE  
*CASE Category:* 55 - AGRICULTURE

**NAG10 320**                      **OHIO STATE UNIV**                      **7682**  
 ROBOTIC TOMATO HARVESTER ROBOTIC TOMATO HARVESTER  
 07/25/2002 - 07/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P LING  
*Tech. Officer:* KSC/J C SAGER  
*CASE Category:* 55 - AGRICULTURE

**NAG13 00039**                      **OHIO STATE UNIV**                      **7683**  
 HIERARCHICAL SEGMENTATION AND ATTRIBUTION OF HIGH RESOLUTION AERIAL IMAGES  
 05/19/2000 - 09/30/2001                      FY02: \$0                      Total: \$200,000  
*Prin. Invest.:* K BOYER  
*Tech. Officer:* SSC/B DAVIS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAS 3 02116**                      **OHIO STATE UNIV**                      **7684**  
 ACTIVE NOISE CONTROL IN SUPERSONIC JETS USING PLASMA ACTUATORS NRA PHASE I  
 03/08/2002 - 11/08/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M SAMIMY  
*Tech. Officer:* GRC/IJ E BRIDGES, GRC/IJ E GRADY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 5 02001**                      **OHIO STATE UNIV**                      **7685**  
 DEVELOP, FABRICATE, TEST LABORATORY PROTOTYPE DIGITAL RECEIVER.  
 03/11/2002 - 08/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J T JOHNSON  
*Tech. Officer:* GSFC/F PERI  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCA 3 206**                      **OHIO STATE UNIV**                      **7686**  
 GLENNAN MICROSYSTEMS INIATIVE FY 01 PROJECTS  
 02/26/2001 - 03/31/2003                      FY02: \$0                      Total: \$140,000  
*Prin. Invest.:* P DUTTA  
*Tech. Officer:* GRC/M V ZELLER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 2 1261**                      **OHIO STATE UNIV**                      **7687**  
 VISUALIZING TIME-VARYING DATA DISTRIBUTIONS IN EOS APPLICATIONS  
 04/26/2001 - 02/28/2003                      FY02: \$0                      Total: \$47,478  
*Prin. Invest.:* H SHEN  
*Tech. Officer:* ARC/D L KAO, ARC/V R WATSON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 3 899**                      **OHIO STATE UNIV**                      **7688**  
 DEVELOPMENT OF ADVANCED SOLAR CELL TECHNOLOGY DEVELOPMENT OF ADVANCED SOLAR CELL TECHNOLOGY  
 06/20/2001 - 06/30/2002                      FY02: \$0                      Total: \$23,000  
*Prin. Invest.:* S A RINGEL  
*Tech. Officer:* GRC/E B CLARK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 949**                      **OHIO STATE UNIV**                      **7689**  
 THERMALLY STABLE OHMIC CONTACTS ON 5H AND 6H-SiC MICRODEVICES FOR HIGH TEMPERATURE APPLICATIONS  
 03/29/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L BRILLSON  
*Tech. Officer:* GRC/R S OKOJIE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 974**                      **OHIO STATE UNIV**                      **7690**  
 ADVANCED III-V SPACE PHOTOVOLTAICS ON LATTICE-ENGINEERED SUBSTRATES  
 06/27/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S A RINGEL  
*Tech. Officer:* GRC/E CLARK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 3 52363**                      **OHIO STATE UNIV**                      **7691**  
 GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RESEARCH PROGRAM  
 06/12/2000 - 09/18/2003                      FY02: \$0                      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**                      **7692**  
 GRADUATE STUDENT RESEARCH  
 06/07/2001 - 08/31/2002                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* V V SUBRAMANIAM  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 5 131**                      **OHIO STATE UNIV**                      **7693**  
 THE ROLE OF THE OCEAN IN CONVECTIVE BURST INITIA- TION &  
 MAINTENANCE: IMPLICATIONS FOR TROPICAL CY  
 06/06/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J HOBGOOD  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 5 30178**                      **OHIO STATE UNIV**                      **7694**  
 METEOROLOGICAL PROCESSES CONTROLLING THE SPATIAL & TEMPORAL  
 VARIABILITY OF NET ANNUAL ACCUMULATION:  
 08/12/1999 - 08/31/2003                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* E MOSLEY-THOMPSON  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 51**                      **OHIO STATE UNIV**                      **7695**  
 ACID SULFATE DRAINAGE: A MODEL SYSTEM FOR UNDERSTA NDING  
 POTENTIAL BIOMINERALIZATION PROCESSON MARS  
 07/11/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* J BIGHAM  
*Tech. Officer:* JSC/R MORRIS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 1 2036**                      **OHIO UNIV**                      **7696**  
 MODIFYING & TESTING ATC CONTROLLER INTERFACE (CI) FOR DATA LINK  
 CLEARANCES  
 03/24/1998 - 02/28/2001                      FY02: -\$5,265                      Total: \$381,716  
*Prin. Invest.:* J M RANKIN, P MATTSON  
*Tech. Officer:* LARC/R W WILLS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 2299**                      **OHIO UNIV**                      **7697**  
 HAPTICS-AUGMENTED SCIENCE EDUCATION  
 05/16/2000 - 05/15/2001                      FY02: \$0                      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**                      **7698**  
 HAPTICS-AUGMENTED EDUCATION  
 06/01/2001 - 05/31/2004                      FY02: \$0                      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**                      **7699**  
 WEATHER DATALINK RESEARCH WEATHER DATALINK RESEARCH  
 04/05/2000 - 07/10/2001                      FY02: \$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**                      **7700**  
 AVIATION WEATHER DATALINK FLIGHT TEST EVALUATIONS RESEARCH  
 AND DEVELOPMENT  
 03/23/2001 - 10/19/2001                      FY02: \$0                      Total: \$49,723  
*Prin. Invest.:* T SKIDMORE  
*Tech. Officer:* GRC/P POINSATTE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2612**                      **OHIO UNIV**                      **7701**  
 FLIGHT DEMONSTRATION OF A 3-DIMENSIONAL COCKPIT DI SPLAY OF  
 TRAFFIC INFORMATION  
 07/31/2001 - 09/23/2003                      FY02: \$0                      Total: \$35,867  
*Prin. Invest.:* J RANKIN  
*Tech. Officer:* GRC/B BREM  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 7645**                      **OHIO UNIV**                      **7702**  
 FUNDING FOR 'ANALYSIS OF POLAR OERSTED, SUNSAT, MA DSAT, AND  
 POGO DATA' (SENH98-0063)  
 08/27/1998 - 12/31/2002                      FY02: \$0                      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**                      **7703**  
 PROPOSAL #537 DEVELOP A DYNAMIC RESOURCE MANAGE- MENT AP-  
 PROACH FOR ADAPTIVE AGENT-BASED REAL-TI  
 02/05/2001 - 02/14/2003                      FY02: \$0                      Total: \$193,919  
*Prin. Invest.:* L WELCH  
*Tech. Officer:* GSFC/B B PFARR  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 11025**                      **OHIO UNIV**                      **7704**  
 COOLING FLOWS AND RADIO GALAXIES: THE CHANDRA ERA (LTSA 2000)  
 06/13/2001 - 06/14/2005                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* B MCNAMARA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1789**                      **OHIO UNIV**                      **7705**  
 FUTURE IMPROVEMENT OF A TRAJECTORY LINERIZATION FLIGHT CON-  
 TROLLER FOR X-33  
 03/06/2001 - 12/31/2002                      FY02: \$0                      Total: \$34,833  
*Prin. Invest.:* J J ZHU  
*Tech. Officer:* MSFC/D R KRUPP  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAS 5 00185**                      **OHIO UNIV**                      **7706**  
 ADAPTIVE MANAGEMENT OF COMPUTING & NETWORK RESOURCES FOR  
 REAL-TIME SENSOR WEBS.  
 08/31/2000 - 12/31/2002                      FY02: \$0                      Total: \$342,988  
*Prin. Invest.:* L WELCH  
*Tech. Officer:* GSFC/B PFAR  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 8 01105**                      **OHIO UNIV**                      **7707**  
 THEORETICAL VALIDATION, FEV & IMPLEMETNATION OF AL GORITHMS, &  
 PREFORMING SIMULATION TESTING  
 05/18/2001 - 05/31/2003                      FY02: \$0                      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**                      **7708**  
 A DTED TERRAIN AVOIDANCE SYS UTILIZING GPS AND RADAR ALTIMETER  
 MONITORING, RE NRA 98-LARC-10  
 09/01/1999 - 12/31/2002                      FY02: \$0                      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



## NASA'S UNIVERSITY PROGRAM

OHIO

<b>NCC 2 1030</b>	<b>OHIO UNIV</b>	<b>7709</b>	<b>NAG 3 2279</b>	<b>UNIV OF AKRON</b>	<b>7717</b>
WEATHER-RELATED PILOT DECISION-MAKING CONTEXT CATE GORIZATION			SYSTEM AND PROPAGATION AVAILABILITY ANALYSIS FOR N ASA'S ADVANCED AIR TRANSPORTATION TECHNOLOGIES (A		
03/25/1998 - 12/31/2000	FY02: \$0	Total: \$132,386	07/12/1999 - 08/14/2001	FY02: \$0	Total: \$74,100
<i>Prin. Invest.:</i> C E MCCOY			<i>Prin. Invest.:</i> O C UGWEJE		
<i>Tech. Officer:</i> ARC/J M ORASANU			<i>Tech. Officer:</i> GRC/R J ACOSTA		
<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER			<i>CASE Category:</i> 45 - ELECTRICAL ENGR		
<b>NCC 2 1258</b>	<b>OHIO UNIV</b>	<b>7710</b>	<b>NAG 3 2390</b>	<b>UNIV OF AKRON</b>	<b>7718</b>
EXTREME DECISION-MAKING: WEATHER RELATED PILOT DECISION-MAKING			HIGH TEMPERATURE ADHESIVES AND STRUCTURAL RESINS HIGH TEMPERATURE ADHESIVES AND STRUCTURAL RESINS		
04/20/2001 - 11/14/2001	FY02: \$0	Total: \$77,199	04/12/2000 - 06/30/2001	FY02: \$0	Total: \$65,832
<i>Prin. Invest.:</i> C E MCCOY			<i>Prin. Invest.:</i> F W HARRIS		
<i>Tech. Officer:</i> ARC/J ORASANU			<i>Tech. Officer:</i> GRC/C CHUANG		
<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NCC 3 680</b>	<b>OHIO UNIV</b>	<b>7711</b>	<b>NAG 3 2420</b>	<b>UNIV OF AKRON</b>	<b>7719</b>
A STUDY OF MULTI-USER TCPTRAFFIC OVER ACTS A STUDY OF MULTI-USER TCPTRAFFIC OVER ACTS			A NEW FINITE ELEMENT FORMULATION ANALYSIS OF AEROSPACE STRUCTURES		
03/10/1999 - 05/15/2001	FY02: \$0	Total: \$90,935	05/11/2000 - 08/25/2003	FY02: \$1	Total: \$120,032
<i>Prin. Invest.:</i> S OSTERMANN			<i>Prin. Invest.:</i> S N PATNAIK		
<i>Tech. Officer:</i> GRC/W D IVANIC			<i>Tech. Officer:</i> GRC/G R HALFORD		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 3 2645</b>	<b>OHIO WESLEYAN UNINERITY</b>	<b>7712</b>	<b>NAG 3 2442</b>	<b>UNIV OF AKRON</b>	<b>7720</b>
IMPROVEMENTS TO CAMPUS INFRASTRUCTURE AT OHIO WESLEYAN UNIV			STEREO IMAGING VELOCIMETRY OF MIXING DRIVEN BY BUOYANCY INDUCED FLOW FIELDS		
10/23/2001 - 08/11/2003	FY02: \$1,497,000	Total: \$1,497,000	05/23/2000 - 11/30/2003	FY02: \$0	Total: \$72,994
<i>Prin. Invest.:</i> W C LOUTHAN			<i>Prin. Invest.:</i> C BATUR		
<i>Tech. Officer:</i> GRC/F SAVINO			<i>Tech. Officer:</i> GRC/W B DUVAL		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 5 10453</b>	<b>OHIO WESLEYAN UNINERITY</b>	<b>7713</b>	<b>NAG 3 2444</b>	<b>UNIV OF AKRON</b>	<b>7721</b>
INFORMAL & UNDERGRADUATE SCIENCE EDUCATION OPPORTUNITIES AT OHIO WESLEYAN UNIV			NE OHIO URBAN GROWTH MONITORING AND MODELING PROTOTYPE		
02/28/2001 - 02/28/2003	FY02: \$0	Total: \$1,373,000	05/24/2000 - 09/30/2001	FY02: \$0	Total: \$105,000
<i>Prin. Invest.:</i> W LOUTHAN			<i>Prin. Invest.:</i> D SIEBERT		
<i>Tech. Officer:</i> HQ/J ROSENDFAL			<i>Tech. Officer:</i> GRC/T M SCOTT		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 1 02003</b>	<b>UNIV OF AKRON</b>	<b>7714</b>	<b>NAG 3 2494</b>	<b>UNIV OF AKRON</b>	<b>7722</b>
CHARACTERIZATION OF DURABILITY OF POLYMER MATRIX COMPOSITES & ADHESIVE JOINTS IN CRYOTANK ENVIRONMENT			COMPRESSOR SURGE INCEPTION AND SURGE DISCRIMINATION FROM TIME SERIES		
11/14/2001 - 11/13/2004	FY02: \$0	Total: \$0	11/08/2000 - 04/27/2002	FY02: \$0	Total: \$44,519
<i>Prin. Invest.:</i> R B PIPES			<i>Prin. Invest.:</i> H K QAMMAR		
<i>Tech. Officer:</i> LARC/E S WEISER			<i>Tech. Officer:</i> GRC/M BRIGHT		
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR			<i>CASE Category:</i> 21 - MATHEMATICS		
<b>NAG 1 02035</b>	<b>UNIV OF AKRON</b>	<b>7715</b>	<b>NAG 3 2512</b>	<b>UNIV OF AKRON</b>	<b>7723</b>
POLYIMIDE/CARBON NANOCOMPOSITES			GRAVITATIONAL INFLUENCES ON FLAME PROPAGATION THROUGH NON-UNIFORM PRE-MIXED GAS SYSTEMS		
01/15/2002 - 12/31/2002	FY02: \$0	Total: \$0	12/08/2000 - 11/30/2004	FY02: \$0	Total: \$16,688
<i>Prin. Invest.:</i> F W HARRIS, L DAI			<i>Prin. Invest.:</i> D PERRY		
<i>Tech. Officer:</i> LARC/J W CONNELL			<i>Tech. Officer:</i> GRC/K R SACKSTEDER		
<i>CASE Category:</i> 12 - CHEMISTRY			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 3 2182</b>	<b>UNIV OF AKRON</b>	<b>7716</b>	<b>NAG 3 2537</b>	<b>UNIV OF AKRON</b>	<b>7724</b>
FAST POTENTIAL THEORETIC METHODS FOR FAR-FIELD SOUND RADIATION PROBLEMS			APPLICATION OF PERIODIC BOUNDARY CONDITIONS IN THE AEROACOUSTICS OF TURBOMACHINERY		
07/18/1998 - 06/30/2001	FY02: \$0	Total: \$30,000	02/08/2001 - 01/31/2004	FY02: \$0	Total: \$15,000
<i>Prin. Invest.:</i> D I HAIHARAN			<i>Prin. Invest.:</i> S SAWYER		
<i>Tech. Officer:</i> GRC/J R SCOTT			<i>Tech. Officer:</i> GRC/E ENVIA		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		

**NAG 3 2566**                      **UNIV OF AKRON**                      **7725**  
 INFRASTRUCTURE ADDITIONS FOR A PLYMER NATECHNOLOGYCENTER AT  
 THE UNIV OF AKRON  
 03/16/2001 - 12/31/2002                      FY02: \$0                      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**                      **7726**  
 LOW MELT VISCOSITY RESINS FOR RESIN TRANSFER MOLDING  
 06/07/2001 - 01/31/2002                      FY02: \$0                      Total: \$44,637  
*Prin. Invest.:* F W HARRIS  
*Tech. Officer:* GRC/C CHUANG  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2632**                      **UNIV OF AKRON**                      **7727**  
 DEVELOPMENT OF AN OPTICAL REAL-TIME POLARIMETRIC IMAGING  
 SYSTEM FOR AEROSPACE APPLICATIONS  
 06/07/2001 - 05/31/2002                      FY02: \$0                      Total: \$58,423  
*Prin. Invest.:* G C GIAKOS  
*Tech. Officer:* GRC/D NG  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 3 2777**                      **UNIV OF AKRON**                      **7728**  
 PERFORMANCE OF FORCE AND DISPLACEMENT METHODS IN THE  
 DESIGN OPTIMIZATION OF FLEXURAL STRUCTURES  
 05/06/2002 - 03/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S N PATNAIK  
*Tech. Officer:* GRC/G R HALFORD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 1 02002**                      **UNIV OF AKRON**                      **7729**  
 CYBER SIMULATION FOR COMPOSITE MATERIALS AND STRUCTURES IN  
 AERONAUTICS AND AEROSPACE  
 12/05/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B R PIPES  
*Tech. Officer:* LARC/J H STARNES, JR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 02003**                      **UNIV OF AKRON**                      **7730**  
 EXPERIMENTS AND MODELS FOR POLYMERIC MICROSPHERE FOAMS  
 12/18/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R B PIPES  
*Tech. Officer:* LARC/E S WEISER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 2 1325**                      **UNIV OF AKRON**                      **7731**  
 LEXICAL ACCESS AND DUAL TASK PERFORMANCE DETERMINING THE  
 LOCUS OF THE BOTTLENECK  
 03/13/2002 - 03/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P ALLEN  
*Tech. Officer:* ARC/E RUTHRUFF, ARC/R W REMINGTON  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 3 567**                      **UNIV OF AKRON**                      **7732**  
 DETERMINATION OF OPTIMUM HEATING ZONE LENGTH & CONTROL  
 THERMOCOUPLE PLACEMENT FOR GRIDMAN CRYSTAL G  
 07/01/1997 - 07/31/2001                      FY02: \$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**                      **7733**  
 ENHANCEMENTS TO NURBS-BASED FEA AIRFOIL MODLER-SABER  
 10/24/1997 - 11/30/2002                      FY02: \$0                      Total: \$238,076  
*Prin. Invest.:* A F SALEEB, D A TROWBRIDGE  
*Tech. Officer:* GRC/S A THORP  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 716**                      **UNIV OF AKRON**                      **7734**  
 THEORY, MODELING, SOFTWARE AND HARDWARE DEVELOPMENT IN  
 COMPUTATIONAL MATERIALS SCIENCE  
 06/25/1999 - 07/06/2003                      FY02: \$0                      Total: \$358,694  
*Prin. Invest.:* G W YOUNG  
*Tech. Officer:* GRC/A CHAIT  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 744**                      **UNIV OF AKRON**                      **7735**  
 DESIGN, PROGRESSIVE MODELING, MANUFACTURE, AND TESTING OF  
 COMPOSITE SHIELD FOR TURBINE ENGINEBLADE  
 12/01/1999 - 11/17/2001                      FY02: \$0                      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**                      **7736**  
 STUDIES ON STRESS-STRAIN RELATIONSHIPS OF POLYMERIC MATERIALS  
 USED IN SPACE APPLICATIONS  
 12/28/1999 - 09/30/2001                      FY02: \$0                      Total: \$234,212  
*Prin. Invest.:* S C JANA  
*Tech. Officer:* GRC/A FREED  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 765**                      **UNIV OF AKRON**                      **7737**  
 DEVELOPMENT OF EFFICIENT NUMERICAL ALGORITHMS FOR PREDICTION  
 OF FAR-FIELD ACOUSTIC NOISE  
 02/07/2000 - 01/02/2002                      FY02: \$0                      Total: \$60,000  
*Prin. Invest.:* K KREIDER  
*Tech. Officer:* GRC/J SCOTT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 768**                      **UNIV OF AKRON**                      **7738**  
 ADVANCED STRUCTURAL, IMPACT AND LIFE ANALYSES OF AEROSPACE  
 COMPONENTS  
 02/02/2000 - 02/28/2003                      FY02: \$0                      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**                      **7739**  
 DEFORMATION AND LIFE OF POLYMER MATRIX COMPOSITE (PMC)  
 FLYWHEEL ROTORS  
 03/27/2000 - 08/28/2002                      FY02: \$0                      Total: \$96,932  
*Prin. Invest.:* D F SALEEB  
*Tech. Officer:* GRC/A ARNOLD  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 794**                      **UNIV OF AKRON**                      **7740**  
 HOMOPOLYROTAXANES AND HOMOPOLYROTAXANED NETWORKS OF PEO  
 04/20/2000 - 11/17/2002                      FY02: \$0                      Total: \$165,798  
*Prin. Invest.:* C PUGH  
*Tech. Officer:* GRC/M MEADOR  
*CASE Category:* 12 - CHEMISTRY

## NASA'S UNIVERSITY PROGRAM

OHIO

<b>NCC 3 802</b>	<b>UNIV OF AKRON</b>	<b>7741</b>	<b>NCC 3 932</b>	<b>UNIV OF AKRON</b>	<b>7749</b>
POLYMER SOLID ELECTROLYTES FOR RECHARGEABLE BATTERIES			FEA STUDY OF IMPACT-PENETRATION FOR LIGHTWEIGHT JET ENGINE CONTAINMENT		
05/23/2000 - 11/17/2002	FY02: \$0	Total: \$153,427	12/28/2001 - 12/31/2002	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> F W HARRIS			<i>Prin. Invest.:</i> W K BINIENDA		
<i>Tech. Officer:</i> GRC/M MEADOR			<i>Tech. Officer:</i> GRC/G D ROBERTS		
<i>CASE Category:</i> 12 - CHEMISTRY			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NCC 3 808</b>	<b>UNIV OF AKRON</b>	<b>7742</b>	<b>NCC 3 968</b>	<b>UNIV OF AKRON</b>	<b>7750</b>
DEFECT DETECTION SCHEMES AND ALGORITHMIC DEVELOPMENT FOR LARGE-SCALE SIMULATIONS OF DAMAGING VISCO-			POLYIMIDE AND EPOXY BASED NANOCOMPOSITES WITH NANO FIBERS AND EXFOLIATED CLAY		
06/16/2000 - 03/14/2003	FY02: \$0	Total: \$397,000	05/31/2002 - 11/30/2002	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> A F SALEEB			<i>Prin. Invest.:</i> D H RENEKER		
<i>Tech. Officer:</i> GRC/S M ARNOLD			<i>Tech. Officer:</i> GRC/M A MEADOR		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NCC 3 820</b>	<b>UNIV OF AKRON</b>	<b>7743</b>	<b>NCC 3 992</b>	<b>UNIV OF AKRON</b>	<b>7751</b>
MODEL-BASED CONTROL OF BATTERIES AND FUEL CELLS FOR LONGER LIFE			EXTEND THE BASE CAPABILITIES OF "COMPARE" TO INCLUDE DAMAGE MODELING		
08/09/2000 - 02/28/2002	FY02: \$0	Total: \$112,644	07/30/2002 - 07/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D T HARTLEY			<i>Prin. Invest.:</i> A SALEEB		
<i>Tech. Officer:</i> GRC/M MANZO			<i>Tech. Officer:</i> GRC/S M ARNOLD		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NCC 3 828</b>	<b>UNIV OF AKRON</b>	<b>7744</b>	<b>NCC 3 998</b>	<b>UNIV OF AKRON</b>	<b>7752</b>
RESEARCH AND DEVELOPMENT OF IMPROVED RF SIGNAL SWITCHING AND DISTRIBUTION TECHNIQUES IN CIVILAVIAT			MODEL-BASED CONTROL OF BATTERIES AND FUEL CELLS FOR LONGER LIFE		
09/29/2000 - 09/30/2001	FY02: \$0	Total: \$24,739	09/06/2002 - 12/31/2002	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> O C UGWEJE			<i>Prin. Invest.:</i> T T HARTLEY		
<i>Tech. Officer:</i> GRC/H NGUYEN			<i>Tech. Officer:</i> GRC/T B MILLER		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			<i>CASE Category:</i> 45 - ELECTRICAL ENGR		
<b>NCC 3 831</b>	<b>UNIV OF AKRON</b>	<b>7745</b>	<b>NGT 3 52364</b>	<b>UNIV OF AKRON</b>	<b>7753</b>
DESIGN OPTIMIZATION OF STRUCTURAL PANELS WITH ANALYSIS APPROXIMATORS AT THE SUBPROBLEM LEVEL			GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RESEARCH PROGRAM		
12/12/2000 - 11/30/2002	FY02: \$0	Total: \$86,804	06/13/2000 - 06/30/2003	FY02: \$0	Total: \$44,000
<i>Prin. Invest.:</i> S N PATNAIK			<i>Prin. Invest.:</i> D PERRY		
<i>Tech. Officer:</i> GRC/D HOPKINS			<i>Tech. Officer:</i> GRC/F J MONTEGANI		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 12 - CHEMISTRY		
<b>NCC 3 839</b>	<b>UNIV OF AKRON</b>	<b>7746</b>	<b>NAG 2 1581</b>	<b>UNIV OF CINCINNATI</b>	<b>7754</b>
RESEARCH IN INNOVATIVE USE OF SMART MATERIALS IN PROPULSION SYSTEM COMPONENTS-CONTROL AND EXPERIMENT			AIRCRAFT AND AIRSPACE MODELING APPROACHES TO CAPACITY ENHANCEMENT IN AIR MANAGEMENT		
12/20/2000 - 12/31/2002	FY02: \$0	Total: \$68,662	09/20/2002 - 09/14/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> G SONG			<i>Prin. Invest.:</i> G L SLATER		
<i>Tech. Officer:</i> GRC/H LEE			<i>Tech. Officer:</i> ARC/T J DAVIS, ARC/T FARLEY		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NCC 3 877</b>	<b>UNIV OF AKRON</b>	<b>7747</b>	<b>NAG 3 2437</b>	<b>UNIV OF CINCINNATI</b>	<b>7755</b>
HIGH TEMPERATURE FUEL CELLS			OHIOVIEW UNDERGRADUATE DISTANCE LEARNING PROTOTYPE OHIOVIEW UNDERGRADUATE DISTANCE LEARNING PROTOTYPE		
03/14/2001 - 03/05/2003	FY02: \$0	Total: \$164,334	05/22/2000 - 09/30/2001	FY02: \$0	Total: \$360,000
<i>Prin. Invest.:</i> R K EBY			<i>Prin. Invest.:</i> D BECK		
<i>Tech. Officer:</i> GRC/M A MEADOR			<i>Tech. Officer:</i> GRC/T SCOTT		
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NCC 3 929</b>	<b>UNIV OF AKRON</b>	<b>7748</b>	<b>NAG 3 2451</b>	<b>UNIV OF CINCINNATI</b>	<b>7756</b>
NON-CONTRACTING PASSIVE-ADAPTIVE TURBINE FINGER SEAL DEVELOPMENT			MICROSCOPIC FLOW VISUALIZATION IN DEMIXING FLUIDS DURING POLYMERIC MEMBRANE FORMATION IN LOW-G		
01/03/2002 - 09/30/2003	FY02: \$0	Total: \$0	06/01/2000 - 11/30/2003	FY02: \$0	Total: \$145,000
<i>Prin. Invest.:</i> M J BRAUN			<i>Prin. Invest.:</i> W B KRANTZ		
<i>Tech. Officer:</i> GRC/M P PROCTOR			<i>Tech. Officer:</i> GRC/H C DEGROH		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		

**NAG 3 2462**                      **UNIV OF CINCINNATI**                      **7757**  
 INTEGRATED ATOMIZER/SWIRLER FOR LEAN DIRECT INJECTION COMBUSTION  
 06/14/2000 - 06/18/2003                      FY02: \$0                      Total: \$121,209  
*Prin. Invest.:* S JENG  
*Tech. Officer:* GRC/R R TACINA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2487**                      **UNIV OF CINCINNATI**                      **7758**  
 A SIMULATION STUDY OF SIGE HBTS FOR POWER APPLICATIONS AT MICROWAVE FREQUENCIES  
 09/27/2000 - 09/07/2003                      FY02: \$0                      Total: \$97,839  
*Prin. Invest.:* K P ROENKER  
*Tech. Officer:* GRC/G E PONCHAK  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2669**                      **UNIV OF CINCINNATI**                      **7759**  
 EFFECTS OF EXIT BOUNDARY CONDITIONS ON PULSE DETONATION ENGINE PERFORMANCE  
 11/30/2001 - 11/16/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E J GUTMARK  
*Tech. Officer:* GRC/H D PERKINS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 8986**                      **UNIV OF CINCINNATI**                      **7760**  
 ULTRA-HOT WINDS FROM DO WHITE DWARFS - FUSE  
 01/27/2000 - 01/31/2003                      FY02: \$0                      Total: \$10,600  
*Prin. Invest.:* M L SITKO  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9418**                      **UNIV OF CINCINNATI**                      **7761**  
 ORDOVICIAN BIODIVERSITY: GEOGRAPHY AND ENVIRONMENT  
 04/11/2000 - 06/30/2003                      FY02: \$0                      Total: \$98,848  
*Prin. Invest.:* A I MILLER  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9475**                      **UNIV OF CINCINNATI**                      **7762**  
 IR SPECTROSCOPY OF DUSTY PROTOSTELLAR DISKS  
 04/20/2000 - 04/30/2003                      FY02: \$0                      Total: \$120,000  
*Prin. Invest.:* M SITKO  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 13 - PHYSICS

**NAG 5 10384**                      **UNIV OF CINCINNATI**                      **7763**  
 DYNAMICS AND CONTROL OF DISTRIBUTED SPACECRAFT.  
 02/07/2001 - 12/14/2002                      FY02: \$0                      Total: \$106,975  
*Prin. Invest.:* T WILLIAMS  
*Tech. Officer:* GSFC/D FOLTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 11684**                      **UNIV OF CINCINNATI**                      **7764**  
 "A DIAGNOSTIC STUDY OF POSSIBLE ENHANCEMENT OF THE HYDROLOGIC CYCLE"  
 02/07/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S ISLAM  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 3 01120**                      **UNIV OF CINCINNATI**                      **7765**  
 DEVELOPMENT OF AN INTEGRATED LOOP HEAT PIPE, USING COHERENT POROUS SILICON AS A WICK  
 03/21/2001 - 12/31/2002                      FY02: \$0                      Total: \$119,999  
*Prin. Invest.:* T HENSENSON  
*Tech. Officer:* GRC/E GOLLIHER  
*CASE Category:* 46 - MECHANICAL ENGR

**NAS 3 02113**                      **UNIV OF CINCINNATI**                      **7766**  
 NRA INTERGRATION OF PULSE DETONATION ENGINE (PDE) WITH AIRFRAME FOR POWER LIFT  
 04/15/2002 - 01/15/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E J GUTMARK  
*Tech. Officer:* GRC/L S HULTGREN, GRC/D ERCEGOVIC  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 3 02130**                      **UNIV OF CINCINNATI**                      **7767**  
 NRA AWARD FOR STUDY "ADVANCED POROUS ACOUSTIC LINE FOR EFFECTIVE FAN AND TURBINE NOISE SUPPRESSION  
 04/16/2002 - 01/16/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E J GUTMARK  
*Tech. Officer:* GRC/C QUINN, GRC/J E GRADY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1139**                      **UNIV OF CINCINNATI**                      **7768**  
 ADVANCED TRAJECTORY ANALYSIS WITH APPLICATION TO A IR TRAFFIC CONTROL  
 09/03/1999 - 07/31/2002                      FY02: \$0                      Total: \$102,612  
*Prin. Invest.:* G L SLATER  
*Tech. Officer:* ARC/T J DAVIS, ARC/D R ISAACSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 981**                      **UNIV OF CINCINNATI**                      **7769**  
 MARS EXTRA-VEHICULAR ACTIVITY (EVA) MARS EXTRA-VEHICULAR ACTIVITY (EVA)  
 07/17/2002 - 07/07/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R BECK  
*Tech. Officer:* GRC/C T RAMOS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 3 52383**                      **UNIV OF CINCINNATI**                      **7770**  
 GRADUATE STUDENT RESEARCHERS PROGRAM - NANOWIRES FOR PHOTOVOLTAIC AND NANOELECTRIC DEVICES  
 08/15/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C BURDA  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 12 - CHEMISTRY

**NGT 5 30108**                      **UNIV OF CINCINNATI**                      **7771**  
 SPACE-TIME CHARACTERIZATION OF REMOTELY SENSED SOIL MOISTURE  
 02/10/1998 - 09/30/2001                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* S ISLAM  
*Tech. Officer:* GSFC/G ASRAR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30453**                      **UNIV OF CINCINNATI**                      **7772**  
 A DIAGNOSTIC STUDY OF A POSSIBLE ACCELERATION OF THE HYDROLOGIC CYCLE. STUDENT: DAVID L. SMALL  
 08/20/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S ISLAM  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<b>NGT 5 50265</b>	<b>UNIV OF CINCINNATI</b>	<b>7773</b>	<b>NAG 1 2244</b>	<b>UNIV OF TOLEDO</b>	<b>7781</b>
NEGATIVE REGULATION OF OSTEOCLASTOGENESIS BY ESTROGENS VIA DIRECT ACTIONS ON HEMATOPOIETIC CELLS			DEV DYNAM CONFIGURABLE OBJ-ORIENTED FRAMEWORK FOR DIS TRIB'D MULTI-MODAL COMPUTAT'L AEROSP SYS SIMULAT		
07/07/1999 - 06/30/2001	FY02: \$0	Total: \$44,000	09/23/1999 - 08/31/2002	FY02: \$0	Total: \$207,104
<i>Prin. Invest.:</i> J W PIKE			<i>Prin. Invest.:</i> A AETEH, V A REED		
<i>Tech. Officer:</i> GSFC/L SMITH			<i>Tech. Officer:</i> LARC/W K GERDES		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 3 2318</b>	<b>UNIV OF DAYTON</b>	<b>7774</b>	<b>NAG 3 2269</b>	<b>UNIV OF TOLEDO</b>	<b>7782</b>
QUALITY OF SERVICE FOR REAL-TIME APPLICATIONS OVER NEXT GENERATION DATA NETWORKS			DEVELOPMENT OF NOVEL METHODS FOR THE REDUCTION OF NOISE AND WEIGHT IN HELICOPTER TRANSMISSIONS		
02/09/2000 - 12/31/2000	FY02: \$0	Total: \$130,000	06/29/1999 - 06/30/2002	FY02: \$0	Total: \$320,052
<i>Prin. Invest.:</i> M ATIQUZZAMAN			<i>Prin. Invest.:</i> T G KEITH		
<i>Tech. Officer:</i> GRC/W D IVANIC			<i>Tech. Officer:</i> GRC/T L KRANTZ		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NAG 5 9804</b>	<b>UNIV OF DAYTON</b>	<b>7775</b>	<b>NAG 3 2338</b>	<b>UNIV OF TOLEDO</b>	<b>7783</b>
STUDIES WITH SYNTHETIC INTERSTELLAR DIAMOND: RARE GAS INCORPORATION AND PHASE STABILITY			CHEMISTRY OF AVIATION FUELS CHEMISTRY OF AVIATION FUELS		
07/14/2000 - 07/14/2003	FY02: \$0	Total: \$60,000	02/23/2000 - 12/31/2002	FY02: \$0	Total: \$289,414
<i>Prin. Invest.:</i> A PHELPS			<i>Prin. Invest.:</i> K L DEWITT		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GRC/M RABINOWITZ		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 43 - CHEMICAL ENGR		
<b>NAG 5 9808</b>	<b>UNIV OF DAYTON</b>	<b>7776</b>	<b>NAG 3 2408</b>	<b>UNIV OF TOLEDO</b>	<b>7784</b>
FE-MG CARBONATES AS A MONITOR PHASE OF CARBON DIOXIDE AND OXYGEN FUGACITY ON MARS			INVESTIGATION OF PRESSURIZED WAVE BEARING INVESTIGATION OF PRESSURIZED WAVE BEARING		
07/17/2000 - 06/30/2003	FY02: \$0	Total: \$45,000	05/01/2000 - 12/31/2002	FY02: \$0	Total: \$76,138
<i>Prin. Invest.:</i> A M KOZIOL			<i>Prin. Invest.:</i> T G KEITH		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GRC/D P FLEMING		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NAS 1 99148</b>	<b>UNIV OF DAYTON</b>	<b>7777</b>	<b>NAG 3 2409</b>	<b>UNIV OF TOLEDO</b>	<b>7785</b>
OPERATIONS AND MODELING ANALYSIS			DISSEMINATION OF REMOTE SENSING TECHNOLOGY IN NORTHWEST OHIO THROUGH EDUCATIONAL AND COMM OUTR		
09/27/1999 - 09/30/2003	FY02: \$0	Total: \$150,500	05/04/2000 - 09/30/2001	FY02: \$0	Total: \$105,000
<i>Prin. Invest.:</i> C E EBELING			<i>Prin. Invest.:</i> D P CZAJKOWSKI		
<i>Tech. Officer:</i> LARC/W D MORRIS			<i>Tech. Officer:</i> GRC/T M SCOTT		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NCC 3 771</b>	<b>UNIV OF DAYTON</b>	<b>7778</b>	<b>NAG 3 2502</b>	<b>UNIV OF TOLEDO</b>	<b>7786</b>
A FERROELECTRIC TUNABLE PRE-SELECT FILTER/LNA HYBRID CIRCUIT WITH A VOLTAGE CONTROLLABLE IMPEDANCE			DEVELOPMENT OF COMPUTATIONAL AEROACOUSTICS CODE FOR JET AND FAN NOISE AND FLOW PREDICTION		
02/10/2000 - 11/08/2001	FY02: \$0	Total: \$30,000	11/07/2000 - 10/31/2002	FY02: \$0	Total: \$129,682
<i>Prin. Invest.:</i> G SUBRAMANYAM			<i>Prin. Invest.:</i> T G KEITH		
<i>Tech. Officer:</i> GRC/F MIRANDA			<i>Tech. Officer:</i> GRC/E ENVIA		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NCC 3 882</b>	<b>UNIV OF DAYTON</b>	<b>7779</b>	<b>NAG 3 2505</b>	<b>UNIV OF TOLEDO</b>	<b>7787</b>
DESIGN OF FREQUENCY AGILE COMPONENTS USING PATTERNED FERROELECTRIC FILMS FOR K- AND KA-BAND APPLICATIONS			CFD SIMULATION OF CASING TREATMENT OF AXIAL FLOW COMPRESSORS		
04/18/2001 - 12/04/2001	FY02: \$0	Total: \$22,633	11/13/2000 - 11/12/2002	FY02: \$0	Total: \$134,650
<i>Prin. Invest.:</i> G SUBRAMANYAM			<i>Prin. Invest.:</i> T G KEITH		
<i>Tech. Officer:</i> GRC/F MIRANDA			<i>Tech. Officer:</i> GRC/J ADMACZYK		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 3 52351</b>	<b>UNIV OF DAYTON</b>	<b>7780</b>	<b>NAG 3 2507</b>	<b>UNIV OF TOLEDO</b>	<b>7788</b>
GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RESEARCH PROGRAM			DEVELOPMENT OF ADVANCED CASING TREATMENTS FOR FLOW CONTROL		
06/23/1999 - 07/31/2002	FY02: \$0	Total: \$66,000	11/20/2000 - 11/05/2001	FY02: \$0	Total: \$119,190
<i>Prin. Invest.:</i> V JAIN			<i>Prin. Invest.:</i> T G KEITH, JR.		
<i>Tech. Officer:</i> GRC/F J MONTEGANI			<i>Tech. Officer:</i> GRC/M D HATHAWAY		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		

**NAG 3 2508**                      **UNIV OF TOLEDO**                      **7789**  
 ESTABLISHMENT OF A DATA EXCHANGE MECHANISM FOR ZOO MING IN  
 THE NPSS ARCHITECTURE  
 11/29/2000 - 11/15/2001                      FY02: \$0                      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**                      **7790**  
 CRYOGENIC NANO ELECTRONICS FOR SPACE BORNE POWER SYSTEMS  
 03/14/2001 - 03/14/2003                      FY02: \$0                      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**                      **7791**  
 SIMULATION OF COORDINATED SATELLITE OPERATION  
 04/17/2001 - 04/02/2004                      FY02: \$0                      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**                      **7792**  
 INVESTIGATION OF DYNAMIC FORCE/VIBRATION TRANSMISSION CHARACTERISTICS OF FOUR-SQUARE TYPE GEAR DURA  
 07/16/2001 - 03/31/2002                      FY02: \$0                      Total: \$31,295  
*Prin. Invest.:* A KAHRAMAN  
*Tech. Officer:* GRC/R HANDSCHUH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2646**                      **UNIV OF TOLEDO**                      **7793**  
 ADVANCED CONCEPTS RESEARCH FOR FLYWHEEL TECHNOLOGY APPLICATIONS  
 08/30/2001 - 05/08/2003                      FY02: \$0                      Total: \$49,999  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/R F BEACH  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 3 2673**                      **UNIV OF TOLEDO**                      **7794**  
 REVIEW OF NASA-GLENN COMPRESSOR RESEARCH REVIEW OF NASA-GLENN COMPRESSOR RESEARCH  
 12/11/2001 - 06/30/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/A J STRAZISAR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2674**                      **UNIV OF TOLEDO**                      **7795**  
 SULFUR OXIDATION AND CONTRAIL PRECURSOR CHEMISTRY SULFUR OXIDATION AND CONTRAIL PRECURSOR CHEMISTRY  
 12/14/2001 - 10/14/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K DEWITT  
*Tech. Officer:* GRC/M J RABINOWITZ  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2756**                      **UNIV OF TOLEDO**                      **7796**  
 RESEARCH INITIATIVES INVOLVING ADVANCED ELECTROMECHANICAL COMPONENTS  
 03/28/2002 - 03/20/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/A F KASCAK  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 5 3248**                      **UNIV OF TOLEDO**                      **7797**  
 THE EFFECT OF ROTATION ON STELLAR WINDS: ASYMMETRIES AND BIPOLAR STRUCTURES IN CIRCUMSTELLAR WINDS  
 10/09/1996 - 08/31/2001                      FY02: \$0                      Total: \$400,000  
*Prin. Invest.:* J E BJORKMAN  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4338**                      **UNIV OF TOLEDO**                      **7798**  
 NEAR-IR EMISSION AND ABSORPTION CHARACTERISTICS OF MANTLE MATERIALS  
 04/21/1997 - 03/31/2001                      FY02: \$0                      Total: \$156,000  
*Prin. Invest.:* D N WITT  
*Tech. Officer:* GSFC/H THRONSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4957**                      **UNIV OF TOLEDO**                      **7799**  
 THE EVOLUTION OF INTERSTELLAR GAS - MASSIVE STARS  
 06/27/1997 - 06/30/2003                      FY02: \$0                      Total: \$420,154  
*Prin. Invest.:* S R FEDERMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6624**                      **UNIV OF TOLEDO**                      **7800**  
 MAPPING THE DIFFUSE GALACTIC LIGHT AND EXTENDED RED EMISSION WITH PIONEER10 AND 11  
 11/20/1997 - 12/31/2000                      FY02: \$0                      Total: \$103,052  
*Prin. Invest.:* A WITT  
*Tech. Officer:* GSFC/J LING  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7754**                      **UNIV OF TOLEDO**                      **7801**  
 OSCILLATOR STRENGTHS FOR ULTRAVIOLET ATOMIC AND MOLECULAR TRANSITIONS  
 11/25/1998 - 06/30/2001                      FY02: \$0                      Total: \$117,462  
*Prin. Invest.:* S R FEDERMAN  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8052**                      **UNIV OF TOLEDO**                      **7802**  
 TERRESTRIAL ENVIRONMENT VARIABLES DERIVED FROM EOS PLATFORM SENSORS  
 01/15/1999 - 01/31/2002                      FY02: \$0                      Total: \$156,377  
*Prin. Invest.:* K P CZAJKOWSKI  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8054**                      **UNIV OF TOLEDO**                      **7803**  
 CIRCUMSTELLAR ENVIRONMENTS OF HIGH- AND INTERMEDIATE-MASS STARS: FROM THE PRE-MAIN-SEQUENCE TO LATE STARS  
 01/19/1999 - 01/14/2004                      FY02: \$0                      Total: \$286,188  
*Prin. Invest.:* K S BJORKMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8183**                      **UNIV OF TOLEDO**                      **7804**  
 DUST AND CONDENSATE CLOUDS IN THE MARTIAN POLAR REGIONS  
 02/16/1999 - 08/31/2003                      FY02: \$0                      Total: \$178,600  
*Prin. Invest.:* P B JAMES  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

OHIO

<b>NAG 5 8671</b>	<b>UNIV OF TOLEDO</b>	<b>7805</b>	<b>NAG 5 12320</b>	<b>UNIV OF TOLEDO</b>	<b>7813</b>
USE OF THERMAL INFRARED SATELLITE DATA IN CLIMATE CHANGE STUDIES			MASS LOSS IN DENEBO (FUSE 2001)		
07/08/1999 - 07/14/2003	FY02: \$0	Total: \$334,317	08/06/2002 - 08/14/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> K P CZAJKOWSKI			<i>Prin. Invest.:</i> N D MORRISON		
<i>Tech. Officer:</i> GSFC/M Y WEI			<i>Tech. Officer:</i> GSFC/G SONNEBORN		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 8794</b>	<b>UNIV OF TOLEDO</b>	<b>7806</b>	<b>NAG 8 1380</b>	<b>UNIV OF TOLEDO</b>	<b>7814</b>
THE GEOMETRY AND EVOLUTION OF LOW-MASS STAR FORMATION (ATP 98)			FOR RESEARCH ENTITLED "SEARCHING FOR THE BEST PROTEIN CRYSTALS"		
09/07/1999 - 09/14/2003	FY02: \$0	Total: \$61,782	06/19/1997 - 07/31/2001	FY02: \$0	Total: \$604,995
<i>Prin. Invest.:</i> J E BJORKMAN			<i>Prin. Invest.:</i> G BORGOTAHN		
<i>Tech. Officer:</i> GSFC/D K WEST			<i>Tech. Officer:</i> MSFC/B GUYNES, MSFC/J MAYO		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 8961</b>	<b>UNIV OF TOLEDO</b>	<b>7807</b>	<b>NAG 8 1578</b>	<b>UNIV OF TOLEDO</b>	<b>7815</b>
MOLECULAR HYDROGEN EXCITATION IN PHOTODISSOCIATION REGIONS - FUSE			INFLUENCE OF IMPURITIES ON PROTEIN CRYSTAL GROWTH		
01/21/2000 - 10/31/2001	FY02: \$0	Total: \$74,200	01/28/1999 - 11/30/2002	FY02: \$0	Total: \$307,600
<i>Prin. Invest.:</i> S R FEDERMAN			<i>Prin. Invest.:</i> C A SCHALL		
<i>Tech. Officer:</i> GSFC/G SONNEBORN			<i>Tech. Officer:</i> MSFC/B GUYNES		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NAG 5 9202</b>	<b>UNIV OF TOLEDO</b>	<b>7808</b>	<b>NAG 8 1825</b>	<b>UNIV OF TOLEDO</b>	<b>7816</b>
MOVING BEYOND THE STANDARD PARADIGM: THE IMPORTANCE OF INTERSTELLAR DUST FROM THE MILKY WAY TO HIGH			SEARCHING FOR THE BEST PROTEIN CRYSTALS; INTEGRATION OF SYNCHROTRON-BASED CRYSTAL MEASUREMENTS		
03/14/2000 - 03/14/2003	FY02: \$0	Total: \$65,858	08/29/2001 - 11/30/2004	FY02: \$0	Total: \$101,000
<i>Prin. Invest.:</i> A WITT			<i>Prin. Invest.:</i> G E BORGSTAHL		
<i>Tech. Officer:</i> GSFC/R OLIVERSEN			<i>Tech. Officer:</i> MSFC/B GUYNES		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 9376</b>	<b>UNIV OF TOLEDO</b>	<b>7809</b>	<b>NAG 8 1838</b>	<b>UNIV OF TOLEDO</b>	<b>7817</b>
INTERSTELLAR DUST IN GALAXIES (LISA - 99)			OPTIMIZATION OF CRYOGENIC COOLING OF PROTEIN CRYSTALS		
04/11/2000 - 04/14/2005	FY02: \$0	Total: \$187,113	10/04/2001 - 11/30/2004	FY02: \$87,000	Total: \$87,000
<i>Prin. Invest.:</i> A N WITT			<i>Prin. Invest.:</i> C SCHALL		
<i>Tech. Officer:</i> GSFC/R J OLIVERSEN			<i>Tech. Officer:</i> MSFC/B GUYNES		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 10305</b>	<b>UNIV OF TOLEDO</b>	<b>7810</b>	<b>NAS 3 01116</b>	<b>UNIV OF TOLEDO</b>	<b>7818</b>
EFFECTS OF STAR FORMATION & STELLAR DEATH ON INTERSTELLAR GAS ASSOCIATED WITH CEP OB2 (FUSE00)			AEROELASTIC MODELING AND ANALYSIS OF UJET FAN AND COMPRESSOR DESIGN		
01/29/2001 - 01/31/2003	FY02: \$0	Total: \$36,800	06/18/2001 - 09/18/2004	FY02: \$0	Total: \$55,000
<i>Prin. Invest.:</i> S R FEDERMAN			<i>Prin. Invest.:</i> T KEITH		
<i>Tech. Officer:</i> GSFC/G SONNEBORN			<i>Tech. Officer:</i> GRC/J MINNS		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NAG 5 11440</b>	<b>UNIV OF TOLEDO</b>	<b>7811</b>	<b>NCC 3 524</b>	<b>UNIV OF TOLEDO</b>	<b>7819</b>
OSCILLATOR STRENGTHS FOR ULTRAVIOLET ATOMIC AND MOLECULAR TRANSITIONS			COMPUTATIONAL SIMULATION OF COMPOSITE BEHAVIOR		
12/04/2001 - 12/31/2005	FY02: \$0	Total: \$0	12/26/1996 - 12/11/2002	FY02: \$0	Total: \$585,527
<i>Prin. Invest.:</i> S R FEDERMAN			<i>Prin. Invest.:</i> T G KEITH		
<i>Tech. Officer:</i> GSFC/H HASAN			<i>Tech. Officer:</i> GRC/P MURTHY		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAG 5 12186</b>	<b>UNIV OF TOLEDO</b>	<b>7812</b>	<b>NCC 3 527</b>	<b>UNIV OF TOLEDO</b>	<b>7820</b>
CONDENSATES AND DUST IN THE POLAR REGIONS OF MARS: MOC WIDE ANGLE DATA			AEROELASTIC ANALYSIS FOR AEROPROPULSION APPLICATIONS		
05/13/2002 - 05/14/2005	FY02: \$0	Total: \$0	12/26/1996 - 06/30/2001	FY02: \$0	Total: \$234,068
<i>Prin. Invest.:</i> P JAMES			<i>Prin. Invest.:</i> T G KEITH, JR.		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GRC/O MEHMED, GRC/G L STEFKO		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NAG 5 12186</b>	<b>UNIV OF TOLEDO</b>	<b>7812</b>	<b>NCC 3 605</b>	<b>UNIV OF TOLEDO</b>	<b>7821</b>
CONDENSATES AND DUST IN THE POLAR REGIONS OF MARS: MOC WIDE ANGLE DATA			AEROELASTIC STABILITY AND RESPONSE OF ROTATING STRUCTURES		
05/13/2002 - 05/14/2005	FY02: \$0	Total: \$0	04/03/1998 - 12/31/2002	FY02: \$0	Total: \$403,759
<i>Prin. Invest.:</i> P JAMES			<i>Prin. Invest.:</i> T G KEITH		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GRC/O MEHMED		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		

**NCC 3 717** **UNIV OF TOLEDO** **7822**  
 MULTI-STAGE AEROELASTIC ANALYSIS FOR PROPULSION MULTI-STAGE  
 AEROELASTIC ANALYSIS FOR PROPULSION  
 06/29/1999 - 11/19/2001 FY02: \$0 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** **7823**  
 CENTRIFUGAL COMPRESSOR AEROELASTIC ANALYSIS CODEE CENTRIFU-  
 GAL COMPRESSOR AEROELASTIC ANALYSIS CODEE  
 06/24/1999 - 02/15/2002 FY02: \$0 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** **7824**  
 ACTIVE CONTROL ANALYSIS FOR AEROELASTIC INSTABILITIES IN TURBO-  
 MACHINES  
 02/14/2000 - 11/01/2001 FY02: \$0 Total: \$115,916  
*Prin. Invest.:* T KEITH  
*Tech. Officer:* GRC/D JANETZKE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 855** **UNIV OF TOLEDO** **7825**  
 NEXT GENERATION OF HALL THRUSTERS FOR SPACE PROPULSION  
 01/25/2001 - 10/18/2002 FY02: \$0 Total: \$147,162  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/D REDDY  
*CASE Category:* 13 - PHYSICS

**NCC 3 881** **UNIV OF TOLEDO** **7826**  
 MICROWAVE LOW NOISE AMPLIFIER USING SILICON GERMANIUM NANO-  
 TECHNOLOGY  
 03/26/2001 - 10/15/2003 FY02: \$0 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** **7827**  
 NOVEL DAMPING CONCEPTS FOR MECHANICAL BACKUP BEARINGS AND  
 PASSIVE MAGNETICALLY SUSPENDED ROTORS  
 08/02/2001 - 10/31/2002 FY02: \$0 Total: \$35,000  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/K MCLALLIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 916** **UNIV OF TOLEDO** **7828**  
 TECHNOLOGY VALIDATION AND RISK REDUCTION RESEARCH FOR FLY-  
 WHEEL TECHNOLOGY  
 09/20/2001 - 01/31/2003 FY02: \$0 Total: \$43,122  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/R BEACH  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 922** **UNIV OF TOLEDO** **7829**  
 ANALYSIS AND OPTIMIZATION OF MIXING ENHANCEMENT DEVICES  
 11/25/2001 - 10/22/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/N J GEORGIADIS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 923** **UNIV OF TOLEDO** **7830**  
 TURBOMACHINERY HEAT TRANSFER AND LOSS MODELING FOR 3D  
 NAVIER-STOKES CODES  
 11/29/2001 - 11/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/R E GAUGLER  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 924** **UNIV OF TOLEDO** **7831**  
 RESEARCH IN CONTROLS FOR FLYWHEEL TECHNOLOGY APPLICATIONS  
 12/10/2001 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/F R BEACH  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 925** **UNIV OF TOLEDO** **7832**  
 VALIDATION AND ENHANCEMENT OF COMPREHENSIVE COMBUSTION  
 MODELING AND SIMULATION  
 12/10/2001 - 12/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/N LIU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 926** **UNIV OF TOLEDO** **7833**  
 TURBINE INTERNAL AND FILM COOLING MODELING FOR 3D NAVIER-  
 STOKES CODES  
 12/10/2001 - 12/05/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/R E GAUGLER  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 943** **UNIV OF TOLEDO** **7834**  
 DYNAMIC ENGINE SIMULATOR RIG USING MAGNETIC BEARINGS  
 03/12/2002 - 10/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/G MONTAGUE  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 954** **UNIV OF TOLEDO** **7835**  
 EXPERIMENTAL STUDY OF TRACTION DRIVES EXPERIMENTAL STUDY OF  
 TRACTION DRIVES  
 04/16/2002 - 04/02/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/W MORALES  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 955** **UNIV OF TOLEDO** **7836**  
 MICROSTRUCTURAL ANALYSIS OF ADVANCED TURBINE MATERIALS  
 08/15/2002 - 09/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* T G KEITH  
*Tech. Officer:* GRC/M V NATHAL  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NGT 3 52342** **UNIV OF TOLEDO** **7837**  
 MICROMACHINED CANTILEVERED TRANSMISSION LINE SWITCHES FOR  
 MICROWAVE APPLICATIONS  
 07/18/1998 - 10/31/2001 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* D J KAPOOR  
*Tech. Officer:* GRC/D MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER



## NASA'S UNIVERSITY PROGRAM

OKLAHOMA

**NGT 3 52375**                      **UNIV OF TOLEDO**                      **7838**  
 GRADUATE STUDENT RESEARCH  
 06/01/2001 - 06/30/2003                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* V J KAPOOR  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2301**                      **WILBERFORCE UNIV**                      **7839**  
 STUDENT OUTREACH WITH RENEWABLE ENERGY TECHNOLOGY (SORET)  
 CONSORTIUM  
 11/05/1999 - 10/28/2002                      FY02: \$0                      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**                      **7840**  
 ROLES FOR TECHNOLOGY IN THE FACILITATION OF DISTRU BUTED WORK  
 IN COMPLEX DYNAMIC DOMAINS  
 07/16/1998 - 10/31/2000                      FY02: \$0                      Total: \$142,295  
*Prin. Invest.:* V L SHALIN  
*Tech. Officer:* ARC/W J CLANCEY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1529**                      **WRIGHT STATE UNIV**                      **7841**  
 HUMAN CENTERED SUPPORT FOR TELERAOBOTIC PLANETARY EXPLORA-  
 TION II  
 11/19/2001 - 11/14/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* V L SHALIN  
*Tech. Officer:* ARC/J TRIMBLE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2637**                      **WRIGHT STATE UNIV**                      **7842**  
 DEFECTS IN AIGAN/GAN HEMT DEVICES DEFECTS IN AIGAN/GAN HEMT  
 DEVICES  
 06/18/2001 - 06/30/2002                      FY02: \$0                      Total: \$119,269  
*Prin. Invest.:* D C LOOK  
*Tech. Officer:* GRC/J FREEMAN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 4188**                      **WRIGHT STATE UNIV**                      **7843**  
 MODEL STUDIES OF EXCITED STATES OF N2 AND N2+ IN T IONOSPHERE  
 03/27/1997 - 03/31/2003                      FY02: \$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**                      **7844**  
 ROLES FOR TECHNOLOGY IN THE FACILITATION OF DISTRI BUTED WORK  
 IN COMPLEX DYNAMIC DOMAINS  
 09/15/2000 - 02/14/2003                      FY02: \$0                      Total: \$122,261  
*Prin. Invest.:* V L SHALIN  
*Tech. Officer:* ARC/W J CLANCEY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1351**                      **WRIGHT STATE UNIV**                      **7845**  
 ROLES FOR TECHNOLOGY IN THE FACILITATION OF DISTRI BUTED WORK  
 IN COMPLEX DYNAMIC DOMAINS AN ANALYSIS  
 06/25/2002 - 09/30/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* V SHALIN  
*Tech. Officer:* ARC/J ORASANU, ARC/M CONNORS  
*CASE Category:* 74 - LINGUISTICS

**NGT 5 30091**                      **WRIGHT STATE UNIV**                      **7846**  
 AEROSPACE MEDICINE TRAINING PROGRAM  
 09/11/1997 - 12/30/2001                      FY02: \$0                      Total: \$2,058,212  
*Prin. Invest.:* S R MOHLER  
*Tech. Officer:* GSFC/R J WILLIAMS  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT 5 30428**                      **WRIGHT STATE UNIV**                      **7847**  
 "CENTURY 21"VISION: NASA TRAINING BY THE RESIDENCY IN AEROSPACE  
 MEIDICINE"  
 04/26/2002 - 12/31/2006                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S MOHLER  
*Tech. Officer:* GSFC/R S WILLIAMS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## OKLAHOMA

**NAG 1 02016**                      **OKLAHOMA STATE UNIV**                      **7848**  
 MODELING INTERACTION BETW PERMEABILITY & DAMAGE IN PMC LAMI-  
 NATES FOR THE NASA REUSABLE LAUNCH VEH  
 12/11/2001 - 12/10/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S ROY  
*Tech. Officer:* LARC/T S GATES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 1852**                      **OKLAHOMA STATE UNIV**                      **7849**  
 STUDIES OF PARTICLES SEDIMENTATION BY NOVEL SCATTE RING TECHH-  
 NIQUE  
 05/01/1996 - 04/30/2002                      FY02: \$0                      Total: \$399,992  
*Prin. Invest.:* O TONG, B ACKERSON  
*Tech. Officer:* GRC/B SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2780**                      **OKLAHOMA STATE UNIV**                      **7850**  
 CHARACTERIZATION OF ENVIRONMENTAL DURABILITY OF PO LYMER  
 MATRIX COMPOSITE  
 05/24/2002 - 06/23/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S ROY  
*Tech. Officer:* LARC/M A MEADOR  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 4 216**                      **OKLAHOMA STATE UNIV**                      **7851**  
 CFD-BASED AEROSERVOELASTIC AND FLIGHT DYNAMICS ANA LYSIS OF A  
 FLIGHT RESEARCH VEHICLE  
 01/11/2001 - 11/30/2001                      FY02: \$0                      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**                      **7852**  
 TERRESTRIAL ENVIRONMENTAL VARIABLES DERIVED FROM E OS PLAT-  
 FORM SENSORS  
 07/09/1998 - 12/31/2001                      FY02: \$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**                      **7853**  
 ROLE OF VITAMIN E IN PREVENTING BOND DAMAGE  
 09/29/1999 - 06/30/2001                      FY02: \$0                      Total: \$206,262  
*Prin. Invest.:* B J STOECCKER  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## OKLAHOMA

## NASA'S UNIVERSITY PROGRAM

**NAG 9 1332**                      **OKLAHOMA STATE UNIV**                      **7854**  
 MONOLITHIC INTERGRATED RADIATION\_SENSOR USING STIMULATED LU-  
 MINESCENSE FROM ALUMINA  
 07/17/2001 - 07/13/2004                      FY02: \$0                      Total: \$468,398  
*Prin. Invest.:* S MCKEEVER  
*Tech. Officer:* JSC/M GOLIGHTLY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 903**                      **OKLAHOMA STATE UNIV**                      **7855**  
 INFRARED AVIONICS SIGNAL DISTRIBUTION: (PHASE 2: EXPERIMENT  
 SETUP AND VERIFICATION)  
 07/13/2001 - 07/19/2002                      FY02: \$0                      Total: \$29,882  
*Prin. Invest.:* M ATIQUZZAMAN  
*Tech. Officer:* GRC/D NGO  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 5 185**                      **OKLAHOMA STATE UNIV**                      **7856**  
 TEACHING FROM SPACE PROGRAM  
 04/03/1997 - 01/31/2002                      FY02: \$0                      Total: \$3,984,243  
*Prin. Invest.:* S K MARKS  
*Tech. Officer:* GSFC/L L BILBROUGH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 561**                      **OKLAHOMA STATE UNIV**                      **7857**  
 AEROSPACE EDUCATION SERVICES PROGRAM  
 06/28/2001 - 05/31/2006                      FY02: \$0                      Total: \$3,000,000  
*Prin. Invest.:* T COLLINS  
*Tech. Officer:* GSFC/L BILBROUGH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 629**                      **OKLAHOMA STATE UNIV**                      **7858**  
 TEACHING FROM SPACE  
 02/27/2002 - 01/31/2007                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S MARKS  
*Tech. Officer:* GSFC/L BILBROUGH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC13 02002**                      **OKLAHOMA STATE UNIV**                      **7859**  
 FIELD TESTING OF A SENSOR-BASED APPLICATOR FOR NITROGEN AND  
 PHOSPHORUS FERTILIZATION  
 01/25/2002 - 12/28/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G JOHSON  
*Tech. Officer:* SSC/R MCKELLIP  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 4 52412**                      **OKLAHOMA STATE UNIV**                      **7860**  
 AEROSEROELASTIC AND FLIGHT DYNAMICS  
 05/12/1999 - 06/30/2002                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* A ARENA  
*Tech. Officer:* DFRC/K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 4 52425**                      **OKLAHOMA STATE UNIV**                      **7861**  
 (GSRP) OPEN PORT STABILIZED SENSOR SYSTEM AEROSERV OELASTIC  
 PREDICTION WITH COMPARISONS TO FLIGHT TE  
 07/16/2001 - 06/30/2003                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* D S ARENA  
*Tech. Officer:* DFRC/K K GUPTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 50420**                      **OKLAHOMA STATE UNIV**                      **7862**  
 TECHNIQUES AND INSTRUMENTS FOR IN-SITU DATING OF M ARTIAN  
 SEDIMENTS STUDENT: MICHAEL BLAIR  
 08/21/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S MCKEEVERS  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7378**                      **ORAL ROBERTS UNIV**                      **7863**  
 EXPERIMENTAL APPARATUS TO TEST THE STABILITY OF SP INNING  
 SPACECRAFT UNDER THRUST  
 05/06/1998 - 05/14/2001                      FY02: \$0                      Total: \$48,000  
*Prin. Invest.:* D HALSMER  
*Tech. Officer:* GSFC/R HARMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1427**                      **UNIV OF OKLAHOMA - NORMAN**                      **7864**  
 EFFECT OF HYPERGRAVITY, VIBRATION, & RADIATION ON GENETIC &  
 DEVELOPMENTAL STABILITY IN DROSOPHILIA..  
 08/03/2000 - 07/31/2003                      FY02: \$0                      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**                      **7865**  
 GRAVITATIONAL EFFECTS ON FLOW INSTABILITY AND TRAN SITION IN LOW  
 DENSITY JETS  
 04/10/2000 - 11/30/2003                      FY02: \$0                      Total: \$140,250  
*Prin. Invest.:* A K AGRAWAI  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2528**                      **UNIV OF OKLAHOMA - NORMAN**                      **7866**  
 SCTP OVER LONG BANDWIDTH DELAY PRODUCT NETWORKS  
 01/22/2001 - 06/30/2002                      FY02: \$0                      Total: \$75,243  
*Prin. Invest.:* D ATIQUZZAMAN  
*Tech. Officer:* GRC/W D IVANCIC  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 3505**                      **UNIV OF OKLAHOMA - NORMAN**                      **7867**  
 MULTIWAVELENGTH STUDIES OF SUPERNOVAE  
 11/25/1996 - 09/30/2002                      FY02: \$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**                      **7868**  
 COMPREHENSIVE SUPERNOVA SPECTROSCOPY - ADP - 99  
 03/31/2000 - 03/31/2002                      FY02: \$0                      Total: \$90,000  
*Prin. Invest.:* D BRANCH  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9745**                      **UNIV OF OKLAHOMA - NORMAN**                      **7869**  
 X-RAY SPECTRAL & VARIABILITY STUDIES OF AGN ADP 99  
 06/29/2000 - 08/14/2002                      FY02: \$0                      Total: \$50,440  
*Prin. Invest.:* K M LEIGHLY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

OKLAHOMA

<p><b>NAG 5 9991</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7870</b>            NGC 6300: A NEW, BRIGHT, COMPTON-THICK SEYFERT 2 GALAXY            09/14/2000 - 08/31/2002                    FY02: \$0                    Total: \$25,433  <i>Prin. Invest.:</i> K M LEIGHL Y  <i>Tech. Officer:</i> GSFC/R MUSHOTZKY  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NCC 3 787</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7878</b>            INSTABILITY AND BREAKUP OF GAS JETS INJECTED IN CO FLOWING LIQUIDS            03/28/2000 - 11/30/2003                    FY02: \$0                    Total: \$125,000  <i>Prin. Invest.:</i> D N PARTHASAEATHY  <i>Tech. Officer:</i> GRC/J B MCQUILLEN  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 10048</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7871</b>            FAR UV SPECTROSCOPY OF NARROW-LINE SEYFERT 1 GALAXY RE 1034+39            10/04/2000 - 08/15/2002                    FY02: \$0                    Total: \$35,500  <i>Prin. Invest.:</i> K LEIGHL Y  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NCC 3 791</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7879</b>            ENHANCEMENT OF MICROGRAVITY FIBER IMPREGNATION USING ELECTROHYDYNAMIC INDUCTION PUMPING            04/11/2000 - 05/31/2001                    FY02: \$0                    Total: \$44,997  <i>Prin. Invest.:</i> D C LAI  <i>Tech. Officer:</i> GRC/H C DEGROH  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 10171</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7872</b>            NARROW-LINE SEYFERT 1 GALAXIES (LTSA 98)            12/18/2000 - 03/31/2004                    FY02: \$0                    Total: \$83,240  <i>Prin. Invest.:</i> K M LEIGHL Y  <i>Tech. Officer:</i> GSFC/R J OLIVERSEN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NCC 5 171</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7880</b>            TO SUPPORT RESEARCH UNDER THE EXPERIMENTAL PROGRAM COMPETITIVE RESEARCH            12/16/1996 - 05/14/2002                    FY02: \$0                    Total: \$2,500,000  <i>Prin. Invest.:</i> V DUCA-SNOWDEN  <i>Tech. Officer:</i> GSFC/J DASCH  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 10366</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7873</b>            WIND EMISSION IN NARROW-LINE SEYFERT 1 GALAXIES (FUSE 00)            02/05/2001 - 02/14/2003                    FY02: \$0                    Total: \$70,000  <i>Prin. Invest.:</i> K M LEIGHL Y  <i>Tech. Officer:</i> GSFC/G SONNEBORN  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NCC 5 398</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7881</b>            NASA EPSCOR: PREPARATORY GRANT PROPOSAL            05/14/1999 - 09/30/2001                    FY02: \$0                    Total: \$448,800  <i>Prin. Invest.:</i> V DUCA-SNOWDEN  <i>Tech. Officer:</i> GSFC/D DETROYE  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 12127</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7874</b>            RADIATIVE TRANSFER IN 3-D MOVING FLOWS: UNDERSTANDING STARS, SUPERNOVAE, AND COSMOLOGY            04/29/2002 - 04/30/2005                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> E BARON  <i>Tech. Officer:</i> GSFC/M SALAMON  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NCC 5 586</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7882</b>            OKLAHOMA NASA/EPSCOR PROGRAM            08/31/2001 - 08/31/2005                    FY02: \$0                    Total: \$310,813  <i>Prin. Invest.:</i> V DUCA-SNOWDEN  <i>Tech. Officer:</i> GSFC/D DETROYE  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 9 1280</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7875</b>            INTEGRATED CREW PERFORMANCE ASSESSMENT AND TRAINING            02/02/2001 - 12/31/2003                    FY02: \$0                    Total: \$143,759  <i>Prin. Invest.:</i> R SCHLEGEL  <i>Tech. Officer:</i> JSC/B WOOLFORD  <i>CASE Category:</i> 56 - MEDICAL</p>	<p><b>NGT 5 30151</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7883</b>            INVESTIGATION OF LAND-ATMOSPHERE INTERACTIONS USING THE OKLAHOMA MESONET/NASA EARTH SCIENCE            09/01/1998 - 08/31/2001                    FY02: \$0                    Total: \$66,000  <i>Prin. Invest.:</i> K CRAWFORD  <i>Tech. Officer:</i> GSFC/M Y WEI  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>
<p><b>NCC 2 1355</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7876</b>            GENETIC AND DEVELOPMENTAL STABILITY IN RESPONSE TO LONG TERM EXPOSURE OF DROSOPHILAMELANOGASTER TO A            07/29/2002 - 07/31/2003                    FY02: \$0                    Total: \$0  <i>Prin. Invest.:</i> J N THOMPSON  <i>Tech. Officer:</i> ARC/D REISS-BUBENHEIM  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NGT 5 40013</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7884</b>            TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATIONAL AND FELLOWSHIP PROGRAM.            01/30/1997 - 02/28/2001                    FY02: \$0                    Total: \$807,500  <i>Prin. Invest.:</i> V DUCA-SNOWDEN  <i>Tech. Officer:</i> GSFC/D DETROYE  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NCC 2 5382</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7877</b>            MINERALS &amp; SUBMICROMETER FORMS AS BIOSIGNATURES            05/16/2000 - 05/14/2002                    FY02: \$0                    Total: \$30,000  <i>Prin. Invest.:</i> R D ELMORE  <i>Tech. Officer:</i> ARC/D BLAKE  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NGT 5 40111</b>                    <b>UNIV OF OKLAHOMA - NORMAN</b>                    <b>7885</b>            OKLAHOMA SPACE GRANT COLLEGE &amp; FELLOWSHIP PROGRAM            03/06/2001 - 02/28/2005                    FY02: \$0                    Total: \$212,500  <i>Prin. Invest.:</i> V DUCA-SNOWDEN  <i>Tech. Officer:</i> GSFC/D DETROYE  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>

## OREGON

**NCC 2 1190 OREGON GRADUATE INST OF SCIENCE & TECHNOLOGY 7886**  
 IMPLEMENTATION OF SENSOR FUSION ALGORITHMS IN MATLAB  
 07/25/2000 - 03/31/2001 FY02: \$0 Total: \$30,000  
*Prin. Invest.:* M PAVEL  
*Tech. Officer:* ARC/A J AHUMADA  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 1215 OREGON GRADUATE INST OF SCIENCE & TECHNOLOGY 7887**  
 HUMAN ERROR MODELING - PROCESS & EVALUATION  
 03/05/2001 - 10/31/2001 FY02: \$0 Total: \$70,112  
*Prin. Invest.:* M PAVEL  
*Tech. Officer:* ARC/B L BEARD  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 1218 OREGON GRADUATE INST OF SCIENCE & TECHNOLOGY 7888**  
 ROBUST INTELLIGENT SYSTEMS BASED ON INFORMATION FU SION  
 03/14/2001 - 02/28/2003 FY02: \$0 Total: \$269,000  
*Prin. Invest.:* M PAVEL  
*Tech. Officer:* ARC/J C COUGLAN, ARC/M SCHWABACHER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1253 OREGON GRADUATE INST OF SCIENCE & TECHNOLOGY 7889**  
 BIOLOGICAL COMPUTING FOR ROBOT NAVIGATION & CONTROL  
 04/08/2001 - 02/28/2003 FY02: \$0 Total: \$336,000  
*Prin. Invest.:* M A JABRI  
*Tech. Officer:* ARC/T R GOVINDAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1264 OREGON GRADUATE INST OF SCIENCE & TECHNOLOGY 7890**  
 MODEL BIASED, DATA DRIVEN ADAPTIVE FAILURE PREDICTION  
 05/21/2001 - 02/28/2003 FY02: \$0 Total: \$120,000  
*Prin. Invest.:* T LEEN  
*Tech. Officer:* ARC/H TUMER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1199 OREGON HEALTH SCIENCES UNIV 7891**  
 HOW DO CELL DIVISION PLANCES SPECIFY REGIONAL GENE EXPRESSION  
 PATTERNS IN EARLYEMBRYOS?  
 04/02/1998 - 04/30/2002 FY02: \$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 7892**  
 TRAINING PILOTS TO PRIORITIZE TASKS  
 02/01/1999 - 02/14/2003 FY02: \$0 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 7893**  
 INTERACTIONS BETWEEN GRAVITY & LIGHT IN DETERMINING PLANT-  
 FORM ANALYSIS USING THE LAXY-2 MUTANT TOMA  
 07/21/1999 - 08/31/2002 FY02: \$0 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 2 1546 OREGON STATE UNIV 7894**  
 NUMERICAL SIMULATIONS OF THE MARTIAN ATMOSPHERE  
 04/02/2002 - 03/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J R BARNES  
*Tech. Officer:* ARC/R M HABERLE, ARC/R E YOUNG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 2463 OREGON STATE UNIV 7895**  
 DEVELOPMENT AND EVALUATION OF HIGH TEMPERATURE AND SPECIAL-  
 IZED FIBER BRAGG GRATINGS  
 06/15/2000 - 09/30/2001 FY02: \$0 Total: \$47,953  
*Prin. Invest.:* T K PLANT  
*Tech. Officer:* GRC/G ADAMOVSKY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 4947 OREGON STATE UNIV 7896**  
 "COUPLED ATMOSPHERE/OCEAN PROCESSES & PRIMARY PROD IN THE  
 SOUTHERN OCEAN"  
 06/23/1997 - 06/30/2001 FY02: \$0 Total: \$3,300,000  
*Prin. Invest.:* M R ABBOTT  
*Tech. Officer:* GSFC/J A MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6156 OREGON STATE UNIV 7897**  
 EFFECT OF OCEAN TIDES ON THE LONG TERM ORBITAL AND OF THE  
 EARTH-MOON SYSTEM  
 09/11/1997 - 09/14/2001 FY02: \$0 Total: \$60,000  
*Prin. Invest.:* G D EGBERT  
*Tech. Officer:* GSFC/B BILLS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6242 OREGON STATE UNIV 7898**  
 MODELING CARBON DYNAMICS AND THEIR ECONOMIC IMPLIC REGIONS:  
 PACIFIC NORTHWESTERN USA AND NORTHWESTER  
 08/19/1997 - 08/31/2001 FY02: \$0 Total: \$580,000  
*Prin. Invest.:* D E HARMON  
*Tech. Officer:* GSFC/G C GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7506 OREGON STATE UNIV 7899**  
 ASSESSING POTENTIAL AND ACTUAL FOREST PRODUCTIVITY ACROSS  
 SOUTHWESTERN OREGON WITH TWO SIMULATION  
 06/26/1998 - 06/30/2003 FY02: \$0 Total: \$260,910  
*Prin. Invest.:* R H WARING  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7531 OREGON STATE UNIV 7900**  
 EVALUATING MODEL PREDICTIONS OF CO2 AND WATER VAPO R EX-  
 CHANGE WITH FLUX MEASUREMENTS IN A POND  
 06/11/1998 - 06/30/2002 FY02: \$0 Total: \$651,594  
*Prin. Invest.:* M H UNSWORTH  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7551 OREGON STATE UNIV 7901**  
 REDUCING UNCERTAINTY IN CARBON AND ENERGY EXCHANGE OVER  
 PINE FORESTS: INFLUENCE OF AGE,MANAGEMENT  
 06/22/1998 - 06/30/2002 FY02: \$0 Total: \$841,355  
*Prin. Invest.:* B LAW  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

OREGON

**NAG 5 7686**                      **OREGON STATE UNIV**                      **7902**  
 LIMITS TO CLOUD SUSCEPTIBILITY.  
 09/15/1998 - 09/30/2002                      FY02: \$0                      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**                      **7903**  
 BIGFOOT--CHARACTERIZING LAND COVER, LAI, AND NPP AT THE LAND-  
 SCALE SCALE FOR EOS/MODIS VALIDATION  
 12/14/1998 - 11/30/2001                      FY02: \$0                      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**                      **7904**  
 CONSTRUCTION TO COMPLETE THE ENVIRONMENTAL COMPUTING CENT-  
 ER  
 02/17/1999 - 07/31/2002                      FY02: \$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**                      **7905**  
 INTEGRATING MICROWAVE AND HYPERSPECTRAL REMOTE SENSING FOR  
 ESTIMATING VEGETATION STRUCTURE AND BIOMA  
 03/24/1999 - 02/28/2002                      FY02: \$0                      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**                      **7906**  
 USING DISTRIBUTED OBJECT-BASED FRAMEWORKS TO SUPPORT EOS  
 DATA ACCESS AND VISUALIZATION  
 05/20/1999 - 05/31/2002                      FY02: \$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**                      **7907**  
 SPATIAL VARIATION OF SURFACE MOISTURE FLUXES IN SPG  
 06/17/1999 - 06/14/2003                      FY02: \$0                      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**                      **7908**  
 EOS TERRA DIRECT BROADCAST RECEIVING STATION: SUPPORT FOR  
 OCEAN & TERRESTRIAL ECOLOGY  
 01/24/2000 - 12/31/2001                      FY02: \$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**                      **7909**  
 JASON-1 INVESTIGATION: ALTIMETRIC STUDIES OF OCEAN TIDAL DYNAM-  
 ICS  
 03/06/2000 - 03/31/2003                      FY02: \$0                      Total: \$114,791  
*Prin. Invest.:* G D EGBERT  
*Tech. Officer:* GSFC/R RAY  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 9428**                      **OREGON STATE UNIV**                      **7910**  
 SYNTHESIS & ALTERATION OF HIGHER MOLECULAR WEIGHT ORGANIC  
 COMPOUNDS UNDER HYDROTHERMAL CONDITIONS  
 04/11/2000 - 04/14/2003                      FY02: \$0                      Total: \$194,200  
*Prin. Invest.:* B T SIMONEIT  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9446**                      **OREGON STATE UNIV**                      **7911**  
 MICROBES IN SILICATE ROCKS ON EARTH: ANALOGUES OF EXTANT &  
 FOSSIL MICROBIAL HABITATS ON OTHER  
 04/13/2000 - 04/14/2003                      FY02: \$0                      Total: \$99,042  
*Prin. Invest.:* M FISK  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9677**                      **OREGON STATE UNIV**                      **7912**  
 SUPPORT FOR THE GOF C BOREAL FOREST WORKSHOP, NASA SIBERIAN  
 NETWORK, AND EWG BOREAL FOREST PROJECT  
 06/02/2000 - 10/31/2002                      FY02: \$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**                      **7913**  
 STUDIES OF MGS TES AND MPF MET DATA  
 06/29/2000 - 06/30/2003                      FY02: \$0                      Total: \$119,200  
*Prin. Invest.:* J R BARNES  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10614**                      **OREGON STATE UNIV**                      **7914**  
 GOF C SUPPORT, WORKSHOP IN RUSSIA  
 03/16/2001 - 08/31/2002                      FY02: \$0                      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**                      **7915**  
 THE REFINEMENT OF THE ATMOSPHERIC CORRECTION ALGORITHM FOR  
 SPACE-DERIVING THE MARINE CHLOROPHYLL  
 03/19/2001 - 03/14/2004                      FY02: \$0                      Total: \$145,495  
*Prin. Invest.:* K S SHIFRIN  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11046**                      **OREGON STATE UNIV**                      **7916**  
 DYNAMICS AND CIRCULATION OF THE MARTIAN ATMOSPHERE  
 06/20/2001 - 06/30/2004                      FY02: \$0                      Total: \$74,000  
*Prin. Invest.:* J BARNES  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11105**                      **OREGON STATE UNIV**                      **7917**  
 ADVANCED VALIDATION OF AMSR WIND SPEED MEASUREMENT USING  
 BUOY, SCATTEROMETER, AND NWP SURFACE ANALYS  
 07/13/2001 - 08/31/2004                      FY02: \$0                      Total: \$28,809  
*Prin. Invest.:* M H FREILICH  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## OREGON

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11125**                      **OREGON STATE UNIV**                      **7918**  
 COUPLED ATMOSPHERE/OCEAN PROCESSES AND PRIMARY PRODUCTION IN THE SOUTHERN OCEAN  
 08/01/2001 - 06/30/2003                      FY02: \$0                      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**                      **7919**  
 A ONE-YEAR PILOT STUDY FOR THE INCLUSION OF ACTIVE OPTICAL SENSORS INTO PALACE FLOATS  
 07/30/2001 - 07/31/2002                      FY02: \$0                      Total: \$27,977  
*Prin. Invest.:* E BOSS  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11190**                      **OREGON STATE UNIV**                      **7920**  
 ECOSYSTEMS STRUCTURE AND CARBON CYCLING IN THE NORTH PACIFIC: MODELING & DATA ASSIMILATION  
 08/17/2001 - 08/31/2004                      FY02: \$0                      Total: \$216,950  
*Prin. Invest.:* Y SPITZ  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11222**                      **OREGON STATE UNIV**                      **7921**  
 LINKING IN-SITU MEASUREMENTS, REMOTE SENSING, AND MODELS TO VALIDATE MODIS PRODUCTS RELATED TO TH  
 08/09/2001 - 07/31/2004                      FY02: \$0                      Total: \$24,628  
*Prin. Invest.:* D P TURNER  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11223**                      **OREGON STATE UNIV**                      **7922**  
 USING REMOTE SENSING & IN SITU NETWORK OBSERVATIONS TO EVALUATE & IMPROVE THE PERFORMANCE OF  
 08/09/2001 - 07/31/2004                      FY02: \$0                      Total: \$76,090  
*Prin. Invest.:* B LAW  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11231**                      **OREGON STATE UNIV**                      **7923**  
 REGIONAL CARBON DIOXIDE FLUXES OVER HETEROGENEOUS TERRAIN  
 08/13/2001 - 08/14/2004                      FY02: \$0                      Total: \$184,525  
*Prin. Invest.:* L MAHRT  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11250**                      **OREGON STATE UNIV**                      **7924**  
 DRIVING FORCES OF CHANGE IN REGIONAL CARBON STOCKS : COMPARISON OF THE WESTERN OREGON, AND ST. PET  
 08/20/2001 - 08/14/2004                      FY02: \$0                      Total: \$187,238  
*Prin. Invest.:* O KRANKINA  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11404**                      **OREGON STATE UNIV**                      **7925**  
 TESTING SPATIAL CORRELATION OF SUBDUCTION INTERPLATE COUPLING AND FOREARC MORPHO-TECTONICS  
 11/28/2001 - 11/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C GOLDFINGER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11534**                      **OREGON STATE UNIV**                      **7926**  
 PARAMETERIZATIONS OF THE VERTICAL VARIABILITY OF TROPICAL CIRRUS CLOUD MICROPHYSICAL AND OPTICAL PROPERTIES  
 01/03/2002 - 12/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C H TWOHY  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11586**                      **OREGON STATE UNIV**                      **7927**  
 IMPROVED OBSERVATION AND MODELING OF FLUXES BETWEEN THE SNOW PACK AND THE ATMOSPHERE  
 01/25/2002 - 01/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L MAHRT  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11652**                      **OREGON STATE UNIV**                      **7928**  
 LASER 40AR/39AR DATING OF IMPACT MELT ROCKS: THE CHRONOLOGY OF LUNAR BASIN FORMATION  
 01/28/2002 - 01/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R DUNCAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 12351**                      **OREGON STATE UNIV**                      **7929**  
 INVESTIGATION OF ENDOLITHIC MICROORGANISMS IN OLIVINE-BEARING ROCKS  
 07/03/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M FISK  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12378**                      **OREGON STATE UNIV**                      **7930**  
 LOW FREQUENCY VARIABILITY OF THE SOUTH ATLANTIC CIRCULATION AND INTERBASIN EXCHANGES: OBSERVATIONS  
 07/16/2002 - 07/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R P MATANO  
*Tech. Officer:* GSFC/S HAKKINEN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 12404**                      **OREGON STATE UNIV**                      **7931**  
 SCATTERING CHARACTERISTICS OF PHYTOPLANKTON TAXONOMIC GROUPS AND THEIR EFFECT ON REFLECTANCE  
 08/01/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W PEGAU  
*Tech. Officer:* GSFC/C TREES  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12443**                      **OREGON STATE UNIV**                      **7932**  
 3RD INTERNATIONAL SUMMER SCHOOL ON INVERSE METHODS AND DATA ASSIMILATION  
 08/06/2002 - 08/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A BENNETT  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAS 1 98140**                      **OREGON STATE UNIV**                      **7933**  
 CHARACTERIZATION OF CLOUDS AND THE ANISOTROPY OF EMITTED AND REFLECTED RADIANCES  
 10/29/1998 - 10/29/2002                      FY02: \$0                      Total: \$561,235  
*Prin. Invest.:* J COAKLEY  
*Tech. Officer:* LARC/B A WIELICKI, LARC/R L HUFFMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## NASA'S UNIVERSITY PROGRAM

OREGON

<b>NAS 1 99104</b>	<b>OREGON STATE UNIV</b>	<b>7934</b>	<b>NGT 5 30185</b>	<b>OREGON STATE UNIV</b>	<b>7942</b>
DETERMINATION OF THE INDIRECT RADIATIVE FORCING DUE TO AEROSOLS			RIGHT WHALE ECOLOGY IN THE NORTHWEST ATLANTIC OCEAN/STUDENT-MARK BAUMGARTNER		
05/17/1999 - 05/16/2003	FY02: \$0	Total: \$23,950	08/19/1999 - 08/31/2002	FY02: \$0	Total: \$66,000
<i>Prin. Invest.:</i> J M COAKLEY, JR.			<i>Prin. Invest.:</i> B MATE		
<i>Tech. Officer:</i> LARC/G GIBSON			<i>Tech. Officer:</i> GSFC/M WEI		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAS 5 31360</b>	<b>OREGON STATE UNIV</b>	<b>7935</b>	<b>NGT 5 30214</b>	<b>OREGON STATE UNIV</b>	<b>7943</b>
MODIS INVESTIGATION			COMBINING FIELD MEASUREMENTS AND SATELLITE IMAGERY WITH A PROBABILISTIC MODEL TO QUANTIFY UNCERTAINTY		
12/30/1991 - 06/14/2003	FY02: \$0	Total: \$4,737,000	08/24/1999 - 08/31/2003	FY02: \$0	Total: \$44,000
<i>Prin. Invest.:</i> M R ABBOTT			<i>Prin. Invest.:</i> W B COHEN		
<i>Tech. Officer:</i> GSFC/H OSEROFF			<i>Tech. Officer:</i> GSFC/M WEI		
<i>CASE Category:</i> 33 - OCEANOGRAPHY			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAS 5 32965</b>	<b>OREGON STATE UNIV</b>	<b>7936</b>	<b>NGT 5 30347</b>	<b>OREGON STATE UNIV</b>	<b>7944</b>
SEAWINDS PRINCIPAL INVESTIGATOR & SCIENCE TEAM ACTIVITIES			ASYSTEMATIC STUDY OF THE OPTICAL PROPERTIES OF NON SPHERICAL OCEANIC PARTICLES/STUDENT: SEAN HERRING		
09/15/1995 - 12/31/2004	FY02: \$0	Total: \$7,540,085	08/21/2000 - 08/31/2003	FY02: \$0	Total: \$44,000
<i>Prin. Invest.:</i> D H FREILICH			<i>Prin. Invest.:</i> W PEGAU		
<i>Tech. Officer:</i> GSFC/C RABER			<i>Tech. Officer:</i> GSFC/M WEI		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 2 5427</b>	<b>OREGON STATE UNIV</b>	<b>7937</b>	<b>NGT 5 30387</b>	<b>OREGON STATE UNIV</b>	<b>7945</b>
PREPARATION OF THE ZAPS INSTRUMENT PACKAGE FOR THE VAILULU MISSION			SCALING UP NOCTURNAL CO2 AND WATER VAPOR FLUXES WITH MICROMETEOROLOGICAL NETWORKS/REINA NAKAMURA		
03/09/2001 - 01/31/2002	FY02: \$0	Total: \$15,000	08/13/2001 - 08/31/2004	FY02: \$0	Total: \$22,000
<i>Prin. Invest.:</i> G P KLINKHAMMER			<i>Prin. Invest.:</i> L MAHRT		
<i>Tech. Officer:</i> ARC/M T FLYNN, ARC/C A STOCKER			<i>Tech. Officer:</i> GSFC/W WEI		
<i>CASE Category:</i> 33 - OCEANOGRAPHY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 2 5515</b>	<b>OREGON STATE UNIV</b>	<b>7938</b>	<b>NGT 5 40103</b>	<b>OREGON STATE UNIV</b>	<b>7946</b>
MEDUSA - SEA FLOOR MONITORING SYSTEM			OREGON SPACE GRANT COLL AND FELLOWSHIP PROGRAM		
08/07/2002 - 07/31/2003	FY02: \$0	Total: \$0	03/01/2001 - 02/28/2005	FY02: \$0	Total: \$404,803
<i>Prin. Invest.:</i> G P KLINKHAMMER			<i>Prin. Invest.:</i> A C KLEIN		
<i>Tech. Officer:</i> ARC/M FLYNN			<i>Tech. Officer:</i> GSFC/D D DETROYE		
<i>CASE Category:</i> 33 - OCEANOGRAPHY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 2 52245</b>	<b>OREGON STATE UNIV</b>	<b>7939</b>	<b>NAG 3 2741</b>	<b>PORTLAND STATE UNIV</b>	<b>7947</b>
MESOSCALE MODEL OF THE MARTIAN ATMOSPHERE			CAPILLARY FLOW IN INTERIOR CORNERS CAPILLARY FLOW IN INTERIOR CORNERS		
08/11/1998 - 08/14/2001	FY02: \$0	Total: \$66,000	04/04/2002 - 12/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J R BARNES			<i>Prin. Invest.:</i> M M WEISLOGEL		
<i>Tech. Officer:</i> ARC/R M HABERLE			<i>Tech. Officer:</i> GRC/M M HASAN		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NGT 5 96</b>	<b>OREGON STATE UNIV</b>	<b>7940</b>	<b>NAG 5 9579</b>	<b>PORTLAND STATE UNIV</b>	<b>7948</b>
GLOBAL CLIMATE CHANGE EFFECTS ON CARBON SEQUESTRATION MEDIATED BY SOIL MICROORGANISMS			RECOGNIZING THE SIGNATURES OF HYPERTHERMOPHILIC BIOFILMS: GEYSERITES, EPITHERMAL DEPOSITS & ANCI		
08/20/1999 - 08/31/2002	FY02: \$0	Total: \$66,000	05/10/2000 - 04/30/2002	FY02: \$0	Total: \$178,960
<i>Prin. Invest.:</i> R P DICK, V GEWIN			<i>Prin. Invest.:</i> S CADY		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> GSFC/M MEYER		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 5 30181</b>	<b>OREGON STATE UNIV</b>	<b>7941</b>	<b>NAG 5 11309</b>	<b>PORTLAND STATE UNIV</b>	<b>7949</b>
FUNCTIONAL GROUPING OF PLANTS IN FLORIDA SCRUB HABITAT/STUDENT: TAMMY FOSTER			ICE SHELVES AND LANDFAST ICE ON THE ANTARCTIC PERIMETER CHARACTERISTICS AND EFFECTS OF CLIMATE CHANGE		
08/23/1999 - 08/31/2002	FY02: \$0	Total: \$44,000	08/30/2001 - 08/31/2003	FY02: \$0	Total: \$10,300
<i>Prin. Invest.:</i> B BOND			<i>Prin. Invest.:</i> C HULBE		
<i>Tech. Officer:</i> GSFC/M Y WEI			<i>Tech. Officer:</i> GSFC/W ABDALATI		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11441**                    **PORTLAND STATE UNIV**                    **7950**  
 GENETIC COMPLEXITY IN THE RNA WORLD: AN EXAMINATION OF THE  
 GENETIC LOAD IN RNA POPULATIONS  
 12/17/2001 - 09/30/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* N LEHMAN  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11442**                    **PORTLAND STATE UNIV**                    **7951**  
 MICROBIAL INTERACTIONS WITH REDUCED MINERALS: A SYSTEM FOR  
 EARLY TERRESTRIAL AND EXTRATERRESTRIAL  
 12/20/2001 - 11/30/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* T STEVENS  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2010**                    **UNIV OF OREGON - EUGENE**                    **7952**  
 ATMOSPHERIC AND SPECTROSCOPIC RESEARCH IN THE FAR INFRARED  
 02/23/1998 - 02/21/2002                    FY02: \$0                    Total: \$112,000  
*Prin. Invest.:* K PARK  
*Tech. Officer:* LARC/I G NOLT  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6109**                    **UNIV OF OREGON - EUGENE**                    **7953**  
 THE FORMATION AND EVOLUTION OF LSB GALAXIES  
 07/24/1997 - 10/31/2001                    FY02: \$0                    Total: \$164,039  
*Prin. Invest.:* D SCHOMBERT  
*Tech. Officer:* GSFC/D GOLOMBEK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8505**                    **UNIV OF OREGON - EUGENE**                    **7954**  
 INSTABILITIES IN PROTOSTELLAR STAR/DISK SYSTEMS (A TP - 98)  
 05/10/1999 - 04/30/2003                    FY02: \$0                    Total: \$76,358  
*Prin. Invest.:* J IMAMURA  
*Tech. Officer:* GSFC/R K OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10709**                    **UNIV OF OREGON - EUGENE**                    **7955**  
 ACCRETION FLOWS IN MAGNETIC WHITE DWARF SYSTEMS (ADP 2000)  
 04/23/2001 - 04/30/2002                    FY02: \$0                    Total: \$28,250  
*Prin. Invest.:* J IMAMURA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11300**                    **UNIV OF OREGON - EUGENE**                    **7956**  
 GALAXY PHOTOMETRY FOR NASA/IPAC EXTRAGALACTIC DATA BASE  
 08/29/2001 - 08/31/2004                    FY02: \$0                    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**                    **7957**  
 AFFECT & AERONAUTICAL DECISION-MAKING  
 02/02/1999 - 01/14/2003                    FY02: \$0                    Total: \$368,313  
*Prin. Invest.:* R MAURO  
*Tech. Officer:* ARC/I BARSHI  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 1304**                    **UNIV OF OREGON - EUGENE**                    **7958**  
 AFFECT AND AERONAUTICAL DECISION MAKING  
 02/05/2002 - 01/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R MAURO  
*Tech. Officer:* ARC/I BARSHI, ARC/R K DISMUKES  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NCC 2 5409**                    **UNIV OF OREGON - EUGENE**                    **7959**  
 CULTURE COLLECTION OF MICRO-ORGANISMS FROM EXTREME ENVIRON-  
 MENTS & THE ROLE OF THE UV-SHIELDING PIGMENT  
 11/22/2000 - 12/31/2002                    FY02: \$0                    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**                    **7960**  
 DEVELOPMENT OF A SELF-PACED COMPUTER BASED TRAINING PRO-  
 GRAM ON IN-FLIGHT ICING  
 03/23/2001 - 06/30/2002                    FY02: \$0                    Total: \$210,874  
*Prin. Invest.:* R MAURO  
*Tech. Officer:* GRC/T H BOND  
*CASE Category:* 41 - AERONAUTICAL ENGR

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**NAG 5 7964**                    **BLOOMSBURG UNIV**                    **7961**  
 REMOTE SENSING OF FRACTAL PLANETARY SURFACES  
 01/11/1999 - 01/14/2002                    FY02: \$0                    Total: \$146,300  
*Prin. Invest.:* M K SHEPARD  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11539**                    **BLOOMSBURG UNIV**                    **7962**  
 REMOTE SENSING OF PLANETARY SURFACES  
 01/03/2002 - 12/31/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M K SHEPARD  
*Tech. Officer:* GSFC/DSENSEKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8679**                    **BUCKNELL UNIV**                    **7963**  
 INVESTIGATION OF AERODYNAMIC AND RADIOMETRIC LAND SURFACE  
 TEMPERATURES  
 07/27/1999 - 08/14/2003                    FY02: \$0                    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**                    **7964**  
 IMPROVED PREDICTION OF MOMENTUM AND SCALAR FLUXES USING  
 MODIS IMAGERY  
 08/17/1999 - 08/14/2003                    FY02: \$0                    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**                    **7965**  
 SATELLITE-BASED ESTIMATION OF AERODYNAMIC ROUGHNESS FOR GLO-  
 BAL CLIMATE STUDIES  
 12/06/2000 - 12/14/2001                    FY02: \$0                    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**                    **7966**  
 SOFTWARE AND HARDWARE SYSTEM FOR PREDICTING THE COMPUTA-  
 TIONAL SPEED OF HIGH PERFORMANCE COMPUTERS  
 04/26/2001 - 11/14/2002                    FY02: \$0                    Total: \$75,497  
*Prin. Invest.:* M F ABURDENE  
*Tech. Officer:* GSFC/J DORBAND  
*CASE Category:* 45 - ELECTRICAL ENGR



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## PENNSYLVANIA

<b>NAG 1 2090</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7967</b>	<b>NAG 3 2159</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7976</b>
NOVEL SCALABLE ALGORITHMS FOR AEROSPACE DESIGN OPTIMIZATION OM MASSIVELY PARALLEL COMPUTERS			LATEAL MOTION OF PARTICLES AND BUBBLES CAUSED BY PHORETIC FLOWS NEAR A SOLID INTERFACE		
07/21/1998 - 08/31/2001	FY02: \$0	Total: \$276,403	04/22/1998 - 12/31/2002	FY02: \$0	Total: \$380,000
<i>Prin. Invest.:</i> O GHATTAS			<i>Prin. Invest.:</i> P J SIDES, Y E SOLOMENTSER, J L ANDERSON		
<i>Tech. Officer:</i> LARC/R T BIEDRON, GSFC/J SOBIESKI			<i>Tech. Officer:</i> GRC/R B ROGERS		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 2 1230</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7968</b>	<b>NAG 3 2449</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7977</b>
APPLICATION SPECIFIC SUPER COMPUTING			MICROSCALE HYDRODYNAMICS NEAR MOVING CONTACT LINES MICRO- CALE HYDRODYNAMICS NEAR MOVING CONTACT LINE		
06/16/1998 - 04/30/2001	FY02: \$0	Total: \$1,149,288	06/12/2000 - 05/18/2005	FY02: \$0	Total: \$236,696
<i>Prin. Invest.:</i> T C MOWRY, O C GHATTAS, D R O'HALLARON			<i>Prin. Invest.:</i> S GAROFF		
<i>Tech. Officer:</i> ARC/C H SCHULBACH			<i>Tech. Officer:</i> GRC/B S SINGH		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 2 1393</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7969</b>	<b>NAG 3 2640</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7978</b>
MODEL-BASED PROGRAMMING SKUNKWORKS			NANOSTRUCTURAL ELECTROCHEMICALLY ACTIVE SYSTEMS FO R LITHIUM-ION BATTERIES		
02/01/2000 - 04/30/2002	FY02: \$0	Total: \$140,000	06/25/2001 - 05/31/2004	FY02: \$0	Total: \$50,000
<i>Prin. Invest.:</i> R SIMMONS			<i>Prin. Invest.:</i> P N KUMTA		
<i>Tech. Officer:</i> ARC/M SHIRLEY			<i>Tech. Officer:</i> GRC/D L BRITTON		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NAG 2 1402</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7970</b>	<b>NAG 5 6548</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7979</b>
AUTOMATED VERIFICATION OF DIAGNOSTIC MODELS			A NEW LOOK AT CLUSTER EVOLUTION (LTSA)		
04/12/2000 - 05/31/2002	FY02: \$0	Total: \$145,000	10/29/1997 - 10/31/2002	FY02: \$0	Total: \$149,500
<i>Prin. Invest.:</i> R G SIMMONS			<i>Prin. Invest.:</i> R NICHOL		
<i>Tech. Officer:</i> ARC/M LOWRY			<i>Tech. Officer:</i> GSFC/D WEST		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 2 1441</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7971</b>	<b>NAG 5 7707</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7980</b>
HUAV FLIGHTDYNAMICS & CONTROL			ANTARCTIC METEORITE SEARCH DEMONSTRATION		
09/28/2000 - 04/30/2002	FY02: \$0	Total: \$197,070	09/17/1998 - 08/31/2001	FY02: \$0	Total: \$1,182,000
<i>Prin. Invest.:</i> W C MESSNER, C E THORPE			<i>Prin. Invest.:</i> W WHITTAKER		
<i>Tech. Officer:</i> ARC/M B TISCHLER			<i>Tech. Officer:</i> GSFC/D LAVERY		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 2 1472</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7972</b>	<b>NAG 5 7926</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7981</b>
EFFECTIVE TEAM SUPPORT: FROM MODELING TO SOFTWARE AGENTS			THE VIPER SUNYAEV-ZELDOVICH SURVEY_(LTSA 98)		
04/06/2001 - 03/31/2003	FY02: \$0	Total: \$442,776	01/03/1999 - 12/31/2004	FY02: \$0	Total: \$270,000
<i>Prin. Invest.:</i> B JOHN, K SYCARA			<i>Prin. Invest.:</i> A K ROMER		
<i>Tech. Officer:</i> ARC/M P MATESSA			<i>Tech. Officer:</i> GSFC/D K WEST		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 2 1537</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7973</b>	<b>NAG 5 8093</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7982</b>
MY PERSONAL ROVER A DOMESTIC EDUCATIONAL SCIENCE R OVER			AN AUTOMATED SYSTEM FOR THE REDUCTION AND ANALYSIS OF X-RAY DATA FROM GALAXIES		
02/15/2002 - 02/14/2003	FY02: \$0	Total: \$0	02/01/1999 - 06/30/2001	FY02: \$0	Total: \$146,198
<i>Prin. Invest.:</i> I R NOURBAKHSH			<i>Prin. Invest.:</i> A F PTAK		
<i>Tech. Officer:</i> ARC/R MORRIS, ARC/D CLANSY			<i>Tech. Officer:</i> GSFC/P HUNTER		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 2 1569</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7974</b>	<b>NAG 5 9309</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7983</b>
ORGANIZATIONAL METRICS			ARTIFICIAL INTELLIGENCE TECHNIQUES FOR MINERAL IDEN TIFICATION FROM NEAR INFRARED SPECTRA ONBOARD FUT		
06/25/2002 - 01/31/2003	FY02: \$0	Total: \$0	03/20/2000 - 03/14/2002	FY02: \$0	Total: \$97,500
<i>Prin. Invest.:</i> K CARLEY			<i>Prin. Invest.:</i> C GLYMOUR		
<i>Tech. Officer:</i> ARC/J ORASANU, ARC/M CONNORS			<i>Tech. Officer:</i> GSFC/J BREDEKAMP		
<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 2 6054</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>7975</b>			
SOLVING IMPORTANT PROBLEMS FASTER					
02/20/2002 - 02/14/2003	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> T MOWRY					
<i>Tech. Officer:</i> ARC/J T ONUFER					
<i>CASE Category:</i> 22 - COMPUTER SCIENCE					

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**NAG 5 9899**                    **CARNEGIE - MELLON UNIV**                    **7984**  
 XMM SURVEY OF THE SHARC SAMPLE: CONSTRAINING OMEGA AND  
 CLUSTER FORMATION  
 09/06/2000 - 09/14/2001                    FY02: \$0                    Total: \$12,700  
*Prin. Invest.:* A ROMER  
*Tech. Officer:* GSFC/R F MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9902**                    **CARNEGIE - MELLON UNIV**                    **7985**  
 MISSION SCIENTIST FOR ESA'S X-RAY MULTI-MIRROR MISSION  
 08/25/2000 - 08/31/2003                    FY02: \$0                    Total: \$324,305  
*Prin. Invest.:* R E GRIFFITHS  
*Tech. Officer:* GSFC/N WHITE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9922**                    **CARNEGIE - MELLON UNIV**                    **7986**  
 XMM SEARCHES FOR IRON LINES IN LOW LUMINOSITY AGN: A TEST OF  
 ACCRETION THEORIES  
 09/05/2000 - 06/30/2001                    FY02: -\$15,011                    Total: \$1,399  
*Prin. Invest.:* A F PTAK  
*Tech. Officer:* GSFC/P M ATKINS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10014**                    **CARNEGIE - MELLON UNIV**                    **7987**  
 'FOSSIL GROUPS' IN THE BRIGHT SHARC SURVEY  
 09/21/2000 - 09/30/2003                    FY02: \$0                    Total: \$18,100  
*Prin. Invest.:* R C NICHOL  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10043**                    **CARNEGIE - MELLON UNIV**                    **7988**  
 X-RAY SPECTRAL STATISTICS OF A COMPLETE HARD X-RAY -SELECTED  
 SAMPLE OF AGNS  
 11/02/2000 - 10/31/2002                    FY02: \$0                    Total: \$33,400  
*Prin. Invest.:* T MIYAJI  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10170**                    **CARNEGIE - MELLON UNIV**                    **7989**  
 X-RAY SPECTROSCOPY OF LOW-LUMINOSITY ACTIVE GALACTIC NUCLEI  
 WITH XMM  
 12/18/2000 - 12/31/2001                    FY02: \$0                    Total: \$9,724  
*Prin. Invest.:* A F PTAK  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10739**                    **CARNEGIE - MELLON UNIV**                    **7990**  
 VEXT: A VIRTUAL OBSERVATORY EXPLORATORY TOOLKIT. FULLY FUNDS  
 YEAR 1 OF AWARD  
 05/17/2001 - 05/31/2002                    FY02: \$0                    Total: \$80,000  
*Prin. Invest.:* J SCHNEIDER  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10740**                    **CARNEGIE - MELLON UNIV**                    **7991**  
 ADVANCED GALAXY CLUSTER DETECTION SOFTWARE.  
 04/12/2001 - 06/30/2003                    FY02: \$0                    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**                    **7992**  
 AGN X-RAY SPECTRAL EVOLUTION (LTSA 2000)  
 05/10/2001 - 08/31/2006                    FY02: \$0                    Total: \$93,910  
*Prin. Invest.:* T MIYAJI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11634**                    **CARNEGIE - MELLON UNIV**                    **7993**  
 X-RAY CLUSTERS AS COSMOLOGICAL PROBES \_(LTSA 01)  
 01/29/2002 - 01/31/2007                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* A K ROMER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11888**                    **CARNEGIE - MELLON UNIV**                    **7994**  
 X-RAY SPECTROSCOPY OF LOW-LUMINOSITY ACTIVE GALACTIC NUCLEI  
 WITH XMM  
 04/04/2002 - 11/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* T DIMATTEO  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11998**                    **CARNEGIE - MELLON UNIV**                    **7995**  
 ARTIFICIAL INTELLIGENCE METHODS FOR IDENTIFYING MINERAL COM-  
 POSITION.  
 05/05/2002 - 04/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* C GLYMOUR  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1674**                    **CARNEGIE - MELLON UNIV**                    **7996**  
 SHAPRE EVOLUTION KINETICS OF SMALL PARTICLES  
 06/28/2000 - 11/30/2003                    FY02: \$0                    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**                    **7997**  
 LATTICE BOLTZMANN COMPUTATIONS OF BINARY DIFFUSION IN LIQUIDS  
 UNDER STOCHASTIC MICROGRAVITY  
 05/24/2000 - 11/30/2002                    FY02: \$0                    Total: \$121,250  
*Prin. Invest.:* R F SEKERKA  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1799**                    **CARNEGIE - MELLON UNIV**                    **7998**  
 RESEARCH ENTITLED, "ULTRA-HIGH DENSITY MEMS- ACTUATED-PROBE  
 MASS DATA STORAGE"  
 04/24/2001 - 04/23/2004                    FY02: \$0                    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**                    **7999**  
 ELECTROOSMOTIC & ELECTROPHORETIC SELF-ASSEMBLY TECHNIQUES  
 TO PROMOTE MASS TRANSFER ON BIOSENSORS  
 08/31/2001 - 11/30/2004                    FY02: \$0                    Total: \$67,000  
*Prin. Invest.:* R D TILTON  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 12 - CHEMISTRY

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<b>NAG 9 1090</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8000</b>	<b>NAG 9 1326</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8009</b>
ANTARTIC METEORITE SEARCH DEMONSTRATION			DISTRIBUTED MULTI ROBOT ASSEMBLY AND CONSTRUCTION		
02/26/1999 - 04/15/2001	FY02: \$0	Total: \$1,817,801	06/19/2001 - 11/30/2002	FY02: \$0	Total: \$181,000
<i>Prin. Invest.:</i> T KANADE, W WHITAKER			<i>Prin. Invest.:</i> R SIMMONS, S SINGH		
<i>Tech. Officer:</i> HQ/D LAVERY			<i>Tech. Officer:</i> JSC/C L FARMER		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 9 1092</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8001</b>	<b>NAG 9 1327</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8010</b>
AUTONOMOUS ROVER TECNOLOGY			SELF ADAPTIVE PERCEPTION SYSTEMS FOR VARYING ENVIROMENTS		
03/15/1999 - 04/30/2002	FY02: \$0	Total: \$1,341,800	06/21/2001 - 06/20/2002	FY02: \$0	Total: \$22,000
<i>Prin. Invest.:</i> T KANADE			<i>Prin. Invest.:</i> R SIMMONS, S BURKETT		
<i>Tech. Officer:</i> JSC/D LAVERY			<i>Tech. Officer:</i> JSC/C FARMER		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NAG 9 1226</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8002</b>	<b>NAG 9 1440</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8011</b>
DISTRIBUTED MULTI-ROBOT ASSEMBLY AND CONSTRUCTION			PATH PLANNING FOR FREE FLYING ROBOTS		
05/12/2000 - 05/15/2001	FY02: \$0	Total: \$300,000	07/22/2002 - 07/21/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R SIMMONS			<i>Prin. Invest.:</i> H CHOSET		
<i>Tech. Officer:</i> JSC/T PENDLETON, JSC/C CULBERT			<i>Tech. Officer:</i> JSC/C L FARMER		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 9 1232</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8003</b>	<b>NAS 3 27735</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8012</b>
STRATEGIC POSITIONING AND ATTITUDE COMPUTING ENGINE FOR HOM- ING ORBITING GADGETRY			COORDINATED APPROACH TO DEVELOPMENT & VALIDATION OF AEROELASTIC CODES		
05/15/2000 - 12/31/2001	FY02: \$0	Total: \$250,000	05/30/1996 - 03/31/2001	FY02: \$0	Total: \$569,130
<i>Prin. Invest.:</i> O AMIDI			<i>Prin. Invest.:</i> J H GRIFFIN		
<i>Tech. Officer:</i> JSC/R D JUDAY			<i>Tech. Officer:</i> GRC/R DEL ROSARIO, GRC/G L STEFKO		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NAG 9 1240</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8004</b>	<b>NCC 2 1188</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8013</b>
SKYWORKER PHASE II SPACE SOLAR POWER			HIGH DEPENDABILITY COMPUTING CONSORTIUM		
06/29/2000 - 12/30/2000	FY02: \$0	Total: \$124,624	07/11/2000 - 12/31/2001	FY02: \$0	Total: \$1,043,461
<i>Prin. Invest.:</i> R W WHITTAKER			<i>Prin. Invest.:</i> J R MORRIS		
<i>Tech. Officer:</i> JSC/C J CULBERT, JSC/H ALDRIDGE			<i>Tech. Officer:</i> ARC/M E DUENAS		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 9 1242</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8005</b>	<b>NCC 2 1226</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8014</b>
RESEARCH GRANT			SIMULATING LEARNING OF COMPLEX, DYNAMIC TASKS		
06/30/2000 - 09/30/2002	FY02: \$0	Total: \$22,000	03/23/2001 - 02/28/2003	FY02: \$0	Total: \$157,000
<i>Prin. Invest.:</i> D HERSHBERGER, D HERSHBERGER			<i>Prin. Invest.:</i> J R ANDERSON		
<i>Tech. Officer:</i> JSC/CFARMER, JSC/W TARKINGTON			<i>Tech. Officer:</i> ARC/M MATESSA		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 9 1248</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8006</b>	<b>NCC 2 1227</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8015</b>
AUTONOMOUS RECONNAISSANCE ROVER FOR EVA ROBOTIC AS SIS- TANCE			AUTOMATED DISCOVERY PROCEDURES FOR GENE EXPRESSION & REGU- LATION FROM MICROARRAY & SERIAL ANALYSIS O		
07/18/2000 - 07/16/2003	FY02: \$0	Total: \$150,000	03/16/2001 - 02/28/2003	FY02: \$0	Total: \$298,000
<i>Prin. Invest.:</i> D APOSTOLOPOULOS			<i>Prin. Invest.:</i> C GLYMOUR		
<i>Tech. Officer:</i> JSC/C J CULBERT, JSC/C FARMER			<i>Tech. Officer:</i> ARC/J COUGHLAN		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 9 1256</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8007</b>	<b>NCC 2 1241</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8016</b>
SUN SYNCHRONOUS CIRCUMNAVIGATION			FORMAL VERIFICAION TOOLS & TECHNIQUES FOR AUTOMON OUS SYSTEMS		
08/21/2000 - 12/20/2001	FY02: \$0	Total: \$1,078,139	03/28/2001 - 11/30/2002	FY02: \$0	Total: \$75,000
<i>Prin. Invest.:</i> W R WHITTAKER			<i>Prin. Invest.:</i> J WING		
<i>Tech. Officer:</i> JSC/C J CULBERT, JSC/H ALDRIDGE			<i>Tech. Officer:</i> ARC/R MORRIS, ARC/D J CLANCY		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 9 1276</b>	<b>CARNEGIE - MELLON UNIV</b>	<b>8008</b>			
PITTSBURGH PUBLIC SCHOOL DIST/CARNEGIE MELLON UNIV TEAM PAR- TICIPATION IN FIRST COMPET					
02/22/2001 - 05/01/2001	FY02: \$0	Total: \$35,000			
<i>Prin. Invest.:</i> W WHITTAKER					
<i>Tech. Officer:</i> JSC/C CULBERT					
<i>CASE Category:</i> 46 - MECHANICAL ENGR					

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**NCC 2 1243**                    **CARNEGIE - MELLON UNIV**                    **8017**  
 HETEROGENEOUS MULTI-ROVER COORDINATION OF PLANETARY EXPLORATION  
 04/05/2001 - 02/28/2003                    FY02: \$0                    Total: \$400,697  
*Prin. Invest.:* R SIMMONS  
*Tech. Officer:* ARC/R MORRIS, ARC/D J CLANCY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1298**                    **CARNEGIE - MELLON UNIV**                    **8018**  
 THE HIGH DEPENDABILITY COMPUTING PROGRAM (HDCP)  
 12/13/2001 - 12/14/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J H MORRIS, W SCHERLIS  
*Tech. Officer:* ARC/M R LOWRY, ARC/M DUENAS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1317**                    **CARNEGIE - MELLON UNIV**                    **8019**  
 EFFECTIVE TEAM SUPPORT: FROM TASK AND COGNITIVE MODELING TO SOFTWARE AGENTS FOR TIMECRITICAL COMPL  
 03/05/2002 - 02/28/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* B E JOHN  
*Tech. Officer:* ARC/R REMINGTON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1319**                    **CARNEGIE - MELLON UNIV**                    **8020**  
 THE SUMMER ROBOTIC AUTONOMY COURSE  
 03/13/2002 - 08/31/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* I R NOURBAKHSH  
*Tech. Officer:* ARC/M DUENAS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 1324**                    **CARNEGIE - MELLON UNIV**                    **8021**  
 REAL TIME FAULT DETECTION AND SITUATION AWARENESS FOR ROVERS  
 03/13/2002 - 08/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R G SIMMONS  
*Tech. Officer:* ARC/M SHIRLEY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5438**                    **CARNEGIE - MELLON UNIV**                    **8022**  
 INTELLIGENT SPACE ROBOTS IN THE NEXT 20 YEARS A SUMMER STUDY  
 06/21/2001 - 10/31/2001                    FY02: \$0                    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**                    **8023**  
 NATIONAL ROBOTICS ENGINEERING CONSORTIUM  
 08/26/1997 - 07/31/2002                    FY02: \$0                    Total: \$13,867,615  
*Prin. Invest.:* T KANADE  
*Tech. Officer:* GSFC/B H HANKS  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 431**                    **CARNEGIE - MELLON UNIV**                    **8024**  
 EVENTSCOPE: A 3D, NETWORKED ROBOTIC LEARNING ENVIRONMENT IN RESPONSE TO NASA COOPERATIVE AGREEMENT  
 09/20/1999 - 09/30/2002                    FY02: \$1                    Total: \$328,366  
*Prin. Invest.:* P COPPIN  
*Tech. Officer:* GSFC/R E GABRYS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 52277**                    **CARNEGIE - MELLON UNIV**                    **8025**  
 AUTOMATED SURFACE MISSION PLANNING (STUDENT: PAUL D. THOMPSON)  
 06/12/2001 - 08/31/2003                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* W L WHITTAKER  
*Tech. Officer:* ARC/M H SIMS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 2 52286**                    **CARNEGIE - MELLON UNIV**                    **8026**  
 PROBABILISTIC PLANNING AND EXECUTION FOR SITE SURVEY  
 05/22/2002 - 08/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R SIMMONS  
*Tech. Officer:* ARC/D SMITH, ARC/S LAU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 3 52370**                    **CARNEGIE - MELLON UNIV**                    **8027**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT RESEARCHERS PROGRAM  
 06/20/2000 - 06/30/2003                    FY02: \$0                    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**                    **8028**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT RESEARCHERS PROGRAM  
 06/21/2001 - 07/31/2003                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* M E MCHENRY  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 50279**                    **CARNEGIE - MELLON UNIV**                    **8029**  
 EFFICIENT MACHINE LEARNING ALGORITHMS FOR SCIENCE STUDENT: ALEXANDER G. GRAY  
 06/20/2000 - 07/31/2003                    FY02: \$0                    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**                    **8030**  
 INTEGRATING FEATURE TRACKING AND SHAPE-FROM-MOTION FOR ROBOST VISUAL NAVIGATION/STUDENT: DENNIS STEL  
 05/07/2001 - 06/30/2004                    FY02: \$0                    Total: \$22,000  
*Prin. Invest.:* S SINGH  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 9 64**                    **CARNEGIE - MELLON UNIV**                    **8031**  
 LEARNING SHAPE AND BEHAVIOR BY OBSERVING PUSHING  
 07/09/2002 - 07/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R SIMMONS  
*Tech. Officer:* JSC/C FARMER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 01118**                    **DREXEL UNIV**                    **8032**  
 RECONFIGURABLE CONTROL OF AIRCRAFT IN NONLINEAR FLIGHT REGIMES  
 08/16/2001 - 08/31/2004                    FY02: \$0                    Total: \$50,000  
*Prin. Invest.:* B C CHANG  
*Tech. Officer:* LARC/C M BELCASTRO  
*CASE Category:* 41 - AERONAUTICAL ENGR

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**NAG 2 1436** **DREXEL UNIV** **8033**  
 ALTERED SIGNAL TRANSDUCTION & DIFFERENTIAL GENE EXPRESSION IN  
 PC12 PHEOCYTOMOCYTOMA CELLS IN CULTUR  
 09/19/2000 - 08/31/2002 FY02: \$0 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 2212** **DREXEL UNIV** **8034**  
 DEVELOPMENT OF LEAN DIRECT WALL INJECTION (LDWI)CO MBUSTOR  
 12/03/1998 - 11/30/2001 FY02: \$0 Total: \$141,182  
*Prin. Invest.:* K J CHOI  
*Tech. Officer:* GRC/R R TACINA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2295** **DREXEL UNIV** **8035**  
 DEVELOPMENT AND VERIFICATION OF AN IMPROVED MODEL OF THE ICE  
 ACCRETION PROCESS  
 09/29/1999 - 02/09/2001 FY02: \$0 Total: \$82,975  
*Prin. Invest.:* D A RUFF  
*Tech. Officer:* GRC/M G POTAPCZUK  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 6964** **DREXEL UNIV** **8036**  
 STELLAR AND BINARY EVOLUTION IN GLOBULAR CLUSTERS - ATP  
 02/10/1998 - 02/14/2002 FY02: \$0 Total: \$350,826  
*Prin. Invest.:* S L MCMILLAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8929** **DREXEL UNIV** **8037**  
 SCHOOL-BASED UV-B MONITORING PROJECT IN SUPPORT OF EOS-CHEM  
 01/13/2000 - 01/14/2003 FY02: \$0 Total: \$184,949  
*Prin. Invest.:* D R BROOKS  
*Tech. Officer:* GSFC/E HILSENATH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9264** **DREXEL UNIV** **8038**  
 BINARY EVOLUTION IN GLOBULAR CLUSTERS - ATP  
 03/13/2000 - 03/31/2003 FY02: \$0 Total: \$152,411  
*Prin. Invest.:* S MCMILLAN  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10026** **DREXEL UNIV** **8039**  
 NASA ESS HPCC PROGRAM  
 10/27/2000 - 10/14/2002 FY02: \$0 Total: \$215,000  
*Prin. Invest.:* D VALLIERES  
*Tech. Officer:* GSFC/J FISCHER  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10775** **DREXEL UNIV** **8040**  
 STELLAR AND BINARY EVOLUTION IN STAR CLUSTERS (ATP 2000)  
 04/24/2001 - 04/30/2004 FY02: \$0 Total: \$70,000  
*Prin. Invest.:* S L MCMILLAN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11119** **DREXEL UNIV** **8041**  
 NUMERICAL RELATIVISTIC ASTROPHYSICS AT THE LABORATORY OF HIGH  
 ENERGY ASTROPHYSICS (LHEA).  
 08/09/2001 - 03/14/2003 FY02: \$0 Total: \$36,181  
*Prin. Invest.:* M VALLIERES  
*Tech. Officer:* GSFC/J CENTRELLA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11340** **DREXEL UNIV** **8042**  
 LIPOSOME-ENCAPSULATED ENZYMES AS OPTICAL NANOSENSORS FOR  
 THE DETECTION OF BIOLOGICAL PROCESSES  
 09/14/2001 - 09/14/2002 FY02: \$0 Total: \$6,000  
*Prin. Invest.:* M A WHEATLEY  
*Tech. Officer:* GSFC/H SHAW  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 12243** **DREXEL UNIV** **8043**  
 PROBING THE EVOLUTION OF AGN CLUSTERING (LISA 2001 )  
 06/05/2002 - 06/14/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* M VOGEELEY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1380** **DREXEL UNIV** **8044**  
 INNOVATIVE CARDIAC TISSUE ENGINEERING IN RWV BIOREACTORS  
 09/13/2001 - 09/04/2002 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* P LELKES  
*Tech. Officer:* JSC/N PELLIS  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

**NAG13 00040** **DREXEL UNIV** **8045**  
 APPLICATION OF AN INTEGRATED MONITORING & MODELING SYSTEM  
 NARRAGANSETT BAY - INTERNET-BASED TECHNOLOGY  
 08/23/2000 - 08/22/2003 FY02: \$0 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** **8046**  
 EFFECTS OF ELECTROMAGNETIC-INDUCED FAILURE MODES: MODELING  
 AND ANALYSIS MY 1/3  
 02/25/1998 - 12/31/2000 FY02: \$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** **8047**  
 A STUDY OF THE CHEMISTRY OF SULFUR IN THE INTER-TROPICAL AND  
 SOUTH PACIFIC CONVERGENCE ZONES-----  
 04/28/1998 - 10/31/2002 FY02: \$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** **8048**  
 AN AIRBORNE STUDY OF THE CHEMISTRY OF SULFUR IN THE ATMOSPHERE  
 OF THE WESTERN NORTH PACIFIC OCEAN  
 09/11/2000 - 03/31/2003 FY02: \$0 Total: \$310,340  
*Prin. Invest.:* A R BANDY  
*Tech. Officer:* LARC/V E DELUORE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 3 822** **DREXEL UNIV** **8049**  
 EXPERIMENTAL AND MODEL DEVELOPMENT FOR INVESTIGATION OF  
 SOOTING AND RADIATION EFFECTS IN MICROGRAVITY  
 08/17/2000 - 12/31/2002 FY02: \$0 Total: \$215,330  
*Prin. Invest.:* D CHOI  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

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**NCC 3 825** **DREXEL UNIV** **8050**  
 DEVELOPMENT OF THERMALLY SPRAYED FGM EROSION/OXIDATION  
 RESISTANT COATING FOR POLYMERIC SUBSTRATES  
 09/26/2000 - 08/31/2003 FY02: \$0 Total: \$70,760  
*Prin. Invest.:* D KNIGHT  
*Tech. Officer:* GRC/J K SUTTER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 835** **DREXEL UNIV** **8051**  
 A PRELIMINARY INVESTIGATION OF THE E-BEAM INDUCED POLYMERIZA-  
 TION OF MALEIMIDE AND NORBORNENE END-CAP  
 12/15/2000 - 04/24/2003 FY02: \$0 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** **8052**  
 COMBUSTION OF UNSUPPORTED DROPLET CLUSTERS IN MICRO GRAVITY  
 01/11/2001 - 12/18/2003 FY02: \$0 Total: \$59,692  
*Prin. Invest.:* D A RUFF  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 913** **DREXEL UNIV** **8053**  
 INVESTIGATION OF SOOTING AND RADIATION EFFECTS ON THE BURNING  
 OF LARGE ETHANOL AND HEPTANE DROPLETS  
 08/31/2001 - 07/12/2002 FY02: \$0 Total: \$11,250  
*Prin. Invest.:* D Y CHOI  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 1003** **DREXEL UNIV** **8054**  
 DETERMINATION OF COOL FLAME QUENCHING DISTANCES AT MICRO-  
 GRAVITY  
 09/13/2002 - 09/15/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* H PEARLMAN  
*Tech. Officer:* GRC/J E BROOKER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 1006** **DREXEL UNIV** **8055**  
 LOW-TEMPERATURE OXIDATION AND COOL FLAMES EXPERIMENT  
 09/19/2002 - 09/18/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* H PEARLMAN  
*Tech. Officer:* GRC/D L URBAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 9 130** **DREXEL UNIV** **8056**  
 PC12 PHEOCHROMOCYTOMA CELLS  
 05/31/2001 - 05/30/2003 FY02: \$0 Total: \$168,150  
*Prin. Invest.:* P LELKE  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 6858** **FRANKLIN-MARSHALL COLL** **8057**  
 STATISTICAL ALGORITHMS FOR THE ANALYSIS OF SPACE-BASED  
 DATASETS  
 02/09/1998 - 02/14/2002 FY02: \$0 Total: \$63,912  
*Prin. Invest.:* D BACKMAN  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NCC 2 5365** **FRANKLIN-MARSHALL COLL** **8058**  
 THE NSTARS PROJECT: DATABASE, ASTROPHYSICS AND ASTRONOMY  
 RESEARCH AND SCIENTIFIC WORKSHOPS  
 02/01/2000 - 01/31/2001 FY02: \$0 Total: \$63,250  
*Prin. Invest.:* D BACKMAN  
*Tech. Officer:* ARC/L CAROFF  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1840** **HAHNEMANN UNIV** **8059**  
 DETERGENT INTERACTIONS AFFECTING MEMBRANE PROTEIN CRYSTAL-  
 LIZATION: ANALYSIS & USE IN SCREEN DESIGN  
 09/28/2001 - 11/30/2004 FY02: \$0 Total: \$81,000  
*Prin. Invest.:* P J LOLL, J M WEINCEK  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9285** **HAVERFORD COLL** **8060**  
 LARGE-SCALE STRUCTURE IN THE X-RAY BACKGROUND AND LIMITS ON  
 COSMOLOGICAL PARAMETERS FROM THE INTEGRAL  
 04/17/2000 - 04/30/2003 FY02: \$0 Total: \$54,764  
*Prin. Invest.:* S P BOUGHN  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50418** **LEHIGH UNIV** **8061**  
 WHEN AND HOW DID TOPOGRAPHY DEVELOP IN THE NORTHERN  
 APENNINES AN INTEGRATIVE GIS-BASED APPROACH  
 08/14/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* F J PAZZAGLIA  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10172** **LINCOLN UNIV - PA.** **8062**  
 LINCOLN'S ADVANCED SCIENCE AND ENGINEERING REINFORCED CEMENT  
 (LASER) PROGRAM  
 01/03/2001 - 01/14/2002 FY02: \$0 Total: \$30,000  
*Prin. Invest.:* R LANGLEY  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 662** **LINCOLN UNIV - PA.** **8063**  
 NASA/LINCOLN UNIVERSITY TEACHER EDUCATION PARTNERSHIP: MINOR-  
 ITY UNIVERSITY MATHEMATICS, SCIENCE, & TECH  
 08/21/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* O RICHARD  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12416** **MUHLBERG COLL** **8064**  
 INTRODUCING NEW TECHNOLOGIES INTO THE CLASSROOM K-16  
 07/29/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R MILLIGAN  
*Tech. Officer:* HQ/S CANRIGHT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 3368** **PENN. ST. U. ERIE-BEHREND COLL** **8065**  
 ISO SOLAR SYSTEM MISSION-TEAM MEMBER SUPPORT  
 08/28/1996 - 09/30/2001 FY02: \$0 Total: \$60,000  
*Prin. Invest.:* R F KNACKE  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 50387**      **PENN. STATE UNIV.-RADNOR**      **8066**  
 UNVEILING THE ACCRETION DISKS WHICH FUEL ACTIVE GA LACTIC  
 NUCLEI (STUDENT: KAREN LEWIS)  
 06/03/2002 - 06/30/2005      FY02: \$0      Total: \$0  
*Prin. Invest.:* M ERACLEOUS  
*Tech. Officer:* GSF/C K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1044**      **PENNSYLVANIA STATE UNIV -HERSHEY MED.**      **8067**  
 NEUROVASCULAR RESPONSE TO BED REST  
 07/15/1998 - 07/14/2001      FY02: \$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.**      **8068**  
 BED REST & NEUROVASCULAR FUNCTION  
 09/25/2000 - 11/06/2001      FY02: \$0      Total: \$193,608  
*Prin. Invest.:* D MACLEAN  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2147**      **PENNSYLVANIA STATE UNIV. - UNIV. PARK**      **8069**  
 NUMERICAL SIMULATIONS FOR LANDING GEAR NOISE GENERATION AND  
 RADIATION (REF:NRA 98-LARC-5)  
 02/05/1999 - 12/31/2001      FY02: \$0      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**      **8070**  
 SIMULATION OF THE NOISE RADIATED BY RECTANGULAR JETS  
 06/24/1999 - 02/28/2002      FY02: \$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**      **8071**  
 ADAPTIVE INTERFACE APPROACK USING A REAL TIME BIOCYVERNETIC  
 SYSTEM: CONTROL OF HAZARDOUS  
 02/25/2000 - 02/24/2002      FY02: \$0      Total: \$30,000  
*Prin. Invest.:* W J RAY  
*Tech. Officer:* LARC/L J PRINZEL  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 1 01009**      **PENNSYLVANIA STATE UNIV. - UNIV. PARK**      **8072**  
 THE PHYSICAL MECHANISMS FOR TONAL NOISE GENERATION BY SLATS  
 01/23/2001 - 01/31/2004      FY02: \$0      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**      **8073**  
 AN EFFICIENT SCHEME FOR UPDATING SPARSE CHOLESKY FACTORS  
 05/24/2001 - 03/31/2002      FY02: \$0      Total: \$20,002  
*Prin. Invest.:* P RAGHAVAN  
*Tech. Officer:* LARC/J C NEWMAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 02065**      **PENNSYLVANIA STATE UNIV. - UNIV. PARK**      **8074**  
 SIMULATION OF METAL DEPOSITION USING ELECTRON BEAM  
 03/14/2002 - 11/13/2003      FY02: \$0      Total: \$0  
*Prin. Invest.:* V V SEMAK  
*Tech. Officer:* LARC/K M TAMINGER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 2 1302**      **PENNSYLVANIA STATE UNIV. - UNIV. PARK**      **8075**  
 PARTICIPATION AS MISSION SCIENTIST IN OBSERVATIONS FROM THE  
 MIDDLE STRATOSPHERE DURING SOLVE  
 03/05/1999 - 01/31/2001      FY02: \$0      Total: \$104,000  
*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**      **8076**  
 MOLECULAR CONTROL OF CELL GROWTH DURING GRAVITY RE SPONSES  
 OF MAIZE SEEDINGS  
 07/20/1999 - 07/14/2003      FY02: \$0      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**      **8077**  
 GRAVITROPISM IN CHARA RHIZOIDS  
 07/30/1999 - 07/14/2003      FY02: \$0      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**      **8078**  
 OBSTACLE DETECTION ALGORITHMS FOR ROTORCRAFT NAVIGATION  
 06/13/2000 - 05/14/2001      FY02: \$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**      **8079**  
 MEASUREMENTS OF OH AND HO2 USING ATHOS ON THE DC-8 DURING  
 SOLVE  
 01/26/2001 - 01/31/2003      FY02: \$0      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**      **8080**  
 WIRE DETECTION ALGORITHMS FOR NAVIGATION  
 06/26/2001 - 06/30/2002      FY02: \$0      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**      **8081**  
 EVALUATION OF SI-O-C FOAM CERAMICS IN SIMULATED AE ROTHMAL  
 ENVIRONMENTS  
 09/14/2001 - 12/31/2002      FY02: \$0      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**      **8082**  
 MICROGRAVITY EFFECTS ON TRANSENDOTHELIAL TRANSPORT  
 05/22/1996 - 10/21/2001      FY02: \$0      Total: \$460,000  
*Prin. Invest.:* J M TAZBELL  
*Tech. Officer:* GRC/J S LING, GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NAG 3 2151** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8083  
 MODELING OF COMBUSTION RESPONSE OF GAS TURBINE SPRAY SWIRL-STABILIZED INJECTORS TO ACOUSTIC OSCILLATIONS  
 04/07/1998 - 12/31/2001 FY02: \$0 Total: \$135,000  
 Prin. Invest.: V G YANG  
 Tech. Officer: GRC/K L BREISACHER  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 3 2328** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8084  
 A NUMERICAL AND EXPERIMENTAL STUDY OF THE FLOW AND NOISE FROM SUBSONIC AND SUPERSONIC JETS  
 03/17/2000 - 09/30/2002 FY02: \$0 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 8085  
 MOLECULAR DYNAMIC OF FLUID SOLID SYSTEMS MOLECULAR DYNAMIC OF FLUID SOLID SYSTEMS  
 03/31/2000 - 12/04/2003 FY02: \$0 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 8086  
 HEALTH MANAGEMENT AND LIFE EXTENDING CONTROL OF GAS TURBINE ENGINES  
 05/30/2000 - 05/14/2003 FY02: \$0 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 8087  
 DYNAMICS OF PARTICLES IN STATIONARY ISOTROPIC TURBULENCE  
 07/11/2000 - 11/30/2003 FY02: \$0 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 8088  
 COMBUSTION BEHAVIOR OF ADVANCED MONOPROPELLANTS COMBUSTION BEHAVIOR OF ADVANCED MONOPROPELLANTS  
 12/11/2000 - 10/31/2003 FY02: \$0 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 8089  
 EXPERIMENTAL AND THEORETICAL STUDIES OF WET GRANULAR MEDIA  
 02/26/2001 - 01/31/2004 FY02: \$0 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 8090  
 DIELECTRIC MATERIALS DEVELOPMENT FOR HIGH TEMPERATURE  
 03/16/2001 - 05/08/2003 FY02: \$0 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 8091  
 MEMS NOZZLE OPTIMIZATION STUDIES FOR DECOMPOSING SOLID MICROPROPULSION TECHNOLOGY  
 04/19/2001 - 05/31/2004 FY02: \$0 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 8092  
 FLYWHEEL TECHNOLOGY DEVELOPMENT FOR SMALL SATELLITE APPLICATIONS  
 04/27/2001 - 04/30/2003 FY02: \$0 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 8093  
 INVESTIGATION OF ULTRAHIGH POWER DENSITY MACHINE DESIGN  
 05/04/2001 - 12/31/2001 FY02: \$0 Total: \$79,997  
 Prin. Invest.: D HOFMANN  
 Tech. Officer: GRC/G V BROWN  
 CASE Category: 45 - ELECTRICAL ENGR

**NAG 3 2656** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8094  
 PREDICTION OF GAS LUBRICATED FOIL JOURNAL BEARING PERFORMANCE  
 01/24/2002 - 01/21/2005 FY02: \$0 Total: \$0  
 Prin. Invest.: M CARPINO  
 Tech. Officer: GRC/S A HOWARD  
 CASE Category: 46 - MECHANICAL ENGR

**NAG 3 2657** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8095  
 THRUST AUGMENTATION MEASUREMENTS USING PULSE DETONATION EJECTOR  
 01/22/2002 - 12/11/2004 FY02: \$0 Total: \$0  
 Prin. Invest.: R J SANTORO  
 Tech. Officer: GRC/D T PALAC  
 CASE Category: 46 - MECHANICAL ENGR

**NAG 3 2659** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8096  
 OPTIMIZATION OF ACTIVE CONTROL OF GAS TURBINE COMBUSTION USING MAIN FLOW MODULATION IN LOW EMISSION  
 12/22/2001 - 12/11/2004 FY02: \$0 Total: \$0  
 Prin. Invest.: D A SANTAVICCA  
 Tech. Officer: GRC/C T CHANG  
 CASE Category: 41 - AERONAUTICAL ENGR

**NAG 3 2729** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8097  
 DYNAMICS OF DROPS AND BUBBLES IN CONFINED FLOWS OF COMPLEX FLUIDS  
 04/02/2002 - 03/31/2006 FY02: \$0 Total: \$0  
 Prin. Invest.: A BORHAN  
 Tech. Officer: GRC/M M HASAN  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG 3 2746** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8098  
 MICROGRAVITY EFFECTS ON TRANSVASCULAR TRANSPORT AND VASCULAR CONTROL  
 04/02/2002 - 02/28/2006 FY02: \$0 Total: \$0  
 Prin. Invest.: D M TARBELL  
 Tech. Officer: GRC/P A PARSONS  
 CASE Category: 49 - ENGINEERING, OTHER



<p><b>NAG 3 2778</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8099  INTELLIGENT CONTROL OF AUTONOMOUS PROPULSION SYSTEMS  05/16/2002 - 12/13/2002 FY02: \$0 Total: \$0  Prin. Invest.: K R REICHARD  Tech. Officer: GRC/J LITT  CASE Category: 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 5 5220</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8108  GRANT NAG5-5220 - HIGH ENERGY ANTIMATTER TELESCOPE (HEAT) - PI DR. JAMES BEATTY  03/16/1999 - 11/30/2002 FY02: \$0 Total: \$461,000  Prin. Invest.: J J BEATTY  Tech. Officer: GSFC/B A MERRITT  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 3 2795</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8100  INTEGRATION OF QUANTUM DOTS INTO PROTOCRYSTALLINE SILICON SOLAR CELLS  09/06/2002 - 09/08/2003 FY02: \$0 Total: \$0  Prin. Invest.: C R WRONSKI  Tech. Officer: GRC/S G BAILEY  CASE Category: 45 - ELECTRICAL ENGR</p>	<p><b>NAG 5 5248</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8109  COSMIC RAY ENERGETICS AND MASS (CREAM) COSMIC RAY ENERGETICS AND MASS (CREAM)  03/12/2000 - 11/30/2002 FY02: \$0 Total: \$296,000  Prin. Invest.: BEATTY  Tech. Officer: GSFC/B MERRITT  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 4 160</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8101  LEARNING USING ERAST AIRCRAFT/LUAU  02/08/1999 - 09/30/2001 FY02: \$0 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</p>	<p><b>NAG 5 5250</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8110  FIRST YEAR OF THREE YEAR EFFORT FOR PI DR. STEPHANE COUTU  03/23/2000 - 11/30/2002 FY02: \$0 Total: \$296,000  Prin. Invest.: S E COUTU  Tech. Officer: WFF/B A MERRITT  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 3970</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8102  USE OF ARABIDOPSIS TRANSPOSON MUTANTS IN THE STUDY  03/05/1997 - 02/28/2001 FY02: \$0 Total: \$470,187  Prin. Invest.: N V FEDOROFF  Tech. Officer: GSFC/M AVERNER  CASE Category: 59 - LIFE SCIENCE, OTHER</p>	<p><b>NAG 5 5256</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8111  MODIFICATION OF IONIZATION PROPERTIES IN THE MIDDLE ATMOSPHERE BY GRAVITY WAVES  03/20/2000 - 02/10/2003 FY02: \$0 Total: \$514,256  Prin. Invest.: C L CROSKY  Tech. Officer: GSFC/W B JOHNSON  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 4301</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8103  A STUDY OF PLANETARY SYSTEMS AROUND NEUTRON STARS  04/09/1997 - 05/31/2002 FY02: \$0 Total: \$297,000  Prin. Invest.: D WOLSZCZAN  Tech. Officer: GSFC/D NAVA  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 5277</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8112  RESEARCH IN X-RAY ASTRONOMY RESEARCH IN X-RAY ASTRONOMY  06/01/2000 - 05/15/2003 FY02: \$0 Total: \$265,000  Prin. Invest.: D N BURROWS, G P GARMIRE  Tech. Officer: GSFC/J C BRINTON  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 4553</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8104  THE GLOBAL WATER CYCLE: EXTENSION ACROSS THE EARTH  06/12/1997 - 06/30/2002 FY02: \$0 Total: \$5,263,454  Prin. Invest.: E J BARRON  Tech. Officer: GSFC/M WEI  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 5 5313</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8113  GRAVITY WAVE FORCING THE MESOSPHERE AND LOWER THERMOSPHERE MOUNTAIN AND CONNECTIVE WAVES  02/08/2001 - 02/09/2004 FY02: \$0 Total: \$79,287  Prin. Invest.: C L CROSKY  Tech. Officer: GSFC/J C BRINTON  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 4840</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8105  THE REGENERATING PROTOPLAST AS A SINGLE CELL MODEL IN PLANTS  06/26/1997 - 05/31/2002 FY02: \$0 Total: \$366,770  Prin. Invest.: R CYR  Tech. Officer: GSFC/M AVERNER  CASE Category: 59 - LIFE SCIENCE, OTHER</p>	<p><b>NAG 5 5356</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8114  NEW TRACK IMAGING TECHNOLOGY FOR NEXT-GENERATION GAMMA-RAY TELESCOPES  04/09/2002 - 12/31/2004 FY02: \$0 Total: \$0  Prin. Invest.: T N JACKSON  Tech. Officer: GSFC/B A MERRITT  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 5169</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8106  PROJECT DROPPS: THE DISTRIBUTION AND ROLE OF PARTICLES IN THE POLAR SUMMER MESOSPHERE  03/13/1998 - 12/31/2002 FY02: \$0 Total: \$168,596  Prin. Invest.: J D MITCHELL  Tech. Officer: GSFC/W B JOHNSON  CASE Category: 13 - PHYSICS</p>	<p><b>NAG 5 5363</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8115  COSMIC-RAY SPECTRUM AND COMPOSITION AT HIGH ENERGY FIRST YEAR OF FUNDING  05/16/2002 - 03/31/2007 FY02: \$0 Total: \$0  Prin. Invest.: S COUTU  Tech. Officer: GSFC/B MERRITT  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 5174</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8107  VALIDATION AND PROMPT DISTRIBUTION OF ACCESS DATA FUNDING FOR FIRST YEAR OF GRANT  03/09/1998 - 03/31/2002 FY02: \$0 Total: \$109,080  Prin. Invest.: S COUTU  Tech. Officer: GSFC/B A MERRITT  CASE Category: 13 - PHYSICS</p>	

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 5369** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8116  
 LAYERS IN THE EQUATORIAL MESOSPHERE, MOTIONS AND A EROSOL  
 ROCKET AND RADAR STUDY (LEMMA)  
 06/25/2002 - 06/18/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J MITCHELL  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5375** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8117  
 ROCKET INVESTIGATION OF SCATTERING LAYERS IN THE B OTTOMSIDE  
 EQUATORIAL F REGION IONOSPHERE  
 06/19/2002 - 06/10/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* T WHEELER  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6389** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8118  
 MODELING THE AIR-SEA FLUXES OF CARBONYL SYLFIDE AN D CARBON  
 MONOXIDE USING REMOTELY SENSED DATA  
 10/17/1997 - 08/31/2001 FY02: \$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 8119  
 THE GAS AND THE STARS OF INTERMEDIATE REDSHIFT GALAXIES (L TSA)  
 10/10/1997 - 10/14/2002 FY02: \$0 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 8120  
 EVALUATION AND INTERCOMPARISON OF THREE-DIMENSIONA L MARINE  
 CARBON CYCLE MODELS  
 10/24/1997 - 12/31/2001 FY02: \$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 8121  
 SPACE-TIME SCALING OF WATER TRANSFERS BETWEEN THE LAND  
 SURFACE AND THE LOWER ATMOSPHERE  
 12/04/1997 - 10/31/2000 FY02: \$0 Total: \$163,955  
*Prin. Invest.:* A P BARROS  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6737** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8122  
 THE STATISTICAL CONSULTING CENTER FOR ASTRONOMY (S CCA)  
 12/17/1997 - 12/31/2001 FY02: \$0 Total: \$97,886  
*Prin. Invest.:* M AKRITAS  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7017** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8123  
 NEUTRON STAR ATMOSPHERES - ATP  
 02/17/1998 - 02/14/2002 FY02: \$0 Total: \$288,142  
*Prin. Invest.:* G G PAVLOV  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7547** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8124  
 SATELLITE TRACKING AND RAINFALL ESTIMATION FOR SHO RT-TERM,  
 HEAVILY PERCIPITATING STORM EVENTS  
 06/22/1998 - 06/30/2002 FY02: \$0 Total: \$235,764  
*Prin. Invest.:* J L EVANS  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 32 - GEOLOGICALSCIENCE

**NAG 5 7776** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8125  
 REMOTE SENSING OF WEST ANTARCTIC ICE SHEET SURFACE MELTING:  
 RECOGNITION,CONTROLS, AND SIGNIFICANCE  
 10/27/1998 - 12/31/2002 FY02: \$0 Total: \$31,220  
*Prin. Invest.:* R ALLEY  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8107** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8126  
 AXAF, XMM AND ASTRO-E INVESTIGATIONS OF SEYFERT/IQU ASAR CEN-  
 TRAL ENGINES: EXPLORING THE ENVIRONMENTS  
 02/05/1999 - 02/14/2004 FY02: \$0 Total: \$188,500  
*Prin. Invest.:* W N BRANDT  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8422** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8127  
 2-RAY STUDIES OF YOUNG STELLAR OBJECTS\_(L TSA 98)  
 04/01/1999 - 04/30/2001 FY02: \$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 8128  
 METHANE & HYDROGEN IN EARTH'S PRIMITIVE ATMOSPHERE  
 08/02/1999 - 09/30/2003 FY02: \$0 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 8129  
 MERGING MODELS AND OBSERVATIONS OF THE ATMOSPHERIC BOUND-  
 ARY LAYER'S MESOSCALE STRUCTURE DURING SGP-9  
 08/17/1999 - 08/14/2002 FY02: \$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 8130  
 SPACE-TIME DYNAMICS OF SOIL MOISTURE & TEMPERATURE -SCALE  
 ISSUES  
 08/17/1999 - 08/14/2003 FY02: \$0 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 8131  
 TECTONIC-CLIMATE INTERACTIONS IN ACTION OROGENIC BELTS: QUAN-  
 TIFICATION OF DYNAMIC TOPOGRAPHY WITH S  
 02/10/2000 - 12/31/2000 FY02: -\$841 Total: \$81,191  
*Prin. Invest.:* D W BURBANK  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9089** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8132  
 SEARCH FOR NEW EVIDENCE IN PRE-2.0 GA PALEOSOLS & SHALES FOR  
 THE EARLY EVOLUTION OF ATMOSPHERIC OXYG  
 02/17/2000 - 01/31/2003 FY02: \$0 Total: \$120,000  
*Prin. Invest.:* H OHMOTO  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9153** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8133  
 THEORETICAL STUDIES OF GAMMA-RAY BURSTS WITH SWIFT  
 03/02/2000 - 06/30/2003 FY02: \$0 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 8134  
 PHYSICS OF GAMMA RAY BURST SOURCES  
 03/08/2000 - 03/14/2003 FY02: \$0 Total: \$210,900  
*Prin. Invest.:* P MESZAROS  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9377** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8135  
 THE ORIGINS AND PROPERTIES OF INTRACLUSTER STARS (LISA 99)  
 04/05/2000 - 03/31/2005 FY02: \$0 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 8136  
 A RADICAL-VELOCITY ASSESSMENT OF CANDIDATE SIM GRID STARS FOR  
 ASTROMETIC STABILITY, USING  
 05/10/2000 - 05/14/2003 FY02: \$0 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 8137  
 "THIN FILM TRANSISTOR ADDRESSING ARRAYS FOR MICRO- WELL GAMMA  
 RAY DETECTORS"  
 05/12/2000 - 05/14/2001 FY02: \$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 8138  
 AN X-RAY STUDY OF THE MOST DISTANT QUASARS FROM THE SLOAN  
 DIGITAL SKY SURVEY  
 09/05/2000 - 09/14/2002 FY02: \$0 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 8139  
 A DETAILED STUDY OF TWO NLS1  
 09/05/2000 - 09/14/2003 FY02: \$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 8140  
 XMM SPECTROSCOPY OF THE X-RAY DETECTED BROAD ABSORPTION  
 LINE QSO CSO 755  
 09/07/2000 - 09/14/2003 FY02: \$0 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 8141  
 XMM STUDY OF THE BRIGHT ULTRASOFT NARROW-LINE QUASAR NAB  
 0205+024  
 09/07/2000 - 09/14/2003 FY02: \$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 8142  
 CONSTRAINTS ON HO FROM TIME-DELAY MEASUREMENTS OF PG1115+080  
 09/06/2000 - 09/14/2003 FY02: \$0 Total: \$36,600  
*Prin. Invest.:* G CHARTAS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9938** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8143  
 SPECTRUM AND PULSATIONS OF THE NEUTRON STAR CANDIDATE RX  
 J0002+6246  
 09/06/2000 - 09/14/2002 FY02: \$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 8144  
 AN XMM STUDY OF THE BRIGHT NARROW-LINE SEYFERT 1 GALAXY  
 ARAKELIAN 564  
 09/06/2000 - 09/14/2003 FY02: \$0 Total: \$28,800  
*Prin. Invest.:* W BRANDT  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9940** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8145  
 XMM SPECTROSCOPY OF MARKARIAN 6: INTRINSIC ABSORPTION AND  
 BLACK HOLE REGION  
 09/06/2000 - 09/14/2003 FY02: \$0 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 8146  
 THROUGH BAL QUASARS BRIGHTLY  
 09/07/2000 - 08/31/2003 FY02: \$0 Total: \$33,900  
*Prin. Invest.:* G CHARTAS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9970** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8147  
 PROBING CLASS O PROTOSTARS WITH HARD X-RAYS --OMC2 -3 REGION--  
 09/13/2000 - 09/14/2002 FY02: \$0 Total: \$38,300  
*Prin. Invest.:* Y TSUBOI  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

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**NAG 5 9976** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8148  
RGS ABUNDANCE MEASUREMENT OF WOLF-RAYET STELLAR WIND  
09/12/2000 - 01/31/2003 FY02: \$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 8149  
STRUCTURE OF THE ACCRETION FLOWS IN BROAD-LINE RADIO GALAXIES  
09/13/2000 - 09/14/2002 FY02: \$0 Total: \$37,444  
*Prin. Invest.:* M ERACLEOUS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10050** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8150  
MERGING MODELS AND OBSERVATIONS OF THE ATMOSPHERIC BOUND-  
ARY LAYER'S MESOSCALE STRUCTURE DURING S  
09/28/2000 - 05/31/2002 FY02: \$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 8151  
MAPPING SPECTRAL LINES FROM THE DIFFUSE X-RAY BACK GROUND  
10/27/2000 - 10/31/2002 FY02: \$0 Total: \$9,500  
*Prin. Invest.:* D N BURROWS  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10080** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8152  
SHADOWING OF THE EXTRAGALACTIC SOFT X-RAY BACK- GROUND  
10/27/2000 - 10/31/2002 FY02: \$0 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 8153  
THE X-RAY PROPERTIES OF LOCAL GALAXIES: BRIDGING THE GAP TO  
HIGH-Z  
11/20/2000 - 11/30/2002 FY02: \$0 Total: \$6,703  
*Prin. Invest.:* N BRANDT  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10541** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8154  
PATTERN-BASED MONITORING OF CHANGE AT MULTIPLE SCALES  
THROUGH REMOTE SENSING& GIS IN FOREST  
03/20/2001 - 03/14/2003 FY02: \$0 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 8155  
STATISTICAL CHALLENGES IN MODERN ASTRONOMY III  
03/13/2001 - 03/14/2002 FY02: \$0 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 8156  
PENN STATE ACTIVITIES IN THE NASA GSFC TRANSMISSIV E MICROSHUT-  
TER ARRAY TECHNOLOGY DEVELOPMENT PROGR  
03/19/2001 - 03/31/2002 FY02: \$0 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 8157  
SOFT X-RAY BACKGROUND IN THE GALACTIC ANTI-CENTER (ADP - 2000)  
04/19/2001 - 04/30/2003 FY02: \$0 Total: \$5,209  
*Prin. Invest.:* S PARK  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10817** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8158  
A COMPREHENSIVE STUDY OF THE NARROW ABSORPTION- LINE GAS  
INTRINSIC TO QUASARS  
04/24/2001 - 04/30/2006 FY02: \$0 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 8159  
X-RAY RADIATION FROM NEUTRON STARS (LTSA 2000)  
05/08/2001 - 05/14/2006 FY02: \$0 Total: \$89,000  
*Prin. Invest.:* G PAVLOV  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11427** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8160  
INFRARED SILICON IMMERSION GRATING TECHNOLOGY DEVE LOPMENT  
12/03/2001 - 11/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* J GE  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11472** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8161  
COMBINED OBSERVATIONAL AND MODELING OF CIRRUS GENE RATED BY  
DEEP CONVECTION  
12/19/2001 - 12/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J VERLINDE  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11832** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8162  
MESOSPHERIC AND LOWER IONOSPHERIC EFFECTS OF SPRIT ES  
03/11/2002 - 02/28/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* V PASKO  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 12115** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8163  
COMPACT HIGH-RESOLUTION 3-D IMAGING SPECTROMETER FOR DISCOV-  
ERING OASES ON MARS  
04/26/2002 - 04/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J GE  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

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<p><b>NAG 5 12181</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8164            PLANETS AROUND NEUTRON STARS            05/20/2002 - 05/31/2003 FY02: \$0 Total: \$0  <i>Prin. Invest.:</i> A WOLSKZCZAN  <i>Tech. Officer:</i> GSFC/J BOYCE  <i>CASE Category:</i> 11 - ASTRONOMY</p>	<p><b>NAG 8 1452</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8172            R/S GRAVITATIONAL EFFECTS ON DISTORTION IN SINTERING            02/01/1998 - 01/31/2004 FY02: \$0 Total: \$565,000  <i>Prin. Invest.:</i> R M GERMAN  <i>Tech. Officer:</i> MSFC/C TALLEY  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 12242</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8165            "A WEB MAP-BASED TOOL FOR NEAR-REAL TIME MOSQUITO MANAGE-            MENT IN PENNSYLVANIA"            05/28/2002 - 06/30/2005 FY02: \$0 Total: \$0  <i>Prin. Invest.:</i> D A MILLER  <i>Tech. Officer:</i> GSFC/N MAYNARD  <i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NAG 8 1761</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8173            CRITICAL CASMIR FORCES            05/01/2001 - 04/30/2005 FY02: \$0 Total: \$115,000  <i>Prin. Invest.:</i> M CHAN  <i>Tech. Officer:</i> MSFC/D HUBBARD  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 12257</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8166            "OPTICALLY THIN PIXEL DETECTORS FOR A BROADBAND X- RAY POLA-            RIMETER".            06/27/2002 - 06/30/2003 FY02: \$0 Total: \$0  <i>Prin. Invest.:</i> T N JACKSON  <i>Tech. Officer:</i> GSFC/P V DEINS-JONES  <i>CASE Category:</i> 45 - ELECTRICAL ENGR</p>	<p><b>NAG 8 1792</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8174            RESEARCH ENTITLED, "VALIDATION DATA FOR FULL FLOW STAGED COM-            BUSTION INJECTORS"            03/13/2001 - 03/31/2005 FY02: \$0 Total: \$367,650  <i>Prin. Invest.:</i> R J SANTORO  <i>Tech. Officer:</i> MSFC/K TUCKER  <i>CASE Category:</i> 43 - CHEMICAL ENGR</p>
<p><b>NAG 5 12330</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8167            TRACE ELEMENT MOBILITY            06/28/2002 - 06/30/2005 FY02: \$0 Total: \$0  <i>Prin. Invest.:</i> S BRANTLEY  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 8 1844</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8175            FOCUSED ROCKET-EJECTOR ROCKET-BASED COMBINED-CYCLE EXPERI-            MENTS (RBCC)            07/16/2001 - 06/30/2002 FY02: \$0 Total: \$60,000  <i>Prin. Invest.:</i> R J SANTORO, S PAL  <i>Tech. Officer:</i> MSFC/J H RUFF  <i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR</p>
<p><b>NAG 5 12338</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8168            THE LATE ORDOVICIAN MASS EXTINCTION AND RECOVERY: DIVERSITY            DYNAMICS AND GEOGRAPHIC VARIABILITY            07/15/2002 - 06/30/2005 FY02: \$0 Total: \$0  <i>Prin. Invest.:</i> M E PATZKOWSKY  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 8 1854</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8176            NOVATION OF NAG8-1449 FROM YATLE TO PENN STATE            12/18/2001 - 03/01/2003 FY02: \$0 Total: \$0  <i>Prin. Invest.:</i> K GIBBLE  <i>Tech. Officer:</i> MSFC/D HUBBARD  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 5 12352</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8169            PHOTOCHEMICAL MODELING OF EARTH'S EARLY ATMOSPHERE            07/03/2002 - 06/30/2005 FY02: \$0 Total: \$0  <i>Prin. Invest.:</i> J F KASTING  <i>Tech. Officer:</i> GSFC/M MEYER  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 8 1873</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8177            THE STUDY OF ADVANCED LASER IGNITION CONCEPTS            08/16/2002 - 01/31/2003 FY02: \$0 Total: \$0  <i>Prin. Invest.:</i> D SANTAVICCA  <i>Tech. Officer:</i> MSFC/H TRINH  <i>CASE Category:</i> 46 - MECHANICAL ENGR</p>
<p><b>NAG 5 12426</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8170            CHEMICAL MODELING FOR STUDIES OF GEOTREACE CAPABILITES            08/13/2002 - 08/14/2003 FY02: \$0 Total: \$0  <i>Prin. Invest.:</i> W BRUNE  <i>Tech. Officer:</i> GSFC/J GLEASON  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 8 1877</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8178            RESEARCH ENTITLED MODELING OF DETONATION INITIATIO N AND            PROPAGATION IN COMBUSTION WAVE IGNITION            07/24/2002 - 03/31/2003 FY02: \$0 Total: \$0  <i>Prin. Invest.:</i> V YANG  <i>Tech. Officer:</i> MSFC/B BULLARD  <i>CASE Category:</i> 43 - CHEMICAL ENGR</p>
<p><b>NAG 8 1272</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8171            GRAVITATIONAL EFFECT ON THE DEVELOPMENT OF LASER WELDPPOOL            AND SOLIDIFICATIONMICROSTRUCTURE            05/09/1996 - 06/15/2003 FY02: \$0 Total: \$600,000  <i>Prin. Invest.:</i> J SINGH  <i>Tech. Officer:</i> MSFC/P DOTY, MSFC/R POWER  <i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER</p>	<p><b>NAG 9 1173</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8179            FACILITATED BLOOD PRESSURE CONTROL            09/22/1999 - 09/30/2002 FY02: \$0 Total: \$281,449  <i>Prin. Invest.:</i> J A PAWELCZYK  <i>Tech. Officer:</i> JSC/C LLOYD  <i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER</p>
	<p><b>NAG 9 1264</b> PENNSYLVANIA STATE UNIV. - UNIV. PARK 8180            BONE STRAIN DURING OG EXERCISE            11/28/2000 - 10/31/2003 FY02: \$0 Total: \$247,831  <i>Prin. Invest.:</i> P CAVANAGH  <i>Tech. Officer:</i> JSC/C W LLOYD  <i>CASE Category:</i> 56 - MEDICL</p>

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## NASA'S UNIVERSITY PROGRAM

**NAG 9 1372** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8181  
 MICROFABRICATED OPTICAL BIOSENSOR ARRAYS FOR AIR QUALITY MONITORING  
 08/01/2001 - 09/03/2004 FY02: \$0 Total: \$101,397  
*Prin. Invest.:* M V PISHKO  
*Tech. Officer:* JSC/D RUSSO  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NAG10 326** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8182  
 NASA INTERNSHIP DEVELOPMENT PROGRAM NASA INTERNSHIP DEVELOPMENT PROGRAM  
 09/06/2002 - 09/08/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A FREEMAN  
*Tech. Officer:* KSC/G BUCKINGHA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 3 01082** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8183  
 REDUCED THERMAL CONDUCTIVITY ZIRCONIA BASED THERMAL BARRIER COATINGS TBC APPLIED ON ALUMINUM BOND  
 03/08/2001 - 08/30/2002 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* NOT AVAILABLE  
*Tech. Officer:* GRC/R DRAPER  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAS 3 02111** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8184  
 NRA FOR OPTIMIZED DESIGNS OF ULTRA-HIGH POWER DENSITY MACHINES  
 04/12/2002 - 01/12/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* H HOFMANN  
*Tech. Officer:* GRC/J J TRUDELL, GRC/D ERCEGOVIC  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 5 00136** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8185  
 SWIFT ULTRAVIOLET & OPTICAL TELESCOPES X-RAY TELESCOPE, GROUND STATION SYSTEM  
 04/27/2000 - 12/31/2006 FY02: \$900,000 Total: \$11,682,000  
*Prin. Invest.:* J A NOUSEK  
*Tech. Officer:* GSFC/R BORELLI  
*CASE Category:* 11 - ASTRONOMY

**NAS 8 01128** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8186  
 CHANDRA PROGRAM (SCIENCE INSTRUMENT) - ADVANCED CHARGE COUPLED IMAGING DEVICE SPECTROMETER (ACIS)  
 03/01/2002 - 09/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* G GARMIRE  
*Tech. Officer:* MSFC/M C SMITH, MSFC/M S OSBORNE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 8 38252** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8187  
 AXAF CCD IMAGING SPECTROMETER  
 06/27/1990 - 03/01/2002 FY02: \$0 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 8188  
 R/S "EXPERIMENTAL & ANALYTICAL MODELING OF THE ROCKET EJECTOR MODE"  
 09/04/1996 - 07/01/2001 FY02: \$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 8189  
 FOOT REACTION FORCES DURING SPACE FLIGHT  
 05/01/1999 - 09/30/2002 FY02: \$0 Total: \$558,015  
*Prin. Invest.:* P CAVANAGH  
*Tech. Officer:* JSC/M KAMMAN  
*CASE Category:* 56 - MEDICAL

**NCC 1 300** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8190  
 HOX MEASUREMENTS IN THE TROPOSPHERE WITH THE AIRBORNE TROPOSPHERIC HYDROGEN OXIDES SENSOR  
 07/07/1998 - 07/30/2001 FY02: \$0 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 8191  
 NASTRAN DMAP FUZZY STRUCTURES PROGRAMMING  
 03/15/2000 - 12/31/2001 FY02: \$0 Total: \$104,028  
*Prin. Invest.:* V W SPARROW  
*Tech. Officer:* LARC/R D BUEHRLE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 406** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8192  
 MODELING THE NOISE OF ARBITRARY, MANEUVERING ROTORS  
 09/07/2000 - 12/21/2001 FY02: \$0 Total: \$62,131  
*Prin. Invest.:* K S BRENTNER  
*Tech. Officer:* LARC/H E JONES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 414** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8193  
 TRACE-P OH & HO2 MEASUREMENTS W/AIRBORNE TROPOSPHERIC HYDROGEN OXIDES (ATHOS) ON THE NASA DC-8  
 09/25/2000 - 03/31/2003 FY02: \$0 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 8194  
 PENN STATE ROTORCRAFT CENTER OF EXCELLENCE  
 02/26/1996 - 12/31/2000 FY02: -\$644 Total: \$1,961,848  
*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 8195  
 CREATING THE PENN STATE ASTROBIOLOGY RESEARCH CENTER  
 09/17/1998 - 06/30/2003 FY02: \$0 Total: \$3,441,143  
*Prin. Invest.:* H OHMOTO  
*Tech. Officer:* ARC/R A GRAYMES, ARC/W W DOLCI  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 2 1122** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8196  
 A NOVEL OXIDATION-RESISTANT THERMAL PROTECTION MATERIAL  
 06/07/1999 - 08/31/2001 FY02: \$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 8197  
 NEW TECHNIQUES FOR DATA FUSION VISUALIZATION & CONDITION MONITORING OF COMPLEX SYSTEMS  
 01/12/2001 - 09/30/2002 FY02: \$0 Total: \$235,000  
*Prin. Invest.:* J L WISE  
*Tech. Officer:* ARC/J E PALLIX  
*CASE Category:* 22 - COMPUTER SCIENCE

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**NCC 2 1331** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8198  
 ALGORITHMS FOR OBSTACLE DETECTION FOR COLLISION AVOIDANCE  
 USING INFRARED IMAGES  
 04/03/2002 - 04/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* O I CAMPS  
*Tech. Officer:* ARC/A AHUMADA, ARC/J B MULLIGAN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 2 5410** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8199  
 GREENHOUSE MECHANISMS FOR WARMING EARLY MARS  
 11/22/2000 - 11/30/2002 FY02: \$0 Total: \$45,260  
*Prin. Invest.:* J F KASTINGS  
*Tech. Officer:* ARC/R E YOUNG, ARC/D DESMARAIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5511** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8200  
 IDENTIFYING THE STRUCTURAL BUILDING BLOCKS OF THE PROTEIN  
 UNIVERSE  
 08/06/2002 - 07/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* H ZHA  
*Tech. Officer:* ARC/S LIANG  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 3 597** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8201  
 MULTIAXIAL DEFORMATION STUDY OF HIGH TEMPERATURE METALLIC  
 MATERIALS  
 01/28/1998 - 11/30/2001 FY02: \$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 8202  
 COMPUTATIONAL AND EXPERIMENTAL STUDY OF ENERGETIC MATERIALS  
 IN A COUNTERLOW MICROGRAVITY ENVIRONMENT  
 06/28/1999 - 06/09/2003 FY02: \$0 Total: \$61,980  
*Prin. Invest.:* R A YETTER  
*Tech. Officer:* GRC/D L UBRAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 3 767** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8203  
 LOW CONDUCTIVE THERMAL BARRIER COATINGS PRODUCED BY ION  
 BEAM ASSISTED EB-PVD WITH CONTROLLED POROSITY  
 02/01/2000 - 01/31/2003 FY02: \$0 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 8204  
 DEFORMATION RESPONSE AND LIFE OF METALLIC COMPOSITES  
 01/12/2001 - 12/17/2002 FY02: \$0 Total: \$100,764  
*Prin. Invest.:* D J LISSENDEN  
*Tech. Officer:* GRC/S M ARNOLD  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 920** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8205  
 MULTISCALE COMPUTATIONAL TOOLS FOR PREDICTING THERMODYNAMICS,  
 MOISTURE EVOLUTION AND MECHANICAL PROPERTIES  
 10/23/2001 - 10/21/2005 FY02: \$10,000 Total: \$10,000  
*Prin. Invest.:* D CHEN  
*Tech. Officer:* GRC/M V NATHAL  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 3 973** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8206  
 A PRELIMINARY STUDY: IDENTIFICATION OF THE MECHANISMS THROUGH  
 WHICH RECOMBINATION CENTERS ARE CREATED  
 07/11/2002 - 02/10/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* P M LENAHAN  
*Tech. Officer:* GRC/R S OKOJIE  
*CASE Category:* 13 - PHYSICS

**NCC 5 432** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8207  
 LUAV II: LEARNING USING ERASER AIRCRAFT MISSIONS FOR UNDERSTAND-  
 ING REMOTE SENSING, ATMOSPHERIC SAMPLING  
 09/20/1999 - 06/30/2003 FY02: \$0 Total: \$538,637  
*Prin. Invest.:* D L GRABOWSKI  
*Tech. Officer:* GSFC/R E GABRYNS  
*CASE Category:* 99 - MULTI INTERDISCIPLINARY, OTHER

**NCC 5 508** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8208  
 NASA/GSFC COOPERATIVE ENTERPRISE, PROP # 3552  
 08/15/2000 - 12/31/2002 FY02: \$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 8209  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) PREVIOUS  
 GRANT NO. NGT-1-52249  
 05/25/2001 - 06/30/2003 FY02: \$0 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 8210  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/20/1998 - 06/30/2002 FY02: \$0 Total: \$78,001  
*Prin. Invest.:* P K MCLAUGHLIN  
*Tech. Officer:* LARC/T NORUM, LARC/B J JANSEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 2 52275** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8211  
 NATIONAL ROTORCRAFT TECHNOLOGY CENTER (NRTC) ROTOR CRAFT  
 CENTER OF EXCELLENCE (RCOE)  
 02/14/2001 - 01/31/2003 FY02: \$0 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 8212  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 07/15/1999 - 08/14/2002 FY02: \$0 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 8213  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 06/19/2000 - 08/14/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* D A SANTAVICCA  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 46 - MECHANICAL ENGR

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NGT 5 118** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8214  
 MODELING OF THE WEST ANTARCTIC ICE SHEET TO ASSESS DIVIDE  
 STABILITY & ICE STREAM EVOLUTION/STUDENT  
 05/31/2001 - 08/14/2004 FY02: \$0 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 8215  
 CHARTING THE COURSE OF CIRCUMSTELLAR MATERIAL STUDENT: JOHN  
 DEBES  
 05/31/2001 - 07/31/2004 FY02: \$0 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 8216  
 TESTING BINARY BLACK HOLE CODES IN STRONG FIELD REGIMES  
 (STUDENT: DAVID GARRISON)  
 06/12/2001 - 06/30/2003 FY02: \$0 Total: \$22,000  
 Prin. Invest.: P LAGUNA  
 Tech. Officer: GSFC/M S BURRELL  
 CASE Category: 13 - PHYSICS

**NGT 5 30171** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8217  
 INTEGRATED SATELLITE, MODEL, AND FIELD-BASED STUDIES OF CON-  
 TROLSON THE EXTENT OF SURFACE MELTING I  
 09/04/1998 - 08/31/2001 FY02: \$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 8218  
 EDDY CORRELATION MEASUREMENT OF CO2 FLUX IN VOLCANIC-  
 HYDROTHERMAL ENVIRONMENTS SYS/STUDENT J. LEWIC  
 08/19/1999 - 08/31/2002 FY02: \$0 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 8219  
 UNDERSTANDING HIGH TROPICAL CIRRUS/STUDENT: MATTHEW T. BOEHM  
 08/18/1999 - 08/31/2001 FY02: \$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 8220  
 A UNIFIED DATABASE MODEL FOR THE EXPLORATION AND ANALYSIS OF  
 SPATIOTEMPORAL ENVIRONMENTAL  
 08/14/2000 - 08/31/2001 FY02: \$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 8221  
 PREDICTIVE SIGNATURES ASSOCIATED WITH THE DEVELOPM ENT OF  
 TROPICAL WEATHER SYSTEMS IN THE EAST  
 09/07/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
 Prin. Invest.: G JENKINS  
 Tech. Officer: GSFC/M WEI  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40064** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8222  
 SUPPORT TO PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLL AND  
 FELLOWSHIP PROGRAM.  
 02/25/1997 - 01/31/2001 FY02: \$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 8223  
 PENNSYLVANIA SPACE GRANT COLL AND FELLOWSHIP PR OGRAM  
 02/22/2001 - 01/31/2005 FY02: \$0 Total: \$482,500  
 Prin. Invest.: R DEVON  
 Tech. Officer: GSFC/D DETROYE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50236** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8224  
 GALAXY DISK EVOLUTION\_(STUDENT: DAVID ANDERSEN)  
 05/27/1999 - 06/30/2002 FY02: \$0 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 8225  
 DEEP OBSERVATIONS WITH NASA'S CHANDRA X-RAY OBSERV ATORY:  
 RESOLVING THE DISCRETE SOURCES OF THE COS  
 06/02/1999 - 06/30/2002 FY02: \$0 Total: \$66,000  
 Prin. Invest.: N BRANDT  
 Tech. Officer: GSFC/L SMITH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50277** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8226  
 PEERING THROUGH THE CLOUDS: ABSORPTION STUDIES OF LUMINOUS  
 ACTIVE GALAXIES WITH THE NEW GENERA  
 06/20/2000 - 07/31/2003 FY02: \$0 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 8227  
 COSMIC RAY ENERGISTICS AND MASS BALLOON EXPERIMENT STUDENT:  
 ROBERT KILLOREN  
 06/26/2000 - 07/31/2003 FY02: \$0 Total: \$44,000  
 Prin. Invest.: S COUTU  
 Tech. Officer: GSFC/L SMITH  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50399** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8228  
 ORIGINS AND EVOLUTION OF HOT SUBDWARFS  
 06/13/2002 - 07/31/2005 FY02: \$0 Total: \$0  
 Prin. Invest.: R WADE  
 Tech. Officer: GSFC/K BLANDING  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52876** PENNSYLVANIA STATE UNIV. - UNIV. PARK 8229  
 ADVANCED SPACE PROPULSION USING ANTIMATTER, (GSRP)  
 08/13/1999 - 08/14/2002 FY02: \$0 Total: \$66,000  
 Prin. Invest.: G A SMITH  
 Tech. Officer: MSFC/J DOWDY  
 CASE Category: 46 - MECHANICAL ENGR



## NASA'S UNIVERSITY PROGRAM

## PENNSYLVANIA

**NAG 3 2424** PHIL COLL OF PHARMACY & SCIENCE 8230  
 IN VIVO EVALUATION OF A NOVEL AND IMPROVED INSTRUMENT FOR  
 OBJECTIVE EVALUATION OF OPHTHALMIC LENS O  
 05/15/2000 - 12/15/2001 FY02: \$0 Total: \$49,872  
 Prin. Invest.: D DUBLIN  
 Tech. Officer: GRC/B S SINGH  
 CASE Category: 49 - ENGINEERING, OTHER

**NAG 5 10094** SWARTHMORE COLL 8231  
 HIGH RESOLUTION SPECTROSCOPIC DIAGNOSTICS OF HOT PLASMA IN  
 THE STELLAR WIND OF EPSILON CANIS MAJORI  
 11/21/2000 - 11/30/2001 FY02: \$0 Total: \$23,396  
 Prin. Invest.: D H COHEN  
 Tech. Officer: GSFC/R MUSHOTZKY  
 CASE Category: 11 - ASTRONOMY

**NAG 5 8649** TEMPLE UNIV 8232  
 TO DEVELOP A PROTOTYPE AUTOMATED NETWORK FAULT DIAGNOSIS  
 SYSTEM FOR A MULTI-CAST BASED IP NETWORK  
 07/28/1999 - 01/31/2001 FY02: \$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 8233  
 FACTORS MODULATING RADIATION INDUCED G2-DELAYS  
 06/15/1998 - 03/01/2003 FY02: \$0 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 8234  
 GENETICALLY ENGINEERED COLLAGEN II FOR SMALL BIOMATERIALS  
 08/22/2001 - 09/30/2004 FY02: \$0 Total: \$54,000  
 Prin. Invest.: A FERTALA  
 Tech. Officer: JSC/D RISEN  
 CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1400** THOMAS JEFFERSON UNIV 8235  
 MICROGRAVITY ON HUMAN OSTEOBLAST LIFE HISTORY: EXPERIMENTAL  
 AND NUMERICAL STUDY  
 07/02/2002 - 09/30/2004 FY02: \$0 Total: \$0  
 Prin. Invest.: I M SHAPIRO  
 Tech. Officer: JSC/D RISIN  
 CASE Category: 56 - MEDICAL

**NAG 3 2172** UNIV OF PENNSYLVANIA 8236  
 COLLOIDAL ASSEMBLY IN ENTROPICALLY DRIVEN LOW-VOLUME  
 FRACTION BINARY PARTICLE SUSPENSION  
 06/08/1998 - 02/28/2003 FY02: \$0 Total: \$629,241  
 Prin. Invest.: A G YODH  
 Tech. Officer: GRC/R A WILKINSEN  
 CASE Category: 13 - PHYSICS

**NAG 3 2417** UNIV OF PENNSYLVANIA 8237  
 ENGINEERING NOVEL BIOCOLLOID SUSPENSIONS ENGINEERING NOVEL  
 BIOCOLLOID SUSPENSIONS  
 05/08/2000 - 11/30/2003 FY02: \$0 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 8238  
 COUPLING COMPUTER VISION AND ASTRONAUT PERFORMANCE FOR  
 MULTI-PERSON MODELING AND ANALYSIS  
 08/25/1999 - 08/31/2002 FY02: \$0 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 8239  
 MICROWAVE FOREGROUNDS AND THEIR POLARIZATION (PI TRANSFER  
 INST ADV STUDIES NAG5-6034)  
 03/08/2000 - 09/30/2002 FY02: \$0 Total: \$249,941  
 Prin. Invest.: M TEGMARK  
 Tech. Officer: GSFC/R OLIVERSEN  
 CASE Category: 11 - ASTRONOMY

**NAG 5 9229** UNIV OF PENNSYLVANIA 8240  
 BLAST: A BALLOON-BORNE LARGE-APERTURE SUB-MILLIMETER TELE-  
 SCOPE - A COMPREHENSIVE PLAN FOR GALAXY  
 03/20/2000 - 03/30/2003 FY02: \$0 Total: \$621,000  
 Prin. Invest.: M DEVLIN  
 Tech. Officer: GSFC/G STRINGFELLOW  
 CASE Category: 11 - ASTRONOMY

**NAG 5 10731** UNIV OF PENNSYLVANIA 8241  
 A VERY WIDE AREA SURVEY FOR TRANS-NEPTUNIAN OBJECTS  
 04/11/2001 - 04/14/2004 FY02: \$0 Total: \$35,000  
 Prin. Invest.: C ALCOCK  
 Tech. Officer: GSFC/J BOYCE  
 CASE Category: 11 - ASTRONOMY

**NAG 5 10923** UNIV OF PENNSYLVANIA 8242  
 MAPPING LARGE-SCALE STRUCTURE IN THE UNIVERSE  
 05/22/2001 - 03/14/2005 FY02: \$0 Total: \$129,447  
 Prin. Invest.: B JAIN  
 Tech. Officer: GSFC/R J OLIVERSEN  
 CASE Category: 11 - ASTRONOMY

**NAG 5 10924** UNIV OF PENNSYLVANIA 8243  
 THE CLUSTERING OF GALAXIES AND DARK MATTER AT INTERMEDIATE  
 REDSHIFTS (ATP 99)  
 05/22/2001 - 03/14/2003 FY02: \$0 Total: \$67,762  
 Prin. Invest.: B JAIN  
 Tech. Officer: GSFC/R J OLIVERSEN  
 CASE Category: 11 - ASTRONOMY

**NAG 5 11099** UNIV OF PENNSYLVANIA 8244  
 CMB POLARIZATION ANALYSIS (LTSA 2000)  
 07/24/2001 - 10/31/2002 FY02: \$0 Total: \$91,884  
 Prin. Invest.: M TEGMARK  
 Tech. Officer: GSFC/R J OLIVERSEN  
 CASE Category: 11 - ASTRONOMY

**NAG 5 12033** UNIV OF PENNSYLVANIA 8245  
 THE FORMATION AND EVOLUTION OF DARK MATTER HALOS  
 04/12/2002 - 04/15/2002 FY02: \$0 Total: \$0  
 Prin. Invest.: C M MA  
 Tech. Officer: GSFC/M SALAMON  
 CASE Category: 11 - ASTRONOMY

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1350**                      **UNIV OF PENNSYLVANIA**                      **8246**  
 FOR RESEARCH ENTITLED: QUANITATIVE ANALYSIS INTER ACTIONS  
 DURING MEMBRANE PROTEIN CRYSTALLIZATION"  
 06/19/1997 - 10/31/2001                      FY02: \$0                      Total: \$847,373  
*Prin. Invest.:* P LOLL  
*Tech. Officer:* MSFC/R CROMISE, MSFC/C R TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1483**                      **UNIV OF PENNSYLVANIA**                      **8247**  
 SURFACE TRANSFORMATION OF REACTIVE GLASS IN A MIRCROGRAVITY  
 ENVIRONMENT  
 02/03/1998 - 01/31/2002                      FY02: \$0                      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**                      **8248**  
 RESEARCH POLYOMOSOMES: TOUGH, GRANT VESICLES FROM BLOCK  
 COPOLYMERS  
 05/26/2000 - 11/30/2003                      FY02: \$0                      Total: \$164,000  
*Prin. Invest.:* D A  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1161**                      **UNIV OF PENNSYLVANIA**                      **8249**  
 PREDICTING VULNERABILITY OF PERFORMANCE IMPAIRMENT FROM  
 SLEEP LOSS  
 09/21/1999 - 09/20/2002                      FY02: \$0                      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**                      **8250**  
 ENVIRONMENTAL BIOMEDICAL STRESS DATA  
 12/14/2000 - 10/31/2001                      FY02: \$0                      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**                      **8251**  
 CREW TASK SIMULATION FOR MAINTENANCE, TRAINING AND SAFETY  
 02/22/2001 - 09/30/2003                      FY02: \$0                      Total: \$142,500  
*Prin. Invest.:* N BADLER  
*Tech. Officer:* JSC/B WOOLFORD  
*CASE Category:* 56 - MEDICL

**NAG 9 1357**                      **UNIV OF PENNSYLVANIA**                      **8252**  
 IMPACT OF MICROGRAVITY ON HUMAN OSTEBLAST LIFE HIS TORY:  
 EXPERIMENTAL INVESTIGATION & NUMERICAL STUD  
 08/22/2001 - 11/01/2001                      FY02: \$0                      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**                      **8253**  
 DEVELOPMENT OF A TIME RESOLVED VISIBLE AND ULTRAVI OLET SPEC-  
 TROSCOPIC TECHNIQUE FOR MEASURING RES  
 08/31/1998 - 08/31/2001                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* H DAI, L LETENDRE  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30460**                      **UNIV OF PENNSYLVANIA**                      **8254**  
 THE ANOMOLUS ISOTOPIC ENRICHMENT IN STRATOSPHERIC OZONE--A  
 KEY TO UNDER-STANDING ATMOSPHERIC PHOTOCH  
 08/21/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D HAI-LUNG  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50267**                      **UNIV OF PENNSYLVANIA**                      **8255**  
 ENGINEERING BIOADHESIVE COLLOIDAL SUSPENSIONS  
 07/07/1999 - 06/30/2002                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* D A HAMMER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50415**                      **UNIV OF PENNSYLVANIA**                      **8256**  
 ENGINEERING BIODEGRADABLE, ARTIFICIAL LEUKOCYTES FOR TAR-  
 GETED DELIVERY OF THERAPEUTICS IN HUMAN  
 08/06/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D HAMMER  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1186**                      **UNIV OF PITTSBURGH**                      **8257**  
 VESTIBULO-AUTONOMIC CIRCUITS  
 03/17/1998 - 03/31/2003                      FY02: \$0                      Total: \$542,675  
*Prin. Invest.:* C D BALABAN, C A SCUDDER  
*Tech. Officer:* ARCM M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2396**                      **UNIV OF PITTSBURGH**                      **8258**  
 FORCED TWO-DIMENSIONAL TURBULENCE IN FREELY SUSPEN DED FILMS  
 04/14/2000 - 11/30/2003                      FY02: \$0                      Total: \$170,000  
*Prin. Invest.:* D WI  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2538**                      **UNIV OF PITTSBURGH**                      **8259**  
 FUNDING  
 02/06/2001 - 04/08/2003                      FY02: \$0                      Total: \$60,015  
*Prin. Invest.:* W J CHOYKE  
*Tech. Officer:* GRC/D J LARKIN  
*CASE Category:* 13 - PHYSICS

**NAG 3 2730**                      **UNIV OF PITTSBURGH**                      **8260**  
 FULL-FIELD INTERFEROMETRIC MEASUREMENTS OF THICKNE SS OF  
 FREELY SUSPENDED LIQUID FILMS  
 03/29/2002 - 02/19/2006                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D L WU  
*Tech. Officer:* GRC/M M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3723**                      **UNIV OF PITTSBURGH**                      **8261**  
 PHOTOMETRIC ANALYSIS OF SPACECRAFT PLANETARY IMAGE  
 02/12/1997 - 10/31/2000                      FY02: \$0                      Total: \$305,442  
*Prin. Invest.:* S W HAPKE  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 4116**                      **UNIV OF PITTSBURGH**                      **8262**  
 ELECTRON-ION RECOMBINATION PROCESSES RELATING TO P  
 03/03/1997 - 12/31/2002                      FY02: \$0                      Total: \$399,775  
*Prin. Invest.:* D JOHNSON  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## NASA'S UNIVERSITY PROGRAM

## PENNSYLVANIA

<b>NAG 5 5267</b>	<b>UNIV OF PITTSBURGH</b>	<b>8263</b>	<b>NAG 5 9439</b>	<b>UNIV OF PITTSBURGH</b>	<b>8271</b>
LABORATORY SUPPORT FOR THE CRYOGENIC WHOLE AIR SAMPLING OF CARBON DIOXIDE IN THE UPPER MESOSPHERE			MONITORING THE HAZARDS OF SILICI VOLCANOES WITH REMOTE SENSING		
06/01/2000 - 05/24/2003	FY02: \$0	Total: \$131,870	04/14/2000 - 04/30/2003	FY02: \$0	Total: \$124,715
<i>Prin. Invest.:</i> E ZIPF			<i>Prin. Invest.:</i> M S RAMSEY		
<i>Tech. Officer:</i> GSFC/J C BINTON			<i>Tech. Officer:</i> GSFC/H V FREY		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<b>NAG 5 7930</b>	<b>UNIV OF PITTSBURGH</b>	<b>8264</b>	<b>NAG 5 9466</b>	<b>UNIV OF PITTSBURGH</b>	<b>8272</b>
THE NATURE AND EVOLUTION OF THE GASEOUS AND STELLA R COMPONENTS OF THE GALAXY POPULATION ASSOCIATE			EMPLACEMENT OF TERRESTRIAL & PLANETARY LAVA FLOWS		
12/14/1998 - 12/14/2003	FY02: \$0	Total: \$310,981	04/18/2000 - 04/14/2003	FY02: \$0	Total: \$58,200
<i>Prin. Invest.:</i> D A TURNSHEK			<i>Prin. Invest.:</i> D A CROWN		
<i>Tech. Officer:</i> GSFC/D K WEST			<i>Tech. Officer:</i> GSFC/J A GRANT		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<b>NAG 5 8211</b>	<b>UNIV OF PITTSBURGH</b>	<b>8265</b>	<b>NAG 5 9836</b>	<b>UNIV OF PITTSBURGH</b>	<b>8273</b>
QUANTITATIVE SPECTROSCOPIC ANALYSES OF MASSIVE STARS (L TSA98)			MULTI-DIMENSIONAL RADIATIVE TRANSFER IN THE CIRCUM STELLAR MEDIUM		
02/26/1999 - 02/29/2004	FY02: \$0	Total: \$227,653	10/05/2000 - 10/14/2001	FY02: \$0	Total: \$11,736
<i>Prin. Invest.:</i> J D HILLIER			<i>Prin. Invest.:</i> D HILLIER		
<i>Tech. Officer:</i> GSFC/D K WEST			<i>Tech. Officer:</i> GSFC/S HEAP		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 8531</b>	<b>UNIV OF PITTSBURGH</b>	<b>8266</b>	<b>NAG 5 10222</b>	<b>UNIV OF PITTSBURGH</b>	<b>8274</b>
MINIATURE IN SITU GEOCHRONOLOGY INSTRUMENT FOR PLANETARY SURFACE DEPLOYMENT: BREADBOARD DEVELOPMENT			REMOTE SENSING OF PLANETARY SURFACES: MODELING & APPLICATIONS		
06/15/1999 - 06/30/2001	FY02: \$0	Total: \$121,128	01/11/2001 - 01/14/2004	FY02: \$0	Total: \$74,200
<i>Prin. Invest.:</i> B W STEWART			<i>Prin. Invest.:</i> B W HAPKE		
<i>Tech. Officer:</i> GSFC/B BETTS			<i>Tech. Officer:</i> GSFC/D SENSKE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<b>NAG 5 8546</b>	<b>UNIV OF PITTSBURGH</b>	<b>8267</b>	<b>NAG 5 10377</b>	<b>UNIV OF PITTSBURGH</b>	<b>8275</b>
UNRAVELING THE EVOLUTION OF GALAXIES (L TSA 98)			TOWARDS UNDERSTANDING STARBURST GALAXIES AT LOW & HIGH REDSHIFT (FUSE-00)		
05/21/1999 - 03/31/2003	FY02: \$0	Total: \$279,861	02/08/2001 - 02/14/2003	FY02: \$0	Total: \$17,000
<i>Prin. Invest.:</i> A CONNOLLY			<i>Prin. Invest.:</i> J D HILLIER		
<i>Tech. Officer:</i> GSFC/D K WEST			<i>Tech. Officer:</i> GSFC/G SONNEBORN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 9051</b>	<b>UNIV OF PITTSBURGH</b>	<b>8268</b>	<b>NAG 5 10378</b>	<b>UNIV OF PITTSBURGH</b>	<b>8276</b>
AN INTERDISCIPLINARY TEACHER TRAINING PROGRAM ON EARTH SYSTEM SCIENCE USING INFORMATION TECHNOLOGY			JUST WHAT IS ETA CARINAE (FUSE 00)		
02/14/2000 - 02/14/2003	FY02: \$0	Total: \$76,692	02/08/2001 - 02/14/2003	FY02: \$0	Total: \$30,500
<i>Prin. Invest.:</i> A I PANAH			<i>Prin. Invest.:</i> J D HILLIER		
<i>Tech. Officer:</i> GSFC/N KHAZENIE			<i>Tech. Officer:</i> GSFC/G SONNEBORN		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 9399</b>	<b>UNIV OF PITTSBURGH</b>	<b>8269</b>	<b>NAG 5 10628</b>	<b>UNIV OF PITTSBURGH</b>	<b>8277</b>
MULTIFREQUENCY, MULTIREOLUTION IMAGE DETECTION			ASTROMETRIC OBSERVATION OF PLANETARY SYSTEMS DISCOVERED BY RADIAL VELOCITY TECHNIQUES		
04/12/2000 - 03/31/2003	FY02: \$0	Total: \$77,300	03/17/2001 - 03/14/2003	FY02: \$0	Total: \$24,800
<i>Prin. Invest.:</i> A CONNOLLY			<i>Prin. Invest.:</i> G GATEWOOD		
<i>Tech. Officer:</i> GSFC/J BREDEKAMP			<i>Tech. Officer:</i> GSFC/J M BOYCE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 9438</b>	<b>UNIV OF PITTSBURGH</b>	<b>8270</b>	<b>NAG 5 11959</b>	<b>UNIV OF PITTSBURGH</b>	<b>8278</b>
MULTI-SPECTRAL REMOTE SENSING OF BRUSH FIRE SCARS IN ARID URBAN REGIONS: ANALYSIS OF FUTURE FIRE AND			ELECTRON-ION RECOMBINATION PROCESSES		
04/14/2000 - 04/30/2003	FY02: \$0	Total: \$105,703	04/03/2002 - 04/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> M S RAMSEY			<i>Prin. Invest.:</i> R JOHNSEN		
<i>Tech. Officer:</i> GSFC/H V FREY			<i>Tech. Officer:</i> GSFC/J HILLMAN		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

## PENNSYLVANIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 12521**                      **UNIV OF PITTSBURGH**                      **8279**  
 SUPPORT FOR SYMPOSIUM ON SOLAR SYSTEM REMOTE SENSING  
 08/22/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B HAPKE  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1587**                      **UNIV OF PITTSBURGH**                      **8280**  
 R/S FREELY SUSPENDED LIQUID FILMS AND THEIR APPLICATIONS IN  
 BIOLOGICAL RESEARCH  
 01/28/1999 - 11/30/2002                      FY02: \$0                      Total: \$283,050  
*Prin. Invest.:* X L WU  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

**NAG 9 1036**                      **UNIV OF PITTSBURGH**                      **8281**  
 SLEEPING SHORT  
 06/22/1998 - 07/26/2002                      FY02: \$0                      Total: \$695,951  
*Prin. Invest.:* T H MONK  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1234**                      **UNIV OF PITTSBURGH**                      **8282**  
 SLEEP STUDY  
 10/18/2000 - 09/30/2003                      FY02: \$0                      Total: \$267,523  
*Prin. Invest.:* T H MONK  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 56 - MEDICL

**NAS 2 02058**                      **UNIV OF PITTSBURGH**                      **8283**  
 FUNDAMENTAL TECHNOLOGIES FOR DEVELOPMENT OF BIOMOLECULAR  
 SENSORS  
 12/20/2001 - 12/10/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S ASHER, R GETZENBERG, D FINGOLD  
*Tech. Officer:* ARC/J HINES, ARC/P FUNG  
*CASE Category:* 56 - MEDICL

**NAS 8 97111**                      **UNIV OF PITTSBURGH**                      **8284**  
 OPERATION AND MANAGEMENT OF THE NASA MID-ATLANTIC TECHNOLOGY  
 CENTER  
 01/29/1997 - 02/23/2001                      FY02: \$0                      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**                      **8285**  
 EVOLUTION OF THE MARTIAN HIGHLANDS: IMPLICATIONS FROM DRAINAGE  
 BASIN CHARACTERISTICS AND VALLEY  
 06/11/2001 - 06/30/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* D A CROWN  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 5 50252**                      **UNIV OF PITTSBURGH**                      **8286**  
 AUTOMATED LEARNING WITH PROBABILISTIC NETWORKS FOR STUDY &  
 EXPLORATION OF THE UNIVERSE/STUDENT: DENV  
 06/08/1999 - 01/31/2003                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* M DRUZDZEL  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50256**                      **UNIV OF PITTSBURGH**                      **8287**  
 THE ROLE OF THE CEREBELLUM IN CARDIOVASCULAR RESPONSES TO  
 CHANGES IN GRAVITY STUDENT: MICHAEL HOLME  
 07/07/1999 - 06/30/2001                      FY02: \$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**                      **8288**  
 MULTISENSORY INTEGRATION IN THE VESTIBULAR NUCLEI: IMPLICATIONS  
 FOR RECOVERY OF FUNCTION FOLLOWING  
 07/06/2000 - 06/30/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* B J YATES  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50318**                      **UNIV OF PITTSBURGH**                      **8289**  
 CORTICAL REPRESENTATION OF SPACE IN HUMANS/STUDENT ELISHA  
 MERRIAM  
 07/11/2000 - 07/14/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* C L COLBY  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50408**                      **UNIV OF PITTSBURGH**                      **8290**  
 ROLE OF THE VESTIBULAR NUCLEI IN RECOVERY OF ORTHOSTATIC  
 TOLERANCE FOLLOWING VESTIBULAR LESIONS  
 07/31/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B YATES  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7113**                      **VILLANOVA UNIV**                      **8291**  
 DETERMINING THE PHYSICAL PROPERTIES OF THE MAIN SEQUENCE B  
 STARS  
 03/25/1998 - 03/31/2003                      FY02: \$0                      Total: \$44,393  
*Prin. Invest.:* E FITZPATRICK  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8388**                      **VILLANOVA UNIV**                      **8292**  
 NEW INSIGHTS INTO THE STRUCTURE & EVOLUTION OF CV WHITE  
 DWARFS USING THE IUE NEWSIPS FINAL ARCHIVE  
 03/05/1999 - 03/14/2002                      FY02: \$0                      Total: \$81,017  
*Prin. Invest.:* E M SION  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8985**                      **VILLANOVA UNIV**                      **8293**  
 SOLAR PHYSICS WITH FUSE: FUV STUDIES OF SOLAR ANALOGS & TWINS  
 - FUSE  
 01/27/2000 - 07/31/2002                      FY02: \$0                      Total: \$65,700  
*Prin. Invest.:* E F GUINAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10369**                      **VILLANOVA UNIV**                      **8294**  
 THE COSMIC DISTANCE SCALE: AN ACCURATE DISTANCE TO THE LMC  
 USING ECLIPSING BINARIES (FUSE 00)  
 02/08/2001 - 02/14/2003                      FY02: \$0                      Total: \$62,500  
*Prin. Invest.:* E F GUINAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

RHODE ISLAND

**NAG 5 10385** **VILLANOVA UNIV** **8295**  
 A STUDY OF THE ATMOSPHERES OF THE MAIN SEQUENCE B STARS (FUSE 00)  
 02/08/2001 - 02/14/2003 FY02: \$0 Total: \$42,500  
*Prin. Invest.:* E L FITZPATRICK  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10386** **VILLANOVA UNIV** **8296**  
 PHYSICS OF BOUNDARY LAYERSWHITE DWARF ACCRETION IN DWARF NOVAE (FUSE 00)  
 02/08/2001 - 05/31/2003 FY02: \$0 Total: \$57,900  
*Prin. Invest.:* E M SION  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10387** **VILLANOVA UNIV** **8297**  
 THE FUV SUN IN TIME A STUDY OF SOLAR ANALOGS OF DIFFERENT AGES (FUSE 00)  
 02/08/2001 - 02/14/2003 FY02: \$0 Total: \$30,400  
*Prin. Invest.:* E F GUINAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10686** **VILLANOVA UNIV** **8298**  
 CNO ABUNDANCES IN LMC BN AND BC SUPERGIANTS (FUSE 2000)  
 04/04/2001 - 04/14/2003 FY02: \$0 Total: \$27,208  
*Prin. Invest.:* E L FITPATRICK  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11482** **VILLANOVA UNIV** **8299**  
 ACCRETING WHITE DWARFS IN CATAclysmic BINARIES (ADP 2001)  
 12/21/2001 - 12/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* E M SION  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12067** **VILLANOVA UNIV** **8300**  
 PROBING WHITE DWARF ACCRETORS AND INNER DISK STRUCTURE OF HIGH ACCRETIONRATE DWARF NOVAE  
 04/26/2002 - 04/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* E M SION  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12125** **VILLANOVA UNIV** **8301**  
 FUSE OBSERVATIONS OF THE SUN IN TIME: TRANSITION REGION PHYSICS AND EVOLUTION FUV IRRADIANCES  
 05/09/2002 - 05/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* E F GUINAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12137** **VILLANOVA UNIV** **8302**  
 HIGH-LATITUDE B STARS (FUSE 2001)  
 05/01/2002 - 04/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* E FITZPATRICK  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12138** **VILLANOVA UNIV** **8303**  
 ECLIPSING BINARIES IN THE LMC (FUSE 02)  
 05/01/2002 - 04/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* E F QUINAN  
*Tech. Officer:* GSFC/G Q SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6080** **WEST CHESTER UNIV OF PA** **8304**  
 WEST CHESTER UNIV CONCEPTS & PEDAGOGICAL  
 08/27/1997 - 07/14/2002 FY02: \$0 Total: \$19,625  
*Prin. Invest.:* R M BUSCH  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## RHODE ISLAND

**NAG 3 1929** **BROWN UNIV** **8305**  
 KINETIC AND THERMODYNAMIC STUDIES OF MELTING-FREEZING OF HELIUM MICROGRAVITY  
 07/24/1996 - 05/31/2003 FY02: \$0 Total: \$403,923  
*Prin. Invest.:* D ELBAUM, J M KOSTERLITZ  
*Tech. Officer:* GRC/B S SINGH  
*CASE Category:* 13 - PHYSICS

**NAG 3 2668** **BROWN UNIV** **8306**  
 PERFORMANCE OF NANOTUBE-BASED CERAMIC COMPOSITES: MODELING AND EXPERIMENT  
 11/29/2001 - 10/08/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* W A CURTIN  
*Tech. Officer:* GRC/J B HURST  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 3659** **BROWN UNIV** **8307**  
 PLANETARY GEOPHYSICS AND TECTONICS  
 03/07/1997 - 10/31/2002 FY02: \$0 Total: \$379,644  
*Prin. Invest.:* E PARMENTIER  
*Tech. Officer:* GSFC/JG GRANTS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3871** **BROWN UNIV** **8308**  
 REFLECTANCE EXPERIMENT LABORATORY  
 02/14/1997 - 09/30/2002 FY02: \$0 Total: \$521,039  
*Prin. Invest.:* C M PIETERS  
*Tech. Officer:* GSFC/J GGRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 3872** **BROWN UNIV** **8309**  
 BROWN REGIONAL PLANETARY DATA CENTER  
 02/14/1997 - 09/30/2001 FY02: \$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** **8310**  
 PLANETARY IMPACT PROCESSES  
 02/14/1997 - 09/30/2002 FY02: \$0 Total: \$704,152  
*Prin. Invest.:* P H SCHULTZ  
*Tech. Officer:* GSFC/D G SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## RHODE ISLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 3933**                      **BROWN UNIV**                      **8311**  
 GEOLOGICAL MAPPING OF VENUS: ORIGIN OF BASINS AND STRATIGRA-  
 PHY  
 02/13/1997 - 02/14/2002              FY02: \$0                      Total: \$290,950  
*Prin. Invest.:* D W HEAD,III  
*Tech. Officer:* GSFC/P G ROGERS  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 5133**                      **BROWN UNIV**                      **8312**  
 A HIGH RESOLUTION X-RAY DETECTOR USING MAGNETIC BOLOMETERS  
 03/12/1997 - 09/30/2001              FY02: \$0                      Total: \$400,000  
*Prin. Invest.:* G SEIDEL  
*Tech. Officer:* GSFC/B FLOWERS  
*CASE Category:* 13 - PHYSICS

**NAG 5 6144**                      **BROWN UNIV**                      **8313**  
 MARS OBSERVER LASER ALTIMETER (MOLA) PARTICIPATION  
 08/19/1997 - 12/31/2003              FY02: \$0                      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**                      **8314**  
 AN ULTRASPECTROMETER (MEMUS) FOR PLANETARY SURFACE ANALYSIS  
 03/10/1998 - 03/31/2002              FY02: \$0                      Total: \$455,444  
*Prin. Invest.:* P H SCHULTZ  
*Tech. Officer:* GSFC/B CAMPBELL  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7866**                      **BROWN UNIV**                      **8315**  
 DIAPYCNISM AND SOLID-STATE CONVECTION ON EUROPA  
 01/12/1999 - 12/31/2001              FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* D T PAPPALARDO  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8046**                      **BROWN UNIV**                      **8316**  
 ORIGIN, STRUCTURE, AND EVOLUTION OF GROOVED TERRAIN ON  
 GANYMEDE AND COMPARISON TO EUROPA  
 01/15/1999 - 01/14/2002              FY02: \$0                      Total: \$126,523  
*Prin. Invest.:* D T PAPPALARDO  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8174**                      **BROWN UNIV**                      **8317**  
 KINETICS OF MELTING AND DISSOLUTION IN LUNAR MATERIALS  
 02/04/1999 - 10/31/2002              FY02: \$0                      Total: \$188,000  
*Prin. Invest.:* D C HESS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8181**                      **BROWN UNIV**                      **8318**  
 EXPERIMENTS AND SPECTRAL STUDIES OF MARTIAN VOLCANIC ROCKS:  
 IMPLICATIONS FOR THE ORIGIN OF PATHFINDER  
 02/16/1999 - 09/30/2002              FY02: \$0                      Total: \$169,300  
*Prin. Invest.:* M J RUTHERFORD  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8972**                      **BROWN UNIV**                      **8319**  
 MINERALOGY OF THE MARTIAN SURFACE: CRUSTAL COMPOSITION TO  
 SURFACE PROCESSES  
 01/28/2000 - 02/28/2003              FY02: \$0                      Total: \$144,300  
*Prin. Invest.:* J F MUSTARD  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9287**                      **BROWN UNIV**                      **8320**  
 REMOTE SENSING INFORMATION APPLIED TO GEOLOGICAL STUDIES OF  
 PLANETS  
 03/16/2000 - 03/31/2002              FY02: \$0                      Total: \$48,000  
*Prin. Invest.:* C PIETERS  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9453**                      **BROWN UNIV**                      **8321**  
 BLAST: A BALLOON-BORNE LARGE-APERTURE SUB-MILLIMETER TELE-  
 SCOPE - A COMPREHENSIVE PLAN FOR GALAC  
 04/13/2000 - 04/14/2003              FY02: \$0                      Total: \$215,000  
*Prin. Invest.:* G TUCKER  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9522**                      **BROWN UNIV**                      **8322**  
 EXPERIMENTAL STUDY OF LUNAR MAGMAS & MAGMATIC PROCESSES  
 04/26/2000 - 04/30/2003              FY02: \$0                      Total: \$92,000  
*Prin. Invest.:* M J RUTHERFORD  
*Tech. Officer:* GSFC/D NAVA  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9589**                      **BROWN UNIV**                      **8323**  
 REFLECTANCE & THERMAL INFRARED SPECTROSCOPY OF MAR RELA-  
 TIONSHIP BETWEEN ISM & TES FOR COMPOS  
 05/12/2000 - 05/14/2003              FY02: \$0                      Total: \$103,600  
*Prin. Invest.:* J F MUSTARD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9780**                      **BROWN UNIV**                      **8324**  
 MARTIAN VOLCANIC EDIFICE & DEPOSIT CHARACTERIZATION: VOLCANIC  
 STYLE, MAGMA TRANSPORT & EDIFICE/CALD  
 07/10/2000 - 06/30/2002              FY02: \$0                      Total: \$146,000  
*Prin. Invest.:* J W HEAD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10010**                      **BROWN UNIV**                      **8325**  
 REGOLITH PROCESSES AND THE COMPOSITIONAL DIVERSITY OF MARE  
 BASALTS  
 09/25/2000 - 09/30/2003              FY02: \$0                      Total: \$74,000  
*Prin. Invest.:* C M PIETERS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10031**                      **BROWN UNIV**                      **8326**  
 ANALYSIS OF LUNAR PROSPECTOR MAGNETOMETER/ELECTRON REFLEC-  
 TOMETER (MAG/ER) EXPERIMENT DATA TO ASSIST  
 09/28/2000 - 09/30/2003              FY02: \$0                      Total: \$67,000  
*Prin. Invest.:* J W HEAD III  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

RHODE ISLAND

**NAG 5 10188**                      **BROWN UNIV**                      **8327**  
 NORTHEAST REGIONAL PLANETARY DATA CENTER  
 01/03/2001 - 01/14/2004                      FY02: \$0                      Total: \$50,900  
*Prin. Invest.:* P H SCHULTZ  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 11538**                      **BROWN UNIV**                      **8335**  
 PLANETARY IMPACT PROCESSES  
 01/04/2002 - 01/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P H SCHULTZ  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 10383**                      **BROWN UNIV**                      **8328**  
 DETECTORS WITH BREAK THROUGH ENERGY RESOLUTION USING MAGNETIC SENSORS  
 02/07/2001 - 02/14/2004                      FY02: \$0                      Total: \$260,030  
*Prin. Invest.:* G SEIDEL  
*Tech. Officer:* GSFC/C STAHL  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 11763**                      **BROWN UNIV**                      **8336**  
 MINERALOGY OF LUNAR MATERIALS FROM REFLECTANCE, SP ECTROSCOPY: MEASUREMENT, ANALYSIS, AND  
 02/21/2002 - 03/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C PIETERS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 – CHEMISTRY

**NAG 5 10401**                      **BROWN UNIV**                      **8329**  
 REMOTE SENSING INFORMATION APPLIED TO GEOLOGICAL STUDIES OF PLANETS  
 02/13/2001 - 01/31/2004                      FY02: \$0                      Total: \$40,000  
*Prin. Invest.:* C M PIETERS  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 11774**                      **BROWN UNIV**                      **8337**  
 GEOLOGICAL MAPPING GANYMEDE: A POST-GALILEO VIEW  
 02/28/2002 - 02/28/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J W HEAD  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 10469**                      **BROWN UNIV**                      **8330**  
 MINERALOGY OF LUNAR SAMPLES FROM REFLECTANCE SPECTROSCOPY  
 02/27/2001 - 03/31/2002                      FY02: \$0                      Total: \$35,000  
*Prin. Invest.:* C PIETERS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 – CHEMISTRY

**NAG 5 11775**                      **BROWN UNIV**                      **8338**  
 GEOLOGICAL MAPPING OF VENUS: ORIGINS OF MAJOR TOPOGRAPHIC FEATURES AND DEVELOPING CRITERIA TO TEST  
 02/27/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J W HEAD  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 – MULTI INTERDISCIPL, OTHER

**NAG 5 10573**                      **BROWN UNIV**                      **8331**  
 TESTS FOR STANDING BODIES OF WATER IN THE NORTHERN LOWLANDS AND RELATION TO SOUTH POLAR DEPOSITS IN  
 03/13/2001 - 03/14/2002                      FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* J HEAD  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 11931**                      **BROWN UNIV**                      **8339**  
 TETROGENESIS OF MARE BASALTS, MG-RICH SUITES AND SNC PARENT MAGMAS  
 04/03/2002 - 04/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P C HESS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 – CHEMISTRY

**NAG 5 10665**                      **BROWN UNIV**                      **8332**  
 HYDROGEN ISOTOPIC COMPOSITIONS OF INDIVIDUAL ORGANIC COMPOUNDS IN CARBONACEOUS METEORITES  
 03/21/2001 - 03/31/2004                      FY02: \$0                      Total: \$70,000  
*Prin. Invest.:* Y HUANG  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 12225**                      **BROWN UNIV**                      **8340**  
 EXPERIMENTS & SPECTRAL STUDIES OF MARTIAN VOLCANIC ROCKS: FACTORS AFFECTING MGS AND MARS PATHFINDER  
 05/22/2002 - 05/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M J RUTHERFORD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 10690**                      **BROWN UNIV**                      **8333**  
 VOLCANIC LANDFORMS & DEPOSITS: DIVERSITY OF ERUPTION CONDITIONS & IMPLICATIONS FOR THE ASCENT  
 03/30/2001 - 03/31/2003                      FY02: \$0                      Total: \$36,000  
*Prin. Invest.:* J HEAD  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 11 – ASTRONOMY

**NAG 5 12254**                      **BROWN UNIV**                      **8341**  
 MARTIAN VOLCANIC EDIFICE & DEPOSIT CHARACTERIZATION: VOLCANIC STYLE, MAGMA TRANSPORT & EDIFICE/C  
 06/05/2002 - 06/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J W HEAD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 32 – GEOLOGICAL SCIENCE

**NAG 5 11145**                      **BROWN UNIV**                      **8334**  
 LANDSCAPE DYNAMICS AND LAND-USE/LAND-COVER CHANGE IN THE GREAT BASIN/MOJAVE DESERT REGION  
 07/25/2001 - 08/14/2004                      FY02: \$0                      Total: \$61,387  
*Prin. Invest.:* J F MUSTARD  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 – ENVIRONMENTAL SCI, OTHER

**NAG 5 12286**                      **BROWN UNIV**                      **8342**  
 GEOLOGIC UNITS ON MARS: STATISTICAL CHARACTERIZATION OF TOPOGRAPHY & GEOLOGICAL ASSESSMENT OF PROP  
 06/11/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M KRESLAVSKY  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 – ASTRONOMY

## RHODE ISLAND

## NASA'S UNIVERSITY PROGRAM

**NAG 5 12327** **BROWN UNIV** **8343**  
 SYNTHESIS AND SURVIVAL OF ORGANICS DURING HYPER- VELOCITY  
 IMPACTS  
 06/27/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* P H SCHULTZ  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12474** **BROWN UNIV** **8344**  
 TESTS FOR STANDING BODIES OF WATER IN THE NORTHERN LOWLANDS  
 AND RELATIONTO SOUTH POLAR DEPOSITS IN  
 08/20/2002 - 07/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J HEAD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1774** **BROWN UNIV** **8345**  
 COALESCENCE OF SUPERFLUID HELIUM DROPS IN A MICRO- GRAVITY  
 ENVIRONMENT  
 04/30/2001 - 04/29/2005 FY02: \$0 Total: \$79,946  
*Prin. Invest.:* H J MARIS  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 9 1302** **BROWN UNIV** **8346**  
 SNC OXYGEN FUGACITY RECORDED PYROXENES: AN EXPERIMENTAL &  
 ANALYTICAL STUDY  
 06/15/2001 - 06/30/2002 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* M RUTHERFORD  
*Tech. Officer:* JSC/J JONES  
*CASE Category:* 56 - MEDICL

**NCC 1 01035** **BROWN UNIV** **8347**  
 RELAXATION & PRECONDITIONING 4 HI-ORDER DISCONTINUOUS GALERKIN  
 METHODS W/APPLIC AEROACOUSTICS & H/S FLOW  
 03/21/2001 - 11/30/2003 FY02: \$0 Total: \$20,129  
*Prin. Invest.:* C W SHU  
*Tech. Officer:* LARC/H L ATKINS  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 2 1217** **BROWN UNIV** **8348**  
 CAUSAL REASONING  
 03/13/2001 - 02/28/2003 FY02: \$0 Total: \$115,000  
*Prin. Invest.:* S A SLOMAN  
*Tech. Officer:* ARC/M SHAFTO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 487** **BROWN UNIV** **8349**  
 PRECISION AND ACCURACY OF ALL DATA FOR THE DETERMINATION OF  
 VEGETATION ABUNDANCE  
 04/05/2000 - 09/30/2002 FY02: \$2,500 Total: \$101,400  
*Prin. Invest.:* J F MUSTARD  
*Tech. Officer:* GSFC/S G UNGAR  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC13 98005** **BROWN UNIV** **8350**  
 BROWN UNIV AFFILIATED RESEARCH CENTER FOR THE NORTHEAST  
 09/15/1998 - 06/30/2002 FY02: \$0 Total: \$500,000  
*Prin. Invest.:* J F MUSTARD  
*Tech. Officer:* SSC/H CARR  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 01024** **BROWN UNIV** **8351**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/11/2001 - 06/30/2004 FY02: \$0 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** **8352**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/28/2001 - 06/30/2003 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* C SHA  
*Tech. Officer:* LARC/H L ATKINS  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NGT 3 52369** **BROWN UNIV** **8353**  
 GRADUATE STUDENT RESEARCHERS PROGRAM GRADUATE STUDENT  
 RESEARCHERS PROGRAM  
 06/20/2000 - 08/31/2002 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* G P CRAWFORD  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 5 91** **BROWN UNIV** **8354**  
 SWITCHABLE/TUNABLE INTERFERENCE FILTERS FOR REMOTE SENSING  
 APPLICATIONS STUDENT:ADAM FONTECCHIO  
 06/10/1999 - 08/31/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* G CRAWFORD  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NGT 5 40106** **BROWN UNIV** **8355**  
 RHODE ISLAND SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 03/06/2001 - 02/28/2005 FY02: \$0 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** **8356**  
 EFFECTS OF HIGH STRAIN-RATE DEFORMATION ON IMPACT MELT GEN-  
 ERATION  
 06/04/1999 - 06/30/2002 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* P H SCHULTZ  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 50355** **BROWN UNIV** **8357**  
 INHOMOGENEITIES IN SUPERSTRING COSMOLOGY  
 05/14/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* R BRANDENBERGER  
*Tech. Officer:* HQ/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 53** **BROWN UNIV** **8358**  
 TRAINING GRANT/REGOLITH PROCESS ON AIRLESS BODIES  
 06/06/2001 - 06/30/2002 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* C PIETERS  
*Tech. Officer:* JSC/D MACKAY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NGT 9 63** **BROWN UNIV** **8359**  
 SNC OXYGEN FUGACITY RECORDED IN THE PYROGENES  
 06/07/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* M MACANTA  
*Tech. Officer:* JSC/J JONES  
*CASE Category:* 32 - GEOLOGICAL SCIENCE



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<b>NGT 9 66</b>	<b>BROWN UNIV</b>	<b>8360</b>		<b>NAG 5 8739</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8368</b>	
REGOLITH PROCESSES ON AIRLESS BODIES: AN ESSENTIAL LINK BETWEEN SAMPLE ANALYSIS & REMOTE SENSING				INVESTIGATION OF AERODYNAMIC AND RADOMETRIC LAND SURFACE TEMPERATURES			
08/23/2002 - 06/30/2003	FY02: \$0	Total: \$0		08/19/1999 - 08/14/2002	FY02: \$0	Total: \$30,998	
<i>Prin. Invest.:</i> C PIETERS				<i>Prin. Invest.:</i> Y WANG			
<i>Tech. Officer:</i> JSC/L KELLER				<i>Tech. Officer:</i> GSFC/E T ENGMAN			
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE				<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NAG 3 2208</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8361</b>		<b>NAG 5 8829</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8369</b>	
CERAMIC BASED STRAIN SENSORS FOR USE AT HIGH TEMPERATURE				MULTIPLE INNOVATIVE MODELS IN REGIONAL LAND COVER CHANGE STUDIES			
11/17/1998 - 03/30/2002	FY02: \$0	Total: \$180,000		09/08/1999 - 09/30/2002	FY02: \$62,776	Total: \$245,260	
<i>Prin. Invest.:</i> O GREGORY				<i>Prin. Invest.:</i> Y WANG			
<i>Tech. Officer:</i> GRC/J LEI				<i>Tech. Officer:</i> GSFC/M WEI			
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR				<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NAG 3 2229</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8362</b>		<b>NAG 5 9633</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8370</b>	
NUMERICAL SIMULATIONS FOR THE DESIGN OF TERRESTRIAL AND MICROGRAVITY WETTING MICROHYDRODYNAMICS EXP				EXTENSION OF THE 1KM PATHFINDER AVHRR SST ARCHIVE BOTH IN TIME AND SPACE			
03/09/1999 - 12/31/2000	FY02: \$0	Total: \$30,888		05/26/2000 - 04/30/2003	FY02: \$0	Total: \$226,250	
<i>Prin. Invest.:</i> A BOSE				<i>Prin. Invest.:</i> P CORNILLON			
<i>Tech. Officer:</i> GRC/D A JACQUMIN				<i>Tech. Officer:</i> GSFC/J DODGE			
<i>CASE Category:</i> 49 - ENGINEERING, OTHER				<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NAG 3 2434</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8363</b>		<b>NAG 5 9724</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8371</b>	
PHASE CHANGE IN LOW AND JITTERING GRAVITY ENVIRONMENT SIMULATED VIA ELECTROMAGNETIC FIELD				U.S. COASTAL BLENDED IN SITU AND REMOTELY-SENSED OCEAN CHLOROPHYLL DATA SETS			
05/30/2000 - 11/30/2003	FY02: \$0	Total: \$71,811		06/29/2000 - 06/30/2003	FY02: \$0	Total: \$38,467	
<i>Prin. Invest.:</i> D FAGHRI				<i>Prin. Invest.:</i> J YODER			
<i>Tech. Officer:</i> GRC/H C DEGROH				<i>Tech. Officer:</i> GSFC/J DODGE			
<i>CASE Category:</i> 49 - ENGINEERING, OTHER				<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NAG 3 2652</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8364</b>		<b>NAG 5 10554</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8372</b>	
FLAME SPRAY STRAIN GAGES WITH IMPROVED DURABILITY AND LIFETIMES				WIND-INDUCED SHORT TIME-SCALE FLUCTUATIONS OF PHYTOPLANKTON BIOMASS			
12/12/2001 - 12/11/2003	FY02: \$0	Total: \$0		03/12/2001 - 03/14/2004	FY02: \$0	Total: \$65,264	
<i>Prin. Invest.:</i> O GREGORY				<i>Prin. Invest.:</i> B UZ			
<i>Tech. Officer:</i> GRC/G C FRALICK				<i>Tech. Officer:</i> GSFC/J MARRA			
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR				<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			
<b>NAG 3 2655</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8365</b>		<b>NAG 5 10555</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8373</b>	
CERAMIC STRAIN GAGES FOR USE AT TEMPERATURES UP TO 1500 DEGREES C				SATELLITE STUDIES OF COUPLED BIOLOGICAL & PHYSICAL VARIABILITY IN OCEAN MARGIN WATERS OF THE NORTHWEST			
12/31/2001 - 12/11/2003	FY02: \$0	Total: \$0		03/12/2001 - 03/14/2004	FY02: \$0	Total: \$180,571	
<i>Prin. Invest.:</i> D GREGORY				<i>Prin. Invest.:</i> J YODER			
<i>Tech. Officer:</i> GRC/G C FRALICK				<i>Tech. Officer:</i> GSFC/J MARRA			
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR				<i>CASE Category:</i> 33 - OCEANOGRAPHY			
<b>NAG 5 6560</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8366</b>		<b>NAG 5 12283</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8374</b>	
DETERMINATION OF OCEAN COLOR PROVINCES IN THE NORTH ATLANTIC				STUDY OF THE CIRCULATIONS THAT CONNECT THE TROPICAL, SUBTROPICAL, AND SUBPOLAR REGIONS IN THE PAC			
10/27/1997 - 10/31/2002	FY02: \$0	Total: \$440,122		06/13/2002 - 05/31/2005	FY02: \$0	Total: \$0	
<i>Prin. Invest.:</i> P M STEGMANN				<i>Prin. Invest.:</i> L ROTHSTEIN			
<i>Tech. Officer:</i> GSFC/J YODER				<i>Tech. Officer:</i> GSFC/E LINDSTROM			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER				<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NAG 5 6645</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8367</b>		<b>NCC 1 302</b>	<b>UNIV OF RHODE ISLAND</b>	<b>8375</b>	
SATELLITE STUDIES OF PHYTOPLANKTON DYNAMICS AND PRODUCTIVITY IN THE GLOBAL OCEAN AND IN OCEAN M				HYDROGEN PEROXIDE, METHYLDIHYDROPEROXIDE & FORMALDEHYDE --THEIR RELATIONSHIP TO TROPOSPHERIC OXIDANT CHEM			
12/01/1997 - 10/14/2001	FY02: \$0	Total: \$553,256		07/14/1998 - 06/30/2001	FY02: \$0	Total: \$319,007	
<i>Prin. Invest.:</i> J A YODER				<i>Prin. Invest.:</i> B HEIKES			
<i>Tech. Officer:</i> GSFC/J CAMPBELL				<i>Tech. Officer:</i> LARC/J L RAPER, LARC/R J BENDURA			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER				<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			

## SOUTH CAROLINA

## NASA'S UNIVERSITY PROGRAM

**NCC 1 408**                      **UNIV OF RHODE ISLAND**                      **8376**  
 HYDROGEN PEROXIDE, METHYLHYDROGEN PEROXIDE, & FOR- MALDE-  
 HYDE TRANSPORT & CHEM EVOLUTION OVER PACIFIC  
 09/07/2000 - 02/14/2003                      FY02: \$0                      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**                      **8377**  
 SUBSURFACE BIOSPHERES  
 07/20/2001 - 06/30/2006                      FY02: \$0                      Total: \$292,933  
*Prin. Invest.:* S D'HONDT, A TESKE, K HINRICHS  
*Tech. Officer:* ARC/R A GRAYMES, ARC/W DOLCI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 307**                      **UNIV OF RHODE ISLAND**                      **8378**  
 THE DISTRIBUTED OCEANOGRAPHIC DATA SYSTEM (DODS): A FRAME-  
 WORK FOR ACCESS TO SCIENTIFIC DATA IN THE EO  
 04/27/1998 - 12/31/2002                      FY02: \$227,000                      Total: \$2,506,200  
*Prin. Invest.:* P CORNILLON  
*Tech. Officer:* GSFC/M MAIDEN  
*CASE Category:* 33 - OCEANOGRAPHY

## SOUTH CAROLINA

**NAG 5 11761**                      **CLAFLIN COLL**                      **8379**  
 ASTROCHEM PROJECT  
 03/12/2002 - 03/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A WILLIAMS  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2214**                      **CLEMSON UNIV - CLEMSON**                      **8380**  
 THERMAL CONTROL AND ENHANCEMENT OF HEAT CAPACITY OF CRYO-  
 GENIC CAPILLARY PUMPED LOOP AND HEAT PIPE W  
 01/22/1999 - 11/01/2002                      FY02: \$0                      Total: \$69,658  
*Prin. Invest.:* D M OCHTERBECK  
*Tech. Officer:* GRC/F P CHIARAMONTE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 5186**                      **CLEMSON UNIV - CLEMSON**                      **8381**  
 COUPLING OF DYNAMICS IN AURORA FUNDING FOR FIRST YEAR OF  
 GRANT  
 03/30/1998 - 02/28/2003                      FY02: \$0                      Total: \$383,363  
*Prin. Invest.:* M F LARSEN  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5242**                      **CLEMSON UNIV - CLEMSON**                      **8382**  
 A SOUNDING ROCKET INVESTIGATION OF THE FINE STRUCTURE IN THE  
 MESOPAUSE REGION  
 03/16/1999 - 08/31/2002                      FY02: \$0                      Total: \$244,100  
*Prin. Invest.:* M F LARSEN  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5259**                      **CLEMSON UNIV - CLEMSON**                      **8383**  
 FIRST YEAR OF THREE YEAR EFFORT/ A SEQUENTIAL ROCKET INVESTI-  
 GATION OF WINDS AND PLASMA LAYERS  
 04/11/2000 - 03/23/2003                      FY02: \$0                      Total: \$206,700  
*Prin. Invest.:* M F LARSEN  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5317**                      **CLEMSON UNIV - CLEMSON**                      **8384**  
 MAPPING THE E-REGION AND ZONAL WINDS NEAR A STABLE AURORAL  
 ARC, USING A NEAR-HORIZONTAL CHEMICAL TRA  
 03/19/2001 - 02/28/2004                      FY02: \$0                      Total: \$96,100  
*Prin. Invest.:* M F LARSEN  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5320**                      **CLEMSON UNIV - CLEMSON**                      **8385**  
 MULTIPLE-SCALE STUDY OF HIGH-LATITUDE JOULE HEATING DURING A  
 SUBSTORM EVENT  
 04/26/2001 - 12/31/2003                      FY02: \$0                      Total: \$144,700  
*Prin. Invest.:* M LARSON  
*Tech. Officer:* GSFC/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5325**                      **CLEMSON UNIV - CLEMSON**                      **8386**  
 OBSERVING AND MEASURING EARLY OPTICAL LIGHT CURVES FROM  
 GAMMA-RAY BURSTS WITH LOTIS  
 03/21/2001 - 09/30/2002                      FY02: \$0                      Total: \$15,000  
*Prin. Invest.:* D H HARTMANN  
*Tech. Officer:* WFF/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5372**                      **CLEMSON UNIV - CLEMSON**                      **8387**  
 ELECTRODYNAMICS OF THE NIGHTTIME EQUATORIAL IONOSPHERE: THE  
 EFFECTS OF WINDS AND WAVES  
 06/19/2002 - 06/10/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M LARSEN  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5373**                      **CLEMSON UNIV - CLEMSON**                      **8388**  
 ROCKET INVESTIGATION OF BOTTOMSIDE EQUATORIAL F REGION ELEC-  
 TRODYNAMICS  
 06/19/2002 - 06/10/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M LARSON  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5378**                      **CLEMSON UNIV - CLEMSON**                      **8389**  
 INVESTIGATION OF DC ELECTRIC FIELDS, WINDS, AND PLASMA DENSITY  
 STRUCTURE IN THE NIGHTTIME EQUATORIAL  
 06/19/2002 - 06/10/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M LARSEN  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5379**                      **CLEMSON UNIV - CLEMSON**                      **8390**  
 CAMPAIGN PROPOSAL: SOUNDING ROCKET INVESTIGATIONS OF E-AND  
 F-REGION ELECTRODYNAMICS AT THE MAGNE  
 06/25/2002 - 06/13/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M LARSEN  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5384**                      **CLEMSON UNIV - CLEMSON**                      **8391**  
 UNSOLICITED PROPOSAL ENTITLED, FIELD MEASUREMENTS OF DROP  
 SIZE DISTRIBUTIONS IN STRATIFORM  
 08/08/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J SAYLOR  
*Tech. Officer:* WFF/L BLIVEN  
*CASE Category:* 33 - OCEANOGRAPHY

<p><b>NAG 5 5385</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8392</b>  LAYERS IN THE EQUATORIAL MESOSPHERE, MOTIONS AND AEROSOL  (LEMMA) ROCKET &amp; RADAR STUDY  09/30/2002 - 09/25/2005                    FY02: \$0                    Total: \$0  Prin. Invest.: G LEHMACHER  Tech. Officer: WFF/J BRINTON  CASE Category: 13 - PHYSICS</p>	<p><b>NAG 5 9459</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8400</b>  SILICON - CARBON NANOTUBE HYBRID DEVICE DESIGN: A ROUTE TO  NANOSCALE INTEGRATION  04/13/2000 - 04/14/2002                    FY02: \$0                    Total: \$25,000  Prin. Invest.: D L CARROLL  Tech. Officer: GSFC/H C SHAW  CASE Category: 47 - METAL &amp; MATERIALS ENGR</p>
<p><b>NAG 5 7592</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8393</b>  INVESTIGATING THE FEASIBILITY OF, AND LIMITATIONS ASSOCIATED WITH,  RECOVERING GRAVITYWAVE PARAMETER  07/07/1998 - 06/30/2001                    FY02: \$0                    Total: \$158,676  Prin. Invest.: M P HICKEY  Tech. Officer: GSFC/M MELLOTT  CASE Category: 13 - PHYSICS</p>	<p><b>NAG 5 9702</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8401</b>  MEASURING THE T144 MASS IN CAS A WITH OSSE  06/15/2000 - 06/14/2002                    FY02: \$0                    Total: \$5,000  Prin. Invest.: L THE  Tech. Officer: GSFC/J P NORRIS  CASE Category: 11 - ASTRONOMY</p>
<p><b>NAG 5 7782</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8394</b>  PHYSICAL VARIATIONS IN THE RAINDROP SIZE DISTRIBUTION &amp; THEIR  EFFECTS ON THE QUANTITATIVE ESTIMATION  11/13/1998 - 05/14/2002                    FY02: \$0                    Total: \$149,730  Prin. Invest.: C W ULBRICH  Tech. Officer: GSFC/O W THIELE  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 9824</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8402</b>  EXTRACTION OF SINGLE EVENT UPSET PARAMETERS FROM CIRCUIT  SIMULATION CODE  07/25/2000 - 07/31/2001                    FY02: \$0                    Total: \$25,000  Prin. Invest.: P MCNULTY  Tech. Officer: GSFC/J BARTH  CASE Category: 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 8075</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8395</b>  OSSE OBSERVATIONS OF 44TI IN SNR G266.2-1.2  01/15/1999 - 01/14/2001                    FY02: \$0                    Total: \$11,200  Prin. Invest.: M D LEISING  Tech. Officer: GSFC/J P NORRIS  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 10018</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8403</b>  PVFS 2000: AN OPERATIONAL PARALLEL FILE SYSTEM FOR BEOWULF  10/02/2000 - 09/30/2003                    FY02: \$0                    Total: \$152,447  Prin. Invest.: D LIGON III  Tech. Officer: GSFC/J DORBAND  CASE Category: 22 - COMPUTER SCIENCE</p>
<p><b>NAG 5 8304</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8396</b>  PRESOLAR DUST GRAINS IN METEORITES: ORIGIN AND MEANING  02/25/1999 - 10/14/2002                    FY02: \$0                    Total: \$167,000  Prin. Invest.: D CLAYTON  Tech. Officer: GSFC/J BOYCE  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 5 10251</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8404</b>  STUDIES OF WIND SHEAR INSTABILITIES &amp; GRAVITY WAVES IN THE MLT  REGION AIRGLOW &amp; RELATED EFFECTS  01/05/2001 - 01/14/2004                    FY02: \$0                    Total: \$79,898  Prin. Invest.: M HICKEY  Tech. Officer: GSFC/M MELLOTT  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 8448</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8397</b>  RELATING SOLAR BIRTH TO THE GALAXY  04/07/1999 - 03/31/2002                    FY02: \$0                    Total: \$130,000  Prin. Invest.: D D CLAYTON  Tech. Officer: HQ/J BOYCE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 5 10367</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8405</b>  MINIATURE HEAT TRANSPORT SYSTEM FOR SPACECRAFT THE RMAL  CONTROL  03/19/2001 - 03/31/2004                    FY02: \$0                    Total: \$39,300  Prin. Invest.: D M OCHTERBECK  Tech. Officer: GSFC/J KU  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>
<p><b>NAG 5 8759</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8398</b>  MANIPULATION AND CONTACT SENSING VIA TRUNKS, TENTA CLES, AND  WHISKERS  08/26/1999 - 08/31/2003                    FY02: \$0                    Total: \$276,852  Prin. Invest.: I D WALKER  Tech. Officer: GSFC/S DAVISON  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 5 10454</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8406</b>  HISTORY OF THE NUCLEI IMPORTANT FOR COSMOCHEMISTRY  02/21/2001 - 05/31/2004                    FY02: \$0                    Total: \$37,000  Prin. Invest.: B MEYER  Tech. Officer: GSFC/J BOYCE  CASE Category: 12 - CHEMISTRY</p>
<p><b>NAG 5 9267</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8399</b>  INVESTIGATION OF PLASMA TURBULENCE IN THE EQUATORIAL IONO-  SPHERE  03/13/2000 - 02/28/2002                    FY02: \$0                    Total: \$61,782  Prin. Invest.: D HYSSELL  Tech. Officer: GSFC/M MELLOTT  CASE Category: 32 - GEOLOGICAL SCIENCE</p>	<p><b>NAG 5 10764</b>                    <b>CLEMSON UNIV - CLEMSON</b>                    <b>8407</b>  THE RADIOACTIVE MILKY WAY &amp; SUPERNOVAE (LISA 2000)  04/23/2001 - 04/30/2006                    FY02: \$0                    Total: \$77,538  Prin. Invest.: M D LEISING  Tech. Officer: GSFC/R J OLIVERSEN  CASE Category: 11 - ASTRONOMY</p>

## SOUTH CAROLINA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11293**                    **CLEMSON UNIV - CLEMSON**                    **8408**  
 NANO-ELECTRONICS: CIRCUIT DESIGN FOR SILICON/CARBON NANOTUBE  
 INTEGRATION  
 08/22/2001 - 07/31/2002                    FY02: \$0                    Total: \$25,000  
*Prin. Invest.:* D L CARROLL  
*Tech. Officer:* GSFC/H SHAW  
*CASE Category:* 13 - PHYSICS

**NAG 5 11329**                    **CLEMSON UNIV - CLEMSON**                    **8409**  
 ALTERNATIVE COMPUTING ROADMAP PROJECT  
 09/25/2001 - 09/30/2004                    FY02: \$0                    Total: \$33,800  
*Prin. Invest.:* D SASS  
*Tech. Officer:* GSFC/P CORONADO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 11808**                    **CLEMSON UNIV - CLEMSON**                    **8410**  
 SPECIAL CONDITIONS FOR THE BIRTH OF THE SOLAR SYST EM  
 02/27/2002 - 03/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D D CLAYTON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11871**                    **CLEMSON UNIV - CLEMSON**                    **8411**  
 PRESOLAR DUST GRAINS IN METEORITES AND IDPS  
 03/12/2002 - 04/14/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D CLAYTON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NCC 1 01036**                    **CLEMSON UNIV - CLEMSON**                    **8412**  
 ADVANCED CROSS ENTERPRISE TECHNOLOGY DEVELOPMENT FOR NASA  
 MISSIONS  
 04/12/2001 - 04/30/2004                    FY02: \$0                    Total: \$158,123  
*Prin. Invest.:* Y SUN  
*Tech. Officer:* LARC/J W CONWELL  
*CASE Category:* 12 - CHEMISTRY

**NCC 2 1114**                    **CLEMSON UNIV - CLEMSON**                    **8413**  
 VIRTUAL REALITY TECHNOLOGY FOR AIRCRAFT VISUAL INS PECTION:  
 TRAINING & JOB AIDING  
 04/23/1999 - 12/31/2001                    FY02: \$0                    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 1288**                    **CLEMSON UNIV - CLEMSON**                    **8414**  
 USING ADVANCED DISPLAYS TO SUPPORT TRAINING AND JO B AIDING:  
 IMPROVING AIRCRAFT INSPECTION PERFORMAN  
 12/31/2001 - 12/31/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* B MELLO, A T DUCHOWSKI  
*Tech. Officer:* ARC/T BEARD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 2 5421**                    **CLEMSON UNIV - CLEMSON**                    **8415**  
 COMBINATORIAL APPROACH FOR SYNTHESIS & CHARACTERIZ ATION OF  
 CARBON NANOTUBES - A CHARACTERIZATION LA  
 02/15/2001 - 01/31/2003                    FY02: \$0                    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**                    **8416**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/28/2001 - 06/30/2003                    FY02: \$0                    Total: \$12,000  
*Prin. Invest.:* Y P SUN  
*Tech. Officer:* LARC/J W CONNELL, LARC/J G SMITH  
*CASE Category:* 12 - CHEMISTRY

**NGT 1 52238**                    **CLEMSON UNIV - CLEMSON**                    **8417**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/03/2000 - 06/30/2001                    FY02: \$0                    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 85**                    **CLEMSON UNIV - CLEMSON**                    **8418**  
 COTS CUSTOM HARDWARE: THE RECONFIGURABLE APPROACH TO CLUS-  
 TER BASED PARALLEL: STUDENT/KEITH UNDERWOO  
 05/20/1999 - 08/14/2002                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* W LIGON  
*Tech. Officer:* GSFC/G A SOFFEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 109**                    **CLEMSON UNIV - CLEMSON**                    **8419**  
 ALGORITHMS & SCHEDULING FOR PARALLEL I/O (STUDENT: PHILIP CARNS)  
 06/12/2000 - 08/14/2003                    FY02: \$0                    Total: \$44,000  
*Prin. Invest.:* W B LIGON  
*Tech. Officer:* GSFC/G SOFFEN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 8 52858**                    **CLEMSON UNIV - CLEMSON**                    **8420**  
 ROBUST SPEECH RECOGNITION SCHEME USING PARALLEL MODEL COM-  
 BINATION WITH AN ADAPTIVE HYBRID  
 07/23/1998 - 08/14/2001                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* J N GOWDY  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 7183**                    **COLL OF CHARLESTON**                    **8421**  
 EXPLORING THE SOLAR SYSTEM IN THE CLASSROOM  
 03/16/1998 - 03/14/2002                    FY02: \$0                    Total: \$48,000  
*Prin. Invest.:* C R COOMBS  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10313**                    **COLL OF CHARLESTON**                    **8422**  
 BETA PIC-LIKE CIRCUMSTELLAR GAS DISK AROUND 2 AND -- FUSE-00  
 01/26/2001 - 01/31/2003                    FY02: \$0                    Total: \$16,000  
*Prin. Invest.:* J E NEFF  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10625**                    **COLL OF CHARLESTON**                    **8423**  
 AN ARTIFICIAL INTELLIGENCE CLASSIFICATION TOOL & ITS APPLICATION  
 TO GAMMA-RAY BURSTS  
 03/22/2001 - 01/31/2003                    FY02: \$0                    Total: \$104,054  
*Prin. Invest.:* J HAKKILA  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## NASA'S UNIVERSITY PROGRAM

SOUTH CAROLINA

<b>NAG 5 10633</b>	<b>COLL OF CHARLESTON</b>	<b>8424</b>	<b>NCC 2 1085</b>	<b>FURMAN UNIV</b>	<b>8432</b>
EXPLORING THE SOLAR SYSTEM IN THE CLASSROOM: A DIFFERENTIATED MULTISENSORY APPROACH			PROSPECTIVE REMEMBERING UNDER COMPLEX, DEMANDING & FLUID CONDITIONS		
03/17/2001 - 03/14/2003	FY02: \$0	Total: \$40,000	01/27/1999 - 01/14/2003	FY02: \$0	Total: \$401,024
<i>Prin. Invest.:</i> C RUNYON			<i>Prin. Invest.:</i> G O EINSTEIN, M A MCDANIEL		
<i>Tech. Officer:</i> GSFC/J M BOYCE			<i>Tech. Officer:</i> ARC/R K DISMUKES		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 11017</b>	<b>COLL OF CHARLESTON</b>	<b>8425</b>	<b>NAG 2 1415</b>	<b>MEDICAL UNIV OF SOUTH CAROLINA</b>	<b>8433</b>
EARLY BATSE GRB AFTERGLOWS (ADP 2000)			EMBRYONIC CELL MIGRATION & METALLOPROTEINASE ACTIVITY ARE AFFECTED BY RANDOMIZATION OF THE GRAVITY		
06/12/2001 - 01/14/2003	FY02: \$0	Total: \$30,000	07/11/2000 - 06/30/2003	FY02: \$0	Total: \$266,175
<i>Prin. Invest.:</i> T W GIBLIN			<i>Prin. Invest.:</i> S HOFFMAN		
<i>Tech. Officer:</i> GSFC/R J OLIVERSEN			<i>Tech. Officer:</i> ARC/M M AVERNER		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)		
<b>NCC 5 263</b>	<b>COLL OF CHARLESTON</b>	<b>8426</b>	<b>NAG 8 1385</b>	<b>MEDICAL UNIV OF SOUTH CAROLINA</b>	<b>8434</b>
SOUTHEASTERN OSS-SPACE GRANT REGIONAL EDUCATION COALITION: KEYS TO IMPLEMENTING NASA'S OSS EDUCATION			RESEARCH "GASTRIC MUCOSAL CELL CULTURE IN SIMULATED MICROGRAVITY		
01/12/1998 - 01/14/2003	FY02: \$0	Total: \$1,030,000	06/13/1997 - 12/30/2001	FY02: -\$41,838	Total: \$530,255
<i>Prin. Invest.:</i> M COLGAN			<i>Prin. Invest.:</i> A J SMOKA		
<i>Tech. Officer:</i> GSFC/J ROSENTHAL			<i>Tech. Officer:</i> MSFC/N R PELLIS, MSFC/J MAYO		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 56 - MEDICL		
<b>NCC 5 413</b>	<b>COLL OF CHARLESTON</b>	<b>8427</b>	<b>NAG 5 8246</b>	<b>SOUTH CAROLINA STATE UNIV</b>	<b>8435</b>
EPSCOR PREPARATION PROGRAM			SHARE WITH A PAIR OF PEERS (SWAPOP II)		
06/18/1999 - 06/14/2002	FY02: \$0	Total: \$450,000	02/19/1999 - 02/28/2002	FY02: \$0	Total: \$586,190
<i>Prin. Invest.:</i> M COLGAN			<i>Prin. Invest.:</i> J D SALLEY		
<i>Tech. Officer:</i> GSFC/D DETROYE			<i>Tech. Officer:</i> GSFC/D MENCHAN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 5 575</b>	<b>COLL OF CHARLESTON</b>	<b>8428</b>	<b>NAG 5 10145</b>	<b>SOUTH CAROLINA STATE UNIV</b>	<b>8436</b>
SOUTH CAROLINA NASA EPSCOR PROGRAM			ENHANCEMENT OF THE SPACE SCIENCE RESEARCH PROGRAM AT SOUTH CAROLINA STATE UNIV		
08/23/2001 - 07/31/2004	FY02: \$0	Total: \$300,000	01/05/2001 - 12/31/2003	FY02: \$0	Total: \$227,000
<i>Prin. Invest.:</i> M COLGAN			<i>Prin. Invest.:</i> D K WALTER		
<i>Tech. Officer:</i> GSFC/DDETROYE			<i>Tech. Officer:</i> GSFC/P SAKIMOTO		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NCC 5 607</b>	<b>COLL OF CHARLESTON</b>	<b>8429</b>	<b>NCC 5 454</b>	<b>SOUTH CAROLINA STATE UNIV</b>	<b>8437</b>
SOUTHEAST REGIONAL CLEARING HOUSE: A COALITION OF SPACE GRANT CONSORTIA(SERCH)			CURRICULUM ENHANCEMENT THROUGH SPACE SCIENCE RSCH		
12/17/2001 - 01/14/2007	FY02: \$0	Total: \$0	02/11/2000 - 02/28/2003	FY02: \$0	Total: \$300,000
<i>Prin. Invest.:</i> C RUNYON			<i>Prin. Invest.:</i> D K WALTER		
<i>Tech. Officer:</i> GSFC/P SAKIMOTO			<i>Tech. Officer:</i> GSFC/M MATTHEWS		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 5 40050</b>	<b>COLL OF CHARLESTON</b>	<b>8430</b>	<b>NCC 5 534</b>	<b>SOUTH CAROLINA STATE UNIV</b>	<b>8438</b>
NATIONAL SPACE GRANT COLL AND FELLOWSHIP PROGRA			THE CENTER FOR NASA RESEARCH AND TECHNOLOGY (CNRT) /MUSPIN NRTS PROGRAM.		
02/03/1997 - 02/28/2002	FY02: \$0	Total: \$1,072,676	02/01/2001 - 01/31/2004	FY02: \$0	Total: \$350,000
<i>Prin. Invest.:</i> M COLGAN			<i>Prin. Invest.:</i> D WALTER		
<i>Tech. Officer:</i> GSFC/L KEFFER			<i>Tech. Officer:</i> GSFC/J HARRINGTON		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 5 40099</b>	<b>COLL OF CHARLESTON</b>	<b>8431</b>	<b>NCC 5 651</b>	<b>SOUTH CAROLINA STATE UNIV</b>	<b>8439</b>
SOUTH CAROLINA SPACE GRANT COLL AND FELLOWSHIP PROGRAM			SHARE WITH A PAIR OF PEERS II		
02/28/2001 - 02/28/2005	FY02: \$0	Total: \$256,250	08/16/2002 - 08/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> M COLGAN			<i>Prin. Invest.:</i> J SALLEY		
<i>Tech. Officer:</i> GSFC/D DETROYE			<i>Tech. Officer:</i> GSFC/MMATEU		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

## SOUTH DAKOTA

## NASA'S UNIVERSITY PROGRAM

**NAG 1 02117 UNIV OF SOUTH CAROLINA-COLUMBIA 8440**  
 SPUN-CAST POLYMER COMPOSITE MIRRORS AND THEIR USE IN ADAPTIVE OPTICS  
 09/30/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* W A SCRIVENS  
*Tech. Officer:* LARC/G C HORNER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 8837 UNIV OF SOUTH CAROLINA-COLUMBIA 8441**  
 STUDY OF LAND-ATMOSPHERE INTERACTIONS USING SATELLITE DATA ASSIMILATION  
 09/22/1999 - 09/30/2001 FY02: \$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 8442**  
 COUPLING SATELLITE REMOTE SENSING & UNSTEADY FLOW MODELING FOR DISCHARGE ESTIMATION  
 11/16/1999 - 10/31/2002 FY02: \$38,686 Total: \$83,566  
*Prin. Invest.:* V LAKSHMI  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9233 UNIV OF SOUTH CAROLINA-COLUMBIA 8443**  
 THE INFLUENCE OF LAND-ATMOSPHERE INTERACTIONS ON VARIABILITY OF THE NORTH AMERICAN MONSOON  
 04/06/2000 - 04/30/2003 FY02: \$0 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 8444**  
 FUNDING GRANT FOR PROPOSAL # NRA-99-055-05 TITLED HIGH PERF ULTRAVIOLET DETECTORS BASED ON QUATERNAR  
 01/31/2001 - 02/29/2004 FY02: \$0 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 8445**  
 EXTENDED VALIDATION OF AMSR-E SOIL MOISTURE PRODUCTS (AQUA-0084-0032)  
 07/27/2001 - 08/31/2004 FY02: \$0 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 8446**  
 AN ASSESSMENT OF GLOBAL ORGANIC CARBON FLUX ALONG CONTINENTAL MARGINS  
 08/20/2001 - 08/31/2004 FY02: \$0 Total: \$48,613  
*Prin. Invest.:* R THUNELL  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11526 UNIV OF SOUTH CAROLINA-COLUMBIA 8447**  
 STUDIES OF COMBINED PASSIVE & ACTIVE SOIL MOISTURE SENSING  
 01/14/2002 - 01/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* V LAKSHMI  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12339 UNIV OF SOUTH CAROLINA-COLUMBIA 8448**  
 CHLOROPLAST CONUSTRUM  
 07/15/2002 - 06/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* J BERNHARD  
*Tech. Officer:* GSFC/IMMEYERS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 174 UNIV OF SOUTH CAROLINA-COLUMBIA 8449**  
 EXPERIMENTAL PROGRAM TO STIMULATE COMPETITIVE RESEARCH  
 12/16/1996 - 03/31/2002 FY02: \$0 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 8450**  
 PROGRAM FOR A NASA AFFILIATED RESEARCH CENTER PROGRAM AT THE UNIV OF SOUTH CAROLINA  
 02/01/2000 - 01/31/2005 FY02: \$0 Total: \$365,750  
*Prin. Invest.:* J JENSEN  
*Tech. Officer:* SSC/N SOVIK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT13 52723 UNIV OF SOUTH CAROLINA-COLUMBIA 8451**  
 MACHINE LEARNING GMDH NEURO-FUZZY TECHNIQUES INHERENT OPTICAL PROPERTY ESTIMATION  
 07/22/1999 - 07/31/2003 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* J JENSEN  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 9624 VOORHEES COLL 8452**  
 EARTH SCIENCE EDUCATION AND RESEARCH INITIATIVE  
 05/23/2000 - 05/14/2003 FY02: \$0 Total: \$279,960  
*Prin. Invest.:* C SMITH  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## SOUTH DAKOTA

**NAG 5 7548 OGLALA LAKOTA COLL 8453**  
 OGLALA LAKOTA COLL PACE/MSET  
 07/01/1998 - 09/30/2001 FY02: \$0 Total: \$300,000  
*Prin. Invest.:* J HAAS  
*Tech. Officer:* GSFC/T GULL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10935 OGLALA LAKOTA COLL 8454**  
 NASA/OGLALA LAKOTA COLL SUMMER INST AND RESEARCH INST. NASA HONORS SUPPLEMENTAL SUC  
 06/07/2001 - 06/14/2002 FY02: \$0 Total: \$41,500  
*Prin. Invest.:* S PHELPS  
*Tech. Officer:* GSFC/D MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 7746 SOUTH DAKOTA SCHOOL OF MINES & TECH 8455**  
 PROVIDE FOR SCIENTIFIC KNOWLEDGE FOR INDIAN LEARNING AND LEADERSHIP FOR MISSION TO PLANET EARTH  
 10/21/1998 - 08/31/2001 FY02: \$0 Total: \$300,000  
*Prin. Invest.:* F CAMPONE  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 21 - MATHEMATICS

## NASA'S UNIVERSITY PROGRAM

TENNESSEE

**NAG 5 8973** SOUTH DAKOTA SCHOOL OF MINES & TECH 8456  
 EARTH SYSTEMS CONNECTIONS: AN INTEGRATED K-4 SCIENCE, MATH-  
 EMATICS, & TECHNOLOGY CURRICULUM  
 02/15/2000 - 12/31/2002 FY02: \$0 Total: \$309,100  
 Prin. Invest.: L A VIERLING  
 Tech. Officer: GSFC/N KHAZENIE  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 99021** SOUTH DAKOTA SCHOOL OF MINES & TECH 8457  
 APPLICATION OF REMOTE SENSING TO FOREST RESOURCE INVENTORY  
 AND HABITAT MODELING  
 08/13/1999 - 10/31/2002 FY02: \$30,000 Total: \$230,040  
 Prin. Invest.: M PRICE  
 Tech. Officer: JSC/R MCKELLIP  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 402** SOUTH DAKOTA SCHOOL OF MINES & TECH 8458  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/14/1999 - 12/31/2001 FY02: \$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 8459  
 THE USE OF REMOTE SENSING FOR MONITORING, PREDICTI ON, AND  
 MANAGEMENT OF HYDROLOGIC, AGRICULTURAL, AND  
 08/31/2001 - 08/31/2004 FY02: \$0 Total: \$512,100  
 Prin. Invest.: S O FARWELL  
 Tech. Officer: GSFC/D DETROYE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30402** SOUTH DAKOTA SCHOOL OF MINES & TECH 8460  
 SEMI-ARID GRASSLAND ECOSYSTEM FORCING: REPLACING NATIVE,  
 FREE-RANGING UNGULATE GRAZING WITH HUMAN-  
 09/05/2001 - 08/31/2004 FY02: \$0 Total: \$22,000  
 Prin. Invest.: P R ZIMMERMAN  
 Tech. Officer: GSFC/K BLANDING  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40042** SOUTH DAKOTA SCHOOL OF MINES & TECH 8461  
 NATIONAL SPACE GRANT COLL AND FELLOWSHIP PROGRA  
 01/24/1997 - 02/28/2001 FY02: \$0 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 8462  
 SOUTH DAKOTA SPACE GRANT COLL AND FELLOWSHIP PR OGRAM  
 02/28/2001 - 02/28/2005 FY02: \$0 Total: \$260,781  
 Prin. Invest.: S O FARWELL  
 Tech. Officer: GSFC/D DETROYE  
 CASE Category: 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 3540** SOUTH DAKOTA STATE UNIV 8463  
 TM RADIOMETRIC CALIBRATION  
 11/19/1996 - 06/30/2001 FY02: \$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 8464  
 LANDSAT RADOMETRIC CALIBRATION: TOWARDS A 20 YEAR RECORD OF  
 CALIBRATED THEMATIC MAPPER CLASS DAT FO  
 09/14/2001 - 09/14/2004 FY02: \$0 Total: \$99,975  
 Prin. Invest.: D HELDER  
 Tech. Officer: GSFC/B L MARKHAM  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

**NAG13 02045** SOUTH DAKOTA STATE UNIV 8465  
 SDSU WORK PLAN FOR JACIE SDSU WORK PLAN FOR JACIE  
 08/09/2002 - 06/30/2003 FY02: \$0 Total: \$0  
 Prin. Invest.: D HELDER  
 Tech. Officer: SSC/V ZANONI  
 CASE Category: 19 - PHYSICAL SCIENCE, OTHER

**NCC 5 472** SOUTH DAKOTA STATE UNIV 8466  
 AN INTEGRATED ASSESSMENT OF THE EARTH OBSRVER - 1 INSTRUMENT  
 SUITE & THE LANDSAT 7 ENHANCED THEMATIC  
 03/08/2000 - 12/31/2002 FY02: \$2,494 Total: \$190,584  
 Prin. Invest.: D HELDER  
 Tech. Officer: GSFC/S UNGAR  
 CASE Category: 39 - ENVIRONMENTAL SCI, OTHER

## TENNESSEE

**NAG 3 2454** CHRISTIAN BROTHERS COLL 8467  
 ROBUST STRATEGY FOR ROCKET ENGINE HEALTH MONITORIN G  
 06/07/2000 - 05/31/2001 FY02: \$0 Total: \$144,264  
 Prin. Invest.: D SANTI  
 Tech. Officer: GRC/E WONG  
 CASE Category: 42 - ASTRONAUTICAL ENGR

**NAG 5 10344** EAST TENNESSEE STATE UNIV 8468  
 THE OUTER ATMOSPHERE OF MIRA VARIABLES (FUSE 00)  
 01/31/2001 - 01/31/2003 FY02: \$0 Total: \$20,623  
 Prin. Invest.: D G LUTTERMOSER  
 Tech. Officer: GSFC/G SONNEBORN  
 CASE Category: 11 - ASTRONOMY

**NAG 8 1375** EAST TENNESSEE STATE UNIV 8469  
 METASTABLE SOLUTION STRUCTURE AND OPTIMIZATION STRATEGIES IN  
 PROTEIN CRYSTAL GROWTH  
 06/18/1997 - 09/30/2003 FY02: \$0 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 8470  
 SURFACE AND INTERFACIAL STRUCTURES OF METAL ULTRA- THIN FILM  
 ON SIC AT ELEVATED TEMPERATURES  
 10/14/1999 - 11/10/2001 FY02: \$0 Total: \$192,484  
 Prin. Invest.: D E COLLINS  
 Tech. Officer: GRC/G HUNTER  
 CASE Category: 43 - CHEMICAL ENGR

**NAG 3 2308** FISK UNIV 8471  
 SIZE GRADED QUANTUM DOT SOLAR ENERGY CELLS FOR SPA CE POWER  
 TECHNOLOGY  
 12/10/1999 - 05/31/2002 FY02: \$0 Total: \$282,963  
 Prin. Invest.: D O HENDERSON  
 Tech. Officer: GRC/E CLARK  
 CASE Category: 13 - PHYSICS

TENNESSEE

NASA'S UNIVERSITY PROGRAM

**NAG 8 1604**                      **FIK UNIV**                      **8472**  
 OPTICAL TRAPPING AND MANIPULATION OF NANOCRYSTALS CREATED IN  
 A LASER ABATION PLUME  
 04/21/1999 - 04/20/2002                      FY02: \$0                      Total: \$300,971  
*Prin. Invest.:* D O HENDERSON  
*Tech. Officer:* MSFC/U  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NCC 8 133**                      **FIK UNIV**                      **8473**  
 FOR RESEARCH "FIK UNIV CENTER FOR PHOTONIC MATERIALS AND  
 DEVICES"  
 04/21/1997 - 12/31/2002                      FY02: \$0                      Total: \$5,200,000  
*Prin. Invest.:* E SILHERMAN  
*Tech. Officer:* MSFC/D O FRAZIER  
*CASE Category:* 13 - PHYSICS

**NCC 8 195**                      **FIK UNIV**                      **8474**  
 CHARACTERIZATION OF CRYSTALLINE PERFECTION OF BINARY AND  
 TERNARY GAP SEMICONDUCTORS  
 09/30/1999 - 09/29/2001                      FY02: \$0                      Total: \$199,759  
*Prin. Invest.:* A BURGER  
*Tech. Officer:* MSFC/C HUA SU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12093**                      **MEHARRY MEDICAL COLL**                      **8475**  
 NASA/MEHARRY/VANDERBILT SUMMER RESEARCH APPRENTICE SHIP  
 PROGRAM  
 04/30/2002 - 04/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M F LIMA  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11692**                      **MIDDLE TENNESSEE STATE UNIV**                      **8476**  
 TENNESSEE CENTER FOR THE ADVANCEMENT OF MATHEMATIC S SCI-  
 ENCE AND TECHNOLOGY EDUCATION  
 02/01/2002 - 01/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E R PHILLIPS  
*Tech. Officer:* GSFC/L BILBROUGH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12561**                      **MIDDLE TENNESSEE STATE UNIV**                      **8477**  
 NAKED-EYE OBSERVATORY  
 09/17/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E KLUMPE  
*Tech. Officer:* GSFC/L BILBROUGH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1486**                      **MIDDLE TENNESSEE STATE UNIV**                      **8478**  
 R/S DEVELOPMENT OF ANIONIC POLYELECTROLYTES FOR SOLID STATE  
 BATTERY APPLICATION  
 04/21/1998 - 08/01/2002                      FY02: \$0                      Total: \$164,531  
*Prin. Invest.:* A C FRIEDLI  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 2 1419**                      **TENNESSEE STATE UNIV**                      **8479**  
 QUALITY OF SERVICE COMPARISONS BETWEEN SATELLITE, MIRCOWAVE,  
 & T1 COMMUNICATIONS  
 07/13/2000 - 06/14/2003                      FY02: \$0                      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**                      **8480**  
 EMBODIMENT OF INTELLIGENT BEHAVIORS ON MOBILE ROBO TS  
 04/18/2001 - 10/31/2001                      FY02: \$0                      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 1530**                      **TENNESSEE STATE UNIV**                      **8481**  
 EMBODIMENT OF INTELLIGENT BEHAVIORS ON MOBILE ROBO TS  
 12/13/2001 - 12/14/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M S ZEIN-SABATTO  
*Tech. Officer:* ARC/S COLOMBANO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 6052**                      **TENNESSEE STATE UNIV**                      **8482**  
 A PARTNERSHIP BETWEEN THE TENNESSEE STATE UNIV CTR OF EXCEL-  
 LENCE, THE NM SUPERCOMPUTING CHALLENGE &  
 09/27/2001 - 09/30/2002                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* W A SMITH  
*Tech. Officer:* ARC/A CARDENAS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2272**                      **TENNESSEE STATE UNIV**                      **8483**  
 TECHNICAL RESEARCH/MENTORSHIP SYMPOSIUM '99 INTEGR ATION OF  
 EDUCATION, WORK CYCLES, ANDGRADUATE SCH  
 06/23/1999 - 06/30/2001                      FY02: \$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**                      **8484**  
 COLL BOUND TO GRADUATE SCHOOL COLL BOUND TO GRADUATE  
 SCHOOL  
 05/24/2000 - 11/30/2000                      FY02: \$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**                      **8485**  
 TSU RESEARCH PROJECTS FOR INCREASING THE POOL OF M INORITY  
 ENGINEERS  
 07/10/2000 - 06/30/2003                      FY02: -\$1                      Total: \$164,799  
*Prin. Invest.:* D ROGERS  
*Tech. Officer:* GRC/S MERRITT  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2577**                      **TENNESSEE STATE UNIV**                      **8486**  
 THE NASA ENGINEERING AND SCIENCE COLLABORATIVE THE NASA  
 ENGINEERING AND SCIENCE COLLABORATIVE  
 04/18/2001 - 11/30/2002                      FY02: \$0                      Total: \$762,940  
*Prin. Invest.:* D ROGERS  
*Tech. Officer:* GRC/R LAWRENCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2606**                      **TENNESSEE STATE UNIV**                      **8487**  
 COLL BOUND TO GRADUATE SCHOOL PROGRAM COLL BOUND TO GRADU-  
 ATE SCHOOL PROGRAM  
 05/23/2001 - 09/30/2001                      FY02: \$0                      Total: \$53,212  
*Prin. Invest.:* D ROGERS  
*Tech. Officer:* GRC/M BOROWSKI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



## NASA'S UNIVERSITY PROGRAM

TENNESSEE

<b>NAG 3 2781</b>	<b>TENNESSEE STATE UNIV</b>	<b>8488</b>	<b>NAG 8 1749</b>	<b>TENNESSEE TECHNOLOGICAL UNIV</b>	<b>8497</b>
COLL BOUND COLL BOUND			ACTIVE CONTROL OF LARGE, FLEXIBLE SPACE STRUCTURES USING		
05/23/2002 - 09/01/2002	FY02: \$0	Total: \$0	SHAPE MEMORY ALLOYS		
<i>Prin. Invest.:</i> D ROGERS			10/02/2000 - 07/31/2002	FY02: \$0	Total: \$37,813
<i>Tech. Officer:</i> GRC/IM BOROWSKI			<i>Prin. Invest.:</i> S CANFIELD		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>Tech. Officer:</i> MSFC/C K CARRINGTON		
			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 10896</b>	<b>TENNESSEE STATE UNIV</b>	<b>8489</b>	<b>NAG 8 1793</b>	<b>TENNESSEE TECHNOLOGICAL UNIV</b>	<b>8498</b>
TSU SPACE SCIENCE AND ASTROBIOLOGY INITIATIVE			CONCEPT DEL AND EVAL OF CAPTURE DEVICES FOR RENEDE ZOUS WITH		
05/04/2001 - 04/30/2003	FY02: \$0	Total: \$200,000	TETHER-DRIVEN TRANSFER VEHICLES		
<i>Prin. Invest.:</i> M BUSBY			03/06/2001 - 02/15/2002	FY02: \$0	Total: \$38,000
<i>Tech. Officer:</i> GSFC/M MATHEWS			<i>Prin. Invest.:</i> S CANFIELD		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>Tech. Officer:</i> MSFC/K WELZN		
			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NAG 8 1855</b>	<b>TENNESSEE STATE UNIV</b>	<b>8490</b>	<b>NAG 8 1794</b>	<b>TENNESSEE TECHNOLOGICAL UNIV</b>	<b>8499</b>
INSPIRING CAREERS IN ENG, MATHEMATICS SCIENCE			ENHANCEMENT OF EJECTOR EFFICIENCY IN ADVANCE RE- USABLE		
12/17/2001 - 12/16/2002	FY02: \$0	Total: \$0	PROPULSION ENGINE		
<i>Prin. Invest.:</i> L SHARPE			03/13/2001 - 09/30/2003	FY02: \$0	Total: \$60,000
<i>Tech. Officer:</i> MSFC/W LOVE			<i>Prin. Invest.:</i> S S HAN, J PIEDDIESON		
<i>CASE Category:</i> 21 - MATHEMATICS			<i>Tech. Officer:</i> MSFC/J J HUTT		
			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NCC 2 1205</b>	<b>TENNESSEE STATE UNIV</b>	<b>8491</b>	<b>NGT 8 52883</b>	<b>TENNESSEE TECHNOLOGICAL UNIV</b>	<b>8500</b>
A PARTNERSHIP BETWEEN THE TSU CTR. OF EXCELLENCE & THE NM			HYDROSTATIC EFFECTS ON YIELDING AND FATIGUE LIFE		
SUPERCOMPUTING CHALLENGE			09/10/1999 - 09/09/2002	FY02: \$0	Total: \$66,000
09/26/2000 - 09/30/2001	FY02: \$0	Total: \$70,800	<i>Prin. Invest.:</i> C WILSON		
<i>Prin. Invest.:</i> W A SMITH			<i>Tech. Officer:</i> MSFC/J DOWDY		
<i>Tech. Officer:</i> ARC/M E DUENAS, ARC/K FREEMEN			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE					
<b>NCC 5 96</b>	<b>TENNESSEE STATE UNIV</b>	<b>8492</b>	<b>NGT 8 52911</b>	<b>TENNESSEE TECHNOLOGICAL UNIV</b>	<b>8501</b>
NASA/TSU NETWORK RESOURCE AND TRAINING SITE			DEV & EVALUATION OF CAPTURE DEVICES FOR RENDEZVOUS WITH		
08/15/1995 - 08/14/2001	FY02: \$0	Total: \$2,878,000	TETHER-DRIVEN TRANSFER VEHICLES		
<i>Prin. Invest.:</i> W A SMITH			06/26/2001 - 06/30/2002	FY02: \$0	Total: \$22,000
<i>Tech. Officer:</i> GSFC/J HARRINGTON			<i>Prin. Invest.:</i> S CANFIELD		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>Tech. Officer:</i> MSFC/S NASH-STEVENSON		
			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NCC 5 511</b>	<b>TENNESSEE STATE UNIV</b>	<b>8493</b>	<b>NAG 5 7617</b>	<b>UNIV OF MEMPHIS</b>	<b>8502</b>
CENTER FOR AUTOMATED SPACE SCIENCE			FUNDING FOR 'LANDSLIDE HAZARD IN RESPONSE TO SHORT TERM		
08/23/2000 - 06/30/2005	FY02: \$0	Total: \$1,500,000	CLIMATE CHANGE' (SENH98-0020)		
<i>Prin. Invest.:</i> M BUSBY			07/24/1998 - 06/30/2002	FY02: \$0	Total: \$225,000
<i>Tech. Officer:</i> GSFC/M MATHEWS			<i>Prin. Invest.:</i> M ELLIS		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>Tech. Officer:</i> GSFC/H V FREY		
			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<b>NCC 5 531</b>	<b>TENNESSEE STATE UNIV</b>	<b>8494</b>	<b>NAG 5 9783</b>	<b>UNIV OF MEMPHIS</b>	<b>8503</b>
NASA/TSU MINORITY UNIVERSITIES INFORMATION NETWORK FOR RE-			OBSERVATIONAL CONSTRAINTS FOR CORONAL HEATING MODELS		
SEARCH & EDUCATION/MUSPIN NRTSPROGRAM			07/06/2000 - 06/30/2003	FY02: \$0	Total: \$60,429
02/01/2001 - 01/31/2004	FY02: \$0	Total: \$365,321	<i>Prin. Invest.:</i> J T SCHMELZ		
<i>Prin. Invest.:</i> W A SMITH			<i>Tech. Officer:</i> GSFC/W J WAGNER		
<i>Tech. Officer:</i> GSFC/J HARRINGTON			<i>CASE Category:</i> 13 - PHYSICS		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER					
<b>NCC 5 657</b>	<b>TENNESSEE STATE UNIV</b>	<b>8495</b>	<b>NAG 5 12096</b>	<b>UNIV OF MEMPHIS</b>	<b>8504</b>
MINORITY INST COLLABORATORY			THE IMPLICATIONS OF MULTITHERMAL LOOPS FOR CORONAL HEATING		
09/18/2002 - 12/14/2002	FY02: \$0	Total: \$0	MODELS		
<i>Prin. Invest.:</i> T P GARY			05/01/2002 - 06/30/2003	FY02: \$0	Total: \$0
<i>Tech. Officer:</i> GSFC/JHARRINGTON			<i>Prin. Invest.:</i> J T SCHMELZ		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>Tech. Officer:</i> GSFC/W WAGNER		
			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 8 1631</b>	<b>TENNESSEE TECHNOLOGICAL UNIV</b>	<b>8496</b>			
ANALYSIS OF NEARLY STEADY PHOTOSPHERIC FLOWS					
09/07/1999 - 09/08/2002	FY02: \$0	Total: \$87,000			
<i>Prin. Invest.:</i> S HAN					
<i>Tech. Officer:</i> MSFC/D HATHAWAY					
<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER					

## TENNESSEE

## NASA'S UNIVERSITY PROGRAM

**NCC 2 1244**                      **UNIV OF MEMPHIS**                      **8505**  
 SODAS: MODELS OF SELF-ORGANIZING ONTOGENETIC DEVELOPMENT  
 FOR AUTONOMOUS ADAPTIVE SYSTEMS  
 04/05/2001 - 02/28/2003                      FY02: \$0                      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**                      **8506**  
 PRE-SERVICE TEACHER ENHANCEMENT PROGRAM  
 02/04/2000 - 02/14/2003                      FY02: \$0                      Total: \$201,390  
*Prin. Invest.:* T L PATTY  
*Tech. Officer:* GSFC/B MEESON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4541**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8507**  
 METEORITE PETROGENESIS  
 05/06/1997 - 03/31/2002                      FY02: \$0                      Total: \$537,000  
*Prin. Invest.:* D V MCSWEEN, JR.  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8405**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8508**  
 TOWARD THE CORE COLLAPSE SUPERNOVA MECHANISM: THE NEXT  
 GENERATION IN NEUTRINO TRANSPORT AND CONVE  
 03/16/1999 - 08/31/2002                      FY02: \$0                      Total: \$167,694  
*Prin. Invest.:* A MEZZACAPPA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8726**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8509**  
 PLANETARY PETROLOGY AND GEOCHEMISTRY  
 08/04/1999 - 07/31/2002                      FY02: \$0                      Total: \$70,500  
*Prin. Invest.:* L A TAYLOR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8760**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8510**  
 TOWARDS INTELLIGENT DISTRIBUTED BIOLUMINESCENCE DETECTION OF  
 BIOLOGICAL CONTAMINATION AND STRESSORS  
 08/26/1999 - 02/28/2002                      FY02: \$0                      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**                      **8511**  
 NHSE - THE NATIONAL HPCC SOFTWARE EXCHANGE  
 09/07/1999 - 08/31/2002                      FY02: \$0                      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**                      **8512**  
 THE POROSITY OF ASTEROIDS  
 01/07/2000 - 12/31/2002                      FY02: \$0                      Total: \$64,350  
*Prin. Invest.:* D BRITT  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9061**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8513**  
 THE MINERALOGY OF THE INNER ASTEROID BELT  
 02/15/2000 - 02/14/2003                      FY02: \$0                      Total: \$79,443  
*Prin. Invest.:* D T BRITT  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10414**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8514**  
 PETROGENESIS OF PLANETARY CRUSTS AND MANTLES AND METEORITES  
 02/14/2001 - 02/14/2002                      FY02: \$0                      Total: \$110,000  
*Prin. Invest.:* L A TAYLOR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10525**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8515**  
 DUST AND FELDSPAR MINERALOGY ON MARS FROM THERMAL EMISSION  
 SPECTRA  
 03/06/2001 - 03/14/2004                      FY02: \$0                      Total: \$60,700  
*Prin. Invest.:* H MCSWEEN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10582**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8516**  
 AN INVESTIGATION OF THE PREHISTORY, FORMATION & EVOLUTION OF  
 THE SOLAR SYSTEM THROUGH ULTRASENSIT  
 03/19/2001 - 04/30/2002                      FY02: \$0                      Total: \$25,000  
*Prin. Invest.:* N THONNARD  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10635**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8517**  
 SPECIAL CONSIDERATIONS IN THE INTERPRETATION OF THERMAL INFR  
 RED SPECTROSCOPY FROM LANDERS AN  
 03/17/2001 - 03/14/2002                      FY02: \$0                      Total: \$73,000  
*Prin. Invest.:* J MOERSCH  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10666**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8518**  
 RECOGNIZING BIOTIC INFLUENCES ON PLANETARY EVOLUTION: INVEST  
 IGATING THE BIOGEOCHEMICAL RECORD OF  
 03/21/2001 - 03/31/2003                      FY02: \$0                      Total: \$82,200  
*Prin. Invest.:* L KAH  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10788**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8519**  
 REMOTE SENSING FOR MARTIAN EXPALEONTOLOGY: DETECTABILITY  
 THRESHOLDS FOR AQUEOUS MINERALS AS A BASIS  
 04/23/2001 - 04/30/2004                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* J E MOERSH  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10794**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8520**  
 MINERALOGY & SPECTRAL PROPERTIES OF LUNAR SOILS  
 04/25/2001 - 04/30/2002                      FY02: \$0                      Total: \$24,000  
*Prin. Invest.:* L TAYLOR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11201**                      **UNIV OF TENNESSEE - KNOXVILLE**                      **8521**  
 MINERALOGICAL MAPPING OF PUTATIVE MARTIAN PALEOLAKE BASINS  
 08/07/2001 - 08/14/2003                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* J E MOERSCH  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

<p><b>NAG 5 11558</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8522</b>  METEORITIC PETROGENESIS OF LUNAR AND PLANETARY CRUSTS AND METEORITES  02/08/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  Prin. Invest.: L A TAYLOR  Tech. Officer: GSFC/J M BOYCE  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 8 1669</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8530</b>  RESEARCH ENTITLED, "DEVELOPMENT OF A MONTE CARLO RADIATION TRANSPORT CODE SYSTEM FOR HEDS"  08/16/2000 - 11/30/2003                      FY02: \$0                      Total: \$107,000  Prin. Invest.: L W TOWNSEND, T A GABRIEL, T W ARMSTRONG  Tech. Officer: MSFC/P DOTY  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 5 11567</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8523</b>  CONSTRAINING PLANETESIMAL ACCRETION BY THERMAL MODELING  02/19/2002 - 02/28/2005                      FY02: \$0                      Total: \$0  Prin. Invest.: H MCSWEEN  Tech. Officer: GSFC/J BOYCE  CASE Category: 11 - ASTRONOMY</p>	<p><b>NAG 8 1826</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8531</b>  STRUCTURAL STUDIES OF NUCLEOSOMES AND CHROMATIN  09/06/2001 - 11/30/2004                      FY02: \$0                      Total: \$57,000  Prin. Invest.: G J BUNICK  Tech. Officer: MSFC/B GUYNES  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>
<p><b>NAG 5 11744</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8524</b>  METEORITE PETROGENESIS  02/20/2002 - 03/31/2003                      FY02: \$0                      Total: \$0  Prin. Invest.: H Y MCSWEEN  Tech. Officer: GSFC/JBOYCE  CASE Category: 12 - CHEMISTRY</p>	<p><b>NAG 9 1080</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8532</b>  BIOLUMINESCENT BIOREPORTER INTEGRATED CIRCUITS FOR MONITORING SPACECRAFT ENVIRONMENTS  03/15/1999 - 03/14/2002                      FY02: \$0                      Total: \$386,132  Prin. Invest.: G S SAYLER  Tech. Officer: JPL/D JAN  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAG 5 11978</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8525</b>  CHEMICAL AND MINERALOGICAL CHARACTERIZATIONS OF LUNAR SOILS FOR SPECTRAL REFLECTANCE CALIBRATIONS  04/08/2002 - 04/30/2005                      FY02: \$0                      Total: \$0  Prin. Invest.: L A TAYLOR  Tech. Officer: GSFC/J BOYCE  CASE Category: 12 - CHEMISTRY</p>	<p><b>NAG 9 1123</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8533</b>  MEASUREMENT OF SECONDARY NEUTRON AND CHARGES PARTICAL SPECTRA  07/01/1999 - 06/30/2002                      FY02: \$0                      Total: \$66,000  Prin. Invest.: L W TOWNSEND  Tech. Officer: JSC/F A CUCINOTTA  CASE Category: 59 - LIFE SCIENCE, OTHER</p>
<p><b>NAG 5 12134</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8526</b>  CAREER OPPORTUNITIES FOR STUDENTS WITH DISABILITIES (COSD)  05/09/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  Prin. Invest.: R GREENBERG  Tech. Officer: GSFC/M HARTMAN  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 9 1424</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8534</b>  BIOLUMINESCENT MONITORING OF OPPORTUNISTIC PATHOGENS IN THE SPACECRAFT ENVIRONMENT  06/14/2002 - 09/30/2004                      FY02: \$0                      Total: \$0  Prin. Invest.: G S SAYLER  Tech. Officer: JSC/D JAN  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>
<p><b>NAG 5 12477</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8527</b>  ADVANCED WARNING METHODOLOGIES FOR SOLAR PARTICLE EVENT RADIATION EXPOSURES  08/21/2002 - 08/14/2005                      FY02: \$0                      Total: \$0  Prin. Invest.: L TOWNSEND  Tech. Officer: GSFC/W WAGNER  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NCC 2 1187</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8535</b>  IN SITU &amp; REMOTE SENSING OF MARTIAN GEOLOGY  06/29/2000 - 06/30/2001                      FY02: \$0                      Total: \$29,534  Prin. Invest.: J E MOERSCH, E J HENRIKSEN  Tech. Officer: ARC/T L ROUSH, ARC  CASE Category: 32 - GEOLOGICAL SCIENCE</p>
<p><b>NAG 8 1442</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8528</b>  R/S PROJECT SEE (SATELLITE ENERGY EXCHANGE) TEST OF EQUIVALENCE PRINCIPLE &amp; MEASUREMENT OF GRAVITATION  04/24/1998 - 01/31/2003                      FY02: \$0                      Total: \$177,000  Prin. Invest.: A J SANDERS  Tech. Officer: MSFC/J POE  CASE Category: 13 - PHYSICS</p>	<p><b>NCC 2 5265</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8536</b>  THE STUDY OF HYBRID COMPUTATION METHODS FOR THE COMPUTATION OF ROTOR FLOWS AT LOW FLIGHT SPEEDS  04/23/1998 - 10/31/2000                      FY02: \$0                      Total: \$40,000  Prin. Invest.: J STEINHOFF  Tech. Officer: ARC/F CARDONNA  CASE Category: 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 8 1568</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8529</b>  REVERSIBLE CRYOGENIC STORAGE OF MACROMOLECULAR CRYSTALS GROWN IN MICROGRAVITY  01/15/1999 - 11/30/2002                      FY02: \$0                      Total: \$414,300  Prin. Invest.: G J BUNICK  Tech. Officer: MSFC/B V GUYNES, MSFC/D CHAFEE  CASE Category: 39 - ENVIRONMENTAL SCI, OTHER</p>	<p><b>NCC 2 5390</b>                      <b>UNIV OF TENNESSEE - KNOXVILLE</b>                      <b>8537</b>  ENABLING QUANTUM MECHANICAL SIMULATIONS OF CARBON NANOTUBES  08/15/2000 - 01/31/2001                      FY02: \$0                      Total: \$5,000  Prin. Invest.: P RAGHAVAN  Tech. Officer: ARC/T R GOVINDAN  CASE Category: 19 - PHYSICAL SCIENCE, OTHER</p>

## TENNESSEE

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50206 UNIV OF TENNESSEE - KNOXVILLE 8538**  
 EVALUATION OF CONSTRUCTED MICROBIAL COMMUNITIES AS INOCULA  
 FOR BIOLOGICAL SUPPORT SYSTEMS  
 07/09/1998 - 07/14/2001 FY02: \$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 8539**  
 THE PETROLOGY & TEMPORAL & SPATIAL EVOLUTION OF MARTIAN  
 VOLCANISM FROM THERMALEMISSION DATA OF  
 06/22/2000 - 07/31/2003 FY02: \$0 Total: \$44,000  
*Prin. Invest.:* H Y MCSWEEN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52920 UNIV OF TENNESSEE - KNOXVILLE 8540**  
 CONTINUOUS CROSS SECTION DATABASE DEVELOPMENT FOR GENERALIZED  
 THREE DIMENSION RADIATION TRANSPORT CODES  
 05/29/2002 - 06/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* L TOWNSEND  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2680 UNIV OF TENNESSEE SPACE INST-TULLAHOMA 8541**  
 PULSED DETONATION ENGINE TECHNOLOGY - IC-02-33 PULSED DETONA-  
 TIONENGINE TECHNOLOGY - IC-02-33  
 12/19/2001 - 09/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* D L MERKLE  
*Tech. Officer:* GRC/R FERNANDEZ  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 4387 UNIV OF TENNESSEE SPACE INST-TULLAHOMA 8542**  
 CONSTRAINING ACCRETION AND DIFFERENTIATION OF PLANET MODELLING  
 04/24/1997 - 02/28/2002 FY02: \$0 Total: \$244,100  
*Prin. Invest.:* D Y MCSWEEN, JR.  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAS 8 97301 UNIV OF TENNESSEE SPACE INST-TULLAHOMA 8543**  
 CRITICAL PHYSICAL PROCESSES, IGNITION, DDT LENGTHS AND TIME  
 ACCURATE TREATMENTS  
 07/30/1997 - 12/28/2001 FY02: \$0 Total: \$254,000  
*Prin. Invest.:* J W MUELHAUSER  
*Tech. Officer:* MSFC/J COLE  
*CASE Category:* 13 - PHYSICS

**NCC 2 5413 UNIV OF TENNESSEE SPACE INST-TULLAHOMA 8544**  
 ALGORITHMIC ENHANCEMENTS FOR UNSTEADY AERODYNAMICS & COM-  
 BUSTION APPLICATIONS  
 12/14/2000 - 09/30/2001 FY02: \$0 Total: \$40,224  
*Prin. Invest.:* S VENKATESWARAN  
*Tech. Officer:* ARC/M E OLSEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 2 5493 UNIV OF TENNESSEE SPACE INST-TULLAHOMA 8545**  
 ALGORITHMIC ENHANCEMENTS FOR UNSTEADY AERODYNAMICS MUL-  
 TIPHASE AND COMBUSTION APPLICATIONS  
 05/24/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* S VENKATESWARAN  
*Tech. Officer:* ARC/G KLOPPER, ARC/M E OLSEN  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 3 2401 VANDERBILT UNIV 8546**  
 SEPARATION OF CARBON MONOXIDE AND CARBON DIOXIDE FOR MARS  
 ISRU  
 04/25/2000 - 11/30/2003 FY02: \$0 Total: \$138,305  
*Prin. Invest.:* D LEVAN  
*Tech. Officer:* GRC/R D GREEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 8618 VANDERBILT UNIV 8547**  
 A STUDY OF ION OUTFLOW AS A SOURCE FOR THE MAGNETO SPHERE  
 06/14/1999 - 06/30/2002 FY02: \$0 Total: \$172,044  
*Prin. Invest.:* R CHAPPELL  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8906 VANDERBILT UNIV 8548**  
 THE PRESSURE IONIZATION OF HYDROGEN & THE INTERIOR OF JUPITER  
 & SATURN  
 12/29/1999 - 01/31/2003 FY02: \$0 Total: \$52,650  
*Prin. Invest.:* D SAUMON  
*Tech. Officer:* GSFC/J GRANT  
*CASE Category:* 13 - PHYSICS

**NAG 5 9565 VANDERBILT UNIV 8549**  
 NEW ISTP SOLAR MAX: A MULTI-SPACECRAFT STUDY OF THE FLOW OF  
 IONOSPHERIC PLASMA  
 05/09/2000 - 05/14/2002 FY02: \$0 Total: \$70,000  
*Prin. Invest.:* C CHAPPELL  
*Tech. Officer:* GSFC/R HOFFMAN  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9828 VANDERBILT UNIV 8550**  
 SINGLE EVENT EFFECTS IN COMBINATIONAL LOGIC.  
 08/23/2000 - 08/31/2001 FY02: \$0 Total: \$25,000  
*Prin. Invest.:* L MASSENGILL  
*Tech. Officer:* GSFC/J BARTH  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 10572 VANDERBILT UNIV 8551**  
 THE TIMESCALE FOR THE FORMATION OF PLANETARY SYSTEMS  
 03/13/2001 - 03/31/2002 FY02: \$0 Total: \$15,000  
*Prin. Invest.:* D WEINTRAUB  
*Tech. Officer:* GSFC/J M BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12429 VANDERBILT UNIV 8552**  
 IMMUNOISOLATION OF LIVING ISLETS AS A FUNCTIONAL CURE FOR  
 DIABETES - LARGE ANIMAL STUDIES  
 07/29/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* T G WANG  
*Tech. Officer:* GSFC/L P CHAMBERS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1662 VANDERBILT UNIV 8553**  
 RECOVERY OF MINERALS IN MARTIAN SOILS VIA SUPERCRITICAL FLUID  
 EXTRACTIONS.  
 06/01/2000 - 11/30/2003 FY02: \$0 Total: \$135,250  
*Prin. Invest.:* K A DEBELAK  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

TENNESSEE

<b>NAG 8 1677</b>	<b>VANDERBILT UNIV</b>	<b>8554</b>	<b>NCC 2 1238</b>	<b>VANDERBILT UNIV</b>	<b>8562</b>
INVESTIGATION OF TGHE RELATIONSHIP BETWEEN UNDERCOOLING AND SOLIDIFICATION VELOCITY.			ROBUST METHODS FOR AUTONOMOUS FAULT ADAPTIVE CONTR OL OF COMPLEX SYSTEMS		
05/08/2000 - 11/30/2003	FY02: \$0	Total: \$222,493	04/06/2001 - 02/28/2003	FY02: \$0	Total: \$90,000
<i>Prin. Invest.:</i> R J BAYUZICK			<i>Prin. Invest.:</i> G BISWAS		
<i>Tech. Officer:</i> MSFC/P DOTY			<i>Tech. Officer:</i> ARC/R MORRIS, ARC/D J CLANCY		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 8 1745</b>	<b>VANDERBILT UNIV</b>	<b>8555</b>	<b>NCC 2 5384</b>	<b>VANDERBILT UNIV</b>	<b>8563</b>
FLOW VISUALIZATION STUDIES IN MOLTEN ZONES			MODELING OF HYBRID MEMBRANE/ADSORBER FOR CARBON DI OXIDE REMOVAL AND COMPARISON WITH FOUR-BED MOLE..		
09/29/2000 - 07/31/2003	FY02: \$0	Total: \$62,500	05/30/2000 - 06/30/2001	FY02: \$0	Total: \$48,637
<i>Prin. Invest.:</i> A V ANIKUMER			<i>Prin. Invest.:</i> M D LEVAN		
<i>Tech. Officer:</i> MSFC/R GRUGEL			<i>Tech. Officer:</i> ARC/J E FINN		
<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER			<i>CASE Category:</i> 43 - CHEMICAL ENGR		
<b>NAG 9 1273</b>	<b>VANDERBILT UNIV</b>	<b>8556</b>	<b>NCC 8 255</b>	<b>VANDERBILT UNIV</b>	<b>8564</b>
DESIGN THROUGH MANUFACTURING: SOLID MODEL-FINITE ELEMENT ANALYSIS INTERFACE			RESEARCH DEVELOPMENT NSSTC		
01/09/2001 - 09/30/2002	FY02: \$0	Total: \$15,500	01/31/2002 - 02/07/2007	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> C HACHEY			<i>Prin. Invest.:</i> S H SMARTT		
<i>Tech. Officer:</i> JSC/R ARONOFF			<i>Tech. Officer:</i> MSFC/S COLEMAN, MSFC/R SILVER		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 9 1428</b>	<b>VANDERBILT UNIV</b>	<b>8557</b>	<b>NGT 1 52227</b>	<b>VANDERBILT UNIV</b>	<b>8565</b>
ROBOT ACQUISITION OF ACTIVE MAPS THROUGH TELEOPERATION & VECTOR SPACE ANALYSIS			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
05/29/2002 - 06/03/2002	FY02: \$0	Total: \$0	01/20/2000 - 12/31/2001	FY02: \$0	Total: \$34,001
<i>Prin. Invest.:</i> R A PETERS			<i>Prin. Invest.:</i> A COX		
<i>Tech. Officer:</i> JSC/R T SAVELY			<i>Tech. Officer:</i> LARC/G C HORNER		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NAG 9 1446</b>	<b>VANDERBILT UNIV</b>	<b>8558</b>	<b>NGT 5 105</b>	<b>VANDERBILT UNIV</b>	<b>8566</b>
ANTONOMOUS BEHAVIORS BY ROBOTIC ASSISTANTS			CHARACTERIZATION OF PROTON RADIATION EFFECTS IN LI NEAR BIOPOLAR DEVICES & CIRCUITS/STUDENT: H BARNAB		
08/01/2002 - 07/31/2004	FY02: \$0	Total: \$0	05/26/2000 - 06/30/2003	FY02: \$0	Total: \$44,000
<i>Prin. Invest.:</i> K KAWAMURA			<i>Prin. Invest.:</i> R D SCHRIMPF		
<i>Tech. Officer:</i> JSC/R SAVELY			<i>Tech. Officer:</i> GSFC/G A SOFFEN		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 45 - ELECTRICAL ENGR		
<b>NCC 1 01018</b>	<b>VANDERBILT UNIV</b>	<b>8559</b>	<b>NGT 5 40054</b>	<b>VANDERBILT UNIV</b>	<b>8567</b>
AEROELASTICITY IN ORNITHOPIC MICRO-AERIAL VEHICLES MY 1/3			TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLL AND FELLOWSHIP PROGRAM.		
01/12/2001 - 09/30/2003	FY02: \$0	Total: \$33,330	02/12/1997 - 01/31/2001	FY02: -\$27,738	Total: \$1,763,012
<i>Prin. Invest.:</i> K D FRAMPTOM			<i>Prin. Invest.:</i> A M STRAUSS		
<i>Tech. Officer:</i> LARC/D L RANEY, LARC/D E COX			<i>Tech. Officer:</i> GSFC/L KEFFER		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 1 01031</b>	<b>VANDERBILT UNIV</b>	<b>8560</b>	<b>NGT 5 40074</b>	<b>VANDERBILT UNIV</b>	<b>8568</b>
SYSTEMS RISK ASSESSMENT AND ALLOCATION IN CONCEPTUAL DESIGN			TENNESSEE SPACE GRANT COLL & FELLOWSHIP PROGRAM		
03/12/2001 - 12/31/2002	FY02: \$0	Total: \$100,000	02/09/2001 - 01/31/2005	FY02: \$27,738	Total: \$488,488
<i>Prin. Invest.:</i> S MAHADEVAN			<i>Prin. Invest.:</i> A M STRAUSS		
<i>Tech. Officer:</i> LARC/T A ZHANG			<i>Tech. Officer:</i> GSFC/D D DETROYE		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 2 1127</b>	<b>VANDERBILT UNIV</b>	<b>8561</b>	<b>NGT 5 50209</b>	<b>VANDERBILT UNIV</b>	<b>8569</b>
ADSORPTION EQUILIBRIUM & FIXED BED PERFORMANCE FOR REGENERABLE INCINERATOR EXHAUST PURIFICATION & T			INVESTIGATION OF EFFECTS OF DILUTE OXYGEN SOLUTE ON NUCLEATION OF ZIRCONIUM		
06/21/1999 - 05/31/2003	FY02: \$0	Total: \$180,404	07/10/1998 - 06/30/2002	FY02: \$0	Total: \$66,000
<i>Prin. Invest.:</i> M D LEVAN			<i>Prin. Invest.:</i> R BAYUZICK		
<i>Tech. Officer:</i> ARC/J E FINN			<i>Tech. Officer:</i> HQ/A NURRIDIN		
<i>CASE Category:</i> 43 - CHEMICAL ENGR			<i>CASE Category:</i> 43 - CHEMICAL ENGR		

## TEXAS

## NASA'S UNIVERSITY PROGRAM

**NGT 8 52859** **VANDERBILT UNIV** **8570**  
 INTEGRATION OF HAPTIC FEEDBACK INTO VIRTUAL ENVIRONMENTS FOR  
 MISSION OPERATION APPLICATION  
 07/23/1998 - 08/14/2001 FY02: \$0 Total: \$66,000  
*Prin. Invest.:* M GOLDFARB  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52905** **VANDERBILT UNIV** **8571**  
 DESIGN AND FABRICATION OF INDIUM-TIN-OXIDE (ITO) MICRO-SCALE  
 STRAIN SENSORS  
 05/25/2001 - 07/01/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* R A WELLER  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 8 52907** **VANDERBILT UNIV** **8572**  
 AEROSPACE STRUCTURAL SYSTEM RELIABILITY ASSESSMENT  
 05/25/2001 - 06/30/2004 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* S MAHADEVAN  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 44 - CIVIL ENGR

**NGT 8 52910** **VANDERBILT UNIV** **8573**  
 UV RAMAN LINESHAPES FOR TEMPERATURE DETERMINATION  
 05/31/2001 - 06/30/2005 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* R W PITZ  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 9 52** **VANDERBILT UNIV** **8574**  
 MACHINE PERCEPTION TO FACILITATE HUMAN-ROBOT INTER ACTION  
 07/17/2000 - 08/31/2002 FY02: \$0 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 COLL-SHERMAN** **8575**  
 FLOOD FORECASTING USING A REGIONAL SCALE ATMOSPHERE/LAND-  
 SURFACE MODELING SYSTEM.  
 12/11/2000 - 12/14/2003 FY02: \$0 Total: \$32,134  
*Prin. Invest.:* D R BAKER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 2 1355** **BAYLOR COLL OF MEDICINE** **8576**  
 ROLE OF MATH1 IN DEVELOPMENT & FUNCTION OF PROPRIO RECEPTORS  
 07/22/1999 - 07/14/2003 FY02: \$0 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 COLL OF MEDICINE** **8577**  
 THE INTERACTIVE COUPLING OF CYTOSKELETON & SIGNAL TRANSDUC-  
 TION ELEMENTS IN GRAVITY SENSITIVITY OF T-  
 07/23/1999 - 07/31/2003 FY02: \$0 Total: \$435,419  
*Prin. Invest.:* B B HASHEM  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1496** **BAYLOR COLL OF MEDICINE** **8578**  
 SENSELESS AND GF11 IN SENSORY NEURON AND HAIR CELL DEVELOP-  
 MENT  
 07/11/2001 - 06/30/2003 FY02: \$0 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 COLL OF MEDICINE** **8579**  
 FOR RESEARCH ENTITLED "LIVER TISSUE ENGINEERING IN MICROGRAV-  
 ITY ENVIRONMENT"  
 06/26/1997 - 11/30/2002 FY02: \$0 Total: \$619,000  
*Prin. Invest.:* B YOFE  
*Tech. Officer:* MSFC/C R TALLEY  
*CASE Category:* 56 - MEDICL

**NAG 8 1583** **BAYLOR COLL OF MEDICINE** **8580**  
 ISLET CELL ASSEMBLY AND FUNCTION IN A NASA MICROGRAVITY BIORE-  
 ACTOR  
 02/02/1999 - 11/30/2002 FY02: \$0 Total: \$394,748  
*Prin. Invest.:* A S RAJAN  
*Tech. Officer:* JSC/N R PELLIS  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1052** **BAYLOR COLL OF MEDICINE** **8581**  
 BIOPHYSICAL MODELS OF DNA DAMAGE, MUTATION, &...  
 08/25/1998 - 09/24/2002 FY02: \$0 Total: \$271,674  
*Prin. Invest.:* L E PETERSON  
*Tech. Officer:* JSC/F A CUCINOTTA  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1151** **BAYLOR COLL OF MEDICINE** **8582**  
 NONINVASIVE MONITORING OF BONE RESORPTION AND SWEAT CALCIUM  
 USING SKIN PATCHES  
 09/16/1999 - 09/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* A D LE BLANC  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1153** **BAYLOR COLL OF MEDICINE** **8583**  
 PROTECTING SCIENTIFIC INTEGRITY THROUGH DISCLOSURE OF CON-  
 FFLICTS OF INTERESTS  
 09/13/1999 - 09/30/2003 FY02: \$0 Total: \$534,934  
*Prin. Invest.:* B A BRODY  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1158** **BAYLOR COLL OF MEDICINE** **8584**  
 ROLE OF GROWTH HORMONE SECRETOGOUS AND EXERCISE ON MUSCLE  
 HOMEOSTASIS UNDER MICROGRAVITY  
 10/01/1999 - 10/31/2002 FY02: \$0 Total: \$535,172  
*Prin. Invest.:* B J SCHWARTZ  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 56 - MEDICL

**NAG 9 1253** **BAYLOR COLL OF MEDICINE** **8585**  
 EFFECTS OF ANTI-ORTHOSTATIC SUSPENSION ON INNATE IMMUNITY  
 09/11/2000 - 09/30/2003 FY02: \$0 Total: \$182,711  
*Prin. Invest.:* C SMITH  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

## NASA'S UNIVERSITY PROGRAM

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<b>NAG 9 1361</b>	<b>BAYLOR COLL OF MEDICINE</b>	<b>8586</b>	<b>NAG 5 11658</b>	<b>PAUL QUINN COLL</b>	<b>8595</b>
LIVER TISSUE ENGINEERING IN MICROGRAVITY ENVIRONMENT			MSET INST FOR ATTRACTING STUDENTS TO THE SCIE NCES		
07/13/2001 - 09/30/2004	FY02: \$0	Total: \$47,000	02/12/2002 - 02/28/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> B YOFEF			<i>Prin. Invest.:</i> S JONES		
<i>Tech. Officer:</i> JSC/D RISIN			<i>Tech. Officer:</i> GSFC/C PERSON		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 9 58</b>	<b>BAYLOR COLL OF MEDICINE</b>	<b>8587</b>	<b>NAG 4 148</b>	<b>PRAIRIE VIEW A&amp;M UNIV</b>	<b>8596</b>
NATIONAL SPACE BIOMEDICAL RESEARCH INST			RADIATION EFFECTS ON ELECTRONIC MATERIAL AND DEVICES		
03/26/1997 - 11/30/2002	FY02: \$3,641,000	Total: \$71,814,063	03/03/1998 - 02/27/2003	FY02: \$0	Total: \$266,999
<i>Prin. Invest.:</i> B R ALFORD, M.D.			<i>Prin. Invest.:</i> R WILKINS		
<i>Tech. Officer:</i> JSC/C F SAWIN			<i>Tech. Officer:</i> DFRC/E COX		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NCC 9 61</b>	<b>BAYLOR COLL OF MEDICINE</b>	<b>8588</b>	<b>NAG 4 210</b>	<b>PRAIRIE VIEW A&amp;M UNIV</b>	<b>8597</b>
PREVENTION OF BED REST OSTEOPOROSIS			MITIGATION OF HIGH ALTITUDE AND LOW EARTH ORBIT RA DIATION		
05/23/1997 - 01/31/2003	FY02: \$0	Total: \$2,320,039	EFFECTS ON MICROELECTRONICS VIA SHIELDING		
<i>Prin. Invest.:</i> A D LE BLANC			06/07/2000 - 06/06/2003	FY02: \$0	Total: \$200,000
<i>Tech. Officer:</i> JSC/L C SHACKELFORD			<i>Prin. Invest.:</i> D K KIRBY		
<i>CASE Category:</i> 56 - MEDICL			<i>Tech. Officer:</i> DFRC/D GUPTA		
			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NCC 9 88</b>	<b>BAYLOR COLL OF MEDICINE</b>	<b>8589</b>	<b>NAG 4 233</b>	<b>PRAIRIE VIEW A&amp;M UNIV</b>	<b>8598</b>
COMPARISON OF STRENGTH TRAINING WITH ISS INTERIM RESISTANCE			EXPLORATORY ALGORITHM DEVELOPMENT STUDY OF A WAVELET-BASED		
EXERCISE DEVISE VS FREE			ADAPTIVE SMART SCHEME FOR VIBRATION DETE		
07/20/1999 - 07/31/2002	FY02: \$0	Total: \$29,760	08/14/2002 - 10/31/2002	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> A BEBLANC			<i>Prin. Invest.:</i> D M AKUJUOBI		
<i>Tech. Officer:</i> JSC/S SCHNEIDER			<i>Tech. Officer:</i> DFRC/K KLOESEL		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 5 8566</b>	<b>HOUSTON COMM COLL</b>	<b>8590</b>	<b>NAG 5 11070</b>	<b>PRAIRIE VIEW A&amp;M UNIV</b>	<b>8599</b>
NASA/HCC SCIENCE CHALLENGE PROGRAM			CENTER FOR APPLIED RADIATION RESEARCH PARTNERSHIP PROGRAM		
05/20/1999 - 12/31/2000	FY02: \$0	Total: \$150,000	06/29/2001 - 08/31/2002	FY02: \$0	Total: \$200,000
<i>Prin. Invest.:</i> C GARCIA			<i>Prin. Invest.:</i> R WILKINS		
<i>Tech. Officer:</i> GSFC/M MATEU			<i>Tech. Officer:</i> GSFC/J MALONE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 10239</b>	<b>HOUSTON COMM COLL</b>	<b>8591</b>	<b>NAG 8 1338</b>	<b>PRAIRIE VIEW A&amp;M UNIV</b>	<b>8600</b>
NASA HCC SCIENCE CHALLENGE PROGRAM			ESTABLISHMENT OF A SOLAR OBSERVATORY AND STUDIES ON THE		
01/10/2001 - 05/31/2002	FY02: \$0	Total: \$149,298	SOLAR ATMOSPHERE		
<i>Prin. Invest.:</i> C GARCIA			03/18/1997 - 03/31/2003	FY02: \$0	Total: \$438,700
<i>Tech. Officer:</i> GSFC/M MATEU			<i>Prin. Invest.:</i> T HUANG		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>Tech. Officer:</i> MSFC/J M DAVIS		
			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NCC 9 126</b>	<b>LAMAR UNIV</b>	<b>8592</b>	<b>NAG 8 1644</b>	<b>PRAIRIE VIEW A&amp;M UNIV</b>	<b>8601</b>
DEVELOPMENT OF MINIATURE LASER MASS SPECTROMETER SYSTEM			ADVANCED FUEL INJECTOR OPTIMIZATION FOR RBCC ENGINE CONCEPT		
FOR PLANETARY STUDIES			09/30/1999 - 09/30/2002	FY02: \$0	Total: \$200,000
04/20/2001 - 07/14/2003	FY02: \$0	Total: \$200,000	<i>Prin. Invest.:</i> Z HAQUE, N BUTUK		
<i>Prin. Invest.:</i> S L JORDAN, G M IRWIN			<i>Tech. Officer:</i> MSFC/A BEAM, MSFC/W LOVE		
<i>Tech. Officer:</i> SSC/G A MCKAY			<i>CASE Category:</i> 43 - CHEMICAL ENGR		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER					
<b>NAG 9 1274</b>	<b>LE TOURNEAU UNIV</b>	<b>8593</b>	<b>NAG 8 1874</b>	<b>PRAIRIE VIEW A&amp;M UNIV</b>	<b>8602</b>
ANALYSIS OF ARBON NAONTUBE FORMATION & EMISSION SP ECTRA IN			STUDIES OF SOLAR PROMINENCES AND FILAMENTS		
LASER ABLATION PROCESS			06/18/2002 - 05/31/2004	FY02: \$0	Total: \$0
01/09/2001 - 01/30/2002	FY02: \$0	Total: \$15,500	<i>Prin. Invest.:</i> T HUANG		
<i>Prin. Invest.:</i> G DE BOER			<i>Tech. Officer:</i> MSFC/J DAVIS		
<i>Tech. Officer:</i> JSC/C SCOTT			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR					
<b>NAG 9 1170</b>	<b>OUR LADY OF THE LAKE UNIV</b>	<b>8594</b>	<b>NAG 9 1136</b>	<b>PRAIRIE VIEW A&amp;M UNIV</b>	<b>8603</b>
ENGAGING EDUCATORS IN THE EARTH/SCIENCE ENTERP			POWER QUALITY AND RELIABILITY		
09/24/1999 - 01/31/2002	FY02: \$0	Total: \$199,304	08/24/1999 - 08/23/2001	FY02: \$0	Total: \$100,000
<i>Prin. Invest.:</i> K A WARD			<i>Prin. Invest.:</i> W F TROTTEY, J ATTIA		
<i>Tech. Officer:</i> JSC/L ARMENDARIZ			<i>Tech. Officer:</i> JSC/W C ROEH, JSC/L M ARMENDARIZA		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 46 - MECHANICAL ENGR		

## TEXAS

## NASA'S UNIVERSITY PROGRAM

**NAG 9 1241**                      **PRAIRIE VIEW A&M UNIV**                      **8604**  
 USE OF ELCTROMIGRATION TO IMMOBILIZE METAL IONS  
 06/22/2000 - 05/31/2003                      FY02: \$0                      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**                      **8605**  
 RADIATION EXPOSURE EFFECTS & SHIELDING ANALYSIS OF CARBON  
 NANTUBE MATERIALS  
 07/30/2001 - 12/29/2001                      FY02: \$0                      Total: \$37,000  
*Prin. Invest.:* R WILKINS  
*Tech. Officer:* JSC/A LEE, JSC/L M ARMENDARIZ  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 9 1405**                      **PRAIRIE VIEW A&M UNIV**                      **8606**  
 DEVELOP DAILY OSVSRVATION & RESEARCH PROGRAM AT PR AIRIE VIEW  
 SOLAR OBSERVATORY  
 05/24/2002 - 05/23/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T S HWANG  
*Tech. Officer:* JSC/K KRISHEN, JSC/L M ARMENDARIZ  
*CASE Category:* 11 - ASTRONOMY

**NAG13 46**                      **PRAIRIE VIEW A&M UNIV**                      **8607**  
 TEXAS GULF COAST ENVIRONMENTAL DATA CENTER SAME  
 10/04/1995 - 04/20/2001                      FY02: -\$2,579                      Total: \$267,546  
*Prin. Invest.:* S SHAKIR  
*Tech. Officer:* SSC/A JOYCE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 577**                      **PRAIRIE VIEW A&M UNIV**                      **8608**  
 RESEARCH TO SIGNIFICANTLY ENHANCE COMPOSITES SURVI ABILITY AT  
 550 DEGREES F IN OXIDATIVE ENVIRONMENT  
 09/26/1997 - 08/31/2002                      FY02: \$0                      Total: \$336,102  
*Prin. Invest.:* L E CARSON-ISABELLE  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NCC 3 972**                      **PRAIRIE VIEW A&M UNIV**                      **8609**  
 EFFECTS OF SERVICE CONDITIONS ON THE MORPHOLOGY AN D PROP-  
 erties OF ADVANCED COMPOSITESFOR CRYOGENIC  
 06/25/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D BINEY  
*Tech. Officer:* GRC/M A MEADOR  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 980**                      **PRAIRIE VIEW A&M UNIV**                      **8610**  
 RESEARCH TO SIGNIFICANTLY ENHANCE COMPOSITES SURVI VABILITY AT  
 550 DEGREES F IN OXIDATIVE ENVIRONMEN  
 07/03/2002 - 09/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D CARSON-ISABELLE  
*Tech. Officer:* GRC/M MEADOR  
*CASE Category:* 12 - CHEMISTRY

**NCC 5 115**                      **PRAIRIE VIEW A&M UNIV**                      **8611**  
 ESTABLISHMENT OF A NASA SOUTHWEST REGIONAL NETWORK RE-  
 sources TRAINING SITE  
 08/15/1995 - 09/14/2001                      FY02: \$0                      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**                      **8612**  
 NASA SOUTHWEST REGIONAL NETWORK RESOURCES AND TRAINING  
 SITE/MUSPIN NRTS PROGRAM.  
 02/01/2001 - 01/31/2004                      FY02: \$0                      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**                      **8613**  
 IMPROVEMENT OF THE SOLAR OBSERVATION FACILITIES AT PRAIRIE VIEW  
 SOLAR OBSERVATORY  
 09/14/2001 - 09/14/2002                      FY02: \$0                      Total: \$35,500  
*Prin. Invest.:* D HUANG  
*Tech. Officer:* GSFC/J HARRINGTON  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 670**                      **PRAIRIE VIEW A&M UNIV**                      **8614**  
 FURTHER IMPROVEMENT OF THE SOLAR OBSERVATION INSTR UMENT.  
 ONE YEAR GRANT.  
 09/12/2002 - 09/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T HUANG  
*Tech. Officer:* GSFC/J L HARRINGTON  
*CASE Category:* 11 - ASTRONOMY

**NCC 9 66**                      **PRAIRIE VIEW A&M UNIV**                      **8615**  
 SOFTWARE ENGINEERING INITIATIVE  
 09/25/1997 - 12/31/2002                      FY02: \$0                      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**                      **8616**  
 CENTER APPLIED RADIATION RESEARCH  
 09/27/2000 - 08/31/2005                      FY02: \$0                      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**                      **8617**  
 NONLINEAR RECEPITIVITY AND BY-PASS TRANSITION IN THREE-  
 DIMENSIONAL BOUNDARY LAYERS NRA 98 LARC5  
 02/10/1999 - 06/30/2002                      FY02: \$0                      Total: \$117,458  
*Prin. Invest.:* S S COLLIS  
*Tech. Officer:* LARC/R R ANTOLIFF  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NAG 2 1401**                      **RICE UNIV**                      **8618**  
 VIRTUAL PROTOTYPING FOR CARBON NANOTUBES  
 04/24/2000 - 03/14/2002                      FY02: \$0                      Total: \$113,437  
*Prin. Invest.:* B YAKOBSON  
*Tech. Officer:* ARC/M MEYAPPAN, ARC/H PARTRIDGE  
*CASE Category:* 13 - PHYSICS

**NAG 3 2534**                      **RICE UNIV**                      **8619**  
 AD HOC NETWORKS IN SPACE AND SURFACE SYSTEMS AD HOC NET-  
 works IN SPACE AND SURFACE SYSTEMS  
 03/07/2001 - 12/31/2003                      FY02: \$0                      Total: \$325,082  
*Prin. Invest.:* D B JOHNSON  
*Tech. Officer:* GRC/D FOLTZ  
*CASE Category:* 22 - COMPUTER SCIENCE





## TEXAS

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11417** RICE UNIV 8636  
ON THE ROLE OF CHARGE EXCHANGE IN THE FORMATION OF THE  
MARTIAN MAGNETIC PILEUP BOUNDARY  
11/28/2001 - 11/30/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* P CLOUTIER  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 11418** RICE UNIV 8637  
SOLAR WIND INACTIONS AT VENUS TO MARS, INCLUDING THE MAGNETIC  
EFFECTS OF THE MARTIAN CRUSTAL MAGNETI  
11/28/2001 - 02/28/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* P CLOUTIER  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 11796** RICE UNIV 8638  
PROBING THE SPECTRAL EVOLUTION OF PARTICLES IN THE BLAZAR MKN  
421\_ ADP99  
03/01/2002 - 03/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D FOSSATI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11853** RICE UNIV 8639  
THE EXTRAORDINARY CAMPAIGNS ON MKN421 OF 2000/2001 (ADP 2001)  
03/20/2002 - 03/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* G FOSSATI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11881** RICE UNIV 8640  
MAGNETOSPHERIC STORM DYNAMICS  
03/27/2002 - 03/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R A WOLF  
*Tech. Officer:* GSFC/J M GREBOWSKY  
*CASE Category:* 13 - PHYSICS

**NAG 5 12144** RICE UNIV 8641  
INITIAL DEVELOPMENT OF AN ANALYSIS MODEL OF THE IN NER MAGNETO-  
SPHERE  
05/10/2002 - 05/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* F R TOFFOLETTO  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12166** RICE UNIV 8642  
EVOLUTION AND INFLUENCE OF THE MARTIAN HEMISPHERIC DICHOTOMY  
05/14/2002 - 05/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* A LENARDIC  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12266** RICE UNIV 8643  
WOLF-RAYET STAR HD 192163 (FUSE 2001)  
06/24/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R J DUFOUR  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1467** RICE UNIV 8644  
INFLUENCE OF REDUCED GRAVITY CONDITIONS ON THE OPTIMIZED  
GROWTH AND DEPOSITION OF METAL NANOSHELL  
03/06/1998 - 01/31/2003 FY02: \$0 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 8645  
SUPERFLUID PHASE TRANSITION IN AN ULTRACOLD PERMI GAS  
04/24/2001 - 04/30/2005 FY02: \$0 Total: \$86,663  
*Prin. Invest.:* R G HULET  
*Tech. Officer:* MSFC/D S HUBBARD  
*CASE Category:* 13 - PHYSICS

**NAG 9 978** RICE UNIV 8646  
DEVELOPMENT OF PLASMA INJECTOR FOR VSIPR  
10/17/1997 - 09/30/2003 FY02: \$0 Total: \$170,412  
*Prin. Invest.:* A A CHAN  
*Tech. Officer:* JSC/F CHANG-DIAZ  
*CASE Category:* 13 - PHYSICS

**NAG 9 1049** RICE UNIV 8647  
LASER ABSORPTION SENSORS  
08/04/1998 - 08/05/2002 FY02: \$0 Total: \$419,720  
*Prin. Invest.:* F K TITTLE  
*Tech. Officer:* JPL/D L JAN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 9 1059** RICE UNIV 8648  
COMPUTATIONAL METHODS  
12/14/1998 - 12/31/2002 FY02: \$0 Total: \$138,187  
*Prin. Invest.:* T E TEZDUYAR  
*Tech. Officer:* JSC/F MARTIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1249** RICE UNIV 8649  
APPLICATION OF MACHINE LEARNING TO THE CONTROL OF ADVANCED  
LIFE SUPPORT SYSTEMS  
07/19/2000 - 12/31/2002 FY02: \$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 8650  
MATRIX OF HYPERVELOCITY IMPACT TESTS  
03/02/2001 - 12/31/2001 FY02: \$0 Total: \$40,000  
*Prin. Invest.:* E V BARRERA  
*Tech. Officer:* JSC/J CREWS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1435** RICE UNIV 8651  
SIMULATION & MODELING OF PARACHUT SYSTEMS  
07/01/2002 - 12/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* T E TEZDUYAR  
*Tech. Officer:* JSC/G W BOURLAND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1219** RICE UNIV 8652  
INTEGRATED MODELING OF COGNITION AND THE INFORMATION ENVI-  
RONMENT  
03/16/2001 - 12/31/2001 FY02: \$0 Total: \$95,591  
*Prin. Invest.:* M BYRNE, A KIRLIK  
*Tech. Officer:* ARC/B L BEARD  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

## NASA'S UNIVERSITY PROGRAM

TEXAS

<b>NCC 2 1279</b>	<b>RICE UNIV</b>	<b>8653</b>	<b>NGT 9 19</b>	<b>RICE UNIV</b>	<b>8661</b>
TECHNOLOGY DEVELOPMENT OF MINIATURIZED FAR-INFRARED SOURCES FOR BIOMOLECULAR SPECTROSCOPY			NOVEL LASER BASED GAS SENSORS FOR TRAVE GAS DETECTION IN A SPACECRAFT HABITAT		
08/23/2001 - 10/14/2003	FY02: \$0	Total: \$40,380	08/23/1999 - 06/30/2002	FY02: \$0	Total: \$66,000
<i>Prin. Invest.:</i> J KONO			<i>Prin. Invest.:</i> F K TITTEL		
<i>Tech. Officer:</i> ARC/B BIEGEL			<i>Tech. Officer:</i> JSC/J C GRAF		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			<i>CASE Category:</i> 54 - ENVIRONMENTAL BIOLOGY		
<b>NCC 2 1321</b>	<b>RICE UNIV</b>	<b>8654</b>	<b>NGT 9 23</b>	<b>RICE UNIV</b>	<b>8662</b>
INTEGRATED MODELING OF COGNITION AND THE INFORMATION ENVIRONMENT			UNDERSTANDING PROPERTIES OF NANOTUBE REINFORCED ..		
03/12/2002 - 02/28/2003	FY02: \$0	Total: \$0	05/30/1997 - 06/30/2001	FY02: \$0	Total: \$66,000
<i>Prin. Invest.:</i> M BYRNE			<i>Prin. Invest.:</i> E V BARRERA		
<i>Tech. Officer:</i> ARC/D C FOYLE, ARC/R ASHFORD			<i>Tech. Officer:</i> JSC/B FILES		
<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NCC 2 1356</b>	<b>RICE UNIV</b>	<b>8655</b>	<b>NAS 9 00106</b>	<b>SAN JACINTO COLL</b>	<b>8663</b>
DROSOPHILIA BEHAVIOR AND GENE EXPRESSION IN MICROGRAVITY			COMPUTER TRAINING		
07/29/2002 - 07/31/2003	FY02: \$0	Total: \$0	09/29/2000 - 09/30/2002	FY02: \$0	Total: \$358,729
<i>Prin. Invest.:</i> K M BECKINGHAM			<i>Prin. Invest.:</i> N J ANTHA		
<i>Tech. Officer:</i> ARC/D R BUBENHIEM			<i>Tech. Officer:</i> JSC/D DENTON-MISFELDT		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 2 5458</b>	<b>RICE UNIV</b>	<b>8656</b>	<b>NCC 9 137</b>	<b>SAN JACINTO COLL</b>	<b>8664</b>
ELECTRONIC PROPERTIES OF ANTIMONIDE-BASE SEMICONDUCTOR NANOSTRUCTURES FOR THZ GENERATION			KC 135 STUDENT FLIGHT PROGRAM		
08/23/2001 - 08/31/2003	FY02: \$0	Total: \$59,620	09/21/2001 - 08/31/2004	FY02: \$0	Total: \$96,328
<i>Prin. Invest.:</i> J KONO			<i>Prin. Invest.:</i> M DALTON		
<i>Tech. Officer:</i> ARC/T R GOVINDAN, ARC/B BIEGEL			<i>Tech. Officer:</i> JSC/D SICKOREZ		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 5 311</b>	<b>RICE UNIV</b>	<b>8657</b>	<b>NCC 9 141</b>	<b>SAN JACINTO COLL</b>	<b>8665</b>
MUSEUMS TEACHING PLANET EARTH(UTPE)			PROVIDE AREOSPACE RELATED EXPERIENCE FOR NON TRADITIONAL COMMUNITY COLL		
04/11/1998 - 02/28/2003	FY02: \$0	Total: \$1,753,000	08/15/2001 - 08/31/2003	FY02: \$0	Total: \$15,000
<i>Prin. Invest.:</i> P REIFF			<i>Prin. Invest.:</i> N AVAILABLE		
<i>Tech. Officer:</i> GSFC/A TUYAHOV			<i>Tech. Officer:</i> JSC/N AVAILABLE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 9 77</b>	<b>RICE UNIV</b>	<b>8658</b>	<b>NAG 5 4562</b>	<b>SOUTHERN METHODIST UNIV</b>	<b>8666</b>
ADVANCED NANOTECHNOLOGY MATERIALS AND APPLICATIONS			CORONAE AND CHASMATA:IMPLICATIONS FOR TERRRESTRIAL		
10/29/1998 - 10/30/2002	FY02: \$0	Total: \$2,306,000	05/29/1997 - 11/30/2001	FY02: \$0	Total: \$249,866
<i>Prin. Invest.:</i> R C SMALLEY			<i>Prin. Invest.:</i> D L HANSEN		
<i>Tech. Officer:</i> JSC/G K HORIUCHI			<i>Tech. Officer:</i> GSFC/J GRANT		
<i>CASE Category:</i> 12 - CHEMISTRY			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<b>NGT 2 52252</b>	<b>RICE UNIV</b>	<b>8659</b>	<b>NAG 5 9142</b>	<b>SOUTHERN METHODIST UNIV</b>	<b>8667</b>
MULTIWAVELENGTH STUDIES OF WOLF-RAYET GALAXIES			TECTONIC EVOLUTION OF PLANET SURFACES		
09/30/1998 - 10/31/2001	FY02: \$0	Total: \$66,000	02/29/2000 - 04/14/2003	FY02: \$0	Total: \$48,750
<i>Prin. Invest.:</i> D J DUFOUR			<i>Prin. Invest.:</i> V L HANSEN		
<i>Tech. Officer:</i> ARC/D J HOLLENBACH			<i>Tech. Officer:</i> GSFC/D A SENSKE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<b>NGT 8 52899</b>	<b>RICE UNIV</b>	<b>8660</b>	<b>NAG 5 10586</b>	<b>SOUTHERN METHODIST UNIV</b>	<b>8668</b>
THE BROADBAND ANALYSIS OF SPECTRAL AND TEMPORAL PROPERTIES OF GAMMA-RAY BURSTS			TERRESTRIAL PLANET EVOLUTION		
05/25/2001 - 07/01/2004	FY02: \$0	Total: \$22,000	03/13/2001 - 05/14/2004	FY02: \$0	Total: \$65,000
<i>Prin. Invest.:</i> E P LIANG			<i>Prin. Invest.:</i> V L HANSEN		
<i>Tech. Officer:</i> MSFC/S NASH-STEVENSON			<i>Tech. Officer:</i> GSFC/D SENSKE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NGT 5 12289</b>	<b>SOUTHERN METHODIST UNIV</b>	<b>8669</b>	<b>NAG 5 12289</b>	<b>SOUTHERN METHODIST UNIV</b>	<b>8669</b>
EVALUATE FUNDAMENTAL PROCESSES THAT SHAPE LIFE ON EARTH			EVALUATE FUNDAMENTAL PROCESSES THAT SHAPE LIFE ON EARTH		
06/20/2002 - 05/31/2003	FY02: \$0	Total: \$0	06/20/2002 - 05/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J NEEL			<i>Prin. Invest.:</i> J NEEL		
<i>Tech. Officer:</i> GSFC/L CHAMBERS			<i>Tech. Officer:</i> GSFC/L CHAMBERS		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

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**NAS 1 01104**                    **SOUTHERN METHODIST UNIV**                    **8670**  
 BROAD BAND PYROELECTRIC IR DETECTOR FOR FIRST (FAR-INFARED SPECTROSCOPY OF THE TROPOSPHERE)  
 09/07/2001 - 09/06/2002                    FY02: \$0                    Total: \$50,000  
*Prin. Invest.:* Z CELIK-BUTLER, D BUTLER  
*Tech. Officer:* LARC/D G JOHNSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02112**                    **SOUTHWEST TEXAS JUNIOR COLL**                    **8671**  
 2002-2004 SOUTHWEST TEXAS PACE/MSET ACADEMY NRA-02 -OEOP-03  
 09/03/2002 - 09/02/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* A HERNANDEZ  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 21 - MATHEMATICS

**NAG 9 1019**                    **SOUTHWEST TEXAS JUNIOR COLL**                    **8672**  
 PRECOLL AWARD FOR EXCELLENCE PACE/MSET  
 05/28/1998 - 08/31/2002                    FY02: \$0                    Total: \$298,420  
*Prin. Invest.:* A HERNANDEZ, JR.  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 376**                    **SOUTHWEST TEXAS STATE UNIV**                    **8673**  
 LOW DIELECTRIC POLYMERS  
 03/22/2000 - 08/31/2001                    FY02: \$0                    Total: \$50,000  
*Prin. Invest.:* P E CASSIDY, M T BLANDA  
*Tech. Officer:* LARC/D M STOAKLEY  
*CASE Category:* 12 - CHEMISTRY

**NCC 1 01033**                    **SOUTHWEST TEXAS STATE UNIV**                    **8674**  
 LOW DIELECTRIC POLYMERS  
 05/10/2001 - 05/09/2002                    FY02: \$0                    Total: \$50,000  
*Prin. Invest.:* P E CASSIDY, S R VENUMBABA  
*Tech. Officer:* LARC/D M STOAKLEY, LARC/C C FAY  
*CASE Category:* 12 - CHEMISTRY

**NCC 1 02030**                    **SOUTHWEST TEXAS STATE UNIV**                    **8675**  
 HIGH PERFORMANCE POLYMERS  
 06/04/2002 - 06/02/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* P E CASSIDY, S R VENUMBABA  
*Tech. Officer:* LARC/G A MINER, LARC/D M STOAKLEY  
*CASE Category:* 12 - CHEMISTRY

**NCC 9 54**                    **SOUTHWEST TEXAS STATE UNIV**                    **8676**  
 ORAL HISTORY RESEARCH PROJECT  
 03/01/1999 - 09/30/2001                    FY02: \$0                    Total: \$38,683  
*Prin. Invest.:* K MARGERISON  
*Tech. Officer:* JSC/W A LARSEN  
*CASE Category:* 73 - HISTORY

**NAG 1 01005**                    **TEXAS A&M UNIV**                    **8677**  
 UNSTEADY RANS COMPUTATIONS OF COMPLEX TURBULENT FLOWS: MODELING & IMPLEMENTATION  
 02/15/2001 - 12/31/2003                    FY02: \$0                    Total: \$68,009  
*Prin. Invest.:* S GIRIMAJI  
*Tech. Officer:* LARC/B A SINGER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01015**                    **TEXAS A&M UNIV**                    **8678**  
 ACTIVE SKIN FOR TURBULENT DRAG REDUCTION  
 02/15/2001 - 05/31/2002                    FY02: \$0                    Total: \$65,000  
*Prin. Invest.:* O K REDINIOTIS, D C LAGODAS  
*Tech. Officer:* LARC/M J WALSH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01080**                    **TEXAS A&M UNIV**                    **8679**  
 HIERARCHICAL STRATEGY FOR RAPID ANALYSIS ENVIRONMENT  
 05/11/2001 - 01/31/2004                    FY02: \$0                    Total: \$60,000  
*Prin. Invest.:* J D WHITCOMB  
*Tech. Officer:* LARC/I S RAJU, LARC/J B RANSOM  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 02002**                    **TEXAS A&M UNIV**                    **8680**  
 ANAL OF HISTORICAL CIRRUS IN-SITU DATA IN SUPPORT OF TERRA, AQUA & GIFTS CIRRUS RETRIEVAL EFFORTS  
 11/07/2001 - 11/06/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* P YANG  
*Tech. Officer:* LARC/V E DELNORE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 02069**                    **TEXAS A&M UNIV**                    **8681**  
 ACTIVE SKIN FOR TURBULENT DRAG REDUCTION  
 03/20/2002 - 03/19/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* O K REDINIOTIS, D C LAGODAS  
*Tech. Officer:* LARC/M J WALSH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1340**                    **TEXAS A&M UNIV**                    **8682**  
 ADAPTATIONS OF VISCERAL & CEREBRAL RESISTANCE ARTICLES TO SIMULATED MICROGRAVITY  
 07/16/1999 - 06/30/2003                    FY02: \$0                    Total: \$368,261  
*Prin. Invest.:* M D DELP  
*Tech. Officer:* ARC/M M AVERNER, ARC/R MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 3 2551**                    **TEXAS A&M UNIV**                    **8683**  
 MULTI-BEAM PHASED ARRAY ANTENNAS MULTI-BEAM PHASED ARRAY ANTENNAS  
 02/28/2001 - 02/28/2003                    FY02: \$0                    Total: \$100,000  
*Prin. Invest.:* D CHANG  
*Tech. Officer:* GRC/R LEE  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2617**                    **TEXAS A&M UNIV**                    **8684**  
 ADVANCED LITHIUM ION POLYMER BATTERIES FOR AEROSPACE APPLICATION  
 05/23/2001 - 05/31/2004                    FY02: \$0                    Total: \$106,000  
*Prin. Invest.:* D APPLEBY  
*Tech. Officer:* GRC/R BALDWIN  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2712**                    **TEXAS A&M UNIV**                    **8685**  
 MICROSCALE INVESTIGATION OF THERMO-FLUID TRANSPORT IN THE TRANSITION FILM REGION OF AN EVAPORATING  
 02/21/2002 - 11/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D D KHIM  
*Tech. Officer:* GRC/M M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2721**                    **TEXAS A&M UNIV**                    **8686**  
 PARTIALLY AVERAGED NAVIER-STOKES EQUATION: MODELING AND COMPUTATION #02-171.  
 03/04/2002 - 02/10/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D GIRIMAJI  
*Tech. Officer:* GRC/D A POVINELLI  
*CASE Category:* 41 - AERONAUTICAL ENGR

## NASA'S UNIVERSITY PROGRAM

TEXAS

<b>NAG 5 6446</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8687</b>	<b>NAG 5 9729</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8695</b>
WORLD OCEAN CIRCULATION EXPERIMENT: SUPPORT FOR THE U.S. WOCE OFFICE			PHYSICAL VALIDATION OF TMI OCEANIC RAINFALL RETRIEVALS		
11/25/1997 - 12/31/2002	FY02: \$0	Total: \$375,000	06/22/2000 - 11/30/2002	FY02: \$0	Total: \$163,600
<i>Prin. Invest.:</i> W D NOWLIN			<i>Prin. Invest.:</i> T WILHEIT		
<i>Tech. Officer:</i> GSFC/J CAMPBELL			<i>Tech. Officer:</i> GSFC/R LAWRENCE		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 7751</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8688</b>	<b>NAG 5 10549</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8696</b>
DOES SOUTHERN OCEAN SEA ICE AFFECT INTERANNUAL OCEAN VARIABILITY			AIRCRAFT-BASED MEASUREMENT OF AEROSOL OPTICAL PROPERTIES		
11/19/1998 - 12/31/2001	FY02: \$0	Total: \$178,940	03/09/2001 - 03/14/2004	FY02: \$0	Total: \$111,414
<i>Prin. Invest.:</i> A STOESEL			<i>Prin. Invest.:</i> D COLLINS		
<i>Tech. Officer:</i> GSFC/S GOGINENI			<i>Tech. Officer:</i> GSFC/M WEI		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 8706</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8689</b>	<b>NAG 5 10641</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8697</b>
NOX PRODUCTION BY LIGHTNING AND ITS IMPACT ON THE CHEMISTRY OF THE UPPER TROPOSPHERE AND LOWER STRATOSPHERE			ASSIMILATING SATELLITE-DERIVED SEA-ICE CONCENTRATION IN A GLOBAL COUPLED SEA-ICE-OCEAN GCM		
07/19/1999 - 08/31/2003	FY02: \$0	Total: \$270,455	03/17/2001 - 03/14/2004	FY02: \$0	Total: \$65,640
<i>Prin. Invest.:</i> R ZHANG			<i>Prin. Invest.:</i> S STOESEL		
<i>Tech. Officer:</i> GSFC/M Y WEI			<i>Tech. Officer:</i> GSFC/W ABDALATI		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 33 - OCEANOGRAPHY		
<b>NAG 5 9409</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8690</b>	<b>NAG 5 10829</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8698</b>
MODELING TROPICAL ATLANTIC VARIABILITY			SUPPORT FOR U.S. WOCE OFFICE AND U.S. GOOS OFFICE		
04/06/2000 - 06/30/2003	FY02: \$0	Total: \$70,000	04/25/2001 - 04/30/2004	FY02: \$0	Total: \$75,000
<i>Prin. Invest.:</i> P CHANG			<i>Prin. Invest.:</i> W NOWLIN		
<i>Tech. Officer:</i> GSFC/K BERGMAN			<i>Tech. Officer:</i> GSFC/E LINDSTROM		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 33 - OCEANOGRAPHY		
<b>NAG 5 9455</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8691</b>	<b>NAG 5 10877</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8699</b>
CONTINUED DEVELOPMENT OF SNOW AND SEA ICE ALBEDO ALGORITHMS FOR MODERATE RESOLUTION IMAGING			CONTINUED DEVELOPMENT OF SNOW AND SEA ICE ALBEDO ALGORITHMS FOR THE MODERATE RESOLUTION IMAGING		
04/12/2000 - 12/31/2000	FY02: \$0	Total: \$19,849	05/16/2001 - 08/31/2001	FY02: \$0	Total: \$15,000
<i>Prin. Invest.:</i> A KLEIN			<i>Prin. Invest.:</i> A KLEIN		
<i>Tech. Officer:</i> GSFC/D K HALL			<i>Tech. Officer:</i> GSFC/D K HALL		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 9485</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8692</b>	<b>NAG 5 11013</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8700</b>
DEVELOPMENT OF A LONG-RANGE SCIENCE PLAN FOR SUB-GLACIAL LAKE EXPLORATION			IMPROVEMENT OF RAIN ESTIMATION IN TROPICAL CYCLONE REGION OF THE UNITED STATES		
04/25/2000 - 04/30/2001	FY02: \$0	Total: \$27,335	07/10/2001 - 06/14/2004	FY02: \$0	Total: \$228,000
<i>Prin. Invest.:</i> M C KENNICUT			<i>Prin. Invest.:</i> M BOGGERSTAFF		
<i>Tech. Officer:</i> GSFC/M MEYER			<i>Tech. Officer:</i> GSFC/R LAWRENCE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 9649</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8693</b>	<b>NAG 5 11144</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8701</b>
STATISTICAL SAMPLING AND ESTIMATION PROBLEMS USING TRMM DATA			EFFECTS OF URBANIZATION ON ECOLOGICAL SERVICES IN A SEMI-ARID REGION OF THE UNITED STATES		
06/26/2000 - 11/30/2003	FY02: \$0	Total: \$139,180	07/25/2001 - 08/14/2004	FY02: \$0	Total: \$94,341
<i>Prin. Invest.:</i> G R NORTH			<i>Prin. Invest.:</i> R LACEY		
<i>Tech. Officer:</i> GSFC/R J LAWRENCE			<i>Tech. Officer:</i> GSFC/G GUTMAN		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 9697</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8694</b>	<b>NAG 5 11349</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8702</b>
VALIDATION OF TRMM RAINFALL AND HEATING ESTIMATES			DYNAMICS AND CONTROL OF LARGE SATELLITE FORMATIONS		
07/26/2000 - 11/30/2002	FY02: \$0	Total: \$200,000	10/01/2001 - 10/14/2002	FY02: \$60,000	Total: \$60,000
<i>Prin. Invest.:</i> M I BIGGERSTAFF			<i>Prin. Invest.:</i> K T ALFRIEND		
<i>Tech. Officer:</i> GSFC/R J LAWRENCE			<i>Tech. Officer:</i> GSFC/J A LEITNER		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR		

## TEXAS

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11374**                      **TEXAS A&M UNIV**                      **8703**  
 SCATTERING & ABSORPTION PROPERTIES OF NONSPHERICAL  
 /INHOMOGENEOUS AEROSOLS & ICE CRYSTALS:  
 11/16/2001 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P YANG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11375**                      **TEXAS A&M UNIV**                      **8704**  
 SPACE-TIME DYNAMICS OF SOIL MOISTURE AND TEMPERATU RE-SCALE  
 ISSUES  
 10/25/2001 - 11/30/2003                      FY02: \$104,082                      Total: \$104,082  
*Prin. Invest.:* B P MOHANTY  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11681**                      **TEXAS A&M UNIV**                      **8705**  
 "IMPACT OF FIELD-SCALE HETEROGENEITY IN SURFACE MO ISTURE AND  
 VEGETATION COVER ON REGIONAL SCALE FLU  
 01/31/2002 - 01/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A CAHILL  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11702**                      **TEXAS A&M UNIV**                      **8706**  
 "EVOLUTION OF MULTI-SCALE HYDROLOGIC PROCESSES AND ITS IMPACT  
 ON LAND-ATMOSPHERE INTERACTION"  
 02/07/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B P MOHANTY  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11847**                      **TEXAS A&M UNIV**                      **8707**  
 VALIDATION OF A SNOW ALBEDO ALGORITHM FOR THE MODE RATE  
 RESOLUTION IMAGING SPECTRORADIOMETER  
 03/28/2002 - 10/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A KLEIN  
*Tech. Officer:* GSFC/D K HALL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11935**                      **TEXAS A&M UNIV**                      **8708**  
 RETRIEVE CIRRUS REFLECTANCE USING VISIBLE AND 1.38 -UM WATER  
 ABSORPTION BANDS  
 03/27/2002 - 03/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P YANG  
*Tech. Officer:* GSFC/W WISCOMBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11992**                      **TEXAS A&M UNIV**                      **8709**  
 INVESTIGATION OF TITAN'S AEROSOLS  
 04/12/2002 - 04/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M T LEMMON  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12120**                      **TEXAS A&M UNIV**                      **8710**  
 ANAYLSIS OF MEASUREMENT AND MODELING STUDIES FOR CRYSTAL-  
 FACE  
 04/29/2002 - 04/30/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P YANG  
*Tech. Officer:* GSFC/S TSAY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1618**                      **TEXAS A&M UNIV**                      **8711**  
 R&D OF HIGH GAIN, HIGH EFFICIENCY, CIRCULAR POLAR- IZED RECTEN-  
 NAS  
 07/06/1999 - 01/31/2001                      FY02: \$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**                      **8712**  
 THERMOPHYSICAL ESEM & TEM CHARACTERIZATION OF CARBON FIBERS"  
 CTE, SPECTROSCOPY & ROUGHNESS STUDY  
 04/20/2001 - 01/31/2003                      FY02: \$0                      Total: \$64,304  
*Prin. Invest.:* O O OCHOA  
*Tech. Officer:* MSFC/M R EFFINGER, MSFC/P VALENTINE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1853**                      **TEXAS A&M UNIV**                      **8713**  
 COMPUTATIONAL ANALYSIS OF CRYOGENIC FLUID FILM BEARINGS SOFT-  
 WARE UPGRADE  
 11/01/2001 - 11/01/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L S ANDRES  
*Tech. Officer:* MSFC/T JETT  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1067**                      **TEXAS A&M UNIV**                      **8714**  
 PLANT GROWTH AND METABOLISM AT SUB-AMBIENT ATMOSPHERE PRES-  
 SURES  
 01/06/1999 - 12/31/2002                      FY02: \$0                      Total: \$465,446  
*Prin. Invest.:* M C DREW  
*Tech. Officer:* JSC/D BARTA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1119**                      **TEXAS A&M UNIV**                      **8715**  
 STABILITY OF RETORT PROCESSED MILK PRODUCTS  
 07/01/1999 - 06/30/2001                      FY02: \$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**                      **8716**  
 SEPARATION OF LIQUID PHASE FR GAS PHASE  
 09/09/1999 - 01/31/2002                      FY02: \$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**                      **8717**  
 NAVIGATION SYSTEMS & TECHNOLOGY LAB (NSR) ATTITUDE DETERMINA-  
 TION  
 01/28/2000 - 12/31/2002                      FY02: \$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**                      **8718**  
 SYNTHESIS AND EVALUATION OF ROBUST DYNAMIC INVERSION  
 05/22/2000 - 09/30/2001                      FY02: \$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 8719  
 VARIABLE ISP ROCKET TRAJECTORY OPTIMIZATION  
 06/30/2000 - 05/31/2002 FY02: \$0 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 8720  
 FLIGHT TESTS OF AN UNMANNED POWERED PARACHUTE  
 01/11/2001 - 03/29/2002 FY02: \$0 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 8721  
 MICROFABRICATED OPTICAL BIOSENSOR ARRAYS FOR AIR QUALITY MONI-  
 TORING  
 01/24/2001 - 09/30/2003 FY02: \$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 8722  
 IMMWPS SEPARATOR KC-135 FLIGHT DIAGNOSTIC TESTING  
 06/18/2001 - 08/01/2002 FY02: \$0 Total: \$50,000  
*Prin. Invest.:* F R BEST  
*Tech. Officer:* JSC/K HURLBERT  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1390** TEXAS A&M UNIV 8723  
 MODELING, SIMULATION & TESTING OF COMMERCIAL AVAILBLE DC/ DC  
 CONVERTERS SUITABLE  
 12/10/2001 - 07/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* P ENJETI  
*Tech. Officer:* JSC/R GARCIA, JSC/S HOSSAIN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 9 1396** TEXAS A&M UNIV 8724  
 FLT TESTS OF AN UNMANNED POWERED PARACHUTE  
 03/01/2002 - 02/28/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D T WARD, J VALASEK, D W LUND  
*Tech. Officer:* JSC/A L STRAHAN, JSC/C J CERIMELE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 9 1442** TEXAS A&M UNIV 8725  
 VIRTUAL VIDEO FOR REMORE COCKPIT VAN  
 07/26/2002 - 01/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A P BANERJEE  
*Tech. Officer:* JSC/F J DELGADO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 304** TEXAS A&M UNIV 8726  
 SCOPING DESIGN FOR ZERO GRAVITY ULLAGE TESTING SCOPING DESIGN  
 FOR ZERO GRAVITY ULLAGE TESTING  
 08/08/2001 - 12/31/2001 FY02: \$0 Total: \$22,500  
*Prin. Invest.:* F R BEST  
*Tech. Officer:* KSC/T R REINARTS  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG10 328** TEXAS A&M UNIV 8727  
 ZERO GRAVITY ULLAGE TESTING #02-174 ZERO GRAVITY ULLAGE TESTING  
 #02-174  
 09/24/2002 - 09/12/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D BEST  
*Tech. Officer:* KSC/M GUISBERT  
*CASE Category:* 46 - MECHANICAL ENGR

**NAS 5 32593** TEXAS A&M UNIV 8728  
 STUDY ENTITLED MIMR SCIENCE TEAM MEMBERSHIP  
 12/15/1993 - 12/31/2002 FY02: \$0 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 8729  
 OPERATION & MANAGEMENT OF RTTC  
 12/22/2000 - 12/31/2002 FY02: \$0 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 02063** TEXAS A&M UNIV 8730  
 LOW SPEED TUNNEL TESTING FOR AERODYNAMICS TECHNOLOGY  
 STUDIES  
 07/21/2002 - 06/22/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* G L MARTINEZ  
*Tech. Officer:* JSC/D L EICHBLATT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAS 9 97002** TEXAS A&M UNIV 8731  
 TEXAS A & M LOW-SPEED WIND TUNNEL (LSWT) TESTING  
 04/02/1997 - 04/02/2001 FY02: \$0 Total: \$204,145  
*Prin. Invest.:* J L MARTINEZ  
*Tech. Officer:* JSC/S G LABBE, JSC/C J CERIMELE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 386** TEXAS A&M UNIV 8732  
 MICRO SPACECRAFT ATTITUDE SENSOR SYSTEM (MSAS) NASA HQS  
 CETDP COMPETITION  
 03/13/2000 - 04/04/2002 FY02: \$0 Total: \$360,000  
*Prin. Invest.:* J L JUNKINS  
*Tech. Officer:* LARC/L G HORTA  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 1 02038** TEXAS A&M UNIV 8733  
 UNIV RESEARCH, ENGINEERING AND TECHNOLOGY INSTITUTE (URETI),  
 INTELLIGENT BIO-NANO MATERIALS  
 08/19/2002 - 08/18/2007 FY02: \$0 Total: \$0  
*Prin. Invest.:* D C LAGODAS  
*Tech. Officer:* LARC/T R SUTTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1166** TEXAS A&M UNIV 8734  
 ARTERIAL REMODELING AND FUNCTIONAL ADAPTATIONS INDUCED BY  
 MICROGRAVITY  
 03/22/2000 - 03/14/2003 FY02: \$0 Total: \$706,193  
*Prin. Invest.:* M D DELP  
*Tech. Officer:* ARC/M F VASQUES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

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## NASA'S UNIVERSITY PROGRAM

**NCC 3 516**                      **TEXAS A&M UNIV**                      **8735**  
 THE CENTER FOR SPACE POWER  
 11/26/1996 - 11/03/2002                      FY02: \$0                      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**                      **8736**  
 THERMAL CONTROL AND ENHANCEMENT OF HEAT TRANSPORT CAPACITY  
 OF CRYOGENICS CAPILLARY PUMPED LOOPS AND  
 03/20/1998 - 08/31/2002                      FY02: \$0                      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**                      **8737**  
 SMART STRUCTURAL COMPONENTS FOR INCREASED FLIGHT SPEED,  
 SAFETY & CAPACITY USING MAGNETIC BEARINGS A  
 01/18/2000 - 01/31/2002                      FY02: \$0                      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**                      **8738**  
 EXPERIMENTAL STUDY OF THE EFFECTS OF WAKES ON SEPARATION IN  
 LOW PRESSURE TURBINE FLOW  
 04/20/2000 - 12/31/2002                      FY02: \$0                      Total: \$131,735  
*Prin. Invest.:* I SCHOBEIRI  
*Tech. Officer:* GRC/D ASHPIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 3 836**                      **TEXAS A&M UNIV**                      **8739**  
 LOW POWER LOSS, FAIL SAFE MAGNETIC SUSPENSIONS FOR ENERGY  
 STORAGE AND ATTITUDE CONTROL FLYWHEELS  
 01/04/2001 - 01/01/2004                      FY02: \$0                      Total: \$337,470  
*Prin. Invest.:* D PALAZZOLO  
*Tech. Officer:* GRC/K P MCLALLIN  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 928**                      **TEXAS A&M UNIV**                      **8740**  
 SMART STRUCTURAL COMPONENTS AND SIMULATION TOOLS FOR IN-  
 CREASED ENGINE EFFICIENCY, FLIGHT RANGE AND  
 12/19/2001 - 09/30/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D PALAZZOLO  
*Tech. Officer:* GRC/A J PROVENZA  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 3 933**                      **TEXAS A&M UNIV**                      **8741**  
 MULTIAXIAL CONTINUUM DAMAGE MODEL FOR LIFE PREDICTION OF  
 POLYMER MATRIX COMPOSITES AT ULTRA HIGH TEMPERATURE  
 01/02/2002 - 12/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R TAIREJA  
*Tech. Officer:* GRC/R ELLIS  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 4 152**                      **TEXAS A&M UNIV**                      **8742**  
 CONTINUOUS COMMISSIONING PROPOSAL CONTINUOUS COMMISSION-  
 ING PROPOSAL  
 06/18/2001 - 05/31/2002                      FY02: \$0                      Total: \$70,000  
*Prin. Invest.:* W TURNER  
*Tech. Officer:* DFRC/J TORRES  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 359**                      **TEXAS A&M UNIV**                      **8743**  
 MISSION GEOGRAPHY  
 08/24/1998 - 07/31/2003                      FY02: \$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**                      **8744**  
 VISION-BASED NAVIGATION FOR SPACECRAFT FORMATION FLYING  
 12/21/1999 - 08/31/2002                      FY02: \$0                      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**                      **8745**  
 UNSOLICITED PROPOSAL FOR A COOPERATIVE AGREEMENT BETWEEN  
 THE TEXAS ENGINEERING EXPERIMENT STATION  
 03/03/2000 - 02/28/2002                      FY02: \$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**                      **8746**  
 BUILDING AN INTERDISCIPLINARY RESEARCH INFRASTRUCTURE IN AP-  
 PLIED COMPUTER SCIENCE, GEOGRAPHIC INFORMATION  
 09/25/2000 - 09/30/2001                      FY02: \$0                      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**                      **8747**  
 R/S INVESTIGATION OF NEURONAL PHYSIOLOGY IN SIMULATED MICRO-  
 GRAVITY USING SMART FLUORESCENT ...  
 03/12/1999 - 11/30/2002                      FY02: \$0                      Total: \$371,000  
*Prin. Invest.:* G COTE  
*Tech. Officer:* JSC/M ANDERSON  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIRONMENTAL)

**NCC 8 226**                      **TEXAS A&M UNIV**                      **8748**  
 PROMOTE COMMERCIALY FUNDED ENGINEERING RESEARCH & TECH-  
 NOLOGY DEVELOPMENT ON THE INTERNATIONAL SPACE STATION  
 05/01/2001 - 10/31/2002                      FY02: \$0                      Total: \$716,000  
*Prin. Invest.:* D BOYLE  
*Tech. Officer:* MSFC/S LAMBING  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 8 236**                      **TEXAS A&M UNIV**                      **8749**  
 PROMOTE COMMERCIALY FUNDED RESEARCH & TECH DEVELOPMENT IN THE FIELD  
 OF SPACE POWER GENERATION AND ENERGY STORAGE  
 11/01/2001 - 10/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W F BEST  
*Tech. Officer:* MSFC/S LAMBING  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 9 69**                      **TEXAS A&M UNIV**                      **8750**  
 NASA COMMERCIAL SPACE TO ADVOCATE & SUPPORT COMMERCIAL  
 ENGINEERING ON ISS  
 05/07/1998 - 05/06/2001                      FY02: \$0                      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



## NASA'S UNIVERSITY PROGRAM

TEXAS

<b>NCC 9 146</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8751</b>			
WEB DEVELOPMENT & ONLINE DELIVERY OF MIDDLE SCHOOL AERO-SPACE SCHOLARS PROGRAM					
11/30/2001 - 11/30/2002	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> J DENTON					
<i>Tech. Officer:</i> JSC/A SANCHEZ					
<i>CASE Category:</i> 22 - COMPUTER SCIENCE					
<b>NCC 9 150</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8752</b>			
SUPPORT FOR THE MINORITY OUTREACH PROGRAM TEXAS A&M SPACE ENGINEERING INST					
07/03/2002 - 09/30/2003	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> D BOYLE					
<i>Tech. Officer:</i> JSC/H W LANE					
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR					
<b>NGT 4 52432</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8753</b>			
GRADUATE STUDENT RESEARCHERS PROGRAM - FAULT TOLERANT CONTROL OF AN F-15 AIRCRAFT					
06/11/2002 - 06/30/2003	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> D SMITH					
<i>Tech. Officer:</i> DFRC/K GUPTA					
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR					
<b>NGT 5 30211</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8754</b>			
HYDROLOGIC CONSEQUENCES OF SHRUB SAVANNA EXPANSION STUDENT: WYLIE N. HARRIS					
08/20/1999 - 08/31/2001	FY02: \$0	Total: \$22,000			
<i>Prin. Invest.:</i> T BOUTTON					
<i>Tech. Officer:</i> GSFC/M WEI					
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER					
<b>NGT 5 30408</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8755</b>			
EVALUATION OF SHRUB ENCROACHMENT ON WATER AVAILABILITY IN SEMI-ARID RANGELAND OF THE SOUTHWEST					
08/15/2001 - 08/31/2004	FY02: \$0	Total: \$22,000			
<i>Prin. Invest.:</i> C MUNSTER					
<i>Tech. Officer:</i> GSFC/M WEI					
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER					
<b>NGT 5 30417</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8756</b>			
UNDERSTANDING AND ASSESSING POTENTIAL PREDICTABILITY OF THE SACZ & SPCZ USING NASA/NSIPP AND NCAR/C					
09/06/2001 - 08/31/2004	FY02: \$0	Total: \$22,000			
<i>Prin. Invest.:</i> P CHANG					
<i>Tech. Officer:</i> GSFC/M WEI					
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER					
<b>NGT 5 30467</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8757</b>			
SIMULATING SURFACE WATER RUNOFF AND ASSESSING IMPACTS OF NATURAL AND HUMAN-INDUCED ENVIRONMENTAL					
08/21/2002 - 08/31/2005	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> L HONGXING					
<i>Tech. Officer:</i> GSFC/M WEI					
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER					
<b>NGT 5 50417</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8758</b>			
A COMPARISON OF TROPICAL PRECIPITATION RATES SIMULATED BY THE NCAR_CCM3 WITH THOSE OBSERVED BY THE					
08/12/2002 - 08/31/2005	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> G R NORTH					
<i>Tech. Officer:</i> GSFC/K BLANDING					
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER					
<b>NGT 8 52913</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8759</b>			
CLARIFYING AND MITIGATING THE EFFECTS OF STRESS ON MENTAL SIMULATION IN DECISION MAKING					
05/29/2002 - 06/30/2005	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> S SMITH					
<i>Tech. Officer:</i> MSFC/S NASH-STEVEN					
<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER					
<b>NGT 9 34</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8760</b>			
KINETICS OF NITRIFICATION BY ISO TOPE DILUTION IN GROWTH OF WHEAT USING ZEOPONICS					
06/04/1998 - 07/01/2001	FY02: \$0	Total: \$66,000			
<i>Prin. Invest.:</i> R W WEAVER					
<i>Tech. Officer:</i> JSC/D G SICKOREZ					
<i>CASE Category:</i> 55 - AGRICULTURE					
<b>NGT 9 39</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8761</b>			
1999 SUMMER FACULTY FELLOWSHIP PROGRAM					
04/21/1999 - 12/31/2000	FY02: \$0	Total: \$385,000			
<i>Prin. Invest.:</i> W A HYMAN, R BANNEROT					
<i>Tech. Officer:</i> JSC/D SICKOREZ					
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER					
<b>NGT 9 54</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8762</b>			
2001 SUMMER FACULTY FELLOWSHIP PROGRAM					
06/29/2001 - 12/31/2002	FY02: \$0	Total: \$359,417			
<i>Prin. Invest.:</i> W A HYMAN					
<i>Tech. Officer:</i> JSC/D SICKOREZ					
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER					
<b>NGT10 52628</b>	<b>TEXAS A&amp;M UNIV</b>	<b>8763</b>			
BIOTIC FACTORS CONTROLLING CALICIVIOUS ATTACHMENT AND PERSISTENCE ON ROMAINE AND ICEBERG LETTUCE					
08/14/2002 - 08/31/2003	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> D PILLAI					
<i>Tech. Officer:</i> KSC/C BLACK					
<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER					
<b>NAG 5 9196</b>	<b>TEXAS A&amp;M UNIV-CORPUS CHRISTI</b>	<b>8764</b>			
THE TRANSLINGUAL EARTH SYSTEM SCIENCE EDUCATION CENTER					
03/10/2000 - 09/14/2001	FY02: \$0	Total: \$154,580			
<i>Prin. Invest.:</i> G BLOUNT					
<i>Tech. Officer:</i> GSFC/N KHAZENIE					
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER					
<b>NAG 9 1401</b>	<b>TEXAS A&amp;M UNIV-CORPUS CHRISTI</b>	<b>8765</b>			
"FINDING NEAR OPTIMAL SCHEDULES FOR FUNCTIONALLY DISTRIBUTED TASKS ON CLUSTER & MULTIPROCESSOR ARCH					
03/05/2002 - 03/04/2005	FY02: \$0	Total: \$0			
<i>Prin. Invest.:</i> M MOORE					
<i>Tech. Officer:</i> JSC/L M ARMENDARIZ					
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER					
<b>NAG 5 7159</b>	<b>TEXAS A&amp;M UNIV-KINGSVILLE</b>	<b>8766</b>			
SIMULATION SUPPORT FOR THE DEVELOPMENT OF GLAST					
03/16/1998 - 08/31/2001	FY02: \$0	Total: \$104,000			
<i>Prin. Invest.:</i> D SUSON					
<i>Tech. Officer:</i> GSFC/D THOMPSON					
<i>CASE Category:</i> 13 - PHYSICS					

## TEXAS

## NASA'S UNIVERSITY PROGRAM

**NAG 8 1650**                      **TEXAS A&M UNIV-KINGSVILLE**                      **8767**  
 EXPANDABLE SOFTWARE REUSE LIBRARY  
 01/20/2000 - 05/31/2002                      FY02: \$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**                      **8768**  
 DESIGN OF LOW BIT RATE SIGNAL COMPRESSOR FOR EFFICIENT RE-  
 CORDING  
 04/26/1999 - 04/30/2003                      FY02: \$0                      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**                      **8769**  
 CRITICAL TESTS OF STELLAR EVOLUTION\_(LTSA)  
 03/02/1998 - 02/28/2003                      FY02: \$0                      Total: \$33,800  
*Prin. Invest.:* P MARCUM  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11002**                      **TEXAS COLL**                      **8770**  
 TEXAS COLL CENTER FOR EXCELLENCE IN MATHEMATICS SCIENCE &  
 TECHNOLOGY & A TECHNOLOGY PLACE FOR KID  
 06/01/2001 - 05/31/2002                      FY02: \$0                      Total: \$998,000  
*Prin. Invest.:* M NAMBOODIRI  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1416**                      **TEXAS COLL**                      **8771**  
 PRE-COLL PLACEMENT FOR ACHIEVEMENT OF EXCELLENCE IN MATH,  
 SCIENCE, ENGINEERING TECHNOLOGY  
 09/30/2002 - 09/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* W STENGER  
*Tech. Officer:* JSC/L M ARMENDEZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12599**                      **TEXAS SOUTHERN UNIV**                      **8772**  
 NASA CENTER ON MODEL-BASED SIMULATION - STRUCTURAL AND MATE-  
 RIALS SYSTEMS  
 09/25/2002 - 09/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D C DAVIS  
*Tech. Officer:* GSFC/C PERSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1132**                      **TEXAS SOUTHERN UNIV**                      **8773**  
 FIELD TESTING  
 07/16/1999 - 03/31/2002                      FY02: \$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**                      **8774**  
 MOLD DEVELOPMENT IN HYDROPONICS  
 04/25/2000 - 04/24/2003                      FY02: \$0                      Total: \$132,000  
*Prin. Invest.:* O A JEJLOWO  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 55 - AGRICULTURE

**NAG 9 1227**                      **TEXAS SOUTHERN UNIV**                      **8775**  
 SILICON UPTAKE IN HYDROPONICS BY GRAMINACEOUS CROP PLANTS  
 06/22/2000 - 06/30/2003                      FY02: \$0                      Total: \$112,000  
*Prin. Invest.:* G A JEJLOWO  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 55 - AGRICULTURE

**NAG 9 1414**                      **TEXAS SOUTHERN UNIV**                      **8776**  
 STUDIES IN VIVO MODEL OF SIMULATED MICROGRAVITY O CALCIUM  
 HOMEOSTASIS  
 09/11/2002 - 09/10/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G RAMESH  
*Tech. Officer:* JSC/L M ARMENDARIZ  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NCC 9 80**                      **TEXAS SOUTHERN UNIV**                      **8777**  
 HIGH PRESSURE LABORATORY  
 12/02/1998 - 07/31/2002                      FY02: \$0                      Total: \$899,675  
*Prin. Invest.:* B L WILSON  
*Tech. Officer:* JSC/C B AGEE  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 2192**                      **TEXAS TECH UNIV**                      **8778**  
 THE HEAVY OZONE PROBLEM NRA-98-OES-04  
 09/28/1999 - 12/31/2002                      FY02: \$0                      Total: \$101,235  
*Prin. Invest.:* G I GELLENE  
*Tech. Officer:* LARC/G L MADDREA, LARC/L R POOLE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1560**                      **TEXAS TECH UNIV**                      **8779**  
 ACTION THEORIES AND DESIGN OF INTELLIGENT SYSTEMS  
 05/17/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R WATSON  
*Tech. Officer:* ARC/J FRANK, ARC/R MORRIS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 3 2005**                      **TEXAS TECH UNIV**                      **8780**  
 ARCJET ELECTRODE DEGRDATION RESEARCH  
 01/24/1997 - 08/31/2001                      FY02: \$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**                      **8781**  
 OPTIMIZATION STUDIES FOR ACCESS CALORIMETRY INCREMENTAL FUND-  
 ING FOR FIRST YEAR OF GRANT  
 03/26/1998 - 06/30/2002                      FY02: \$0                      Total: \$251,762  
*Prin. Invest.:* R WIGMANS  
*Tech. Officer:* GSFC/B A MERRITT  
*CASE Category:* 13 - PHYSICS

**NAG 5 9505**                      **TEXAS TECH UNIV**                      **8782**  
 DEVELOPMENT OF A PARALLEL VERSION OF SEQUENCAL WITH EXPERI-  
 MENTS ON & APPLICATION TO NEURAL NETWORK  
 04/26/2000 - 08/31/2001                      FY02: \$0                      Total: \$90,000  
*Prin. Invest.:* D COOKE  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<b>NCC 3 962</b>	<b>TEXAS TECH UNIV</b>	<b>8783</b>		<b>NAG 5 10714</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8791</b>	
ON-CHIP BACKSCATTERING INTERFEROMETRY FOR SPACE BASED BIOSENSING AND DIAGNOSTICS				ADVANCED ADIABATIC DEMAGNETIZATION REFRIGERATORS FOR CONTINUOUS COOLING FROM 10K TO 50MK			
05/02/2002 - 09/30/2004	FY02: \$0	Total: \$0		04/12/2001 - 05/31/2003	FY02: \$0	Total: \$15,000	
<i>Prin. Invest.:</i> D BORNHOP				<i>Prin. Invest.:</i> P W CHU			
<i>Tech. Officer:</i> GRC/C NIEDERHAUS				<i>Tech. Officer:</i> GSFC/P J SHIRRON			
<i>CASE Category:</i> 49 - ENGINEERING, OTHER				<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			
<b>NCC 9 108</b>	<b>TEXAS TECH UNIV</b>	<b>8784</b>		<b>NAG 8 1363</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8792</b>	
PLANT RESEARCH IN EDU & WATER REUSE/RECYCLING				"EPITAXIAL GROWTH OF PROTEIN CRYSTALS ON SELF-ASSEMBLED MONOLAYERS"			
07/07/2000 - 09/30/2001	FY02: \$0	Total: \$915,000		06/02/1997 - 11/30/2001	FY02: \$0	Total: \$419,000	
<i>Prin. Invest.:</i> J L SMITH, L V URBAN, E B PEFFLEY				<i>Prin. Invest.:</i> J M FRIEDMAN			
<i>Tech. Officer:</i> JSC/D L HENNINGER, JSC/K R DAUES				<i>Tech. Officer:</i> MSFC/B GUYNES, MSFC/J MAYO			
<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER				<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			
<b>NCC 9 143</b>	<b>TEXAS TECH UNIV</b>	<b>8785</b>		<b>NAG 8 1658</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8793</b>	
PLANT RESEARCH IN EDU, WATER REUSE/RECYCLING				DEVELOPMENT OF SPACE RADIATION MONTE-CARLO COMPUTER SIMULATION BASED ON FLUKA & ROOT CODE			
09/28/2001 - 09/30/2002	FY02: \$0	Total: \$1,497,000		05/01/2000 - 11/30/2002	FY02: \$0	Total: \$184,000	
<i>Prin. Invest.:</i> J L SMITH				<i>Prin. Invest.:</i> L S PINSKY			
<i>Tech. Officer:</i> JSC/D L HENNINGER				<i>Tech. Officer:</i> MSFC/P DOTY			
<i>CASE Category:</i> 49 - ENGINEERING, OTHER				<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			
<b>NAG 9 1278</b>	<b>TRINITY UNIV</b>	<b>8786</b>		<b>NAG 8 1857</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8794</b>	
KALMAN FILTER BASED SENSOR FUSION FOR ESTIMATION OF MOBILE ROBOT LOCATION AND ORIENTATION				EFFECTS ON CONVECTIVE TRANSPORT OF SOLUTE IMPURITIES			
01/12/2001 - 12/31/2002	FY02: \$0	Total: \$15,400		01/29/2002 - 02/28/2003	FY02: \$0	Total: \$0	
<i>Prin. Invest.:</i> K NICKELS				<i>Prin. Invest.:</i> P VEKILOV			
<i>Tech. Officer:</i> JSC/K BAKER				<i>Tech. Officer:</i> MSFC/K F ROBINSON			
<i>CASE Category:</i> 49 - ENGINEERING, OTHER				<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			
<b>NAG 3 2697</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8787</b>		<b>NAG 9 867</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8795</b>	
FUNDAMENTAL STUDIES ON TWO-PHASE FLOWS THROUGH PAC KED-BEDS IN MICROGRAVITY				NASA-ASEE SUMMER FACULTY FELLOWSHIPS			
01/28/2002 - 10/31/2005	FY02: \$0	Total: \$0		05/09/1996 - 06/06/2002	FY02: \$0	Total: \$1,213,000	
<i>Prin. Invest.:</i> D BALAKOTAIAH				<i>Prin. Invest.:</i> R B BANNEROT			
<i>Tech. Officer:</i> GRC/B J MOTIL				<i>Tech. Officer:</i> JSC/D SICKOREZ			
<i>CASE Category:</i> 49 - ENGINEERING, OTHER				<i>CASE Category:</i> 46 - MECHANICAL ENGR			
<b>NAG 5 4765</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8788</b>		<b>NAG 9 985</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8796</b>	
LL CHODRITES				INVESTIGATE & DEVELOP ADVANCED TRAINING TECHNIQUES			
06/06/1997 - 05/31/2001	FY02: \$0	Total: \$71,674		01/16/1998 - 08/31/2002	FY02: \$0	Total: \$1,123,078	
<i>Prin. Invest.:</i> D M REID				<i>Prin. Invest.:</i> B LOFTIN			
<i>Tech. Officer:</i> GSFC/D NAVA				<i>Tech. Officer:</i> JSC/R SAVELY			
<i>CASE Category:</i> 11 - ASTRONOMY				<i>CASE Category:</i> 22 - COMPUTER SCIENCE			
<b>NAG 5 7840</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8789</b>		<b>NAG 9 1012</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8797</b>	
WINDS, WATER BUDGETS, AND STABLE ISOTOPES IN TROPICAL CYCLONES USING TRMM AND QUICKSCAT				TWO PHASE SYSTEMS FOR MARS-G			
01/06/1999 - 12/31/2002	FY02: \$0	Total: \$148,877		05/20/1998 - 06/30/2001	FY02: \$0	Total: \$70,411	
<i>Prin. Invest.:</i> J R LAWRENCE				<i>Prin. Invest.:</i> L C WHITTE			
<i>Tech. Officer:</i> GSFC/R W LAWRENCE				<i>Tech. Officer:</i> JSC/J D CORNWELL			
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE				<i>CASE Category:</i> 46 - MECHANICAL ENGR			
<b>NAG 5 8140</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8790</b>		<b>NAG 9 1055</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8798</b>	
THE ORIGINS OF TRANSLATION				URBAN EXPERIENCE PROGRAM			
02/03/1999 - 06/30/2002	FY02: \$0	Total: \$235,360		09/22/1998 - 08/30/2002	FY02: \$0	Total: \$105,000	
<i>Prin. Invest.:</i> D FOX				<i>Prin. Invest.:</i> T MINDIOLA, JR.			
<i>Tech. Officer:</i> GSFC/M MEYER				<i>Tech. Officer:</i> JSC/L ARMENDARIZ			
<i>CASE Category:</i> 11 - ASTRONOMY				<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			
<b>NAG 5 8140</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8790</b>		<b>NAG 9 1103</b>	<b>UNIV HOUSTON-HOUSTON</b>	<b>8799</b>	
THE ORIGINS OF TRANSLATION				THE SEARCH FOR MICROBIAL BIOMARKERS IN TERRESTRIAL DEPOSITS			
05/04/1999 - 03/09/2004	FY02: \$0	Total: \$60,000		05/04/1999 - 03/09/2004	FY02: \$0	Total: \$60,000	
<i>Prin. Invest.:</i> D FOX				<i>Prin. Invest.:</i> H S CHAFETZ			
<i>Tech. Officer:</i> GSFC/M MEYER				<i>Tech. Officer:</i> JSC/E K GIBSON			
<i>CASE Category:</i> 11 - ASTRONOMY				<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			

TEXAS

NASA'S UNIVERSITY PROGRAM

**NAG 9 1152**                      **UNIV HOUSTON-HOUSTON**                      **8800**  
 THERAPEUTIC EFFICACY OF GROWTH HORMONE  
 09/20/1999 - 11/08/2002                      FY02: \$0                      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**                      **8801**  
 TEXAS LEARNING AND COMPUTATIONAL CENTER  
 10/23/2000 - 08/16/2002                      FY02: \$0                      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**                      **8802**  
 ADVANCED CROSS ENTERPRISE TECHNOLOGY DEVELOPMENT F OR  
 NASA MISSIONS  
 03/27/2001 - 03/31/2003                      FY02: \$0                      Total: \$382,000  
*Prin. Invest.:* A IGNATIEV  
*Tech. Officer:* JSC/R S BAIRD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1293**                      **UNIV HOUSTON-HOUSTON**                      **8803**  
 DEVELOPMENT OF REDUCED SURFACE WAVE ANTENNAS FOR THE  
 NASA/JSC NAVIGATION  
 04/16/2001 - 04/30/2004                      FY02: \$0                      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**                      **8804**  
 GRADUATE STUDENT RESERACH PROGRAM CARBON NANOTUBE POLY-  
 MER NANOCOMPOSITES  
 06/14/2001 - 07/31/2003                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* C A MITCHELL  
*Tech. Officer:* JSC/B FILES  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 9 1347**                      **UNIV HOUSTON-HOUSTON**                      **8805**  
 NOVEL TISSUE ASSEMBLIES: MODELS FOR ENTERIC PATHOGENESIS  
 07/01/2001 - 07/31/2002                      FY02: \$0                      Total: \$25,894  
*Prin. Invest.:* L S PINSKY  
*Tech. Officer:* JSC/G BADHWAR  
*CASE Category:* 13 - PHYSICS

**NAG 9 1363**                      **UNIV HOUSTON-HOUSTON**                      **8806**  
 URBAN EXPERIENCE PROGRAM  
 07/10/2001 - 07/11/2004                      FY02: \$0                      Total: \$25,000  
*Prin. Invest.:* T MINDIOLA  
*Tech. Officer:* JSC/L M ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1410**                      **UNIV HOUSTON-HOUSTON**                      **8807**  
 URBAN EXPERIENCE PROGRAM  
 08/15/2002 - 08/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T MINDIOLA  
*Tech. Officer:* JSC/L M ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1421**                      **UNIV HOUSTON-HOUSTON**                      **8808**  
 MARS RADIATION CHARACTERIZATION EXPERIMENTAL PROG  
 05/01/2002 - 04/30/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L C WHITE, D K HOLLINGSWORTH  
*Tech. Officer:* JSC/K M HURBERT  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 9 1422**                      **UNIV HOUSTON-HOUSTON**                      **8809**  
 EDUCATIONAL GRANT FOR NASA ASEE SUMMER FACULTY FEL LOWSHIPS  
 05/14/2002 - 05/13/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R B BANNEROT  
*Tech. Officer:* JSC/D G SICHAREZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1429**                      **UNIV HOUSTON-HOUSTON**                      **8810**  
 ANALYSIS OF DAT FROM MARS ODYSSEY MARIE EXPERIMENT  
 06/19/2002 - 05/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L PINSKY  
*Tech. Officer:* JSC/G JOHNSON  
*CASE Category:* 11 - ASTRONOMY

**NAG 9 1453**                      **UNIV HOUSTON-HOUSTON**                      **8811**  
 STABILITY OF PHARMACEUTICAL FOR SPACE IN-FLIGHT TR EATMENT  
 08/19/2002 - 08/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D CHOW  
*Tech. Officer:* JSC/L PUTCHA  
*CASE Category:* 56 - MEDICL

**NCC 2 5394**                      **UNIV HOUSTON-HOUSTON**                      **8812**  
 THE SCALABILITY OF OPENMP ON LARGE-SCALE DISTRIBUT ED SHARED-  
 MEMORY ARCHITECTURES SUCH AS THESGI OR  
 08/14/2000 - 04/30/2002                      FY02: \$0                      Total: \$95,000  
*Prin. Invest.:* B CHAPMAN  
*Tech. Officer:* ARC/J YAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 2 5396**                      **UNIV HOUSTON-HOUSTON**                      **8813**  
 MINERALS & SUBMICROMETER FORMS AS BIOSIGNATURES  
 08/28/2000 - 08/31/2002                      FY02: \$0                      Total: \$30,000  
*Prin. Invest.:* A D HAYMET  
*Tech. Officer:* ARC/D F BLAKE  
*CASE Category:* 12 - CHEMISTRY

**NCC 8 127**                      **UNIV HOUSTON-HOUSTON**                      **8814**  
 FOR RESEARCH "CONTINUATION OF SUPPORT FOR THE COMMERCIAL  
 SPACE CENTER, SPACE VACUUM EPITAXY CTR  
 01/21/1997 - 10/14/2001                      FY02: \$0                      Total: \$7,500,000  
*Prin. Invest.:* A IGNATIEV, S S PEI  
*Tech. Officer:* MSFC/S J LAMBING  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 8 239**                      **UNIV HOUSTON-HOUSTON**                      **8815**  
 PROMOTE COMMERCIALY FUNDED RESEARCH AND TECHNOLOGY DEVEL-  
 OPMENT IN THE FIELD OF SPACE VACUUM EPITAXY  
 01/16/2002 - 10/14/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A IGNATIEV  
*Tech. Officer:* MSFC/S LAMBING  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 9 70**                      **UNIV HOUSTON-HOUSTON**                      **8816**  
 UH NASA TECHNOLOGY COMMERCIALIZATION  
 03/24/1998 - 05/31/2002                      FY02: \$0                      Total: \$1,200,000  
*Prin. Invest.:* A V VAILLAS  
*Tech. Officer:* JSC/H L DAVIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

<p><b>NCC 9 151 UNIV HOUSTON-HOUSTON 8817</b>            USE OF NEAR-INFRARED SPECTROSCOPY AS NON-INVASIVE MEASURE OF MUSCLE VASCULAR FUNCTION            05/29/2002 - 12/31/2002      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> J DAVIS  <i>Tech. Officer:</i> JSC/D FEEBACK  <i>CASE Category:</i> 56 - MEDICL</p>	<p><b>NCC 2 1160 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8825</b>            STREPTOCOCCUS PNEUMONIAE GENE EXPRESSION AND VIRUL ENCE POTENTIAL IN THE SPACE ENVIRONMENT            02/11/2000 - 03/14/2003      FY02: \$0      Total: \$237,517  <i>Prin. Invest.:</i> D NIESSEL  <i>Tech. Officer:</i> ARC/C M WINGET, ARC/D REISS-BUBENHEIM  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NGT 3 52356 UNIV HOUSTON-HOUSTON 8818</b>            GRADUATE STUDENT RESEARCH PROGRAM GRADUATE STUDENT RE-SEARCH PROGRAM            07/01/1999 - 08/31/2001      FY02: \$0      Total: \$44,000  <i>Prin. Invest.:</i> V BALAKOTIAIAH  <i>Tech. Officer:</i> GRC/F J MONTEGANI  <i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NCC 8 170 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8826</b>            R/S DIFFERENTIATION OF 3 DIMENSIONAL CO-CULTURES OF MYOFIBRO-BLASTS, PRENEOPLASTIC            03/23/1999 - 12/30/2002      FY02: \$0      Total: \$440,800  <i>Prin. Invest.:</i> V CHOPPA  <i>Tech. Officer:</i> MSFC/V CHOPPA  <i>CASE Category:</i> 56 - MEDICL</p>
<p><b>NGT 5 50182 UNIV HOUSTON-HOUSTON 8819</b>            PRIMORDIAL PEPTIDE SYNTHESIS IN THE ORIGIN OF LIFE            05/27/1998 - 06/30/2001      FY02: \$0      Total: \$66,000  <i>Prin. Invest.:</i> G E FOX  <i>Tech. Officer:</i> HQ/A NURRIDDI  <i>CASE Category:</i> 12 - CHEMISTRY</p>	<p><b>NCC 9 81 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8827</b>            UTMB/NASA-JSC GRADUATE MED TRAINING IN AEROSPACE MEDICINE            12/07/1998 - 09/30/2003      FY02: \$0      Total: \$687,534  <i>Prin. Invest.:</i> J R DAVIS  <i>Tech. Officer:</i> JSC/R BILICA  <i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER</p>
<p><b>NAG 9 1155 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8820</b>            NUTRITIONAL INTERVENTION TO IMPROVE MUSCLE PROTEIN METABO-LISM DURING STRESS            09/16/1999 - 11/30/2002      FY02: \$0      Total: \$386,092  <i>Prin. Invest.:</i> A A FERRANDO  <i>Tech. Officer:</i> JSC/C LLOYD  <i>CASE Category:</i> 56 - MEDICL</p>	<p><b>NCC 9 123 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8828</b>            SPATIAL REORIENTATION OF SENSORIMOTOR BALANCE CONTROL IN ALTERED GRAVITY            02/22/2001 - 11/30/2003      FY02: \$0      Total: \$7,450  <i>Prin. Invest.:</i> G KAUFMAN  <i>Tech. Officer:</i> JSC/B PALOSKI  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAS 2 02059 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8821</b>            FUNDAMENTAL TECHNOLOGIES FOR DEVELOPMENT OF BIOMOL ECULAR SENSORS            12/20/2001 - 12/20/2002      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> J F LEARY  <i>Tech. Officer:</i> ARC/J W HINES, ARC/P P FUNG  <i>CASE Category:</i> 56 - MEDICL</p>	<p><b>NGT 9 47 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8829</b>            TRAINING PROGRAM FOR TWO STUDENTS GRADUATE SCHOOL OF BIO-MEDICAL SCIENCES            04/12/2000 - 05/31/2003      FY02: \$0      Total: \$100,000  <i>Prin. Invest.:</i> C W COOPER  <i>Tech. Officer:</i> JSC/C W LLOYD  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAS 9 01006 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8822</b>            ISS FLIGHT EXPERIMENT E129            01/23/2001 - 12/31/2004      FY02: \$100,000      Total: \$326,059  <i>Prin. Invest.:</i> A D BARRET  <i>Tech. Officer:</i> JSC/M ANDERSON  <i>CASE Category:</i> 56 - MEDICL</p>	<p><b>NAG 8 1824 UNIV OF TEXAS-GRAD SCHOOL OF BIOMED SCI. 8830</b>            PHYSICO-CHEMICAL TOOLS FOR RATIONAL OPTIMATIZATION OF GROWTH CONDITIONS OF BIOLOGICAL CRYSTALS            10/04/2001 - 11/30/2004      FY02: \$94,000      Total: \$94,000  <i>Prin. Invest.:</i> P G VEKILOV  <i>Tech. Officer:</i> MSFC/B GUYNES  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAS 9 97147 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8823</b>            PROTEIN TURNOVER DURING SPACE FLIGHT            02/24/1997 - 06/30/2004      FY02: \$0      Total: \$618,000  <i>Prin. Invest.:</i> A FERRANDO  <i>Tech. Officer:</i> JSC/A LEE  <i>CASE Category:</i> 56 - MEDICL</p>	<p><b>NAG 9 1206 UNIV OF TEXAS-HLTH SCI CTR-SAN ANTONIO 8831</b>            USE OF NASA BIOREACTOR TO STUDY CELL CYCLE REGULATION            03/01/2000 - 02/28/2002      FY02: \$0      Total: \$337,785  <i>Prin. Invest.:</i> J M JESSUP  <i>Tech. Officer:</i> JSC/S GONDA  <i>CASE Category:</i> 56 - MEDICL</p>
<p><b>NAS 9 98138 UNIV OF TEXAS MEDICAL BRANCH - GALVESTON 8824</b>            SMALL PAYLOAD EXPERIMENT            10/28/1998 - 05/31/2003      FY02: \$0      Total: \$299,356  <i>Prin. Invest.:</i> M MCGINNIS  <i>Tech. Officer:</i> JSC/C HAVEN  <i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)</p>	<p><b>NAG10 180 UNIV OF TEXAS-HLTH SCI CTR-SAN ANTONIO 8832</b>            FUNCT DEV IN A MODEL VESTIBULAS SYS            01/18/1996 - 09/30/2002      FY02: \$0      Total: \$703,425  <i>Prin. Invest.:</i> M L WIEDERHOLD  <i>Tech. Officer:</i> KSC/W M KNOTT  <i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER</p>

**NAG 5 11928 UNIV OF TEXAS-PAN AMERICAN 8833**  
 NASA BORDER INITIATIVE  
 04/04/2002 - 10/31/2002 FY02: \$0 Total: \$0  
*Prin. Invest.:* H MEDRANO  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12549 UNIV OF TEXAS-PAN AMERICAN 8834**  
 NASA BORDER INITIATIVE: A PARTNERSHIP FOR ENRICHING EDUCATION  
 FOR AT-RISK STUDENTS (PEERS)  
 09/05/2002 - 08/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* H MEDRADO  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1634 UNIV OF TEXAS-PAN AMERICAN 8835**  
 OPTIMAL DESIGN OF HYBRID PASSIVE VISCOELASTIC AND ACTIVE PIEZO-  
 ELECTRIC DAMPING LAYERS  
 09/30/1999 - 08/31/2003 FY02: \$0 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 8836**  
 PARTNERSHIP FOR SCIENCE AND ENGR STUDENT SUCCESS  
 09/27/1999 - 09/30/2002 FY02: \$0 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 8837**  
 SPACE FLIGHT, STRESS & PLASTICITY  
 02/07/1995 - 12/31/2000 FY02: \$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 8838**  
 THE ROLE OF CARDIAC MECHANICS IN BLOOD PRESSURE REGULATORY  
 STRESS  
 06/27/1997 - 09/30/2001 FY02: \$0 Total: \$525,000  
*Prin. Invest.:* B LEVINE  
*Tech. Officer:* GSFC/V SCHNEIDER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1033 UNIV OF TEXAS, HEALTH SCI CTR-DALLAS 8839**  
 MICROCIRCULATORY ADJUSTMENT TO SIMULATED MICROGRAVITY EXPO-  
 SURE IN HUMANS  
 07/16/1998 - 07/14/2002 FY02: \$0 Total: \$475,700  
*Prin. Invest.:* C G CRANDALL  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 56 - MEDICAL

**NAG 2 1505 UNIV. OF TEXAS MD ANDERSON CANCER CENTER 8840**  
 GRAVITY AND INTERGRIN MEDIATED HUMAN LYMPHOCYTE ADHESION  
 07/26/2001 - 07/14/2003 FY02: \$95,738 Total: \$215,077  
*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 8841**  
 USE OF NASA BIOREACTORS IN A NOVEL SCHEME FOR IMMUNIZATION  
 AGAINST CANCER  
 06/18/1997 - 12/31/2002 FY02: \$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 8842**  
 APPLICATION OF BIOREACTOR TECHNOLOGY ANALYSIS AND COUNTER  
 MEASURE DEVELOPMENT OF MICROGRAVITY  
 06/18/1997 - 11/30/2001 FY02: \$0 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 8843**  
 APPLICATION OF BIOREACTOR TECHNOLOGY FOR A PRECLINICAL HUMAN  
 MODEL OF MELANOMA  
 03/19/1999 - 11/02/2002 FY02: \$0 Total: \$364,250  
*Prin. Invest.:* E A GRIMM  
*Tech. Officer:* MSFC/D RISEN  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 1454 UNIV. OF TEXAS MD ANDERSON CANCER CENTER 8844**  
 EFFECT OF RADIATION ON HUMAN PERIPHERAL BLOOD DERIVED TITIC CELLS  
 09/13/2002 - 09/16/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* J REUBEN  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 56 - MEDICAL

**NAG 2 1261 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8845**  
 RELATIONSHIP OF MORPHOGENESIS & MINERALIZATION TO GRAVITY IN  
 SPACEFLOWN ALGAE  
 09/01/1998 - 04/30/2003 FY02: \$0 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 8846**  
 CYTOPLASMIC/GOLGI INTERACTIONS IN THE NANOFABRICATION OF  
 BIOMINERAL COMPOSITES - A GENETIC APPROACH  
 07/05/2001 - 06/30/2003 FY02: \$77,693 Total: \$170,381  
*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 8847**  
 GRAVITY AND THE REGULATION OF A CENTRAL GROWTH FACTOR  
 06/11/1997 - 01/31/2002 FY02: \$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 8848**  
 IMPACT/MICROGRAVITY ON IMMUNOGENICITY ASSOCIATED WITH BI-  
 STRUCTURAL CHANGES/PANCREATIC ISLETS  
 03/19/1999 - 12/31/2002 FY02: \$0 Total: \$333,083  
*Prin. Invest.:* L P RUTZKY  
*Tech. Officer:* MSFC/B V GUYNES  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 9 952 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8849**  
 EXERCISE DURING PREBREATHE: REDUCTION OF THE H-2-O PREB-  
 REATHE TIME  
 08/14/1997 - 02/14/2001 FY02: \$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 8850**  
 EFFECTS OF CIRCADIAN RHYTHMS ON DEPRESSION OUTCOME  
 06/22/1998 - 03/30/2003 FY02: \$0 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 8851**  
 DUST STIMULANTS ON LUNG INFLAMMATION AND ALVEOLAR MACROPH-  
 AGE FUNCTION  
 09/20/1999 - 09/19/2002 FY02: \$0 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 8852**  
 DEVELOP REINFORCEMENT LEARNING TECHNIQUES FOR EFFICIENT  
 TRAINING ROBOTIC SYSTEMS  
 07/18/2000 - 07/19/2002 FY02: \$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 8853**  
 EFFECT OF MICROGRAVITY ON PANCREATIC ISLET XENOTRANSPLANTA-  
 TION,VASCULARIZATION & STEM CELL  
 07/27/2001 - 09/30/2004 FY02: \$0 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 8854**  
 HUMAN CENTERED INTELLIGENT FLIGHT SURGEON CONSOLE  
 03/29/2001 - 02/28/2003 FY02: \$0 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 8855**  
 NUTRITION IMMUNOMODULATION IN MICROGRAVITY  
 03/05/1999 - 11/30/2002 FY02: \$0 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 8856**  
 EVA PREBREATHE REDUCTION PROTOCOL  
 03/11/1999 - 03/10/2003 FY02: \$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 8857**  
 GAS PHASE FORMATION, GROWTH AND EFFECTS OF SURFACE TENSION  
 02/23/2000 - 01/31/2003 FY02: \$0 Total: \$55,162  
*Prin. Invest.:* B D BUTLER  
*Tech. Officer:* JSC/M R POWELL  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 9 103 UNIV. OF TEXAS-HLTH SCIENCE CTR-HOUSTON 8858**  
 CHARACTERIZATION OF AUTONOMIC FUNCTION  
 02/25/2000 - 02/20/2003 FY02: \$0 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 8859**  
 TRAINING PROGRAM FOR TWO STUDENTS AT THE GRADUATE SCHOOL OF  
 BIOMEDICAL SCIENCES  
 04/07/2000 - 05/31/2003 FY02: \$0 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 8860**  
 COX REGRESSION MODELING AND ANALYSIS OF NASA/JSC EXPERIMEN-  
 TAL DATA ON DECOMPRESSION SICKNESS  
 02/20/1999 - 09/30/2001 FY02: \$0 Total: \$30,000  
*Prin. Invest.:* R S CHHIKARA  
*Tech. Officer:* JSC/M POWELL  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NCC 9 30 UNIV OF HOUSTON - CLEAR LAKE 8861**  
 RESEARCH FOR COMPUTING & INFORMATION SYSTEMS  
 08/08/1994 - 06/30/2002 FY02: \$531,757 Total: \$33,082,755  
*Prin. Invest.:* E T DICKERSON  
*Tech. Officer:* JSC/R T SAVELY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 9 156 UNIV OF HOUSTON - CLEAR LAKE 8862**  
 MANAGEMENT OF JSC LIBRARY BOOKS & JOURNALS & FOR PROVIDING  
 LIBRARY SERVICES TOJSC PERSONNEL  
 09/25/2002 - 09/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* K WILHORSKI  
*Tech. Officer:* JSC/K E INGRAM  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 48 UNIV OF HOUSTON - CLEAR LAKE 8863**  
 NASA IMAGE INST FOR GEOGRAPHY & EARTH SCIENCE TEACHERS  
 06/01/2000 - 12/31/2000 FY02: \$0 Total: \$21,900  
*Prin. Invest.:* J N MACIR  
*Tech. Officer:* JSC/N G ROBERTSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10149 UNIV OF HOUSTON - DOWNTOWN 8864**  
 AN URBAN OUTREACH PROGRAM IN SPACE SCIENCE: A COLLABORATIVE  
 EFFORT BETWEEN NASA,HISPANIC SERVING &  
 01/03/2001 - 12/31/2003 FY02: \$0 Total: \$212,998  
*Prin. Invest.:* P A MORRIS-SMITH  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12366**            **UNIV OF HOUSTON - DOWNTOWN**            **8865**  
 THE ORIGINS OF TRANSLATION AND EARLY LIFE  
 07/09/2002 - 06/30/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* G E FOX  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12467**            **UNIV OF HOUSTON - DOWNTOWN**            **8866**  
 UHD PARTICIPATORY PROJECT IN MESSENGER EXPLORATION & NSIP  
 DEVELOPMENT OF STUDENT SCIENTISTS - ONE YR  
 09/11/2002 - 09/14/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* D A ALO  
*Tech. Officer:* GSFC/J L HARRINGTON  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 9 1018**            **UNIV OF HOUSTON - DOWNTOWN**            **8867**  
 PRECOLL AWARD FOR EXCELLENCE PACE/MSET  
 05/01/1998 - 04/30/2001            FY02: \$0            Total: \$299,400  
*Prin. Invest.:* R ALO  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1113**            **UNIV OF HOUSTON - DOWNTOWN**            **8868**  
 ACIENT LIFE IN ROCKS ON EARTH  
 05/14/1999 - 05/13/2003            FY02: \$0            Total: \$30,000  
*Prin. Invest.:* P A MORRIS-SMITH  
*Tech. Officer:* JSC/E K GIBSON  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 9 1114**            **UNIV OF HOUSTON - DOWNTOWN**            **8869**  
 ACIENT LIFE IN ROCKS ON EARTH  
 05/13/1999 - 05/31/2003            FY02: \$0            Total: \$30,000  
*Prin. Invest.:* P A MORRIS-SMITH  
*Tech. Officer:* JSC/E K GIBSON  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 5352**            **UNIV OF NORTH TEXAS**            **8870**  
 NANOSTRUCTURED POLYMER FILMS FOR IMPROVED BARRIER PROPERTIES  
 01/16/2002 - 12/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* N D'SOUZA  
*Tech. Officer:* GSFC/B MERRITT  
*CASE Category:* 13 - PHYSICS

**NCC 2 1316**            **UNIV OF NORTH TEXAS**            **8871**  
 TESTING THE NECESSITY OF STRATEGIC RETRIEVAL IN EVENT BASED  
 PROSPECTIVE MEMORY  
 03/06/2002 - 03/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* M BINK  
*Tech. Officer:* ARC/R K DISMUKES  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4668**            **UNIV OF NORTH TEXAS HLTH SCI.CTR AT FT.WORTH**            **8872**  
 CARTOID BAROREFLEX FUNCTION DURING PROLONGED EXERC  
 06/17/1997 - 05/31/2001            FY02: \$0            Total: \$301,896  
*Prin. Invest.:* P B RAVEN  
*Tech. Officer:* GSFC/V SCHNEIDER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1262**            **UNIV OF NORTH TEXAS HLTH SCI.CTR AT FT.WORTH**            **8873**  
 VESTIBULAR MODULATION OF AUTONOMIC RESPONSES TO ORTHOSTASIS  
 11/16/2000 - 10/31/2003            FY02: \$0            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

**NAG 1 01017**            **UNIV OF TEXAS - ARLINGTON**            **8874**  
 NANO-FILM OF HIGH RESOLUTION PRESSURE SENSING  
 03/01/2001 - 03/31/2002            FY02: \$0            Total: \$23,239  
*Prin. Invest.:* S P JOSHI  
*Tech. Officer:* LARC/S K KAHNG  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 8 1889**            **UNIV OF TEXAS - ARLINGTON**            **8875**  
 DESIGN STURY FOR A SLIT-JAW CAMERA FOR SUMI  
 09/18/2002 - 12/12/2002            FY02: \$0            Total: \$0  
*Prin. Invest.:* Z MUSIELAK  
*Tech. Officer:* MSFC/J PORTER  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 2 5395**            **UNIV OF TEXAS - ARLINGTON**            **8876**  
 SCHEDULING & LOAD BALANCING ON THE INFORMATION POWER GRID  
 08/15/2000 - 03/31/2003            FY02: \$0            Total: \$85,320  
*Prin. Invest.:* S K DAS  
*Tech. Officer:* ARC/R BISWAS, ARC/D KWAK  
*CASE Category:* 22 - COMPUTER SCIENCE

**NGT 5 30382**            **UNIV OF TEXAS - ARLINGTON**            **8877**  
 MINING OF STRUCTURAL DATA TO DISCOVER PRABABILISTIC SUBSTRUCTURES  
 JOSEPH T.POTTS  
 08/13/2001 - 08/31/2004            FY02: \$0            Total: \$22,000  
*Prin. Invest.:* D COOK  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01109**            **UNIV OF TEXAS - AUSTIN**            **8878**  
 APPLICATION OF HOS AND VOLTERRA MODELS TO AEROELASTIC SYSTEM  
 IDENTIFICATION  
 07/18/2001 - 09/30/2002            FY02: \$0            Total: \$35,000  
*Prin. Invest.:* E J POWERS  
*Tech. Officer:* LARC/W A SILVA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1347**            **UNIV OF TEXAS - AUSTIN**            **8879**  
 CELLULAR BASES OF LIGHT REGULATED GRAVITY RESPONSES  
 07/23/1999 - 06/30/2003            FY02: \$0            Total: \$305,884  
*Prin. Invest.:* S J ROUX  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 2 1349**            **UNIV OF TEXAS - AUSTIN**            **8880**  
 EVOLUTIONARY ORIGIN OF BODY AXIS SEGMENTATION IN ANEELIDS &  
 ARTHROPODS  
 07/20/1999 - 07/14/2003            FY02: \$0            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**                      **8881**  
 INSTABILITIES IN SURFACE-TENSION DRIVEN CONVECTION  
 05/06/1996 - 05/05/2001                      FY02: \$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**                      **8882**  
 PRECISION MEASUREMENTS WITH TRAPPED LASER-COOLED ATOMS IN A  
 MICROGRAVITY ENVIRONMENT  
 06/14/1996 - 01/01/2001                      FY02: \$0                      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**                      **8883**  
 LASER VELOCIMETER FOR STUDIES OF MICROGRAVITY COMBUSTION  
 FLOWFIELDS  
 02/26/1999 - 01/13/2003                      FY02: \$0                      Total: \$247,750  
*Prin. Invest.:* P L VARGHESE  
*Tech. Officer:* GRC/P S GREENBERG  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2602**                      **UNIV OF TEXAS - AUSTIN**                      **8884**  
 ADVANCED FLYWHEEL MATERIALS DEVELOPMENT PROGRAM FOR HIGH  
 SPECIFIC ENERGY, SPACE APPLICATIONS  
 05/01/2001 - 05/31/2002                      FY02: \$0                      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**                      **8885**  
 HIGH PERFORMANCE AIGAN AND GAN POWER ELECTRONIC DEVICES  
 06/18/2001 - 08/31/2003                      FY02: \$0                      Total: \$35,914  
*Prin. Invest.:* D D DUPUIS  
*Tech. Officer:* GRC/G SCHWARZE  
*CASE Category:* 13 - PHYSICS

**NAG 5 3431**                      **UNIV OF TEXAS - AUSTIN**                      **8886**  
 PARASEC-SCALE ENVIRONMENT OF LIMINOUS AGN: SPECTROSCOPIC  
 CLUES TO WINDS, JETS, AND ACCRETION  
 10/01/1996 - 09/30/2002                      FY02: \$0                      Total: \$712,606  
*Prin. Invest.:* B J WILLS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3786**                      **UNIV OF TEXAS - AUSTIN**                      **8887**  
 MCDONALD OBSERVATORY SUPPORT: HARLAN SMITH POST-DOCTORAL  
 PLANETARY SCIENCE  
 03/19/1997 - 12/31/2002                      FY02: \$0                      Total: \$251,849  
*Prin. Invest.:* D N BASH  
*Tech. Officer:* GSFC/J BERGSTRALH  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4209**                      **UNIV OF TEXAS - AUSTIN**                      **8888**  
 MICROMACHINED DIFFRACTION GRATINGS FOR COMPACT IR  
 03/14/1997 - 03/30/2001                      FY02: \$0                      Total: \$217,746  
*Prin. Invest.:* D JAFFE  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 5171**                      **UNIV OF TEXAS - AUSTIN**                      **8889**  
 MEASUREMENT AND INTERPRETATION OF TEMPORAL VARIABILITY FIELD  
 USING GPS AND SLR  
 07/17/1997 - 07/14/2001                      FY02: \$0                      Total: \$162,000  
*Prin. Invest.:* R R EM  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6728**                      **UNIV OF TEXAS - AUSTIN**                      **8890**  
 GENERAL RELATIVISTIC AND GRAVITATIONAL PHYSICS PARAMETERS  
 FROM LUNAR LASER RANGING DATA  
 12/11/1997 - 12/31/2001                      FY02: \$0                      Total: \$198,000  
*Prin. Invest.:* P J SHELUS  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7203**                      **UNIV OF TEXAS - AUSTIN**                      **8891**  
 TRACING THE MASS IN AN EVOLUTIONARY SEQUENCE  
 04/23/1998 - 04/14/2002                      FY02: \$0                      Total: \$165,643  
*Prin. Invest.:* N J EVANS, 11  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7582**                      **UNIV OF TEXAS - AUSTIN**                      **8892**  
 "MAPPING NEAR-SURFACE SALINIZATION USING LONG-WAVELENGTH  
 AIRSAR" (SENH98-0113)  
 08/04/1998 - 07/31/2002                      FY02: \$0                      Total: \$126,000  
*Prin. Invest.:* J G PAINE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7660**                      **UNIV OF TEXAS - AUSTIN**                      **8893**  
 'PATTERNS OF SHORELINE CHANGE AND HURRICANE WASHOVER ON  
 BARRIER ISLANDS' (SENH98-0094)  
 09/09/1998 - 08/31/2003                      FY02: \$0                      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**                      **8894**  
 FUNDING FOR 'REMOTE SENSING, GIS AND THE ANCIENT TERRITORY: A  
 PROJECT FOR THE CHORA OF CHERSONESOS  
 09/17/1998 - 09/30/2002                      FY02: \$0                      Total: \$250,023  
*Prin. Invest.:* J C CARTER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 7791**                      **UNIV OF TEXAS - AUSTIN**                      **8895**  
 SPATIALLY-RESOLVED, GROUND-BASED OBSERVATIONS OF MARTIAN  
 ATMOSPHERIC WATER VAPOR: 1999-2002 APP  
 12/14/1998 - 08/30/2002                      FY02: \$0                      Total: \$203,708  
*Prin. Invest.:* D S BARKER  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7910**                      **UNIV OF TEXAS - AUSTIN**                      **8896**  
 CHARACTERIZING THE SIMPLE COAST ICE STREAM SYSTEM USING  
 SATELLITE IMAGES, IMPROVED TOPOGRAPHY, AND IN  
 12/07/1998 - 12/31/2001                      FY02: \$0                      Total: \$82,341  
*Prin. Invest.:* D D BLANKENSHIP  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTALSCI, OTHER

**NAG 5 7937**                      **UNIV OF TEXAS - AUSTIN**                      **8897**  
 SUPERNOVAE AND COSMOLOGY  
 12/21/1998 - 12/31/2003                      FY02: \$0                      Total: \$314,815  
*Prin. Invest.:* P HOEFELICH  
*Tech. Officer:* GSFC/DK WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8143**                      **UNIV OF TEXAS - AUSTIN**                      **8898**  
 IMPROVED NUMERICAL MODELING OF LOW-DENSITY ATMOSPHERIC FLOW ON IO  
 02/01/1999 - 12/31/2002                      FY02: \$0                      Total: \$152,688  
*Prin. Invest.:* D GOLDSTEIN  
*Tech. Officer:* GSFC/D BOGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8290**                      **UNIV OF TEXAS - AUSTIN**                      **8899**  
 OPTIMAL LAND INITIALIZATION FOR SEASONAL CLIMATE PREDICTIONS  
 02/24/1999 - 08/31/2001                      FY02: \$0                      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**                      **8900**  
 PHOTOMETRIC DETECTION OF EXTRA-SOLAR PLANETS  
 02/24/1999 - 02/28/2003                      FY02: \$0                      Total: \$269,600  
*Prin. Invest.:* W P COCHRAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8611**                      **UNIV OF TEXAS - AUSTIN**                      **8901**  
 SOIL MOISTURE VARIABILITY AND ITS ROLE IN LAND ATMOSPHERE INTERACTION DURING SGP97  
 06/11/1999 - 06/14/2001                      FY02: \$0                      Total: \$124,590  
*Prin. Invest.:* J S FAMIGLIETTI  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8798**                      **UNIV OF TEXAS - AUSTIN**                      **8902**  
 VARIATIONS IN SPACE GEODETIC IN TIME SERIES DUE TO WATER REDISTRIBUTION AND OTHER SOURCES.  
 11/02/1999 - 11/14/2003                      FY02: \$100,000                      Total: \$310,000  
*Prin. Invest.:* C R WILSON  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 8858**                      **UNIV OF TEXAS - AUSTIN**                      **8903**  
 HIGH INDEX GRISMS FOR MID-INFRARED SPECTROSCOPY.  
 09/28/1999 - 01/31/2003                      FY02: \$0                      Total: \$288,671  
*Prin. Invest.:* D T JAFFE  
*Tech. Officer:* GSFC/F HERRERO  
*CASE Category:* 13 - PHYSICS

**NAG 5 9003**                      **UNIV OF TEXAS - AUSTIN**                      **8904**  
 THE CHEMICAL COMPOSITION OF PRIMITIVE BODIES IN THE SOLAR SYSTEM  
 01/27/2000 - 01/31/2003                      FY02: \$0                      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**                      **8905**  
 RECONSTRUCTION OF HISTORICAL SEA LEVEL VARIATIONS USING TIDE GAUGE DATA AND EMPIRICAL ORTHOGONAL  
 02/29/2000 - 02/28/2003                      FY02: \$0                      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**                      **8906**  
 IMPROVEMENT IN GEOID MODELS FOR OCEAN CIRCULATION STUDIES  
 03/08/2000 - 03/14/2003                      FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* B TAPLEY  
*Tech. Officer:* GSFC/F HERBERT  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 9227**                      **UNIV OF TEXAS - AUSTIN**                      **8907**  
 RADIAL VELOCITY DETECTION OF EXTRA-SOLAR PLANETARY SYSTEMS  
 03/13/2000 - 03/30/2003                      FY02: \$0                      Total: \$280,000  
*Prin. Invest.:* W COCHRAN  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9230**                      **UNIV OF TEXAS - AUSTIN**                      **8908**  
 IMPROVED SILICON DIFFRACTION GRATINGS FOR NEAR-IR SPECTROSCOPY FROM SPACE  
 03/20/2000 - 02/28/2003                      FY02: \$0                      Total: \$244,736  
*Prin. Invest.:* D JAFFE  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9239**                      **UNIV OF TEXAS - AUSTIN**                      **8909**  
 FAR-UV ABSORPTION-LINE SPECTROSCOPY OF THE NEUTRAL ENVELOPES OF PLANETARY NEBULAE - FUSE  
 03/09/2000 - 03/14/2002                      FY02: \$0                      Total: \$73,600  
*Prin. Invest.:* G SONNEBORN  
*Tech. Officer:* GSFC/H DINERSTEIN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9302**                      **UNIV OF TEXAS - AUSTIN**                      **8910**  
 REQUEST FOR SUPPLEMENTAL FUNDING FOR COX POSTDOCTORAL FELLOW  
 03/20/2000 - 03/31/2002                      FY02: \$0                      Total: \$22,500  
*Prin. Invest.:* C WHEELER  
*Tech. Officer:* GSFC/D GOLOBEK  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9321**                      **UNIV OF TEXAS - AUSTIN**                      **8911**  
 A PARALLEL GENETICS-ALGORITHM-BASED APPROACH TO WHITE DWARF PULSATION MODELS  
 03/22/2000 - 03/31/2003                      FY02: \$0                      Total: \$152,900  
*Prin. Invest.:* D E WINGET  
*Tech. Officer:* GSFC/J BREDEKAMP  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9829**                      **UNIV OF TEXAS - AUSTIN**                      **8912**  
 SPACECRAFT RENDEZVOUS NAVIGATION WITH INTEGRATED INS-GPS.  
 08/23/2000 - 08/31/2001                      FY02: \$0                      Total: \$80,382  
*Prin. Invest.:* R H BISHOP  
*Tech. Officer:* GSFC/R CARPENTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

## NASA'S UNIVERSITY PROGRAM

TEXAS

<b>NAG 5 9989</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8913</b>	<b>NAG 5 10767</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8921</b>
EARTH SYSTEM DYNAMICS: THE DETERMINATION & INTERP RETATION OF THE GLOBALANGULAR MOMENTUM BUDGET USI			SUPPLEMENT FOR THEORY POSTDOC (ATP-2000)		
09/21/2000 - 03/31/2002	FY02: \$0	Total: \$1,087,000	05/03/2001 - 04/30/2004	FY02: \$0	Total: \$16,000
<i>Prin. Invest.:</i> B D TAPLEY			<i>Prin. Invest.:</i> J WHEELER		
<i>Tech. Officer:</i> GSFC/J LABRECQUE			<i>Tech. Officer:</i> GSFC/R J OLIVERSEN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 10121</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8914</b>	<b>NAG 5 10825</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8922</b>
20TH TEXAS SYMPOSIUM ON RELATIVISTIC ASTROPHYSICS			REIONIZATION OF THE UNIVERSE (ATP - 2000)		
11/28/2000 - 01/31/2002	FY02: \$0	Total: \$15,000	05/01/2001 - 05/14/2004	FY02: \$0	Total: \$111,390
<i>Prin. Invest.:</i> J C WHEELER			<i>Prin. Invest.:</i> P R SHAPIRO		
<i>Tech. Officer:</i> GSFC/L KALUZIENSKI			<i>Tech. Officer:</i> GSFC/R J OLIVERSEN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 10183</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8915</b>	<b>NAG 5 10826</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8923</b>
ASTROMETRY OF NEW & UNDER-OBSERVED NEAR-EARTH- OBJECTS- (NEOS) AT MCDONALD OBSERVATORY			FORMATION OF STAR CLUSTERS (ATP - 2000)		
01/22/2001 - 01/31/2003	FY02: \$0	Total: \$99,400	05/01/2001 - 05/14/2003	FY02: \$0	Total: \$79,332
<i>Prin. Invest.:</i> E BARKER			<i>Prin. Invest.:</i> H MARTEL		
<i>Tech. Officer:</i> GSFC/T MORGAN			<i>Tech. Officer:</i> GSFC/R J OLIVERSEN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 10195</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8916</b>	<b>NAG 5 11203</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8924</b>
GENERAL RELATIVISTIC & GRAVITATIONAL PHYSICS PARAM ETERS FROM LUNAR LASERRANGING DATA			SATELLITE LASER RANGING DATA ANALYSIS AND QUALITY CONTROL		
12/28/2000 - 12/31/2003	FY02: \$0	Total: \$50,000	08/09/2001 - 08/14/2004	FY02: \$0	Total: \$50,000
<i>Prin. Invest.:</i> P J SHELUS			<i>Prin. Invest.:</i> R J EANES		
<i>Tech. Officer:</i> GSFC/M SALOMON			<i>Tech. Officer:</i> GSFC/D L CARTER		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 10435</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8917</b>	<b>NAG 5 11278</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8925</b>
GROUND BASED STUDIES OF THE OUTER PLANETS			DECENTRALIZED CONTROL FOR SATELLITES		
02/20/2001 - 02/28/2004	FY02: \$0	Total: \$130,600	08/21/2001 - 08/31/2003	FY02: \$0	Total: \$86,835
<i>Prin. Invest.:</i> L TRAFTON			<i>Prin. Invest.:</i> E LIGHTSEY		
<i>Tech. Officer:</i> GSFC/T MORGAN			<i>Tech. Officer:</i> GSFC/J R CARPENTER		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAG 5 10458</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8918</b>	<b>NAG 5 11464</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8926</b>
INFRARED SPECTRAL SURVEY OF YOUNG STELLAR/PLANETARY Y SYS- TEMS WITH SUB-AU SPATIAL RESOLUTION			GENERAL RELATIVISTIC AND GRAVITATIONAL PHYSICS PAR AMETERS FROM LUNAR LASER RANGING DATA		
02/26/2001 - 02/28/2003	FY02: \$310,000	Total: \$345,000	12/10/2001 - 12/31/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> P HARVEY			<i>Prin. Invest.:</i> P SHELUS		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GSFC/M SALAMON		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 13 - PHYSICS		
<b>NAG 5 10488</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8919</b>	<b>NAG 5 11597</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8927</b>
FROM MOLECULAR CLOUD CORE TO PROTOPLANETARY DISK: TRACING THE MASS			NEBULAR UV ABSORPTION LINES IN PLANETARY NEBULAE - FUSE CYCLE 2.		
02/27/2001 - 02/28/2004	FY02: \$0	Total: \$60,000	01/17/2002 - 03/14/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> N J EVANS,II			<i>Prin. Invest.:</i> H L DINERSTEIN		
<i>Tech. Officer:</i> GSFC/J BOYCE			<i>Tech. Officer:</i> GSFC/G SONNEBORN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 10766</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8920</b>	<b>NAG 5 11619</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8928</b>
JETS FROM NEUTRON STARS (ATP-2000)			DEEP MOONQUAKES ON THE FAR HEMISPHERE OF THE MOON		
04/23/2001 - 04/30/2004	FY02: \$0	Total: \$53,900	01/22/2002 - 01/31/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J WHEELER			<i>Prin. Invest.:</i> Y NAKAMURA		
<i>Tech. Officer:</i> GSFC/R J OLIVERSEN			<i>Tech. Officer:</i> GSFC/D SENSKE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 11636</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8929</b>	<b>NAG 5 11636</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8929</b>
"WATER MASS VARIABILITY IN THE EARTH SYSTEM"			"WATER MASS VARIABILITY IN THE EARTH SYSTEM"		
01/18/2002 - 01/14/2005	FY02: \$0	Total: \$0	01/18/2002 - 01/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> D P CHAMBERS			<i>Prin. Invest.:</i> D P CHAMBERS		
<i>Tech. Officer:</i> GSFC/P R HOUSER			<i>Tech. Officer:</i> GSFC/P R HOUSER		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		

## TEXAS

## NASA'S UNIVERSITY PROGRAM

**NAG 5 11949 UNIV OF TEXAS - AUSTIN 8930**  
 ATTITUDE DETERMINATION USING NONALINGED GPS ATENNAS  
 03/28/2002 - 03/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* G LIGHTSEY  
*Tech. Officer:* GSFC/R CARPENTER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 11991 UNIV OF TEXAS - AUSTIN 8931**  
 MODELING PARTICULATES IN IONIAN VOLCANIC PLUMES  
 04/11/2002 - 04/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* D GOLDSTEIN  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12299 UNIV OF TEXAS - AUSTIN 8932**  
 P-MODES, GRAVITY WAVES, ROTATION AND THE SOLAR CYC LE  
 06/19/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* P KUMAR  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12322 UNIV OF TEXAS - AUSTIN 8933**  
 ACCRETION DISK VISCOSITY (FUSE 2001)  
 08/07/2002 - 08/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* E L ROBINSON  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1764 UNIV OF TEXAS - AUSTIN 8934**  
 SEARCH FOR TIME REVERALS SYMETRY VIOLATION WITH LASER-COOLED  
 ATOMS  
 05/01/2001 - 04/30/2005 FY02: \$0 Total: \$80,000  
*Prin. Invest.:* D J HEINZMAN  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 9 994 UNIV OF TEXAS - AUSTIN 8935**  
 1998 NASA REDUCED GRAVITY STUDENT FLIGHT OPS  
 02/23/1998 - 01/31/2001 FY02: \$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 8936**  
 NASA STUDENT COMPETITION  
 12/14/1998 - 10/31/2002 FY02: \$0 Total: \$161,029  
*Prin. Invest.:* B D TAPLEY  
*Tech. Officer:* JSC/H C MANDELL  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1187 UNIV OF TEXAS - AUSTIN 8937**  
 INTERNATIONAL SPACE STATION GPS RECEIVER SUPPORT  
 02/02/2000 - 01/31/2003 FY02: \$0 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 8938**  
 NAVIGATION SYSTEMS AND TECHNOLOGY LAB  
 01/28/2000 - 12/31/2003 FY02: \$0 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 8939**  
 ANALYSIS AND MEASUREMENT OF THERMAL INSULATION PROPERNES OF  
 EVAC HOLLOW FIBERS  
 03/01/2000 - 05/31/2001 FY02: \$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 8940**  
 MARS PRECISION LANDING TASK  
 04/13/2000 - 09/30/2002 FY02: \$0 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 8941**  
 HYBIRD PARTICLE ELEMENT SIMULATION OF IMPACT ON COMPOSITE  
 ORBITAL DEBRIS SHIELDS  
 07/11/2000 - 09/30/2003 FY02: \$0 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 8942**  
 CULTURAL AND PERSONALITY DETERMINANTS OF PERFORMANCE AND  
 ERROR MANAGMENT  
 02/22/2001 - 01/31/2003 FY02: \$0 Total: \$137,548  
*Prin. Invest.:* R L HELMREICH  
*Tech. Officer:* JSC/C LLOYD  
*CASE Category:* 56 - MEDICL

**NAG 9 1286 UNIV OF TEXAS - AUSTIN 8943**  
 NASA REDUCED GRAVEITY STUDENT FLIGHT CAMPAIGN 2001  
 03/05/2001 - 12/31/2001 FY02: \$0 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 8944**  
 LOW THRUST CAPTURE INVESTIGATION  
 06/13/2001 - 10/31/2001 FY02: \$0 Total: \$20,000  
*Prin. Invest.:* R BISHOP  
*Tech. Officer:* JSC/T CRANE  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 9 1437 UNIV OF TEXAS - AUSTIN 8945**  
 SPACE LAUNCH INITIATIVE ADAPTIVE NAVAGATION ARCHIT ECTURE  
 07/22/2002 - 10/21/2006 FY02: \$0 Total: \$0  
*Prin. Invest.:* R H BISHOP  
*Tech. Officer:* JSC/T CRAIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1441 UNIV OF TEXAS - AUSTIN 8946**  
 ADVANCED MULTI-BODY/MULTI-SPACECRAFT TRAJACTORY OPTIMIZATION  
 SYSTEM  
 07/25/2002 - 07/24/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* C OCAMPO  
*Tech. Officer:* JSC/G L CONDON  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

## NASA'S UNIVERSITY PROGRAM

TEXAS

<b>NAG10 202</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8947</b>	<b>NAS 5 32997</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8956</b>
EARLY DEVELOPMENT OF FERN GAMETOPHYTES IN MICROSCAVITY			OPERATION, MAINTENANCE AND ENGINEERING DEVELOPMENT OF THE		
10/16/1996 - 12/31/2000	FY02: \$0	Total: \$400,625	UNIV OF TX LASER RANGING STATION		
<i>Prin. Invest.:</i> S J POUX			04/17/1996 - 02/28/2001	FY02: \$0	Total: \$2,258,846
<i>Tech. Officer:</i> KSC/W M KNOTT			<i>Prin. Invest.:</i> P J SHELUS, R RICKLETS, J WIANT		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>Tech. Officer:</i> GSFC/J MCGARRY		
			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG10 288</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8948</b>	<b>NAS 5 97213</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8957</b>
MAG-LEV LAUNCH ASSIST TECHNOLOGY DEMONSTRATOR MAG-LEV			GRAVITY RECOVERY AND CLIMATE EXPERIMENT (GRACE)		
LAUNCH ASSIST TECHNOLOGY DEMONSTRATOR			08/12/1997 - 06/12/2006	FY02: \$0	Total: \$6,286,000
07/17/2000 - 03/31/2001	FY02: \$0	Total: \$94,998	<i>Prin. Invest.:</i> B TAPLEY		
<i>Prin. Invest.:</i> R ZOWARKA			<i>Tech. Officer:</i> GSFC/R FITZGERALD		
<i>Tech. Officer:</i> KSC/F ADAMS			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR					
<b>NAG10 295</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8949</b>	<b>NAS 5 99005</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8958</b>
EARLY DEVELOPMENT OF FERN GAMETOPHYTES IN MICROGRA VITY			GLAS SCIENCE TEAM LEADER.		
02/05/2001 - 04/30/2005	FY02: \$0	Total: \$30,000	11/25/1998 - 12/01/2002	FY02: \$0	Total: \$3,505,000
<i>Prin. Invest.:</i> D ROUX			<i>Prin. Invest.:</i> R SCHULTZ		
<i>Tech. Officer:</i> KSC/D SCHULTZ			<i>Tech. Officer:</i> GSFC/G SMITH		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG13 02049</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8950</b>	<b>NCC 2 5482</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8959</b>
RESEARCH ENTITLED "MID-AMERICAN GEOSPATIAL INFORMATION SYS-			DESIGN AND CONTROL OF LARGE COLLECTIONS OF LEARNIN G AGENTS		
TEM"			02/19/2002 - 02/14/2003	FY02: \$0	Total: \$0
07/25/2002 - 09/30/2003	FY02: \$0	Total: \$0	<i>Prin. Invest.:</i> J GHOSH		
<i>Prin. Invest.:</i> B TAPLEY			<i>Tech. Officer:</i> ARC/K TUMER		
<i>Tech. Officer:</i> SSC/B DAVIS			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE					
<b>NAS 3 00119</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8951</b>	<b>NCC 3 677</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8960</b>
FLYWHEEL ROTOR HEALTH MONITORING RESEARCH & DEVELOPMENT			INVESTIGATION OF STRAIN/VORTICITY AND LARGE-SCALE FLOW STRUC-		
04/26/2000 - 04/25/2003	FY02: \$0	Total: \$115,000	TURE IN TURBULENT NONPREMIXED JET FLAMES		
<i>Prin. Invest.:</i> J BENO			02/26/1999 - 01/13/2003	FY02: \$0	Total: \$292,697
<i>Tech. Officer:</i> GRC/K MCLALLIN			<i>Prin. Invest.:</i> N T CLEMENS		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>Tech. Officer:</i> GRC/K SACKSTEDER		
			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NAS 3 00135</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8952</b>	<b>NCC 5 463</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8961</b>
DC-DC HIGH VOLTAGE CONVERTER TECHNOLOGY DEMONSTRATION			EVALUATION AND VALIDATION OF EO-1 AND LANDSAT 7 IMAGERY		
05/25/2000 - 11/24/2000	FY02: \$0	Total: \$168,618	THROUGH AN ANALYSIS OF LAND COVER/LAND USE		
<i>Prin. Invest.:</i> W A WALLS			02/29/2000 - 12/31/2002	FY02: \$18,677	Total: \$224,927
<i>Tech. Officer:</i> GRC/P GEORGE			<i>Prin. Invest.:</i> W A WHITE		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>Tech. Officer:</i> GSFC/S G UNGAR		
			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAS 3 01133</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8953</b>	<b>NGT 1 52147</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8962</b>
FLYWHEEL ARBOR DEVELOPMENT			GRADUATE STUDENT RESEARCH PROGRAM (GSRP)		
05/30/2001 - 05/29/2003	FY02: \$0	Total: \$357,000	07/26/1996 - 12/31/2001	FY02: \$0	Total: \$110,001
<i>Prin. Invest.:</i> R H BENO, R THOMPSON			<i>Prin. Invest.:</i> W T FOWLER		
<i>Tech. Officer:</i> GRC/K L MCLALLIN			<i>Tech. Officer:</i> LARC/T A TOLAY		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAS 3 99169</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8954</b>	<b>NGT 5 72</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8963</b>
FLYWHEEL ROTOR HUB AND RIM HARDWARE FOR THE ACESE FOR ISS			GSRP TRAINING GRANT - PAUL THOMPSON - MASS DISTRIBUTION IN THE		
07/08/1999 - 12/31/2002	FY02: \$0	Total: \$3,656,324	EARTH'S SYSTEMS: SPACE GEODETIC MEA		
<i>Prin. Invest.:</i> J H BENO, R C THOMPSON			06/04/1998 - 08/31/2001	FY02: \$0	Total: \$66,000
<i>Tech. Officer:</i> JSC/K KONNO			<i>Prin. Invest.:</i> B D TAPLEY		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>Tech. Officer:</i> GSFC/G S SOFFEN		
			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NAS 5 01096</b>	<b>UNIV OF TEXAS - AUSTIN</b>	<b>8955</b>			
MCDONALD LASER RANGING STATION SUPPORT SERVICES					
03/01/2001 - 02/28/2004	FY02: \$0	Total: \$307,000			
<i>Prin. Invest.:</i> P J SHELUS					
<i>Tech. Officer:</i> GSFC/D L CARTER					
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER					

## TEXAS

## NASA'S UNIVERSITY PROGRAM

**NGT 5 130**                      **UNIV OF TEXAS - AUSTIN**                      **8964**  
 SOLVING THE INITIAL VALUE PROBLEM FOR TWO BLACK HOLES. STUDENT: ERIN BONNING  
 06/06/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R MATZNER  
*Tech. Officer:* GSFC/M S BURREL  
*CASE Category:* 13 - PHYSICS

**NGT 5 136**                      **UNIV OF TEXAS - AUSTIN**                      **8965**  
 SYNTHESIS OF ATTITUDE DETERMINATION ALGORITHMS ON A PIVOT GPS RECEIVER STUDENT: JARED MADSEN  
 06/13/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G LIGHTSEY  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 137**                      **UNIV OF TEXAS - AUSTIN**                      **8966**  
 INFRARED IMMERSION GRATINGS AND GRISMS FOR IR SPECTROSCOPY AND A SPECTROSCOPIC STUDY OF PR  
 06/13/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D T JAFFE  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 139**                      **UNIV OF TEXAS - AUSTIN**                      **8967**  
 PARALLEL FINITE ELEMENT COMPUTATIONAL TECHNIQUES & AMR FOR MICROGRAVITY FLUID FLOW SIMULATION PROBLE  
 07/02/2002 - 08/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G F CAREY  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 141**                      **UNIV OF TEXAS - AUSTIN**                      **8968**  
 TRAJECTORY OPTIMIZATION IN TRANSLATING, ROTATING, AND OSCILLATING REFERENCE FRAMES WITH APPLICATION  
 07/18/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C OCAMPO  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 5 30162**                      **UNIV OF TEXAS - AUSTIN**                      **8969**  
 ESTIMATING CHANGES IN CONTINENTAL WATER STORAGE FROM SATELLITE OBSERVATIONS OF THE TIME DEPENDENT  
 08/31/1998 - 08/31/2001                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* J S FAMILIETTI, ROD  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30447**                      **UNIV OF TEXAS - AUSTIN**                      **8970**  
 ESTIMATING WATER CONTENT VARIATIONS, ERROR ANALYSIS, AND VALIDATION OF GRACE (STUDENT: KI-WEON SE)  
 08/23/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C WILSON  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30468**                      **UNIV OF TEXAS - AUSTIN**                      **8971**  
 THE TREATMENT OF ALIASING ERROR IN THE ESTIMATION OF THE EARTH'S GRAVITYFIELD - STUDENT NAME: BRIAN  
 08/21/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B TAPLEY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40083**                      **UNIV OF TEXAS - AUSTIN**                      **8972**  
 TEXAS SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2005                      FY02: \$0                      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**                      **8973**  
 IMPROVED ESTIMATION OF SURFACE TOPOGRAPHY & VEGETATION STRUCTURE BY COMBINING INTERFEROMETRIC SAR  
 06/03/1999 - 06/30/2002                      FY02: \$0                      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**                      **8974**  
 GALAXY EVOLUTION AT REDSHIFTS OF Z=1-2  
 06/29/2000 - 06/30/2003                      FY02: \$0                      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**                      **8975**  
 AUTONOMOUS RENDEZVOUS BETWEEN MULTIPLE SPACECRAFT IN A CENTRAL BODY GRAVITY FIELD WITH DETAILED SENS  
 05/31/2001 - 08/31/2004                      FY02: \$0                      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**                      **8976**  
 RNAI ANALYSIS OF GRAVITY SIGNAL TRANSDUCTION IN CERATOPERIS RICHARDII  
 06/13/2001 - 07/31/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* S ROUX  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50401**                      **UNIV OF TEXAS - AUSTIN**                      **8977**  
 PROBING THE PHYSICAL CONDITIONS OF STAR FORMATION  
 06/13/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* N EVANS  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 9 20**                      **UNIV OF TEXAS - AUSTIN**                      **8978**  
 TRAINING GRANT  
 07/08/1999 - 08/31/2002                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* R H BISHOP  
*Tech. Officer:* JSC/D J PEARSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4465**                      **UNIV OF TEXAS - DALLAS**                      **8979**  
 THE SPATIAL DISTRIBUTION OF IONOSPHERIC PLASMA AND IGH LATITUDES  
 05/27/1997 - 04/30/2001                      FY02: \$0                      Total: \$282,115  
*Prin. Invest.:* D A HEELIS  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

## NASA'S UNIVERSITY PROGRAM

TEXAS

**NAG 5 5257**                      **UNIV OF TEXAS - DALLAS**                      **8980**  
 A SEQUENTIAL ROCKET INVESTIGATION OF WINDS AND PLASMAS LAYERS  
 IN THE NIGHTTIME E-REGION  
 02/28/2000 - 02/21/2003                      FY02: \$0                      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**                      **8981**  
 A WEB-BASED DISTRIBUTION OF IONOSPHERIC THERMAL PLASMA DATA  
 FROM THE DMSP SPACECRAFT  
 04/17/2000 - 04/30/2003                      FY02: \$0                      Total: \$155,000  
*Prin. Invest.:* M HAIRSTON  
*Tech. Officer:* GSFC/P HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 9476**                      **UNIV OF TEXAS - DALLAS**                      **8982**  
 TURBO CODES & THEIR APPLICATION IN MOBILE SYSTEMS  
 04/24/2000 - 04/30/2002                      FY02: \$0                      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**                      **8983**  
 A MODEL OF IONOSPHERIC VELOCITY STRUCTURE IN THE HIGH LATI-  
 TUDE F-REGION  
 01/08/2001 - 01/31/2004                      FY02: \$0                      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**                      **8984**  
 DEVELOPMENT OF A RAM WIND SENSOR FOR PLANETARY THERMO-  
 SPHERIC STUDIES-PROPOSAL #273  
 02/06/2001 - 01/31/2004                      FY02: \$0                      Total: \$329,980  
*Prin. Invest.:* G D EARLE  
*Tech. Officer:* GSFC/C STAHL  
*CASE Category:* 13 - PHYSICS

**NAS 5 01068**                      **UNIV OF TEXAS - DALLAS**                      **8985**  
 THE COUPLED ION-NEUTRAL DYNAMICS INVESTIGATION.  
 12/13/2000 - 12/31/2005                      FY02: \$0                      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**                      **8986**  
 LOW-LATITUDE IONOSPHERIC PLASMA DEPLETION: STRUCTURE AND DY-  
 NAMICS  
 05/11/2001 - 05/14/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* R A HEELIS  
*Tech. Officer:* GSFC/M E MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1138**                      **UNIV OF TEXAS - EL PASO**                      **8987**  
 VERIFICATION OF NASA MISSION-CRITICAL SOFTWARE WITHOUT SACRI-  
 FICING PERFORMANCE  
 07/14/1997 - 06/30/2001                      FY02: \$0                      Total: \$199,887  
*Prin. Invest.:* P J TELLER  
*Tech. Officer:* ARC/LOWRY  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2303**                      **UNIV OF TEXAS - EL PASO**                      **8988**  
 THIN-FILM SOLAR CELLS FOR SPACE APPLICATION THIN-FILM SOLAR  
 CELLS FOR SPACE APPLICATION  
 11/23/1999 - 10/28/2002                      FY02: \$0                      Total: \$399,394  
*Prin. Invest.:* G B LUSH  
*Tech. Officer:* GRC/A HEPP  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 3 2773**                      **UNIV OF TEXAS - EL PASO**                      **8989**  
 DEVELOPMENT OF CONTROL STRATEGIES FOR MICROTHRUSTER PRO-  
 PELLANT FLOW  
 04/24/2002 - 05/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D KYPUROS  
*Tech. Officer:* GRC/B REED  
*CASE Category:* 43 - CHEMICAL ENGR

**NAG 4 150**                      **UNIV OF TEXAS - EL PASO**                      **8990**  
 (FAR) AN IMAGING FRAMEWORK FOR AERODYNAMIC, FLUID MECHANIC,  
 AND HEAT TRANSFER SCIENTIFIC-GRADE  
 03/03/1998 - 02/27/2001                      FY02: \$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 8882**                      **UNIV OF TEXAS - EL PASO**                      **8991**  
 SCIENCE EDUCATIONAL INSTRUCTIONAL MATERIALS FOR ISTP/SOLARMAX  
 11/30/1999 - 01/14/2002                      FY02: \$0                      Total: \$53,228  
*Prin. Invest.:* R E LOPEZ  
*Tech. Officer:* GSFC/M H ACUNA  
*CASE Category:* 13 - PHYSICS

**NAG 5 9213**                      **UNIV OF TEXAS - EL PASO**                      **8992**  
 PROBING NEUTRINO-INDUCED NUCLEOSYNTHESIS FROM THE ABUN-  
 DANCES OF FLUORINEBORON, LITHIUM, & OXYGEN  
 03/23/2000 - 03/31/2004                      FY02: \$0                      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**                      **8993**  
 REMOTE SENSING SPECTRAL IDENTIFICATION OF FRESHWATER PLANK-  
 TON  
 05/09/2000 - 05/14/2003                      FY02: \$0                      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**                      **8994**  
 CONNECTING SUN CITY WITH SUN-EARTH CONNECTIONS  
 01/03/2001 - 12/31/2003                      FY02: \$0                      Total: \$223,990  
*Prin. Invest.:* R LOPEZ  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10507**                      **UNIV OF TEXAS - EL PASO**                      **8995**  
 STUDIES OF SOLAR WIND-MAGNETOSPHERE COUPLING THRU DETAILED  
 COMPARISON OF OBSERVATIONS & RESULTS  
 03/01/2001 - 02/28/2004                      FY02: \$0                      Total: \$95,916  
*Prin. Invest.:* R LOPEZ  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 8 1645**                    **UNIV OF TEXAS - EL PASO**                    **8996**  
 INVESTIGATION OF FRICTION STIR WELDING  
 09/30/1999 - 09/30/2003                    FY02: \$0                    Total: \$200,000  
*Prin. Invest.:* J C MCCLURE  
*Tech. Officer:* MSFC/A BEAM, MSFC/W LOVE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 9 1099**                    **UNIV OF TEXAS - EL PASO**                    **8997**  
 DATA FUSION METHODOLOGISTS FOR DAMAGE MONITORING OF AERO-  
 SPACE STRUCTURES  
 05/15/1999 - 05/08/2003                    FY02: \$0                    Total: \$155,189  
*Prin. Invest.:* C FERREGUT  
*Tech. Officer:* JSC/A R ROCHA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 9 1100**                    **UNIV OF TEXAS - EL PASO**                    **8998**  
 FUNDAMENTAL STUDIES OF CRATERING PHENOMMENA  
 05/21/1999 - 12/31/2002                    FY02: \$0                    Total: \$155,773  
*Prin. Invest.:* L E MURR  
*Tech. Officer:* JSC/F HORZ  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 9 1171**                    **UNIV OF TEXAS - EL PASO**                    **8999**  
 EXPERIMENTS FOR THE GRANTS AND COOP AGREEMENT HANDBOOKS  
 09/28/1999 - 05/31/2003                    FY02: \$0                    Total: \$199,339  
*Prin. Invest.:* L E MURR  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG10 225**                    **UNIV OF TEXAS - EL PASO**                    **9000**  
 CONTINUOUS HAZARD TRACKING & FAILURE ANALYSIS METHODOLOGY  
 09/17/1997 - 09/30/2002                    FY02: \$0                    Total: \$298,983  
*Prin. Invest.:* R QUINTANA  
*Tech. Officer:* KSC/B DELIWALA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG10 287**                    **UNIV OF TEXAS - EL PASO**                    **9001**  
 NONPARAMETRIC INFERENCE UNDER ORDER CONSTRAINTS FO R COM-  
 PLETE AND CENSORED DATE: MATERIALS SCIENCE  
 06/28/2000 - 06/27/2003                    FY02: \$0                    Total: \$180,089  
*Prin. Invest.:* D ROJO  
*Tech. Officer:* KSC/R LEE  
*CASE Category:* 21 - MATHEMATICS

**NCC 2 5441**                    **UNIV OF TEXAS - EL PASO**                    **9002**  
 SCIENCE OPPORTUNITY PLANNING FOR THE CASSINI SATUR N MISSION  
 06/26/2001 - 05/31/2003                    FY02: \$0                    Total: \$7,840  
*Prin. Invest.:* S M ROACH  
*Tech. Officer:* ARC/J N CUZZI  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 97**                    **UNIV OF TEXAS - EL PASO**                    **9003**  
 THE UNIV OF TEXAS AT EL PASO NETWORK RESOURCES AND TRAINING  
 SITES  
 08/15/1995 - 08/14/2001                    FY02: \$0                    Total: \$2,623,999  
*Prin. Invest.:* M KOLITSKY  
*Tech. Officer:* GSFC/J BENNETT  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 5 468**                    **UNIV OF TEXAS - EL PASO**                    **9004**  
 CERTIFICATION OF MATHEMATICS AND SCIENCE TEACHERS  
 03/07/2000 - 03/14/2003                    FY02: \$0                    Total: \$377,157  
*Prin. Invest.:* S BLAKE  
*Tech. Officer:* GSFC/C HOLLINGSWORTH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 498**                    **UNIV OF TEXAS - EL PASO**                    **9005**  
 PAN AMERICAN CENTER FOR EARTH AND ENVIRONMENTAL STUDIES  
 05/01/2000 - 06/30/2005                    FY02: \$1,200,000                    Total: \$2,200,000  
*Prin. Invest.:* S STARKS  
*Tech. Officer:* GSFC/J LAMBRECQUE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 535**                    **UNIV OF TEXAS - EL PASO**                    **9006**  
 PROPELLING SCIENCE CONTENT INTO THE NEW MILLENNIUM /MUSPIN  
 NRTS PROGRAM.  
 02/01/2001 - 01/31/2004                    FY02: \$0                    Total: \$350,000  
*Prin. Invest.:* H L SCHULTE  
*Tech. Officer:* GSFC/J L HARRINGTON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 655**                    **UNIV OF TEXAS - EL PASO**                    **9007**  
 DISSEMINATION OF NASA NRTS IMPACTS AT UTEP  
 09/24/2002 - 09/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* H SCHULTE  
*Tech. Officer:* GSFC/J L HARRINGTON  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 9 1054**                    **UNIV OF TEXAS AT BROWNSVILLE**                    **9008**  
 PRE MATH, SCIENCE, ENGINEERING & TECH SPT PROGRAM  
 09/18/1998 - 08/31/2001                    FY02: \$0                    Total: \$75,578  
*Prin. Invest.:* O RIVAS  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1064**                    **UNIV OF TEXAS AT BROWNSVILLE**                    **9009**  
 NRA PACE/MSET BLAST-OFF TO AN ENGINEERING CAREER  
 01/07/1999 - 01/01/2003                    FY02: \$0                    Total: \$300,000  
*Prin. Invest.:* W WELLS  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1304**                    **UNIV OF TEXAS AT BROWNSVILLE**                    **9010**  
 PRE MATH SCIENCE ENGINEERING & TECH SPT (MSET)  
 05/18/2001 - 08/26/2002                    FY02: \$0                    Total: \$25,000  
*Prin. Invest.:* A RIVAS  
*Tech. Officer:* JSC/L ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1391**                    **UNIV OF TEXAS AT BROWNSVILLE**                    **9011**  
 HISPANIC EDUCATION PROGRAM  
 12/06/2001 - 12/05/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* L V LOF  
*Tech. Officer:* JSC/L MARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1406**                    **UNIV OF TEXAS AT BROWNSVILLE**                    **9012**  
 PREMATH, SCIENCE, ENGINEEING & TECH SPT PROGRAM  
 06/20/2002 - 06/19/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* H SILVA  
*Tech. Officer:* JSC/L M ARMENDARIZ  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 438**                    **UNIV OF TEXAS AT BROWNSVILLE**                    **9013**  
 C+P=M2T: SOUTH TEXAS MASTER MATHEMATICS TEACHER PREPARATION  
 PROGRAMS  
 03/03/2000 - 02/28/2003                    FY02: \$0                    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**                    **9014**  
 PARALLEL AERODYNAMICS SIMULATION IN DISTRIBUTED ENVIRONMENTS  
 09/14/1999 - 08/31/2002                    FY02: \$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**                    **9015**  
 CHANGING THE PARADIGM; PREPARING STUDENTS FOR THE COMPUTING  
 PROFESSION IN THE 21ST CENTURY  
 12/15/1999 - 02/28/2003                    FY02: \$0                    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**                    **9016**  
 PARTNERSHIP IN PROBABILISTIC STRUCTURAL ANALYSIS METHODS  
 10/05/1999 - 08/31/2002                    FY02: \$0                    Total: \$200,000  
*Prin. Invest.:* R D MANTEUFEL  
*Tech. Officer:* GRC/C CHAMIS  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2671**                    **UNIV OF TEXAS AT SAN ANTONIO**                    **9017**  
 THE DEVELOPMENT OF A DISLOCATION PATTERNING BASED SET OF  
 RATE-DEPENDENT EVOLUTION LAWS FOR CREEP AND  
 12/06/2001 - 01/15/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D L BAGLEY  
*Tech. Officer:* GRC/S RAJ  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 5 11741**                    **UNIV OF TEXAS AT SAN ANTONIO**                    **9018**  
 PROYECTO ACCESS  
 02/13/2002 - 02/28/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M P BERRIOZABAL  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1720**                    **UNIV OF TEXAS AT SAN ANTONIO**                    **9019**  
 LATIN HYPERCUBE SAMPLING IN RELIABILITY ANALYSIS  
 06/07/2000 - 06/06/2003                    FY02: \$0                    Total: \$192,102  
*Prin. Invest.:* R MANTUEFEL  
*Tech. Officer:* MSFC/F SAFIE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 9 1301**                    **UNIV OF TEXAS AT SAN ANTONIO**                    **9020**  
 TEXAS PREFRESHMAN ENGINEERING (TEXPREP) 2001  
 05/08/2001 - 08/28/2002                    FY02: \$0                    Total: \$198,000  
*Prin. Invest.:* M P BERRIOZABAL  
*Tech. Officer:* JSC/L M ARMENDARIZ  
*CASE Category:* 21 - MATHEMATICS

**NAG 9 1403**                    **UNIV OF TEXAS AT SAN ANTONIO**                    **9021**  
 TEXAS PREFRESHMAN ENGINEERING PROGRAM  
 05/30/2002 - 05/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M P BERRIOZABAL  
*Tech. Officer:* JSC/L M ARMENDARIZ  
*CASE Category:* 21 - MATHEMATICS

**NAG 9 1382**                    **UNIV OF TEXAS AT TYLER**                    **9022**  
 CFD ANALYSIS OF LASER-ABLATION CARBON NANOTUBE PRODUCTION  
 09/17/2001 - 08/31/2002                    FY02: \$0                    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**                    **9023**  
 INTEGRATING MATH AND SCIENCE FOR PRE-SERVICE & IN-SERVICE  
 PARTNERSHIPS  
 03/08/2000 - 02/28/2003                    FY02: \$0                    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**                    **9024**  
 ROBUST COMMAND LINKS FOR FLIGHT TERMINATION ROBUST COMMAND  
 LINKS FOR FLIGHT TERMINATION  
 10/30/2000 - 07/31/2002                    FY02: \$0                    Total: \$72,034  
*Prin. Invest.:* M D RICE  
*Tech. Officer:* DFRC/R D SAKAHARA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 4 220**                    **BRIGHAM YOUNG UNIV**                    **9025**  
 A PERFORMANCE STUDY OF EFTS IN THE PRESENCE OF INTERFERENCE  
 02/11/2002 - 08/31/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M D RICE  
*Tech. Officer:* DFRC/R D SAKAHARA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 7711**                    **BRIGHAM YOUNG UNIV**                    **9026**  
 FDG FOR 'GEOLOGIC AND ARCHAEOLOGIC APPLICATIONS OF HIGH-  
 RESOLUTION SAR' PI:DAVID V. ARNOLD, SENH98  
 09/28/1998 - 09/30/2002                    FY02: \$0                    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**                    **9027**  
 POLAR ICE SHEET MONITORING FROM LONG TERM SCATTEROMETER  
 AND RADIOMETER OBSERVATIONS  
 08/18/1999 - 08/31/2002                    FY02: \$0                    Total: \$266,355  
*Prin. Invest.:* D LONG  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9625**                    **BRIGHAM YOUNG UNIV**                    **9028**  
 SCATTEROMETER CLIMATE RECORD PATHFINDER  
 05/23/2000 - 04/30/2003                    FY02: \$0                    Total: \$265,000  
*Prin. Invest.:* D LONG  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9638**                    **BRIGHAM YOUNG UNIV**                    **9029**  
 SYNERGISTIC USE OF TRMM AND SEAWINDS DATA  
 06/08/2000 - 11/30/2002                    FY02: \$0                    Total: \$64,583  
*Prin. Invest.:* D G LONG  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 02005**                    **BRIGHAM YOUNG UNIV**                    **9030**  
 NANOMATERIALS & STRUCTURES FOR NANO AND MICROPOWER APPLI-  
 CATIONS  
 01/15/2002 - 01/14/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J N HARB, G D WATT, R C DAVIS  
*Tech. Officer:* LARC/G C KING  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 2048**                      **UNIV OF UTAH**                      **9031**  
 CLOUD SCALE NUMERICAL MODELING OF THE ARCTIC BOUNDARY LAYER  
 04/01/1998 - 06/30/2001                      FY02: -\$1                      Total: \$256,653  
*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**                      **9032**  
 FACILITY FOR ATMOSPHERIC REMOTE SENSING (FARS) CIRRUS MEASUREMENTS FOR FIRE III  
 06/30/1998 - 05/31/2001                      FY02: \$0                      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**                      **9033**  
 USING GROUND-BASED MEASUREMENTS AND RETRIEVALS TO VALIDATE SATELLITE DATA  
 01/19/2000 - 10/31/2002                      FY02: \$0                      Total: \$134,028  
*Prin. Invest.:* X DONG  
*Tech. Officer:* LARC/P MINNIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 2319**                      **UNIV OF UTAH**                      **9034**  
 MOLECULAR DYNAMICS SIMULATIONS OF RANDOM IONOMERS AND NANOCOMPOSITES  
 07/14/2000 - 06/30/2003                      FY02: \$0                      Total: \$117,438  
*Prin. Invest.:* G D SMITH, M A GLASSER  
*Tech. Officer:* LARC/J A HINKLEY, LARC/T S GATES  
*CASE Category:* 12 - CHEMISTRY

**NAG 2 1444**                      **UNIV OF UTAH**                      **9035**  
 THE UAV CIRRUS CLOUD MEASUREMENT PROGRAM: A PROPOSAL IN SUPPORT OF THE NASA ESE UAV  
 09/21/2000 - 12/31/2000                      FY02: -\$781                      Total: \$89,219  
*Prin. Invest.:* G G MACE  
*Tech. Officer:* ARC/S S WEGENER, ARC/R S HIPSKIN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 2403**                      **UNIV OF UTAH**                      **9036**  
 SIMULATION OF COMBUSTION SYSTEMS WITH REALISTIC G- JITTER  
 04/26/2000 - 03/22/2000                      FY02: \$0                      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**                      **9037**  
 SECONDARY FIRES: INITIATION & EXTINGUISHMENT SECONDARY FIRES: INITIATION & EXTINGUISHMENT  
 02/23/2001 - 11/30/2004                      FY02: \$0                      Total: \$30,001  
*Prin. Invest.:* W MELL  
*Tech. Officer:* GRC/H D ROSS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2624**                      **UNIV OF UTAH**                      **9038**  
 A JOINT SIMULATION AND EXPERIMENTAL STUDY OF NANOCOMPOSITE SOLID POLYMERIC ELECTROLYTES  
 05/25/2001 - 12/31/2003                      FY02: \$0                      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**                      **9039**  
 ORBITING ARRAY OF WIDE-ANGLE LIGHT COLLECTORS (OWL ORBITING "EYES" TO STUDY AIR SHOWERS INITIATED BY  
 03/03/1997 - 02/28/2002                      FY02: \$0                      Total: \$120,646  
*Prin. Invest.:* E C LOH  
*Tech. Officer:* GSFC/L M BARBIER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6458**                      **UNIV OF UTAH**                      **9040**  
 CLOUD PROPERTY & SURFACE RADIATION OBSERVATIONS & DIAGNOSTICS IN SUPPORT OF EOS, CERES, MODIS & MISR  
 10/14/1997 - 03/31/2003                      FY02: \$0                      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**                      **9041**  
 CONTINUED SUPPORT OF THE GCTE FOCUS 1 OFFICE (ECOSYSTEM PHYSIOLOGY)  
 06/19/1998 - 07/31/2002                      FY02: \$0                      Total: \$450,420  
*Prin. Invest.:* J R EHLERINGER  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7871**                      **UNIV OF UTAH**                      **9042**  
 THE GLACIER DYNAMICS AND MASS FLUX OF ANTARCTIC ICE STREAMS FROM RADARSAT INSAR  
 01/21/1999 - 12/31/2002                      FY02: \$0                      Total: \$146,060  
*Prin. Invest.:* R FORESTER  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8277**                      **UNIV OF UTAH**                      **9043**  
 ACCRETION ONTO SUPERMASSIVE BLACK HOLES: OBSERVATIONAL SIGNALS FROM 3-D33-DIMENSION (ATP 98)  
 03/02/1999 - 02/28/2003                      FY02: \$0                      Total: \$109,239  
*Prin. Invest.:* B C BROMLEY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8339**                      **UNIV OF UTAH**                      **9044**  
 GLOBAL DISTRIBUTION OF LIGHTNING FROM THE DTD AND RELATED GLOBAL DISTRIBUTION OF MCSS FROM TH  
 04/26/1999 - 03/31/2001                      FY02: \$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**                      **9045**  
 THE SPATIAL AND TEMPORAL CHARACTERISTICS OF HIGH LATITUDE SEASONAL SNOW MELT AS DETECTED BY PASSIVE  
 06/02/1999 - 05/31/2002                      FY02: \$0                      Total: \$128,886  
*Prin. Invest.:* K JEZEK  
*Tech. Officer:* GSFC/J C DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9717**                      **UNIV OF UTAH**                      **9046**  
 VALIDATION AND TRANSFERABILITY OF TROPICAL LATENT HEATING ESTIMATES  
 06/21/2000 - 11/30/2002                      FY02: \$0                      Total: \$217,924  
*Prin. Invest.:* E J ZIPSER  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## NASA'S UNIVERSITY PROGRAM

UTAH

<b>NAG 5 10136</b>	<b>UNIV OF UTAH</b>	<b>9047</b>	<b>NAG 5 12230</b>	<b>UNIV OF UTAH</b>	<b>9055</b>
SAR ANALYSIS OF THE WESTERN SAINT ELIAS OROGEN, ALASKA			INFRARED SPECTROSCOPY OF COMETARY MOLECULES		
12/04/2000 - 11/30/2003	FY02: \$0	Total: \$46,997	05/30/2002 - 05/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R L BRUHN			<i>Prin. Invest.:</i> J EHLERINGER		
<i>Tech. Officer:</i> GSFC/E LINDSTROM			<i>Tech. Officer:</i> GSFC/D WICKLAND		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 10682</b>	<b>UNIV OF UTAH</b>	<b>9048</b>	<b>NAG 5 12552</b>	<b>UNIV OF UTAH</b>	<b>9056</b>
REMOTE SENSING OF INTENSITY & ORGANIZATION OF CONVECTION IN HURRICANES & TROPICAL CYCLONES BEFORE			A MULTI-SENSOR (MULTI-SCALE) APPROACH TO SNOWMELT DETECTION USING ACTIVE AND PASSIVE MICROWAVE		
05/10/2001 - 05/14/2004	FY02: \$0	Total: \$89,500	09/09/2002 - 09/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> E J ZIPSER			<i>Prin. Invest.:</i> R FORSTER		
<i>Tech. Officer:</i> GSFC/R J LAWRENCE			<i>Tech. Officer:</i> GSFC/M WEI		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 11478</b>	<b>UNIV OF UTAH</b>	<b>9049</b>	<b>NAG 8 1665</b>	<b>UNIV OF UTAH</b>	<b>9057</b>
CHARACTERIZATION OF THE ATMOSPHERIC PHYSICAL STATE GROUND SITE DATA COLLECTION, PROCESSING, & REDUCT			NOVEL MICROSTRUCTURES FOR POLYMER-LIQUID CRYSTAL CO-COMPOSITE MATERIALS		
12/19/2001 - 12/31/2003	FY02: \$0	Total: \$0	06/15/2000 - 11/30/2003	FY02: \$0	Total: \$154,500
<i>Prin. Invest.:</i> G MACE			<i>Prin. Invest.:</i> J J MAGDA		
<i>Tech. Officer:</i> GSFC/D ANDERSON			<i>Tech. Officer:</i> MSFC/P DOTY		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 11503</b>	<b>UNIV OF UTAH</b>	<b>9050</b>	<b>NAG 8 1797</b>	<b>UNIV OF UTAH</b>	<b>9058</b>
CRYSTAL-FACE: FIELD MEASUREMENT SUPPORT FROM THE FARS POLARIZATION DIVERSITY LIDAR AND 95 GHZ R			INTENSITY & ORGANIZATION OF CONVECTION IN HURRICANES AND TROPICAL CYCLONES BEFORE & AFTER LANDFALL		
01/02/2002 - 12/31/2003	FY02: \$0	Total: \$0	03/07/2001 - 01/31/2002	FY02: \$0	Total: \$45,140
<i>Prin. Invest.:</i> K SASSEN			<i>Prin. Invest.:</i> E J ZIPSER		
<i>Tech. Officer:</i> GSFC/D ANDERSON			<i>Tech. Officer:</i> MSFC/J ARNOLD		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 11504</b>	<b>UNIV OF UTAH</b>	<b>9051</b>	<b>NAS 5 00120</b>	<b>UNIV OF UTAH</b>	<b>9059</b>
CLOUD-SCALE AND LARGE-SCALE MODELING OF TROPICAL ANVILS AND CIRRUS LAYERS			MEASUREMENT OF THE ATMOSPHERIC UV NIGHTGLOW FROM A HIGH ALTITUDE BALLOON (NIGHTGLOW)		
01/02/2002 - 12/31/2003	FY02: \$0	Total: \$0	02/01/2000 - 05/31/2002	FY02: \$0	Total: \$102,540
<i>Prin. Invest.:</i> S K KRUEGER			<i>Prin. Invest.:</i> E LOHBER, E LOH		
<i>Tech. Officer:</i> GSFC/D ANDERSON			<i>Tech. Officer:</i> GSFC/L BARBIER		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 11505</b>	<b>UNIV OF UTAH</b>	<b>9052</b>	<b>NCC 1 256</b>	<b>UNIV OF UTAH</b>	<b>9060</b>
DIRECT MEASUREMENT OF THE OPTICAL PROPERTIES OF TROPICAL CIRRUS CLOUDS			DEVELOPMENT OF PREDICTIVE CAPABILITIES FOR DAMAGE TOLERANCE IN STITCHED COMPOSITE MATERIALS		
01/02/2002 - 12/31/2003	FY02: \$0	Total: \$0	05/01/1997 - 04/30/2001	FY02: \$0	Total: \$207,021
<i>Prin. Invest.:</i> T J GARRETT			<i>Prin. Invest.:</i> D O ADAMS		
<i>Tech. Officer:</i> GSFC/D ANDERSON			<i>Tech. Officer:</i> LARC/J R REEDERS		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NAG 5 11532</b>	<b>UNIV OF UTAH</b>	<b>9053</b>	<b>NCC 2 5516</b>	<b>UNIV OF UTAH</b>	<b>9061</b>
CONNECTING THE PROPERTIES OF ANVIL CIRRUS TO THE PROPERTIES OF THE CONVECTIVE SOURCE			SIMULATION STUDIES OF THE CONFORMATIONS AND DYNAMICS OF A MODEL SINGLE STRANDED DNA MOLECULE IN AQUEOUS SOLUTION		
01/03/2002 - 12/14/2003	FY02: \$0	Total: \$0	08/08/2002 - 08/14/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> E ZIPSER			<i>Prin. Invest.:</i> G SMITH		
<i>Tech. Officer:</i> GSFC/D ANDERSON			<i>Tech. Officer:</i> ARC/R JAFFE		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER		
<b>NAG 5 12080</b>	<b>UNIV OF UTAH</b>	<b>9054</b>	<b>NCC 5 297</b>	<b>UNIV OF UTAH</b>	<b>9062</b>
GCTE FOCUS 1 OFFICE: ECOSYSTEM PROCESSES IN BIOGEOCHEMICAL CYCLES			CARBON AND OXYGEN ISOTOPE RATIO CO <sub>2</sub> FLUX ANALYSES AT THE SOIL, CANOPY, AND LANDSCAPE SCALES		
05/15/2002 - 05/14/2005	FY02: \$0	Total: \$0	06/16/1998 - 12/31/2002	FY02: \$0	Total: \$855,598
<i>Prin. Invest.:</i> J EHLERINGER			<i>Prin. Invest.:</i> J EHLERINGER		
<i>Tech. Officer:</i> GSFC/D WICKLAND			<i>Tech. Officer:</i> GSFC/D DEERING		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		

**NGT 5 30184**                      **UNIV OF UTAH**                      **9063**  
 IMPLICATIONS OF ARCTIC WARMING AS DETERMINED BY SNOWMELT  
 ONSET DATES OBSERVED WITH REMOTELY SENSE  
 08/19/1999 - 08/31/2002              FY02: \$0                      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**                      **9064**  
 THE O OF ATMOSPHERIC CO2: SEEING THE GRASSLAND THROUGH THE  
 BLADES/STUDENT: BRENT HELLIKER  
 08/19/1999 - 08/31/2001              FY02: \$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**                      **9065**  
 RETRIEVAL OF CIRRUS CLOUD MICROPHYSICAL PARAMETERS AND ANALY-  
 SIS OF THE RELATIONSHIP BETWEEN PROPERT  
 08/14/2001 - 08/31/2004              FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* G MACE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30423**                      **UNIV OF UTAH**                      **9066**  
 PRECIPITATION FEATURES ACCORDING TO TRMM: DIURNAL CYCLE AND  
 EVALUATION OF RAINFALL PRODUCTS (STUDE  
 09/07/2001 - 08/31/2004              FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* E SIPZER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40101**                      **UNIV OF UTAH**                      **9067**  
 ROCKY MOUNTAIN UTAH SPACE GRANT COLL AND FELLOW SHIP PRO-  
 GRAM  
 03/01/2001 - 01/31/2005              FY02: \$0                      Total: \$431,250  
*Prin. Invest.:* W WESTENSKOW  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50410**                      **UNIV OF UTAH**                      **9068**  
 EFFECTS OF EXERCISE WITH AND WITHOUT WEIGHT BEARING ON BONE  
 STRENGTH AND ARCHITECTURE. STUDENT: SA  
 07/29/2002 - 07/31/2005              FY02: \$0                      Total: \$0  
*Prin. Invest.:* S MILLER  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 4469**                      **UTAH STATE UNIV**                      **9069**  
 SATELLITE STUDIES OF STORM TIME MID- AND LOW-LATITUDE DYNAMICS  
 05/21/1997 - 09/30/2001              FY02: \$0                      Total: \$309,200  
*Prin. Invest.:* D G FEJER  
*Tech. Officer:* GSFC/M M MELLOTT  
*CASE Category:* 13 - PHYSICS

**NAG 5 5187**                      **UTAH STATE UNIV**                      **9070**  
 CODA - COUPLING OF DYNAMICS AND AURORA FUNDING FOR FIRST YEAR  
 OF GRANT  
 03/30/1998 - 03/31/2003              FY02: \$0                      Total: \$411,231  
*Prin. Invest.:* C M SWENSON  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5189**                      **UTAH STATE UNIV**                      **9071**  
 A ROCKET INVESTIGATION OF ELECTRON DENSITY STRUCTURE, E-FIELDS  
 AND AEROSOLS DURING PMSE AND N  
 03/27/1998 - 09/30/2003              FY02: \$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**                      **9072**  
 FIRST YEAR OF A THREE YEAR GRANT NAG5-5245 PI DR. JAMES C. ULWICK  
 03/29/1999 - 09/30/2002              FY02: \$0                      Total: \$390,470  
*Prin. Invest.:* J C ULWICK  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5258**                      **UTAH STATE UNIV**                      **9073**  
 FIRST YEAR OF THREE YEAR EFFORT/ ROCKET INVESTIGATION OF WINDS  
 ASSOCIATED W/E-REGION  
 04/11/2000 - 03/23/2003              FY02: \$0                      Total: \$147,900  
*Prin. Invest.:* C M SWENSON  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5293**                      **UTAH STATE UNIV**                      **9074**  
 IONOSPHERIC NANOSATELLITE FORMATION (ION-F) IONOSPHERIC NANO-  
 SATELLITE FORMATION (ION-F)  
 05/23/2000 - 05/17/2003              FY02: \$0                      Total: \$317,170  
*Prin. Invest.:* B G FEJER  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5374**                      **UTAH STATE UNIV**                      **9075**  
 ROCKET INVESTIGATION OF SCATTERING LAYERS IN THE BOTTOMSIDE  
 EQUATORIAL REGION IONOSPHERE  
 06/19/2002 - 06/10/2005              FY02: \$0                      Total: \$0  
*Prin. Invest.:* C SWENSON  
*Tech. Officer:* WFF/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 7597**                      **UTAH STATE UNIV**                      **9076**  
 SNOW HYDROLOGY: THE PARAMETERIZATION OF SUBGRID PROCESSES  
 WITHIN A PHYSICALLY BASED SNOW ENERGY  
 07/21/1998 - 07/14/2002              FY02: \$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**                      **9077**  
 "THE FLOW OF PLASMA IN THE SOLAR TERRESTRIAL ENVIRONMENT".  
 02/24/1999 - 03/31/2002              FY02: \$0                      Total: \$838,470  
*Prin. Invest.:* R W SCHUNK  
*Tech. Officer:* GSFC/J M GREBOWSKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8638**                      **UTAH STATE UNIV**                      **9078**  
 PLASMAPAUSE AND ITS ENVIRONMENT: A PROPOSAL FOR COOPERATIVE  
 STUDIES  
 08/11/1999 - 01/31/2003              FY02: \$0                      Total: \$70,500  
*Prin. Invest.:* B G FEJER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

## NASA'S UNIVERSITY PROGRAM

UTAH

<b>NAG 5 9290</b>	<b>UTAH STATE UNIV</b>	<b>9079</b>	<b>NAG 5 12170</b>	<b>UTAH STATE UNIV</b>	<b>9087</b>
ION-F: A SPACE-BASED TESTBED FOR DISTRIBUTED FORMATION CONTROL USING THE USUSAT NANOSATELLITE			I-M COUPLING ALONG AURORAL FILED LINES: MASS AND ENERGY EXCHANGE BETWEEN HOT MAGNETOSPHERIC A		
03/17/2000 - 03/31/2004	FY02: \$0	Total: \$47,000	05/09/2002 - 05/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R FULLMER			<i>Prin. Invest.:</i> A R BARAKAT		
<i>Tech. Officer:</i> GSFC/K LUU			<i>Tech. Officer:</i> GSFC/J SPANN		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 10215</b>	<b>UTAH STATE UNIV</b>	<b>9080</b>	<b>NAG 8 1750</b>	<b>UTAH STATE UNIV</b>	<b>9088</b>
SATELLITE STUDIES OF STORM-TIME THERMOSPHERIC WIND S			EXTENSION OF ATLANTA/HOUSTON URBAN HEAT ISLAND STUDIES USING ASTER IMAGERY		
01/05/2001 - 01/14/2004	FY02: \$0	Total: \$81,000	11/13/2000 - 11/19/2002	FY02: \$0	Total: \$11,573
<i>Prin. Invest.:</i> B G FEJER			<i>Prin. Invest.:</i> R GILES		
<i>Tech. Officer:</i> GSFC/M MELLOTT			<i>Tech. Officer:</i> MSFC/D QUATTROCHI		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 10716</b>	<b>UTAH STATE UNIV</b>	<b>9081</b>	<b>NAG 9 999</b>	<b>UTAH STATE UNIV</b>	<b>9089</b>
MULTIPLIERLESS FILTERS FOR REAL-TIME PROCESSING OF HYPERSPECTRAL IMAGES			CROP OPTIMIZATION AND FAILURE ANALYSIS USING CO2		
04/10/2001 - 04/30/2004	FY02: \$0	Total: \$62,000	04/25/1998 - 09/24/2002	FY02: \$0	Total: \$619,240
<i>Prin. Invest.:</i> T BOSE			<i>Prin. Invest.:</i> B G BUGBEE, L R JOHNSON		
<i>Tech. Officer:</i> GSFC/P E HUNTER			<i>Tech. Officer:</i> KSC/R M WHEELER		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 54 - ENVIRONMENTAL BIOLOGY		
<b>NAG 5 11282</b>	<b>UTAH STATE UNIV</b>	<b>9082</b>	<b>NAG 9 1237</b>	<b>UTAH STATE UNIV</b>	<b>9090</b>
USING REMOTE SENSING & IN SITU NETWORK OBSERVATION TO EVALUATE & IMPROVE THE PERFORMANCE OF			CO2 GAS EXCHANGE TO DETERMINE THE FACTORS CONTROLLING RESPIRATION & CARBON USE IN CROP PLANTS		
08/17/2001 - 08/31/2004	FY02: \$0	Total: \$82,344	06/16/2000 - 07/01/2003	FY02: \$0	Total: \$42,275
<i>Prin. Invest.:</i> M WHITE			<i>Prin. Invest.:</i> B BUGBEE		
<i>Tech. Officer:</i> GSFC/D WICKLAND			<i>Tech. Officer:</i> JSC/D BARTA		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 55 - AGRICULTURE		
<b>NAG 5 11673</b>	<b>UTAH STATE UNIV</b>	<b>9083</b>	<b>NAG 9 1284</b>	<b>UTAH STATE UNIV</b>	<b>9091</b>
IMPACT OF FIELD SCALE HETEROGENEITY IN SURFACE MOISTURE & VEGETATION COVER ON REGIONAL SCALE			OPTIMIZATION OF ROOT ZONE SUBSTRATES FOR REDUCED GRAVITY EXPERIMENTS		
01/30/2002 - 01/31/2005	FY02: \$0	Total: \$0	02/22/2001 - 02/21/2005	FY02: \$0	Total: \$95,000
<i>Prin. Invest.:</i> C NEALE			<i>Prin. Invest.:</i> G BINGHAM		
<i>Tech. Officer:</i> GSFC/P R HOUSER			<i>Tech. Officer:</i> JSC/K DAUES		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 56 - MEDICAL		
<b>NAG 5 11687</b>	<b>UTAH STATE UNIV</b>	<b>9084</b>	<b>NAG 9 1397</b>	<b>UTAH STATE UNIV</b>	<b>9092</b>
IMPACT OF FIELD-SCALE HETEROGENEITY IN SURFACE MOISTURE AND VEGETATION COVER ON REGIONAL-SCALE FLUX			ETHYLENE SYNTHESIS & SENSITIVITY IN SALAD CROPS		
02/12/2002 - 01/31/2005	FY02: \$0	Total: \$0	02/20/2002 - 02/19/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> L HIPPS			<i>Prin. Invest.:</i> B G BUGBEE		
<i>Tech. Officer:</i> GSFC/P R HOUSER			<i>Tech. Officer:</i> JSC/K DAUES		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 11880</b>	<b>UTAH STATE UNIV</b>	<b>9085</b>	<b>NAG13 02058</b>	<b>UTAH STATE UNIV</b>	<b>9093</b>
THE FLOW OF PLASMA IN THE SOLAR TERRESTRIAL ENVIRONMENT			DEVELOPMENT OF INTERMOUNTAIN REGION DIGITAL IMAGE PROCESSING AND ARCHIVE CENTER FOR LANDSCAPE		
03/20/2002 - 03/31/2005	FY02: \$0	Total: \$0	09/27/2002 - 03/26/2004	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R W SCHUNK			<i>Prin. Invest.:</i> D RAMSEY		
<i>Tech. Officer:</i> GSFC/J M GREBOWSKY			<i>Tech. Officer:</i> SSC/T FRISBLE		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 55 - AGRICULTURE		
<b>NAG 5 12117</b>	<b>UTAH STATE UNIV</b>	<b>9086</b>	<b>NAS 1 00071</b>	<b>UTAH STATE UNIV</b>	<b>9094</b>
VISUALIZATION OF SPACE-TIME AMBIGUITIES TO BE EXPLORED BY NASA GEMINI MISSION WITH A CRITIQUE OF			SENSOR MODULE DEVELOPMENT AND SUPPORT FOR GIFTS		
04/29/2002 - 04/30/2003	FY02: \$0	Total: \$0	06/19/2000 - 03/19/2007	FY02: \$783,750	Total: \$10,097,300
<i>Prin. Invest.:</i> J J SOJKA			<i>Prin. Invest.:</i> G BINGHAM, W SMITH		
<i>Tech. Officer:</i> GSFC/P BUCHANAN			<i>Tech. Officer:</i> LARC/W A ROETTKER, LARC/J B MILLER		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		

**NAS 1 02053**                      **UTAH STATE UNIV**                      **9095**  
 FAR-INFRARED SPECTROSCOPY OF THE TROPOSPHERE (FIRST) FOURIER  
 TRANSFORM SPECTROMETER  
 07/22/2002 - 07/21/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G E BINGHAM  
*Tech. Officer:* LARC/G JOHNSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 1 20467**                      **UTAH STATE UNIV**                      **9096**  
 SOUNDING OF THE ATMOSPHERE USING BROADBAND EMISSION RADIOM-  
 ETRY (SABER) INSTRUMENT  
 03/28/1995 - 03/31/2002                      FY02: \$0                      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 02031**                      **UTAH STATE UNIV**                      **9097**  
 R&D SERVICES NRA 8-31; MEASUREMENT OF CHARGE STOR- AGE DECAY  
 TIME AND RESISTIVITY OF SPACECRAFT INSU  
 02/20/2002 - 02/19/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J R DENNISON, R FREDRICKSON, W HANSEN  
*Tech. Officer:* MSFC/D HARDAGE  
*CASE Category:* 13 - PHYSICS

**NAS 8 98221**                      **UTAH STATE UNIV**                      **9098**  
 ELECTRONIC PROPERTIES OF MATERIALS WITH APPLICATION TO SPACE-  
 CRAFT CHARGING  
 06/18/1998 - 12/31/2002                      FY02: \$0                      Total: \$331,736  
*Prin. Invest.:* J R DENNISON  
*Tech. Officer:* MSFC/S PEARSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAS 9 02002**                      **UTAH STATE UNIV**                      **9099**  
 FLOATING POTENTIAL MEASUREMENT UNIT  
 10/30/2001 - 03/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C SWANSON  
*Tech. Officer:* JSC/M A EDEN  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NCC 2 5466**                      **UTAH STATE UNIV**                      **9100**  
 FLOUROMETRIC DETECTION OF MICROORGANISMS ON STERLI ZED SUR-  
 FACES  
 09/26/2001 - 09/14/2003                      FY02: \$0                      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 2 5514**                      **UTAH STATE UNIV**                      **9101**  
 MEDUSA SEA FLOOR MONITORING SYSTEM II  
 08/06/2002 - 09/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L POWERS  
*Tech. Officer:* ARC/M FLYNN  
*CASE Category:* 33 - OCEANOGRAPHY

**NCC 5 219**                      **UTAH STATE UNIV**                      **9102**  
 HOLOGRAPHIC LIDAR CONCEPTS AND APPLICATIONS  
 08/19/1997 - 10/31/2001                      FY02: \$0                      Total: \$79,520  
*Prin. Invest.:* T D WILKERSON  
*Tech. Officer:* GSFC/G SCHWEMMER  
*CASE Category:* 11 - ASTRONOMY

**NCC 5 598**                      **UTAH STATE UNIV**                      **9103**  
 HOLOGRAPHIC LIDAR CONCEPTS AND APPLICATIONS  
 10/10/2001 - 10/14/2004                      FY02: \$39,831                      Total: \$39,831  
*Prin. Invest.:* T D WILKERSON  
*Tech. Officer:* GSFC/G SCHWEMMER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 8 162**                      **UTAH STATE UNIV**                      **9104**  
 ANALYSIS OF SPATIAL AND TEMPORAL VARIABILITY OF THE WARM  
 SEASON LAND SURFACE ENERGY BUDGET  
 11/02/1998 - 04/30/2002                      FY02: \$0                      Total: \$75,115  
*Prin. Invest.:* R R GILLIES  
*Tech. Officer:* MSFC/W LAPENTA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC13 00005**                      **UTAH STATE UNIV**                      **9105**  
 AFFILIATED RESEARCH CENTER PROGRAM SAME  
 03/06/2000 - 03/05/2005                      FY02: \$0                      Total: \$365,666  
*Prin. Invest.:* R D RAMSEY, D BAKER, C HALL  
*Tech. Officer:* SSC/A PEEK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC13 02001**                      **UTAH STATE UNIV**                      **9106**  
 VALIDATION AND APPLICATION OF GEOSPATIAL INFORMA- TION FOR  
 EARLY DETECTION OF STRESS IN WHEAT  
 01/07/2002 - 01/06/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T HAMMOND  
*Tech. Officer:* SSC/D RISEN  
*CASE Category:* 56 - MEDICL

**NGT 5 142**                      **UTAH STATE UNIV**                      **9107**  
 THEORETICAL AND EXPERIMENTAL INVESTIGATION OF HIGH LATITUDE  
 OUTFLOW, FORIONS AND NEUTRALS, GSRP TRA  
 07/18/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R W SCHUNK  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 13 - PHYSICS

**NGT 5 40047**                      **UTAH STATE UNIV**                      **9108**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLL AND  
 FELLOWSHIP PROGRAM  
 02/11/1997 - 08/31/2002                      FY02: \$0                      Total: \$1,354,372  
*Prin. Invest.:* D BAKER  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50398**                      **UTAH STATE UNIV**                      **9109**  
 NOVEL ALGORITHMS FOR IMAGE RESTORATION  
 06/13/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T BOSE  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52866**                      **UTAH STATE UNIV**                      **9110**  
 MONITORING OZONE CONCENTRATIONS AND INJURY IN HIGH ELEVATION  
 DOUGLAS FIR NEAR SALT LAKE CITY  
 07/24/1998 - 08/22/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* F BAKER  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

VIRGINIA

**NGT 8 52885**                      **UTAH STATE UNIV**                      **9111**  
 EXPERIMENTAL STUDY OF THE SECONDARY ELECTRON EMISSION  
 06/22/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* J DENNISON  
*Tech. Officer:* MSFC/S NASH-STEVENSON  
*CASE Category:* 13 - PHYSICS

**NGT10 52617**                      **UTAH STATE UNIV**                      **9112**  
 PLANT RESIDE DEGRADATION PRODUCTS IN REGENERATIVE LIFE SUP-  
 PORT SYSTEMS  
 07/14/1998 - 12/01/2001                      FY02: \$0                      Total: \$73,500  
*Prin. Invest.:* P GROSSEL  
*Tech. Officer:* KSC/R WHEELER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NGT10 52631**                      **UTAH STATE UNIV**                      **9113**  
 GSRP STRESS SIGNALING IN RESPONSE TO HYPOXIA  
 07/30/2001 - 12/31/2002                      FY02: \$22,000                      Total: \$22,000  
*Prin. Invest.:* D DEWALD  
*Tech. Officer:* KSC/R M WHEELER  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

## VERMONT

**NAG 5 8020**                      **MIDDLEBURY COLL**                      **9114**  
 SN 1006: PROBING THE SYNCHROTRON ORIGIN OF THE X- RAYS AND  
 MEASURING PROPER MOTIONS \_ADP98  
 01/06/1999 - 12/31/2001                      FY02: \$0                      Total: \$39,632  
*Prin. Invest.:* P WINKLER  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9733**                      **MIDDLEBURY COLL**                      **9115**  
 ENERGETICS & INITIATION OF CORONAL MASS EJECTIONS  
 06/30/2000 - 06/30/2003                      FY02: \$0                      Total: \$56,328  
*Prin. Invest.:* R WOLFSON  
*Tech. Officer:* GSFC/W J WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 10463**                      **UNIV OF VERMONT**                      **9116**  
 CORE FORMATION UNDER DYNAMIC CONDITIONS: AN EXPERIMENTAL  
 DEFORMATION INVESTIGATION  
 02/27/2001 - 02/28/2004                      FY02: \$0                      Total: \$40,000  
*Prin. Invest.:* T RUCHMER  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NCC 2 5399**                      **UNIV OF VERMONT**                      **9117**  
 LAND COVER MAPPING IN NORTHERN ECOSYSTEMS USING AD  
 EOS/POLDER  
 09/18/2000 - 03/31/2002                      FY02: \$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

**NCC 5 394**                      **UNIV OF VERMONT**                      **9118**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/13/1999 - 11/01/2001                      FY02: \$0                      Total: \$450,000  
*Prin. Invest.:* W LAKIN  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 581**                      **UNIV OF VERMONT**                      **9119**  
 VERMONT NASA EPSCOR PROGRAM  
 08/15/2001 - 07/31/2004                      FY02: \$0                      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**                      **9120**  
 NATIONAL SPACE GRANT COLL AND FELLOWSHIP PROGRA  
 01/24/1997 - 02/28/2001                      FY02: \$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**                      **9121**  
 VERMONT SPACE GRANT COLL & FELLOWSHIP PROGRAM  
 03/02/2001 - 02/28/2005                      FY02: \$0                      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**                      **9122**  
 TECHNOLOGY DEVELOPMENT IMPLEMENTATION, AND ASSESS- MENT:  
 K-16 PRE-SERVICE, IN-SERVICE, AND DISTANCE  
 08/20/1999 - 07/31/2002                      FY02: \$0                      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**                      **9123**  
 AN EXPERIMENT IN EDUCATIONAL TECHNOLOGY-EVALUATING A CYBER-  
 BASED MODEL FOR LEARNING  
 03/28/2000 - 12/15/2001                      FY02: \$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**                      **9124**  
 LOW TEMP SUPERCONDUCTING QUANTUM INTERFERENCE (SQUID) NON-  
 DESTRUCTIVE EVALUATION (NDE) APPLIC'S  
 06/01/2001 - 11/30/2002                      FY02: \$0                      Total: \$30,070  
*Prin. Invest.:* R SELIM  
*Tech. Officer:* LARC/M NAMKUNG  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 02055**                      **CHRISTOPHER NEWPORT UNIV**                      **9125**  
 LOW TEMPERATURE SQUID FOR NDE APPLICATIONS  
 02/15/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R SELIM  
*Tech. Officer:* LARC/R A WINCHESKI  
*CASE Category:* 13 - PHYSICS

**NAG 5 6503**                      **CHRISTOPHER NEWPORT UNIV**                      **9126**  
 VALIDATION OF MSMT. OF POLLUTION IN THE TROPOSPHER E (MOPITT)  
 EXPERIMENT BY GROUND-BASED INFRARED SO  
 10/29/1997 - 09/30/2002                      FY02: \$0                      Total: \$496,543  
*Prin. Invest.:* N POUGATCHEV  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 11 - ASTRONOMY

**NCC 1 01028** CHRISTOPHER NEWPORT UNIV 9127  
 THEORETICAL AND COMPUTATIONAL DEVELOPMENT OF A GALACTIC COS-  
 MIC RAY (GCR) BOUNDARY CONDITION MODEL  
 03/08/2001 - 01/31/2004 FY02: \$0 Total: \$92,586  
*Prin. Invest.:* K CHANG  
*Tech. Officer:* LARC/R C SINGLETERRY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 02018** CHRISTOPHER NEWPORT UNIV 9128  
 ANALYSIS OF MULTIPLATFORM CO (CARBON MONOXIDE) MEASUREMENTS  
 DURING TRACE-P MISSION  
 03/21/2002 - 01/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* N S POUGATCHEV  
*Tech. Officer:* LARC/G W SACHSE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 02021** CHRISTOPHER NEWPORT UNIV 9129  
 SYNTHESIS OF CARBON NANOTUBES USING TEMPLATING TECHNIQUE  
 04/08/2002 - 04/07/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* T M ABDEL-FATTAH  
*Tech. Officer:* LARC/E J SIOCHI  
*CASE Category:* 12 - CHEMISTRY

**NCC 1 02039** CHRISTOPHER NEWPORT UNIV 9130  
 DISTANCE LEARNING TECHNOLOGY/SCIENCE MATH ENGINEERING AND  
 TECHNOLOGY EDUCATION (SMET)  
 07/25/2002 - 07/31/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* R A CANTON, M SPRAGUE  
*Tech. Officer:* LARC/T E PINELLI  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCC 1 02041** CHRISTOPHER NEWPORT UNIV 9131  
 AEROSPACE VEHICLE SYSTEMS TECHNOLOGY OFFICE EDUCATIONAL  
 OUTREACH  
 08/08/2002 - 08/07/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* E B WARD  
*Tech. Officer:* LARC/R R ANTCLIFF  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 02042** CHRISTOPHER NEWPORT UNIV 9132  
 PROJECT PRIME TIME  
 07/17/2002 - 08/14/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* B H BARTELS  
*Tech. Officer:* LARC/J M SEATON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 435** CHRISTOPHER NEWPORT UNIV 9133  
 THE NASA WHY FILES, PROBLEM-BASED LEARNING INTEGRATING BROAD-  
 CAST VIDEO AND THE INTERNET.  
 09/24/1999 - 09/30/2002 FY02: \$0 Total: \$244,396  
*Prin. Invest.:* D B CATON  
*Tech. Officer:* GSFC/D GABRYS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2168** COLL OF WILLIAM AND MARY 9134  
 AN ADVANCED HIERARCHICAL HYBRID ENVIRONMENT FOR RELIABILITY  
 AND PERFORMANCE MODELING  
 03/24/1999 - 02/28/2003 FY02: \$0 Total: \$302,429  
*Prin. Invest.:* G CIARDO  
*Tech. Officer:* LARC/P W GOODE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 2271** COLL OF WILLIAM AND MARY 9135  
 A UNIFORM ONTOLOGY FOR SOFTWARE INTERFACES  
 03/21/2000 - 02/28/2002 FY02: \$0 Total: \$44,752  
*Prin. Invest.:* S FEYOCK  
*Tech. Officer:* LARC/P C SCHUTTE  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NAG 1 2314** COLL OF WILLIAM AND MARY 9136  
 PREPARATION AND CHARACTERIZATION OF POLYIMIDE NANOCOMPOS-  
 ITES  
 06/26/2000 - 06/14/2002 FY02: \$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** COLL OF WILLIAM AND MARY 9137  
 BELL-CURVE BASED EVOLUTIONARY STRATEGIES FOR STRUCTURAL  
 OPTIMIZATION  
 07/07/2000 - 07/31/2001 FY02: \$0 Total: \$42,245  
*Prin. Invest.:* R K KINCAID  
*Tech. Officer:* LARC/J SOBIESKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 01107** COLL OF WILLIAM AND MARY 9138  
 PREPARATION AND CHARACTERIZATION OF POLYIMIDE NANOCOMPOS-  
 ITES  
 07/09/2001 - 06/14/2003 FY02: \$0 Total: \$2,920  
*Prin. Invest.:* R A ORWOLL  
*Tech. Officer:* LARC/J W CONNELL  
*CASE Category:* 12 - CHEMISTRY

**NAG 1 02095** COLL OF WILLIAM AND MARY 9139  
 FORMAL VERIFICATION OF SAFETY PROPERTIES FOR AERO- SPACE  
 SYSTEMS THROUGH ALGORITHMS BASED ON  
 05/09/2002 - 10/08/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* G CIARDO  
*Tech. Officer:* LARC/B L DIVITO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 02109** COLL OF WILLIAM AND MARY 9140  
 POLYIMIDE-CLAY COMPOSITE MATERIALS FOR SPACE APPLICATION  
 08/07/2002 - 06/06/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R A ORWOLL  
*Tech. Officer:* LARC/J W CONNELL, LARC/J G SMITH  
*CASE Category:* 12 - CHEMISTRY

**NAS 1 00146** COLL OF WILLIAM AND MARY 9141  
 SPECTROSCOPIC RESEARCH AND ANALYSES OF SAGE III DATA PROD-  
 UCTS  
 01/19/2001 - 01/18/2006 FY02: \$0 Total: \$101,000  
*Prin. Invest.:* D BRENNER  
*Tech. Officer:* LARC/W CHU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 327** COLL OF WILLIAM AND MARY 9142  
 PREDICTION FOR RADIATION SHIELDING MATERIALS  
 01/27/1999 - 12/18/2002 FY02: \$0 Total: \$294,189  
*Prin. Invest.:* R L KIEFER  
*Tech. Officer:* LARC/S A THIBEAULT  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER



## NASA'S UNIVERSITY PROGRAM

VIRGINIA

<b>NCC 1 356</b>	<b>COLL OF WILLIAM AND MARY</b>	<b>9143</b>	<b>NGT 1 52180</b>	<b>COLL OF WILLIAM AND MARY</b>	<b>9151</b>
CYBER SIMULATION FOR COMPOSITE MAT'L S & STRUCTURES IN AERO- NAUTICS AND AEROSPACE			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
09/28/1999 - 09/30/2002	FY02: \$0	Total: \$324,060	01/12/1998 - 12/31/2001	FY02: \$0	Total: \$66,000
<i>Prin. Invest.:</i> D M MANOS, R B PIPES			<i>Prin. Invest.:</i> J S BOGHOSIAN		
<i>Tech. Officer:</i> LARC/J H STARNES, JR.			<i>Tech. Officer:</i> LARC/P H JOHNSTON		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 13 - PHYSICS		
<b>NCC 1 390</b>	<b>COLL OF WILLIAM AND MARY</b>	<b>9144</b>	<b>NGT 1 52200</b>	<b>COLL OF WILLIAM AND MARY</b>	<b>9152</b>
HIGH RESOLUTION SPECTROSCOPY TO SUPPORT ATMOS- PHERIC MEA- SUREMENTS			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
03/29/2000 - 03/31/2003	FY02: \$0	Total: \$292,100	07/21/1998 - 08/31/2002	FY02: \$0	Total: \$78,000
<i>Prin. Invest.:</i> D C BENNER, M D VENKATARAMAN			<i>Prin. Invest.:</i> R A ORWOLL		
<i>Tech. Officer:</i> LARC/M H SMITH			<i>Tech. Officer:</i> LARC/J W CONNELL, LARC/J A HINKLEY		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NCC 1 01030</b>	<b>COLL OF WILLIAM AND MARY</b>	<b>9145</b>	<b>NGT 1 52204</b>	<b>COLL OF WILLIAM AND MARY</b>	<b>9153</b>
DEV & APPLIC NON-LINEAR IMAGE ENHANCEMENT & MULTI- SENSOR FUSION TECHNIQ'S HAZY/DARK IMAG'G CONDITIO			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
03/06/2001 - 02/08/2004	FY02: \$0	Total: \$100,000	09/04/1998 - 08/31/2002	FY02: \$0	Total: \$82,000
<i>Prin. Invest.:</i> Z RAHMAD			<i>Prin. Invest.:</i> M HINDERS		
<i>Tech. Officer:</i> LARC/D J JOBSON, LARC/S D HARRAH			<i>Tech. Officer:</i> LARC/T E PINELLI		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 1 01056</b>	<b>COLL OF WILLIAM AND MARY</b>	<b>9146</b>	<b>NAG 1 2258</b>	<b>GEORGE MASON UNIV</b>	<b>9154</b>
LARGE SCALE PRODUCTION OF CARBON NANOTUBES USING THE JEF- FERSON LAB FREE ELECTRON LASER			INVENTIVE DESIGN: AN EVOLUTIONARY COMPUTATION APPROACH		
07/25/2001 - 07/24/2003	FY02: \$0	Total: \$60,000	01/05/2000 - 08/31/2001	FY02: \$0	Total: \$133,999
<i>Prin. Invest.:</i> B C HOLLOWAY			<i>Prin. Invest.:</i> T ARCISZEWSKI, D A SCHUM, K DEJONG		
<i>Tech. Officer:</i> LARC/M W SMITH			<i>Tech. Officer:</i> LARC/J J REHDER		
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NCC 1 02029</b>	<b>COLL OF WILLIAM AND MARY</b>	<b>9147</b>	<b>NAG 1 2316</b>	<b>GEORGE MASON UNIV</b>	<b>9155</b>
ROBUST TECHNIQUES FOR MULTIDISCIPLINARY DESIGN OPT IMIZATION PROBLEM SYNTHESIS AND SOLUTION			MIDDLE ATMOSPHERIC HYDROGEN PHOTOCHEMISTRY		
05/16/2002 - 05/15/2003	FY02: \$0	Total: \$0	06/23/2000 - 06/22/2001	FY02: \$0	Total: \$32,001
<i>Prin. Invest.:</i> R M LEWIS			<i>Prin. Invest.:</i> M SUMMERS		
<i>Tech. Officer:</i> LARC/N M ALEXANDROV			<i>Tech. Officer:</i> LARC/G MADDREA		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NCC 1 02032</b>	<b>COLL OF WILLIAM AND MARY</b>	<b>9148</b>	<b>NAG 1 01030</b>	<b>GEORGE MASON UNIV</b>	<b>9156</b>
MATERIALS FOR RADIATION SHIELDING AND DURABILITY I N THE SPACE ENVIRONMENT			INVENTIVE DESIGN: AN EVOLUTIONARY COMPUTATION APPROACH		
06/21/2002 - 06/20/2005	FY02: \$0	Total: \$0	03/09/2001 - 09/30/2004	FY02: \$0	Total: \$179,069
<i>Prin. Invest.:</i> R L KIEFER			<i>Prin. Invest.:</i> T ARCISZEWSKI, K D JONG		
<i>Tech. Officer:</i> LARC/S A THIBEAULT			<i>Tech. Officer:</i> LARC/J J RENDER		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER		
<b>NGT 1 01008</b>	<b>COLL OF WILLIAM AND MARY</b>	<b>9149</b>	<b>NAG 2 1289</b>	<b>GEORGE MASON UNIV</b>	<b>9157</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3			ABATEMENT OF AUTOMATION ERRORS BY TRAINING BASED O N COGNI- TIVE MODELS		
06/04/2001 - 06/30/2004	FY02: \$0	Total: \$12,000	02/01/1999 - 09/30/2002	FY02: \$0	Total: \$279,804
<i>Prin. Invest.:</i> N M ALEXANDROV, V TORCZON			<i>Prin. Invest.:</i> D B DAVIS, P A IKOMI, R W HOLT		
<i>Tech. Officer:</i> LARC/R HATHAWAY			<i>Tech. Officer:</i> ARC/S M CASNER		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER		
<b>NGT 1 01010</b>	<b>COLL OF WILLIAM AND MARY</b>	<b>9150</b>	<b>NAG 2 1565</b>	<b>GEORGE MASON UNIV</b>	<b>9158</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3			AN EFFICIENT AIR TRAFFIC MANAGEMENT MODEL FOR EVAL UATION OF COMPLEX BEHAVIOR AND IV & V SUPPORT OF		
06/04/2001 - 06/30/2004	FY02: \$0	Total: \$12,000	06/10/2002 - 05/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> M HINDERS			<i>Prin. Invest.:</i> G DONOHUE, C H CHEN		
<i>Tech. Officer:</i> LARC/R A HATHAWAY			<i>Tech. Officer:</i> ARC/K ROTH, ARC/K D JAMES		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 1 01010</b>	<b>COLL OF WILLIAM AND MARY</b>	<b>9150</b>	<b>NAG 5 8834</b>	<b>GEORGE MASON UNIV</b>	<b>9159</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3			THE REDSHIFT DEPENDENCE OF THE INTERACTION- ACTIVITY CONNEC- TION AMONG ULTRALUMINOUS STARBURST		
06/04/2001 - 06/30/2004	FY02: \$0	Total: \$12,000	11/18/1999 - 09/30/2002	FY02: \$0	Total: \$58,845
<i>Prin. Invest.:</i> M HINDERS			<i>Prin. Invest.:</i> J WALLIN		
<i>Tech. Officer:</i> LARC/R A HATHAWAY			<i>Tech. Officer:</i> GSFC/D K WEST		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		

## VIRGINIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 9636**                    **GEORGE MASON UNIV**                    **9160**  
 CONTINUOUS PRECIPITATION ESTIMATES FROM TRMM & MESOSCALE  
 MODELS  
 05/25/2000 - 01/31/2002                    FY02: \$0                    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**                    **9161**  
 HYDROGEN CHEMISTRY IN THE POLAR MESOSPHERE  
 06/22/2000 - 06/30/2002                    FY02: \$0                    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**                    **9162**  
 PROBLEM SOLVING ON LOOSELY COUPLED SYSTEM  
 07/07/2000 - 07/14/2003                    FY02: \$0                    Total: \$62,283  
*Prin. Invest.:* P Y WANG  
*Tech. Officer:* GSFC/J DORBAND  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10038**                    **GEORGE MASON UNIV**                    **9163**  
 LOW-LUMINOSITY NUCLEAR ACCRETION IN NGC 4261 & NGC 6251  
 09/27/2000 - 09/30/2003                    FY02: \$0                    Total: \$38,518  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10073**                    **GEORGE MASON UNIV**                    **9164**  
 HIGH-ENERGY ABSORPTION IN BLAZARS: PROBING THE INNER JET  
 ENVIRONMENT (ADP 98)  
 10/30/2000 - 06/30/2003                    FY02: \$0                    Total: \$70,923  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10177**                    **GEORGE MASON UNIV**                    **9165**  
 A PROTOTYPE CLUSTERING TECHNIQUE FOR DATA MINING & KNOWLEDGE  
 DISCOVERY BASED ON A DATA PYRAMID MODE  
 01/04/2001 - 06/14/2002                    FY02: \$0                    Total: \$132,000  
*Prin. Invest.:* D KAFATOS  
*Tech. Officer:* GSFC/K L MOE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 10243**                    **GEORGE MASON UNIV**                    **9166**  
 CONSTRAINING THE STRUCTURE OF THE CENTRAL ENGINE OF RADIO-  
 LOUD AGN ADP99  
 01/17/2001 - 09/14/2002                    FY02: \$0                    Total: \$28,219  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10244**                    **GEORGE MASON UNIV**                    **9167**  
 INTENSIVE RXTE MONITORING OF THE TEV BLAZAR MRK501 (ADP 99)  
 01/18/2001 - 01/31/2003                    FY02: \$0                    Total: \$23,678  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10708**                    **GEORGE MASON UNIV**                    **9168**  
 STRUCTURE OF THE ACCRETION FLOW IN RADIO-LOUD AGN  
 04/23/2001 - 10/31/2002                    FY02: \$0                    Total: \$104,959  
*Prin. Invest.:* R M SAMBRUNA  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10776**                    **GEORGE MASON UNIV**                    **9169**  
 COBE/DIRBE DATA AND THE ZODIACAL CLOUD (ADP 2000)  
 04/26/2001 - 04/30/2003                    FY02: \$0                    Total: \$121,000  
*Prin. Invest.:* L OZNEROY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10879**                    **GEORGE MASON UNIV**                    **9170**  
 ANALYSES OF RAIN RATE PARAMETERS DERIVED FROM TMI: CONDI-  
 TIONAL RAIN RATE AND RAIN FRACTIONS  
 05/10/2001 - 09/14/2002                    FY02: \$0                    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**                    **9171**  
 SATELLITE MICROWAVE ESTIMATES OF OCEANIC RAINFALL AND SNOW  
 OVER LAND  
 09/13/2001 - 09/14/2003                    FY02: \$0                    Total: \$110,158  
*Prin. Invest.:* L CHIU  
*Tech. Officer:* GSFC/A T CHANG  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11432**                    **GEORGE MASON UNIV**                    **9172**  
 PROBING THE NUCLEI OF IR LUMINOUS GALAXIES: THE GENESIS, NATURE,  
 & EVOLUTION OF THEIR NUCLEAR ACT  
 11/30/2001 - 09/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* S SATYAPAL  
*Tech. Officer:* GSFC/H HASSAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11874**                    **GEORGE MASON UNIV**                    **9173**  
 OBSERVATIONAL STUDY ON INITIATION AND ACCELERATION OF CORONAL  
 MASS EJECTIONS  
 03/15/2002 - 03/14/2004                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J ZHANG  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 12343**                    **GEORGE MASON UNIV**                    **9174**  
 EXPLORING THE PHASE SPACE AND CYCLE SPACE OF NETWORKED  
 COLLECTIVE DYNAMICAL SYSTEMS.  
 07/22/2002 - 08/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D MOROWITZ  
*Tech. Officer:* GSFC/J DORBAND  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG13 01009**                    **GEORGE MASON UNIV**                    **9175**  
 VIRGINIA ACCESS  
 09/19/2001 - 09/18/2002                    FY02: \$0                    Total: \$997,800  
*Prin. Invest.:* M KAFATOS  
*Tech. Officer:* SSCW GRAHAM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

VIRGINIA

<b>NAG13 02054</b>	<b>GEORGE MASON UNIV</b>	<b>9176</b>	<b>NAG 1 2135</b>	<b>HAMPTON UNIV</b>	<b>9184</b>
VIRGINIA ACCESS AND MIDDLE ATLANTIC GEOSPATIAL INFORMATION CONSORTIUM			STUDY OF CONTRAILS AND ATMOSPHERIC RADIATION MEAS (ARM) DATA PROJECT DEVELOPMENT		
09/05/2002 - 09/18/2003	FY02: \$0	Total: \$0	01/19/1999 - 01/31/2002	FY02: \$0	Total: \$285,939
<i>Prin. Invest.:</i> M KAFATOS			<i>Prin. Invest.:</i> M P MCCORMICK, J M RUSSELL, 111		
<i>Tech. Officer:</i> SSC/M GIARDINO			<i>Tech. Officer:</i> LARC/P MINNIS		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NCA 1 01004</b>	<b>GEORGE MASON UNIV</b>	<b>9177</b>	<b>NAG 1 2170</b>	<b>HAMPTON UNIV</b>	<b>9185</b>
VIRGINIA SATSLAB			DEVELOPMENT AND COMPARISON OF GLOBAL AEROSOL, WATER VAPOR, AND OZONE CLIMATOLOGIES USING SAGE II		
08/31/2001 - 09/30/2002	FY02: \$0	Total: \$500,000	03/25/1999 - 02/28/2002	FY02: \$0	Total: \$213,000
<i>Prin. Invest.:</i> G DONOHUE			<i>Prin. Invest.:</i> M P MCCORMICK		
<i>Tech. Officer:</i> LARC/J R BURLEY			<i>Tech. Officer:</i> LARC/G L MADDREA, LARC/L R POOLE		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NCC 5 143</b>	<b>GEORGE MASON UNIV</b>	<b>9178</b>	<b>NAG 1 2206</b>	<b>HAMPTON UNIV</b>	<b>9186</b>
EARTH SYSTEM SCIENCE DATA SUPPORT			TOP-OF-ATMOSPHERE CLEAR-SKY BROADBAND RADIATIVE FLUX AND DIRECT AEROSOL RADIATIVE FORCING FROM		
07/15/1996 - 06/14/2001	FY02: \$0	Total: \$7,132,077	06/21/1999 - 06/30/2002	FY02: \$0	Total: \$164,555
<i>Prin. Invest.:</i> M KAFATOS			<i>Prin. Invest.:</i> N G LOEB, B LIN, J HU		
<i>Tech. Officer:</i> GSFC/S KEMPLER			<i>Tech. Officer:</i> LARC/V E DELNORE, LARC/J L RAPER		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NCC 5 306</b>	<b>GEORGE MASON UNIV</b>	<b>9179</b>	<b>NAG 1 2223</b>	<b>HAMPTON UNIV</b>	<b>9187</b>
SEASONAL & INTERANNUAL EARTH SCIENCE INFORMANTION PARTNER (SIESIP)			EVALUATION OF THE EFFECT OF WATER VAPOR ON THE PERFORMANCE OF NASA'S NMRO CATALYSIT FOR CARBON		
04/09/1998 - 12/31/2002	FY02: \$310,000	Total: \$2,660,000	08/31/1999 - 03/31/2002	FY02: \$0	Total: \$199,869
<i>Prin. Invest.:</i> M KAFATOS			<i>Prin. Invest.:</i> A AKYURTLU		
<i>Tech. Officer:</i> GSFC/M MAIDEN			<i>Tech. Officer:</i> LARC/D R SCHRYER		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NCC 5 360</b>	<b>GEORGE MASON UNIV</b>	<b>9180</b>	<b>NAG 1 2224</b>	<b>HAMPTON UNIV</b>	<b>9188</b>
CONTINUING CAREER PROGRAM (CCP)			STUDENT FIELD TESTING OF THE HAMPTON UNIV COMPACT OZONE LIDAR SYSTEM CERTIFICATION OF		
08/29/1998 - 08/31/2003	FY02: \$30,000	Total: \$1,762,716	08/24/1999 - 12/31/2001	FY02: \$0	Total: \$200,000
<i>Prin. Invest.:</i> R R STOUGH			<i>Prin. Invest.:</i> T H CHYBA		
<i>Tech. Officer:</i> GSFC/A J MATURO			<i>Tech. Officer:</i> LARC/J FISHMAN		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NCC 5 522</b>	<b>GEORGE MASON UNIV</b>	<b>9181</b>	<b>NAG 1 2318</b>	<b>HAMPTON UNIV</b>	<b>9189</b>
DEVELOPMENT OF POSEIDON OCEAN MODEL FOR NSIPP			THEORET & OBSERVAT'L DETERM OF GLOBAL & REGIONAL RADIATION BUDG, FORC'G & FEEDBACK TOP-OF-ATMOSPHERE		
12/18/2000 - 12/31/2003	FY02: \$0	Total: \$150,207	07/18/2000 - 10/31/2003	FY02: \$0	Total: \$524,152
<i>Prin. Invest.:</i> P S SCHOPF			<i>Prin. Invest.:</i> N G LOEB		
<i>Tech. Officer:</i> GSFC/M RIENECKER			<i>Tech. Officer:</i> LARC/G G GIBSON		
<i>CASE Category:</i> 33 - OCEANOGRAPHY			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NCC 5 555</b>	<b>GEORGE MASON UNIV</b>	<b>9182</b>	<b>NAG 1 2331</b>	<b>HAMPTON UNIV</b>	<b>9190</b>
JOINT INTERDISCIPLINARY EARTH SCIENCE			THE AMERICAN INDIAN EDUCATIONAL OPPORTUNITIES 2000 PROGRAM		
05/04/2001 - 06/14/2003	FY02: \$0	Total: \$2,441,161	09/29/2000 - 07/31/2002	FY02: \$0	Total: \$75,000
<i>Prin. Invest.:</i> M KAFATOS			<i>Prin. Invest.:</i> R SCHWAN		
<i>Tech. Officer:</i> GSFC/M MCCUMBER			<i>Tech. Officer:</i> LARC/R A HATHAWAY		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 79 - SOCIAL SCIENCE, OTHER		
<b>NCC 5 645</b>	<b>GEORGE MASON UNIV</b>	<b>9183</b>	<b>NAG 1 01075</b>	<b>HAMPTON UNIV</b>	<b>9191</b>
JOINT GEO-INFORMATICS LABORATORY (JGIL) CONDUCT RESEARCH & PROTOTYPING IN SUPPORT OF ESDISIP &			STATISTICAL METHODS FOR RAPID AEROTHERMAL ANALYSIS AND DESIGN TECHNOLOGY		
06/12/2002 - 06/14/2005	FY02: \$0	Total: \$0	04/27/2001 - 01/09/2002	FY02: \$0	Total: \$80,000
<i>Prin. Invest.:</i> L DI			<i>Prin. Invest.:</i> D J DEPRIEST, C B MORGAN		
<i>Tech. Officer:</i> GSFC/K MCDONALD			<i>Tech. Officer:</i> LARC/R A THOMPSON		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		

## VIRGINIA

## NASA'S UNIVERSITY PROGRAM

**NAG 1 01089**                      **HAMPTON UNIV**                      **9192**  
 THE AMERICAN INDIAN EDUCATIONAL OPPORTUNITIES 2001 PROGRAM  
 06/13/2001 - 06/10/2003                      FY02: \$0                      Total: \$100,000  
*Prin. Invest.:* R SCHWAN  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 01096**                      **HAMPTON UNIV**                      **9193**  
 TOP-OF-ATMOSPHERE ALBEDO ESTIMATION FROM POLDER MULTI-ANGLE  
 MEASUREMENTS: EVALUATION OF WATER AND  
 06/20/2001 - 05/31/2004                      FY02: \$0                      Total: \$52,279  
*Prin. Invest.:* N G LOEB, Y HU  
*Tech. Officer:* LARC/V E DELNORE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 02030**                      **HAMPTON UNIV**                      **9194**  
 STATISTICAL METHODS FOR RAPID AEROTHERMAL ANALYSIS AND DESIGN  
 TECHNOLOGY  
 01/10/2002 - 12/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D J DEPRIEST, C B MORGAN  
*Tech. Officer:* LARC/R A THOMPSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02044**                      **HAMPTON UNIV**                      **9195**  
 CONTRAIL TRACKING AND ARM (ATMOSPHERIC RADIATION MEASURE-  
 MENTS) DATA PRODUCT DEVELOPMENT  
 01/28/2002 - 01/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D P DUDA  
*Tech. Officer:* LARC/P MINNIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 2 1331**                      **HAMPTON UNIV**                      **9196**  
 APPLIED CFD RESEARCH & TRAINING  
 06/21/1999 - 09/14/2002                      FY02: \$0                      Total: \$300,000  
*Prin. Invest.:* H HU  
*Tech. Officer:* ARC/R C STRAWN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2189**                      **HAMPTON UNIV**                      **9197**  
 OPTICAL ELECTRONIC BRAGG REFLECTION SENSOR SYSTEM WITH HY-  
 DRODYNAMIC FLOW APPLICATIONS  
 08/07/1998 - 05/30/2002                      FY02: \$0                      Total: \$439,999  
*Prin. Invest.:* D R LYONS  
*Tech. Officer:* GRC/D GRIFFIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2249**                      **HAMPTON UNIV**                      **9198**  
 ADVANCED METHODS FOR AIRCRAFT ENGINE THRUST AND NOISE  
 BENEFITS. NOZZLE-INLET FLOW ANALYSIS  
 04/01/1999 - 12/31/2002                      FY02: \$0                      Total: \$300,000  
*Prin. Invest.:* M H MORGAN  
*Tech. Officer:* GRC/A BLANKSON  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2422**                      **HAMPTON UNIV**                      **9199**  
 NUMERICAL SIMULATION OF ONE-AND TWO-PHASE FLOWS IN PROPUL-  
 SION SYSTEMS  
 05/31/2000 - 12/31/2002                      FY02: \$0                      Total: \$200,000  
*Prin. Invest.:* M GILLINSKY  
*Tech. Officer:* GRC/I M BLANKSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2495**                      **HAMPTON UNIV**                      **9200**  
 CORRUGATED AND COMPOSED NOZZLES APPLICATION FOR THRU-  
 JET NOISE BENEFITS VIA UEET PROGRAM  
 10/27/2000 - 09/30/2003                      FY02: \$0                      Total: \$125,000  
*Prin. Invest.:* D GILLINSKY  
*Tech. Officer:* GRC/D W LAM  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2618**                      **HAMPTON UNIV**                      **9201**  
 ANALYSIS OF ANTIOXIDANT AND PHOSPHOINOSITOL SIGNAL TRANSDUC-  
 TION PATHWAY (S) IN PLANTS AFTER EXPOSURE  
 05/31/2001 - 04/30/2005                      FY02: \$0                      Total: \$55,000  
*Prin. Invest.:* C M OKPODU  
*Tech. Officer:* GRC/D W GRIFFIN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 5299**                      **HAMPTON UNIV**                      **9202**  
 DYNAMICAL INTERPRETATION OF AEROSOL INFLUENCES ON DOBSON  
 SPECTROPHOTOMETER  
 07/18/2000 - 08/31/2001                      FY02: \$0                      Total: \$49,078  
*Prin. Invest.:* D P MCCORMICK  
*Tech. Officer:* GSFC/F SCHMIDLIN  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 5360**                      **HAMPTON UNIV**                      **9203**  
 GRANT TO HAMPTON UNIVERSITY FOR THE STUDY OF UPPER AIR INSTRU-  
 MENTATION ANOMALIES. PERIOD: 3/15/02 T  
 03/14/2002 - 09/15/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P MCCORMICK  
*Tech. Officer:* WFF/F J SCHMIDLIN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 6296**                      **HAMPTON UNIV**                      **9204**  
 HAMPTON UNIV - OPTICAL RADIATION IN ATMOSPHERE  
 09/19/1997 - 02/28/2001                      FY02: \$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**                      **9205**  
 STUDIES OF THE CLIMATOLOGY, LONG-TERM TRENDS, AND QUASI-  
 BIENNIAL OSCILLATION OF CHEMICAL TRACERS IN  
 04/07/1998 - 03/31/2001                      FY02: \$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**                      **9206**  
 "PROPOSAL FOR MEMBERSHIP TO THE AEROSOL RADIATIVE FORCING  
 SCIENCE TEAM"  
 08/16/1999 - 01/31/2002                      FY02: \$0                      Total: \$44,730  
*Prin. Invest.:* M MCCORMICK  
*Tech. Officer:* GSFC/M I MISHCHENKO  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9156**                      **HAMPTON UNIV**                      **9207**  
 PROGRAM FOR IMPROVING SUCCESS IN SCIENCE, ENGINEERING, AND  
 MATHEMATICS (PRISEM)  
 03/03/2000 - 02/28/2003                      FY02: \$0                      Total: \$183,864  
*Prin. Invest.:* C RANKINS  
*Tech. Officer:* GSFC/M STOUTSENBERGER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



## VIRGINIA

## NASA'S UNIVERSITY PROGRAM

**NCC 1 01059** **HAMPTON UNIV** **9224**  
 CENTER FOR LIDAR & ATMOSPHERIC SCIENCES STUDENTS (FORMERLY  
 GSFC NCC-5-348)  
 08/22/2001 - 06/30/2003 FY02: \$0 Total: \$500,000  
*Prin. Invest.:* D A TEMPLE, A OMAR  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 02015** **HAMPTON UNIV** **9225**  
 2002 NASA SUMMER FACULTY FELLOWSHIP PROGRAM  
 02/22/2002 - 03/02/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* D J DEPRIEST  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 02020** **HAMPTON UNIV** **9226**  
 2002 LANGLEY AEROSPACE RESEARCH SUMMER SCHOLLARS PROGRAM  
 (LARSS)  
 04/02/2002 - 03/02/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* H DAVIS  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 5 348** **HAMPTON UNIV** **9227**  
 CENTER FOR LIDAR AND ATMOSPHERIC SCIENCES STUDENTS  
 06/29/1998 - 02/28/2002 FY02: \$0 Total: \$1,495,533  
*Prin. Invest.:* T A CHYBA  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 2 52261** **HAMPTON UNIV** **9228**  
 DEVELOPMENT OF AN ASTROBIOLOGY EDUCATION CURRICULUM AT  
 HAMPTON UNIV  
 12/06/1999 - 06/30/2002 FY02: \$0 Total: \$199,877  
*Prin. Invest.:* B FAISON  
*Tech. Officer:* ARC/D DESMARAIS  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NGT 3 52354** **HAMPTON UNIV** **9229**  
 UV INDUCED DENSIFICATION AND ABLATION DURING THE FORMATION OF  
 BRAGG GRATINGS IN GE-DOPED SiO2 PREFO  
 06/25/1999 - 06/30/2001 FY02: \$0 Total: \$65,850  
*Prin. Invest.:* D R LYONS  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 13 - PHYSICS

**NAG 1 2155** **JAMES MADISON UNIV** **9230**  
 CHAOS AND THERMAL SCIENCES LABORATORY (CATS LAB) MY 1/3  
 03/05/1999 - 12/31/2001 FY02: \$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** **9231**  
 INFRARED DEVELOPMENT AND TESTING LABORATORY WITH DEVELOP-  
 MENT OF ATMOSPHERIC CO IMAGING INSTRUMENT  
 04/29/1999 - 02/28/2003 FY02: \$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** **9232**  
 DETERMINATION OF MATL NEAR THE GLASS TRANSITION TEMPERATURE  
 FOR AN ISOGRID BOOM  
 06/25/2001 - 04/30/2002 FY02: \$0 Total: \$14,974  
*Prin. Invest.:* J R BLANDINO  
*Tech. Officer:* LARC/J A WOODS-VEDELER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02033** **JAMES MADISON UNIV** **9233**  
 RANS LES AND DNS TOWARD MUTUALLY CONSISTENT FORMULATIONS  
 01/10/2002 - 01/09/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* C D PRUETT  
*Tech. Officer:* LARC/T B GATSKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 6166** **JAMES MADISON UNIV** **9234**  
 COLL OF INTEGRATED SCIENCE & TECHNOLOGY (CISAT) CONDUCT  
 PRE-SERVICE TEACHER ENHANCEMENT WORKSHOP.  
 08/01/1997 - 01/31/2001 FY02: \$0 Total: \$60,000  
*Prin. Invest.:* J BARNES  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10701** **JAMES MADISON UNIV** **9235**  
 DEVELOPMENT OF TEST TECHNOLOGY FOR THIN-FILM MEMEB RANE  
 STRUCTURES  
 04/05/2001 - 04/14/2003 FY02: \$0 Total: \$49,965  
*Prin. Invest.:* J BLANDINO  
*Tech. Officer:* GSFC/J JOHNSON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 1 394** **MARY WASHINGTON COLL** **9236**  
 A PROPOSAL FOR THE ESTABLISHMENT OF A CENTER FOR EXPERIMEN-  
 TAL AERODYNAMICS (CEA)  
 04/24/2000 - 03/31/2005 FY02: \$0 Total: \$340,820  
*Prin. Invest.:* C P BRITCHER, R L ASH, R L ASH  
*Tech. Officer:* LARC/J C YU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2125** **NORFOLK STATE UNIV** **9237**  
 TECHNICAL EDUCATION OUTREACH MATERIALS SCIENCE AND TECHNOL-  
 OGY BASED ON NASAS MATERIALS RESEARCH  
 01/12/1999 - 12/31/2002 FY02: \$0 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** **9238**  
 DEVELOPMENT OF SOLID-STATE LASER MATERIALS FOR APPLICATION IN  
 LASERES FOR ATMOSPHERIC OZONE & WATER  
 03/30/1999 - 12/31/2001 FY02: \$0 Total: \$100,000  
*Prin. Invest.:* M NOGINOV, G LOUTTS  
*Tech. Officer:* LARC/N P BARNES, LARC/J C BARNES  
*CASE Category:* 13 - PHYSICS

**NAG 1 2226** **NORFOLK STATE UNIV** **9239**  
 PORTSMOUTH ATMOSPHERIC SCIENCE SCHOOL PROJECT (PASS)  
 08/24/1999 - 07/31/2002 FY02: \$0 Total: \$199,728  
*Prin. Invest.:* C COLEMAN  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

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**NAG 1 2228**                      **NORFOLK STATE UNIV**                      **9240**  
 NONSELECTIVE ROOMTEMPERATURE MICROBOLOMETERS BASED ON  
 CMB THIN FILMS  
 08/30/1999 - 07/31/2001                      FY02: \$0                      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**                      **9241**  
 PRE-SERVICE TEACHER CONFERENCE MY 1/2  
 09/03/1999 - 07/31/2001                      FY02: \$0                      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**                      **9242**  
 THE CHROME HONORS PROGRAM  
 09/26/2001 - 09/30/2002                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* E WILSON  
*Tech. Officer:* LARC/R HATHAWAY  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02060**                      **NORFOLK STATE UNIV**                      **9243**  
 NASA'S CENTER OF EXCELLENCE FOR STRUCTURES AND MATERIALS  
 TECHNICAL EDUCATION OUTREACH  
 04/01/2002 - 04/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J A JACOBS  
*Tech. Officer:* LARC/E J PRIOR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02076**                      **NORFOLK STATE UNIV**                      **9244**  
 CHARACTERIZATION OF SMART OPTICAL MATERIALS USING ELLIPSO-  
 MTRY  
 03/29/2002 - 07/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K D SONG  
*Tech. Officer:* LARC/S H CHOI, LARC/G C KING  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2289**                      **NORFOLK STATE UNIV**                      **9245**  
 NOVEL HIGH EFFICIENT ORGANIC PHOTOVOLTAIC MATERIAL S  
 08/30/1999 - 07/21/2002                      FY02: \$0                      Total: \$299,816  
*Prin. Invest.:* S SUN  
*Tech. Officer:* GRC/A F HEPP  
*CASE Category:* 12 - CHEMISTRY

**NAG 4 165**                      **NORFOLK STATE UNIV**                      **9246**  
 VARIATIONAL METHOD IN DESIGN OPTIMIZATION  
 02/26/1999 - 02/26/2003                      FY02: \$0                      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**                      **9247**  
 NORFOLK STATE UNIV RESEARCH EXPERIENCE IN EA  
 09/15/1997 - 07/31/2002                      FY02: \$0                      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**                      **9248**  
 SUMMER WORKSHOP PROGRAM TO PROVIDE EMERGING EDUCAT ORS  
 W/THE FAMILIARITY & KNOWLEDGE TO UTILIZE IN C  
 05/12/1999 - 05/14/2002                      FY02: \$0                      Total: \$40,295  
*Prin. Invest.:* S CHAUDHURY  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8653**                      **NORFOLK STATE UNIV**                      **9249**  
 DESIGN AND PERFORMANCE TESTS OF ULTRA-COMPACT CALO RIMETERS  
 FOR HIGH ENERGY ASTROPHYSICS  
 08/19/1999 - 07/31/2003                      FY02: \$0                      Total: \$279,385  
*Prin. Invest.:* C W SALGADO  
*Tech. Officer:* GSFC/R E STREITMATTER  
*CASE Category:* 13 - PHYSICS

**NAG 5 9257**                      **NORFOLK STATE UNIV**                      **9250**  
 BRINGING EDUCATION & SCIENCE TOGETHER FOR SYSTEMIC TRAINING &  
 EMPOWERMENT OF PRESERVICE TEACHERS  
 03/15/2000 - 02/28/2003                      FY02: \$0                      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**                      **9251**  
 SCENARIO BASED LEARNING: INQUIRY FOR A DIGITAL EARTH  
 04/05/2000 - 03/31/2003                      FY02: \$0                      Total: \$172,370  
*Prin. Invest.:* W J RODRIQUEZ  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10140**                      **NORFOLK STATE UNIV**                      **9252**  
 A NASA-HBCU PARTNERSHIP TO ENHANCE MINORITY EDUCAT ION &  
 RESEARCH PARTICIPATION IN THE SPACE SCIENCE  
 12/12/2000 - 12/31/2003                      FY02: \$0                      Total: \$203,891  
*Prin. Invest.:* C W SALGADO  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1862**                      **NORFOLK STATE UNIV**                      **9253**  
 GROWTH AND CHARACTERIZATION OF ORGANIC CRYSTALS  
 04/16/2002 - 04/15/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* L SALARY  
*Tech. Officer:* MSFC/W J LOVE  
*CASE Category:* 12 - CHEMISTRY

**NCC 1 280**                      **NORFOLK STATE UNIV**                      **9254**  
 FEASIBILITY STUDY OF PIEZOELECTRIC ACTUATORS DRIVE N BY A  
 MICROWAVE  
 03/06/1998 - 03/05/2002                      FY02: \$0                      Total: \$300,000  
*Prin. Invest.:* K D SONG  
*Tech. Officer:* LARC/S H CHOI  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 1 01049**                      **NORFOLK STATE UNIV**                      **9255**  
 DEVELOPMENT OF NOVEL COMPOSITE AND RANDOM MATERIAL FOR  
 NONLINEAR OPTICS AND LASERS - TRANSFER FROM  
 06/06/2001 - 09/14/2004                      FY02: \$0                      Total: \$420,000  
*Prin. Invest.:* L MATTIX  
*Tech. Officer:* LARC/J C BARNES  
*CASE Category:* 47 - METAL & MATERIALS ENGR

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**NCC 1 01053**                      **NORFOLK STATE UNIV**                      **9256**  
 2001 PRE-SERVICE TEACHER INST  
 05/10/2001 - 03/31/2002                      FY02: \$0                      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**                      **9257**  
 MISSION-LEVERAGED EDUCATION: NSU-NASA INNOVATIVE UNDERGRADU-  
 ATE MODEL MILLENIUM A NASA PAIR PROJECT  
 06/29/2001 - 02/29/2004                      FY02: \$0                      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**                      **9258**  
 2001 PRE-SERVICE TEACHER CONFERENCE  
 08/14/2001 - 07/31/2002                      FY02: \$0                      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 1 02024**                      **NORFOLK STATE UNIV**                      **9259**  
 2002 PRE-SERVICE TEACHER PROGRAM (INST AND CONFERENCE)  
 04/29/2002 - 04/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S M PROCTOR, P TUCKER-HOGAN  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 457**                      **NORFOLK STATE UNIV**                      **9260**  
 MISSION-LEVERAGED EDUCATION: NSU-NASA INNOVATIVE UNDERGRADU-  
 ATE MODEL  
 02/22/2000 - 03/31/2001                      FY02: \$0                      Total: \$292,845  
*Prin. Invest.:* L MATTIX  
*Tech. Officer:* GSFC/M MATTHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 2195**                      **OLD DOMINION UNIV**                      **9261**  
 PROCESS COST MODELING FOR MULTIDISCIPLINARY DESIGN APPLICA-  
 TIONS  
 05/21/1999 - 03/31/2002                      FY02: \$0                      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**                      **9262**  
 DEVELOPMENT OF A TRANSIENT CUT-OFF GRID FOR FOCUS SCHLIEREN  
 07/12/1999 - 06/14/2002                      FY02: \$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 2252**                      **OLD DOMINION UNIV**                      **9263**  
 USER ACCEPTABILITY OF PHYSIOLOGICAL AND OTHER MEASURES OF  
 HAZARDOUS STATES OF AWARENESS  
 11/23/1999 - 02/28/2001                      FY02: \$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 2266**                      **OLD DOMINION UNIV**                      **9264**  
 NUMERICAL SIMULATIONS OF MIXING AND COMBUSTION IN SCRAMJET  
 ENGINES  
 01/31/2000 - 12/31/2002                      FY02: \$0                      Total: \$77,991  
*Prin. Invest.:* S W TIWARI, T O MOHIELDIN  
*Tech. Officer:* LARC/D E REUBUSH, LARC/C R MCCLINTON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 2278**                      **OLD DOMINION UNIV**                      **9265**  
 IMPLICATIONS OF AUTOMOTIVE AND TRUCKING ON-BOARD INFORMATION  
 SYSTEMS FOR GENERAL AVIATION COCKPIT  
 03/15/2000 - 03/31/2002                      FY02: \$0                      Total: \$45,380  
*Prin. Invest.:* P KACHROO, P J KAUFFMAN  
*Tech. Officer:* LARC/E J JOHNSON  
*CASE Category:* 41 - AERONAUTICALENGNR

**NAG 1 2279**                      **OLD DOMINION UNIV**                      **9266**  
 DESIGN & ANALYSIS OF ARCHITECTURES FOR STRUCTURAL HEALTH  
 MONITORING SYSTEMS  
 03/13/2000 - 08/31/2002                      FY02: \$0                      Total: \$92,995  
*Prin. Invest.:* R MUKKAMALA  
*Tech. Officer:* LARC/S L VAZQUEZ  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 2300**                      **OLD DOMINION UNIV**                      **9267**  
 STRUCTURE-COMPATIBLE NONLINEAR HEAT TRANSFER ANAL.ERROR ES-  
 TIMATEDS, ORDER ADAPTIVITY & DESIGN OPTIMI  
 05/26/2000 - 05/14/2003                      FY02: \$0                      Total: \$95,000  
*Prin. Invest.:* G HOU  
*Tech. Officer:* LARC/K S BEY  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 2303**                      **OLD DOMINION UNIV**                      **9268**  
 NATIONAL CULTURE, CREW RESOURCES MANAGEMENT, AND TEAM PER-  
 FORMANCE IN A FLOGHT SIMULATION  
 06/02/2000 - 12/31/2003                      FY02: \$0                      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 2330**                      **OLD DOMINION UNIV**                      **9269**  
 INVESTIGATION OF ERROR PATTERNS IN GEOGRAPHICAL DATABASES  
 09/29/2000 - 07/31/2002                      FY02: \$0                      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**                      **9270**  
 MODELING DISTURBANCE DYNAMICS IN TRANSITIONAL AND TURBULENT  
 BOUNDARY LAYERS  
 12/20/2000 - 10/31/2001                      FY02: \$0                      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**                      **9271**  
 NONLINEAR AND FAILURE ANALYSIS OF COMPOSITE STRUCTURES  
 02/05/2001 - 12/31/2002                      FY02: \$0                      Total: \$60,000  
*Prin. Invest.:* A K NOOR  
*Tech. Officer:* LARC/J H STARNES, JR  
*CASE Category:* 41 - AERONAUTICAL ENGR



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<p><b>NAG 1 01033</b>                      <b>OLD DOMINION UNIV</b>                      <b>9272</b>  PARALLEL DOMAIN DECOMPOSITION FORMULATION AND SOFTWARE FOR  LARGE-SCALE UNSYMMETRICAL 3D APPLICATI  02/22/2001 - 01/14/2004                      FY02: \$0                      Total: \$30,000  <i>Prin. Invest.:</i> D T NGUYEN  <i>Tech. Officer:</i> LARC/W R WATSON, LARC/M G JONES  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 1 01086</b>                      <b>OLD DOMINION UNIV</b>                      <b>9280</b>  REDUCING DESIGN RISK USING DESIGN METHODS  05/17/2001 - 03/17/2003                      FY02: \$0                      Total: \$9,988  <i>Prin. Invest.:</i> R UNAL  <i>Tech. Officer:</i> LARC/R A LEPSCH  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 1 01043</b>                      <b>OLD DOMINION UNIV</b>                      <b>9273</b>  ULTRA NANOSTRUCTURED COMPOSITE FIBERS  03/26/2001 - 03/25/2004                      FY02: \$0                      Total: \$80,000  <i>Prin. Invest.:</i> R B PIPES  <i>Tech. Officer:</i> LARC/T S GATES  <i>CASE Category:</i> 47 - METAL &amp; MATERIALS ENGR</p>	<p><b>NAG 1 01092</b>                      <b>OLD DOMINION UNIV</b>                      <b>9281</b>  ERROR ANALYSIS FOR DISCONTINUOUS GALERKIN METHOD FOR PARA-  BOLIC PROBLEMS  06/27/2001 - 06/30/2003                      FY02: \$0                      Total: \$20,000  <i>Prin. Invest.:</i> H KANEKO  <i>Tech. Officer:</i> LARC/K S BEY  <i>CASE Category:</i> 21 - MATHEMATICS</p>
<p><b>NAG 1 01044</b>                      <b>OLD DOMINION UNIV</b>                      <b>9274</b>  INVESTIGATION WAVE PROPAGATIONS IN DISCONTINUOUS GALERKIN  METHOD  03/26/2001 - 02/28/2004                      FY02: \$0                      Total: \$19,021  <i>Prin. Invest.:</i> F HU  <i>Tech. Officer:</i> LARC/H L ATKINS  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 1 01097</b>                      <b>OLD DOMINION UNIV</b>                      <b>9282</b>  A PROJECT DEV MODEL FOR ASSESSING THE FEAS OF AUTO MOTIVE-  TRUCKING INFO SYS W/APPLICS TO GEN AVIATIO  06/29/2001 - 09/30/2002                      FY02: \$0                      Total: \$59,990  <i>Prin. Invest.:</i> P J KAUFFMANN, P KACHROO  <i>Tech. Officer:</i> LARC/E J JOHNSON, LARC/H P STOUGH  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 1 01047</b>                      <b>OLD DOMINION UNIV</b>                      <b>9275</b>  MANAGEMENT (BY VSGC) OF 2000-2001 NATIONAL GENERAL AVIATION  DESIGN COMPETITION  04/12/2001 - 09/30/2001                      FY02: \$0                      Total: \$25,000  <i>Prin. Invest.:</i> M L SANDY  <i>Tech. Officer:</i> LARC/H W JARRETT  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 1 01121</b>                      <b>OLD DOMINION UNIV</b>                      <b>9283</b>  YOUNG PHD'S IN HUMAN SPACE FLIGHT INST  08/31/2001 - 08/31/2002                      FY02: \$0                      Total: \$29,852  <i>Prin. Invest.:</i> E WILSON  <i>Tech. Officer:</i> LARC/R HATHAWAY  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 1 01068</b>                      <b>OLD DOMINION UNIV</b>                      <b>9276</b>  NOISE PREDICTION FOR ADVANCED AIRCRAFT CONFIGUR- ATIONS USING  THE EQUIVALENT SOURCE METHOD  04/23/2001 - 04/22/2003                      FY02: \$0                      Total: \$90,000  <i>Prin. Invest.:</i> M H DUNN  <i>Tech. Officer:</i> LARC/D P GARBER, LARC/R A GOLUB  <i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER</p>	<p><b>NAG 1 02005</b>                      <b>OLD DOMINION UNIV</b>                      <b>9284</b>  STUDIES IN TRANSITION AND TIME VARYING TURBULENT FLOW  11/16/2001 - 11/15/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> C E GROSCH  <i>Tech. Officer:</i> LARC/T B GATSKI  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 1 01071</b>                      <b>OLD DOMINION UNIV</b>                      <b>9277</b>  MODIFICATION OF EXISTING METHOD OF MOMENT CODE FOR LARGE  OBJECTS USING PHYSICAL OPTICS  04/20/2001 - 09/30/2002                      FY02: \$0                      Total: \$30,212  <i>Prin. Invest.:</i> R P JOSHI  <i>Tech. Officer:</i> LARC/M D DESHBANDE  <i>CASE Category:</i> 45 - ELECTRICAL ENGR</p>	<p><b>NAG 1 02039</b>                      <b>OLD DOMINION UNIV</b>                      <b>9285</b>  SPECIFICATION DESIGN AND ANALYSIS OF ADVANCED HUMS ARCHITURES  01/25/2002 - 01/31/2004                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> R MUKKAMALA  <i>Tech. Officer:</i> LARC/S L VAZQUEZ, LARC/E G COOPER  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>
<p><b>NAG 1 01076</b>                      <b>OLD DOMINION UNIV</b>                      <b>9278</b>  PARALLEL COMPUTATIONAL STUDIES OF THE DIRECT SIMULATION MONTE  CARLO METHOD IN FLUID DYNAMICS  05/16/2001 - 05/31/2004                      FY02: \$0                      Total: \$34,618  <i>Prin. Invest.:</i> D E KEYES, P BOGACKI  <i>Tech. Officer:</i> LARC/J N MOSS  <i>CASE Category:</i> 22 - COMPUTER SCIENCE</p>	<p><b>NAG 1 02062</b>                      <b>OLD DOMINION UNIV</b>                      <b>9286</b>  ADAPTIVE TECHNOLOGY AS A COUNTERMEASURE FOR COMPLACENCY  03/05/2002 - 03/04/2003                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> M SCERBO, F FREEMAN  <i>Tech. Officer:</i> LARC/A T POPE  <i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER</p>
<p><b>NAG 1 01077</b>                      <b>OLD DOMINION UNIV</b>                      <b>9279</b>  DEV NUMERICAL MODELS 4 PERF PREDICTIONS OF SINGLE PHOTON  AVALANCHE PHOTODETECTORS 4 2-MICRON REGIME  05/16/2001 - 12/31/2001                      FY02: \$0                      Total: \$20,000  <i>Prin. Invest.:</i> R P JOSHI  <i>Tech. Officer:</i> GSFC/M N ABEDIN  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 1 02072</b>                      <b>OLD DOMINION UNIV</b>                      <b>9287</b>  NUMERICAL ANAL FOR PREDICTING ALGAASSB-INGAASSB AVALANCHE  PHOTODETECTOR PERF @ 2-MICRON WAVELENGTHS  03/20/2002 - 12/31/2002                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> R P JOSHI  <i>Tech. Officer:</i> LARC/M N ABEDINE  <i>CASE Category:</i> 13 - PHYSICS</p>
<p><b>NAG 1 01077</b>                      <b>OLD DOMINION UNIV</b>                      <b>9279</b>  DEV NUMERICAL MODELS 4 PERF PREDICTIONS OF SINGLE PHOTON  AVALANCHE PHOTODETECTORS 4 2-MICRON REGIME  05/16/2001 - 12/31/2001                      FY02: \$0                      Total: \$20,000  <i>Prin. Invest.:</i> R P JOSHI  <i>Tech. Officer:</i> GSFC/M N ABEDIN  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 1 02096</b>                      <b>OLD DOMINION UNIV</b>                      <b>9288</b>  COST ESTIMATION TECHNIQUES FOR MULTI-DISCIPLINARY OPTIMIZATION  05/14/2002 - 05/13/2005                      FY02: \$0                      Total: \$0  <i>Prin. Invest.:</i> H P BAO  <i>Tech. Officer:</i> LARC/R P WESTON  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>

## VIRGINIA

## NASA'S UNIVERSITY PROGRAM

**NAG 1 02110** OLD DOMINION UNIV 9289  
 DEVELOPMENT OF APPROXIMATION MODELS FOR LAUNCH VEHICLE  
 OPERATIONS ANALYSIS  
 08/16/2002 - 06/15/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* R UNAL  
*Tech. Officer:* LARC/W D MORRIS, LARC/N H WHITE  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 2 1481** OLD DOMINION UNIV 9290  
 DATA-LINK AIRCRAFT COMMUNICATIONS: AN EXAMINATION OF INTERFER-  
 ENCE, COHERENCE, & WORKLOAD  
 05/04/2001 - 04/30/2003 FY02: \$0 Total: \$80,000  
*Prin. Invest.:* D S MCNAMARA, M SCERBO  
*Tech. Officer:* ARC/I BARSHI, ARC/S LOZITO  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NAG 5 4515** OLD DOMINION UNIV 9291  
 STUDYING THE EARTH'S ENVIRONMENT IN SPACE: CLASSR ACTIVITIES  
 WITH INSTRUCTION RESOURCES.  
 06/02/1997 - 12/31/2000 FY02: \$0 Total: \$166,896  
*Prin. Invest.:* E SMITH  
*Tech. Officer:* GSFC/N KHAZENIE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10528** OLD DOMINION UNIV 9292  
 RESPONSE OF SEA ICE AND MARINE ECOSYSTEMS TO THE OBSERVED  
 WARMING TRENDS IN THE ARTIC  
 03/19/2001 - 03/14/2004 FY02: \$0 Total: \$116,806  
*Prin. Invest.:* G F COTA  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11259** OLD DOMINION UNIV 9293  
 PHYSICAL BIOLOGICAL INTERACTIONS AND THE CARBON CYCLE OF THE  
 TROPICAL PACIFIC AND ATLANTIC\_OCEANS  
 08/20/2001 - 08/31/2004 FY02: \$0 Total: \$92,899  
*Prin. Invest.:* E HOFMANN  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1813** OLD DOMINION UNIV 9294  
 RESEARCH GRANT  
 04/30/2001 - 01/31/2003 FY02: \$0 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 9295  
 VIRTUAL REALITY TRAINING  
 12/18/2000 - 12/18/2003 FY02: \$0 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 9296  
 TESTBED OF INTEROPERABLE MULTIDISCIPLINARY DIGITAL LIBRARIES  
 09/22/1999 - 09/21/2003 FY02: \$0 Total: \$497,970  
*Prin. Invest.:* K MALY  
*Tech. Officer:* LARC/M M LITTLE, LARC/N R KAPLAN  
*CASE Category:* 22 - COMPUTER SCIENCE

**NCA 1 188** OLD DOMINION UNIV 9297  
 VA SPACE GRANT CONSORTIUM ENVIRONMENT IMPACT  
 08/04/2000 - 10/31/2001 FY02: \$0 Total: \$75,000  
*Prin. Invest.:* M L SANDY  
*Tech. Officer:* LARC/S A COOKE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 320** OLD DOMINION UNIV 9298  
 STUDY OF APPLICATION OF GREEN'S FUNCTION METHODS APPLIED TO  
 SPACE RADIATION PROTECTION  
 09/23/1998 - 09/30/2001 FY02: \$0 Total: \$106,507  
*Prin. Invest.:* J H HEINBOCKEL  
*Tech. Officer:* LARC/R C SINGLETERRY, LARC/J W WILSON  
*CASE Category:* 13 - PHYSICS

**NCC 1 349** OLD DOMINION UNIV 9299  
 INST FOR SCIENTIFIC & EDUCATIONAL TECHNOLOGY (FOLLOW-ON TO  
 NCC-1-232)  
 06/28/1999 - 08/15/2002 FY02: \$0 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 9300  
 AUTOMATED, NON-AUTOCLAVE, COMPOSITE MATERIALS FABRICATION  
 (NRA 99-LARC-1)  
 11/29/1999 - 11/30/2002 FY02: \$0 Total: \$285,325  
*Prin. Invest.:* M C GUPTA  
*Tech. Officer:* LARC/T H HOU  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 1 364** OLD DOMINION UNIV 9301  
 PSYCHOPHYSIOLOGICAL CONTROL OF ACOGNITIVE TASK USING ADAP-  
 TIVE AUTOMATION  
 12/09/1999 - 11/30/2001 FY02: \$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 9302  
 DOCUMENT AND DISSEMINATE THE RESULTS OF WIND TUNNEL TESTS OF  
 WRIGHT FLYER AIRCRAFT AND  
 01/31/2000 - 12/31/2001 FY02: \$0 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 9303  
 TWO AND THREE DIMENSIONAL ELASTIC-PLASTIC FINITE ELEMENT ANALY-  
 SES OF TAPERED/COLDWORKED FASTENERS  
 02/07/2000 - 12/31/2002 FY02: \$0 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 9304  
 A COMPARISON OF QUASI-STATE INDENTATION & DROP-WT IMPACT  
 TESTING ON CARBON/EPOXY LAMINATES  
 03/14/2000 - 09/30/2001 FY02: \$0 Total: \$45,000  
*Prin. Invest.:* R PRABHAKARAN  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

<b>NCC 1 392</b>	<b>OLD DOMINION UNIV</b>	<b>9305</b>	<b>NCC 1 01043</b>	<b>OLD DOMINION UNIV</b>	<b>9313</b>
STOCHASTIC DYNAMICAL MODELS FOR DIGITAL CONTROL SYSTEMS IN ELECTROMAGNETIC ENVIRONMENTS (EME)			NASA - ASEE SUMMER FACULTY RESEARCH PROGRAM 2001		
04/07/2000 - 03/31/2003	FY02: \$0	Total: \$304,326	04/06/2001 - 12/31/2002	FY02: -\$5,700	Total: \$588,008
<i>Prin. Invest.:</i> W S GRAY, O R GONZALEZ			<i>Prin. Invest.:</i> B TIWARI, D DEPRIEST		
<i>Tech. Officer:</i> LARC/C M BELCASTRO			<i>Tech. Officer:</i> LARC/R A HATHAWAY		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 1 396</b>	<b>OLD DOMINION UNIV</b>	<b>9306</b>	<b>NCC 1 01052</b>	<b>OLD DOMINION UNIV</b>	<b>9314</b>
AN ALGORITHM FOR TRANSPORT OF ANISOTROPIC NEUTRONS			AUTOMATED TOW PLACEMENT PROCESSING & CHARACTERIZATION OF COMPOSITES		
05/03/2000 - 09/30/2002	FY02: \$0	Total: \$79,321	06/22/2001 - 12/31/2003	FY02: \$0	Total: \$29,940
<i>Prin. Invest.:</i> J TWEED			<i>Prin. Invest.:</i> R PRABHAKARAN		
<i>Tech. Officer:</i> LARC/R C SINGLETERRY, LARC/J W WILSON			<i>Tech. Officer:</i> LARC/T H HOU		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 13 - PHYSICS		
<b>NCC 1 404</b>	<b>OLD DOMINION UNIV</b>	<b>9307</b>	<b>NCC 1 02022</b>	<b>OLD DOMINION UNIV</b>	<b>9315</b>
BOLTZMANN TRANSPORT CODE UPDATE: PARALLELIZATION AND INTEGRATED DESIGN METHODS			NANOCOMPOSITE STRUCTURE-PROPERTY-PROCESS RELATIONSHIPS		
07/11/2000 - 07/16/2003	FY02: \$0	Total: \$188,000	04/08/2002 - 04/07/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J H HEINBOCKEL, J NEALY			<i>Prin. Invest.:</i> M C GUPTA		
<i>Tech. Officer:</i> LARC/R C SINGLETERRY JR, LARC/J W WILSON			<i>Tech. Officer:</i> LARC/T S GATES		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NCC 1 01012</b>	<b>OLD DOMINION UNIV</b>	<b>9308</b>	<b>NCC 1 02026</b>	<b>OLD DOMINION UNIV</b>	<b>9316</b>
EVALUATING THE ABILITY OF HEART RATE AND EEG TO CONTROL ALERTNESS DURING PERFORMANCE			PHOTONIC SENSORS FOR INTEGRATED SYSTEM HEALTH MONITORING		
12/29/2000 - 08/31/2002	FY02: \$0	Total: \$70,895	05/07/2002 - 05/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> F G FREEMAN, M W SCERBO, P J MIKULKA			<i>Prin. Invest.:</i> S ALBIN, M BUONCRISTIANI		
<i>Tech. Officer:</i> LARC/L J PRINZEL			<i>Tech. Officer:</i> LARC/R S ROGOWSKI		
<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER			<i>CASE Category:</i> 45 - ELECTRICAL ENGR		
<b>NCC 1 01014</b>	<b>OLD DOMINION UNIV</b>	<b>9309</b>	<b>NCC 1 02027</b>	<b>OLD DOMINION UNIV</b>	<b>9317</b>
CENTER FOR ADVANCED ENGINEERING ENVIRONMENTS			THE WRIGHT FLYER TESTING PROGRAM		
01/24/2001 - 12/31/2003	FY02: \$0	Total: \$550,000	05/06/2002 - 05/05/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> A K NOOR			<i>Prin. Invest.:</i> R L ASHE		
<i>Tech. Officer:</i> LARC/R D BRAUN, LARC/K A CANNON			<i>Tech. Officer:</i> LARC/E J PRIOR		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NCC 1 01015</b>	<b>OLD DOMINION UNIV</b>	<b>9310</b>	<b>NCC 1 02044</b>	<b>OLD DOMINION UNIV</b>	<b>9318</b>
ADV'D APPLIC'S FOR ADIFOR 3.0 FOR EFFICIENT CALCULATION OF 1ST&2ND-ORDER CFD SENSITIVITY DERIVATIVE			DEV OF EXPERT JUDGEMENT ELICITATION & CALIBRATION METHODOLOGY FOR RISK ANALYSIS CONCEPT VEHICLE DES		
02/01/2001 - 09/30/2002	FY02: \$0	Total: \$62,562	08/07/2002 - 08/15/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> A C TAYLOR, III			<i>Prin. Invest.:</i> R UNAL, C KEATING, R MONROE		
<i>Tech. Officer:</i> LARC/P A NEWMAN			<i>Tech. Officer:</i> LARC/L L GREEN, LARC/T A ZANG		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NCC 1 01032</b>	<b>OLD DOMINION UNIV</b>	<b>9311</b>	<b>NCC 5 258</b>	<b>OLD DOMINION UNIV</b>	<b>9319</b>
FIELD PENETRATION STUDIES STATISTICS AND BOUNDING			PHYSICAL-BIOLOGICAL INTERACTIONS IN THE GLOBAL EQUATORIAL SURFACE LAYER		
03/23/2001 - 12/31/2003	FY02: \$0	Total: \$61,411	11/17/1997 - 10/31/2001	FY02: \$0	Total: \$376,303
<i>Prin. Invest.:</i> C F BUNTING, L L VAHALA			<i>Prin. Invest.:</i> E HOFMANN		
<i>Tech. Officer:</i> LARC/T X NGUYEN			<i>Tech. Officer:</i> GSFC/J MARRA		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NCC 1 01040</b>	<b>OLD DOMINION UNIV</b>	<b>9312</b>	<b>NCC 5 592</b>	<b>OLD DOMINION UNIV</b>	<b>9320</b>
RESEARCH ON INTELLIGENT SYNTHESIS ENVIRONMENT			NASA USRP UNDERGRADUATE STUDENT RESEARCH PROGRAM, VIRGINIA SPACE GRANT CONSORTIUM.		
03/27/2001 - 09/30/2002	FY02: \$0	Total: \$500,000	09/19/2001 - 09/14/2004	FY02: \$0	Total: \$999,626
<i>Prin. Invest.:</i> A K NOOR, R B LOFFIN			<i>Prin. Invest.:</i> M SANDY		
<i>Tech. Officer:</i> LARC/J J REHRER			<i>Tech. Officer:</i> GSFC/J GORMAN		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		

## VIRGINIA

## NASA'S UNIVERSITY PROGRAM

**NCC 9 135**                      **OLD DOMINION UNIV**                      **9321**  
 VIRTUAL REALITY TRAINING/CYBERSICKNESS & EFFECTS ON SENSORMO-  
 TOR FUNCTIONS  
 07/20/2001 - 03/31/2003                      FY02: \$0                      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**                      **9322**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 11/02/2000 - 09/30/2001                      FY02: \$0                      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**                      **9323**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 05/22/2001 - 06/30/2004                      FY02: \$0                      Total: \$12,000  
*Prin. Invest.:* M SCERBO  
*Tech. Officer:* LARC/R HATHAWAY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 1 01011**                      **OLD DOMINION UNIV**                      **9324**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/04/2001 - 06/30/2004                      FY02: \$0                      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**                      **9325**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/06/2001 - 12/22/2001                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* L VAHALA  
*Tech. Officer:* LARC/T X NGUYEN  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 1 01014**                      **OLD DOMINION UNIV**                      **9326**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/06/2001 - 06/30/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* D H ELSAYED-ALII  
*Tech. Officer:* LARC/R DEYOUNG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NGT 1 01015**                      **OLD DOMINION UNIV**                      **9327**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 05/25/2001 - 06/30/2003                      FY02: \$0                      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**                      **9328**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 05/29/2001 - 06/30/2003                      FY02: \$0                      Total: \$12,000  
*Prin. Invest.:* J P BLISS  
*Tech. Officer:* LARC/J R COMSTOCK, JR, LARC/A T POPE  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NGT 1 01020**                      **OLD DOMINION UNIV**                      **9329**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 05/30/2001 - 06/30/2003                      FY02: \$0                      Total: \$12,000  
*Prin. Invest.:* J C BLISS  
*Tech. Officer:* LARC/K A LATORELLA, LARC/V CRISP  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 01021**                      **OLD DOMINION UNIV**                      **9330**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 05/31/2001 - 06/30/2003                      FY02: \$0                      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**                      **9331**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3  
 06/12/2001 - 06/30/2004                      FY02: \$0                      Total: \$12,000  
*Prin. Invest.:* J HUANG  
*Tech. Officer:* LARC/P FERGEN  
*CASE Category:* 46 - MECHANICAL ENGR

**NGT 1 01029**                      **OLD DOMINION UNIV**                      **9332**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/14/2001 - 06/30/2003                      FY02: \$0                      Total: \$12,000  
*Prin. Invest.:* S ZOHORIOD  
*Tech. Officer:* LARC/D B SHAFER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 01030**                      **OLD DOMINION UNIV**                      **9333**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2  
 06/15/2001 - 09/30/2003                      FY02: \$0                      Total: \$12,000  
*Prin. Invest.:* M SCERBO  
*Tech. Officer:* LARC/J L BURT  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 02020**                      **OLD DOMINION UNIV**                      **9334**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 07/24/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G J MCAULIFFE, A WILLIAMS  
*Tech. Officer:* LARC/T PINELLI  
*CASE Category:* 69 - PSYCHOLOGY, OTHER

**NGT 1 52171**                      **OLD DOMINION UNIV**                      **9335**  
 GRADUATE STUDENT RESEARCHERS PROGRAM  
 05/29/1997 - 12/31/2000                      FY02: \$0                      Total: \$77,000  
*Prin. Invest.:* C P BRITCHER  
*Tech. Officer:* LARC/N J GROOW  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52210**                      **OLD DOMINION UNIV**                      **9336**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/26/1999 - 06/30/2002                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* D T NGUYEN  
*Tech. Officer:* LARC/J SOBIESKI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NGT 1 52211**                      **OLD DOMINION UNIV**                      **9337**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 05/26/1999 - 06/30/2001                      FY02: -\$1                      Total: \$34,933  
*Prin. Invest.:* H SAYID ELE  
*Tech. Officer:* LARC/R J DEYOUNG  
*CASE Category:* 45 - ELECTRICAL ENGR

**NGT 1 52219**                      **OLD DOMINION UNIV**                      **9338**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/04/1999 - 06/30/2001                      FY02: \$0                      Total: \$44,001  
*Prin. Invest.:* F G FREEMAN  
*Tech. Officer:* LARC/A T POPE, LARC/L J PRINZED,111  
*CASE Category:* 61 - PSYCHOLOGY BIOLOGY

## NASA'S UNIVERSITY PROGRAM

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<b>NGT 1 52220</b>	<b>OLD DOMINION UNIV</b>	<b>9339</b>	<b>NGT 5 40059</b>	<b>OLD DOMINION UNIV</b>	<b>9348</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			IN SUPPORT OF THE NATIONAL SPACE GRANT COLL PROGRAM		
06/04/1999 - 06/30/2001	FY02: \$0	Total: \$44,000	02/21/1997 - 01/31/2001	FY02: \$0	Total: \$1,733,189
<i>Prin. Invest.:</i> G D COATES			<i>Prin. Invest.:</i> M L SANDY		
<i>Tech. Officer:</i> LARC/A T POPE, LARC/L J PRINZEL, 111			<i>Tech. Officer:</i> GSFC/L KEFFER		
<i>CASE Category:</i> 61 - PSYCHOLOGY BIOLOGY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 1 52229</b>	<b>OLD DOMINION UNIV</b>	<b>9340</b>	<b>NGT 5 40070</b>	<b>OLD DOMINION UNIV</b>	<b>9349</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			GENERAL AVIATION DESIGN COMPETITION FUNDING IN SUP PORT OF THE		
04/21/2000 - 06/30/2001	FY02: \$0	Total: \$22,000	VIRGINIA NATIONAL SPACE GRANT COLL		
<i>Prin. Invest.:</i> H ELSAVIDELE			01/03/2001 - 05/31/2002	FY02: \$0	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>9341</b>	<b>NGT 5 40080</b>	<b>OLD DOMINION UNIV</b>	<b>9350</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			VIRGINIA SPACE GRANT COLL & FELLOWSHIP PROGRAM		
04/21/2000 - 06/30/2001	FY02: \$0	Total: \$22,000	02/09/2001 - 01/31/2005	FY02: \$0	Total: \$694,809
<i>Prin. Invest.:</i> M MIHALE CZ			<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		
<b>NGT 1 52231</b>	<b>OLD DOMINION UNIV</b>	<b>9342</b>	<b>NAG 5 5165</b>	<b>ROANOKE COLL</b>	<b>9351</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			IMPROVED MODELING FOR THE COSMIC RAY ORIGIN FUNDING FOR FIRST		
04/21/2000 - 06/30/2001	FY02: \$0	Total: \$22,000	YEAR OF GRANT		
<i>Prin. Invest.:</i> F G FREEMAN			03/09/1998 - 03/31/2002	FY02: \$0	Total: \$115,750
<i>Tech. Officer:</i> LARC/L J PRINZEL			<i>Prin. Invest.:</i> C H TSAO		
<i>CASE Category:</i> 69 - PSYCHOLOGY, OTHER			<i>Tech. Officer:</i> GSFC/B A MERRITT		
			<i>CASE Category:</i> 13 - PHYSICS		
<b>NGT 1 52232</b>	<b>OLD DOMINION UNIV</b>	<b>9343</b>	<b>NAG 1 1964</b>	<b>UNIV OF VIRGINIA</b>	<b>9352</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			INTELLIGENT PROCESSING OF MATERIALS FOR DESIGN AND MANUFAC-		
04/24/2000 - 06/30/2001	FY02: \$0	Total: \$22,000	TURING, ETC.		
<i>Prin. Invest.:</i> J M STARK			09/30/1997 - 12/31/2000	FY02: \$0	Total: \$4,877,789
<i>Tech. Officer:</i> LARC/J R COMSTOCK, JR, LARC/A T POPE			<i>Prin. Invest.:</i> H N WADLEY		
<i>CASE Category:</i> 59 - LIFE SCIENCE, OTHER			<i>Tech. Officer:</i> LARC/C MOORE		
			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 1 52235</b>	<b>OLD DOMINION UNIV</b>	<b>9344</b>	<b>NAG 1 2131</b>	<b>UNIV OF VIRGINIA</b>	<b>9353</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			DUAL-MODE COMBUSTION (FOLLOW-ON TO NAG-1-2085)		
04/25/2000 - 06/30/2001	FY02: -\$1	Total: \$22,000	01/26/1999 - 05/31/2002	FY02: \$0	Total: \$469,412
<i>Prin. Invest.:</i> P HIX, S ZAHORIAN			<i>Prin. Invest.:</i> J C MCDANIEL, E H MASLAN, H K CHELLIAH		
<i>Tech. Officer:</i> LARC/D B SHAFER			<i>Tech. Officer:</i> LARC/D E REUBUSH, LARC/C R MCCLINTON		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NGT 1 52236</b>	<b>OLD DOMINION UNIV</b>	<b>9345</b>	<b>NAG 1 2282</b>	<b>UNIV OF VIRGINIA</b>	<b>9354</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			METALLURGICAL FACTORS CONTROLLING LOCALIZED CORROSION AND		
04/27/2000 - 06/30/2001	FY02: \$0	Total: \$22,000	STRESS CORROSION CRACK INITIATIONIN		
<i>Prin. Invest.:</i> M SCERBO			03/22/2000 - 02/28/2001	FY02: \$0	Total: \$49,501
<i>Tech. Officer:</i> LARC/D B SHAFER			<i>Prin. Invest.:</i> D A LITTLE, J R SCULLY		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>Tech. Officer:</i> LARC/M S DOMACK		
			<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR		
<b>NGT 1 52241</b>	<b>OLD DOMINION UNIV</b>	<b>9346</b>	<b>NAG 1 2290</b>	<b>UNIV OF VIRGINIA</b>	<b>9355</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			PRACTICAL USE OF FORMAL TECHNIQUES IN AEROSPACE IN SOFTWARE		
06/08/2000 - 05/31/2001	FY02: \$0	Total: \$22,000	SYSTEMS		
<i>Prin. Invest.:</i> D LOCKWOOD			05/01/2000 - 11/30/2002	FY02: \$0	Total: \$367,616
<i>Tech. Officer:</i> LARC/G W SACHSE			<i>Prin. Invest.:</i> J C KNIGHT, D E EVANS		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>Tech. Officer:</i> LARC/K J HAYHURST		
			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NGT 1 52245</b>	<b>OLD DOMINION UNIV</b>	<b>9347</b>			
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)					
07/10/2000 - 06/30/2002	FY02: \$0	Total: \$44,001			
<i>Prin. Invest.:</i> R UNAL					
<i>Tech. Officer:</i> LARC/A A MOORE					
<i>CASE Category:</i> 42 - ASTRONAUTICAL ENGR					

## VIRGINIA

## NASA'S UNIVERSITY PROGRAM

**NAG 1 2321**                      **UNIV OF VIRGINIA**                      **9356**  
 DEVELOPMENT OF SENSORY ALLOYS FOR ACOUSTIC STRAIN MONITORS  
 08/14/2000 - 12/31/2002                      FY02: \$0                      Total: \$129,977  
*Prin. Invest.:* G SHIFLET  
*Tech. Officer:* LARC/R PIASCIK  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 01022**                      **UNIV OF VIRGINIA**                      **9357**  
 END EFFECTS AND LOAD DIFFUSION IN COMPOSITE STRUCTURES  
 03/21/2001 - 12/31/2001                      FY02: \$0                      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**                      **9358**  
 EXPERIMENTAL CHARACTERIZATION OF CONTINUUM/RAREFIELD FLOWS  
 05/18/2001 - 02/29/2004                      FY02: \$0                      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**                      **9359**  
 UNSTEADY AERODYNAMICS OF FLAPPING WINGS  
 08/16/2001 - 08/31/2004                      FY02: \$0                      Total: \$50,000  
*Prin. Invest.:* N NAJ-HARIRI  
*Tech. Officer:* LARC/D D MOERDER  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02019**                      **UNIV OF VIRGINIA**                      **9360**  
 DUAL-MODE COMBUSTION MY 1/3  
 12/14/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J C MACDANIEL, C P GOYNE  
*Tech. Officer:* LARC/D E REUBUSH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 1 02049**                      **UNIV OF VIRGINIA**                      **9361**  
 DEVELOPMENT OF SENSORY ALLOYS FOR MAGNETIC AND ACOUSTIC  
 STRAIN MONITORS  
 02/06/2002 - 05/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G J SHIFLET  
*Tech. Officer:* LARC/R S PIASCIK  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 02090**                      **UNIV OF VIRGINIA**                      **9362**  
 METALS TECHNOLOGY FOR AEROSP APPLICS IN 2020: DEV OF HIGH TEMP  
 ALUMINUM ALLOYS FOR AEROSPACE APPLIC  
 04/29/2002 - 04/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E A STARKE  
*Tech. Officer:* LARC/D L DICUS  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 1 02101**                      **UNIV OF VIRGINIA**                      **9363**  
 ADVANCED TOOLS AND TECHNIQUES FOR FORMAL TECHNIQUE S IN  
 AEROSPACE SYSTEMS  
 06/17/2002 - 09/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J C KNIGHT  
*Tech. Officer:* LARC/B L DIVITO  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 02102**                      **UNIV OF VIRGINIA**                      **9364**  
 NASA AVIATION SAFETY PROGRAM SYSTEMS ANALYSIS/PROG RAM AS-  
 SESSMENT METRICS REVIEW  
 06/17/2002 - 09/30/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G E LOUIS  
*Tech. Officer:* LARC/S M JONES, LARC/V K CRISP  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 1 02103**                      **UNIV OF VIRGINIA**                      **9365**  
 EXPANDING THE USE OF FORMAL TECHNIQUES IN AEROSPACE SYSTEMS  
 SEAS PROPOSAL NO:CS-NASA/LARC-1120-02  
 06/27/2002 - 09/30/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J C KNIGHT  
*Tech. Officer:* LARC/C M HOLLOWAY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 02113**                      **UNIV OF VIRGINIA**                      **9366**  
 EVALUATING MEASURES OF HUMAN-AUTOMATION INTERACTION IN PILOT  
 SELF-SEPARATION TASKS  
 09/10/2002 - 05/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E J BASS, G L BALLARD  
*Tech. Officer:* LARC/M T PALMER  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 1916**                      **UNIV OF VIRGINIA**                      **9367**  
 INSTABILITY MECHANISMS OF THERMALLY-DRIVEN INTERFACIAL FLOWS  
 IN LIGHT-ENCAPSULATED CRYSTALGROWTH  
 07/16/1996 - 07/16/2001                      FY02: \$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**                      **9368**  
 HETEROGENEOUS COMB OF POROUS SOLID FUEL PART UNDER MICRO-  
 GRAV: A COMPREHENSIVE THERO & EXPSTUDIES  
 07/23/1996 - 05/31/2002                      FY02: \$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**                      **9369**  
 RLV THRUST CELL LINER COATING ANALYSIS AND OPTIMIZATION  
 03/16/2000 - 11/30/2002                      FY02: \$0                      Total: \$81,500  
*Prin. Invest.:* M J PINDERA  
*Tech. Officer:* GRC/S M ARNOLD  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 3 2524**                      **UNIV OF VIRGINIA**                      **9370**  
 HOMOGENIZED AND SMART HOTFGM  
 01/19/2001 - 11/30/2002                      FY02: \$0                      Total: \$160,057  
*Prin. Invest.:* M PINDERA  
*Tech. Officer:* GRC/S M ARNOLD  
*CASE Category:* 44 - CIVIL ENGR

**NAG 3 2760**                      **UNIV OF VIRGINIA**                      **9371**  
 DYNAMICS OF DROPS AND BUBBLES IN CONFINED FLOWS OF COMPLEX  
 FLUIDS  
 04/03/2002 - 12/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D HAJ-HARIRI  
*Tech. Officer:* GRC/M HASAN  
*CASE Category:* 49 - ENGINEERING, OTHER

## NASA'S UNIVERSITY PROGRAM

VIRGINIA

<b>NAG 5 3633</b>	<b>UNIV OF VIRGINIA</b>	<b>9372</b>	<b>NAG 5 7266</b>	<b>UNIV OF VIRGINIA</b>	<b>9380</b>
CHARGED PARTICLE INDUCED ALTERATIONS OF SURFACES I			SOUTHERN AFRICAN VALIDATION OF EOS GROUND AND AIRB ORNE		
03/13/1997 - 01/31/2002	FY02: \$0	Total: \$145,005	INSTRUMENTATION AND VALIDATION ACTIVITIES		
<i>Prin. Invest.:</i> R E JOHNSON			04/30/1998 - 08/30/2001	FY02: \$0	Total: \$499,858
<i>Tech. Officer:</i> GSFC/P G ROGERS			<i>Prin. Invest.:</i> R J SWAPP		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>Tech. Officer:</i> GSFC/J PRIVETTE		
			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 3931</b>	<b>UNIV OF VIRGINIA</b>	<b>9373</b>	<b>NAG 5 7500</b>	<b>UNIV OF VIRGINIA</b>	<b>9381</b>
EROSIONAL PROCESSES ON MARS			MAGNETOHYDRODYNAMICS OF THE SOLAR NEBULA		
03/12/1997 - 02/28/2003	FY02: \$0	Total: \$293,763	06/01/1998 - 05/31/2002	FY02: \$0	Total: \$164,000
<i>Prin. Invest.:</i> A D HOWARD			<i>Prin. Invest.:</i> S BALBUS		
<i>Tech. Officer:</i> GSFC/J G GRANT			<i>Tech. Officer:</i> HQ/J BOYCE		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 4192</b>	<b>UNIV OF VIRGINIA</b>	<b>9374</b>	<b>NAG 5 7749</b>	<b>UNIV OF VIRGINIA</b>	<b>9382</b>
ION COLLISION PROCESSES:PLASMA INTERACTIONS WITH AN NEUTRAL			SPUTTERING OF THE MARTIAN ATMOSPHERE		
CORONA			11/04/1998 - 12/31/2002	FY02: \$0	Total: \$173,751
04/10/1997 - 03/31/2003	FY02: \$0	Total: \$408,848	<i>Prin. Invest.:</i> R E JOHNSON		
<i>Prin. Invest.:</i> D E JOHNSON			<i>Tech. Officer:</i> GSFC/R BEEBE		
<i>Tech. Officer:</i> GSFC/J BERGSTRALH			<i>CASE Category:</i> 11 - ASTRONOMY		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE					
<b>NAG 5 4283</b>	<b>UNIV OF VIRGINIA</b>	<b>9375</b>	<b>NAG 5 7862</b>	<b>UNIV OF VIRGINIA</b>	<b>9383</b>
EROSION AND ALTERATION OF INTERSTELLAR AND INTERPL			SAFARI 2000: A SOUTHERN AFRICAN REGIONAL SCIENCE I INITIATIVE		
04/07/1997 - 05/31/2002	FY02: \$0	Total: \$177,700	01/08/1999 - 10/31/2002	FY02: \$0	Total: \$252,864
<i>Prin. Invest.:</i> D E JOHNSON			<i>Prin. Invest.:</i> C O JUSTICE		
<i>Tech. Officer:</i> GSFC/D BOYCE			<i>Tech. Officer:</i> GSFC/D WICKLAND		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 4332</b>	<b>UNIV OF VIRGINIA</b>	<b>9376</b>	<b>NAG 5 7939</b>	<b>UNIV OF VIRGINIA</b>	<b>9384</b>
SUBLIMATION AND OPTICAL PROPERTIES OF ICES AT LOW TO SOLAR			"COLLABORATIVE PARTICIPATION OF SOUTH AFRICAN AIRB ORNE VALIDA-		
SYSTEM OBJECTS			TION PLATFORM IN SAFARI2000"		
04/30/1997 - 08/31/2001	FY02: \$0	Total: \$193,971	01/04/1999 - 09/14/2001	FY02: \$0	Total: \$300,704
<i>Prin. Invest.:</i> D A BARAGIOLA			<i>Prin. Invest.:</i> R J SWAP		
<i>Tech. Officer:</i> GSFC/P ROGERS			<i>Tech. Officer:</i> GSFC/M KING		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 6384</b>	<b>UNIV OF VIRGINIA</b>	<b>9377</b>	<b>NAG 5 7956</b>	<b>UNIV OF VIRGINIA</b>	<b>9385</b>
THE COUPLING LAND-USE AND LAND-COVER CHANGES, AND MIOMBO			LAND SURFACE CHARACTERIZATION OF SOUTHERN AFRICAN SAVANNAS:		
WOODLANDS			CARBON CYCLING AND SENSITIVITY TO E		
09/26/1997 - 10/31/2001	FY02: -\$321	Total: \$569,844	01/07/1999 - 01/31/2003	FY02: \$0	Total: \$605,642
<i>Prin. Invest.:</i> P DESANKER			<i>Prin. Invest.:</i> H H SHUGART		
<i>Tech. Officer:</i> GSFC/A C JANETOS			<i>Tech. Officer:</i> GSFC/D E WICKLAND		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 6403</b>	<b>UNIV OF VIRGINIA</b>	<b>9378</b>	<b>NAG 5 8088</b>	<b>UNIV OF VIRGINIA</b>	<b>9386</b>
CRITICAL TESTS OF STELLAR EVOLUTION (LTSA)			SUPERNOVA-INFLUENCED STAR FORMATION		
10/10/1997 - 10/14/2002	FY02: \$0	Total: \$400,799	01/27/1999 - 12/31/2002	FY02: \$0	Total: \$130,000
<i>Prin. Invest.:</i> R O'CONNELL			<i>Prin. Invest.:</i> D A CHEVALIER		
<i>Tech. Officer:</i> GSFC/R K OLIVERSEN			<i>Tech. Officer:</i> HQ/J BOYCE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 6828</b>	<b>UNIV OF VIRGINIA</b>	<b>9379</b>	<b>NAG 5 8130</b>	<b>UNIV OF VIRGINIA</b>	<b>9387</b>
GAS EVOLUTION FROM ICY SURFACES			MODELS OF PULSAR NEBULAE (ATP 98)		
01/15/1998 - 07/31/2001	FY02: \$0	Total: \$130,643	02/11/1999 - 02/14/2003	FY02: \$0	Total: \$185,500
<i>Prin. Invest.:</i> R BARAGIOLA			<i>Prin. Invest.:</i> R A CHEVALIER		
<i>Tech. Officer:</i> GSFC/R BEEBE			<i>Tech. Officer:</i> GSFC/R J OLIVERSEN		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 8162</b>	<b>UNIV OF VIRGINIA</b>	<b>9388</b>	<b>NAG 5 8162</b>	<b>UNIV OF VIRGINIA</b>	<b>9388</b>
LAND COVER AND LAND USE CHANGE PROJECT SCIENTIST S UPPORT			LAND COVER AND LAND USE CHANGE PROJECT SCIENTIST S UPPORT		
02/08/1999 - 08/31/2001	FY02: -\$3,983	Total: \$533,552	02/08/1999 - 08/31/2001	FY02: -\$3,983	Total: \$533,552
<i>Prin. Invest.:</i> C O JUSTICE			<i>Prin. Invest.:</i> C O JUSTICE		
<i>Tech. Officer:</i> GSFC/A C JANETOS			<i>Tech. Officer:</i> GSFC/A C JANETOS		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		

## VIRGINIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 8232** **UNIV OF VIRGINIA** **9389**  
 SUPERNOVA REMNANTS: INTERSTELLAR AND CIRCUMSTELLAR INTERAC-  
 TIONS (ATP98)  
 02/11/1999 - 02/14/2002 FY02: \$0 Total: \$180,000  
*Prin. Invest.:* R A CHEVALIER  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8444** **UNIV OF VIRGINIA** **9390**  
 LABORATORY SIMULATIONS OF RADIATION EFFECTS ON PLANETARY  
 SURFACES  
 04/07/1999 - 05/31/2002 FY02: \$0 Total: \$164,000  
*Prin. Invest.:* R A BARAGIOLA  
*Tech. Officer:* HQ/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8663** **UNIV OF VIRGINIA** **9391**  
 LOW COST TERAHERTZ FREQUENCY MULTIPLIERS FOR SOFIA AND EX-  
 PLORER MISSIONS  
 07/07/1999 - 01/14/2002 FY02: \$0 Total: \$267,552  
*Prin. Invest.:* T CROWE  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 5 8670** **UNIV OF VIRGINIA** **9392**  
 ESTIMATING ROOT ZONE SOIL MOISTURE AND EXPLORING SCALE AS-  
 PECTS OF ITS COUPLING TO THE ATMOSPHERIC  
 07/08/1999 - 07/14/2003 FY02: \$0 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** **9393**  
 TO DEVELOPE A COMPACT, AMBIENT TEMPERATURE 500 GHZ RECEIVER  
 FOR USE IN PASSIVE MICROWAVE REMOTE SEN  
 08/25/1999 - 09/30/2001 FY02: \$0 Total: \$97,000  
*Prin. Invest.:* J L HESLER  
*Tech. Officer:* GSFC/J R WANG  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8902** **UNIV OF VIRGINIA** **9394**  
 MARTIAN CRATERED HIGHLANDS FIELD CONFERENCE  
 12/28/1999 - 12/31/2001 FY02: \$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** **9395**  
 FAR-ULTRAVIOLET STUDIES OF METAL-DEFICIENT BLUE COMPACT DWARF  
 GALAXIES - FUSE  
 01/24/2000 - 01/31/2003 FY02: \$0 Total: \$54,300  
*Prin. Invest.:* T X THUAN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9266** **UNIV OF VIRGINIA** **9396**  
 NUMERICAL MAGNETOHYDRODYNAMIC STUDIES OF ACCRETION DISKS  
 (ATP 99)  
 03/13/2000 - 03/14/2003 FY02: \$0 Total: \$184,364  
*Prin. Invest.:* J HAWLEY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9289** **UNIV OF VIRGINIA** **9397**  
 OPERATIONALIZING GOFC IN THE MIOMBO REGION & QUESTIONS OF  
 CARBON MIOMBO REGION A SOURCE OR SINK  
 03/27/2000 - 04/30/2003 FY02: \$0 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** **9398**  
 REGIONAL ANALYSIS OF LAND-ATMOSPHERE FEEDBACKS IN SOUTHERN  
 AFRICAN SAVANNAS: A SYNTHESIS ACTIVITIES  
 04/05/2000 - 04/30/2003 FY02: \$0 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** **9399**  
 PRODUCTION OF DIABATIC HEATING IN THE TROPICAL TROPOSPHERE  
 06/05/2000 - 05/31/2003 FY02: \$0 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** **9400**  
 INTEGRATING A MANUAL THESAURUS WITH AUTOMATED TERM SUGGES-  
 TION TECHNIQUES FOR CROSS-DISCIPLINARY  
 07/11/2000 - 01/14/2002 FY02: \$0 Total: \$82,338  
*Prin. Invest.:* J FRENCH  
*Tech. Officer:* GSFC/K MOE  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 5 9758** **UNIV OF VIRGINIA** **9401**  
 MOLECULAR ISOTOPIC COMPOSITION OF ORGANIC COMPOUNDS IN ANT-  
 ARCTIC METEORITES  
 06/28/2000 - 06/30/2003 FY02: \$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** **9402**  
 ARE THE SCUBA DEEP SURVEY SOURCES STARBURSTS OR AGN?  
 09/06/2000 - 09/14/2001 FY02: \$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** **9403**  
 STELLAR MASS LOSS VERSUS EXTERNAL ACCRETION IN X-RAY BRIGHT  
 ELLIPTICALS  
 10/27/2000 - 10/31/2002 FY02: \$0 Total: \$40,000  
*Prin. Invest.:* C L SARAZIN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10075** **UNIV OF VIRGINIA** **9404**  
 MERGER SHOCKS IN CLUSTERS OF GALAXIES  
 10/27/2000 - 10/31/2003 FY02: \$0 Total: \$38,700  
*Prin. Invest.:* C L SARAZIN  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY



## NASA'S UNIVERSITY PROGRAM

VIRGINIA

<b>NAG 5 10173</b>	<b>UNIV OF VIRGINIA</b>	<b>9405</b>	<b>NAG 5 11341</b>	<b>UNIV OF VIRGINIA</b>	<b>9413</b>
CHARGED PARTICLE ALTERATIONS OF THE SURFACES IN THE OUTER SOLAR SYSTEM			CARPE GIS MAPPING ACTIVITY		
12/21/2000 - 01/31/2004	FY02: \$0	Total: \$39,000	09/24/2001 - 09/30/2002	FY02: \$0	Total: \$9,004
<i>Prin. Invest.:</i> R E JOHNSON			<i>Prin. Invest.:</i> C O JUSTICE		
<i>Tech. Officer:</i> GSFC/D SENSKE			<i>Tech. Officer:</i> GSFC/C J TUCKER		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 10250</b>	<b>UNIV OF VIRGINIA</b>	<b>9406</b>	<b>NAG 5 11647</b>	<b>UNIV OF VIRGINIA</b>	<b>9414</b>
OBSERVATIONS OF O VI EMISSION IN THE HOT HALO OF NGC 891 (FUSE 00)			EROSIONAL PROCESSES ON MARS		
02/15/2001 - 02/14/2003	FY02: \$0	Total: \$69,997	01/24/2002 - 02/28/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> E M MURPHY			<i>Prin. Invest.:</i> A D HOWARD		
<i>Tech. Officer:</i> GSFC/G SONNEBORN			<i>Tech. Officer:</i> GSFC/D SENSKE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 10341</b>	<b>UNIV OF VIRGINIA</b>	<b>9407</b>	<b>NAG 5 11771</b>	<b>UNIV OF VIRGINIA</b>	<b>9415</b>
THE INTERSTELLAR MEDIUM OF BLUE COMPACT DWARF GALAXIES (FUSE 00)			MOLECULAR SYNTHESIS AND DESORPTION IN PRE-COMETARY ICY GRAINS: LABORATORY SIMULATIONS		
02/05/2001 - 02/14/2003	FY02: \$0	Total: \$77,800	03/26/2002 - 02/28/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> T X THUAN			<i>Prin. Invest.:</i> R A BARAGIOLA		
<i>Tech. Officer:</i> GSFC/G SONNEBORN			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 10436</b>	<b>UNIV OF VIRGINIA</b>	<b>9408</b>	<b>NAG 5 11953</b>	<b>UNIV OF VIRGINIA</b>	<b>9416</b>
STRUCTURE & REFLECTANCE OF SURFACES OF ICY BODIES: LABORATORY SIMULATIONS			SOFTWARE QUALITY & SAFETY ASSESSMENT USING BAYESIAN BELIEF NETWORKS		
02/20/2001 - 02/28/2003	FY02: \$0	Total: \$50,500	04/08/2002 - 04/14/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R A BARAGIOLA			<i>Prin. Invest.:</i> D B DUGAN		
<i>Tech. Officer:</i> GSFC/D SENSKE			<i>Tech. Officer:</i> GSFC/L H ROSENBERG		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 5 10606</b>	<b>UNIV OF VIRGINIA</b>	<b>9409</b>	<b>NAG 5 12025</b>	<b>UNIV OF VIRGINIA</b>	<b>9417</b>
ANALYSIS OF IN-SITU OBSERVATIONS OF AEROSOLS OVER SOUTHERN AFRICA			THESAURUS SUPPORT FOR EARTH SCIENCE DATA SYSTEMS.		
03/15/2001 - 03/14/2004	FY02: \$0	Total: \$71,973	04/22/2002 - 01/31/2003	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R SWAP			<i>Prin. Invest.:</i> J C FRENCH		
<i>Tech. Officer:</i> GSFC/M WEI			<i>Tech. Officer:</i> GSFC/K MOE		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAG 5 10655</b>	<b>UNIV OF VIRGINIA</b>	<b>9410</b>	<b>NAG 5 12055</b>	<b>UNIV OF VIRGINIA</b>	<b>9418</b>
MAGNETOHYDRODYNAMICS IN PROTOSTELLAR DISKS			RADIATION CHEMISTRY OF PLANETARY SURFACES: SYNTHESIS AND DECOMPOSITION		
03/20/2001 - 05/31/2003	FY02: \$0	Total: \$30,000	04/19/2002 - 04/30/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> S BALBUS			<i>Prin. Invest.:</i> R A BARAGIOLA		
<i>Tech. Officer:</i> GSFC/J M BOYCE			<i>Tech. Officer:</i> GSFC/J BOYCE		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 12 - CHEMISTRY		
<b>NAG 5 10956</b>	<b>UNIV OF VIRGINIA</b>	<b>9411</b>	<b>NAG 5 12061</b>	<b>UNIV OF VIRGINIA</b>	<b>9419</b>
ADVANCED IMAGE PROCESSING FOR IMAGE2000 ENHANCEMENTS			ATMOSPHERIC COLLISION PROCESSES		
05/30/2001 - 05/31/2002	FY02: \$0	Total: \$50,000	04/18/2002 - 04/30/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> G WILLIAMS			<i>Prin. Invest.:</i> R E JOHNSON		
<i>Tech. Officer:</i> WFF/B MERRITT			<i>Tech. Officer:</i> GSFC/J HILLMAN		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 10985</b>	<b>UNIV OF VIRGINIA</b>	<b>9412</b>	<b>NAG 5 12102</b>	<b>UNIV OF VIRGINIA</b>	<b>9420</b>
SOUTHERN AFRICAN VALIDATION OF EOS GROUND AND AIRBORNE INSTRUMENTATION AND VALIDATION ACTIVITIES			LARGE-SCALE STRUCTURE OF MAGNETOCENTRIFUGAL JETS AND WINDS IN STAR FORMATION		
05/31/2001 - 05/31/2002	FY02: \$0	Total: \$58,997	04/24/2002 - 04/30/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> R J SWAPP			<i>Prin. Invest.:</i> Z LI		
<i>Tech. Officer:</i> GSFC/J PRIVETTE			<i>Tech. Officer:</i> GSFC/M SALAMON		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		

## VIRGINIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 12262**                      **UNIV OF VIRGINIA**                      **9421**  
 THE DISK-HALO CONNECTION IN THE SPIRAL GALAXY M101  
 06/04/2002 - 06/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R W O'CONNELL  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12267**                      **UNIV OF VIRGINIA**                      **9422**  
 ELLIPTICAL GALAXIES (FUZE 2001)  
 06/24/2002 - 06/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R W O'CONNELL  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12405**                      **UNIV OF VIRGINIA**                      **9423**  
 2002 COMPREHENSIVE HEDS EDUCATION PROGRAM EVALUATI ON TEAM  
 08/01/2002 - 07/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D BALL  
*Tech. Officer:* GSFC/D HALE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12472**                      **UNIV OF VIRGINIA**                      **9424**  
 RADIATION -INDUCED EROSION AND ALTERATION OF GRAIN S  
 08/15/2002 - 08/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R E JOHNSON  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12609**                      **UNIV OF VIRGINIA**                      **9425**  
 OBSERVATIONS OF O VI EMISSION IN THE HALO OF NGC 4 631  
 09/26/2002 - 09/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E M MURPHY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12620**                      **UNIV OF VIRGINIA**                      **9426**  
 LABORATORY STUDIES IN SUPPORT OF NEAR DATA ANALYSIS  
 09/30/2002 - 09/30/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R A BARAGIOLA  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1567**                      **UNIV OF VIRGINIA**                      **9427**  
 MEMBRANE PROTEIN CRYSTALLIZATION SCREENS BASED UPON FUNDA-  
 MENTAL PHENOMENOLOGY OF SOLUTIONS  
 12/22/1998 - 11/30/2003                      FY02: \$0                      Total: \$459,550  
*Prin. Invest.:* M C WIENER  
*Tech. Officer:* MSFC/B GUYNES  
*CASE Category:* 13 - PHYSICS

**NAG 8 1832**                      **UNIV OF VIRGINIA**                      **9428**  
 A DIRECTED APPROACH TO MEMBRANE PROTEIN CRYSTALLO- GRAPHY  
 09/05/2001 - 11/30/2004                      FY02: \$0                      Total: \$91,000  
*Prin. Invest.:* M C WIENER  
*Tech. Officer:* MSFC/B Q GUYNES  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAS 1 02076**                      **UNIV OF VIRGINIA**                      **9429**  
 ASSAP/GALILEO SOFTWARE TOOL MAINTENANCE AND IMPROV EMENTS  
 AND FEASIBILITY STUDY  
 09/26/2002 - 09/26/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K J SULLIVAN, J B DUGAN  
*Tech. Officer:* LARC/J A CARABALLO  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAS 1 99098**                      **UNIV OF VIRGINIA**                      **9430**  
 ANALYTICAL AERONAUTICAL SAFETY SOFTWARE TOOL  
 03/26/1999 - 10/31/2002                      FY02: \$0                      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

**NCC 1 342**                      **UNIV OF VIRGINIA**                      **9431**  
 ROBUST ADAPTIVE CONTROL IN THE PRESENCE OF UNCERTAINTIES AND  
 FAILURES  
 06/08/1999 - 05/31/2003                      FY02: \$0                      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**                      **9432**  
 NONLINEAR IMPEDANCE OF POROUS MATERIALS  
 11/12/1999 - 11/14/2002                      FY02: \$0                      Total: \$106,473  
*Prin. Invest.:* W E ZORUMSKI  
*Tech. Officer:* LARC/T L PARROTT, LARC/M G JONES  
*CASE Category:* 13 - PHYSICS

**NCC 1 01009**                      **UNIV OF VIRGINIA**                      **9433**  
 DEVELOPMENT & EVALUATION OF LAP JOINT SIMULANT ENVIRONMENTS  
 FOR ACCELERATED TESTING  
 12/14/2000 - 12/31/2002                      FY02: \$0                      Total: \$60,000  
*Prin. Invest.:* R G KELLY  
*Tech. Officer:* LARC/R S PIASCIK  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCC 1 02006**                      **UNIV OF VIRGINIA**                      **9434**  
 DIRECT ADAPTIVE CONTROL METHODOLOGIES FOR SYSTEMS IN THE  
 PRESENCE OF UNCERTAINTIES AND FAILURES  
 01/09/2002 - 05/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* G TAO  
*Tech. Officer:* LARC/S M JOSHI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 02019**                      **UNIV OF VIRGINIA**                      **9435**  
 LOAD DIFFUSION IN COMPOSITE AND SMART STRUCTURES  
 03/29/2002 - 03/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C O HORGAN  
*Tech. Officer:* LARC/D R AMBUR, LARC/M P NEMETH  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1093**                      **UNIV OF VIRGINIA**                      **9436**  
 WHEN ARE THE IMMERSIVE DISPLAYS USEFUL: PERCEPTUAL & TASK  
 CONSIDERATIONS?  
 03/09/1999 - 08/31/2002                      FY02: \$0                      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**                      **9437**  
 THE TOPOGRAPHY & BASIN DEPOSITS OF THE EQUATORIAL HIGHLANDS  
 08/28/2000 - 08/31/2003                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* A D HOWARD  
*Tech. Officer:* ARC/IJ M MOORE  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

## NASA'S UNIVERSITY PROGRAM

VIRGINIA

<b>NCC 2 5415</b>	<b>UNIV OF VIRGINIA</b>	<b>9438</b>	<b>NGT 5 30418</b>	<b>UNIV OF VIRGINIA</b>	<b>9447</b>
THEORETICAL CALCULATIONS OF POLYNUCLEAR TRANSITION METAL CARBONYLS			STRUCTURAL DYNAMICS OF SOUTHERN AFRICAN SAVANNAS A LONG THE KALAHARI TRANSECT--STUDENT:KELLY C		
01/19/2001 - 01/31/2003	FY02: \$0	Total: \$60,000	09/10/2001 - 08/31/2004	FY02: \$0	Total: \$22,000
<i>Prin. Invest.:</i> L S ANDREWS			<i>Prin. Invest.:</i> H SHUGART		
<i>Tech. Officer:</i> ARC/H PARTRIDGE			<i>Tech. Officer:</i> GSFC/M WEI		
<i>CASE Category:</i> 12 - CHEMISTRY			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NCC 8 171</b>	<b>UNIV OF VIRGINIA</b>	<b>9439</b>	<b>NGT 5 30448</b>	<b>UNIV OF VIRGINIA</b>	<b>9448</b>
MODELING PROSTATE CANCER SKELETAL METASTASIS AND GENE THERAPY			ESTIMATION OF THE CARBON BUDGET RESPONSE TO LAND USE CHANGE FOR THE MIOMBO ECOSYSTEM OF SOUTHERN AF		
03/01/1999 - 07/31/2001	FY02: \$0	Total: \$463,100	08/23/2002 - 08/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> L W CHUNG			<i>Prin. Invest.:</i> P DESANKER		
<i>Tech. Officer:</i> MSFC/D R MORRISON			<i>Tech. Officer:</i> GSFC/M WEI		
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 1 01016</b>	<b>UNIV OF VIRGINIA</b>	<b>9440</b>	<b>NGT 5 50305</b>	<b>UNIV OF VIRGINIA</b>	<b>9449</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2			USING NOVEL MEMBRANE PROTEIN CRYSTALLIZATION SCREENS FOR THE STRUCTURE DETERMINATION OF ACHLORIDE		
06/22/2001 - 06/30/2003	FY02: \$0	Total: \$12,000	07/01/2000 - 06/30/2003	FY02: \$0	Total: \$42,252
<i>Prin. Invest.:</i> B W JOHNSON			<i>Prin. Invest.:</i> M C WIENER		
<i>Tech. Officer:</i> LARC/P M GOODE, LARC/A T MORRIS			<i>Tech. Officer:</i> GSFC/L SMITH		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 1 01031</b>	<b>UNIV OF VIRGINIA</b>	<b>9441</b>	<b>NGT 5 50385</b>	<b>UNIV OF VIRGINIA</b>	<b>9450</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/2			MODELING OF SATURN'S NEUTRAL TORUS AND SPUTTER-PRODUCED SATELLITE ATMOSPHERES STUDENT: MICH		
06/22/2001 - 06/30/2003	FY02: \$0	Total: \$12,000	05/23/2002 - 05/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> J C MCDANIEL, JR			<i>Prin. Invest.:</i> R JOHNSON		
<i>Tech. Officer:</i> LARC/C E GLASS			<i>Tech. Officer:</i> GSFC/K BLANDING		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 1 02007</b>	<b>UNIV OF VIRGINIA</b>	<b>9442</b>	<b>NGT10 52620</b>	<b>UNIV OF VIRGINIA</b>	<b>9451</b>
GRADUATE STUDENT RESEARCHER PROGRAM (GSRP)			TRAINING GRANT UNDER A GRADUATE STUDENT RESEARCHER'S PROGRAM		
06/07/2002 - 06/30/2005	FY02: \$0	Total: \$0	06/22/1999 - 12/31/2002	FY02: \$0	Total: \$66,000
<i>Prin. Invest.:</i> J C MCDANIEL, P D CAMPBELL			<i>Prin. Invest.:</i> A MILLS		
<i>Tech. Officer:</i> LARC/C E GLASS			<i>Tech. Officer:</i> KSC/R WHEELER		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 55 - AGRICULTURE		
<b>NGT 1 52237</b>	<b>UNIV OF VIRGINIA</b>	<b>9443</b>	<b>NAG 1 2106</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9452</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			EVALUATION AND IMPROVEMENT OF EARTH RADIATION BUDGET DATA SETS		
04/27/2000 - 06/30/2001	FY02: \$0	Total: \$22,000	09/17/1998 - 09/30/2001	FY02: \$0	Total: \$674,454
<i>Prin. Invest.:</i> C R ELKS			<i>Prin. Invest.:</i> M P HAEFFELIN		
<i>Tech. Officer:</i> LARC/P W GOODE, LARC/A T MORRIS			<i>Tech. Officer:</i> LARC/D F YOUNG		
<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NGT 1 52244</b>	<b>UNIV OF VIRGINIA</b>	<b>9444</b>	<b>NAG 1 2158</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9453</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			HYBRID ACTIVE-PASSIVE SYSTEMS FOR CONTROL OF AIRCRAFT INTERIOR NOISE		
08/01/2000 - 06/30/2001	FY02: \$0	Total: \$22,000	03/09/1999 - 03/31/2002	FY02: \$0	Total: \$414,882
<i>Prin. Invest.:</i> R W KENT			<i>Prin. Invest.:</i> C R FULLER		
<i>Tech. Officer:</i> LARC/L E JONES			<i>Tech. Officer:</i> LARC/D L PALUMBO		
<i>CASE Category:</i> 49 - ENGINEERING, OTHER			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NGT 1 52247</b>	<b>UNIV OF VIRGINIA</b>	<b>9445</b>	<b>NGT 5 30365</b>	<b>UNIV OF VIRGINIA</b>	<b>9446</b>
GRADUATE STUDENT RESEARCHERS PROGRAM			NEE MODIFICATION BY AEROSOL RADIATIVE FORCING/JORDAN G. BARR		
08/01/2000 - 06/30/2001	FY02: \$0	Total: \$22,000	08/13/2001 - 08/31/2004	FY02: \$0	Total: \$22,000
<i>Prin. Invest.:</i> J C MCDANIEL JR, D E CECIL			<i>Prin. Invest.:</i> J FUENTES		
<i>Tech. Officer:</i> GSFC/C E GLASS			<i>Tech. Officer:</i> GSFC/M WEI		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NGT 1 52247</b>	<b>UNIV OF VIRGINIA</b>	<b>9445</b>	<b>NAG 1 2190</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9454</b>
GRADUATE STUDENT RESEARCHERS PROGRAM			EFFICIENT HYBRID ACTUATION USING SOLID-STATE ACTUATORS		
08/01/2000 - 06/30/2001	FY02: \$0	Total: \$22,000	07/06/1999 - 04/30/2002	FY02: \$0	Total: \$314,123
<i>Prin. Invest.:</i> J C MCDANIEL JR, D E CECIL			<i>Prin. Invest.:</i> D J LEO, H H CUDNEY		
<i>Tech. Officer:</i> GSFC/C E GLASS			<i>Tech. Officer:</i> LARC/G C HORNER, LARC/R G REMUS		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 46 - MECHANICAL ENGR		

**NAG 1 2272**            **VA POLYTECHNIC INST & ST UNIV**            **9455**  
 AERODYNAMIC STUDIES RELATED TO THE AEROACOUSTICS OF TILTROTOR BLADES  
 03/24/2000 - 02/28/2003            FY02: \$0            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**            **9456**  
 FINITE ELEMENT MODEL UPDATING OF UNCERTAIN SYSTEMS  
 03/08/2000 - 07/31/2002            FY02: \$0            Total: \$62,117  
*Prin. Invest.:* R KAPANIA  
*Tech. Officer:* LARC/L G HORTA, LARC/J JUANG  
*CASE Category:* 46 - MECHANICAL ENGR

**NAG 1 2298**            **VA POLYTECHNIC INST & ST UNIV**            **9457**  
 RESIDUAL STRESS EFFECTS IN ANISOTROPIC COMPOSITE LAMINATES  
 05/24/2000 - 05/15/2003            FY02: \$0            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**            **9458**  
 ANALYSIS FOR THE PROGRESSIVE FAILURE RESPONSE OF TEXTILE COMPOSITE FUSELAGE FRAMES  
 06/14/2000 - 06/09/2001            FY02: \$0            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**            **9459**  
 PUNCTURE-HEALING PROPERTIES OF CARBON NANOTUBE- FILLED IONOMERS  
 07/05/2000 - 07/31/2003            FY02: \$0            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**            **9460**  
 FORMATION OF METAL NANOPHASES IN POLYMERIC MATRICES VIA SUPERCRITICAL FLUID INFUSION  
 08/24/2000 - 04/30/2001            FY02: \$0            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**            **9461**  
 FUNDAMENTAL STUDIES OF HQ TUBES WITH MODE MEASUREMENTS  
 08/30/2000 - 08/15/2001            FY02: \$0            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**            **9462**  
 NONLINEAR AEROELASTICITY OF LIFTING SURFACES BY FUNCTIONAL SERIES TECHNIQUES: SUBCRITICAL  
 11/21/2000 - 09/30/2001            FY02: \$0            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**            **9463**  
 OPTICAL FIBER STRAIN SENSOR INSTRUMENTATION FOR HIGH TEMPERATURE AEROSPACE STRUCTURAL MONITORING  
 01/18/2001 - 12/31/2001            FY02: \$0            Total: \$66,999  
*Prin. Invest.:* A WANG, G PICKRELL, R MAY  
*Tech. Officer:* LARC/R S ROGOWSKI  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 1 01072**            **VA POLYTECHNIC INST & ST UNIV**            **9464**  
 FAILURE OF NONCIRCULAR COMPOSITE CYLINDERS MY 1/3  
 04/24/2001 - 05/15/2004            FY02: \$0            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**            **9465**  
 STUDY OF REQUIREMENTS ASND CONSTRAINTS FOR FOUR PASSENGER PERSONAL AIR VEHICLE EXPLORATION CONCEPT  
 06/16/2001 - 02/15/2002            FY02: \$0            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**            **9466**  
 THIN-WALLED STRUCTURES MULTIPLE INTERACTIVE FUNCTIONS- FOUNDATIONS OF THE THEORY AND BEHAVIOR  
 07/16/2001 - 07/15/2004            FY02: \$0            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**            **9467**  
 INTEGRATION OF MACRO FIBER COMPOSITES INTO THE DYNAMICS AND CONTROL OF AN INFLATED TORUS  
 06/16/2001 - 06/15/2002            FY02: \$0            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**            **9468**  
 EVOLUTIONARY STRATEGIES FOR PASSIVE/ACTIVE TAILORING OF THIN AND MODERATELY THICK WALLED  
 06/20/2001 - 06/19/2004            FY02: \$0            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**            **9469**  
 NEW MEAS & INTERPRETATION PROTOCOLS FOR SATELLITE- BASED EARTH RADIATION BUDGET (ERB) OBSERVATIONS  
 08/15/2001 - 09/30/2004            FY02: \$0            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**            **9470**  
 ANALYSIS FOR THE PROGRESSIVE FAILURE RESPONSE OF TEXTILE COMPOSITE FUSELAGE FRAMES  
 09/18/2001 - 07/31/2002            FY02: \$0            Total: \$19,000  
*Prin. Invest.:* E R JOHNSON  
*Tech. Officer:* LARC/R B OITNOTT  
*CASE Category:* 41 - AERONAUTICAL ENGR

<p><b>NAG 1 01125</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9471</b>            UNCERTAINTY AND CONFIDENCE INTERVALS IN RADIOMETRIC INSTRUMENT DATA PRODUCTS            10/15/2001 - 10/14/2002      FY02: \$25,830      Total: \$25,830  <i>Prin. Invest.:</i> J R MAHAN  <i>Tech. Officer:</i> LARC/R B LEE, LARC/R L HUFFMAN  <i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 1 02108</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9479</b>            PROGRAM TO DEVELOP INTEGRATED JP-7 PLASMA-INJECTOR FLAME-HOLDER FOR SUPERSONIC COMBUSTION            07/29/2002 - 08/09/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> J A SCHETZ  <i>Tech. Officer:</i> LARC/D E REUBUSH  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 1 02011</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9472</b>            OPEN/CLOSED LOOP NONLINEAR AEROELASTICITY OF AIRCRAFT WINGS            11/28/2001 - 11/30/2003      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> LIBRESCU  <i>Tech. Officer:</i> LARC/W A SILVA  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 1 02111</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9480</b>            INVESTIGATION OF ADAPTIVE STRUCTURES FOR MORPHING AIRCRAFT            08/30/2002 - 08/31/2003      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> H H ROBERTSHAW, D J INMAN, C F REINHOLTZ  <i>Tech. Officer:</i> LARC/G C HORNER  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 1 02024</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9473</b>            MULTIDISCIPLINARY DESIGN OPTIMIZTN INVESTIGATION ADVANCED DESIGN CONCEPTS APPLIED BLENDED WING-BODY            12/21/2001 - 01/14/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> S M PROCTOR  <i>Tech. Officer:</i> LARC/R A HATHAWAY, LARC/M D GUYEN  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 2 1486</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9481</b>            PERFORMANCE PREDICTION &amp; VALIDATION FOR SMALL VTOL UAV'S            06/18/2001 - 02/28/2002      FY02: \$0      Total: \$123,980  <i>Prin. Invest.:</i> A MYKLEBUST  <i>Tech. Officer:</i> ARC/T NAUMONICE, ARC/C E HANGE  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 1 02025</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9474</b>            POLYNOMIAL CHAOS IN FLUID MECHANICS            12/19/2001 - 09/30/2002      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> B GROSSMAN, R W WALTERS  <i>Tech. Officer:</i> LARC/J H MORRISON  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 2 1521</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9482</b>            ACCELERATING DESIGN INTEGRATED AIRCRAFT SYNTHESIS TOOLS            09/10/2001 - 08/31/2003      FY02: \$0      Total: \$159,020  <i>Prin. Invest.:</i> A MYKLEBUST, J H BOHN  <i>Tech. Officer:</i> ARC/D A WARDWELL  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>
<p><b>NAG 1 02053</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9475</b>            ADVANCED DISTRIBUTED ACTIVE VIBRATION ABSORBERS DAVA'S FOR REDUCING AIRCRAFT INTERIOR NOISE            02/13/2002 - 02/12/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> C R FULLER  <i>Tech. Officer:</i> LARC/D L PALUMBO  <i>CASE Category:</i> 46 - MECHANICAL ENGR</p>	<p><b>NAG 3 2093</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9483</b>            AN INTEGRATED SYSTEMS APPROACH TOWARDS ACTIVE CONTROL OF THERMO-ACOUSTIC INSTABILITIES            12/15/1997 - 10/31/2001      FY02: \$0      Total: \$292,803  <i>Prin. Invest.:</i> U VANDSBURGER, W R SAUNDERS, B GANESHAN  <i>Tech. Officer:</i> GRC/J E MAY  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 1 02063</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9476</b>            A PROGRAM TO DEVELOP SHAPE MEMORY ALLOYS FOR SENSING AND MORPHING APPLICATIONS            03/06/2002 - 03/05/2005      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> W T REYNOLDS  <i>Tech. Officer:</i> LARC/R S PIASCIK  <i>CASE Category:</i> 47 - METAL &amp; MATERIALS ENGR</p>	<p><b>NAG 3 2100</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9484</b>            DURABILITY OF CERAMIC MATRIX COMPOSITES AT HIGH TEMPERATURES: EXPERIMENTAL STUDIES &amp; PREDICTIVE MODELING            01/06/1998 - 11/19/2001      FY02: \$0      Total: \$200,184  <i>Prin. Invest.:</i> W A CURTIN  <i>Tech. Officer:</i> GRC/M H JASKOWIAK  <i>CASE Category:</i> 47 - METAL &amp; MATERIALS ENGR</p>
<p><b>NAG 1 02084</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9477</b>            CONTROL OF LANDING GEAR NOISE            04/22/2002 - 04/21/2006      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> R A BURDISSO, W NG  <i>Tech. Officer:</i> LARC/M R KHORRAMI  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 3 2687</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9485</b>            A DESIGN METHODOLOGY FOR RAPID IMPLEMENTATION OF ACTIVE CONTROL SYSTEMS ACROSS LEANDIRECT INJECTION            01/10/2002 - 09/30/2004      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> W R SAUNDERS  <i>Tech. Officer:</i> GRC/J R SAUS  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>
<p><b>NAG 1 02106</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9478</b>            DEVELOPMENT AND OPERATION OF VIRGINIA FIRST LEGO LEAGUE (VAFL) (FOLLOW-ON TO NAG-1-01021)            07/23/2002 - 03/31/2003      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> B DUGGINS  <i>Tech. Officer:</i> LARC/J M SEATON, LARC/J L EVANS  <i>CASE Category:</i> 49 - ENGINEERING, OTHER</p>	<p><b>NAG 3 2694</b>      <b>VA POLYTECHNIC INST &amp; ST UNIV</b>      <b>9486</b>            FAN NOISE CONTROL USING HERSHEL-QUINCKE RESONATOR S            01/17/2002 - 09/30/2004      FY02: \$0      Total: \$0  <i>Prin. Invest.:</i> D A BURDISSO  <i>Tech. Officer:</i> GRC/L J HEIDELBERG  <i>CASE Category:</i> 41 - AERONAUTICAL ENGR</p>

VIRGINIA

NASA'S UNIVERSITY PROGRAM

**NAG 3 2710**            **VA POLYTECHNIC INST & ST UNIV**            **9487**  
 PREDICTING MODES OF THE UNSTEADY VORTICITY FIELD NEAR THE TRAILING EDGE OF A BLADE  
 02/14/2002 - 08/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* W J DEVENPORT  
*Tech. Officer:* GRC/E ENVIA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2733**            **VA POLYTECHNIC INST & ST UNIV**            **9488**  
 BASIC HIGH REYNOLDS NUMBER 3-D TURBULENT BOUNDARY LAYER EXPERIMENTS ON LAGS TO IMPROVE SECOND-ORDER  
 03/08/2002 - 01/31/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* R L SIMPSON  
*Tech. Officer:* GRC/L A POVINELLI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 3 2796**            **VA POLYTECHNIC INST & ST UNIV**            **9489**  
 COMPUTATIONAL THERMOCHEMISTRY OF JET FUELS AND ROC KET PROPELLANTS  
 08/06/2002 - 09/30/2002            FY02: \$0            Total: \$0  
*Prin. Invest.:* T CRAWFORD  
*Tech. Officer:* GRC/M ZEHE  
*CASE Category:* 12 - CHEMISTRY

**NAG 4 218**            **VA POLYTECHNIC INST & ST UNIV**            **9490**  
 RESEARCH AND DEVELOPMENT OF SCRAMJET SKIN FRICTION AND HEAT FLUX INSTRUMENTATION FOR FLIGHT RESEARC  
 01/31/2001 - 09/17/2002            FY02: \$0            Total: \$75,000  
*Prin. Invest.:* J A SCHETZ  
*Tech. Officer:* DFRC/T T BUI  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 5295**            **VA POLYTECHNIC INST & ST UNIV**            **9491**  
 IONOSPHERIC NANOSATELLITE FORMATION (ION-F) SCIENCE  
 06/01/2000 - 05/25/2003            FY02: \$0            Total: \$99,070  
*Prin. Invest.:* W SCALES  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 9291**            **VA POLYTECHNIC INST & ST UNIV**            **9492**  
 ION-F: A SPACE-BASED TESTBED FOR DISTRIBUTED FORMATION CONTROL USING THE HOKIESAT NANOSATELLITE  
 03/17/2000 - 03/31/2003            FY02: \$0            Total: \$157,000  
*Prin. Invest.:* C HALL  
*Tech. Officer:* GSFC/K LUU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 10548**            **VA POLYTECHNIC INST & ST UNIV**            **9493**  
 NET ECOSYSTEM PRODUCTIVITY OF MANAGED FORESTS  
 03/14/2001 - 03/14/2004            FY02: \$0            Total: \$107,659  
*Prin. Invest.:* R WYNNNE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10733**            **VA POLYTECHNIC INST & ST UNIV**            **9494**  
 FLUID AND MELT INCLUSION STUDIES OF VOLATILES IN PLANETARY SAMPLES  
 04/11/2001 - 04/14/2002            FY02: \$0            Total: \$25,000  
*Prin. Invest.:* R BODNAR  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10818**            **VA POLYTECHNIC INST & ST UNIV**            **9495**  
 "CONTROL EFFECTIVENESS FOR LEONARDO MISSION ORBITS "  
 04/24/2001 - 01/31/2002            FY02: \$0            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**            **9496**  
 TETHERED FORMATION FLYING STUDY-CROSS ENTERPRISE TECH. DEV. PROGRAM  
 09/05/2001 - 08/31/2004            FY02: \$0            Total: \$32,447  
*Prin. Invest.:* C HALL  
*Tech. Officer:* GSFC/D QUINN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 12119**            **VA POLYTECHNIC INST & ST UNIV**            **9497**  
 TIME-OPTIMAL CONTROL FOR FORMATION ESTABLISHMENT & MANEUVERING  
 04/29/2002 - 05/30/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* D HALL  
*Tech. Officer:* GSFC/D FOLTA  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 8 1846**            **VA POLYTECHNIC INST & ST UNIV**            **9498**  
 MATERIAL CHARACTERIZATION OF ELASTOMERIC ADHESIVE  
 08/09/2001 - 02/08/2003            FY02: \$0            Total: \$66,983  
*Prin. Invest.:* D A DILLIARD  
*Tech. Officer:* MSFC/M E PRINCE  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NCA 1 01002**            **VA POLYTECHNIC INST & ST UNIV**            **9499**  
 VA POLYTECHNIC INST FOR NAT. DECISION SPT SIM MODEL FRAMEWORK DEV  
 03/15/2001 - 10/31/2001            FY02: \$0            Total: \$94,100  
*Prin. Invest.:* A A TRANI, H SWINGLE  
*Tech. Officer:* LARC/S A COOKE  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 346**            **VA POLYTECHNIC INST & ST UNIV**            **9500**  
 A UNIFIED PROGRAM FOR THE FLIGHT DYNAMICS AND AERO SERVOELASTICITY OF WHOLE AIRCRAFT  
 06/17/1999 - 12/15/2002            FY02: \$0            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**            **9501**  
 LOW SPEED ROTOR/FUSELAGE INTERACTIONAL AERODYNAMICS  
 01/12/2000 - 10/30/2002            FY02: \$0            Total: \$137,867  
*Prin. Invest.:* D D BOYD, R W BARNWELL  
*Tech. Officer:* LARC/H E JONES  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 1 398**            **VA POLYTECHNIC INST & ST UNIV**            **9502**  
 INTERFACE FINITE ELEMENTS FOR ANALYSIS OF FRACTURE INITIATION & PROGRESSION  
 05/15/2000 - 05/14/2003            FY02: \$0            Total: \$107,278  
*Prin. Invest.:* E R JOHNSON  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

<b>NCC 1 405</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9503</b>	<b>NGT 1 01033</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9512</b>
SCIENTIFIC INVESTIGATIONS WITH RADIATION BUDGET DATA			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3		
08/10/2000 - 08/15/2003	FY02: \$0	Total: \$135,383	06/22/2001 - 06/30/2004	FY02: \$0	Total: \$12,000
<i>Prin. Invest.:</i> G L SMITH			<i>Prin. Invest.:</i> T LONG		
<i>Tech. Officer:</i> LARC/R B LEE III, LARC/R L HUFFMAN JR.			<i>Tech. Officer:</i> LARC/E J SIOCHI		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NCC 1 01029</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9504</b>	<b>NGT 1 01035</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9513</b>
DEVELOPMENT OF AN EFFICIENT BINAURAL SIMULATION FOR THE ANALYSIS OF STRUCTURAL ACOUSTIC DATA			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP) MY 1/3		
03/14/2001 - 12/31/2002	FY02: \$0	Total: \$50,757	06/25/2001 - 01/23/2002	FY02: \$0	Total: \$22,000
<i>Prin. Invest.:</i> M E JOHNSON			<i>Prin. Invest.:</i> D P TELIONES		
<i>Tech. Officer:</i> LARC/S A RIZZI			<i>Tech. Officer:</i> LARC/A E WASHBURN, LARC/W L SELLERS		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 41 - AERONAUTICAL ENGR		
<b>NCC 1 01037</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9505</b>	<b>NGT 1 01038</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9514</b>
VARTM MODEL DEVELOPMENT AND VERIFICATION			GSRP		
04/12/2001 - 04/11/2004	FY02: \$0	Total: \$74,989	09/10/2001 - 12/31/2002	FY02: \$0	Total: \$10,000
<i>Prin. Invest.:</i> A C LOOS			<i>Prin. Invest.:</i> M AHMADIAN		
<i>Tech. Officer:</i> LARC/R J CANO, LARC/B J JENSEN			<i>Tech. Officer:</i> LARC/D L PALUMBO		
<i>CASE Category:</i> 47 - METAL & MATERIALS ENGR			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NCC 1 01044</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9506</b>	<b>NGT 1 02014</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9515</b>
NEW NANO-SPHERE MATERIALS: MAGNETIC AND DIELECTRIC PROPERTIES OF THE A3N@C80 ENDOHEDRAL			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
04/12/2001 - 01/12/2004	FY02: \$0	Total: \$70,650	06/07/2002 - 06/30/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> H C DORN			<i>Prin. Invest.:</i> D J INMAN, R B WILLIAMS		
<i>Tech. Officer:</i> LARC/C C FAY			<i>Tech. Officer:</i> LARC/W K WILKE		
<i>CASE Category:</i> 12 - CHEMISTRY			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NCC 1 02014</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9507</b>	<b>NGT 1 52184</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9516</b>
LOW SPEED ROTOR/ FUSELAGE INTERACTIONAL AERODYNAMIC CS			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
02/20/2002 - 02/27/2002	FY02: \$0	Total: \$0	05/12/1998 - 06/30/2001	FY02: \$0	Total: \$78,000
<i>Prin. Invest.:</i> R W BARNWELL, D S PRICHARD			<i>Prin. Invest.:</i> J BURTON		
<i>Tech. Officer:</i> LARC/H E JONES, LARC/H E JONES			<i>Tech. Officer:</i> LARC/J M SEATON		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NCC 2 5433</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9508</b>	<b>NGT 1 52224</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9517</b>
AEROELASTIC DESIGN OF WINGS USING NON-TRADITIONAL METHODS			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
04/25/2001 - 09/30/2002	FY02: \$0	Total: \$47,023	09/27/1999 - 08/31/2002	FY02: \$0	Total: \$44,000
<i>Prin. Invest.:</i> R K KAPANIA			<i>Prin. Invest.:</i> G J OGLE		
<i>Tech. Officer:</i> ARC/T L HOLST, ARC/G GURASWANY			<i>Tech. Officer:</i> LARC/J M SEATON		
<i>CASE Category:</i> 22 - COMPUTER SCIENCE			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NCC 3 866</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9509</b>	<b>NGT 1 52246</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9518</b>
HIGH TEMPERATURE PROTON EXCHANGE MEMBRANDS FOR FUEL CELLS			TRAINING GRANT - ADAPTIVE SYSTEM IDENTIFICATION AND CONTROL TECHNIQUES FOR STRUCTURAL NOISE REDUC-		
02/20/2001 - 03/31/2003	FY02: \$0	Total: \$69,815	08/25/2000 - 06/14/2001	FY02: \$0	Total: \$36,543
<i>Prin. Invest.:</i> J E MCGRATH			<i>Prin. Invest.:</i> M AHMODEON		
<i>Tech. Officer:</i> GRC/M B MEADOR			<i>Tech. Officer:</i> LARC/D L PALOMBO		
<i>CASE Category:</i> 12 - CHEMISTRY			<i>CASE Category:</i> 49 - ENGINEERING, OTHER		
<b>NGT 1 01002</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9510</b>	<b>NGT 1 52248</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9519</b>
GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)			GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)		
11/14/2000 - 10/31/2001	FY02: \$0	Total: \$17,721	08/01/2000 - 06/30/2002	FY02: \$0	Total: \$34,001
<i>Prin. Invest.:</i> J J KELLEY			<i>Prin. Invest.:</i> A M SMITH, J R MAHAN		
<i>Tech. Officer:</i> LARC/R H THOMAS			<i>Tech. Officer:</i> LARC/K J PRIESTLEY, LARC/R B LEE III		
<i>CASE Category:</i> 41 - AERONAUTICAL ENGR			<i>CASE Category:</i> 46 - MECHANICAL ENGR		
<b>NGT 1 01003</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9511</b>	<b>NGT 5 30198</b>	<b>VA POLYTECHNIC INST &amp; ST UNIV</b>	<b>9520</b>
GRADUATE STUDENT RESEARCHERS PROGRAM			ESTIMATING FOREST VEGETATION BIOMASS USING AIRBORNE LIDAR MEASUREMENTS STUDENT: SORIN POPESCU		
01/26/2001 - 12/31/2001	FY02: \$0	Total: \$22,000	08/24/1999 - 08/31/2002	FY02: \$0	Total: \$66,000
<i>Prin. Invest.:</i> T C WARD			<i>Prin. Invest.:</i> R H WYNNE		
<i>Tech. Officer:</i> LARC/E J SIOCHI, LARC/J A HINKLEY			<i>Tech. Officer:</i> GSFC/M WEI		
<i>CASE Category:</i> 12 - CHEMISTRY			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		

## WASHINGTON

## NASA'S UNIVERSITY PROGRAM

**NGT 5 50260**            **VA POLYTECHNIC INST & ST UNIV**            **9521**  
 A SHARED AUGMENTED REALITY SYSTEM FOR COMMUNICATIO NACROSS  
 ENVIRONMENTS STUDENT: WILLIAM STADERMAN  
 07/07/1999 - 08/31/2002            FY02: \$0            Total: \$66,000  
*Prin. Invest.:* B M KLEINER  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50425**            **VA POLYTECHNIC INST & ST UNIV**            **9522**  
 NOVEL APPROACHES TO ESTABLISHING VALIDITY & RELIAB ILITY OF  
 MECHANICAL RESPONSE TISSUE ANALYSIS: T  
 08/14/2002 - 08/14/2005            FY02: \$0            Total: \$0  
*Prin. Invest.:* W G HERBERT  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 8 52909**            **VA POLYTECHNIC INST & ST UNIV**            **9523**  
 DEVELOPMENT OF SELF-MONITORING AND SELF-HEALING BOLDT JOINTS  
 05/25/2001 - 06/30/2004            FY02: \$0            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**            **9524**  
 ELECTRIC FIELD-MEDIATED PROCESSING OF POLYMERS  
 06/07/2000 - 01/14/2002            FY02: \$1            Total: \$38,513  
*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**            **9525**  
 A MINIATURE EMBEDDED RECONFIGURABLE COMPUTER AND LOGIC  
 MODULE  
 04/09/2001 - 05/22/2002            FY02: \$0            Total: \$39,957  
*Prin. Invest.:* J H TUCKER  
*Tech. Officer:* LARC/Q A SHAMS  
*CASE Category:* 45 - ELECTRICAL ENGR

**NAG 8 1484**            **VIRGINIA COMMONWEALTH UNIV**            **9526**  
 R/S GAS PHASE POLYMERIZATION AND NUCLEATION EXPERIMENTS IN  
 MICROGRAVITY  
 02/01/1998 - 01/31/2003            FY02: \$0            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**            **9527**  
 NEUROLAB EXPERIMENT DOCUMENT FOR E-049  
 02/22/1996 - 09/30/2002            FY02: \$0            Total: \$915,438  
*Prin. Invest.:* D ECKBURG  
*Tech. Officer:* JSC/A LEE  
*CASE Category:* 56 - MEDICL

**NAS 9 19541**            **VIRGINIA COMMONWEALTH UNIV**            **9528**  
 AUTONOMIC MECHANISMS DURING PROLONGED WEIGHTLESSNE SS  
 03/14/1996 - 02/28/2002            FY02: \$0            Total: \$749,668  
*Prin. Invest.:* H B CHERMSIDE  
*Tech. Officer:* JSC/C M BUNTIN  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NCC 1 02013**            **VIRGINIA COMMONWEALTH UNIV**            **9529**  
 FEXIBLE, HIGH PERFORMANCE, HIGH STABILITY SENSORS/ ACTUATORS  
 FOR AEROSPACE APPLICATIONS  
 02/14/2002 - 02/13/2004            FY02: \$0            Total: \$0  
*Prin. Invest.:* Z OUNAIES  
*Tech. Officer:* LARC/J S HARRISON  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 3 645**            **VIRGINIA COMMONWEALTH UNIV**            **9530**  
 INVESTIGATION OF BOUNDARY LAYER DEVELOPMENT I LOW- PRESSURE  
 TURBINE STAGES  
 09/03/1998 - 10/31/2000            FY02: \$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**            **9531**  
 MEDICAL INFORMANTICS AND TECH APPLICATIONS CONSORTIUM  
 07/01/1999 - 10/31/2002            FY02: \$0            Total: \$5,772,199  
*Prin. Invest.:* R C MERRELL  
*Tech. Officer:* JSC/J S LOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 9 148**            **VIRGINIA COMMONWEALTH UNIV**            **9532**  
 MEDICAL INFORMATICS & TECHNOLOGY APPLICATIONS TEST BED  
 01/22/2002 - 10/30/2002            FY02: \$0            Total: \$0  
*Prin. Invest.:* R C MERRELL  
*Tech. Officer:* JSC/J S LOGAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## WASHINGTON

**NAG 5 7672**            **CENTRAL WASHINGTON UNIV**            **9533**  
 FUNDING FOR 'VARIATIONS IN SEA LEVEL CHANGE ALONG THE CASCADIA  
 MARGIN.'(SENH98-0083)  
 09/01/1998 - 06/30/2002            FY02: \$0            Total: \$294,208  
*Prin. Invest.:* M MILLER  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 10501**            **CENTRAL WASHINGTON UNIV**            **9534**  
 APPLICATIONS OF DIGITAL ELEVATION MODELS TO THE ACTIVE TECTON-  
 ICS & PALEOCLIMATE OF CENTRAL ASIA  
 03/02/2001 - 02/28/2003            FY02: \$0            Total: \$19,000  
*Prin. Invest.:* C RUBIN  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 6034**            **HERITAGE COLL**            **9535**  
 ENHANCING SCIENCE TEACHER TRAINING USING WATER RES OURCES &  
 GLOBE  
 06/10/1999 - 03/31/2002            FY02: \$0            Total: \$512,930  
*Prin. Invest.:* P T ALEXANDER  
*Tech. Officer:* ARC/A CARDENAS, ARC/G S LEE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG13 02057**            **HERITAGE COLL**            **9536**  
 PAIR-INCORPORATION OF SATELLITE IMAGERY ANALYSIS I N ENVIRON-  
 MENT AND COMPUTER SCIENCE CIRRICULA  
 09/23/2002 - 09/30/2006            FY02: \$0            Total: \$0  
*Prin. Invest.:* D FALCO  
*Tech. Officer:* SSC/D TRAVIS  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER



<p><b>NAG13 99027</b>                      <b>HERITAGE COLL</b>                      <b>9537</b>  APPLICATION OF REMOTELY SENSED INFORMATION TO ENVIRONMENTAL  PROBLEMS OF HISPANICS AND NATIVE AM  09/08/1999 - 09/26/2001                      FY02: \$0                      Total: \$198,642  Prin. Invest.: J W FALCO  Tech. Officer: SSC/R TRAVIS  CASE Category: 62 - PSYCHOLOGY SOCIAL ASPECTS</p>	<p><b>NAG 1 01078</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9545</b>  TOUGHENED RESIN DEVELOPMENT AND COMPOSITE SYSTEMS FOR  VARTM APPLICATIONS  05/24/2001 - 05/30/2004                      FY02: \$0                      Total: \$118,500  Prin. Invest.: J C SEFERIS  Tech. Officer: LARC/B J JENSEN, LARC/R J CANO  CASE Category: 47 - METAL &amp; MATERIALS ENGR</p>
<p><b>NAG 5 11836</b>                      <b>UNIV OF PUGET SOUND</b>                      <b>9538</b>  EVOLUTION OF SEA ICE THICKNESS DISTRIBUTION DERIVED FROM  MODELING AND REMOTE SENSING  03/18/2002 - 03/14/2003                      FY02: \$0                      Total: \$0  Prin. Invest.: A THORNDIKE  Tech. Officer: GSFC/W ABDALATI  CASE Category: 33 - OCEANOGRAPHY</p>	<p><b>NAG 2 1450</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9546</b>  NETWORK SERVER PARADIGMS FOR AIR TRAFFIC MANAGEMENT AUTO-  MATION  12/14/2000 - 12/31/2002                      FY02: \$0                      Total: \$27,939  Prin. Invest.: S DEVASIA  Tech. Officer: ARC/G MEYER  CASE Category: 49 - ENGINEERING, OTHER</p>
<p><b>NAG 5 12328</b>                      <b>UNIV OF PUGET SOUND</b>                      <b>9539</b>  BIOGEOCHEMISTRY OF IRON IN A NEAR-NEUTRAL PH IRON-DEPOSITING  HOT SPRING WITH PHOTOTROPHIC MICROBIAL  06/27/2002 - 06/30/2005                      FY02: \$0                      Total: \$0  Prin. Invest.: B PIERSON  Tech. Officer: GSFC/M MEYER  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 2 1514</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9547</b>  THE ROLE OF THE HOMEBOX TRANSCRIPTION FACTOR, CPRO X1, IN  DEVELOPMENT OF THE VESTIBULAR PERIPHERY IN  08/17/2001 - 07/14/2003                      FY02: \$0                      Total: \$71,220  Prin. Invest.: J S STONE  Tech. Officer: ARC/M M AVERNER  CASE Category: 51 - BIOLOGY (EXCLUDING ENVIR)</p>
<p><b>NAG 1 2072</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9540</b>  COORD'D PARAMETERIZATION DEV &amp; LG-EDDY SIMULATION FOR MARINE  &amp; ARCTIC CLOUD-TOPPED BOUNDARY LAYERS  06/12/1998 - 03/31/2002                      FY02: \$0                      Total: \$236,000  Prin. Invest.: C S BRETHERTON  Tech. Officer: LARC/D S MCDUGAL, LARC/J RAPER  CASE Category: 31 - ATMOSPHERIC SCIENCE</p>	<p><b>NAG 2 1538</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9548</b>  INTERLEAVED CONTINGENT PLANNING AND EXECUTION  02/25/2002 - 02/14/2003                      FY02: \$0                      Total: \$0  Prin. Invest.: D WELD  Tech. Officer: ARC/R A MORRIS, ARC/D SMITH  CASE Category: 22 - COMPUTER SCIENCE</p>
<p><b>NAG 1 2079</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9541</b>  AIRBORNE STUDIES IN THE ARCTIC IN SUPPORT OF FIRE III  06/12/1998 - 03/11/2003                      FY02: \$0                      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</p>	<p><b>NAG 3 1865</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9549</b>  INDIUM MONO-ION OSCILLATOR II  07/23/1996 - 01/01/2001                      FY02: \$0                      Total: \$450,000  Prin. Invest.: W NAGOURNEY, M DEHMELT  Tech. Officer: GRC/B S SINGH  CASE Category: 13 - PHYSICS</p>
<p><b>NAG 1 2193</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9542</b>  DYNAMICAL COUPLING OF STRATOSPHERE &amp; TROPOSPHERE  05/12/1999 - 09/30/2002                      FY02: \$0                      Total: \$354,994  Prin. Invest.: J R HOLTON  Tech. Officer: LARC/G L MADDREA, LARC/L R POOLE  CASE Category: 99 - MULTI INTERDISCIPL, OTHER</p>	<p><b>NAG 3 2379</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9550</b>  BUOYANCY-DRIVEN INSTABILITIES IN SINGLE-BUBBLE SONOLUMINES-  CENCE (REF.# 123814)  04/04/2000 - 11/30/2003                      FY02: \$0                      Total: \$160,000  Prin. Invest.: T J MATULA  Tech. Officer: GRC/N R HALL  CASE Category: 49 - ENGINEERING, OTHER</p>
<p><b>NAG 1 2296</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9543</b>  PROBABILISTIC STRUCTURAL INSPECTION OPTIMIZATION WITH BAYESIAN  UPDATING OF DAMAGE CHARACTERISTICS  06/01/2000 - 06/30/2002                      FY02: \$0                      Total: \$130,000  Prin. Invest.: K Y LIN  Tech. Officer: LARC/W J STODD, LARC/I S RAJU  CASE Category: 49 - ENGINEERING, OTHER</p>	<p><b>NAG 3 2455</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9551</b>  PRESSURE SENSITIVE (PSP) FOR TWO SENSOR LIFETIME MEASUREMENT  OF PRESSURE AND TEMPERATURE  06/07/2000 - 12/31/2002                      FY02: \$0                      Total: \$105,000  Prin. Invest.: D GOUTERMAN  Tech. Officer: GRC/T BENCIC  CASE Category: 12 - CHEMISTRY</p>
<p><b>NAG 1 01029</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9544</b>  INTEGRATED AEROSERVOELASTIC OPTIMIZATION OF FULL-SCALE  STRAIN-ACTUATED AIRPLANES: TOOL DEVELOP-  02/15/2001 - 12/31/2003                      FY02: \$0                      Total: \$53,000  Prin. Invest.: E LIVNE  Tech. Officer: LARC/C D WIESEMAN, LARC/R C SCOTT  CASE Category: 41 - AERONAUTICAL ENGR</p>	<p><b>NAG 3 2517</b>                      <b>UNIV OF WASHINGTON</b>                      <b>9552</b>  INVESTIGATION OF THE LIFTOFF AND BLOWOUT OF TRANSITIONAL AND  TURBULENT JET FLAMES  01/09/2001 - 11/30/2004                      FY02: \$0                      Total: \$80,000  Prin. Invest.: D RILEY  Tech. Officer: GRC/J E BROOKER  CASE Category: 49 - ENGINEERING, OTHER</p>

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## NASA'S UNIVERSITY PROGRAM

**NAG 5 3121**                      **UNIV OF WASHINGTON**                      **9553**  
 A STUDY OF MAGNETIC ACCRETION IN VV PUP AND BL HYI  
 10/18/1995 - 10/31/2000                      FY02: \$0                      Total: \$20,346  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4375**                      **UNIV OF WASHINGTON**                      **9554**  
 POLAR EXCHANGE AT THE SEA SURFACE  
 06/11/1997 - 05/31/2001                      FY02: \$0                      Total: \$2,914,703  
*Prin. Invest.:* D A ROTHROCK  
*Tech. Officer:* GSFC/S GOGINENI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4540**                      **UNIV OF WASHINGTON**                      **9555**  
 THERMAL HISTORY OF LUNAR CRUSTAL ROCKS  
 05/06/1997 - 06/14/2002                      FY02: \$0                      Total: \$165,000  
*Prin. Invest.:* D S MCCALLUM  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 4712**                      **UNIV OF WASHINGTON**                      **9556**  
 TITLE: THE REGIONAL AMAZON MODEL SYNOPTIC SCALE H BIO-  
 GEOCHEMICAL CYCLES FROM EOS (EOSRAM)  
 06/23/1997 - 06/30/2001                      FY02: \$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**                      **9557**  
 RADIATIVE TRANSFER IN SNOW TERRAIN FOR APPLICATION REMOTE  
 SENSING  
 06/17/1997 - 03/14/2001                      FY02: \$0                      Total: \$106,208  
*Prin. Invest.:* L TSANG  
*Tech. Officer:* GSFC/A T CHANG  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 4795**                      **UNIV OF WASHINGTON**                      **9558**  
 TRMM VALIDATION: INTEGRATION OF TRMM SATELLITE AN DATA TO  
 DETERMINE TROPICAL HEATING  
 09/08/1997 - 03/15/2001                      FY02: \$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**                      **9559**  
 DROPPS: DISTRIBUTION AND ROLE OF PARTICLES IN THE POLAR SUMMER  
 MESOSPHERE  
 03/13/1998 - 03/31/2002                      FY02: \$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**                      **9560**  
 ATMOSPHERIC LIGHTNING ATMOSPHERIC LIGHTNING  
 04/16/1998 - 04/20/2002                      FY02: \$0                      Total: \$201,960  
*Prin. Invest.:* M MCCARTHY  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5294**                      **UNIV OF WASHINGTON**                      **9561**  
 IONOSPHERIC NANOSATELLITE FORMATION (ION-F) SCIENCE  
 06/01/2000 - 05/25/2003                      FY02: \$0                      Total: \$91,092  
*Prin. Invest.:* J D SAHR  
*Tech. Officer:* GSFC/J C BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 6067**                      **UNIV OF WASHINGTON**                      **9562**  
 IMPACT OF FOREST CLEARCUTTING IN THE PACIFIC NORTH OD EVENTS  
 07/28/1997 - 07/31/2001                      FY02: \$0                      Total: \$255,000  
*Prin. Invest.:* A GILLESPIE  
*Tech. Officer:* GSFC/H V FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6101**                      **UNIV OF WASHINGTON**                      **9563**  
 CLIMATE PROCESSES OVER THE OCEAN  
 07/24/1997 - 07/31/2001                      FY02: \$0                      Total: \$1,674,000  
*Prin. Invest.:* D HARTMANN  
*Tech. Officer:* GSFC/J A CURRAN  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 6463**                      **UNIV OF WASHINGTON**                      **9564**  
 BROADBAND INFRARED THERMOMETER MEASUREMENTS FOR MO DIS  
 VALIDATION  
 10/14/1997 - 03/31/2003                      FY02: \$0                      Total: \$801,752  
*Prin. Invest.:* A T JESSUP  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6493**                      **UNIV OF WASHINGTON**                      **9565**  
 VALIDATION OF RADARSAT GEOPHYSICAL PROCESSOR SYSTEMS PROD-  
 UCTS  
 10/27/1997 - 09/30/2001                      FY02: \$0                      Total: \$366,447  
*Prin. Invest.:* R LINDSAY  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 6505**                      **UNIV OF WASHINGTON**                      **9566**  
 ESTIMATION OF FLOOD HAZARDS THROUGH REMOTE SENSING AND  
 MODELING (SENH 06-0114, LETTENMAIR AND WOO  
 10/24/1997 - 04/30/2001                      FY02: \$0                      Total: \$152,500  
*Prin. Invest.:* D LETTENMAIER  
*Tech. Officer:* GSFC/H FREY  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 6626**                      **UNIV OF WASHINGTON**                      **9567**  
 CODES TO ENABLE DIRECT SIMULATION OF SOLAR SYSTEM FORMATION.  
 11/17/1997 - 11/14/2001                      FY02: \$0                      Total: \$451,354  
*Prin. Invest.:* G LAKE  
*Tech. Officer:* GSFC/J FISCHER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6924**                      **UNIV OF WASHINGTON**                      **9568**  
 GRANT  
 02/04/1998 - 01/31/2001                      FY02: \$0                      Total: \$478,269  
*Prin. Invest.:* G PARKS  
*Tech. Officer:* GSFC/M HESSE  
*CASE Category:* 13 - PHYSICS

**NAG 5 7114**                      **UNIV OF WASHINGTON**                      **9569**  
 WIND DATA ANALYSIS USING THE 3-D INSTRUMENT  
 03/31/1998 - 03/31/2002                      FY02: \$0                      Total: \$392,000  
*Prin. Invest.:* G PARKS  
*Tech. Officer:* GSFC/K OGILVIE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

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<b>NAG 5 7278</b>	<b>UNIV OF WASHINGTON</b>	<b>9570</b>	<b>NAG 5 7819</b>	<b>UNIV OF WASHINGTON</b>	<b>9578</b>
XTE PROPOSAL - THE OUTBURST CYCLE OF V803 CEN			EOS OBSERVATION RESOURCE		
04/15/1998 - 04/30/2001	FY02: \$0	Total: \$10,353	12/14/1998 - 12/31/2001	FY02: \$0	Total: \$549,872
<i>Prin. Invest.:</i> P SZKODY			<i>Prin. Invest.:</i> P V HOBBS		
<i>Tech. Officer:</i> GSFC/J SWANK			<i>Tech. Officer:</i> GSFC/M D KING		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 7330</b>	<b>UNIV OF WASHINGTON</b>	<b>9571</b>	<b>NAG 5 7847</b>	<b>UNIV OF WASHINGTON</b>	<b>9579</b>
XTE PROPOSAL - TIMING THE X-RAY SOURCE IN NCG 6652 : THE REMAINING LUMINOUS GLOBULAR CLUSTER			VARIABILITY OF NET PRECIPITATION OVER ANTARCTIC SE A ICE AND ITS EFFECTS ON ICE-OCEAN INTERACTIONS		
04/24/1998 - 04/30/2002	FY02: \$0	Total: \$20,200	11/23/1998 - 12/31/2002	FY02: \$0	Total: \$328,625
<i>Prin. Invest.:</i> B MARGON			<i>Prin. Invest.:</i> A SCHWEIGER		
<i>Tech. Officer:</i> GSFC/L KALUZIENSKI			<i>Tech. Officer:</i> GSFC/S GOGINENI		
<i>CASE Category:</i> 11 - ASTRONOMY			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAG 5 7495</b>	<b>UNIV OF WASHINGTON</b>	<b>9572</b>	<b>NAG 5 7886</b>	<b>UNIV OF WASHINGTON</b>	<b>9580</b>
MAPPING THE SPATIAL DISTRIBUTION AND TIME EVOLUTION OF SNOW-WATER EQUIVALENT WITH PASSIVE MICROWAVE			VALIDATION OF ACOUSTICAL RAINFALL MEASUREMENTS		
06/29/1998 - 09/14/2001	FY02: \$0	Total: \$350,000	12/02/1998 - 09/30/2001	FY02: \$0	Total: \$201,504
<i>Prin. Invest.:</i> L TSANG			<i>Prin. Invest.:</i> J A NYSTUEN		
<i>Tech. Officer:</i> GSFC/E T ENGMAN			<i>Tech. Officer:</i> GSFC/O W THIELE		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 7526</b>	<b>UNIV OF WASHINGTON</b>	<b>9573</b>	<b>NAG 5 7932</b>	<b>UNIV OF WASHINGTON</b>	<b>9581</b>
EVALUATION OF OCEANIC COOL-SKIN AND WARM LAYER MODELS USING LONG-TERM MEASUREMENTS			THE COUNTERPARTS OF THE LUMINOUS, BURSTING X-RAY SOURCES IN GLOBULAR CLUSTERS - LTSA98		
06/08/1998 - 05/31/2002	FY02: \$0	Total: \$435,721	01/04/1999 - 01/14/2004	FY02: \$0	Total: \$141,508
<i>Prin. Invest.:</i> A T JESSUP			<i>Prin. Invest.:</i> S F ANDERSON		
<i>Tech. Officer:</i> GSFC/E LINDSTROM			<i>Tech. Officer:</i> GSFC/D K WEST		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 7550</b>	<b>UNIV OF WASHINGTON</b>	<b>9574</b>	<b>NAG 5 8089</b>	<b>UNIV OF WASHINGTON</b>	<b>9582</b>
AIRBORNE MICROWAVE IMAGING OF RIVER VELOCITIES			SOLAR WIND/IONOSPHERIC COUPLING IN THE MASS LOADING OF THE MAGNETOSPHERE AND THE FORMATION OF THE GE		
06/30/1998 - 12/31/2001	FY02: \$0	Total: \$330,000	01/28/1999 - 02/28/2003	FY02: \$0	Total: \$224,963
<i>Prin. Invest.:</i> W J PLANT			<i>Prin. Invest.:</i> R M WINGLEE		
<i>Tech. Officer:</i> GSFC/E T ENGMAN			<i>Tech. Officer:</i> GSFC/J SHARBER		
<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 7604</b>	<b>UNIV OF WASHINGTON</b>	<b>9575</b>	<b>NAG 5 8109</b>	<b>UNIV OF WASHINGTON</b>	<b>9583</b>
CIS NET: IN SITU AND REMOTE MONITORING OF PRODUCTIVITY AND NUTRIENT CYCLES IN PUGET SOUND			AIRBORNE IN SITU MEASUREMENTS FOR TRMM VALIDATION STUDIES AT KWAJALEIN		
07/21/1998 - 09/30/2001	FY02: \$0	Total: \$179,832	02/08/1999 - 02/14/2003	FY02: \$0	Total: \$690,698
<i>Prin. Invest.:</i> B FROST			<i>Prin. Invest.:</i> P V HOBBS		
<i>Tech. Officer:</i> GSFC/J W MARRA			<i>Tech. Officer:</i> GSFC/R W LAWRENCE		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 7675</b>	<b>UNIV OF WASHINGTON</b>	<b>9576</b>	<b>NAG 5 8164</b>	<b>UNIV OF WASHINGTON</b>	<b>9584</b>
UTILIZATION OF THE UNIV OF WASHINGTON'S AIRBORNE MEASUREMENTS FOR STUDIES OF THE RADIATIVE EFFECTS OF			TOOLS TO PROBE THE OUTER COMETARY SYSTEM AND TO SIMULATE THE FORMATION AND EVOLUTION OF THE SOLAR		
09/09/1998 - 08/31/2003	FY02: \$0	Total: \$396,062	02/08/1999 - 01/31/2003	FY02: \$0	Total: \$470,969
<i>Prin. Invest.:</i> P V HOBBS			<i>Prin. Invest.:</i> G LAKE		
<i>Tech. Officer:</i> GSFC/M I MISHCHENKO			<i>Tech. Officer:</i> GSFC/P HUNTER		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 7732</b>	<b>UNIV OF WASHINGTON</b>	<b>9577</b>	<b>NAG 5 8296</b>	<b>UNIV OF WASHINGTON</b>	<b>9585</b>
POLAR UVI MISSION DATA ANALYSIS EXTENDED MISSION			DYNAMICS AND THERMODYNAMICS OF THE NORTH PACIFIC OCEAN		
09/29/1998 - 09/30/2001	FY02: \$0	Total: \$1,141,740	02/23/1999 - 08/31/2002	FY02: \$0	Total: \$456,973
<i>Prin. Invest.:</i> G K PARKS			<i>Prin. Invest.:</i> K KELLY		
<i>Tech. Officer:</i> GSFC/R HOFFMAN			<i>Tech. Officer:</i> GSFC/E LINDSTROM		
<i>CASE Category:</i> 13 - PHYSICS			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		

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**NAG 5 8363**                      **UNIV OF WASHINGTON**                      **9586**  
 VALIDATION OF THE LIDAR RETRIEVAL OF AEROSOL EXTINCTION  
 03/15/1999 - 03/14/2001                      FY02: \$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**                      **9587**  
 ANALYSIS OF ASCA AND ROSAT OBSERVATIONS OF CATAclySMIC  
 VARIABLES\_(ADP98  
 03/03/1999 - 03/14/2001                      FY02: \$0                      Total: \$20,000  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8684**                      **UNIV OF WASHINGTON**                      **9588**  
 INVESTIGATION OF THE RELATIONSHIPS BETWEEN AEROSOL PHYSICAL  
 AND CHEMICAL PROPERTIES  
 07/16/1999 - 07/14/2002                      FY02: \$0                      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**                      **9589**  
 MOTOR PROTEINS AS SHUTTLES FOR DIRECTED TRANSPORT IN SYN-  
 THETIC MATRICES  
 09/27/1999 - 01/31/2003                      FY02: \$0                      Total: \$477,605  
*Prin. Invest.:* V VOGEL  
*Tech. Officer:* GSFC/S DAVISON  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8801**                      **UNIV OF WASHINGTON**                      **9590**  
 "AIRCRAFT SUPPORT FOR SAFARI-2000"  
 12/13/1999 - 12/14/2001                      FY02: \$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**                      **9591**  
 O VI EMISSION LINES IN HYADES F STARS - FUSE  
 01/24/2000 - 01/31/2003                      FY02: \$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**                      **9592**  
 THE ORIGIN OF PECULIAR UV LINE RATIOS IN MAGNETIC CATAclySMIC  
 VARIABLES - FUSE  
 01/24/2000 - 01/31/2002                      FY02: \$0                      Total: \$14,900  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9022**                      **UNIV OF WASHINGTON**                      **9593**  
 "UNIV OF WASHINGTON PARTICIPATION IN SAFARI- 2000"  
 02/08/2000 - 02/14/2003                      FY02: \$0                      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**                      **9594**  
 ENHANCING THE LASER-LUNAR RANGING TEST OF THE STRONG EQUIVA-  
 LENCE PRINCIPLE  
 02/17/2000 - 01/31/2003                      FY02: \$0                      Total: \$77,500  
*Prin. Invest.:* J GUNDLACH  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9250**                      **UNIV OF WASHINGTON**                      **9595**  
 ION-F: A SPACE-BASED TESTBED FOR DISTRIBUTED FORMATION CON-  
 TROL USING THE DAWGSTAR NANOSAT  
 03/17/2000 - 03/31/2002                      FY02: \$0                      Total: \$87,000  
*Prin. Invest.:* M CAMPBELL  
*Tech. Officer:* GSFC/K LUU  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 9324**                      **UNIV OF WASHINGTON**                      **9596**  
 NEXT GENERATION SPACE TELESCOPE (NGST) AD HOC SCIENCE WORK-  
 ING GROUP (ASWG) ACTIVITY  
 03/21/2000 - 03/14/2001                      FY02: \$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**                      **9597**  
 ROLE OF THE POLAR OCEANS IN GLOBAL CLIMATE  
 06/19/2000 - 08/31/2003                      FY02: \$0                      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**                      **9598**  
 UNDERSTANDING WATER, CLIMATE AND GLOBAL CHANGE: A GEWEX  
 GLOBAL WATER AND ENERGY PATHFINDER DATA SET  
 04/25/2000 - 04/30/2003                      FY02: \$0                      Total: \$111,665  
*Prin. Invest.:* D LETTENMAIER  
*Tech. Officer:* GSFC/J DODGE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9454**                      **UNIV OF WASHINGTON**                      **9599**  
 TERRESTRIAL HYDROLOGY & CLIMATE STUDIES USING EOS- ERA DATA  
 05/17/2000 - 04/14/2003                      FY02: \$0                      Total: \$154,023  
*Prin. Invest.:* D LETTENMAIER  
*Tech. Officer:* GSFC/P HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9657**                      **UNIV OF WASHINGTON**                      **9600**  
 RELATIONSHIP BETWEEN PRECIPITATING CONVECTION AND EASTERLY  
 WAVE DYNAMICS IN THE WESTERN CENTRAL PACI  
 06/22/2000 - 05/31/2003                      FY02: \$0                      Total: \$147,000  
*Prin. Invest.:* C BRETHERTON  
*Tech. Officer:* GSFC/R LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9668**                      **UNIV OF WASHINGTON**                      **9601**  
 COMBINED USE OF TRMM SATELLITE GROUND-VALIDATION DATA TO MAP  
 CONVECTIVE & STRATIFORM PRECIPITATION  
 06/19/2000 - 11/30/2002                      FY02: \$0                      Total: \$290,070  
*Prin. Invest.:* R A HOUZE  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 11 - ASTRONOMY

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<b>NAG 5 9720</b>	<b>UNIV OF WASHINGTON</b>	<b>9602</b>	<b>NAG 5 10246</b>	<b>UNIV OF WASHINGTON</b>	<b>9610</b>
JOINT-PROBABILITY ANALYSIS OF THE NATURAL VARIABILITY OF TROPICAL OCEANIC PRECIPITATION			UNDERSTANDING THE ENIGMATIC SW SEX STARS (FUSE 00)		
06/21/2000 - 06/30/2003	FY02: \$0	Total: \$231,083	02/12/2001 - 02/14/2003	FY02: \$0	Total: \$46,000
<i>Prin. Invest.:</i> S E YUTER			<i>Prin. Invest.:</i> P SZKODY		
<i>Tech. Officer:</i> GSFC/R J LAWRENCE			<i>Tech. Officer:</i> GSFC/G SONNEBORN		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 9830</b>	<b>UNIV OF WASHINGTON</b>	<b>9603</b>	<b>NAG 5 10342</b>	<b>UNIV OF WASHINGTON</b>	<b>9611</b>
USE OF TRMM DATA TO EVALUATE BENEFITS OF POST-2002 GLOBAL PRECIPITATION MISSION FOR LAND SURFACE HYD			MODELING CONTINENTAL SCALE EROSION IN MOUNTAINOUS REGIONS		
08/23/2000 - 08/31/2003	FY02: \$0	Total: \$124,000	02/05/2001 - 01/31/2003	FY02: \$0	Total: \$98,864
<i>Prin. Invest.:</i> D LETTENMAIER			<i>Prin. Invest.:</i> D R MONTGOMERY		
<i>Tech. Officer:</i> GSFC/R J LAWRENCE			<i>Tech. Officer:</i> GSFC/H V FREY		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 32 - GEOLOGICAL SCIENCE		
<b>NAG 5 9835</b>	<b>UNIV OF WASHINGTON</b>	<b>9604</b>	<b>NAG 5 10343</b>	<b>UNIV OF WASHINGTON</b>	<b>9612</b>
MICROWAVE PASSIVE REMOTE SENSING OF SNOW: SCATTERING MODELS			ACCRETION ONTO MAGNETIC WHITE DWARFS (FUSE 00)		
07/26/2000 - 05/31/2003	FY02: \$0	Total: \$44,104	01/31/2001 - 01/31/2003	FY02: \$0	Total: \$48,845
<i>Prin. Invest.:</i> L TSANG			<i>Prin. Invest.:</i> P SZKODY		
<i>Tech. Officer:</i> GSFC/A T CHANG			<i>Tech. Officer:</i> GSFC/G SONNEBORN		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 9854</b>	<b>UNIV OF WASHINGTON</b>	<b>9605</b>	<b>NAG 5 10400</b>	<b>UNIV OF WASHINGTON</b>	<b>9613</b>
SEA ICE KINEMATICS & THICKNESS FROM RGPS: OBSERVATIONS & THEORY			THE ORIGIN OF PECULIAR UV LINE RATIOS IN THE MAGNETIC CATAclysmic VARIABLE AE AQR (FUSE 2000)		
08/03/2000 - 09/30/2002	FY02: \$0	Total: \$197,355	04/02/2001 - 05/31/2003	FY02: \$0	Total: \$14,440
<i>Prin. Invest.:</i> H STERN			<i>Prin. Invest.:</i> P SZKODY		
<i>Tech. Officer:</i> GSFC/E LINDSTROM			<i>Tech. Officer:</i> GSFC/G SONNEBORN		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 11 - ASTRONOMY		
<b>NAG 5 9906</b>	<b>UNIV OF WASHINGTON</b>	<b>9606</b>	<b>NAG 5 10404</b>	<b>UNIV OF WASHINGTON</b>	<b>9614</b>
ESTIMATION OF WEST ANTARCTIC MASS BALANCE USING ICESAT/GLAS			VALIDATION OF LIDAR RETRIEVAL OF AEROSOL EXTINCTION		
09/08/2000 - 09/14/2003	FY02: \$0	Total: \$87,101	04/02/2001 - 03/31/2003	FY02: \$0	Total: \$85,488
<i>Prin. Invest.:</i> C F RAYMOND			<i>Prin. Invest.:</i> D S COVERT		
<i>Tech. Officer:</i> GSFC/J ZWALLY			<i>Tech. Officer:</i> GSFC/M I MISHCHENKO		
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 5 10092</b>	<b>UNIV OF WASHINGTON</b>	<b>9607</b>	<b>NAG 5 10499</b>	<b>UNIV OF WASHINGTON</b>	<b>9615</b>
USE OF RADARSAT DATA TO PREDICT THE EFFECTS OF LAKE & WETLAND STORAGE ON THE FLOW OF ARCTIC RIVERS			INTERPLANETARY DUST		
11/20/2000 - 11/30/2002	FY02: \$0	Total: \$74,049	03/13/2001 - 03/14/2003	FY02: \$0	Total: \$361,000
<i>Prin. Invest.:</i> D LETTENMAIER			<i>Prin. Invest.:</i> D E BROWNLEE		
<i>Tech. Officer:</i> GSFC/K PARTINGTON			<i>Tech. Officer:</i> GSFC/J M BOYCE		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 12 - CHEMISTRY		
<b>NAG 5 10114</b>	<b>UNIV OF WASHINGTON</b>	<b>9608</b>	<b>NAG 5 10570</b>	<b>UNIV OF WASHINGTON</b>	<b>9616</b>
SURFACE WIND SPEED & FLUXES FROM SYNTHETIC APERTURE RADAR: VALIDATION & APPLICATION TO THE			NUMERICAL CALCULATION OF THE MAGNETIC FIELDS GENERATED BY OCEAN TIDES & THEIR COMPARISON WITH SATEL		
11/22/2000 - 11/30/2003	FY02: \$0	Total: \$158,480	03/13/2001 - 03/14/2004	FY02: \$0	Total: \$80,000
<i>Prin. Invest.:</i> P MOURAD			<i>Prin. Invest.:</i> R TYLER		
<i>Tech. Officer:</i> GSFC/W ABDALATI			<i>Tech. Officer:</i> GSFC/M WEI		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 10225</b>	<b>UNIV OF WASHINGTON</b>	<b>9609</b>	<b>NAG 5 10621</b>	<b>UNIV OF WASHINGTON</b>	<b>9617</b>
ICE SHEETS SURFACE AND BED BOUNDARY CONDITIONS FROM REMOTE SENSING			LAGRANGIAN ASSIMILATION OF SATELLITE DATA FOR CLIMATE STUDIES		
01/04/2001 - 07/14/2002	FY02: \$0	Total: \$116,663	03/19/2001 - 03/31/2004	FY02: \$0	Total: \$79,269
<i>Prin. Invest.:</i> D WINEBRENNER			<i>Prin. Invest.:</i> R LINDSAY		
<i>Tech. Officer:</i> GSFC/W ABDALATI			<i>Tech. Officer:</i> GSFC/W ABDALATI		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAG 5 10225</b>	<b>UNIV OF WASHINGTON</b>	<b>9609</b>	<b>NAG 5 10624</b>	<b>UNIV OF WASHINGTON</b>	<b>9618</b>
ICE SHEETS SURFACE AND BED BOUNDARY CONDITIONS FROM REMOTE SENSING			CLIMATE PROCESSES OVER THE OCEANS		
01/04/2001 - 07/14/2002	FY02: \$0	Total: \$116,663	03/20/2001 - 03/31/2004	FY02: \$0	Total: \$596,979
<i>Prin. Invest.:</i> D WINEBRENNER			<i>Prin. Invest.:</i> D L HARTMANN		
<i>Tech. Officer:</i> GSFC/W ABDALATI			<i>Tech. Officer:</i> GSFC/A ANDERSON		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 33 - OCEANOGRAPHY		

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NASA'S UNIVERSITY PROGRAM

**NAG 5 10745**                      **UNIV OF WASHINGTON**                      **9619**  
 "UNIV OF WASHINGTON AIRBORNE STUDIES IN SUPPORT OF THE CLAMS-2001 FIELD STUDY"  
 04/17/2001 - 02/28/2003                      FY02: \$0                      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**                      **9620**  
 A KINETIC STUDY OF PARTICLE ACCELERATION IN MAGNETOSPHERIC CURRENT SHEETS & COMPARISON WITH OBSERVATIONS  
 05/08/2001 - 05/14/2004                      FY02: \$0                      Total: \$87,737  
*Prin. Invest.:* M J BRITTNACHER  
*Tech. Officer:* GSFC/J F SPANN  
*CASE Category:* 99 - MULTI INTERDISCIPLINARY

**NAG 5 10962**                      **UNIV OF WASHINGTON**                      **9621**  
 MODELING IONOSPHERIC OUTFLOW IN GEOPHYSICALLY RELEVANT COORDINATE SYSTEMS  
 05/23/2001 - 05/31/2004                      FY02: \$0                      Total: \$68,222  
*Prin. Invest.:* R M WINGLEE  
*Tech. Officer:* GSFC/J SPANN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11057**                      **UNIV OF WASHINGTON**                      **9622**  
 MULTISENSOR ASSESSMENT OF ARCTIC POLYNYA VARIABILITY & ITS ASSOCIATION WITH LARGE-SCALE CHANGE  
 06/22/2001 - 06/30/2004                      FY02: \$0                      Total: \$46,515  
*Prin. Invest.:* S MARTIN  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11079**                      **UNIV OF WASHINGTON**                      **9623**  
 A ONE-YEAR PILOT STUDY FOR THE INCLUSION OF ACTIVE OPTICAL SENSORS INTO PALACE FLOATS  
 08/06/2001 - 08/14/2003                      FY02: \$0                      Total: \$56,557  
*Prin. Invest.:* S RISER  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 11359**                      **UNIV OF WASHINGTON**                      **9624**  
 SUPPLEMENT TO MICROWAVE PASSIVE REMOTE SENSING OF SNOW: SCATTERING MODELS  
 10/05/2001 - 09/14/2003                      FY02: \$45,000                      Total: \$45,000  
*Prin. Invest.:* L TSANG  
*Tech. Officer:* GSFC/A T CHANG  
*CASE Category:* 39 - ENVIRONMENTAL SCIENCE, OTHER

**NAG 5 11372**                      **UNIV OF WASHINGTON**                      **9625**  
 INVESTIGATION OF THE FEASIBILITY OF PARASITIC MICROWAVE REMOTE SENSING OF PRECIPITATION  
 10/29/2001 - 10/31/2002                      FY02: \$50,000                      Total: \$50,000  
*Prin. Invest.:* J D SAHR  
*Tech. Officer:* GSFC/J A WEINMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCIENCE, OTHER

**NAG 5 11386**                      **UNIV OF WASHINGTON**                      **9626**  
 WORKSHOP ON LARGE-SCALE OBSERVING SYSTEMS IN SUPPORT OF SEARCH  
 11/05/2001 - 10/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J MORRISON  
*Tech. Officer:* GSFC/W ABDALATI  
*CASE Category:* 99 - MULTI INTERDISCIPLINARY

**NAG 5 11446**                      **UNIV OF WASHINGTON**                      **9627**  
 EQUILIBRIUM SHAPES OF SOLID SOLAR SYSTEM BODIES  
 12/21/2001 - 12/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K HOLSAPPLE  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPLINARY, OTHER

**NAG 5 11499**                      **UNIV OF WASHINGTON**                      **9628**  
 AQUEOUS CHEMICAL MODELING OF SEDIMENTATION ON EARLY MARS WITH APPLICATION TO SURFACE-ATMOSPHERE  
 12/28/2001 - 12/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D CATLING  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NAG 5 11542**                      **UNIV OF WASHINGTON**                      **9629**  
 EVOLUTION OF OXYGEN ATMOSPHERES  
 01/04/2002 - 01/14/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D CATLING  
*Tech. Officer:* GSFC/M MEYER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11587**                      **UNIV OF WASHINGTON**                      **9630**  
 THERMAL HISTORY OF LUNAR CRUSTAL ROCKS  
 01/10/2002 - 01/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S MCCALLUM  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 12 - CHEMISTRY

**NAG 5 11622**                      **UNIV OF WASHINGTON**                      **9631**  
 "EVALUATION OF HYDROLOGIC REMOTE SENSING OBSERVATIONS FOR IMPROVED WEATHER PREDICTION"  
 02/01/2002 - 01/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D LETTENMAIER  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCIENCE, OTHER

**NAG 5 11632**                      **UNIV OF WASHINGTON**                      **9632**  
 TOWARD IMPROVED PROCESS-BASED PAN-ARTIC PREDICTION OF LAND SURFACE MOISTURE AND ENERGY FLUXES  
 02/13/2002 - 02/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D P LETTENMAIER  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCIENCE, OTHER

**NAG 5 11665**                      **UNIV OF WASHINGTON**                      **9633**  
 ARCHIVE & ANALYSIS OF DATA COLLECTED ABROAD THE UNIVERSITY OF WASHINGTON'S CONVAIR-580 RESEARCH AIRCRAFT  
 02/01/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P V HOBBS  
*Tech. Officer:* GSFC/M D KING  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 11679**                      **UNIV OF WASHINGTON**                      **9634**  
 OPTICAL LIGHTNING DETECTOR (OLD) FOR COMING SATELLITE  
 01/31/2002 - 01/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R H HOLZWORTH  
*Tech. Officer:* GSFC/R PFAFF  
*CASE Category:* 11 - ASTRONOMY

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**NAG 5 11685**                      **UNIV OF WASHINGTON**                      **9635**  
 "GLOBAL ASSESSMENT OF OROGRAPHIC FLOODS AND HEAVY RAID FROM TRMM SATELLITE DATA"  
 02/07/2002 - 02/14/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R A HOUSE  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11800**                      **UNIV OF WASHINGTON**                      **9636**  
 A POLAR-SPECIFIC 20-YAR DATA SET OF CLOUD FRACTION AND HEIGHT DERIVED FROM SATELLITE RADIANCES  
 02/28/2002 - 03/31/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* A SCHWEIGER  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11869**                      **UNIV OF WASHINGTON**                      **9637**  
 SOLAR WIND AND IONOSPHERIC INFLUENCES ON GLOBAL CIRCULATION AND ENERGIZATION  
 03/22/2002 - 03/14/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* R M WINGLEE  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11892**                      **UNIV OF WASHINGTON**                      **9638**  
 N-CHILADA: A FRAMEWORK FOR PARALLEL DATA ANALYSIS AND VISUALIZATION.  
 04/11/2002 - 05/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T R QUINN  
*Tech. Officer:* GSFC/P E HUNTER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12203**                      **UNIV OF WASHINGTON**                      **9639**  
 A STUDY OF THE INNER DISK AND HOT WHITE DWARF IN NOVALIKES ABOVE THE PERIOD GAP  
 05/16/2002 - 05/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P SZKODY  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12374**                      **UNIV OF WASHINGTON**                      **9640**  
 ENSEMBLE STREAMFLOW FORECASTING FOR THE WESTERN U.S. USING NSIPP EXPERIMENTAL PREDICTIONS&LAND-  
 07/30/2002 - 07/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D P LETTENMAIER  
*Tech. Officer:* GSFC/M RIENECKER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 12410**                      **UNIV OF WASHINGTON**                      **9641**  
 COLLABORATIVE PROJECT: THE ROLE OF UNDERGRADUATE EDUCATION IN WORKFORCEDVELOPMENT FOR APPLICATIONS  
 08/01/2002 - 07/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* J DECOSMO  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12539**                      **UNIV OF WASHINGTON**                      **9642**  
 AIR-SEA COUPLING IN THE CALIFORNIA CURRENT REGION  
 08/29/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* K KELLY  
*Tech. Officer:* GSFC/E LINDSTROM  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12548**                      **UNIV OF WASHINGTON**                      **9643**  
 "DEVELOPMENT OF HYDROLOGIC NOWCAST AND FORECAST PRODUCTS USING LAND DATA ASSIMILATION SYSTEM OUTPUT  
 09/05/2002 - 09/14/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* D P LETTENMAIER  
*Tech. Officer:* GSFC/P R HOUSER  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 7 99001**                      **UNIV OF WASHINGTON**                      **9644**  
 GRANT FOR PI OF THE STARDUST PROGRAM (PHASE E)  
 05/21/1999 - 06/30/2004                      FY02: \$0                      Total: \$183,221  
*Prin. Invest.:* D E BROWNLEE  
*Tech. Officer:* HQ/M DAHL  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1512**                      **UNIV OF WASHINGTON**                      **9645**  
 WATER TRANSPORT TO THE UPPER TROPOSPHERE BY CONVECTIVE SYSTEMS, AS INFERRED FROM GLOBAL  
 04/06/1998 - 04/05/2002                      FY02: \$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**                      **9646**  
 POLLUTION AND LIGHTNING  
 10/15/1999 - 09/30/2002                      FY02: \$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**                      **9647**  
 FEASIBILITY STUDY FOR A SPACE-BASED TEST OF THE STRONG EQUIVALENCE PRINCIPLE USING LUNAR RANGING.  
 04/23/2001 - 02/01/2006                      FY02: \$0                      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**                      **9648**  
 ULTRHIGH RESOLUTION OPTICAL FREQUENCY STANDARD USING INDIVIDUAL INDIUM IONS  
 04/20/2001 - 02/01/2004                      FY02: \$0                      Total: \$80,000  
*Prin. Invest.:* W NAGOURNEY  
*Tech. Officer:* MSFC/D HUBBARD  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1849**                      **UNIV OF WASHINGTON**                      **9649**  
 FRC ACCELERATION SPACE THRUSTER (FAST)  
 08/30/2001 - 11/30/2001                      FY02: \$0                      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**                      **9650**  
 VISUAL ANATOMIC GUIDANCE TO FACILITATE ULTRASOUND IMAGE ACQUISITION  
 09/07/2000 - 08/31/2001                      FY02: \$0                      Total: \$203,932  
*Prin. Invest.:* F H SHEEHAN  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

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## NASA'S UNIVERSITY PROGRAM

**NAG 9 1271**                      **UNIV OF WASHINGTON**                      **9651**  
DNA MICROCHIP BASED MICROBIAL MONITORING  
12/08/2000 - 11/30/2002                      FY02: \$0                      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**                      **9652**  
MICROARRAYS OF CELLULAR MEMBRANE PATCHES FOR INFLIGHT  
STUDIES OF ION CHANNEL FUNCTION  
08/01/2001 - 09/30/2004                      FY02: \$0                      Total: \$54,000  
*Prin. Invest.:* A FOLCH  
*Tech. Officer:* JSC/D RISIN  
*CASE Category:* 43 - CHEMICAL ENGR

**NAS 1 18940**                      **UNIV OF WASHINGTON**                      **9653**  
SAGE III SCIENCE INVESTIGATION SUPPORT, P.I. PETER V. HOBBS  
10/27/1989 - 01/31/2005                      FY02: \$0                      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**                      **9654**  
COUPLING PICASSO-CENA TO IN SITU MEASUREMENTS FOR ESTIMATION  
OF DIRECT AEROSOL RADIATIVE FORCING  
05/17/1999 - 05/16/2003                      FY02: \$0                      Total: \$153,650  
*Prin. Invest.:* R J CHARLSON  
*Tech. Officer:* LARC/G GIBSON  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAS 5 00212**                      **UNIV OF WASHINGTON**                      **9655**  
MATLAB-BASED ADAPTIVE COMPUTING FOR NASA IMAGE  
09/29/2000 - 09/28/2002                      FY02: \$0                      Total: \$227,273  
*Prin. Invest.:* S HAUCK  
*Tech. Officer:* GSFC/J STEPHENS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 5 00213**                      **UNIV OF WASHINGTON**                      **9656**  
RECONFIGURABLE COMPUTING BASED COMPRESSION FOR SPACE-  
BORNE HYPERSPECTRAL IMAGES.  
09/29/2000 - 09/28/2002                      FY02: \$0                      Total: \$187,143  
*Prin. Invest.:* S HAUCK  
*Tech. Officer:* GSFC/J STEPHENS  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAS 5 30613**                      **UNIV OF WASHINGTON**                      **9657**  
INVESTIGATION DEFINITION PHASE FOR CLUSTER PLASMA SPECTROM-  
ETRY  
02/21/1989 - 02/09/2001                      FY02: \$0                      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**                      **9658**  
INTERMEDIATE THERMAL INFRARED RADIOMETER (EOS INVESTIGATION)  
02/19/1992 - 06/14/2003                      FY02: \$0                      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**                      **9659**  
REMOTE & IN-SITU MEASUREMENT OF AEROSOL OPTICAL PROPERTIES IN  
THE BOUNDARY LAYER  
07/24/2000 - 09/14/2003                      FY02: \$0                      Total: \$3,200  
*Prin. Invest.:* T L COVERT, T L ANDERSON  
*Tech. Officer:* LARC/C A HOSTETLER  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 1 02034**                      **UNIV OF WASHINGTON**                      **9660**  
ELECTRICALLY CONDUCTIVE STRUCTURES FOR DAMAGE DETECTION  
06/18/2002 - 10/30/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* T A ANDERSON  
*Tech. Officer:* LARC/D R AMBUR  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NCC 2 1273**                      **UNIV OF WASHINGTON**                      **9661**  
HABITABLE PLANETS AND EVOLUTION OF BIOLOGICAL COMPLEXITY  
07/20/2001 - 06/30/2006                      FY02: \$0                      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**                      **9662**  
MATHEMATICAL MODELING OF METABOLIC NETWORKS AND ALGORITH-  
MIC DEVELOPMENT FOR HIGH-THROUGHPUT MULTIDIMENSIONAL  
09/14/2001 - 09/14/2002                      FY02: \$0                      Total: \$29,994  
*Prin. Invest.:* H QIAN  
*Tech. Officer:* ARC/S LIANG, ARC/B A BIEGEL  
*CASE Category:* 29 - MATH/COMPUTER SCI, OTHER

**NCC 3 970**                      **UNIV OF WASHINGTON**                      **9663**  
DEVELOPING, VERIFYING AND IMPLEMENTING NATIONAL AND INTERNA-  
TIONAL STANDARDS FOR MONOLITHIC AND COMPLEX INTEGRATED  
06/11/2002 - 10/31/2002                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M G JENKINS  
*Tech. Officer:* GRC/J SALEM  
*CASE Category:* 46 - MECHANICAL ENGR

**NCC 5 326**                      **UNIV OF WASHINGTON**                      **9664**  
SUPPORT OF THE UNIV OF WASHINGTON'S RESEARCH AIRCRAFT FOR  
NASA STUDIES (PROPOSAL #111017)  
03/23/1998 - 02/28/2002                      FY02: \$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**                      **9665**  
BIOGEOCHEMICAL DYNAMICS IN RIVER CORRIDORS OF THE AMAZON  
BASIN AND THEIR RESPONSE TO ANTHROPOGENIC CHANGES  
06/25/1998 - 12/31/2002                      FY02: \$0                      Total: \$537,352  
*Prin. Invest.:* J E RICHEY  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 550**                      **UNIV OF WASHINGTON**                      **9666**  
SUPPORT OF THE UNIV OF WASHINGTON'S RESEARCH AIRCRAFT FOR  
NASA STUDIES  
05/11/2001 - 04/30/2003                      FY02: \$0                      Total: \$340,214  
*Prin. Invest.:* P HOBBS  
*Tech. Officer:* GSFC/C YUHAS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER



<b>NCC 5 584</b>	<b>UNIV OF WASHINGTON</b>	<b>9667</b>		<b>NGT 5 126</b>	<b>UNIV OF WASHINGTON</b>	<b>9676</b>	
MICROWAVE REMOTE SENSING OF FROZEN PRECIPITATION				SIMULATING GALAXY GROUPS. STUDENT: DARREN S. REED			
08/23/2001 - 08/31/2004	FY02: \$0	Total: \$36,000		06/11/2001 - 06/30/2004	FY02: \$0	Total: \$22,000	
<i>Prin. Invest.:</i> R HOUZE				<i>Prin. Invest.:</i> T QUINN			
<i>Tech. Officer:</i> GSFC/J A WEINMAN				<i>Tech. Officer:</i> GSFC/M S BURRELL			
<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER				<i>CASE Category:</i> 29 - MATH/COMPUTER SCI, OTHER			
<b>NCC 5 605</b>	<b>UNIV OF WASHINGTON</b>	<b>9668</b>		<b>NGT 5 30121</b>	<b>UNIV OF WASHINGTON</b>	<b>9677</b>	
SPACE SCIENCE NETWORK NORTHWEST				ASSESSING THE GLOBAL CHARACTERISTICS OF AEROSOLS: WHAT IS THE			
12/13/2001 - 12/31/2006	FY02: \$0	Total: \$0		INFLUENCE OF HUMIDITY IN COLUMNAR AERO			
<i>Prin. Invest.:</i> J H LUTZ				10/01/1997 - 03/31/2001	FY02: \$0	Total: \$66,000	
<i>Tech. Officer:</i> GSFC/P SAKIMOTO				<i>Prin. Invest.:</i> D HEGG			
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER				<i>Tech. Officer:</i> GSFC/G ASRAR			
				<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			
<b>NCC 8 231</b>	<b>UNIV OF WASHINGTON</b>	<b>9669</b>		<b>NGT 5 30149</b>	<b>UNIV OF WASHINGTON</b>	<b>9678</b>	
MINI-MAGNETOSPHERIC PLASMA PROPULSION-RADIATION SHIELDING				COMBINED USE OF REMOTE SENSING AND BIOGEOCHEMICAL MODELING			
(M2PS-S)				TO ESTIMATE PRIMARY PRODUCTION AND CARBO			
09/05/2001 - 12/31/2002	FY02: \$0	Total: \$86,311		08/28/1998 - 08/31/2001	FY02: \$0	Total: \$55,000	
<i>Prin. Invest.:</i> R M WINGLEE				<i>Prin. Invest.:</i> J E RICHEY, WILHELM			
<i>Tech. Officer:</i> MSFC/J H ADAMS				<i>Tech. Officer:</i> GSFC/M Y WEI			
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE				<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NCC 9 56</b>	<b>UNIV OF WASHINGTON</b>	<b>9670</b>		<b>NGT 5 30157</b>	<b>UNIV OF WASHINGTON</b>	<b>9679</b>	
RESEARCH GRANT				MODELING THE FLAMMABILITY OF BRAZILIAN AMAZON FORESTS AT THE			
02/22/2000 - 03/31/2003	FY02: \$0	Total: \$48,392		FOREST: SAVANNA ECOTONE			
<i>Prin. Invest.:</i> D E PARKER				08/28/1998 - 02/28/2002	FY02: \$0	Total: \$44,000	
<i>Tech. Officer:</i> JSC/D HARM, JSC/J J BLOOMBERG				<i>Prin. Invest.:</i> T M HINCKLEY			
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER				<i>Tech. Officer:</i> GSFC/M Y WEI			
				<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NGT 2 52219</b>	<b>UNIV OF WASHINGTON</b>	<b>9671</b>		<b>NGT 5 30161</b>	<b>UNIV OF WASHINGTON</b>	<b>9680</b>	
INFRARED STUDY OF HERBIG AE/BE SYSTEMS				COUPLING LAND-SURFACE AND RIVERINE WATER AND CARBON CYCLES			
08/19/1996 - 08/31/2002	FY02: \$0	Total: \$76,000		IN THE AMAZONBASIN: DEVELOPMENT OF A MUL			
<i>Prin. Invest.:</i> D BROWNLEE				08/31/1998 - 02/28/2002	FY02: \$0	Total: \$66,000	
<i>Tech. Officer:</i> ARC/D H WOODEN, ARC/F C WITTEBORN				<i>Prin. Invest.:</i> J E RICHEY, MAYORGA			
<i>CASE Category:</i> 11 - ASTRONOMY				<i>Tech. Officer:</i> GSFC/M Y WEI			
				<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NGT 2 52281</b>	<b>UNIV OF WASHINGTON</b>	<b>9672</b>		<b>NGT 5 30213</b>	<b>UNIV OF WASHINGTON</b>	<b>9681</b>	
A PRESSURE SENSITIVE PAINT FOR THE STUDY OF UNSTEADY FLOWS				IMPROVING MODEL PARAMETERIZATIONS OF GAS EXCHANGE: QUANTIFI-			
OVER FLEXIBLE BOUNDARIES				CATION OF BUBBLE DYNAMICS BY MEASUREMENT			
07/27/2001 - 08/31/2003	FY02: \$0	Total: \$22,000		08/20/1999 - 08/31/2002	FY02: \$0	Total: \$66,000	
<i>Prin. Invest.:</i> J B CALLIS				<i>Prin. Invest.:</i> S R EMERSON			
<i>Tech. Officer:</i> ARC/J H BELL, ARC/E S SCHAIRER				<i>Tech. Officer:</i> GSFC/M WEI			
<i>CASE Category:</i> 51 - BIOLOGY (EXCLUDING ENVIR)				<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NGT 2 52288</b>	<b>UNIV OF WASHINGTON</b>	<b>9673</b>		<b>NGT 5 30220</b>	<b>UNIV OF WASHINGTON</b>	<b>9682</b>	
1 KM PLANETESIMALS TO PLANETS				OPPORTUNITIES FOR IMPROVING WESTERN WATER MANAGEMENT			
06/05/2002 - 06/30/2003	FY02: \$0	Total: \$0		THROUGH REMOTE SENSING & HYDROLOGICMODEL			
<i>Prin. Invest.:</i> T QUINN				08/24/1999 - 08/31/2002	FY02: \$0	Total: \$66,000	
<i>Tech. Officer:</i> ARC/J J LISSAUER				<i>Prin. Invest.:</i> D P LETTENMAIER			
<i>CASE Category:</i> 11 - ASTRONOMY				<i>Tech. Officer:</i> GSFC/M WEI			
				<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NGT 5 66</b>	<b>UNIV OF WASHINGTON</b>	<b>9674</b>		<b>NGT 5 30343</b>	<b>UNIV OF WASHINGTON</b>	<b>9683</b>	
COMPUTATIONAL OPTICS YEAR 1 OF 2 YEAR COMMITMENT PERIOD OF				TROPICAL FOREST PHENOLOGY ACROSS ENVIRONMENTAL GRADIENTS			
PERFORMANCE SEPT. 1, 1998 TO AUG. 31, 1				IN PANAMA: A MULTISCALE STUDY USING RE			
05/27/1998 - 08/31/2001	FY02: \$0	Total: \$66,000		08/21/2000 - 08/31/2003	FY02: \$0	Total: \$44,000	
<i>Prin. Invest.:</i> J BURKE				<i>Prin. Invest.:</i> T HINCKLEY			
<i>Tech. Officer:</i> GSFC/G SOFFEN				<i>Tech. Officer:</i> GSFC/M WEI			
<i>CASE Category:</i> 21 - MATHEMATICS				<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER			
<b>NGT 5 98</b>	<b>UNIV OF WASHINGTON</b>	<b>9675</b>					
A NEW MECHANISM FOR DEGASSING AT HIGH-SULFUR VOLCANOES							
08/23/1999 - 08/31/2002	FY02: \$0	Total: \$66,000					
<i>Prin. Invest.:</i> C NEWHALL							
<i>Tech. Officer:</i> GSFC/M WEI							
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER							

## WASHINGTON

## NASA'S UNIVERSITY PROGRAM

**NGT 5 30378**                      **UNIV OF WASHINGTON**                      **9684**  
 TRMM-OBSERVED STARTIFORM PRECIPITATION FRACTION RE LATED TO  
 LARGE-SCALE TROPICAL CIRCULATION/COURTN  
 08/13/2001 - 08/31/2004                      FY02: \$0                      Total: \$22,000  
*Prin. Invest.:* R HOUZE, JR  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30427**                      **UNIV OF WASHINGTON**                      **9685**  
 COMBINED USE OF REMOTE SENSING AND BIOGEOCHEMICAL MODELING  
 TO ESTIMATE PRIMARY PRODUCTION AND CARBO  
 10/22/2001 - 09/30/2002                      FY02: \$11,000                      Total: \$11,000  
*Prin. Invest.:* J RICHEY  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30445**                      **UNIV OF WASHINGTON**                      **9686**  
 ESTIMATION OF WEST ANTARTIC ICE SHEET STABILITY TH ROUGH INVER-  
 SION OF RE-MOTELY SENSED DATA (STUDENT  
 08/23/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* C RAYMOND  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40017**                      **UNIV OF WASHINGTON**                      **9687**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLL AND  
 FELLOWSHIP PROGRAM.  
 12/19/1996 - 01/31/2001                      FY02: \$0                      Total: \$1,664,616  
*Prin. Invest.:* J K DECOSMO  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40084**                      **UNIV OF WASHINGTON**                      **9688**  
 WASHINGTON SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 02/09/2001 - 01/31/2005                      FY02: \$0                      Total: \$447,050  
*Prin. Invest.:* J DECOSMO  
*Tech. Officer:* GSFC/D D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50285**                      **UNIV OF WASHINGTON**                      **9689**  
 THREE DIMENSIONAL SIMULATIONS OF THE SOLAR WIND INTERACTION  
 WITH MAGNETIC ANOMALIES ON THE SURFACE  
 06/23/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* R WINGLEE  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50298**                      **UNIV OF WASHINGTON**                      **9690**  
 CALCULATION OF THE MERGER PHASE OF BINARY BLACK HOLES USING  
 NUMERICAL RELATIVITY/STUDENT LUISA BU  
 06/28/2000 - 06/30/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* J BARDEEN  
*Tech. Officer:* GSFC/K BLANDING  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50299**                      **UNIV OF WASHINGTON**                      **9691**  
 AN EMPIRICAL MEASURE OF GALAXY EVOLUTION IN CLUSTERS  
 06/28/2000 - 06/30/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* J DALCANTON  
*Tech. Officer:* GSFC/L SMITH  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 50334**                      **UNIV OF WASHINGTON**                      **9692**  
 DETERMINING THE EFFECTS OF CLOUDS & SEA ICE ON THE EARTH  
 RADIATION BUDGET IN THE SOUTHERNOCEAN  
 08/17/2000 - 08/31/2003                      FY02: \$0                      Total: \$44,000  
*Prin. Invest.:* S WARREN  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 2 1198**                      **WASHINGTON STATE UNIV**                      **9693**  
 LIGNIFICATION: A NEW PARADIGM  
 04/02/1998 - 05/31/2002                      FY02: \$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**                      **9694**  
 DETERMINING THE COMPLEX ORGAIZATIONAL NATURE OF PH ENOLIC  
 RADICAL-RADICAL COUPLING IN VASCULAR PLANT  
 08/17/2001 - 07/14/2003                      FY02: \$0                      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 2378**                      **WASHINGTON STATE UNIV**                      **9695**  
 PASSIVE AND ACTIVE STABILIZATION OF LIQUID BRIDGES IN LOW GRAVITY  
 04/04/2000 - 03/09/2004                      FY02: \$0                      Total: \$255,612  
*Prin. Invest.:* D MARSTON  
*Tech. Officer:* GRC/C NIEDERHAUS  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 4035**                      **WASHINGTON STATE UNIV**                      **9696**  
 RECONSTRUCTION OF THREE-DIMENSIONAL SHAPE AND SPIN FROM  
 RADAR DATA  
 02/27/1997 - 03/31/2001                      FY02: \$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**                      **9697**  
 CALCIUM/CALMODULIN-MEDIATED GRAVITROPIC RESPONSE I  
 06/19/1997 - 09/15/2001                      FY02: \$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**                      **9698**  
 ACCRETION OF INTERPLANETARY DUST: A NEW RECORD FROM 3-HE IN  
 POLAR ICE CORES  
 03/30/2000 - 08/31/2002                      FY02: \$0                      Total: \$60,000  
*Prin. Invest.:* E BROOK  
*Tech. Officer:* GSFC/J BOYCE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10462**                      **WASHINGTON STATE UNIV**                      **9699**  
 PHYSICAL MODELING OF ASTEROIDS USING RADAR & OPICAL DATA  
 02/26/2001 - 03/31/2004                      FY02: \$0                      Total: \$45,000  
*Prin. Invest.:* D HUDSON  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## NASA'S UNIVERSITY PROGRAM

WEST VIRGINIA

**NAG 5 10637**                    **WASHINGTON STATE UNIV**                    **9700**  
 USING SATELLITE OBSERVATIONS TO QUANTIFY BIOMASS BURNING EMIS-  
 SIONS OF NOX & HYDROCARBONS IN THE  
 03/19/2001 - 03/14/2004                    FY02: \$0                    Total: \$83,167  
*Prin. Invest.:* L JAEGLE  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11364**                    **WASHINGTON STATE UNIV**                    **9701**  
 CALCIUM/CALMODULIN MEDIATED GRAVITROPIC RESPONSE IN PLANTS  
 09/27/2001 - 09/30/2002                    FY02: \$0                    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**                    **9702**  
 R/S A COMPARATIVE MODELING STUDY OF MAGNETIC AND ELECTRO-  
 STATIC LEVITATION IN MICROGRAVITY  
 03/26/1998 - 01/31/2003                    FY02: \$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**                    **9703**  
 R/S "STUDY OF MAGNETIC FIELD EFFECTS ON CONVECTION AND SOLIDI-  
 FICATION IN NORMAL AND MICROGRAVITY"  
 06/02/2000 - 11/30/2003                    FY02: \$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**                    **9704**  
 PARTICIPATION IN THE OZONE MONITORING INSTRUMENT SCIENCE TEAM  
 06/09/2000 - 10/31/2004                    FY02: \$0                    Total: \$118,217  
*Prin. Invest.:* G MOUNT  
*Tech. Officer:* GSFC/J C RIVERA  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 2 5346**                    **WASHINGTON STATE UNIV**                    **9705**  
 LOW-POWER FAST SOI ELECTRONICS FOR SPACE APPLICATIONS  
 08/22/1999 - 07/31/2001                    FY02: \$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**                    **9706**  
 TRANSPORT IN MOLECULAR STRUCTURES  
 10/30/2000 - 12/31/2002                    FY02: \$0                    Total: \$60,910  
*Prin. Invest.:* M A OSMAN  
*Tech. Officer:* ARC/N HALL  
*CASE Category:* 13 - PHYSICS

**NCC 8 92**                    **WASHINGTON STATE UNIV**                    **9707**  
 "STUDY OF MAGNETIC DUMPING EFFECT ON CONVECTION & SOLIDIFICA-  
 TION UNDER G-JITTER CONDITIONS"  
 04/19/1996 - 04/21/2001                    FY02: \$0                    Total: \$360,000  
*Prin. Invest.:* B Q LI  
*Tech. Officer:* MSFC/C R TALLEY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 9249**                    **WHITMAN COLL**                    **9708**  
 FUV EXTINCTION: UNIQUE INSIGHTS INTO THE NATURE & ROLE OF SMALL  
 DUST GRAINS - FUSE  
 03/16/2000 - 03/14/2003                    FY02: \$0                    Total: \$21,954  
*Prin. Invest.:* U SOFIA  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 3 2510**                    **WHITWORTH COLL**                    **9709**  
 DEVELOPMENT OF A METHOD TO SPECTROSCOPICALLY ANALYZE CAR-  
 BON GRID EROSION IN ION THRUSTERS  
 12/01/2000 - 12/31/2002                    FY02: \$0                    Total: \$15,924  
*Prin. Invest.:* D STEVENS  
*Tech. Officer:* GRC/D DOMOMKOS  
*CASE Category:* 13 - PHYSICS

## WEST VIRGINIA

**NAG 5 11072**                    **BLUEFIELD STATE COLL**                    **9710**  
 EMERGIN LEADER'S INST  
 07/06/2001 - 07/14/2002                    FY02: \$0                    Total: \$100,000  
*Prin. Invest.:* F WOOTEN BLANKS  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1194**                    **MARSHALL UNIV**                    **9711**  
 CALBINDINS & APOPTOSIS AFTERSHORT TERM SPACE FLIGHT  
 03/25/1998 - 05/31/2001                    FY02: \$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**                    **9712**  
 RCBI ADVANCED COMPOSITES TECHNOLOGY INITIATIVE  
 03/25/2001 - 06/30/2002                    FY02: \$0                    Total: \$2,300,000  
*Prin. Invest.:* M R JULIAN  
*Tech. Officer:* GSFC/M KIENLEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC 5 646**                    **MARSHALL UNIV**                    **9713**  
 ADVANCED COMPOSITES TECHNOLOGY INITIATIVES  
 06/17/2002 - 06/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* M R JULIAN  
*Tech. Officer:* GSFC/M E KIELEN  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11088**                    **WEST VIRGINIA STATE COLL**                    **9714**  
 APPLICATION OF NASA'S REMOTE SENSING SATELLITES TO ENVIRONMEN-  
 TAL RESEARCH AND EARTH SCIENCE EDUCATIO  
 07/25/2001 - 09/30/2002                    FY02: \$0                    Total: \$70,000  
*Prin. Invest.:* J MAYHUGH  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11103**                    **WEST VIRGINIA STATE COLL**                    **9715**  
 NASA SCIENCE AND TECHNOLOGY SCHOLAR PROGRAM  
 07/31/2001 - 07/31/2002                    FY02: \$0                    Total: \$30,000  
*Prin. Invest.:* E V GRIFFIN, SR  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## WEST VIRGINIA

## NASA'S UNIVERSITY PROGRAM

**NAG 5 12269** WEST VIRGINIA STATE COLL 9716  
 REVIEW OF BUSINESS PRACTICES OF THE NASA IV&V FACI LITY  
 06/26/2002 - 05/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* C W SCHAFFER  
*Tech. Officer:* GSFC/K MCGILL  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 1 2096** WEST VIRGINIA UNIV 9717  
 ROLE OF TURBULENCE IN CHEMICAL AND DYNAMICAL PROCESSES IN THE  
 NEAR-FIELD WAKE OF SUBSONICAIRCR  
 09/14/1998 - 12/15/2001 FY02: \$0 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 2 1158** WEST VIRGINIA UNIV 9718  
 AIRNET REMOTELY CONTROLLED B747 SCAL MODEL; TRANS FR AMES  
 10/2000; GSFC STARTS SUPP 2  
 08/25/1997 - 01/31/2001 FY02: \$0 Total: \$150,000  
*Prin. Invest.:* M R NAPOLITANO  
*Tech. Officer:* ARC/W F BROOKS  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NAG 5 5364** WEST VIRGINIA UNIV 9719  
 A STUDY ON CONVERGENCE OF THE HILBERT-HUANG TRANSF ORM  
 04/24/2002 - 04/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* Y XU  
*Tech. Officer:* WFF/B R LONG  
*CASE Category:* 33 - OCEANOGRAPHY

**NAG 5 10218** WEST VIRGINIA UNIV 9720  
 LABORATORY MEASUREMENTS OF BROADBAND EXTREMELY-LOW  
 -FREQUENCY(BB-ELF) WAVE EXCITATION THRESHOLDS &  
 01/05/2001 - 01/14/2004 FY02: \$0 Total: \$98,769  
*Prin. Invest.:* M KOEPKE  
*Tech. Officer:* GSFC/M MELLOTT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11915** WEST VIRGINIA UNIV 9721  
 SOLAR WIND ELECTRONS DURING SOLAR MAXIMUM  
 03/22/2002 - 04/30/2004 FY02: \$0 Total: \$0  
*Prin. Invest.:* J E LITTLETON  
*Tech. Officer:* GSFC/W WAGNER  
*CASE Category:* 13 - PHYSICS

**NAG 5 12608** WEST VIRGINIA UNIV 9722  
 NASA IV&V FACILITY EDUCATIONAL OUTREACH PROPOSAL  
 09/27/2002 - 09/30/2005 FY02: \$0 Total: \$0  
*Prin. Invest.:* E J PYLE  
*Tech. Officer:* GSFC/G BLANEY  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1494** WEST VIRGINIA UNIV 9723  
 MARS ENVIRONMENTAL COMPATIBILITY ASSESSMENT  
 06/11/1998 - 05/31/2002 FY02: \$0 Total: \$243,541  
*Prin. Invest.:* T MELOY  
*Tech. Officer:* MSFC/J POE  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 2 979** WEST VIRGINIA UNIV 9724  
 APPLIED RESEARCH IN SOFTWARE VERIF & VALIDATION TRANS. FROM  
 ARC 10/1/00 START MOD 21 HERE  
 02/27/1997 - 12/31/2002 FY02: \$0 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 9725  
 NASA AMES FACILITY EDUCATION OUTREACH PROGRAM (TRANSFER TO  
 GSFC 9/2000)  
 05/10/2000 - 10/31/2000 FY02: \$0 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 9726  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/17/1999 - 06/30/2001 FY02: \$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 9727  
 WEST VIRGINIA NASA EPSCOR PROGRAM  
 07/13/2001 - 07/31/2005 FY02: \$0 Total: \$291,600  
*Prin. Invest.:* M JARAIEDI  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 4 52431** WEST VIRGINIA UNIV 9728  
 VOLTERRA SYSTEMS FOR NONLINEAR ESTIMATION OF AEROS PACE  
 SYSTEMS  
 06/19/2002 - 06/30/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* Y XU  
*Tech. Officer:* DFRC/M BRENNER  
*CASE Category:* 41 - AERONAUTICAL ENGNR

**NGT 5 40055** WEST VIRGINIA UNIV 9729  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLL AND  
 FELLOWSHIP PROGRAM.  
 02/12/1997 - 02/28/2001 FY02: \$0 Total: \$972,166  
*Prin. Invest.:* M JARAIEDI  
*Tech. Officer:* GSFC/L KEFFER  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 40120** WEST VIRGINIA UNIV 9730  
 WEST VIRGINIA SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 03/14/2001 - 02/28/2005 FY02: \$0 Total: \$257,834  
*Prin. Invest.:* M JARAIEDI  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 8628** WHEELING JESUIT UNIV 9731  
 EARTH SYSTEM SCIENCE EDUCATION ALLIANCE  
 06/24/1999 - 06/30/2004 FY02: \$0 Total: \$588,498  
*Prin. Invest.:* R J MEYERS  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

## NASA'S UNIVERSITY PROGRAM

WISCONSIN

**NAG 5 12489**                      **WHEELING JESUIT UNIV**                      **9732**  
 CHALLENGER LEARNING CENTER AT WHEELING JESUIT UNIV ERSITY  
 08/28/2002 - 08/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* N STRUM  
*Tech. Officer:* GSFC/P STEFFEN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 3 858**                      **WHEELING JESUIT UNIV**                      **9733**  
 THE SYNTHESIS OF INDIUM, GALLIUM AND COPPER DITHIO CARBAMATE  
 COMPLEXES FOR DEPOSITION TRANSFER FOR SPACE AND  
 02/01/2001 - 05/31/2002                      FY02: \$0                      Total: \$9,020  
*Prin. Invest.:* N N DUFFY  
*Tech. Officer:* GRC/A F HEPP  
*CASE Category:* 12 - CHEMISTRY

**NCC 5 440**                      **WHEELING JESUIT UNIV**                      **9734**  
 NATIONAL TECHNOLOGY TRANSFER CENTER: NASA TECHN. TRANSFER &  
 COMMERCIALIZATION PROGRAM  
 11/09/1999 - 10/31/2004                      FY02: \$0                      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**                      **9735**  
 CLASSROOM OF THE FUTURE PROGRAM  
 01/28/2000 - 12/31/2004                      FY02: \$0                      Total: \$3,840,000  
*Prin. Invest.:* N NAIK  
*Tech. Officer:* GSFC/S CANRIGHT  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 604**                      **WHEELING JESUIT UNIV**                      **9736**  
 THE CENTER FOR EDUCATIONAL TECHNOLOGIES BROKER/FAC ILITATOR  
 PROGRAM: SPACE SCIENCE EDUCATION INT  
 12/17/2001 - 12/31/2006                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* N NAIK  
*Tech. Officer:* GSFC/P SAKIMOTO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## WISCONSIN

**NAG 9 1156**                      **MARQUETTE UNIV**                      **9737**  
 LIMB MUSCLE FUNCTION WITH UNLOADING AND COUNTERMEASURES  
 09/15/1999 - 09/30/2003                      FY02: \$0                      Total: \$404,487  
*Prin. Invest.:* R H FITTS  
*Tech. Officer:* JSC/C W LLOYD  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 9 116**                      **MARQUETTE UNIV**                      **9738**  
 LIFE SCIENCE EXPERIMENT EFFECT OF PROLONGED SPACEF LIGHT ON  
 HUMAN SKELETAL MUSCLE  
 01/05/2001 - 01/04/2004                      FY02: \$0                      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 COLL OF WISCONSIN**                      **9739**  
 THE EFFECTS OF MICROGRAVITY ON NEUROMUSCULAR DEVELOPMENT  
 01/20/1995 - 10/31/2001                      FY02: \$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 COLL OF WISCONSIN**                      **9740**  
 EVALUATION OF THE QUALITY OF PRESERVATION OF ARCHIVE FIXED  
 TISSUE SAMPLES FOR ULTRASTRUCTURAL STUDY  
 07/18/2000 - 07/31/2002                      FY02: \$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)

**NGT 5 40097**                      **UNIV OF WISCONSIN - GREEN BAY**                      **9741**  
 WISCONSIN SPACE GRANT COLL & FELLOWSHIP PROGRAM  
 03/06/2001 - 02/28/2005                      FY02: \$0                      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**                      **9742**  
 A WORKBENCH FOR VOLUMETRIC DATA FILTERING AND SEGMENTATION  
 ALGORITHMS  
 03/16/2000 - 12/31/2001                      FY02: \$0                      Total: \$31,901  
*Prin. Invest.:* S O SENGER  
*Tech. Officer:* ARC/J D SMITH  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG 1 2073**                      **UNIV OF WISCONSIN - MADISON**                      **9743**  
 THE COLLECTION AND ANALYSIS OF HIGH SPECTRAL-RESOLUTION  
 INFRARED RADIANCES AS PART OF FIRE  
 05/26/1998 - 11/30/2001                      FY02: \$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**                      **9744**  
 MODELING AND ANALYSIS OF SAGE CONSTITUENT MIXING IN THE LOWER  
 STRATOSPHERE AND UPPER TROPOSPHERE  
 03/16/1999 - 12/31/2002                      FY02: \$0                      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 2322**                      **UNIV OF WISCONSIN - MADISON**                      **9745**  
 OVERLAPPING CLOUD INVESTIGATIONS USING MODIS, CERES AND ARM  
 CART SITE DATA  
 08/18/2000 - 12/31/2001                      FY02: \$0                      Total: \$139,891  
*Prin. Invest.:* S ACKERMAN  
*Tech. Officer:* LARC/J A GREEN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 02020**                      **UNIV OF WISCONSIN - MADISON**                      **9746**  
 ANALYSIS OF HISTORICAL CIRRUS IN SITU IN SUPPORT OF TERRA AQUA  
 AND GIFTS CIRRUS RETRIEVAL EFFORTS  
 12/13/2001 - 12/14/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S A ACKERMAN  
*Tech. Officer:* LARC/V E DELNORE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 1 02057**                      **UNIV OF WISCONSIN - MADISON**                      **9747**  
 SUPPORT FOR THE SCANNING HIS INSTRUMENT TO PARTICIPATE IN THE  
 INTERNATIONAL H2O PROJECT  
 03/08/2002 - 03/07/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* H E REVERCOMB  
*Tech. Officer:* LARC/E V BROWELL, LARC/S ISMAIL  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

## WISCONSIN

## NASA'S UNIVERSITY PROGRAM

**NAG 2 1189 UNIV OF WISCONSIN - MADISON 9748**  
 MOLECULAR GENETICS OF ROOT THIGMORESPONSIVENESS IN ARABIDOPSIS THALIANA  
 03/19/1998 - 03/31/2001 FY02: \$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 9749**  
 SKELETAL MUSCLE GROWTH OF REPAIR DURING MICROGRAVITY  
 05/20/1998 - 06/30/2002 FY02: \$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 9750**  
 MOLECULAR CLONING & CHARACTERIZATION OF THE AGR1 GENE OF ARABIDOPSIS THALIANA  
 07/15/1999 - 06/30/2003 FY02: \$0 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 1492 UNIV OF WISCONSIN - MADISON 9751**  
 MOLECULAR GENETICS OF ROOT THIGMORESPONSIVENESS IN ARABIDOPSIS  
 07/05/2001 - 08/31/2003 FY02: \$0 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 9752**  
 SKELETAL MUSCLE GROWTH AND REPAIR DURING MICROGRAVITY  
 07/24/2001 - 11/30/2002 FY02: \$0 Total: \$71,752  
*Prin. Invest.:* E SCHULTZ  
*Tech. Officer:* ARC/M M AVERNER, ARC/R D MACELROY  
*CASE Category:* 51 - BIOLOGY (EXCLUDING ENVIR)

**NAG 5 674 UNIV OF WISCONSIN - MADISON 9753**  
 SPATIAL HETERODYNE SPECTROMETER FOR INVESTIGATION OF INTERSTELLAR FAR ULTRAVIOLET EMISSION LINES  
 11/30/1990 - 01/31/2002 FY02: \$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 9754**  
 COSMIC X-RAY PHYSICS  
 03/25/1991 - 04/30/2001 FY02: \$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 3524 UNIV OF WISCONSIN - MADISON 9755**  
 STUDIES OF THE HOT INTERSTELLAR MEDIUM AND HALO OF STRUCTURE & SPECTRAL CHARACTERISTICS OF THE LOW E  
 11/13/1996 - 05/14/2002 FY02: \$0 Total: \$575,390  
*Prin. Invest.:* W T SANDERS  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 3769 UNIV OF WISCONSIN - MADISON 9756**  
 NEW MATHEMATICAL METHODS FOR VARIATIONAL OBJECTIVE ESTIMATION  
 02/13/1997 - 09/30/2002 FY02: \$0 Total: \$360,000  
*Prin. Invest.:* G WAHBA  
*Tech. Officer:* GSFC/K H BERGMAN  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 5252 UNIV OF WISCONSIN - MADISON 9757**  
 FLIGHT OF FAR-ULTRAVIOLET SPECTROPOLARIMETER (FUSP) AND DEVELOPMENT AND FLIGHT OF CUPID PI NORDSIECK  
 02/04/2000 - 02/03/2003 FY02: \$0 Total: \$815,640  
*Prin. Invest.:* K H NORDSIECK  
*Tech. Officer:* GSFC/W B JOHNSON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5253 UNIV OF WISCONSIN - MADISON 9758**  
 UV POLARIMETRIC OBSERVATIONS OF RESONANCE LINE AND DUST SCATTERING  
 02/18/2000 - 02/03/2003 FY02: \$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 9759**  
 STUDIES OF THE COSMIC X-RAY BACKGROUND FIRST YEAR FUNDING  
 04/11/2000 - 04/06/2003 FY02: \$0 Total: \$667,000  
*Prin. Invest.:* D MCCAMMON  
*Tech. Officer:* GSFC/J BRINTON  
*CASE Category:* 13 - PHYSICS

**NAG 5 5272 UNIV OF WISCONSIN - MADISON 9760**  
 FIRST FUNDING FOR PHASE 1 OF CIRRUS PROJECT FIRST FUNDING FOR PHASE 1 OF CIRRUS PROJECT  
 04/17/2000 - 04/13/2006 FY02: \$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 9761**  
 THE EVOLUTION OF GALAXY IMAGE STRUCTURE TO Z=3  
 10/08/1997 - 10/14/2001 FY02: \$0 Total: \$270,000  
*Prin. Invest.:* M BERSHADY  
*Tech. Officer:* GSFC/D WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 6457 UNIV OF WISCONSIN - MADISON 9762**  
 VALIDATION OF ASTER AND MODIS SURFACE-TEMPERATURE AND VEGETATION PRODUCTS WITH SURFACE-FLUX APPLICATIONS  
 10/15/1997 - 09/30/2002 FY02: \$0 Total: \$849,751  
*Prin. Invest.:* S T GOWER  
*Tech. Officer:* GSFC/D O STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 6788 UNIV OF WISCONSIN - MADISON 9763**  
 CLOUDS ON NEPTUNE: MOTIONS, EVOLUTION, STRUCTURE  
 02/06/1998 - 03/31/2001 FY02: \$0 Total: \$230,780  
*Prin. Invest.:* L A SROMOVSKY  
*Tech. Officer:* GSFC/T MORGAN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7026**                    **UNIV OF WISCONSIN - MADISON**                    **9764**  
 AN ULTRA-LOW BANDWIDTH DIGITAL IMAGING SYSTEM FOR SPACECRAFT  
 02/26/1998 - 06/30/2001                    FY02: \$0                    Total: \$138,000  
*Prin. Invest.:* J W PERCIVAL  
*Tech. Officer:* GSFC/R SPAGNUOLO  
*CASE Category:* 42 - ASTRONAUTICAL ENGR

**NAG 5 7214**                    **UNIV OF WISCONSIN - MADISON**                    **9765**  
 PRESIDENTIAL EARLY CAREER AWARD FOR SCIENTISTS AND ENGINEERS  
 04/06/1998 - 04/30/2003                    FY02: \$0                    Total: \$366,666  
*Prin. Invest.:* J FOLEY  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 7605**                    **UNIV OF WISCONSIN - MADISON**                    **9766**  
 CRITICAL REVIEW OF CHINESE RESEARCH ON THE SOLAR INFLUENCES  
 ON CLIMATE  
 07/22/1998 - 07/31/2002                    FY02: \$0                    Total: \$218,976  
*Prin. Invest.:* P WANG  
*Tech. Officer:* GSFC/J SHARBER  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 7661**                    **UNIV OF WISCONSIN - MADISON**                    **9767**  
 A STUDY OF UNCERTAINTIES FOR MODIS CLOUD RETRIEVAL S OF  
 OPTICAL THICKNESS AND EFFECTIVE RADIUS  
 09/02/1998 - 03/31/2001                    FY02: \$0                    Total: \$110,269  
*Prin. Invest.:* D PINCUS  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 7931**                    **UNIV OF WISCONSIN - MADISON**                    **9768**  
 PHYSICS OF AN UNSTABLE WIND FROM THE UNSTABLE STAR P CYGNI  
 ADP-98  
 12/14/1998 - 06/14/2002                    FY02: \$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**                    **9769**  
 INTEGRATED STUDIES OF COMET C/199501 (HALE-BOPP) USING THE  
 RESULTS OF THE UNIV WI/GSFC OBSER CAMPAI  
 12/17/1998 - 12/31/2002                    FY02: \$0                    Total: \$276,256  
*Prin. Invest.:* D M HARRIS  
*Tech. Officer:* GSFC/R BEEBE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8057**                    **UNIV OF WISCONSIN - MADISON**                    **9770**  
 INTERPRETATION OF RADIATIVE ENERGY FLUXES IN JUPITER'S ATMOS-  
 PHERE  
 01/15/1999 - 07/31/2002                    FY02: \$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**                    **9771**  
 BIGFOOT--CHARACTERIZING LAND COVER, LAI AND NPP AT THE LAND-  
 SCAPE SCALE FOR EOS/MODIS VALIDATION  
 01/28/1999 - 06/30/2002                    FY02: \$0                    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**                    **9772**  
 THE HISTORY AND INITIAL MASS FUNCTION OF THE LAMBDA A ORIONIS  
 STAR FORMING REGION(ADP 98)  
 04/15/1999 - 02/28/2002                    FY02: \$0                    Total: \$56,505  
*Prin. Invest.:* R D MATHIEU  
*Tech. Officer:* GSFC/D K WEST  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 8417**                    **UNIV OF WISCONSIN - MADISON**                    **9773**  
 THEORETICAL STUDIES OF THE DIFFUSE INTERSTELLAR MEDIUM (ATP 98)  
 03/25/1999 - 03/31/2003                    FY02: \$0                    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**                    **9774**  
 X-RAY DETECTORS FOR SPECTROSCOPY OF 0.1-0.3 KEV EXTENDED  
 SOURCES WITH SUB-EV RESOLUTION.  
 07/09/1999 - 07/14/2002                    FY02: \$0                    Total: \$284,116  
*Prin. Invest.:* D MCCAMMON  
*Tech. Officer:* GSFC/G MUCKLOW  
*CASE Category:* 13 - PHYSICS

**NAG 5 8554**                    **UNIV OF WISCONSIN - MADISON**                    **9775**  
 LONG-TERM WATER FLUX CHANGES FROM CONVERTING OLD-GROWTH  
 PINE FOREST TO HARDWOOD FORESTS IN NORTH  
 06/17/1999 - 06/30/2003                    FY02: \$0                    Total: \$319,128  
*Prin. Invest.:* D MACKAY  
*Tech. Officer:* GSFC/E T ENGMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8597**                    **UNIV OF WISCONSIN - MADISON**                    **9776**  
 THE ROLE OF LAND USE AND LAND COVER CHANGE ON THE TERRES-  
 TRIAL WATER BALANCE OF THE MISSISSIPPI BASIN  
 06/11/1999 - 06/30/2003                    FY02: \$0                    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**                    **9777**  
 DOCUMENTING, UNDERSTANDING, AND PREDICTING THE AGGREGATE  
 SURFACE RADIATION FLUXES FOR SHEBA  
 08/31/1999 - 06/14/2001                    FY02: \$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**                    **9778**  
 SIMPLE MODELS OF THE SPATIAL DISTRIBUTION OF CLOUD RADIATIVE  
 PROPERTIES FOR REMOTE SENSING STUDIES  
 06/29/1999 - 09/30/2001                    FY02: \$0                    Total: \$47,887  
*Prin. Invest.:* R PINCUS  
*Tech. Officer:* GSFC/W WISCOMBE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 8652**                    **UNIV OF WISCONSIN - MADISON**                    **9779**  
 CONTINUING INVESTIGATION OF SINGLE-PHOTON CALORIMETERS FOR  
 X-RAY SPECTROSCOPY  
 08/19/1999 - 09/30/2001                    FY02: \$0                    Total: \$100,000  
*Prin. Invest.:* D MCCAMMON  
*Tech. Officer:* GSFC/R L KELLEY  
*CASE Category:* 11 - ASTRONOMY

## WISCONSIN

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**NAG 5 8967**                    **UNIV OF WISCONSIN - MADISON**                    **9780**  
 OBSERVATIONAL CONSTRAINTS FOR THE GALACTIC FOUNDATION - FUSE  
 01/24/2000 - 01/31/2003                    FY02: \$0                    Total: \$56,200  
*Prin. Invest.:* R BENJAMIN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9024**                    **UNIV OF WISCONSIN - MADISON**                    **9781**  
 OBSERVATIONAL CONSTRAINTS FOR THE GALACTIC FOUNTAIN-FUSE  
 HIGH VELOCITY CLOUDS: ORIGIN  
 02/28/2000 - 02/28/2003                    FY02: \$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**                    **9782**  
 EARTH SCIENCE COMPONENT FOR ACADEMIC PROFESSIONAL ENHANCE-  
 MENT (ESCAPE)  
 02/04/2000 - 02/14/2003                    FY02: \$0                    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**                    **9783**  
 STATISTICAL ANALYSIS OF ATMOSPHERIC OZONE DATA FOR TREND  
 FEATURES & STUDIES ON STATISTICAL METHODOLO  
 02/16/2000 - 08/31/2001                    FY02: \$0                    Total: \$30,000  
*Prin. Invest.:* G C REINSEL  
*Tech. Officer:* GSFC/P K BHARTIA  
*CASE Category:* 31 - ATMOSPHERICS SCIENCE

**NAG 5 9179**                    **UNIV OF WISCONSIN - MADISON**                    **9784**  
 THE ORIGINS OF GALACTIC HALO GAS: ACCRETION AND FOUNTAIN  
 FLOWS (L TSA 99)  
 03/07/2000 - 03/14/2005                    FY02: \$0                    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**                    **9785**  
 SPECTRAL DIAGNOSTICS FOR EARLY-TYPE STARS IN SUPPO RT OF  
 HIGH-RESOLUTION SATELLITE OBSERVATIONS (LTS  
 03/09/2000 - 03/14/2005                    FY02: \$0                    Total: \$39,060  
*Prin. Invest.:* J CASSINELLI  
*Tech. Officer:* GSFC/R OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 9295**                    **UNIV OF WISCONSIN - MADISON**                    **9786**  
 DIAGNOSTIC & PREDICTIVE STUDIES OF THE EARTH'S HYDROLOGIC  
 CYCLE USING MODEL-ASSIMILATED & REMOTE  
 04/13/2000 - 12/31/2002                    FY02: \$0                    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**                    **9787**  
 INTERNATONAL MODIS/AIRS PROCESSING PACKAGE (IMAPP) FOR EOS  
 DIRECT BROADCAST DATA  
 04/04/2000 - 04/14/2003                    FY02: \$0                    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**                    **9788**  
 MONITORING AND MODELING OF LAND-SURFACE ENERGY AND WATER  
 FLUXES USING ANENHANCEDPATHFINDER DATABASE  
 04/13/2000 - 04/30/2003                    FY02: \$0                    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**                    **9789**  
 HUMAN ACTIVITY AND A CHANGING BIOSPHERE  
 04/13/2000 - 04/30/2003                    FY02: \$0                    Total: \$495,681  
*Prin. Invest.:* J FOLEY  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 9673**                    **UNIV OF WISCONSIN - MADISON**                    **9790**  
 DETERMINATION OF MOMENTUM TRANSPORT, ORGANIZATION, & TEMPO-  
 RAL INTENSITY OF DEEP TROPICAL CONVECTION  
 06/01/2000 - 05/31/2003                    FY02: \$0                    Total: \$60,339  
*Prin. Invest.:* J R MECIKALSKI  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 9688**                    **UNIV OF WISCONSIN - MADISON**                    **9791**  
 APPLICATION OF REMOTE SENSING TO ASSESS THE IMPACT OF SHORT  
 TERM CLIMATEVARIABILITY ON COASTAL SEDIM  
 06/14/2000 - 06/14/2003                    FY02: \$0                    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**                    **9792**  
 GLAST: A GEV ALL-SKY MONITOR OF TRANSIENT PHENOME NA  
 06/15/2000 - 06/14/2003                    FY02: \$0                    Total: \$54,989  
*Prin. Invest.:* P DINGUS  
*Tech. Officer:* GSFC/S LAMBROS  
*CASE Category:* 13 - PHYSICS

**NAG 5 9894**                    **UNIV OF WISCONSIN - MADISON**                    **9793**  
 IMPROVED TRMM RAINFALL ESTIMATES FROM A COMBINA- TION OF  
 SATELLITE & SURFACE HYDROLOGICAL OBSERVA  
 08/25/2000 - 11/30/2002                    FY02: \$0                    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**                    **9794**  
 THE NEARBY STARBURST DWARF GALAXY NGC 625  
 09/07/2000 - 09/14/2001                    FY02: \$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**                    **9795**  
 OPTIMIZATION OF THE GODDARD PROFILING (GPROF) ALGO RITHM FOR  
 SUBTROPICAL AND EXTRATROPICAL RAINFALL  
 11/17/2000 - 12/31/2001                    FY02: \$0                    Total: \$34,641  
*Prin. Invest.:* G W PETTY  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE



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WISCONSIN

**NAG 5 10196**                    **UNIV OF WISCONSIN - MADISON**                    **9796**  
 THE MEASUREMENT OF ATOMIC TRANSITION PROBABILITIES FOR SPECTRAL LINES IN THE FUSE BAND  
 01/04/2001 - 12/31/2001                    FY02: \$0                    Total: \$60,000  
*Prin. Invest.:* J E LAWLER  
*Tech. Officer:* GSFC/P CRANE  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10204**                    **UNIV OF WISCONSIN - MADISON**                    **9797**  
 MINIATURE ADIABATIC DEMAGNETIZATION REFRIGERATOR  
 12/28/2000 - 12/31/2003                    FY02: \$0                    Total: \$160,000  
*Prin. Invest.:* P TIMBIE  
*Tech. Officer:* GSFC/G STRINGFELLOW  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10258**                    **UNIV OF WISCONSIN - MADISON**                    **9798**  
 ANTENNA COUPLED TRANSITION EDGE MICROBOLMETERS WITH ON-CHIP FILTERING & DUAL POLARIZATION SENSITIVITY  
 01/31/2001 - 01/31/2004                    FY02: \$0                    Total: \$223,105  
*Prin. Invest.:* P TIMBIE  
*Tech. Officer:* GSFC/J CHERVENAK  
*CASE Category:* 13 - PHYSICS

**NAG 5 10273**                    **UNIV OF WISCONSIN - MADISON**                    **9799**  
 SOME NEW MATHEMATICAL METHODS FOR VARIATIONAL OBJECTIVE ANALYSIS & ACCURACY ESTIMATION, WITH EM  
 01/16/2001 - 01/14/2004                    FY02: \$0                    Total: \$65,000  
*Prin. Invest.:* G WAHBA  
*Tech. Officer:* GSFC/T LEE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 10415**                    **UNIV OF WISCONSIN - MADISON**                    **9800**  
 LMC 1995, THE THIRD SUPERSOFT X-RAY NOVA  
 02/21/2001 - 02/28/2003                    FY02: \$0                    Total: \$21,667  
*Prin. Invest.:* M ORIO  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10729**                    **UNIV OF WISCONSIN - MADISON**                    **9801**  
 CONTINUED DEVELOPMENT OF A PLANETARY IMAGING FOURIER TRANSFORM SPECTROMETER (PIFTS)  
 04/10/2001 - 04/14/2002                    FY02: \$0                    Total: \$50,000  
*Prin. Invest.:* L SROMOVSKY  
*Tech. Officer:* GSFC/B BETTS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 10770**                    **UNIV OF WISCONSIN - MADISON**                    **9802**  
 STAR FORMATION FEEDBACK ON GALAXY EVOLUTION (LISA 2000)  
 04/26/2001 - 04/30/2006                    FY02: \$0                    Total: \$114,544  
*Prin. Invest.:* H A KOBULNICKY  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11085**                    **UNIV OF WISCONSIN - MADISON**                    **9803**  
 CLIMATE AND HUMAN IMPACTS ON WATER RESOURCES IN AFRICA  
 07/20/2001 - 08/14/2004                    FY02: \$0                    Total: \$80,503  
*Prin. Invest.:* M COE  
*Tech. Officer:* GSFC/G GUTMAN  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11155**                    **UNIV OF WISCONSIN - MADISON**                    **9804**  
 VALIDATION OF THE ATMOSPHERIC INFRARED SOUNDER (AIRS) OVER THE ANTARCTIC PLATEAU (AQUA-0080-033) NRA  
 08/08/2001 - 08/31/2004                    FY02: \$0                    Total: \$21,375  
*Prin. Invest.:* D C TOBIN  
*Tech. Officer:* GSFC/D STARR  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11221**                    **UNIV OF WISCONSIN - MADISON**                    **9805**  
 MAGNETIC FIELDS ON OB STARS (ATP 2000)  
 08/09/2001 - 08/14/2004                    FY02: \$0                    Total: \$5,023  
*Prin. Invest.:* J P CASSINELLI  
*Tech. Officer:* GSFC/R J OLIVERSEN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11242**                    **UNIV OF WISCONSIN - MADISON**                    **9806**  
 LINKING IN-SITU MEASUREMENTS, REMOTE SENSING, AND MODELS TO VALIDATE MODIS PRODUCTS RELATED TO THIN CLOUDS  
 08/17/2001 - 08/31/2004                    FY02: \$0                    Total: \$93,203  
*Prin. Invest.:* S T GOWER  
*Tech. Officer:* GSFC/D WICKLAND  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11245**                    **UNIV OF WISCONSIN - MADISON**                    **9807**  
 INTERANNUAL TO DECADE AIR-SEA CARBON FLUXES: ANALYSIS OF MARINE PRODUCTIVITY AND NUTRIENT DYNAMICS  
 08/16/2001 - 08/31/2004                    FY02: \$0                    Total: \$117,204  
*Prin. Invest.:* A WINGUTH  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11303**                    **UNIV OF WISCONSIN - MADISON**                    **9808**  
 ANALYSIS OF DYNAMICAL PROCESSES IMPORTANT TO CLIMATE CHANGE  
 08/31/2001 - 08/31/2003                    FY02: \$0                    Total: \$100,002  
*Prin. Invest.:* M HITCHMAN  
*Tech. Officer:* GSFC/P DECOLA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11322**                    **UNIV OF WISCONSIN - MADISON**                    **9809**  
 HIGH PERFORMANCE IMAGING ARRAYS OF X-RAY CALORIMETERS USING IMPLANTED SILICON  
 11/05/2001 - 11/14/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D MCCAMMON  
*Tech. Officer:* GSFC/C K STAHL  
*CASE Category:* 13 - PHYSICS

**NAG 5 11436**                    **UNIV OF WISCONSIN - MADISON**                    **9810**  
 PRECISION MEASUREMENTS OF OSCILLATOR STRENGTHS FOR NEUTRAL OXYGEN AND NITROGEN IN THE FUSE BAND  
 12/03/2001 - 12/31/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J E LAWLER  
*Tech. Officer:* GSFC/H HASAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 11449**                    **UNIV OF WISCONSIN - MADISON**                    **9811**  
 VALIDATION OF GLAS LIDAR DATA AND THE INVESTIGATION OF LIDAR MULTIPLE SCATTERING  
 12/17/2001 - 12/31/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* E W ELORANTA  
*Tech. Officer:* GSFC/J D SPINHIRNE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

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**NAG 5 11529**                    **UNIV OF WISCONSIN - MADISON**                    **9812**  
 CLOUD MICROPHYSICS AND ABSORPTION VALIDATION  
 01/03/2002 - 12/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* S A ACKERMAN  
*Tech. Officer:* GSFC/D ANDERSON  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 11849**                    **UNIV OF WISCONSIN - MADISON**                    **9813**  
 OVI EMISSION FROM HVCS  
 04/02/2002 - 04/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R BENJAMIN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12012**                    **UNIV OF WISCONSIN - MADISON**                    **9814**  
 NEPTUNE'S CLOUD STRUCTURE  
 04/22/2002 - 04/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* L A SROMOVSKY  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12057**                    **UNIV OF WISCONSIN - MADISON**                    **9815**  
 GAS AND DUST STRUCTURE IN ACTIVE COMETS  
 04/19/2002 - 04/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* W M HARRIS  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12128**                    **UNIV OF WISCONSIN - MADISON**                    **9816**  
 THEORETICAL STUDIES OF THE DIFFUSE INTERSTELLAR MATTER IN THE  
 LOCAL BUBBLE, BULGE, DISK, & HALO  
 04/30/2002 - 04/30/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* D P COX  
*Tech. Officer:* GSFC/M SALAMON  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12196**                    **UNIV OF WISCONSIN - MADISON**                    **9817**  
 MOLECULAR GAS IN THE DISK-HALO INTERFACE  
 05/14/2002 - 05/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R BENJAMIN  
*Tech. Officer:* GSFC/G SONNEBORN  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 12206**                    **UNIV OF WISCONSIN - MADISON**                    **9818**  
 ADAPTIVE OPTICS IMAGING AND SPECTROSCOPY OF NEPTUNE  
 06/03/2002 - 05/31/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* L A SROMOVSKY  
*Tech. Officer:* GSFC/J HILLMAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 12258**                    **UNIV OF WISCONSIN - MADISON**                    **9819**  
 GRADUATE RESEARCH ASSISTANTSHIPS AT THE UNIV WISCONSIN IN  
 COOPERATION WITH THE EARTH SCIENCES  
 07/02/2002 - 07/14/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* S A ACKERMAN  
*Tech. Officer:* GSFC/V V SALOMONSON  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 5 12270**                    **UNIV OF WISCONSIN - MADISON**                    **9820**  
 CLOUD RADIATION MODELING FOR GLOBAL PRECIPITATION MISSION  
 06/27/2002 - 06/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* G J TRIPOLI  
*Tech. Officer:* GSFC/R J LAWRENCE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 5 12422**                    **UNIV OF WISCONSIN - MADISON**                    **9821**  
 PRECISION BALLOON-BORNE MEASUREMENTS OF THE ANISOTROPY IN  
 THE COSMIC MICROWAVE BACKGROUND RADIATION  
 08/01/2002 - 07/31/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* P TIMBIE  
*Tech. Officer:* GSFC/E S CHENG  
*CASE Category:* 13 - PHYSICS

**NAG 5 12536**                    **UNIV OF WISCONSIN - MADISON**                    **9822**  
 PROCESSING METEOROLOGICAL SATELLITE INFORMATION TO NOWCAST  
 CONVECTIVE INITIATION AND CONVECTIVE CH  
 09/26/2002 - 09/14/2005                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J MECIKALSKI  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 12557**                    **UNIV OF WISCONSIN - MADISON**                    **9823**  
 X-RAY EMISSION FROM SINGLE WOLF-RAYET STARS  
 09/23/2002 - 09/30/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R IGNACE  
*Tech. Officer:* GSFC/R MUSHOTZKY  
*CASE Category:* 11 - ASTRONOMY

**NAG 8 1320**                    **UNIV OF WISCONSIN - MADISON**                    **9824**  
 RESEARCH DEVELOPMENT OF ATMOSPHERIC PHYSICAL RETRIEVAL  
 METHODOLOGIES USING SATELLITE DATA  
 01/31/1997 - 04/30/2002                    FY02: \$0                    Total: \$200,000  
*Prin. Invest.:* G DIAK  
*Tech. Officer:* MSFC/F R ROBERTSON, MSFC/J ARNOLD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 8 1459**                    **UNIV OF WISCONSIN - MADISON**                    **9825**  
 R/S PHYSICAL SIMULATION OF MARANGONI CONVECTION IN WELD POOLS  
 02/01/1998 - 01/31/2002                    FY02: \$0                    Total: \$340,417  
*Prin. Invest.:* S KOU  
*Tech. Officer:* MSFC/P M DOTY  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG 8 1460**                    **UNIV OF WISCONSIN - MADISON**                    **9826**  
 R/S DYNAMIC REDUCTION AND THE CREATION OF FINE GRAINED CERAM-  
 ICS FROM INVISCID MELTS  
 02/01/1998 - 01/31/2003                    FY02: \$0                    Total: \$306,467  
*Prin. Invest.:* R F COOPER  
*Tech. Officer:* MSFC/C TALLEY  
*CASE Category:* 13 - PHYSICS

**NAG 8 1672**                    **UNIV OF WISCONSIN - MADISON**                    **9827**  
 ANALYSIS OF CONTAINERLESS SOLIDIFICATION MICRO-STRUCTURES IN  
 UNDERCOOLED MELT/SAND COMPOSITE SYS  
 05/26/2000 - 11/30/2003                    FY02: \$0                    Total: \$125,500  
*Prin. Invest.:* J N PEREPEZKO  
*Tech. Officer:* MSFC/P DOTY  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 8 1719**                    **UNIV OF WISCONSIN - MADISON**                    **9828**  
 FILED REVERSED CONFIGURATION FUSION PROPULSION  
 05/04/2000 - 09/30/2003                    FY02: \$0                    Total: \$59,000  
*Prin. Invest.:* J SANTARIUS  
*Tech. Officer:* MSFC/F THEO  
*CASE Category:* 22 - COMPUTER SCIENCE

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<b>NAG 8 1783</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9829</b>	<b>NAS 5 31367</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9838</b>
ALL-OPTICAL HIGH DENSITY COLD ATOM SOURCES			EOS STUDY		
05/04/2001 - 03/30/2005	FY02: \$0	Total: \$60,000	12/30/1991 - 06/14/2003	FY02: \$50,000	Total: \$5,626,095
<i>Prin. Invest.:</i> T G WALKER			<i>Prin. Invest.:</i> P MENZEL		
<i>Tech. Officer:</i> MSFC/D S HUBBARD			<i>Tech. Officer:</i> GSFC/D TOLL, GSFC/B CONBOY		
<i>CASE Category:</i> 19 - PHYSICAL SCIENCE, OTHER			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG 8 1820</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9830</b>	<b>NAS 5 31375</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9839</b>
INVESTIGATION OF TECHNIQUES FOR SENSOR PLACEMENT, ACTUATOR PLACEMENT, AND TARGETMODE SELECTION...			EOS AIRS INVESTIGATION		
05/15/2001 - 05/15/2003	FY02: \$0	Total: \$39,940	01/13/1992 - 12/14/2002	FY02: \$0	Total: \$2,652,889
<i>Prin. Invest.:</i> D C KAMMER			<i>Prin. Invest.:</i> H REVERCOMB		
<i>Tech. Officer:</i> MSFC/M L TINKER			<i>Tech. Officer:</i> GSFC/E KREINS		
<i>CASE Category:</i> 46 - MECHANICAL ENGR			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAG13 99008</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9831</b>	<b>NAS 5 31377</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9840</b>
MIDWEST CENTER FOR NATURAL RESOURCE MGMT SAME			EOS INVESTIGATION: ALGORITHM DEVELOPMENT WITH HIS/ AIRS		
03/03/1999 - 03/02/2003	FY02: \$0	Total: \$1,500,000	01/08/1992 - 12/14/2002	FY02: \$0	Total: \$1,998,640
<i>Prin. Invest.:</i> G DIAK			<i>Prin. Invest.:</i> W L SMITH		
<i>Tech. Officer:</i> SSC/C HILL			<i>Tech. Officer:</i> GSFC/E KREINS		
<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER			<i>CASE Category:</i> 39 - ENVIRONMENTAL SCI, OTHER		
<b>NAS 1 00070</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9832</b>	<b>NAS 5 99004</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9841</b>
ENG. & SCIENTIFIC SUPPORT FOR NAST-I			GLAS SCIENCE TEAM LEADER.		
09/15/2000 - 10/30/2001	FY02: \$0	Total: \$1,100,485	11/25/1998 - 12/01/2002	FY02: \$0	Total: \$273,000
<i>Prin. Invest.:</i> F A BEST			<i>Prin. Invest.:</i> C BENTLEY		
<i>Tech. Officer:</i> LARC/A ROYAL			<i>Tech. Officer:</i> GSFC/G SMITH		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAS 1 00072</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9833</b>	<b>NCC 1 01011</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9842</b>
ALGORITHM DEVELOPMENT, MEASUREMENT CONCEPT VALIDATION, DATA PROCESSING AND ED/PUBLIC OUTREACH			TROPOSPHERIC MODEL STUDIES OF TRACE P FIELD DATA: REGIONAL ASSESSMENT OF STRATOSPHERIC-TROPOSPHERIC EXCHANGE		
11/06/2000 - 01/31/2006	FY02: \$0	Total: \$1,698,000	01/19/2001 - 01/31/2003	FY02: \$0	Total: \$42,224
<i>Prin. Invest.:</i> H REVERCOMB			<i>Prin. Invest.:</i> M H HITCHMAN, G J TRIPOLI		
<i>Tech. Officer:</i> LARC/V PARSONS			<i>Tech. Officer:</i> LARC/J H CRAWFORD		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE		
<b>NAS 1 96004</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9834</b>	<b>NCC 1 02017</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9843</b>
IDIQ FOR SATELLITE DATA/SITE LICENSE			DEVELOPMENT WITHIN THE REGIONAL AIR QUALITY MODELING SYSTEM (RAQMS)		
05/01/1996 - 04/29/2001	FY02: \$0	Total: \$317,171	03/19/2002 - 03/31/2005	FY02: \$0	Total: \$0
<i>Prin. Invest.:</i> N APPLICABLE			<i>Prin. Invest.:</i> D R JOHNSON		
<i>Tech. Officer:</i> LARC/R C HUFFMAN, JR., LARC/P MINNIS			<i>Tech. Officer:</i> LARC/R B PIERCE		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 12 - CHEMISTRY		
<b>NAS 1 99106</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9835</b>	<b>NCC 2 5323</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9844</b>
ANALYSIS OF COMBINED PICASSO-CENA AND MODIS DATA			TOWARDS A COMMON SERVICE SPECIFICATION & MATCHMAKING FRAMEWORK FOR GRID APPLICATIONS		
05/17/1999 - 05/16/2003	FY02: \$0	Total: \$149,754	05/07/1999 - 04/30/2001	FY02: \$0	Total: \$40,000
<i>Prin. Invest.:</i> S A ACKERMAN			<i>Prin. Invest.:</i> M LIVNY		
<i>Tech. Officer:</i> LARC/G GIBSON			<i>Tech. Officer:</i> ARC/W E JOHNSTON, ARC/G F MORELLO		
<i>CASE Category:</i> 31 - ATMOSPHERIC SCIENCE			<i>CASE Category:</i> 22 - COMPUTER SCIENCE		
<b>NAS 5 02089</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9836</b>	<b>NCC 2 5449</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9845</b>
XRS-Z SALT PILL			FE ISOTOPE STUDIES OF MICROBIAL ECOLOGY		
06/25/2002 - 12/20/2002	FY02: \$0	Total: \$0	07/27/2001 - 07/31/2003	FY02: \$0	Total: \$93,518
<i>Prin. Invest.:</i> R PAULOS			<i>Prin. Invest.:</i> C M JOHNSON, B L BEARD		
<i>Tech. Officer:</i> GSFC/J PANEK			<i>Tech. Officer:</i> ARC/W W DOLCI		
<i>CASE Category:</i> 45 - ELECTRICAL ENGR			<i>CASE Category:</i> 99 - MULTI INTERDISCIPL, OTHER		
<b>NAS 5 30131</b>	<b>UNIV OF WISCONSIN - MADISON</b>	<b>9837</b>			
SPACE TELESCOPE IMAGINE SPECTROGRAPH SUPPORT					
09/22/1987 - 04/30/2002	FY02: \$0	Total: \$1,290,954			
<i>Prin. Invest.:</i> F ROESLER					
<i>Tech. Officer:</i> GSFC/H D VITAGLIANO					
<i>CASE Category:</i> 11 - ASTRONOMY					

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**NCC 5 294**                    **UNIV OF WISCONSIN - MADISON**                    **9846**  
 HIGH RESOLUTION CARBON EXCHANGE OVER LARGE-SCALE AMAZONIA  
 BASED ON MODELING AND GOES SATELLITE  
 06/10/1998 - 12/31/2001                    FY02: \$0                    Total: \$149,659  
*Prin. Invest.:* J M NORMAN  
*Tech. Officer:* GSFC/D W DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 335**                    **UNIV OF WISCONSIN - MADISON**                    **9847**  
 THE EFFECTS OF TROPICAL FOREST CONVERSION: ECOLOGICAL RESEARCH IN THE LARGE-SCALE BIOSPHERE-ATMOSPHERE  
 06/16/1998 - 12/31/2002                    FY02: \$0                    Total: \$92,579  
*Prin. Invest.:* J FOLEY  
*Tech. Officer:* GSFC/D DEERING  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NCC 5 354**                    **UNIV OF WISCONSIN - MADISON**                    **9848**  
 "GSFC COOPERATIVE GRADUATE RESEARCH ASSISTANTSHIPS"  
 08/04/1998 - 08/31/2001                    FY02: \$0                    Total: \$124,644  
*Prin. Invest.:* M H HITCHMAN  
*Tech. Officer:* GSFC/A J NEGRU  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 365**                    **UNIV OF WISCONSIN - MADISON**                    **9849**  
 MODELING WETLANDS AND THEIR ROLE IN HYDROLOGICAL AND BIOGEOCHEMICAL CYCLES  
 09/24/1998 - 09/30/2001                    FY02: \$0                    Total: \$50,033  
*Prin. Invest.:* J A FOLEY  
*Tech. Officer:* HQ/L TRAVIS  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 8 129**                    **UNIV OF WISCONSIN - MADISON**                    **9850**  
 R/S "CONTINUATION SUPPORT FOR WISCONSIN CENTER FOR SPACE AUTHORIZATION & ROBOTICS"  
 01/30/1997 - 10/31/2001                    FY02: \$0                    Total: \$10,148,486  
*Prin. Invest.:* W L ZHOU, J R BULA  
*Tech. Officer:* MSFC/A L MATISAK  
*CASE Category:* 54 - ENVIRONMENTAL BIOLOGY

**NCC 8 241**                    **UNIV OF WISCONSIN - MADISON**                    **9851**  
 PROMOTE COMMERCIALY FUNDED RESEARCH AND TECH DEV. IN THE FIELD OF SPACE POWER AUTOMATION AND ROBOTICS  
 01/29/2002 - 10/31/2002                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* W ZHOU  
*Tech. Officer:* MSFC/A MATISAK  
*CASE Category:* 49 - ENGINEERING, OTHER

**NCC13 00004**                    **UNIV OF WISCONSIN - MADISON**                    **9852**  
 MAXIMIZING MUTUAL OPPORTUNITIES: PARTNERSHIP AMONG NASA, UNIV. OF MADISON AND PRIVATE INDUSTRY  
 03/06/2000 - 03/05/2005                    FY02: \$0                    Total: \$345,000  
*Prin. Invest.:* T LILLESAND  
*Tech. Officer:* SSC/A PEEK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 46**                    **UNIV OF WISCONSIN - MADISON**                    **9853**  
 PRECISION MEASUREMENT OF COSMOLOGICAL PARAMETERS V COSMIC MICROWAVE BACKGROUND ANISOTROPY  
 06/23/1997 - 06/30/2001                    FY02: \$0                    Total: \$88,000  
*Prin. Invest.:* P TIMBIE  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 115**                    **UNIV OF WISCONSIN - MADISON**                    **9854**  
 THREE-DIMENSIONAL MULTIWAVELENGTH MODELING TECHNIQUES FOR ANALYSIS OF ASPHERICAL STELLAR  
 06/04/2001 - 06/30/2003                    FY02: \$0                    Total: \$21,383  
*Prin. Invest.:* K H NORDSIECK  
*Tech. Officer:* GSFC/M S BURRELL  
*CASE Category:* 11 - ASTRONOMY

**NGT 5 30146**                    **UNIV OF WISCONSIN - MADISON**                    **9855**  
 POROELASTIC ANALYSIS OF COSEISMIC AND POSTSEISMIC DEFORMATION ASSOCIATED WITH THE 1992 LANDERS, CALIF  
 08/31/1998 - 08/31/2002                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* H F WANG  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30160**                    **UNIV OF WISCONSIN - MADISON**                    **9856**  
 SCALE-DEPENDENT CLIMATE CHANGE DUE TO DEFORESTATION IN AMAZONIA  
 08/31/1998 - 08/31/2001                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* W BRINKMANN  
*Tech. Officer:* GSFC/M Y WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 30176**                    **UNIV OF WISCONSIN - MADISON**                    **9857**  
 EFFECTS OF LOGGING ACTIVITY ON BIOPHYSICAL PROCESSES AND CARBON CYCLING WITHIN CANADIAN BOREAL FOREST  
 08/12/1999 - 08/31/2002                    FY02: \$0                    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**                    **9858**  
 THE IMPACT OF CLIMATE AND AGRICULTURE ACTIVITY ON NITRATE EXPORT TO THE OCEAN  
 08/14/2001 - 08/31/2004                    FY02: \$0                    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**                    **9859**  
 PRECISION MEASUREMENTS OF THE POLARIZATION OF THE COSMIC MICROWAVE BACKGROUND RADIATION  
 05/27/1998 - 08/31/2001                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* P TIMBIE  
*Tech. Officer:* HQ/A NURRIDIN  
*CASE Category:* 13 - PHYSICS

**NGT 5 50295**                    **UNIV OF WISCONSIN - MADISON**                    **9860**  
 DWARF ELLIPTICALS IN CLUSTERS: THE FIRST GALAXIES STUDENT: CHRISTOPHER CONSELICE  
 06/26/2000 - 12/31/2001                    FY02: \$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**                    **9861**  
 PARAMETERIZATION AND SCALE ISSUES ASSOCIATED WITH MACROSCALE WATERSHED MODELING  
 07/27/1998 - 05/13/2003                    FY02: \$0                    Total: \$66,000  
*Prin. Invest.:* J F CRUISE  
*Tech. Officer:* MSFC/J F DOWDY  
*CASE Category:* 49 - ENGINEERING, OTHER

## NASA'S UNIVERSITY PROGRAM

WYOMING

**NCC 1 354**                    **UNIV OF WISCONSIN - MILWAUKEE**                    **9862**  
 PION PRODUCTION CROSS SECTIONS  
 08/02/1999 - 12/31/2002                    FY02: \$0                    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**                    **9863**  
 PC12 PHEOCHROMOCYTOMA CELLS: A PROVEN MODEL SYSTEM FOR  
 OPTIMIZING 3-D CELL CULTURE  
 03/01/1999 - 11/30/2002                    FY02: \$0                    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**                    **9864**  
 GRADUATE STUDENT RESEARCHERS PROGRAM (GSRP)  
 06/01/1999 - 06/30/2002                    FY02: \$0                    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

## WYOMING

**NAG 1 2164**                    **UNIV OF WYOMING**                    **9865**  
 EVALUATION OF SAGE II AND BALLOON-BARNE STRATO- SPHERIC AEROSOL  
 MEASUREMENTS  
 03/18/1999 - 12/31/2001                    FY02: \$0                    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**                    **9866**  
 SYNTHETIC JET INTERACTION WITH A TURBULENT BOUNDARY LAYER  
 FLOW  
 04/11/2001 - 04/10/2002                    FY02: \$0                    Total: \$32,885  
*Prin. Invest.:* D R SMITH  
*Tech. Officer:* LARC/F J CHEN  
*CASE Category:* 41 - AERONAUTICAL ENGR

**NAG 2 1570**                    **UNIV OF WYOMING**                    **9867**  
 MECHANICAL VERIFICATION OF SYNTHESIZED CODE  
 07/12/2002 - 10/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* J R COWLES  
*Tech. Officer:* ARC/M LOWRY, ARC/S LAU  
*CASE Category:* 22 - COMPUTER SCIENCE

**NAG 2 1576**                    **UNIV OF WYOMING**                    **9868**  
 IN SITU AEROSOL PROFILE MEASUREMENTS AND COMPARISONS WITH  
 SAGE III AEROSOL EXTINCTION AND SURFACE A  
 08/06/2002 - 11/30/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* T DESHLER  
*Tech. Officer:* ARC/C P SCOFIELD  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 4 208**                    **UNIV OF WYOMING**                    **9869**  
 REDUCTION OF BASE DRUG ON LAUNCH VEHICLES REDUCTION OF BASE  
 DRUG ON LAUNCH VEHICLES  
 05/22/2000 - 03/31/2002                    FY02: \$0                    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**                    **9870**  
 ASSESSMENT OF CLIMATIC AND ANTHROPOGENIC IMPACTS O CYCLE  
 CONSTRAINED BY ATMOSPHERIC MEASUREMENTS AND  
 02/03/1997 - 01/14/2002                    FY02: \$0                    Total: \$129,885  
*Prin. Invest.:* E HUNT, JR.  
*Tech. Officer:* GSFC/D E WICKLAND  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 8904**                    **UNIV OF WYOMING**                    **9871**  
 THERMAL EMISSION FROM LAVA FLOWS  
 12/18/1999 - 12/31/2002                    FY02: \$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**                    **9872**  
 MULTI-WAVELENGTH MODELING OF HOT SPOTS ON LO  
 01/18/2000 - 12/31/2002                    FY02: \$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**                    **9873**  
 TO ENHANCE GROUND-BASED OBSERVATIONAL SUPPORT FOR TRAN-  
 SIENT ASTRONOMY RESEARCH  
 09/07/2001 - 09/14/2002                    FY02: \$0                    Total: \$18,160  
*Prin. Invest.:* R CANTERNA  
*Tech. Officer:* GSFC/J P NORRIS  
*CASE Category:* 11 - ASTRONOMY

**NAG 5 11730**                    **UNIV OF WYOMING**                    **9874**  
 INTERPRETATION OF X-RAY AND INFRARED EMISSION FROM IO AND  
 OTHER PLANETARY BODIES  
 02/14/2002 - 02/14/2003                    FY02: \$0                    Total: \$0  
*Prin. Invest.:* R R HOWELL  
*Tech. Officer:* GSFC/D SENSKE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 9 1176**                    **UNIV OF WYOMING**                    **9875**  
 DEVELOP SECURE INTERNET BASED DATA TRANSFER SYSTEM FOR  
 COUNTERMEASURES EVALUATION & VALIDATION PROJ  
 11/15/1999 - 11/14/2001                    FY02: \$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**                    **9876**  
 SAGE III SCIENCE INVESTIGATION SUPPORT P.I. - DR. GABOR VALI  
 01/17/1990 - 01/31/2005                    FY02: \$0                    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**                    **9877**  
 AUTOMATIC FRINGE DETECTION FOR OIL FILM INTERFEROMETRY SKIN-  
 FRICTION MEASUREMENT  
 04/12/1999 - 06/30/2001                    FY02: \$0                    Total: \$40,108  
*Prin. Invest.:* J W NAUGHTON  
*Tech. Officer:* ARC/D M DRIVER, ARC/G ZILLIAC  
*CASE Category:* 41 - AERONAUTICAL ENGR

PUERTO RICO

NASA'S UNIVERSITY PROGRAM

**NCC 5 414**                      **UNIV OF WYOMING**                      **9878**  
 EPSCOR PREPARATION PROGRAM  
 06/18/1999 - 08/31/2002                      FY02: \$0                      Total: \$428,236  
*Prin. Invest.:* P JOHNSON  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 578**                      **UNIV OF WYOMING**                      **9879**  
 WYOMING NASA EPSCOR PROGRAM  
 10/31/2001 - 09/30/2004                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* P E JOHNSON  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NGT 5 30350**                      **UNIV OF WYOMING**                      **9880**  
 EFFECTS OF WIND ON SNOWPACK DISTRIBUTION & SUBSEQU ENT  
 MELT WATER ROUTING ON ECOSYSTEM PROPERTIES/STU  
 08/24/2000 - 08/31/2003                      FY02: \$0                      Total: \$43,992  
*Prin. Invest.:* W REINER  
*Tech. Officer:* GSFC/M WEI  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NGT 5 40102**                      **UNIV OF WYOMING**                      **9881**  
 WYOMING SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 03/01/2001 - 02/28/2005                      FY02: \$0                      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**                      **9882**  
 TRAINING GRANT  
 06/04/1998 - 11/01/2001                      FY02: \$0                      Total: \$66,000  
*Prin. Invest.:* R 3 GANTENBEIN  
*Tech. Officer:* JSC/D G SICKOREZ  
*CASE Category:* 22 - COMPUTER SCIENCE

PUERTO RICO

**NAG 5 11711**                      **POLYTECHNIC UNIV PUERTO RICO**                      **9883**  
 LIVING WITH A STAR, FUTURE ON SPACE RESEARCH & EXP LORATION  
 02/20/2002 - 02/28/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* E LEAL-QUIROS  
*Tech. Officer:* GSFC/G MOAK  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 2 1176**                      **PONCE SCHOOL OF MEDICINE**                      **9884**  
 MECHANISMS OF UV-B INDUCED FREE RADICAL OXIDATIVE DAMAGE IN  
 BOVINE LENSES & HUMAN FIBROBLASTS  
 02/11/1998 - 08/28/2002                      FY02: \$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**                      **9885**  
 DNA REPAIR & SUSCEPTIBILITY TO UV-INDUCED BASAL CEL L CARCINOMA  
 IN PUERTO RICAN POPULATIONS  
 10/26/1999 - 10/31/2001                      FY02: \$0                      Total: \$200,000  
*Prin. Invest.:* J L MATTA  
*Tech. Officer:* ARC/H L D'ANTONI  
*CASE Category:* 56 - MEDICL

**NCC 5 652**                      **UNIV DEL ESTE**                      **9886**  
 A MODEL: THE INST FOR ENHANCING KNOWLEDGE AND IMPROVING  
 INSTRUCTION IN EARTHSCIENC  
 09/04/2002 - 08/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* M HUERTAS  
*Tech. Officer:* HQ/M MATEU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 1 02074**                      **UNIV OF PUERTO RICO - MAYAGUEZ**                      **9887**  
 MICROWAVE REMOTE SENSING OF THE MICROPHYSICAL PROPERTIES OF  
 CLOUDS  
 03/25/2002 - 03/31/2005                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* S CRUZPOL  
*Tech. Officer:* LARC/R A HATHAWAY  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NAG 3 2707**                      **UNIV OF PUERTO RICO - MAYAGUEZ**                      **9888**  
 MATHEMATICS, SCIENCE & TECHNOLOGY CIRCLES: A PILOT MATHEMAT-  
 ICS, SCIENCE & TECHNOLOGY CIRCLES: A PILO  
 03/19/2002 - 01/31/2003                      FY02: \$0                      Total: \$0  
*Prin. Invest.:* B RAMIREZ  
*Tech. Officer:* GRC/R ROMERO  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 5 5302**                      **UNIV OF PUERTO RICO - MAYAGUEZ**                      **9889**  
 CORAL REEF MONITORING BY REMOTE SENSING OF CORAL SPAWN  
 09/05/2000 - 12/31/2002                      FY02: \$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**                      **9890**  
 DYNAMIC TOPOGRAPHY, GRAVITY, & SURFACE DEFORMATION : APPLICA-  
 TION TO HAZARD ASSESSMENT OF ERUPTING IS  
 10/02/1997 - 09/30/2002                      FY02: \$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**                      **9891**  
 CATS-CARIBBEAN TIME SERIES: A SERIAL OBSERVING STA TION IN THE  
 NORTHEASTERN CARIBBEAN SEA  
 05/04/1998 - 06/30/2001                      FY02: \$0                      Total: \$126,000  
*Prin. Invest.:* J CORREDOR  
*Tech. Officer:* GSFC/J W CAMBELL  
*CASE Category:* 39 - ENVIRONMENTAL SCI, OTHER

**NAG 5 10255**                      **UNIV OF PUERTO RICO - MAYAGUEZ**                      **9892**  
 CURRICULUM INTEGRATION THROUGH SOLAR EDUCATION PROGRAM  
 (CITSEP)  
 01/12/2001 - 01/14/2006                      FY02: \$0                      Total: \$55,106  
*Prin. Invest.:* J G GONZALEZ LAGOA  
*Tech. Officer:* GSFC/G COLON  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11296**                      **UNIV OF PUERTO RICO - MAYAGUEZ**                      **9893**  
 CATS CARIBBEAN TIME SERIES: A SERIAL OBSERVING STATION IN THE  
 NORTHEASTERN CARIBBEAN SEA  
 08/29/2001 - 09/30/2002                      FY02: \$0                      Total: \$65,200  
*Prin. Invest.:* J CORREDOR  
*Tech. Officer:* GSFC/J MARRA  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1389**            **UNIV OF PUERTO RICO - MAYAGUEZ**            **9894**  
 RES: THERMAL PROPERTIES OF MELT-GLASS TRANSITIONS OF ORGANIC  
 COMPOUNDS FOR NONLINEAR OPTICAL APPLICA  
 07/09/1997 - 08/15/2001            FY02: \$0            Total: \$433,378  
*Prin. Invest.:* A BARRIENTOS  
*Tech. Officer:* MSFC/M VLASSE  
*CASE Category:* 13 - PHYSICS

**NAG10 243**            **UNIV OF PUERTO RICO - MAYAGUEZ**            **9895**  
 MASTAP - TEACHER ENHANCEMENT PROJECT  
 04/15/1998 - 10/18/2001            FY02: \$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**            **9896**  
 SODIUM CHLORIDE AND NITRATE SEPARATION/RECOVERY FROM CELSS  
 WASTES  
 04/20/1999 - 04/19/2003            FY02: \$0            Total: \$264,146  
*Prin. Invest.:* G COLON  
*Tech. Officer:* KSC/J SAYER  
*CASE Category:* 59 - LIFE SCIENCE, OTHER

**NAG13 02031**            **UNIV OF PUERTO RICO - MAYAGUEZ**            **9897**  
 INVESTIGATION OF FLOW-INDUCED VIBRATION AT THE E2 FACILITY  
 01/23/2002 - 12/31/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* Y JIA  
*Tech. Officer:* SSC/R TRAVIS  
*CASE Category:* 47 - METAL & MATERIALS ENGR

**NAG13 99029**            **UNIV OF PUERTO RICO - MAYAGUEZ**            **9898**  
 DEVELOPMENT AND VALIDATION OF BIO-OPTICAL ALGOR: ITHMS IN  
 COASTAL WATER  
 09/15/1999 - 09/25/2002            FY02: \$0            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**            **9899**  
 "TROPICAL ATMOSPHERIC SCIENCES CENTER"/ THE NASA/PUERTO RICO  
 EPSCOR PROGRAM.  
 07/07/1997 - 06/30/2002            FY02: \$0            Total: \$1,800,000  
*Prin. Invest.:* B G WEINER  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 31 - ATMOSPHERIC SCIENCE

**NCC 5 340**            **UNIV OF PUERTO RICO - MAYAGUEZ**            **9900**  
 PARTNERSHIP FOR SPATIAL AND COMPUTATIONAL RESEARCH  
 06/22/1998 - 05/31/2003            FY02: \$0            Total: \$1,838,192  
*Prin. Invest.:* L MORELL  
*Tech. Officer:* GSFC/M MATHEWS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NCC 5 518**            **UNIV OF PUERTO RICO - MAYAGUEZ**            **9901**  
 TROPICAL CENTER FOR EARTH AND SPACE STUDIES  
 10/05/2000 - 09/30/2005            FY02: \$0            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**            **9902**  
 THEORETICAL QUANTUM STUDY OF THE DISSOCIATION & AD SORPTION  
 DYNAMICS OF HC1 ON STRATOSPHERIC AEROSOL  
 08/24/2000 - 08/31/2001            FY02: \$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**            **9903**  
 TO SUPPORT PROGRAMS AND FELLOWSHIPS UNDER THE NATI COLL AND  
 FELLOWSHIP PROGRAM.  
 01/30/1997 - 08/31/2001            FY02: \$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**            **9904**  
 VERTICAL VARIABILITY IN BIO-OPTICAL PROPERTIES OF COASTAL WATERS  
 -ROLE IN DEV OF NEW REMOTE SENSING  
 09/25/2000 - 01/31/2004            FY02: \$0            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 COLL**            **9905**  
 RF PROPAGATION EFFECTS IN TROPICAL RAIN ZONE RF PROPAGATION  
 EFFECTS IN TROPICAL RAIN ZONE  
 09/24/2001 - 09/14/2002            FY02: \$0            Total: \$10,000  
*Prin. Invest.:* J C CERSOSIMO  
*Tech. Officer:* GRC/R ACOSTA  
*CASE Category:* 45 - ELECTRICAL ENGR

**NCC 3 963**            **UNIV OF PUERTO RICO HUMACAO UNIV COLL**            **9906**  
 POLYMER NANOFIBERS FOR NANOELECTRONIC FIELD EFFECT TRANSIS-  
 TORS  
 05/06/2002 - 12/01/2002            FY02: \$0            Total: \$0  
*Prin. Invest.:* N J PINTO  
*Tech. Officer:* GRC/F MIRANDA  
*CASE Category:* 13 - PHYSICS

**NAG 3 2676**            **UNIV OF PUERTO RICO-RIO PIEDRAS**            **9907**  
 NANO-CRYSTALLINE LITHIUM ION INTERCLATED TRANSITIO N METAL  
 OSIDE THIN FILMS FOR RECHARGEABLE BATTERY  
 01/25/2002 - 12/11/2004            FY02: \$0            Total: \$0  
*Prin. Invest.:* R S KATIYAR  
*Tech. Officer:* GRC/T B MILLER  
*CASE Category:* 12 - CHEMISTRY

**NAG 3 2749**            **UNIV OF PUERTO RICO-RIO PIEDRAS**            **9908**  
 TRAINING FOR EXCELLENCE ON NANOTECHNOLOGY EDUCATIO N AND  
 RESEARCH (TENER)  
 03/27/2002 - 02/28/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* C R CABRERA  
*Tech. Officer:* GRC/M E PEREZ-DAVIS  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 3 2769**            **UNIV OF PUERTO RICO-RIO PIEDRAS**            **9909**  
 SELF-ASSEMBLY OF CARBON NANOTUBES ON PT AND SI ELE CTRODES  
 04/15/2002 - 04/14/2003            FY02: \$0            Total: \$0  
*Prin. Invest.:* C CABRERA  
*Tech. Officer:* GRC/T B MILLER  
*CASE Category:* 12 - CHEMISTRY

## CANADA

**NAG 5 9050 UNIV OF PUERTO RICO-RIO PIEDRAS 9910**  
 INTERACTIONS AND DIVERSITY: EARTH SYSTEM SCIENCE & BEYOND  
 03/01/2000 - 02/14/2003 FY02: \$49,890 Total: \$99,890  
*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 9911**  
 FUNDING FOR GRANT FOR PROPOSAL NUMBER NRA-99-05-05 5-1085  
 TITLED "DIAMOND ULTRAVIOLET SENSORS  
 01/31/2001 - 01/31/2004 FY02: \$0 Total: \$260,883  
*Prin. Invest.:* D MORELL  
*Tech. Officer:* GSFC/B MOTT  
*CASE Category:* 19 - PHYSICAL SCIENCE, OTHER

**NAG 5 11814 UNIV OF PUERTO RICO-RIO PIEDRAS 9912**  
 UPR-RIO PIEDRAS BUSINESS ADMINISTRATION INTERNSHIP PROGRAM  
 03/05/2002 - 03/14/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* J AYALA  
*Tech. Officer:* GSFC/M MENCHAN  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

**NAG 8 1709 UNIV OF PUERTO RICO-RIO PIEDRAS 9913**  
 LAND MANAGEMENT IN THE TROPIC AND ITS EFFECTS ON THE GLOBAL  
 ENVIRONMENT  
 03/20/2000 - 03/19/2003 FY02: \$0 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 9914**  
 NASA EPSCOR: PREPARATORY GRANT PROPOSAL  
 05/17/1999 - 07/31/2002 FY02: \$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 9915**  
 PUERTO RICO NASA EPSCOR PROGRAM  
 09/24/2001 - 08/31/2004 FY02: \$0 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 9916**  
 GRADUATE STUDENT RESEARCH  
 06/08/2001 - 08/31/2003 FY02: \$0 Total: \$22,000  
*Prin. Invest.:* C R CABRERA  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 12 - CHEMISTRY

**NGT 3 52381 UNIV OF PUERTO RICO-RIO PIEDRAS 9917**  
 GRADUATE STUDENT RESEARCHERS PROGRAM - DEVELOPMENT OF A  
 METHODOLOGY FOR THE PREPARATION OF ORDERED  
 07/09/2002 - 07/31/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* C R CABRERA  
*Tech. Officer:* GRC/F J MONTEGANI  
*CASE Category:* 12 - CHEMISTRY

**NGT 5 40091 UNIV OF PUERTO RICO-RIO PIEDRAS 9918**  
 PUERTO RICO SPACE GRANT COLL AND FELLOWSHIP PROGRAM  
 02/22/2001 - 02/28/2005 FY02: \$0 Total: \$406,250  
*Prin. Invest.:* W WEINER  
*Tech. Officer:* GSFC/D DETROYE  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## NASA'S UNIVERSITY PROGRAM

**NAG 5 10240 UNIV OF TURABO 9919**  
 ENGINEERING PREPARATORY PROJECT FOR HISPANIC HIGH SCHOOL  
 STUDENTS  
 01/05/2001 - 02/28/2002 FY02: \$0 Total: \$192,998  
*Prin. Invest.:* A COURTIER  
*Tech. Officer:* GSFC/M MATEU  
*CASE Category:* 49 - ENGINEERING, OTHER

**NAG 5 11727 UNIV OF TURABO 9920**  
 ENGINEERING PREPARATORY PROJECT FOR HISPANIC HIGH SCHOOL  
 STUDENTS  
 02/07/2002 - 02/28/2003 FY02: \$0 Total: \$0  
*Prin. Invest.:* A M COURTIE  
*Tech. Officer:* GSFC/M MATEAU  
*CASE Category:* 99 - MULTI INTERDISCIPL, OTHER

## CANADA

**NAG 5 9875 BROCK UNIV 9923**  
 U.S.-CANADA: FLUORESCENCE-BASED DIAGNOSTIC OF IRON LIMITATION  
 FOR ANALYSIS OF NATURAL PHYTOPLANKTON  
 08/22/2000 - 08/31/2001 FY02: \$0 Total: \$21,000  
*Prin. Invest.:* D BRUCE  
*Tech. Officer:* GSFC/M BEHRENFELD  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

## GREAT BRITAIN

**NAGW 2127 UNIV OF WALES 9924**  
 SOLUTION ALGORITHMS FOR HIGH SPEED COMPRESSIBLE FLOWS  
 06/15/1990 - 04/30/2002 FY02: \$0 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 9925**  
 INVESTIGATION OF THE SENSITIVITY OF THE BUCKLING LOAD TO  
 VARIATIONS IN DESIGN PARAMETERS AND GEOMET  
 01/14/1999 - 06/30/2002 FY02: \$0 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 9926**  
 THE ROLE OF AIRCRAFT ACCIDENT AND INCIDENT CASE HISTORIES IN  
 AVIATION SAFETY AND TRAINING  
 02/03/2000 - 01/31/2002 FY02: \$0 Total: \$171,484  
*Prin. Invest.:* D O'HARE  
*Tech. Officer:* ARC/H BARSHI  
*CASE Category:* 41 - AERONAUTICAL ENGR



## PERU

**NAS 5 99121 UNIV NACIONAL DE SAN AGUSTIN - AREQUIPA 9927**  
 OPERATE & MAINTAIN LASER TRACKING STATION AT AREQUIPA PERU  
 03/18/1999 - 01/23/2002 FY02: \$0 Total: \$429,377  
*Prin. Invest.:* N APPLICABLE  
*Tech. Officer:* GSFC/D L CARTER  
*CASE Category:* 32 - GEOLOGICAL SCIENCE

**NCC 1 01005 MOSCOW INST OF PHYSICS & TECHNOLOGY 9922**  
 INVEST A/C WAKE MOD 4 MITIGATN/REDUCTN OF HARMFUL ATMOSPH  
 EFFECTS SUBSONIC/SUPRSONIC A/C ENGINE EXH  
 09/20/2001 - 09/19/2004 FY02: \$0 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

## RUSSIA

**NCC 1 353 ALL RUSSIA INST. OF AVIATION METALS (VIAM) 9921**  
 EVALUATION OF LIGHTWEIGHT ALLOYS & ADVANCED MATERIALS PRO-  
 CESSING FOR AIRFRAMS & SPACE VEHICLE  
 01/13/2000 - 12/31/2002 FY02: \$0 Total: \$222,000  
*Prin. Invest.:* J FRIDLANDER  
*Tech. Officer:* LARC/R K BIRD  
*CASE Category:* 47 - METAL & MATERIALS ENGR



# 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:

<i>PHYSICAL SCIENCES</i>	<i>ENVIRONMENTAL SCIENCES (Terrestrial and extraterrestrial)</i>	<i>LIFE SCIENCES</i>	<i>SOCIAL SCIENCES</i>
11 ASTRONOMY	31 ATMOSPHERIC SCIENCES	51 BIOLOGICAL SCIENCES	71 ANTHROPOLOGY
12 CHEMISTRY	32 GEOLOGICAL SCIENCES	54 ENVIRONMENTAL BIOLOGY	72 ECONOMICS
13 PHYSICS	33 OCEANOGRAPHY	55 AGRICULTURAL SCIENCES	73 HISTORY
19 PHYSICAL SCIENCES, NEC*	39 ENVIRONMENTAL SCIENCES, NEC*	56 MEDICAL SCIENCES	74 LINGUISTICS
		59 LIFE SCIENCES, NEC*	75 POLITICAL SCIENCE
			76 SOCIOLOGY
			79 SOCIAL SCIENCE, NEC*
<i>MATHEMATICAL/COMPUTER SCIENCE</i>	<i>ENGINEERING</i>	<i>PSYCHOLOGY</i>	<i>OTHER SCIENCES**</i>
21 MATHEMATICS	41 AERONAUTICAL	61 BIOLOGICAL	99 ALL DISCIPLINE(S)
22 COMPUTER SCIENCES	42 ASTRONAUTICAL	62 SOCIAL SCIENCES	
29 MATHEMATICAL COMPUTER SCIENCES, NEC*	43 CHEMICAL	69 PSYCHOLOGICAL, NEC*	
	44 CIVIL		
	45 ELECTRICAL		
	46 MECHANICAL		
	47 METALLURGY AND MATERIALS		
	49 ENGINEERING, NEC*		

\* 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.

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	ARIZONA STATE UNIV	D BOGAN	GSFC	R GREELY	NAG 5 8897	20
11	ARIZONA STATE UNIV	D BOGAN	GSFC	S A FAGENTS	NAG 5 8898	20
11	ARIZONA STATE UNIV	D K WEST	GSFC	S STARRFIELD	NAG 5 6741	19
11	ARIZONA STATE UNIV	D K WEST	GSFC	S G STARRFIELD	NAG 5 8278	19
11	ARIZONA STATE UNIV	D K WEST	GSFC	M POLITANO	NAG 5 8481	19
11	ARIZONA STATE UNIV	D NAVA	GSFC	T G SHARP	NAG 5 9381	20
11	ARIZONA STATE UNIV	D SENSKE	GSFC	R GREELY	NAG 5 10460	21
11	ARIZONA STATE UNIV	G SONNEBORN	GSFC	A P COWLEY	NAG 5 8805	20
11	ARIZONA STATE UNIV	G SONNEBORN	GSFC	S G STARRFIELD	NAG 5 9395	20
11	ARIZONA STATE UNIV	G SONNEBORN	GSFC	J B HOLBERG	NAG 5 10316	21
11	ARIZONA STATE UNIV	J BOYCE	GSFC	D R HUSS	NAG 5 8173	19
11	ARIZONA STATE UNIV	J BOYCE	GSFC	L A LESHIN	NAG 5 8286	19
11	ARIZONA STATE UNIV	J BOYCE	GSFC	R GREELEY	NAG 5 8721	20
11	ARIZONA STATE UNIV	J BOYCE	GSFC	P R BUSECK	NAG 5 9352	20
11	ARIZONA STATE UNIV	J BOYCE	GSFC	R GREELY	NAG 5 9773	20
11	ARIZONA STATE UNIV	J BOYCE	GSFC	S WYCKOFF	NAG 5 10077	20
11	ARIZONA STATE UNIV	J BOYCE	GSFC	P R CHRISTIANSON	NAG 5 10310	21
11	ARIZONA STATE UNIV	J BOYCE	GSFC	G HUSS	NAG 5 10449	21
11	ARIZONA STATE UNIV	J BOYCE	GSFC	H VANHALA	NAG 5 11566	21
11	ARIZONA STATE UNIV	J BOYCE	GSFC	G R HUSS	NAG 5 11770	22
11	ARIZONA STATE UNIV	J BOYCE	GSFC	L A LESHIN	NAG 5 11809	22
11	ARIZONA STATE UNIV	J BOYCE	GSFC	P WILLIAMS	NAG 5 11899	22
11	ARIZONA STATE UNIV	J BOYCE	GSFC	M A PRESLEY	NAG 5 12141	22
11	ARIZONA STATE UNIV	J BOYCE	GSFC	R GREELEY	NAG 5 12142	22
11	ARIZONA STATE UNIV	J GRANT	GSFC	R GREELEY	NAG 5 8948	20
11	ARIZONA STATE UNIV	J M BOYCE	GSFC	S WYCKOFF	NAG 5 10753	21
11	ARIZONA STATE UNIV	J M BOYCE	GSFC	S FAGENTS	NAG 5 11199	21
11	ARIZONA STATE UNIV	M GREENHOUSE	GSFC	R A WINDHORST	NAG 5 12460	22
11	ARIZONA STATE UNIV	R OLIVERSEN	GSFC	S STARRFIELD	NAG 5 9263	20
11	ARIZONA STATE UNIV	J BOYCE	HQ	L LESHIN	NAG 5 7540	19
11	ARIZONA STATE UNIV	J BOYCE	HQ	D R HUSS	NAG 5 8158	19
11	ARIZONA STATE UNIV	J BOYCE	HQ	R GREELEY	NAG 5 8453	19
11	AUBURN UNIV	D BRUNNER	GSFC	H W BRANDHORST	NCC 5 459	4
11	AUBURN UNIV	D EVANS	GSFC	D LIN	NAG 5 8081	3

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	BLOOMSBURG UNIV	J GRANT	GSFC	M K SHEPARD	NAG 5 7964	430
11	BOSTON COLL	R J OLIVERSEN	GSFC	S J CAREY	NAG 5 10824	275
11	BOSTON UNIV	D WEST	GSFC	J R MATTOX	NAG 5 3384	275
11	BOSTON UNIV	J LING	GSFC	N CROOKER	NAG 5 6658	275
11	BOSTON UNIV	J LING	GSFC	N U CROOKER	NAG 5 7049	275
11	BOSTON UNIV	J M BOYCE	GSFC	M MENDILLO	NAG 5 11077	277
11	BOSTON UNIV	J R BYRD	GSFC	P CHAKRABARTI	NAG 5 10801	277
11	BOSTON UNIV	R J OLIVERSEN	GSFC	J M JACKSON	NAG 5 10808	277
11	BOSTON UNIV	R J OLIVERSEN	GSFC	A P MARSCHER	NAG 5 11811	278
11	BOSTON UNIV	R OLIVERSEN	GSFC	A MARSCHER	NAG 5 9161	276
11	BOSTON UNIV	T MORGAN	GSFC	J BAUMGARDNER	NAG 5 10496	277
11	BOWIE STATE UNIV	J TILTON	GSFC	M MAREBOYANA	NAG 5 2829	236
11	BROWN UNIV	B CAMPBELL	GSFC	P H SCHULTZ	NAG 5 7082	452
11	BROWN UNIV	C STAHL	GSFC	G SEIDEL	NAG 5 10383	453
11	BROWN UNIV	D BOGAN	GSFC	D T PAPPALARDO	NAG 5 8046	452
11	BROWN UNIV	D NAVA	GSFC	M J RUTHERFRD	NAG 5 9522	452
11	BROWN UNIV	D SENSKE	GSFC	P H SCHULTZ	NAG 5 10188	453
11	BROWN UNIV	D SENSKE	GSFC	J HEAD	NAG 5 10690	453
11	BROWN UNIV	G STRINGFELLOW	GSFC	G TUCKER	NAG 5 9453	452
11	BROWN UNIV	J BOYCE	GSFC	D C HESS	NAG 5 8174	452
11	BROWN UNIV	J BOYCE	GSFC	J F MUSTARD	NAG 5 9589	452
11	BROWN UNIV	J BOYCE	GSFC	C M PIETERS	NAG 5 10010	452
11	BROWN UNIV	J BOYCE	GSFC	J W HEAD III	NAG 5 10031	452
11	BROWN UNIV	J BOYCE	GSFC	M J RUTHERFORD	NAG 5 12225	453
11	BROWN UNIV	J BOYCE	GSFC	M KRESLAVSKY	NAG 5 12286	453
11	BROWN UNIV	J BOYCE	GSFC	J HEAD	NAG 5 12474	454
11	BROWN UNIV	J M BOYCE	GSFC	J HEAD	NAG 5 10573	453
11	BROWN UNIV	L SMITH	GSFC	P H SCHULTZ	NGT 5 50166	454
11	BROWN UNIV	M MEYER	GSFC	Y HUANG	NAG 5 10665	453
11	BROWN UNIV	R BEEBE	GSFC	D T PAPPALARDO	NAG 5 7866	452
11	BROWN UNIV	J BOYCE	HQ	M J RUTHERFORD	NAG 5 8181	452
11	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	S BOGGS	NAG 5 5286	42
11	CALIFORNIA INST OF TECH	B BETTS	GSFC	J KIRSCHVINK	NAG 5 10410	45
11	CALIFORNIA INST OF TECH	B CAMPBELL	GSFC	J BEAUCHAMP	NAG 5 7081	43
11	CALIFORNIA INST OF TECH	B WORRALL	GSFC	E STONE	NAG 5 6912	42
11	CALIFORNIA INST OF TECH	D K WEST	GSFC	S KULKARNI	NAG 5 6402	42
11	CALIFORNIA INST OF TECH	D K WEST	GSFC	R BLANDFORD	NAG 5 7007	42
11	CALIFORNIA INST OF TECH	D K WEST	GSFC	E PHINNEY	NAG 5 7034	43
11	CALIFORNIA INST OF TECH	D K WEST	GSFC	J M CARPENTER	NAG 5 8217	43
11	CALIFORNIA INST OF TECH	D NAVA	GSFC	D S BURNETT	NAG 5 4319	41
11	CALIFORNIA INST OF TECH	D SENSKE	GSFC	T AHRENS	NAG 5 10208	44
11	CALIFORNIA INST OF TECH	E J WOLLACK	GSFC	A E LANGE	NAG 5 10317	45
11	CALIFORNIA INST OF TECH	F A HERRERO	GSFC	S BOGGS	NAG 5 8743	43
11	CALIFORNIA INST OF TECH	F SNOW	GSFC	C MARTIN	NAS 5 98034	48
11	CALIFORNIA INST OF TECH	G STRINGFELLOW	GSFC	A LANGE	NAG 5 9344	43
11	CALIFORNIA INST OF TECH	H HASAN	GSFC	P LINDBLOM	NAG 5 4093	41
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	S KULKARNI	NAG 5 6981	42
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	D A PAPANASTASSIOU	NAG 5 8251	43
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	S R KULKARNI	NAG 5 8318	43
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	S SARGENT	NAG 5 9530	44
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	A P INGERSOL	NAG 5 9601	44
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	B C MURRAY	NAG 5 9606	44
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	G J WASSERBURG	NAG 5 10293	44
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	G BLAKE	NAG 5 10467	45
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	D STEVENSON	NAG 5 10602	45
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	Y YUNG	NAG 5 10724	45
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	A INGERSOLL	NAG 5 11288	46
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	M RICHARDSON	NAG 5 12156	47
11	CALIFORNIA INST OF TECH	J BOYCE	GSFC	G A BLAKE	NAG 5 9434	43
11	CALIFORNIA INST OF TECH	J M BOYCE	GSFC	S KULKARNI	NAG 5 10558	45
11	CALIFORNIA INST OF TECH	J M BOYCE	GSFC	D STEVENSON	NAG 5 10587	45
11	CALIFORNIA INST OF TECH	J R BYRD	GSFC	D A MEWALDT	NAG 5 10804	45
11	CALIFORNIA INST OF TECH	M MEYER	GSFC	J L KIRSCHVINK	NAG 5 10618	45
11	CALIFORNIA INST OF TECH	M SALAMON	GSFC	M P KAMIONKOWSKI	NAG 5 11985	47
11	CALIFORNIA INST OF TECH	M SALAMON	GSFC	R D BLANDFORD	NAG 5 12032	47
11	CALIFORNIA INST OF TECH	M SALAMON	GSFC	P M GOLDREICH	NAG 5 12037	47

FIELD CODE	INSTITUTION	TECHNICAL OFFICER	TECH OFF LOC.	FIRST PRINCIPAL INVESTIGATOR	AGREEMENT NUMBER	PAGE NUM.
11	CALIFORNIA INST OF TECH	P E HUNTER	GSFC	S G DJORGOVSKI	NAG 5 12118	47
11	CALIFORNIA INST OF TECH	R F MUSHOTZKY	GSFC	F WALTER	NAG 5 9919	44
11	CALIFORNIA INST OF TECH	R H PLESS	GSFC	C MARTIN	NAG 5 5052	41
11	CALIFORNIA INST OF TECH	R J OLIVERSEN	GSFC	M P KAMIONKOWSKI	NAG 5 9821	44
11	CALIFORNIA INST OF TECH	R J OLIVERSEN	GSFC	E PHINNEY	NAG 5 10707	45
11	CALIFORNIA INST OF TECH	R J OLIVERSEN	GSFC	R J BRUNNER	NAG 5 10885	45
11	CALIFORNIA INST OF TECH	R J OLIVERSEN	GSFC	D THOMPSON	NAG 5 10955	46
11	CALIFORNIA INST OF TECH	R J OLIVERSEN	GSFC	A MARSTON	NAG 5 11388	46
11	CALIFORNIA INST OF TECH	R J OLIVERSEN	GSFC	L HILLENBRAND	NAG 5 11645	46
11	CALIFORNIA INST OF TECH	R MUSHOTZKY	GSFC	F A HARRISON	NAG 5 10047	44
11	CALIFORNIA INST OF TECH	R MUSHOTZKY	GSFC	R E RUTLEDGE	NAG 5 11419	46
11	CALIFORNIA INST OF TECH	R OLIVERSEN	GSFC	R SARI	NAG 5 10761	45
11	CALIFORNIA INST OF TECH	T MORGAN	GSFC	E SERABYN	NAG 5 6816	42
11	CALIFORNIA INST OF TECH	A NURRIDIN	HQ	S G DJORGOVSKI	NGT 5 50215	48
11	CALIFORNIA STATE UNIV - FULLERTON	G SONNEBORN	GSFC	K CHEN	NAG 5 10312	50
11	CALIFORNIA STATE UNIV - FULLERTON	J BOYCE	GSFC	D WOODLUM	NAG 5 9433	50
11	CALIFORNIA STATE UNIV - FULLERTON	J BOYCE	GSFC	D WOOLUM	NAG 5 10695	50
11	CALIFORNIA STATE UNIV - LOS ANGELES	D BOGAN	GSFC	K KHURANA	NAG 5 8945	51
11	CALIFORNIA STATE UNIV - NORTHRIDGE	J SHARBER	GSFC	D A CHAPMAN	NAG 5 7778	51
11	CALIFORNIA STATE UNIV - NORTHRIDGE	W J WAGNER	GSFC	G A CHAPMAN	NAG 5 4973	51
11	CALIFORNIA STATE UNIV - NORTHRIDGE	W WAGNER	GSFC	G A CHAPMAN	NAG 5 7191	51
11	CARNEGIE - MELLON UNIV	B H HANKS	GSFC	T KANADE	NCC 5 223	434
11	CARNEGIE - MELLON UNIV	D K WEST	GSFC	A K ROMER	NAG 5 7926	431
11	CARNEGIE - MELLON UNIV	D LAVERY	GSFC	W WHITTAKER	NAG 5 7707	431
11	CARNEGIE - MELLON UNIV	D WEST	GSFC	R NICHOL	NAG 5 6548	431
11	CARNEGIE - MELLON UNIV	N WHITE	GSFC	R E GRIFFITHS	NAG 5 9902	432
11	CARNEGIE - MELLON UNIV	P M ATKINS	GSFC	A F PTAK	NAG 5 9922	432
11	CARNEGIE - MELLON UNIV	R F MUSHOTZKY	GSFC	A ROMER	NAG 5 9899	432
11	CARNEGIE - MELLON UNIV	R J OLIVERSEN	GSFC	T MIYAJI	NAG 5 10875	432
11	CARNEGIE - MELLON UNIV	R J OLIVERSEN	GSFC	A K ROMER	NAG 5 11634	432
11	CARNEGIE - MELLON UNIV	R MUSHOTZKY	GSFC	R C NICHOL	NAG 5 10014	432
11	CARNEGIE - MELLON UNIV	R MUSHOTZKY	GSFC	T MIYAJI	NAG 5 10043	432
11	CARNEGIE - MELLON UNIV	R MUSHOTZKY	GSFC	A F PTAK	NAG 5 10170	432
11	CARNEGIE - MELLON UNIV	R MUSHOTZKY	GSFC	T DIMATTEO	NAG 5 11888	432
11	CASE WESTERN RESERVE UNIV	D K WEST	GSFC	C MIHOS	NAG 5 7019	401
11	CASE WESTERN RESERVE UNIV	J BOYCE	GSFC	R HARVEY	NAG 5 11122	401
11	CASE WESTERN RESERVE UNIV	J BOYCE	HQ	R HARVEY	NAG 5 6715	401
11	CHRISTOPHER NEWPORT UNIV	D STARR	GSFC	N POUGATCHEV	NAG 5 6503	501
11	CITY U COL OF NY YORK COLL	P SAKIMOTO	GSFC	M SPERGEL	NAG 5 10152	364
11	CITY UNIV OF NY SYSTEM	P R HOUSER	GSFC	A FREI	NAG 5 10645	366
11	CLARK ATLANTA UNIV	R BEEBE	GSFC	S TAYAL	NAG 5 6889	178
11	CLEMSON UNIV - CLEMSON	J BOYCE	GSFC	D D CLAYTON	NAG 5 11808	458
11	CLEMSON UNIV - CLEMSON	J P NORRIS	GSFC	M D LEISING	NAG 5 8075	457
11	CLEMSON UNIV - CLEMSON	J P NORRIS	GSFC	L THE	NAG 5 9702	457
11	CLEMSON UNIV - CLEMSON	R J OLIVERSEN	GSFC	M D LEISING	NAG 5 10764	457
11	CLEMSON UNIV - CLEMSON	J BOYCE	HQ	D D CLAYTON	NAG 5 8448	457
11	COLL OF CHARLESTON	G SONNEBORN	GSFC	J E NEFF	NAG 5 10313	458
11	COLL OF CHARLESTON	J BOYCE	GSFC	C R COOMBS	NAG 5 7183	458
11	COLL OF CHARLESTON	J M BOYCE	GSFC	C RUNYON	NAG 5 10633	459
11	COLL OF CHARLESTON	J ROSENDHAL	GSFC	M COLGAN	NCC 5 263	459
11	COLL OF CHARLESTON	R J OLIVERSEN	GSFC	T W GIBLIN	NAG 5 11017	459
11	COLL OF WOOSTER	G SONNEBORN	GSFC	B BOROSON	NAG 5 10396	407
11	COLL OF WOOSTER	K HARTNETT	GSFC	B BOROSON	NAG 5 10233	407
11	COLORADO SCH OF MINES	J BOYCE	GSFC	M B DUKE	NAG 5 9684	117
11	COLUMBIA UNIV	B A MERRITT	GSFC	E APRILE	NAG 5 5280	367
11	COLUMBIA UNIV	D F MUSHOTZKY	GSFC	F B PAERLES	NAG 5 9929	369
11	COLUMBIA UNIV	D F MUSHOTZKY	GSFC	D J HELFAND	NAG 5 9928	369
11	COLUMBIA UNIV	D K WEST	GSFC	A P CROTTS	NAG 5 3502	366
11	COLUMBIA UNIV	D K WEST	GSFC	D HELFAND	NAG 5 6035	367
11	COLUMBIA UNIV	D K WEST	GSFC	J P HALPERN	NAG 5 7814	367
11	COLUMBIA UNIV	D K WEST	GSFC	E V GOTTHELF	NAG 5 7935	368
11	COLUMBIA UNIV	D K WEST	GSFC	J O PATTERSON	NAG 5 7977	368
11	COLUMBIA UNIV	D NAVA	GSFC	D LONGHI	NAG 5 4649	367
11	COLUMBIA UNIV	J P NORRIS	GSFC	U OBERLACK	NAG 5 9653	368
11	COLUMBIA UNIV	N E WHITE	GSFC	S M KAHN	NAG 5 7737	367
11	COLUMBIA UNIV	P ATKINS	GSFC	D HELFAND	NAG 5 9870	368

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11	COLUMBIA UNIV	R F MUSHOTZKY	GSFC	F B PAERELS	NAG 5 9898	369
11	COLUMBIA UNIV	R F MUSHOTZKY	GSFC	D J HELFAND	NAG 5 9946	369
11	COLUMBIA UNIV	R J OLIVERSEN	GSFC	J P HALPERN	NAG 5 9094	368
11	COLUMBIA UNIV	R J OLIVERSEN	GSFC	J P HALPERN	NAG 5 9095	368
11	COLUMBIA UNIV	R J OLIVERSEN	GSFC	E V GOTTHELF	NAG 5 9136	368
11	COLUMBIA UNIV	R M MUSHOTZKY	GSFC	E V GOTTHELF	NAG 5 9911	369
11	COLUMBIA UNIV	R MUSHOTZKY	GSFC	J P HALPERN	NAG 5 9950	369
11	COLUMBIA UNIV	R MUSHOTZKY	GSFC	C A SCHARF	NAG 5 10082	369
11	CORNELL UNIV	D K WEST	GSFC	T J LOREDO	NAG 5 3427	372
11	CORNELL UNIV	D K WEST	GSFC	D F CHERNOFF	NAG 5 8356	373
11	CORNELL UNIV	D K WEST	GSFC	D LAI	NAG 5 8484	373
11	CORNELL UNIV	D SENSKE	GSFC	B E CLARK	NAG 5 10289	374
11	CORNELL UNIV	D SENSKE	GSFC	J VEVERKA	NAG 5 10434	374
11	CORNELL UNIV	D SENSKE	GSFC	J F BELL	NAG 5 10636	374
11	CORNELL UNIV	F M FLASAR	GSFC	B J CONRATH	NCC 5 375	376
11	CORNELL UNIV	F M FLASAR	GSFC	P J GIERASCH	NCC 5 539	376
11	CORNELL UNIV	F M FLASAR	GSFC	B J CONRATH	NCC 5 622	376
11	CORNELL UNIV	G MUCKLOW	GSFC	G J STACEY	NAG 5 8673	373
11	CORNELL UNIV	G STRINGFELLOW	GSFC	D L HERTER	NAG 5 6495	372
11	CORNELL UNIV	J BERGSTRALH	GSFC	D J GIERABCH	NAG 5 3862	372
11	CORNELL UNIV	J BOYCE	GSFC	R LOVELACE	NAG 5 9735	373
11	CORNELL UNIV	J BOYCE	GSFC	J F BELL	NAG 5 9774	374
11	CORNELL UNIV	J BOYCE	GSFC	P GIERASCH	NAG 5 10579	374
11	CORNELL UNIV	J BOYCE	GSFC	R O POHL	NAG 5 10584	374
11	CORNELL UNIV	J M BOYCE	GSFC	R SULLIVAN	NAG 5 10574	374
11	CORNELL UNIV	J M BOYCE	GSFC	B CONRATH	NAG 5 10580	374
11	CORNELL UNIV	L D DEMING	GSFC	J HARRINGTON	NAG 5 9594	373
11	CORNELL UNIV	M SALAMON	GSFC	D LAI	NAG 5 12034	375
11	CORNELL UNIV	P CRANE	GSFC	A SIEVERS	NAG 5 9140	373
11	CORNELL UNIV	R BEEBE	GSFC	D J GIERASCH	NAG 5 7864	372
11	CORNELL UNIV	R BEEBE	GSFC	P HELFENSTEIN	NAG 5 8010	372
11	CORNELL UNIV	R OLIVERSEN	GSFC	R LOVELACE	NAG 5 9047	373
11	CORNELL UNIV	T MORGAN	GSFC	D S HOWELL	NAG 5 8070	373
11	CORNELL UNIV	T MORGAN	GSFC	P NICHOLSON	NAG 5 10438	374
11	CORNELL UNIV	J BOYCE	HQ	D J BANDFIELD	NAG 5 8282	373
11	CORNELL UNIV	D B JARRETT	JPL	J F VEVERKA	NASW 00005	376
11	DARTMOUTH COLL	D EVANS	GSFC	B U SONNERUP	NAG 5 7185	339
11	DARTMOUTH COLL	D EVANS	GSFC	M K HUDSON	NAG 5 7689	340
11	DARTMOUTH COLL	R OLIVERSEN	GSFC	B CHABOYER	NAG 5 9225	340
11	DEPAUL UNIV	J ROSENDHAL	GSFC	C C NARASIMHAN	NCC 5 272	198
11	DEPAUL UNIV	P SAKIMOTO	GSFC	C C	NCC 5 641	198
11	DINE COLL (FORMERLY NAVAJO COMM COLL)	P SAKIMOTO	GSFC	S SEMKEN	NAG 5 10254	23
11	DREXEL UNIV	D K WEST	GSFC	S L MCMILLAN	NAG 5 6964	435
11	DREXEL UNIV	J CENTRELLA	GSFC	M VALLIERES	NAG 5 11119	435
11	DREXEL UNIV	R J OLIVERSEN	GSFC	S L MCMILLAN	NAG 5 10775	435
11	DREXEL UNIV	R J OLIVERSEN	GSFC	M VOGEELEY	NAG 5 12243	435
11	DREXEL UNIV	R OLIVERSEN	GSFC	S MCMILLAN	NAG 5 9264	435
11	EAST TENNESSEE STATE UNIV	G SONNEBORN	GSFC	D G LUTTERMOSER	NAG 5 10344	461
11	EAST NEW MEX. UNIV - MAIN CAMP	P SAKIMOTO	GSFC	S NUTTER	NAG 5 10150	356
11	FAIRFIELD UNIV	G MUCKLOW	GSFC	N HAEGEL	NAG 5 8650	143
11	FLA INTERNATIONAL UNIV	R HARTLE	GSFC	K HARDY	NAG 5 3826	160
11	FLORIDA A&M UNIV	P SAKIMOTO	GSFC	C A WEATHERFORD	NAG 5 10148	162
11	FLORIDA INST OF TECH	R J OLIVERSEN	GSFC	M ZHANG	NAG 5 10888	163
11	FLORIDA STATE UNIV	J BOYCE	GSFC	J C CAIN	NAG 5 8284	165
11	FLORIDA STATE UNIV	J BOYCE	GSFC	J C CAIN	NAG 5 12475	166
11	FLORIDA STATE UNIV	M MEYER	GSFC	I FRIEDMAN	NAG 5 9845	165
11	FRANKLIN-MARSHALL COLL	D K WEST	GSFC	D BACKMAN	NAG 5 6858	436
11	GEORGE MASON UNIV	D K WEST	GSFC	J WALLIN	NAG 5 8834	503
11	GEORGE MASON UNIV	M MCCUMBER	GSFC	M KAFATOS	NCC 5 555	505
11	GEORGE MASON UNIV	R J OLIVERSEN	GSFC	R M SAMBRUNA	NAG 5 10073	504
11	GEORGE MASON UNIV	R J OLIVERSEN	GSFC	R M SAMBRUNA	NAG 5 10243	504
11	GEORGE MASON UNIV	R J OLIVERSEN	GSFC	R M SAMBRUNA	NAG 5 10244	504
11	GEORGE MASON UNIV	R J OLIVERSEN	GSFC	R M SAMBRUNA	NAG 5 10708	504
11	GEORGE MASON UNIV	R J OLIVERSEN	GSFC	L OZNEROY	NAG 5 10776	504
11	GEORGE MASON UNIV	R MUSHOTZKY	GSFC	R M SAMBRUNA	NAG 5 10038	504
11	GEORGE MASON UNIV	S KEMPLER	GSFC	M KAFATOS	NCC 5 143	505

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11	GEORGE WASHINGTON UNIV	J BOYCE	GSFC	G M KEATING	NAG 5 8287	150
11	GEORGE WASHINGTON UNIV	J SWANK	GSFC	W PARKE	NAG 5 11951	151
11	GEORGE WASHINGTON UNIV	R BEEBE	GSFC	D A LEVIN	NAG 5 8068	150
11	GEORGIA INST OF TECH	J M BOYCE	GSFC	J BRADLEY	NAG 5 10632	182
11	GEORGIA STATE UNIV	T P GREENE	ARC	T J HENRY	NCC 2 5479	187
11	GEORGIA STATE UNIV	D K WEST	GSFC	D GIES	NAG 5 6904	186
11	GEORGIA STATE UNIV	H HASAN	GSFC	S T MANSON	NAG 5 7752	186
11	GEORGIA STATE UNIV	H THRONSON	GSFC	D PERERA	NAG 5 4950	186
11	HAMPTON UNIV	J R BYRD	GSFC	D M RUSSELL	NAG 5 10796	507
11	HAMPTON UNIV	P SAKIMOTO	GSFC	A OMAR	NAG 5 10163	507
11	HARVARD UNIV	D NAVA	GSFC	D B JACOBSEN	NAG 5 4720	280
11	HARVARD UNIV	E SMITH	GSFC	R KIRSHNER	NAG 5 7768	281
11	HARVARD UNIV	G SONNEBORN	GSFC	J C RAYMOND	NAG 5 9019	281
11	HARVARD UNIV	J BOYCE	GSFC	D B JACOBSEN	NAG 5 4430	280
11	HARVARD UNIV	J BOYCE	GSFC	A W CAMERON	NAG 5 8467	281
11	HARVARD UNIV	JBOYCE	GSFC	S JACOBSEN	NAG 5 11925	282
11	HARVARD UNIV	M MEYER	GSFC	H D HOLLAND	NAG 5 10631	281
11	HARVARD UNIV	M SALAMON	GSFC	M WHITE	NAG 5 12041	282
11	HARVARD UNIV	M SALAMON	GSFC	L E HERNQUIST	NAG 5 12140	282
11	HARVARD UNIV	P CRANE	GSFC	A H DALGARNO	NAG 5 4348	280
11	HARVARD UNIV	R BEEBE	GSFC	W H PARKINSON	NAG 5 7859	281
11	HARVARD UNIV	R J OLIVERSEN	GSFC	A LOEB	NAG 5 7039	280
11	HARVARD UNIV	R J OLIVERSEN	GSFC	R NARAYAN	NAG 5 10780	281
11	HARVARD UNIV	R MUSHOTZKY	GSFC	J E GRINDLAY	NAG 5 10046	281
11	HARVARD UNIV	R MUSHOTZKY	GSFC	R NARAYAN	NAG 5 10105	281
11	HARVARD UNIV	RMUSHOTZKY	GSFC	J E GRINDLAY	NAG 5 10040	281
11	HAVERFORD COLL	R J OLIVERSEN	GSFC	S P BOUGHN	NAG 5 9285	436
11	INDIANA UNIV - BLOOMINGTON	D WEST	GSFC	STEIMAN-CAMERON	NAG 5 6773	213
11	INDIANA UNIV - BLOOMINGTON	G SONNEBORN	GSFC	S SHORE	NAG 5 9236	213
11	INDIANA UNIV - BLOOMINGTON	J BOYCE	GSFC	D H DURISEN	NAG 5 4295	213
11	INDIANA UNIV - BLOOMINGTON	J BOYCE	GSFC	A BASU	NAG 5 9369	213
11	INDIANA UNIV - BLOOMINGTON	J BOYCE	GSFC	R DURISEN	NAG 5 11964	213
11	INDIANA UNIV - BLOOMINGTON	B MERRIT	WFF	J MUSSER	NAG 5 5224	213
11	IOWA STATE UNIV	D K WEST	GSFC	S D KAWALER	NAG 5 8352	220
11	IOWA STATE UNIV	W WAGNER	GSFC	L A WILLSON	NAG 5 8465	221
11	JOHNS HOPKINS UNIV	L CAROFF	ARC	T HENRY	NAG 2 1392	238
11	JOHNS HOPKINS UNIV	B BETTS	GSFC	R L MCNUTT	NAG 5 8516	241
11	JOHNS HOPKINS UNIV	B BETTS	GSFC	R W MCENTIRE	NAG 5 9719	242
11	JOHNS HOPKINS UNIV	B BETTS	GSFC	W BRINCKERHOFF	NAG 5 10693	245
11	JOHNS HOPKINS UNIV	B CAMPBELL	GSFC	A F CHENG	NAG 5 7080	240
11	JOHNS HOPKINS UNIV	D C LING	GSFC	D M RUST	NAG 5 7921	240
11	JOHNS HOPKINS UNIV	D EVANS	GSFC	D Y LUI	NAG 5 7797	240
11	JOHNS HOPKINS UNIV	D EVANS	GSFC	D G SIBECK	NAG 5 7920	240
11	JOHNS HOPKINS UNIV	D K WEST	GSFC	K R SEMBACH	NAG 5 3485	239
11	JOHNS HOPKINS UNIV	D K WEST	GSFC	A S SZALAY	NAG 5 3503	239
11	JOHNS HOPKINS UNIV	D K WEST	GSFC	G R MEURER	NAG 5 8279	241
11	JOHNS HOPKINS UNIV	D R MENGERS	GSFC	H W MOOS	NAG 5 32985	250
11	JOHNS HOPKINS UNIV	D WEST	GSFC	G A KRISS	NAG 5 3255	239
11	JOHNS HOPKINS UNIV	G H MUCKLOW	GSFC	D G MITCHELL	NAG 5 8687	241
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	J A MORSE	NAG 5 8955	241
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	T M HECKMAN	NAG 5 9012	242
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	R SANKRIT	NAG 5 10248	243
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	T M HECKMAN	NAG 5 10302	244
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	S D FRIEDMAN	NAG 5 10355	244
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	L BIANCHI	NAG 5 10364	244
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	R SANKRIT	NAG 5 10380	244
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	R L SHELTON	NAG 5 10394	244
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	S R MCCANDLISS	NAG 5 10403	244
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	W V DIXON	NAG 5 10405	244
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	P CHAYER	NAG 5 10647	245
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	A FULLERTON	NAG 5 10650	245
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	H A WEAVER	NAG 5 10921	246
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	C HOWK	NAG 5 10957	246
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	J DUPUIS	NAG 5 11570	247
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	W P BLAIR	NAG 5 11581	247
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	J DUPUIS	NAG 5 11717	247

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11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	W ZHENG	NAG 5 11728	247
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	C HOWK	NAG 5 11945	248
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	J KRUK	NAG 5 11967	248
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	R SANKRIT	NAG 5 12017	248
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	C HOWK	NAG 5 12135	248
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	T M HECKMAN	NAG 5 12213	249
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	A FULLERTON	NAG 5 12261	249
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	L BIANCHI	NAG 5 12294	249
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	W P BLAIR	NAG 5 12423	249
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	W P BLAIR	NAG 5 12448	249
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	G WILLIGER	NAG 5 12456	249
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	R L SHELTON	NAG 5 12481	249
11	JOHNS HOPKINS UNIV	G SONNEBORN	GSFC	L BIANCHI	NAG 5 12518	249
11	JOHNS HOPKINS UNIV	H HASAN	GSFC	D R MCCANDLISS	NAG 5 4261	239
11	JOHNS HOPKINS UNIV	J BOYCE	GSFC	S L MURCHIE	NAG 5 8171	241
11	JOHNS HOPKINS UNIV	J BOYCE	GSFC	E RHODES	NAG 5 11783	247
11	JOHNS HOPKINS UNIV	J E ROBINSON	GSFC	N AVAILABLE	NAS 5 01072	250
11	JOHNS HOPKINS UNIV	J J WOLFF	GSFC	D GRANT	NAS 5 97179	250
11	JOHNS HOPKINS UNIV	J JELETIC	GSFC	H FORD	NAG 5 7697	240
11	JOHNS HOPKINS UNIV	J M BOYCE	GSFC	O BARNOUIN-JHA	NAG 5 11211	246
11	JOHNS HOPKINS UNIV	J R BYRD	GSFC	D ZHENG	NAG 5 10798	245
11	JOHNS HOPKINS UNIV	J SPANN	GSFC	S WING	NAG 5 10971	246
11	JOHNS HOPKINS UNIV	J WOLFF	GSFC	T COUGHLIN	NAS 5 97271	250
11	JOHNS HOPKINS UNIV	K E WEAVER	GSFC	E T VISHNIAC	NCC 5 447	251
11	JOHNS HOPKINS UNIV	M GUTATHAKURTA	GSFC	S M KRIMIGIS	NAG 5 12291	249
11	JOHNS HOPKINS UNIV	M MELLOTT	GSFC	R E ERLANDSON	NAG 5 9118	242
11	JOHNS HOPKINS UNIV	P HUNTER	GSFC	S R NYLUND	NAG 5 8149	240
11	JOHNS HOPKINS UNIV	R A HOFFMAN	GSFC	N J FOX	NAG 5 9903	243
11	JOHNS HOPKINS UNIV	R BEEBE	GSFC	D STROBEL	NAG 5 7769	240
11	JOHNS HOPKINS UNIV	R BEEBE	GSFC	C P PARANICAS	NAG 5 7863	240
11	JOHNS HOPKINS UNIV	R BEEBE	GSFC	D MAUK	NAG 5 8191	241
11	JOHNS HOPKINS UNIV	R F MUSHOTZKY	GSFC	A F PTAK	NAG 5 11378	247
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	M A HOUDASHELT	NAG 5 10922	246
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	T HECKMAN	NAG 5 6400	239
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	A S SZALAY	NAG 5 9186	242
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	J H KROLIK	NAG 5 9187	242
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	E COLBERT	NAG 5 9878	243
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	S RIDGWAY	NAG 5 10762	245
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	T YAQOOB	NAG 5 10769	245
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	C A NORMAN	NAG 5 10807	245
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	W V DIXON	NAG 5 10916	245
11	JOHNS HOPKINS UNIV	R J OLIVERSEN	GSFC	E COLBERT	NAG 5 11670	247
11	JOHNS HOPKINS UNIV	R M MUSHOTZKY	GSFC	T HECKMAN	NAG 5 9910	243
11	JOHNS HOPKINS UNIV	R MUSHOTZKY	GSFC	J H KROLIK	NAG 5 10304	244
11	JOHNS HOPKINS UNIV	R MUSHOTZKY	GSFC	M E KAISER	NAG 5 9837	242
11	JOHNS HOPKINS UNIV	R MUSHOTZKY	GSFC	T HECKMAN	NAG 5 9948	243
11	JOHNS HOPKINS UNIV	R MUSHOTZKY	GSFC	W BLAIR	NAG 5 9963	243
11	JOHNS HOPKINS UNIV	R MUSHOTZKY	GSFC	H FORD	NAG 5 10176	243
11	JOHNS HOPKINS UNIV	R MUSHOTZKY	GSFC	L M LUBIN	NAG 5 10511	244
11	JOHNS HOPKINS UNIV	R MUSHOTZKY	GSFC	A F PTAK	NAG 5 11572	247
11	JOHNS HOPKINS UNIV	R OLIVERSEN	GSFC	L BIANCHI	NAG 5 9219	242
11	JOHNS HOPKINS UNIV	R OLIVERSEN	GSFC	J DUPUIS	NAG 5 11844	247
11	JOHNS HOPKINS UNIV	R POLIDAN	GSFC	G KRISS	NAG 5 6764	239
11	JOHNS HOPKINS UNIV	S CURTIS	GSFC	R GREEWALD	NAG 5 8361	241
11	JOHNS HOPKINS UNIV	T MORGAN	GSFC	H WEAVER	NAG 5 7186	240
11	JOHNS HOPKINS UNIV	W WAGNER	GSFC	D M RUST	NAG 5 8331	241
11	JOHNS HOPKINS UNIV	M SMITH	MSFC	R GIACCONI	NAG 8 1527	250
11	LOUISIANA STATE UNIV - BATON ROUGE	D K WEST	GSFC	G C CLAYTON	NAG 5 7933	230
11	LOUISIANA STATE UNIV - BATON ROUGE	G SONNEBORN	GSFC	G C CLAYTON	NAG 5 10185	231
11	LOUISIANA STATE UNIV - BATON ROUGE	R J OLIVERSEN	GSFC	J FRANK	NAG 5 8497	231
11	LOUISIANA STATE UNIV - BATON ROUGE	R J OLIVERSEN	GSFC	G C CLAYTON	NAG 5 9709	231
11	LOUISIANA STATE UNIV - BATON ROUGE	R OLIVERSEN	GSFC	G CLAYTON	NAG 5 9203	231
11	MASSACHUSETTS INST OF TECH	D C LING	GSFC	D J LAZARUS	NAG 5 7794	287
11	MASSACHUSETTS INST OF TECH	D C LING	GSFC	D J LAZARUS	NAG 5 7967	288
11	MASSACHUSETTS INST OF TECH	D K WEST	GSFC	W H LEWIN	NAG 5 3558	286
11	MASSACHUSETTS INST OF TECH	D K WEST	GSFC	M H VAN PUTTEN	NAG 5 7012	287



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11	MASSACHUSETTS INST OF TECH	D K WEST	GSFC	V M KASPI	NAG 5 8063	288
11	MASSACHUSETTS INST OF TECH	D K WEST	GSFC	S A RAPPAPORT	NAG 5 8368	288
11	MASSACHUSETTS INST OF TECH	D SENSKE	GSFC	J WISDOM	NAG 5 11536	291
11	MASSACHUSETTS INST OF TECH	D SENSKE	GSFC	A S RIVKIN	NAG 5 11617	291
11	MASSACHUSETTS INST OF TECH	G MUCKLOW	GSFC	M W BAUTZ	NAG 5 8668	288
11	MASSACHUSETTS INST OF TECH	J BERGSTRALH	GSFC	D P BINZEL	NAG 5 3939	286
11	MASSACHUSETTS INST OF TECH	J BERGSTRALH	GSFC	D L ELLIOT	NAG 5 3940	286
11	MASSACHUSETTS INST OF TECH	J BOYCE	GSFC	M T ZUBER	NAG 5 8707	288
11	MASSACHUSETTS INST OF TECH	J BOYCE	GSFC	J I RICHARDSON	NAG 5 8720	288
11	MASSACHUSETTS INST OF TECH	J BOYCE	GSFC	T L GROVE	NAG 5 9525	289
11	MASSACHUSETTS INST OF TECH	J BOYCE	GSFC	T GROVE	NAG 5 10728	291
11	MASSACHUSETTS INST OF TECH	J KING	GSFC	A J LAZARUS	NAG 5 8031	288
11	MASSACHUSETTS INST OF TECH	J SWANK	GSFC	G W CLARK	NAG 5 7279	287
11	MASSACHUSETTS INST OF TECH	M MEYER	GSFC	S A BOWRING	NAG 5 8814	288
11	MASSACHUSETTS INST OF TECH	P CRANE	GSFC	B F BURKE	NAG 5 9763	290
11	MASSACHUSETTS INST OF TECH	R J OLIVERSEN	GSFC	F A RASIO	NAG 5 8460	288
11	MASSACHUSETTS INST OF TECH	R J OLIVERSEN	GSFC	W H LEWIN	NAG 5 9135	289
11	MASSACHUSETTS INST OF TECH	R J OLIVERSEN	GSFC	W H LEWIN	NAG 5 10815	291
11	MASSACHUSETTS INST OF TECH	R MUSHOTZKY	GSFC	B M GAENSLER	NAG 5 9962	290
11	MASSACHUSETTS INST OF TECH	R MUSHOTZKY	GSFC	C R CANIZARES	NAG 5 10008	290
11	MASSACHUSETTS INST OF TECH	R MUSHOTZKY	GSFC	D S DAVIS	NAG 5 10107	290
11	MASSACHUSETTS INST OF TECH	R MUSHOTZKY	GSFC	W LEWIN	NAG 5 10192	290
11	MASSACHUSETTS INST OF TECH	R MUSHOTZKY	GSFC	W LEWIN	NAG 5 11683	291
11	MASSACHUSETTS INST OF TECH	R MUSHOTZKY	GSFC	W LEWIN	NAG 5 11878	292
11	MASSACHUSETTS INST OF TECH	R MUSHOTZKY	GSFC	W LEWIN	NAG 5 11930	292
11	MASSACHUSETTS INST OF TECH	R OLIVERSEN	GSFC	G ALLEN	NAG 5 9237	289
11	MASSACHUSETTS INST OF TECH	R PETRE	GSFC	M SCHATTENBURG	NCC 5 525	295
11	MASSACHUSETTS INST OF TECH	R PETRE	GSFC	M L SCHTTENBURG	NCC 5 633	295
11	MASSACHUSETTS INST OF TECH	T MORGAN	GSFC	J ELLIOT	NAG 5 10444	290
11	MASSACHUSETTS INST OF TECH	T MORGAN	GSFC	A RIVKIN	NAG 5 10604	290
11	MASSACHUSETTS INST OF TECH	W DAVIS	GSFC	H BRADT	NAS 5 30612	293
11	MASSACHUSETTS INST OF TECH	J BOYCE	HQ	P L GROVE	NAG 5 4768	287
11	MASSACHUSETTS INST OF TECH	M C SMITH	MSFC	C R CANIZARIES	NAS 8 01129	294
11	MEDGAR EVERS COLL	P SAKIMOTO	GSFC	L P JOHNSON	NAG 5 10142	377
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11	MICHIGAN STATE UNIV	R J OLIVERSEN	GSFC	S ZEPF	NAG 5 11320	304
11	MICHIGAN STATE UNIV	W J WAGNER	GSFC	R F STEIN	NAG 5 9563	304
11	MIDDLEBURY COLL	D K WEST	GSFC	P WINKLER	NAG 5 8020	501
11	MONTANA STATE UNIV	D DETROYE	GSFC	W HISCOCK	NCC 5 240	333
11	MONTANA STATE UNIV	J GURMAN	GSFC	P MARTENS	NAG 5 12081	333
11	MONTANA STATE UNIV	M MEYER	GSFC	T R MCDERMOTT	NAG 5 8807	332
11	MONTANA STATE UNIV	M MEYER	GSFC	D M WARD	NAG 5 8824	332
11	MONTANA STATE UNIV	M SALAMON	GSFC	S TSURUTA	NAG 5 12079	333
11	MONTANA STATE UNIV	W WAGNER	GSFC	D CANFIELD	NAG 5 6110	332
11	MONTANA STATE UNIV	W WAGNER	GSFC	R C CANFIELD	NAG 5 11873	333
11	MONTANA STATE UNIV	M J HAGYARD	MSFC	R C CANFIELD	NAG 8 1399	333
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11	NEW JERSEY INST OF TECH	W WAGNER	GSFC	H WANG	NAG 5 7085	346
11	NEW JERSEY INST OF TECH	W WAGNER	GSFC	M F WOODARD	NAG 5 8485	346
11	NEW JERSEY INST OF TECH	W WAGNER	GSFC	P R GOODE	NAG 5 11007	347
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11	NEW MEXICO INST OF MINING & TECH	M Y WEI	GSFC	F M PHILLIPS	NGT 5 30169	358
11	NEW MEXICO STATE UNIV - LAS CRUCES	C P MCKAY	ARC	M MARLEY	NAG 2 6007	358
11	NEW MEXICO STATE UNIV - LAS CRUCES	B A MERRITT	GSFC	S J STOCHAJ	NAG 5 5159	358
11	NEW MEXICO STATE UNIV - LAS CRUCES	D C LING	GSFC	D R WEBBER	NAG 5 7795	358
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11	NEW MEXICO STATE UNIV - LAS CRUCES	D K WEST	GSFC	A KLYPIN	NAG 5 8242	359
11	NEW MEXICO STATE UNIV - LAS CRUCES	F C JONES	GSFC	W R WEBBER	NAG 5 7524	358
11	NEW MEXICO STATE UNIV - LAS CRUCES	J HARRINGTON	GSFC	H BAPTISTE	NAG 5 11311	359
11	NEW MEXICO STATE UNIV - LAS CRUCES	J M BOYCE	GSFC	V SOLOMATOV	NAG 5 10578	359
11	NEW MEXICO STATE UNIV - LAS CRUCES	J M BOYCE	GSFC	J R MURPHY	NAG 5 11164	359
11	NEW MEXICO STATE UNIV - LAS CRUCES	R J OLIVERSEN	GSFC	M S MARLEY	NAG 5 9273	359
11	NEW MEXICO STATE UNIV - LAS CRUCES	T MORGAN	GSFC	D J CHANOVER	NAG 5 7904	359
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11	NORTH CAROLINA STATE UNIV. - RALEIGH	D K WEST	GSFC	S P REYNOLDS	NAG 5 7153	395
11	NORTH CAROLINA STATE UNIV. - RALEIGH	R J OLIVERSEN	GSFC	S P REYNOLDS	NAG 5 10940	395
11	NORTHEAST LOUISIANA UNIV	J M BOYCE	GSFC	D A DE HON	NAG 5 4293	232
11	NORTHERN ARIZONA UNIV	J BOYCE	GSFC	D CORNELISON	NAG 5 11729	24
11	NORTHERN ARIZONA UNIV	J BOYCE	GSFC	N BARLOW	NAG 5 12510	24
11	NORTHERN ARIZONA UNIV	T MORGAN	GSFC	C A GRIFFITH	NAG 5 6790	23
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11	NORTHWESTERN UNIV	D K WEST	GSFC	R E TAAM	NAG 5 7011	199
11	NORTHWESTERN UNIV	D SENSKE	GSFC	M S ROBINSON	NAG 5 10847	200
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11	NORTHWESTERN UNIV	G SONNEBORN	GSFC	D M MEYER	NAG 5 10465	200
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11	NORTHWESTERN UNIV	J BOYCE	HQ	M S ROBINSON	NAG 5 8294	200
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11	OHIO STATE UNIV	D K WEST	GSFC	M H PINSONNEAULT	NAG 5 7150	410
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11	PENN STATE UNIV. - UNIV. PARK	M MEYER	GSFC	H OHMOTO	NAG 5 9089	441
11	PENN STATE UNIV. - UNIV. PARK	M S BURRELL	GSFC	JIAN GE	NGT 5 119	446
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11	RENSSELAER POLYTECH INST	M A MEYER	GSFC	D P FERRIS	NAG 5 7598	380
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11	RICE UNIV	D EVANS	GSFC	D W HILL	NAG 5 8131	471
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11	RICE UNIV	R J OLIVERSEN	GSFC	D FOSSATI	NAG 5 11796	472
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11	RICE UNIV	R OLIVERSEN	GSFC	E LIANG	NAG 5 9223	471
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11	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	R MUSHOTZKY	GSFC	J P HUGHES	NAG 5 9979	353
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11	SAN DIEGO STATE UNIV	D D MAZANEK	LARC	P ETZEL	NGT 1 02018	53
11	SAN JOSE STATE UNIV	D J HOLLEN	ARC	M J KAUFMAN	NCC 2 5338	57
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11	SAN JOSE STATE UNIV	J N CUZZI	ARC	P J HAMIL	NCC 2 1248	56
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11	SAN JOSE STATE UNIV	J BOYCE	GSFC	A BRIDGER	NAG 5 12302	55
11	SONOMA STATE UNIV	A M PARSONS	GSFC	L R COMINSKY	NAG 5 11328	58
11	SONOMA STATE UNIV	A PARSONS	GSFC	L R COMINSKY	NAG 5 9495	58
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11	SOUTH CAROLINA STATE UNIV	P SAKIMOTO	GSFC	D K WALTER	NAG 5 10145	459
11	SOUTHERN METHODIST UNIV	D SENSKE	GSFC	V L HANSEN	NAG 5 10586	473
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11	STANFORD UNIV	J N CUZZI	ARC	A L TYLER	NCC 2 908	64
11	STANFORD UNIV	G D HOLMAN	GSFC	V PETROSIAN	NAG 5 8600	61
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11	STANFORD UNIV	J BOYCE	HQ	R ZARE	NAG 5 7208	60
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11	UNIV OF CALIFORNIA - BERKELEY	J BOYCE	GSFC	A J WESTPHAL	NAG 5 11902	74
11	UNIV OF CALIFORNIA - BERKELEY	J BOYCE	GSFC	G W MARCY	NAG 5 12090	74
11	UNIV OF CALIFORNIA - BERKELEY	J BOYCE	GSFC	A GLASSGOLD	NAG 5 12167	75
11	UNIV OF CALIFORNIA - BERKELEY	J HILLMAN	GSFC	I DE PATER	NAG 5 6890	69
11	UNIV OF CALIFORNIA - BERKELEY	J LING	GSFC	J G LUHMANN	NAG 5 7951	70
11	UNIV OF CALIFORNIA - BERKELEY	J M BOYCE	GSFC	W WELCH	NAG 5 10657	72
11	UNIV OF CALIFORNIA - BERKELEY	J M BOYCE	GSFC	P MARCUS	NAG 5 10664	72
11	UNIV OF CALIFORNIA - BERKELEY	J M BOYCE	GSFC	W DIETRICH	NAG 5 11179	73
11	UNIV OF CALIFORNIA - BERKELEY	J R BYRD	GSFC	D EDELSTEIN	NAG 5 10800	72
11	UNIV OF CALIFORNIA - BERKELEY	J R BYRD	GSFC	D WESTPHAL	NAG 5 10803	73
11	UNIV OF CALIFORNIA - BERKELEY	L SMITH	GSFC	C F MCKEE	NGT 5 50253	78
11	UNIV OF CALIFORNIA - BERKELEY	M L KAISER	GSFC	S BALE	NAG 5 9115	71
11	UNIV OF CALIFORNIA - BERKELEY	M SALAMON	GSFC	J ARONS	NAG 5 12031	74
11	UNIV OF CALIFORNIA - BERKELEY	M SALAMON	GSFC	R I KLEIN	NAG 5 12042	74
11	UNIV OF CALIFORNIA - BERKELEY	M SALAMON	GSFC	E QUATAERT	NAG 5 12043	74
11	UNIV OF CALIFORNIA - BERKELEY	M SALAMON	GSFC	C M MA	NAG 5 12173	75
11	UNIV OF CALIFORNIA - BERKELEY	M SALAMON	GSFC	M WHITE	NAG 5 12437	75
11	UNIV OF CALIFORNIA - BERKELEY	N GEHRELS	GSFC	K HURLEY	NAG 5 9210	71
11	UNIV OF CALIFORNIA - BERKELEY	P CRANE	GSFC	J EDELSTEIN	NAG 5 9091	71
11	UNIV OF CALIFORNIA - BERKELEY	P CRANE	GSFC	O SIEGMUND	NAG 5 9149	71
11	UNIV OF CALIFORNIA - BERKELEY	R J OLIVERSEN	GSFC	G F SMOOT	NAG 5 6552	69
11	UNIV OF CALIFORNIA - BERKELEY	R J OLIVERSEN	GSFC	O H SIEGMUND	NAG 5 9130	71
11	UNIV OF CALIFORNIA - BERKELEY	R J OLIVERSEN	GSFC	K C HURLEY	NAG 5 10710	72
11	UNIV OF CALIFORNIA - BERKELEY	R J OLIVERSEN	GSFC	G H FISHER	NAG 5 10839	73
11	UNIV OF CALIFORNIA - BERKELEY	R J OLIVERSEN	GSFC	I ROTH	NAG 5 10866	73
11	UNIV OF CALIFORNIA - BERKELEY	R J OLIVERSEN	GSFC	K C HURLEY	NAG 5 11451	73
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	70
11	UNIV OF CALIFORNIA - BERKELEY	R MUSHOTZKY	GSFC	E QUATAERT	NAG 5 11333	73
11	UNIV OF CALIFORNIA - BERKELEY	R MUSHOTZKY	GSFC	A V FILIPPENKO	NAG 5 11689	73
11	UNIV OF CALIFORNIA - BERKELEY	R PFAFF	GSFC	D W CARLSON	NAG 5 12590	75
11	UNIV OF CALIFORNIA - BERKELEY	T MORGAN	GSFC	K C HURLEY	NAG 5 9503	71
11	UNIV OF CALIFORNIA - BERKELEY	W WAGNER	GSFC	G H FISHER	NAG 5 8468	70
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	80
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	80
11	UNIV OF CALIFORNIA - DAVIS	R J OLIVERSEN	GSFC	N ARAV	NAG 5 9540	80
11	UNIV OF CALIFORNIA - DAVIS	R J OLIVERSEN	GSFC	N ARAV	NAG 5 11607	80
11	UNIV OF CALIFORNIA - DAVIS	R MUSHOTZKY	GSFC	L M LUBIN	NAG 5 12373	80
11	UNIV OF CALIFORNIA - DAVIS	R OLIVERSEN	GSFC	L KNOX	NAG 5 11098	80
11	UNIV OF CALIFORNIA - IRVINE	R MUSHOTZKY	GSFC	D BUOTE	NAG 5 10748	84
11	UNIV OF CALIFORNIA - IRVINE	R MUSHOTZKY	GSFC	D BUOTE	NAG 5 10758	84
11	UNIV OF CALIFORNIA - LOS ANGELES	C BENNET	GSFC	E L WRIGHT	NAG 5 8540	88
11	UNIV OF CALIFORNIA - LOS ANGELES	C SAVINELLI	GSFC	E WRIGHT	NAS 5 02100	93
11	UNIV OF CALIFORNIA - LOS ANGELES	D EVANS	GSFC	R J STRANGWAY	NAG 5 6965	87
11	UNIV OF CALIFORNIA - LOS ANGELES	D EVANS	GSFC	D SCHRIVER	NAG 5 8085	88
11	UNIV OF CALIFORNIA - LOS ANGELES	D K WEST	GSFC	R A EDELSON	NAG 5 7899	87
11	UNIV OF CALIFORNIA - LOS ANGELES	D K WEST	GSFC	M A JURA	NAG 5 7924	88
11	UNIV OF CALIFORNIA - LOS ANGELES	D NAVA	GSFC	D E RUBIN	NAG 5 4766	87
11	UNIV OF CALIFORNIA - LOS ANGELES	D NAVA	GSFC	F T KYTE	NAG 5 9441	89
11	UNIV OF CALIFORNIA - LOS ANGELES	D SENSKE	GSFC	G SCHUBERT	NAG 5 11691	91
11	UNIV OF CALIFORNIA - LOS ANGELES	G SONNEBORN	GSFC	M A JURA	NAG 5 10351	90
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	D M ZUCKERMAN	NAG 5 4688	87
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	G SCHUBERT	NAG 5 8530	88
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	P H WARREN	NAG 5 9027	89
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	K D MCKEEGAN	NAG 5 9789	90
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	A E RUBIN	NAG 5 12215	93
11	UNIV OF CALIFORNIA - LOS ANGELES	J M BOYCE	GSFC	W MOORE	NAG 5 10615	90



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11	UNIV OF CALIFORNIA - LOS ANGELES	K BLANDING	GSFC	B ZUCKERMAN	NGT 5 50187	94
11	UNIV OF CALIFORNIA - LOS ANGELES	L ZANETTI	GSFC	L R LYONS	NAG 5 7962	88
11	UNIV OF CALIFORNIA - LOS ANGELES	R BEEBE	GSFC	D G KIVELSON	NAG 5 7959	88
11	UNIV OF CALIFORNIA - LOS ANGELES	R BEEBE	GSFC	D K KHURANA	NAG 5 8050	88
11	UNIV OF CALIFORNIA - LOS ANGELES	R BEEBE	GSFC	D M THORNE	NAG 5 8065	88
11	UNIV OF CALIFORNIA - LOS ANGELES	R BEEBE	GSFC	D SCHUBERT	NAG 5 8066	88
11	UNIV OF CALIFORNIA - LOS ANGELES	R J OLIVERSEN	GSFC	R A EDELSON	NAG 5 9023	89
11	UNIV OF CALIFORNIA - LOS ANGELES	R J OLIVERSEN	GSFC	S SAKAI	NAG 5 9826	90
11	UNIV OF CALIFORNIA - LOS ANGELES	R MUSHOTZKY	GSFC	R EDELSON	NAG 5 10032	90
11	UNIV OF CALIFORNIA - LOS ANGELES	W J WAGNER	GSFC	R K ULRICH	NAG 5 10905	91
11	UNIV OF CALIFORNIA - LOS ANGELES	W WAGNER	GSFC	J M PAP	NAG 5 8507	88
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	HQ	A GHEZ	NAG 5 6975	87
11	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	HQ	D JURA	NAG 5 8335	88
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11	UNIV OF CALIFORNIA - RIVERSIDE	N WHITE	GSFC	F CORDOVA	NAG 5 12390	95
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11	UNIV OF CALIFORNIA - RIVERSIDE	A B MERRITT	WFF	A D ZYCHE	NAG 5 5211	95
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11	UNIV OF CALIFORNIA - SAN DIEGO	D NAVA	GSFC	M H THIEMENS	NAG 5 11660	101
11	UNIV OF CALIFORNIA - SAN DIEGO	F A HERRERO	GSFC	J L MATTESON	NAG 5 8731	98
11	UNIV OF CALIFORNIA - SAN DIEGO	F HERRERO	GSFC	R E ROTHSCCHILD	NAG 5 10968	100
11	UNIV OF CALIFORNIA - SAN DIEGO	G SONNEBORN	GSFC	C HOWK	NAG 5 12345	102
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11	UNIV OF CALIFORNIA - SAN DIEGO	J BOYCE	GSFC	D GUIRRENBACH	NAG 5 8272	98
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11	UNIV OF CALIFORNIA - SAN DIEGO	M MEYER	GSFC	G ARRHENIUS	NAG 5 10667	100
11	UNIV OF CALIFORNIA - SAN DIEGO	N WHITE	GSFC	R D COHEN	NAG 5 7362	97
11	UNIV OF CALIFORNIA - SAN DIEGO	R J OLIVERSEN	GSFC	D FOSSATI	NAG 5 9122	99
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11	UNIV OF CALIFORNIA - SAN DIEGO	R OLIVERSEN	GSFC	Y REPHAEI	NAG 5 9247	99
11	UNIV OF CALIFORNIA - SAN DIEGO	R OLIVERSEN	GSFC	W HEINDL	NAG 5 10691	100
11	UNIV OF CALIFORNIA - SAN DIEGO	R OLIVERSON	GSFC	Y REPHAEI	NAG 5 10871	100
11	UNIV OF CALIFORNIA - SAN DIEGO	T MORGAN	GSFC	J R ARNOLD	NAG 5 9005	99
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11	UNIV OF CALIFORNIA - SANTA BARBARA	J BOYCE	GSFC	S J PEALE	NAG 5 7177	106
11	UNIV OF CALIFORNIA - SANTA BARBARA	J BOYCE	GSFC	L BECKER	NAG 5 11385	107
11	UNIV OF CALIFORNIA - SANTA BARBARA	J BOYCE	GSFC	S PEALE	NAG 5 12087	108
11	UNIV OF CALIFORNIA - SANTA BARBARA	J FROGEL	GSFC	J E RUHL	NAG 5 9251	107
11	UNIV OF CALIFORNIA - SANTA BARBARA	N E WHITE	GSFC	D A CORDOVA	NAG 5 7714	106
11	UNIV OF CALIFORNIA - SANTA BARBARA	N E WHITE	GSFC	D FOSTER	NAG 5 7940	106
11	UNIV OF CALIFORNIA - SANTA BARBARA	R DONNELLY	GSFC	D CORDOVA	NAG 5 6911	106
11	UNIV OF CALIFORNIA - SANTA BARBARA	R J OLIVERSEN	GSFC	L BILDSTEN	NAG 5 8658	106
11	UNIV OF CALIFORNIA - SANTA BARBARA	R MUSHOTZKY	GSFC	R E SHIREY	NAG 5 9971	107
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11	UNIV OF CALIFORNIA - SANTA CRUZ	J BOYCE	GSFC	P BODENHEIMER	NAG 5 9661	111
11	UNIV OF CALIFORNIA - SANTA CRUZ	J BOYCE	GSFC	D LIN	NAG 5 10727	111
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11	UNIV OF CALIFORNIA - SANTA CRUZ	J M BOYCE	GSFC	D LIN	NAG 5 10612	111
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11	UNIV OF CALIFORNIA - SANTA CRUZ	M S BURRELL	GSFC	P GUHATHAKURTA	NGT 5 43	113
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11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	J SHULL	NAG 5 10950	132
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	T AYRES	NAG 5 11848	135
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	B E WOOD	NAG 5 11950	135
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	G HARPER	NAG 5 12210	136
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	A BROWN	NAG 5 12233	136
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	J A MORSE	NAG 5 12240	136
11	UNIV OF COLORADO - BOULDER	G SONNEBORN	GSFC	G HARPER	NAG 5 12438	137
11	UNIV OF COLORADO - BOULDER	H HASAN	GSFC	P T STOCKE	NAG 5 3794	123
11	UNIV OF COLORADO - BOULDER	H HASAN	GSFC	D L BENDER	NAG 5 4095	123
11	UNIV OF COLORADO - BOULDER	H HASAN	GSFC	T P SNOW	NAG 5 6758	124
11	UNIV OF COLORADO - BOULDER	H HASAN	GSFC	D WILKINSON	NAG 5 7465	125
11	UNIV OF COLORADO - BOULDER	H HASAN	GSFC	D BENDER	NAG 5 7638	125
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	J M FORBES	NAG 5 8755	127
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	S W LEE	NAG 5 9631	129
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	G STEWART	NAG 5 10000	130
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	G R STEWART	NAG 5 10508	131
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	M MELON	NAG 5 10581	131
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	T SNOW	NAG 5 10601	131
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	G R STEWART	NAG 5 11766	135
11	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	K OHTSUKI	NAG 5 11895	135
11	UNIV OF COLORADO - BOULDER	J JELETIC	GSFC	D GREEN	NAG 5 12279	136
11	UNIV OF COLORADO - BOULDER	J M BOYCE	GSFC	B JAKOSKY	NAG 5 10616	131
11	UNIV OF COLORADO - BOULDER	J M BOYCE	GSFC	F BAGENAL	NAG 5 11177	133
11	UNIV OF COLORADO - BOULDER	J M GREBOWSKY	GSFC	J TOOMRE	NAG 5 8133	126
11	UNIV OF COLORADO - BOULDER	J R BYRD	GSFC	D M SCHNEIDER	NAG 5 10797	131
11	UNIV OF COLORADO - BOULDER	J SWANK	GSFC	C REYNOLDS	NAG 5 7329	125
11	UNIV OF COLORADO - BOULDER	L D DEMING	GSFC	L W ESPOSITO	NAG 5 9694	129
11	UNIV OF COLORADO - BOULDER	L FEINBERG	GSFC	J GREEN	NAS 5 98043	137
11	UNIV OF COLORADO - BOULDER	L LING	GSFC	D PRYOR	NAG 5 6474	124
11	UNIV OF COLORADO - BOULDER	M L KAISER	GSFC	R ERGUN	NAG 5 9114	128
11	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	S PALO	NAG 5 6791	124
11	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	M CODRESCU	NAG 5 6984	125
11	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	M V GOLDMAN	NAG 5 9026	128
11	UNIV OF COLORADO - BOULDER	M SALAMON	GSFC	N GNEDIN	NAG 5 12029	136
11	UNIV OF COLORADO - BOULDER	M SALAMON	GSFC	M C BEGELMAN	NAG 5 12035	136
11	UNIV OF COLORADO - BOULDER	P CRANE	GSFC	R T STEBBINS	NAG 5 6880	125
11	UNIV OF COLORADO - BOULDER	P CRANE	GSFC	J GREEN	NAG 5 9092	128
11	UNIV OF COLORADO - BOULDER	P CRANE	GSFC	T AYRES	NAG 5 11241	133
11	UNIV OF COLORADO - BOULDER	R BEEBE	GSFC	O TOON	NAG 5 6900	125
11	UNIV OF COLORADO - BOULDER	R BEEBE	GSFC	N M SCHNEIDER	NAG 5 8047	126
11	UNIV OF COLORADO - BOULDER	R BEEBE	GSFC	A HENDRIX	NAG 5 8178	126
11	UNIV OF COLORADO - BOULDER	R J OLIVERSEN	GSFC	G S STRINGFELLOW	NAG 5 7223	125
11	UNIV OF COLORADO - BOULDER	R J OLIVERSEN	GSFC	J SHULL	NAG 5 7262	125
11	UNIV OF COLORADO - BOULDER	R J OLIVERSEN	GSFC	B WOOD	NAG 5 9041	128
11	UNIV OF COLORADO - BOULDER	R J OLIVERSEN	GSFC	A J HAMILTON	NAG 5 10763	131
11	UNIV OF COLORADO - BOULDER	R J OLIVERSEN	GSFC	D PROGA	NAG 5 11736	135
11	UNIV OF COLORADO - BOULDER	R MUSHOTZKY	GSFC	C S REYNOLDS	NAG 5 10083	130
11	UNIV OF COLORADO - BOULDER	R MUSHOTZKY	GSFC	S L SKINNER	NAG 5 10325	130
11	UNIV OF COLORADO - BOULDER	R MUSHOTZKY	GSFC	S L SKINNER	NAG 5 10326	130
11	UNIV OF COLORADO - BOULDER	R MUSHOTZKY	GSFC	S L SKINNER	NAG 5 10362	131

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11	UNIV OF COLORADO - BOULDER	T H MORGAN	GSFC	N M SCHNEIDER	NAG 5 9007	128
11	UNIV OF COLORADO - BOULDER	A NURRIDIN	HQ	J C GREEN	NGT 5 50176	141
11	UNIV OF COLORADO - BOULDER	A NURRIDIN	HQ	P S CONTI	NGT 5 50194	141
11	UNIV OF COLORADO - BOULDER	A NURRIDIN	HQ	F BAGENAL	NGT 5 50197	141
11	UNIV OF COLORADO - BOULDER	J BOYCE	HQ	D STEWART	NAG 5 6048	124
11	UNIV OF COLORADO - BOULDER	J BOYCE	HQ	T P SNOW	NAG 5 7449	125
11	UNIV OF COLORADO - BOULDER	J BOYCE	HQ	A W NOLIN	NAG 5 8259	127
11	UNIV OF COLORADO - BOULDER	J BOYCE	HQ	J M FORBES	NAG 5 8266	127
11	UNIV OF COLORADO - BOULDER	J SHARBER	HQ	D W RUSCH	NAG 5 7652	126
11	UNIV OF CONNECTICUT	J I TROMBKA	GSFC	J S SCHWEITZER	NAG 5 8602	143
11	UNIV OF CONNECTICUT	M MEYER	GSFC	P J GOGARTEN	NAG 5 7915	143
11	UNIV OF DAYTON	J BOYCE	GSFC	A PHELPS	NAG 5 9804	419
11	UNIV OF DAYTON	J BOYCE	GSFC	A M KOZIOL	NAG 5 9808	419
11	UNIV OF DELAWARE	D K WEST	GSFC	T STANOV	NAG 5 7009	148
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11	UNIV OF DELAWARE	G SONNEBORN	GSFC	S P OWOCKI	NAG 5 11886	149
11	UNIV OF DELAWARE	G SONNEBORN	GSFC	J L PROVENCAL	NAG 5 12323	149
11	UNIV OF DELAWARE	J DAVILA	GSFC	D MULLAN	NAG 5 11630	149
11	UNIV OF DELAWARE	R J OLIVERSEN	GSFC	T STANLEY	NAG 5 10919	148
11	UNIV OF DELAWARE	R J OLIVERSEN	GSFC	D MULLAN	NAG 5 11228	148
11	UNIV OF DELAWARE	R MUSHOTZKY	GSFC	J MCDONALD	NAG 5 10416	148
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11	UNIV OF DELAWARE - BARTOL RES INST	D C LING	GSFC	G P ZANK	NAG 5 7796	150
11	UNIV OF DELAWARE - BARTOL RES INST	D K WEST	GSFC	S P OWOCKI	NAG 5 3530	149
11	UNIV OF DELAWARE - BARTOL RES INST	J LING	GSFC	J A LE ROUX	NAG 5 6969	150
11	UNIV OF DELAWARE - BARTOL RES INST	W WAGNER	GSFC	W H MATHAEUS	NAG 5 7164	150
11	UNIV OF DELAWARE - BARTOL RES INST	J LING	HQ	S OWOCKI	NAG 5 6470	149
11	UNIV OF DELAWARE - BARTOL RES INST	J LING	HQ	C SMITH	NAG 5 6570	150
11	UNIV OF DELAWARE - BARTOL RES INST	J LING	HQ	J BIEBER	NAG 5 7142	150
11	UNIV OF DENVER	T MOORE	GSFC	T M STEPHEN	NCC 5 506	143
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11	UNIV OF FLORIDA	E F ERICKSON	ARC	R K PINA	NCC 2 5424	172
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11	UNIV OF FLORIDA	R J OLIVERSEN	GSFC	K GROGAN	NAG 5 9280	171
11	UNIV OF FLORIDA	R J OLIVERSEN	GSFC	R GUZMAN	NAG 5 11635	171
11	UNIV OF FLORIDA	R K OLIVERSEN	GSFC	F W HAMANN	NAG 5 8522	170
11	UNIV OF GEORGIA	D K WEST	GSFC	L MAGNANI	NAG 5 8376	188
11	UNIV OF GEORGIA	D K WEST	GSFC	P H HAUSCHILDT	NAG 5 8425	188
11	UNIV OF GEORGIA	J BOYCE	GSFC	P C STANCIL	NAG 5 10551	188
11	UNIV OF GEORGIA	P CRANE	GSFC	P C STANCIL	NAG 5 9088	188
11	UNIV OF GEORGIA	R J OLIVERSEN	GSFC	P H HAUSCHILDT	NAG 5 9222	188
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11	UNIV OF HAWAII AT MANOA - HONOLULU	R MANCINI	ARC	G JACOB	NAG 2 6057	189
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11	UNIV OF HAWAII AT MANOA - HONOLULU	B CAMPBELL	GSFC	S K SHARMA	NAG 5 7139	190
11	UNIV OF HAWAII AT MANOA - HONOLULU	D K WEST	GSFC	T SIMON	NAG 5 8216	191
11	UNIV OF HAWAII AT MANOA - HONOLULU	D NAVA	GSFC	D C JEWITT	NAG 5 4669	190
11	UNIV OF HAWAII AT MANOA - HONOLULU	D SENSKE	GSFC	S K ROWLAND	NAG 5 10228	193
11	UNIV OF HAWAII AT MANOA - HONOLULU	D SENSKE	GSFC	B R HAWKE	NAG 5 10237	194
11	UNIV OF HAWAII AT MANOA - HONOLULU	E SMITH	GSFC	D N HALL	NAG 5 8421	191
11	UNIV OF HAWAII AT MANOA - HONOLULU	G L BJORAKER	GSFC	T C OWEN	NCC 5 373	196
11	UNIV OF HAWAII AT MANOA - HONOLULU	G SONNEBORN	GSFC	T SIMON	NAG 5 8979	192
11	UNIV OF HAWAII AT MANOA - HONOLULU	G SONNEBORN	GSFC	T SIMON	NAG 5 10646	194
11	UNIV OF HAWAII AT MANOA - HONOLULU	G SONNEBORN	GSFC	R KUDRITZKI	NAG 5 11938	195
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11	UNIV OF HAWAII AT MANOA - HONOLULU	H FREY	GSFC	S ANDERSON	NAG 5 12506	195
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11	UNIV OF HAWAII AT MANOA - HONOLULU	J BERGSTRALH	GSFC	D J MEECH	NAG 5 4495	190
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11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	K KEIL	NAG 5 8713	191
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	G TAYLOR	NAG 5 9190	192
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	L BECKER	NAG 5 9354	192
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	P MOUGINIS-MARK	NAG 5 9576	192
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	B HAWKE	NAG 5 9765	193

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11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	E GRUEN	NAG 5 11782	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	V HAMILTON	NAG 5 12485	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	J HAMMER	NAG 5 12486	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	J GRANT	GSFC	S K ROWLAND	NAG 5 8921	192
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11	UNIV OF HAWAII AT MANOA - HONOLULU	J M BOYCE	GSFC	A KROT	NAG 5 10610	194
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11	UNIV OF HAWAII AT MANOA - HONOLULU	M MEYER	GSFC	T C OWEN	NAG 5 8863	192
11	UNIV OF HAWAII AT MANOA - HONOLULU	M SALAMON	GSFC	I SZAPUDI	NAG 5 12101	195
11	UNIV OF HAWAII AT MANOA - HONOLULU	R F MUSHOTZKY	GSFC	T SIMON	NAG 5 9896	193
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11	UNIV OF HAWAII AT MANOA - HONOLULU	R J OLIVERSEN	GSFC	N KAISER	NAG 5 7038	190
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11	UNIV OF HAWAII AT MANOA - HONOLULU	R MUSHOTZKY	GSFC	H EBELING	NAG 5 10085	193
11	UNIV OF HAWAII AT MANOA - HONOLULU	R MUSHOTZKY	GSFC	T SIMON	NAG 5 10128	193
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11	UNIV OF HAWAII AT MANOA - HONOLULU	R OLIVERSEN	GSFC	J HENRY	NAG 5 9166	192
11	UNIV OF HAWAII AT MANOA - HONOLULU	R OLIVERSON	GSFC	H EBELING	NAG 5 9238	192
11	UNIV OF HAWAII AT MANOA - HONOLULU	T MORGAN	GSFC	D J THOLEN	NAG 5 4524	190
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11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D K WEST	GSFC	U CHU	NAG 5 8104	208
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11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	G SONNEBORN	GSFC	R A GRUENDL	NAG 5 10182	209
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	G SONNEBORN	GSFC	Y CHU	NAG 5 10303	209
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	G SONNEBORN	GSFC	M A GUERRERO	NAG 5 12255	210
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	J BOYCE	GSFC	F LAMB	NAG 5 8740	208
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	M MEYER	GSFC	G OLSEN	NAG 5 8479	208
11	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	M SALAMON	GSFC	F LAMB	NAG 5 12030	210
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11	UNIV OF KANSAS MEDICAL CTR	D J BOGAN	GSFC	T E CRAVENS	NAG 5 11038	227
11	UNIV OF KENTUCKY	D GOORTVITCH	ARC	G J FERLAND	NCC 2 5405	229
11	UNIV OF KENTUCKY	D K WEST	GSFC	I SHLOSMAN	NAG 5 3841	228
11	UNIV OF KENTUCKY	D K WEST	GSFC	G FERLAND	NAG 5 6937	228
11	UNIV OF KENTUCKY	D K WEST	GSFC	G J FERLAND	NAG 5 8212	228
11	UNIV OF KENTUCKY	E DWEK	GSFC	M ELITZUR	NAG 5 10518	228
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11	UNIV OF KENTUCKY	R J OLIVERSEN	GSFC	I SHLOSMAN	NAG 5 10823	228
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11	UNIV OF MARYLAND - COLL PARK	A HARDING	GSFC	J D TRASCO	NCC 5 180	268
11	UNIV OF MARYLAND - COLL PARK	A HARDING	GSFC	J TRASCO	NCC 5 640	268
11	UNIV OF MARYLAND - COLL PARK	B DENNIS	GSFC	E J SCHUMAHL	NAG 5 10180	260
11	UNIV OF MARYLAND - COLL PARK	D C LING	GSFC	D LUKASIAK	NAG 5 8079	257
11	UNIV OF MARYLAND - COLL PARK	D K WEST	GSFC	J L WANG	NAG 5 3836	255
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11	UNIV OF MARYLAND - COLL PARK	D LAVERY	GSFC	D L AKIN	NCC 5 417	268
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11	UNIV OF TEXAS - AUSTIN	R J OLIVERSEN	GSFC	J WHEELER	NAG 5 10767	489
11	UNIV OF TEXAS - AUSTIN	R J OLIVERSEN	GSFC	P R SHAPIRO	NAG 5 10825	489
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11	UNIV OF TEXAS - AUSTIN	T H MORGAN	GSFC	A L COCHRAN	NAG 5 9003	488
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11	UNIV OF TEXAS - AUSTIN	T MORGAN	GSFC	L TRAFTON	NAG 5 10435	489
11	UNIV OF TEXAS - AUSTIN	J BOYCE	HQ	N J EVANS	NAG 5 7203	487
11	UNIV OF TEXAS - DALLAS	J BYRD	GSFC	R A HEELIS	NAS 5 01068	493
11	UNIV OF TEXAS - EL PASO	J N CUZZI	ARC	S M ROACH	NCC 2 5441	494
11	UNIV OF TEXAS - EL PASO	P SAKIMOTO	GSFC	R LOPEZ	NAG 5 10151	493
11	UNIV OF TEXAS - EL PASO	R J OLIVERSEN	GSFC	V E SMITH	NAG 5 9213	493
11	UNIV OF TOLEDO	D K WEST	GSFC	S R FEDERMAN	NAG 5 4957	420
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11	UNIV OF TOLEDO	D K WEST	GSFC	J E BJORKMAN	NAG 5 8794	421
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11	UNIV OF TOLEDO	G SONNEBORN	GSFC	S R FEDERMAN	NAG 5 8961	421
11	UNIV OF TOLEDO	G SONNEBORN	GSFC	S R FEDERMAN	NAG 5 10305	421
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11	UNIV OF WISCONSIN - MADISON	T MORGAN	GSFC	L A SROMOVSKY	NAG 5 6788	540
11	UNIV OF WYOMING	J P NORRIS	GSFC	R CANTERNA	NAG 5 11191	547
11	UTAH STATE UNIV	G SCHWEMMER	GSFC	T D WILKERSON	NCC 5 219	500
11	UTAH STATE UNIV	J BOYCE	GSFC	B G FEJER	NAG 5 8638	498
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11	VILLANOVA UNIV	D K WEST	GSFC	E FITZPATRICK	NAG 5 7113	450
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11	WASHINGTON UNIV - ST. LOUIS	J BOYCE	GSFC	C M HOHENBERG	NAG 5 9442	330
11	WASHINGTON UNIV - ST. LOUIS	J BOYCE	GSFC	F PODOSEK	NAG 5 9449	330
11	WASHINGTON UNIV - ST. LOUIS	J BOYCE	GSFC	R M WALKER	NAG 5 9801	330
11	WASHINGTON UNIV - ST. LOUIS	J BOYCE	GSFC	B FEGLEY	NAG 5 10553	330
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11	WASHINGTON UNIV - ST. LOUIS	M MEYER	GSFC	E L SHOCK	NAG 5 7696	329
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11	WASHINGTON UNIV - ST. LOUIS	M CHRISTI	MSFC	P L HINK	NCC 8 154	332
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12	ARIZONA STATE UNIV	M MEYER	GSFC	S PIZZARELLO	NAG 5 9451	20
12	BROWN UNIV	J BOYCE	GSFC	C PIETERS	NAG 5 10469	453
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12	CASE WESTERN RESERVE UNIV	D L BRITTON	GRC	D A SCHERSON	NAG 3 2644	401
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12	CITY UNIV NY KINGSBOROUGH COMM COLL	J BOYCE	HQ	M WEISBERG	NAG 5 11546	364
12	CLARK ATLANTA UNIV	M A MEADOR	GRC	E A MINTZ	NAS 3 01201	178
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12	CLARKSON UNIV	P DOTY	MSFC	W R WILCOX	NAG 8 1703	366
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12	CLEMSON UNIV - CLEMSON	J W CONNELL	LARC	Y P SUN	NGT 1 01036	458
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12	COLL OF WILLIAM AND MARY	J W CONNELL	LARC	R A ORWOLL	NAG 1 01107	502
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12	COLL OF WILLIAM AND MARY	J W CONNELL	LARC	R A ORWOLL	NAG 1 02109	502
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12	JACKSON STATE UNIV	A POHORILLE	ARC	J LESZCZYNSKI	NCC 2 5398	322
12	JOHNS HOPKINS UNIV	M SHIRLEY	ARC	D P WATSON	NAG 2 1559	238
12	KENT STATE UNIV	A F HEPP	GRC	C VARCAS ABURTO	NCC 3 563	408
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12	MICHIGAN TECHNOLOGICAL UNIV	J HINKLEY	LARC	L DRZAL	NAG 1 01004	305
12	MT HOLYOKE COLL	J BOYCE	GSFC	D DYAR	NAG 5 10424	296
12	NY UNIV	S NASH-STEVEN	MSFC	S WILSON	NGT 8 52893	379
12	NORFOLK STATE UNIV	A F HEPP	GRC	S SUN	NAG 3 2289	509
12	NORFOLK STATE UNIV	W J LOVE	MSFC	L SALARY	NAG 8 1862	509
12	NORTHWESTERN UNIV	R S BALDWIN	GRC	D F SHRIVER	NAG 3 2628	199
12	OAKWOOD COLL	W BRANTLEY	MSFC	A VOLKOV	NAG 8 1734	5
12	OREGON STATE UNIV	J BOYCE	GSFC	R DUNCAN	NAG 5 11652	428
12	PRAIRIE VIEW A&M UNIV	M A MEADOR	GRC	L E CARSON-ISABELLE	NCC 3 577	470
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12	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	N J JOHNSON	LARC	M JAFFE	NAG 1 2182	352
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12	SOUTHWEST TEXAS STATE UNIV	G A MINER	LARC	P E CASSIDY	NCC 1 02030	474
12	SPELMAN COLL	Q NGUYEN	GRC	D C CHEN	NAG 3 2758	188
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12	STANFORD UNIV	H PARTRIDGE	ARC	R W DAVIS	NCC 2 5488	65
12	STANFORD UNIV	H PATRIDGE	ARC	Z X SHEN	NCC 2 5446	65
12	STANFORD UNIV	T R GOVINDAN	ARC	H DAI	NCC 2 5270	64
12	STANFORD UNIV	J M BOYCE	GSFC	R ZARE	NAG 5 10544	62
12	STANFORD UNIV	P DOTY	MSFC	G M HOMSY	NAG 8 1692	63
12	STATE UNIV OF NY - STONY BROOK	J BOYCE	GSFC	S MCLENNAN	NAG 5 10506	385
12	STATE UNIV OF NY - STONY BROOK	P DOTY	MSFC	M RAFAILOVICH	NAG 8 1698	385
12	TEXAS A&M UNIV	R BALDWIN	GRC	D APPLEBY	NAG 3 2617	474
12	TEXAS SOUTHERN UNIV	C B AGEE	JSC	B L WILSON	NCC 9 80	480
12	THE CATHOLIC UNIV OF AMERICA	J BOYCE	GSFC	T DICKINSON	NAG 5 12071	158
12	THE CATHOLIC UNIV OF AMERICA	J E ALLEN	GSFC	T THORN	NCC 5 452	159
12	TUFTS UNIV	N HAGEDORN	GRC	D B GOLDNER	NAG 3 2563	297
12	U OF ARKANSAS MAIN CAMP-FAYETTEVILLE	J BOYCE	GSFC	P BENOIT	NAG 5 10736	40
12	UNIV HOUSTON-HOUSTON	D F BLAKE	ARC	A D HAYMET	NCC 2 5396	482
12	UNIV HOUSTON-HOUSTON	A NURRIDIN	HQ	G E FOX	NGT 5 50182	483
12	UNIV OF AKRON	C CHUANG	GRC	F W HARRIS	NAG 3 2572	416
12	UNIV OF AKRON	F J MONTEGANI	GRC	D PERRY	NGT 3 52364	417
12	UNIV OF AKRON	M MEADOR	GRC	C PUGH	NCC 3 794	416
12	UNIV OF AKRON	M MEADOR	GRC	F W HARRIS	NCC 3 802	417
12	UNIV OF AKRON	J W CONNELL	LARC	F W HARRIS	NAG 1 02035	415
12	UNIV OF ALABAMA - HUNTSVILLE	J CAMPBELL	MSFC	L SMALLEY	NAG 8 1403	12
12	UNIV OF ALABAMA - UNIV	D E LUECK	KSC	R D ROGERS	NAG10 305	15
12	UNIV OF ARIZONA	J BOYCE	GSFC	J GANGULY	NAG 5 10486	32
12	UNIV OF ARIZONA	J BOYCE	GSFC	D LAURETTA	NAG 5 11355	34
12	UNIV OF ARIZONA	J BOYCE	GSFC	W BOYNTON	NAG 5 11745	34
12	UNIV OF ARIZONA	J BOYCE	GSFC	A JULL	NAG 5 11979	35
12	UNIV OF ARIZONA	J BOYCE	GSFC	T SWINDLE	NAG 5 12059	35
12	UNIV OF CALIFORNIA - BERKELEY	J F BOYCE	GSFC	D NISHIZUMI	NAG 5 4992	68
12	UNIV OF CALIFORNIA - BERKELEY	R F PFAFF, JR.	GSFC	C W CARLSON	NAG 5 3596	68
12	UNIV OF CALIFORNIA - IRVINE	D HUBBARD	MSFC	P TABOREK	NAG 8 1437	84
12	UNIV OF CALIFORNIA - LOS ANGELES	D NAVA	GSFC	J WASSON	NAG 5 10421	90
12	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	D H WARREN	NAG 5 4215	87
12	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	P WARREN	NAG 5 10490	90
12	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	P WARREN	NAG 5 11541	91
12	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	P WARREN	NAG 5 11556	91
12	UNIV OF CALIFORNIA - LOS ANGELES	J BOYCE	GSFC	J WASSON	NAG 5 12058	92
12	UNIV OF CALIFORNIA - SAN DIEGO	J BOYCE	GSFC	K MARTI	NAG 5 11554	100
12	UNIV OF CALIFORNIA - SAN DIEGO	J BOYCE	GSFC	G W LUGMAIR	NAG 5 11768	101
12	UNIV OF CALIFORNIA - SAN FRANCISCO	M H NEW	ARC	M A WILSON	NCC 2 1126	104
12	UNIV OF CALIFORNIA - SANTA BARBARA	E J SIOCHI	LARC	D E MORSE	NAG 1 01003	105
12	UNIV OF CALIFORNIA - SANTA CRUZ	H PARTRIDGE	ARC	W E BERRY	NAG 2 1580	110
12	UNIV OF CHICAGO	J BOYCE	GSFC	R CLAYTON	NAG 5 10634	204
12	UNIV OF CHICAGO	J BOYCE	GSFC	R N CLAYTON	NAG 5 11568	204
12	UNIV OF CHICAGO	J BOYCE	GSFC	L GROSSMAN	NAG 5 11588	204
12	UNIV OF CINCINNATI	F J MONTEGANI	GRC	C BURDA	NGT 3 52383	418
12	UNIV OF COLORADO - BOULDER	P L LOYSELLE	GRC	J MICHL	NAG 3 2651	122
12	UNIV OF COLORADO - BOULDER	D L THOMSEN	LARC	D M WALBA	NAG 1 02079	121
12	UNIV OF FLORIDA	F ADAMS	KSC	R A YOST	NGT10 52626	173
12	UNIV OF HAWAII AT MANOA - HONOLULU	D NAVA	GSFC	D KEIL	NAG 5 4212	189
12	UNIV OF HAWAII AT MANOA - HONOLULU	D SENSKE	GSFC	K KEIL	NAG 5 11591	195
12	UNIV OF HAWAII AT MANOA - HONOLULU	J BOYCE	GSFC	T MCCORD	NAG 5 10514	194
12	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R S OKOJIE	GRC	I ADESIDA	NAG 3 2599	207
12	UNIV OF MARYLAND - COLL PARK	J BOYCE	GSFC	J FARGUHAR	NAG 5 11544	263
12	UNIV OF MASSACHUSETTS - AMHERST	J BOYCE	GSFC	J GOLDSTEIN	NAG 5 10515	299

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12	UNIV OF MICHIGAN - ANN ARBOR	J BOYCE	GSFC	J BLUM	NAG 5 10552	310
12	UNIV OF MINN	N H HAGEDORN	GRC	W H SMYRL	NAG 3 2600	318
12	UNIV OF MINN	J BOYCE	GSFC	R O PEPIN	NAG 5 11723	320
12	UNIV OF MISSOURI - SAINT LOUIS	M J ZEHE	GRC	J CHICKOS	NAG 3 2592	327
12	UNIV OF MISSOURI - SAINT LOUIS	M ZEHE	GRC	J S CHICKOS	NAG 3 2797	328
12	UNIV OF NEW MEXICO-ALBUQUERQUE	J BOYCE	GSFC	L BORG	NAG 5 11555	362
12	UNIV OF NEW MEXICO-ALBUQUERQUE	J BOYCE	GSFC	F J RIETMEIJER	NAG 5 11762	362
12	UNIV OF NEW MEXICO-ALBUQUERQUE	J BOYCE	GSFC	R C REEDY	NAG 5 11764	362
12	UNIV OF NORTH CAROLINA - CHAPEL HILL	E J SIOCHI	LARC	E T SAMULSKI	NAG 1 2301	397
12	UNIV OF NOTRE DAME	J BOYCE	GSFC	C NEAL	NAG 5 10638	219
12	UNIV OF NOTRE DAME	J BOYCE	GSFC	C NEAL	NAG 5 12076	219
12	UNIV OF PUERTO RICO-RIO PIEDRAS	F J MONTEGANI	GRC	C R CABRERA	NGT 3 52376	550
12	UNIV OF PUERTO RICO-RIO PIEDRAS	F J MONTEGANI	GRC	C R CABRERA	NGT 3 52381	550
12	UNIV OF PUERTO RICO-RIO PIEDRAS	T B MILLER	GRC	R S KATIYAR	NAG 3 2676	549
12	UNIV OF PUERTO RICO-RIO PIEDRAS	T B MILLER	GRC	C CABRERA	NAG 3 2769	549
12	UNIV OF TENNESSEE - KNOXVILLE	J BOYCE	GSFC	L A TAYLOR	NAG 5 11978	465
12	UNIV OF TENNESSEE - KNOXVILLE	JBOYCE	GSFC	H Y MCSWEEN	NAG 5 11744	465
12	UNIV OF TOLEDO	M J RABINOWITZ	GRC	K DEWITT	NAG 3 2674	420
12	UNIV OF UTAH	J A HINKLEY	LARC	G D SMITH	NAG 1 2319	496
12	UNIV OF VERMONT	J BOYCE	GSFC	T RUCHMER	NAG 5 10463	501
12	UNIV OF VIRGINIA	H PARTRIDGE	ARC	L S ANDREWS	NCC 2 5415	521
12	UNIV OF VIRGINIA	J BOYCE	GSFC	R A BARAGIOLA	NAG 5 12055	519
12	UNIV OF WASHINGTON	T BENCIC	GRC	D GOUTERMAN	NAG 3 2455	527
12	UNIV OF WASHINGTON	J BOYCE	GSFC	S MCCALLUM	NAG 5 11587	532
12	UNIV OF WASHINGTON	J M BOYCE	GSFC	D E BROWNLEE	NAG 5 10499	531
12	UNIV OF WISCONSIN - MADISON	R B PIERCE	LARC	D R JOHNSON	NCC 1 02017	545
12	VA POLYTECH INST & ST UNIV	M B MEADOR	GRC	J E MCGRATH	NCC 3 866	525
12	VA POLYTECH INST & ST UNIV	M ZEHE	GRC	T CRAWFORD	NAG 3 2796	524
12	VA POLYTECH INST & ST UNIV	C C FAY	LARC	H C DORN	NCC 1 01044	525
12	VA POLYTECH INST & ST UNIV	E J SIOCHI	LARC	T C WARD	NGT 1 01003	525
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12	VA POLYTECH INST & ST UNIV	T L ST.CLAIR	LARC	L T TAYLOR	NAG 1 2324	522
12	VIRGINIA COMMONWEALTH UNIV	P M DOTY	MSFC	M S EL-SHALL	NAG 8 1484	526
12	WASHINGTON UNIV - ST. LOUIS	G MUCKLOW	GSFC	D LEOPOLD	NAG 5 8536	329
12	WASHINGTON UNIV - ST. LOUIS	J BOYCE	GSFC	D HOHENBERG	NAG 5 4173	328
12	WASHINGTON UNIV - ST. LOUIS	J BOYCE	GSFC	T BERNATOWICZ	NAG 5 10426	330
12	WASHINGTON UNIV - ST. LOUIS	J BOYCE	GSFC	L HASKIN	NAG 5 10485	330
12	WASHINGTON UNIV - ST. LOUIS	J BOYCE	GSFC	F PODOSEK	NAG 5 10513	330
12	WASHINGTON UNIV - ST. LOUIS	J BOYCE	GSFC	L HASKIN	NAG 5 10533	330
12	WASHINGTON UNIV - ST. LOUIS	J BOYCE	GSFC	E ZINNER	NAG 5 11545	331
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13	ALABAMA A&M UNIV	G ADAWOVSKY	GRC	P VENKATESWARLY	NAG 3 1956	1
13	ALABAMA A&M UNIV	D MENCHAN	GSFC	R B LAL	NAG 5 11752	1
13	ALABAMA A&M UNIV	H A ABDELDAYEM	GSFC	M EDWARDS	NAG 5 12028	1
13	ALABAMA A&M UNIV	D PIERSON	JSC	M TADROS	NAG 9 1095	2
13	ALABAMA A&M UNIV	B G PENN	MSFC	N KUKHATAREV	NAG 8 1620	2
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	S NASH-STEVENSON	MSFC	J C WANG	NGT 8 52902	3
13	ARIZONA STATE UNIV	M MEYYAPPAN	ARC	Y ZHANG	NCC 2 5362	23
13	ARIZONA STATE UNIV	I KRAINSKY	GRC	N NEWMAN	NAG 3 2591	19
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	AUBURN UNIV	R REED	GSFC	G NIU	NAG 5 12316	3
13	BETHUNE - COOKMAN COLL	S E HETHERINGTON	GSFC	E F EKPO	NCC 5 426	160
13	BOSTON COLL	N P BARNES	LARC	B D BARTOLO	NAG 1 02034	275
13	BOSTON COLL	N P BARNES	LARC	B DIBARTOIO	NAG 1 2057	274
13	BOSTON COLL	N P BARNES	LARC	B DIBARTOLO	NAG 1 01019	274
13	BOSTON UNIV	N R HALL	GRC	R G HOLT	NAG 3 2143	275
13	BOSTON UNIV	J GREBOWSKY	GSFC	D MENDILLO	NAG 5 4246	275
13	BOSTON UNIV	J GREBOWSKY	GSFC	G L SISCOE	NAG 5 8135	276
13	BOSTON UNIV	M GOLDSTEIN	GSFC	T FRITZ	NAG 5 10108	276
13	BOSTON UNIV	M M MELLOTT	GSFC	D MENDILLO	NAG 5 4707	275
13	BOSTON UNIV	M MELLOTT	GSFC	M OPPENHEIM	NAG 5 7452	276

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13	BOSTON UNIV	J C BARNES	LARC	K P HARLING	NGT 1 52199	278
13	BOSTON UNIV	J BRINTIN	WFF	J CLARKE	NAG 5 5383	275
13	BOSTON UNIV	W B JOHNSON	WFF	S CHAKRABARTI	NAG 5 5251	275
13	BROWN UNIV	B S SINGH	GRC	D ELBAUM	NAG 3 1929	451
13	BROWN UNIV	B FLOWERS	GSFC	G SEIDEL	NAG 5 5133	452
13	BROWN UNIV	D HUBBARD	MSFC	H J MARIS	NAG 8 1774	454
13	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	R A MEWALDT	NAG 5 5166	42
13	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	E C STONE	NAG 5 5216	42
13	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	E C STONE	NAG 5 5227	42
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13	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	F HARRISON	NAG 5 5289	42
13	CALIFORNIA INST OF TECH	B MERRITT	GSFC	E STONE	NAG 5 5346	42
13	CALIFORNIA INST OF TECH	C STAHL	GSFC	J ZMUIZINAS	NAG 5 10358	45
13	CALIFORNIA INST OF TECH	G MUCKLOW	GSFC	F A HARRISON	NAG 5 8535	43
13	CALIFORNIA INST OF TECH	C D ARMSTRONG	LARC	H A ATWATER	NAG 1 01038	40
13	CALIFORNIA INST OF TECH	B A MERRITT	WFF	F HARRISON	NAG 5 5322	42
13	CALIFORNIA INST OF TECH	J C BRINTON	WFF	C MARTIN	NAG 5 5303	42
13	CALIFORNIA STATE UNIV - LONG BEACH	K HSIEH	GRC	J LIU	NAG 3 1830	50
13	CARNEGIE - MELLON UNIV	B S SINGH	GRC	S GAROFF	NAG 3 2449	431
13	CARNEGIE - MELLON UNIV	R B ROGERS	GRC	P J SIDES	NAG 3 2159	431
13	CASE WESTERN RESERVE UNIV	A CHIT	GRC	P L TAYLOR	NCC 3 587	402
13	CASE WESTERN RESERVE UNIV	R OKOJIE	GRC	P PIROUZ	NCC 3 895	403
13	CASE WESTERN RESERVE UNIV	C R TALLEY	MSFC	C ROSENBLATT	NAG 8 1270	401
13	CASE WESTERN RESERVE UNIV	J BRUNSON	MSFC	D H MATTHIESEN	NCC 8 152	404
13	CHRISTOPHER NEWPORT UNIV	R A WINCHESKI	LARC	R SELIM	NAG 1 02055	501
13	CITY UNIV OF NY CITY COLL	B S SINGH	GRC	C MALDARELLI	NAG 3 2167	364
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13	CLARK ATLANTA UNIV	A TEMKIN	GSFC	A MSEZANE	NAG 5 8792	178
13	CLEMSON UNIV - CLEMSON	M MEYYAPPAN	ARC	A M RAO	NCC 2 5421	458
13	CLEMSON UNIV - CLEMSON	H SHAW	GSFC	D L CARROLL	NAG 5 11293	458
13	CLEMSON UNIV - CLEMSON	J BRINTON	GSFC	M LARSON	NAG 5 5320	456
13	CLEMSON UNIV - CLEMSON	J C BRINTON	GSFC	M F LARSEN	NAG 5 5317	456
13	CLEMSON UNIV - CLEMSON	M MELLOTT	GSFC	M P HICKEY	NAG 5 7592	457
13	CLEMSON UNIV - CLEMSON	W B JOHNSON	GSFC	M F LARSEN	NAG 5 5186	456
13	CLEMSON UNIV - CLEMSON	W B JOHNSON	GSFC	M F LARSEN	NAG 5 5242	456
13	CLEMSON UNIV - CLEMSON	W B JOHNSON	GSFC	M F LARSEN	NAG 5 5259	456
13	CLEMSON UNIV - CLEMSON	B A MERRITT	WFF	D H HARTMANN	NAG 5 5325	456
13	CLEMSON UNIV - CLEMSON	J BRINTON	WFF	M LARSEN	NAG 5 5372	456
13	CLEMSON UNIV - CLEMSON	J BRINTON	WFF	M LARSON	NAG 5 5373	456
13	CLEMSON UNIV - CLEMSON	J BRINTON	WFF	M LARSEN	NAG 5 5378	456
13	CLEMSON UNIV - CLEMSON	J BRINTON	WFF	M LARSEN	NAG 5 5379	456
13	CLEMSON UNIV - CLEMSON	J BRINTON	WFF	G LEHMACHER	NAG 5 5385	457
13	CLEVELAND STATE UNIV	A CHAIT	GRC	J A LOCK	NCC 3 521	406
13	CLEVELAND STATE UNIV	A DECKER	GRC	J LOCK	NAG 3 2774	405
13	CLEVELAND STATE UNIV	C R MERCER	GRC	J LOCK	NAG 3 2232	404
13	CLEVELAND STATE UNIV	G ADAMOVSKY	GRC	J A LOCK	NCC 3 909	407
13	CLEVELAND STATE UNIV	S K RUTLEDGE	GRC	P HAMBOURGER	NCC 3 740	406
13	COLL OF WILLIAM AND MARY	M H SMITH	LARC	D C BENNER	NCC 1 390	503
13	COLL OF WILLIAM AND MARY	P H JOHNSTON	LARC	J S BOGHOSIAN	NGT 1 52180	503
13	COLL OF WILLIAM AND MARY	S A THIBEAULT	LARC	R L KIEFER	NCC 1 02032	503
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13	COLORADO STATE UNIV	V K RAWLIN	GRC	P J WILBUR	NAG 3 1801	118
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13	COLUMBIA UNIV	W B JOHNSON	GSFC	S M KAHN	NAG 5 5123	367
13	COLUMBIA UNIV	W B JOHNSON	GSFC	D L WINDT	NAG 5 5254	367
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13	CORNELL UNIV	W B JOHNSON	GSFC	M C KELLEY	NAG 5 5244	372
13	CORNELL UNIV	S K KAHNG	LARC	P L MCEUEN	NAG 1 01034	371
13	CORNELL UNIV	J W POE	MSFC	D M LEE	NAG 8 1445	375
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13	DARTMOUTH COLL	J M GREBOWSKY	GSFC	W LOTKO	NAG 5 11735	340
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13	DELAWARE STATE UNIV	W C EDWARDS	LARC	N MELIKECHI	NAG 1 2030	148
13	DUKE UNIV	B S SINGH	GRC	H MEYER	NAG 3 1838	389
13	EMBRY-RIDDLE AERONAUTICAL UNIV	W B JOHNSON	GSFC	P J ESPY	NAG 5 5199	160
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13	FISK UNIV	E CLARK	GRC	D O HENDERSON	NAG 3 2308	461
13	FISK UNIV	D O FRAZIER	MSFC	E SILHERMAN	NCC 8 133	462
13	FLA INTERNATIONAL UNIV	R HARTLE	GSFC	K HARDY	NAG 5 8791	160
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13	FLORIDA STATE UNIV	B S SINGH	GRC	E MANOUSAKIS	NAG 3 1841	164
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13	GEORGE MASON UNIV	W WAGNER	GSFC	J ZHANG	NAG 5 11874	504
13	GEORGE WASHINGTON UNIV	B MERRITT	GSFC	F BAGINSKI	NAG 5 5353	150
13	GEORGE WASHINGTON UNIV	M LI	GSFC	M ZAGHLOUL	NAG 5 12594	151
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13	GEORGIA INST OF TECH	R A REED	GSFC	J D CRESSLER	NAG 5 12268	182
13	GEORGIA INST OF TECH	S NASH-STEVENSON	MSFC	J OLDS	NGT 8 52898	186
13	HAMPTON UNIV	F J MONTEGANI	GRC	D R LYONS	NGT 3 52354	508
13	HAMPTON UNIV	R HATHAWAY	LARC	D A TEMPLE	NCC 1 251	507
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13	HARVARD UNIV	B A MERRITT	GSFC	G GRINDLAY	NAG 5 5279	280
13	HOWARD UNIV	D MENCHAN	GSFC	A N THORPE	NAG 5 12110	153
13	HOWARD UNIV	J TUTTLE	GSFC	T HUBER	NAG 5 10371	153
13	HOWARD UNIV	W R HOEGY	GSFC	S T SMITH	NCC 5 387	153
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19	CALIFORNIA STATE UNIV - NORTHRIDGE	J GURMAN	GSFC	A CADAVID	NAG 5 10880	51
19	CARNEGIE - MELLON UNIV	K BLANDING	HQ	S SINGH	NGT 5 50347	434
19	CARNEGIE - MELLON UNIV	P DOTY	MSFC	R F SEKERKA	NAG 8 1704	432
19	CASE WESTERN RESERVE UNIV	D HUBBARD	MSFC	C ROSENBLATT	NAG 8 1779	401
19	CITY UNIV OF NY CITY COLL	J HANSEN	GSFC	L P JOHNSON	NCC 5 425	365
19	CITY UNIV OF NY SYSTEM	M MATEU	GSFC	M WEINER	NCC 5 654	366
19	CLARKSON UNIV	C TALLEY	MSFC	L L REGEL	NAG 8 1482	366
19	CLEVELAND STATE UNIV	D ADAMOVSKY	GRC	D FLANAGAN	NCC 3 914	407
19	COLL OF THE HOLY CROSS	A JACKSON	MSFC	M KOSS	NAG 8 1796	279
19	COLL OF WILLIAM AND MARY	S A THIBEAULT	LARC	R L KIEFER	NCC 1 327	502
19	COLORADO STATE UNIV	D STARR	GSFC	G L STEPHENS	NAG 5 11109	119
19	COLUMBIA UNIV	W B JOHNSON	GSFC	C J HAILEY	NAG 5 5260	367
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19	DUKE UNIV	D HUBBARD	MSFC	J E THOMAS	NAG 8 1781	390
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19	HAHNEMANN UNIV	B GUYNES	MSFC	P J LOLL	NAG 8 1840	436
19	HAMPTON UNIV	D DESMARAIS	ARC	B FAISON	NGT 2 52261	508
19	HAMPTON UNIV	T KUCERA	GSFC	W R PRYOR	NAG 5 11818	507
19	HARVARD UNIV	G MADDREA	LARC	S C WOFYSY	NAS 1 18946	282
19	INDIANA UNIV - BLOOMINGTON	D HUBBARD	MSFC	V A KOSTELECKY	NAG 8 1770	213
19	IOWA STATE UNIV	R C OEFTERING	GRC	J A MANN	NAG 3 2784	220
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19	JOHNS HOPKINS UNIV	H K NAHRA	GRC	H N OGUZ	NAG 3 2118	238
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19	JOHNS HOPKINS UNIV	P DOTY	MSFC	R MAUER	NAG 8 1695	250
19	JOHNS HOPKINS UNIV	S M SMITH	SSC	K O O'BRIEN	NAG 9 1146	250
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19	MICHIGAN STATE UNIV	J GURMAN	GSFC	R F STEIN	NAG 5 8053	304
19	MICHIGAN TECHNOLOGICAL UNIV	C TALLEY	MSFC	T H COURTNEY	NAG 8 1478	306
19	MIDDLE TENNESSEE STATE UNIV	C TALLEY	MSFC	A C FRIEDLI	NAG 8 1486	462
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19	NEW MEXICO STATE UNIV - LAS CRUCES	W LOVE	MSFC	C YING	NAG 8 1710	359
19	NORTH CAROLINA A&T STATE UNIV	A BEAM	MSFC	A KENNEDY	NAG 8 1632	392
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19	NORTHWESTERN UNIV	P DOTY	MSFC	J ALKEMPER	NAG 8 1660	200
19	OHIO STATE UNIV	D W GRIFFIN	GRC	C D ANDERECK	NAG 3 2138	409
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19	OREGON STATE UNIV	B BILLS	GSFC	G D EGBERT	NAG 5 6156	426
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19	PENN STATE UNIV. - UNIV. PARK	D L UBTRAN	GRC	R A YETTER	NCC 3 718	445
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19	PRAIRIE VIEW A&M UNIV	F A CUCINOTTA	JSC	R WILKINS	NCC 9 114	470
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19	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	P DOTY	MSFC	J S WALKER	NAG 8 1705	210
19	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	P DOTY	MSFC	J A DANTZIG	NAG 8 1249	210
19	UNIV OF IOWA	D FAIRFIELD	GSFC	L FRANK	NAG 5 11117	223
19	UNIV OF IOWA	D FAIRFIELD	GSFC	R ANDERSON	NAG 5 11379	223
19	UNIV OF IOWA	D FAIRFIELD	GSFC	R ANDERSON	NAG 5 11707	224
19	UNIV OF IOWA	M GOLDSTEIN	GSFC	D GURNETT	NAG 5 9974	223
19	UNIV OF IOWA	R HOFFMAN	GSFC	D GURNATT	NAG 5 7943	223
19	UNIV OF IOWA	R HOFFMAN	GSFC	J SCUDDER	NAG 5 8119	223
19	UNIV OF IOWA	R HOFFMAN	GSFC	J SCUDDER	NAG 5 9499	223
19	UNIV OF IOWA	R HOFFMAN	GSFC	D GURNETT	NAG 5 9561	223
19	UNIV OF IOWA	R HOFFMAN	GSFC	L FRANK	NAG 5 11528	224
19	UNIV OF IOWA	R HOFFMAN	GSFC	J SCUDDER	NAG 5 11676	224
19	UNIV OF IOWA	R HOFFMAN	GSFC	D A GURNETT	NAG 5 11942	224

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19	UNIV OF KANSAS	A J TUYAHOV	GSFC	K P PRICE	NAG 5 9841	226
19	UNIV OF KANSAS	D STARR	GSFC	R BENNARTZ	NAG 5 11106	226
19	UNIV OF MARYLAND - COLL PARK	A CHAIT	GRC	A DEANE	NAG 3 2139	254
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19	UNIV OF MARYLAND - COLL PARK	D STARR	GSFC	S LIANG	NAG 5 6459	255
19	UNIV OF MARYLAND - COLL PARK	D STARR	GSFC	R PINKER	NAG 5 6464	256
19	UNIV OF MARYLAND - COLL PARK	J GURMAN	GSFC	F IPAVICH	NAG 5 9282	259
19	UNIV OF MARYLAND - COLL PARK	J GURMAN	GSFC	F M IPAVICH	NAG 5 12063	264
19	UNIV OF MARYLAND - COLL PARK	J R FISCHER	GSFC	A DEANE	NAG 5 8596	258
19	UNIV OF MARYLAND - COLL PARK	K OGILVIE	GSFC	M COPLAN	NAG 5 8621	258
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19	UNIV OF MARYLAND - COLL PARK	M ACUNA	GSFC	G GLOEKLER	NAG 5 10540	261
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19	UNIV OF MARYLAND - COLL PARK	D HUBBARD	MSFC	R FERRELL	NAG 8 1762	266
19	UNIV OF MARYLAND - EASTERN SHORE	W B KRABILL	GSFC	D R LEVIN	NAG 5 5328	270
19	UNIV OF MARYLAND BALTIMORE	J P GALLOWAY	GSFC	D BLAISDELL	NCC 5 544	270
19	UNIV OF MARYLAND BALTIMORE COUNTY	D O STARR	GSFC	W MCMILLAN	NAG 5 6460	270
19	UNIV OF MARYLAND BALTIMORE COUNTY	D O STARR	GSFC	A MARSHAK	NAG 5 6675	270
19	UNIV OF MARYLAND BALTIMORE COUNTY	D STARR	GSFC	W MCMILLAN	NAG 5 11156	272
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19	UNIV OF MASSACHUSETTS	D STARR	GSFC	R R GAMACHE	NAG 5 11064	298
19	UNIV OF MASSACHUSETTS - AMHERST	D G SICKOREZ	JSC	R E VAN EMMERIK	NGT 9 32	301
19	UNIV OF MIAMI	D Q STARR	GSFC	P J MINNETT	NAG 5 11104	174
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19	UNIV OF MICHIGAN - ANN ARBOR	R HOFFMAN	GSFC	A NAGY	NAG 5 10887	311
19	UNIV OF MICHIGAN - ANN ARBOR	D GALLAGHER	MSFC	M LIEMOHN	NCC 8 181	314
19	UNIV OF MINN	R J MACDOWELL	GSFC	K GOETZ	NAS 5 32994	320
19	UNIV OF MINN	E K STANSBERY	JSC	R O PEPIN	NAG 9 1007	320
19	UNIV OF MINN	P DOTY	MSFC	J DERBY	NAG 8 1258	320
19	UNIV OF MISSISSIPPI - UNIV	D P POWE	SSC	J JOHNSON	NAG13 01004	324
19	UNIV OF NEW HAMPSHIRE - DURHAM	J GURMAN	GSFC	E MOEBIUS	NAG 5 10890	344
19	UNIV OF NEW HAMPSHIRE - DURHAM	K OGILVIE	GSFC	R TORBERT	NAG 5 10360	343
19	UNIV OF NEW HAMPSHIRE - DURHAM	K OGILVIE	GSFC	R TORBERT	NAG 5 11803	344
19	UNIV OF NEW HAMPSHIRE - DURHAM	M GOLDSTEIN	GSFC	J M QUINN	NAG 5 9960	343
19	UNIV OF NEW HAMPSHIRE - DURHAM	P BUCHANAN	GSFC	D LYNCH	NAG 5 10420	343
19	UNIV OF NEW MEXICO-ALBUQUERQUE	J GURMAN	GSFC	S JEFFERIES	NAG 5 10918	362
19	UNIV OF NEW MEXICO-ALBUQUERQUE	D HUBBARD	MSFC	A V BABKIN	NAG 8 1758	362
19	UNIV OF OKLAHOMA - NORMAN	G SONNEBORN	GSFC	K LEIGHLY	NAG 5 10048	425
19	UNIV OF PENNSYLVANIA	P M DOTY	MSFC	P DUCHEYNE	NAG 8 1483	448
19	UNIV OF PENNSYLVANIA	R CROMISE	MSFC	P LOLL	NAG 8 1350	448
19	UNIV OF PUERTO RICO - MAYAGUEZ	G COLON	GSFC	J G GONZALEZ LAGOA	NAG 5 10255	548
19	UNIV OF PUERTO RICO-RIO PIEDRAS	B MOTT	GSFC	D MORELL	NAG 5 10321	550
19	UNIV OF SOUTH CAROLINA-COLUMBIA	B MOTT	GSFC	D KHAN	NAG 5 10322	460
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19	UNIV OF SOUTH FLORIDA	B GUYNES	MSFC	D CAMERON	NAG 8 1381	176
19	UNIV OF SOUTHERN CALIFORNIA	D O STARR	GSFC	M STRAMSKA	NAG 5 6512	114
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19	UNIV OF SOUTHERN MISSISSIPPI	M BODIFORD	MSFC	J A POJMAN	NAG 8 1858	325
19	UNIV OF TENNESSEE - KNOXVILLE	T R GOVINDAN	ARC	P RAGHAVAN	NCC 2 5390	465
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19	UNIV OF TEXAS - AUSTIN	A T CHAI	GRC	H L SWINNEY	NAG 3 1839	487
19	UNIV OF TEXAS - AUSTIN	D G SICKOREZ	JSC	B D TAPLEY	NAG 9 994	490
19	UNIV OF TEXAS - AUSTIN	D SICKOREZ	JSC	B D TAPLEY	NAG 9 1286	490
19	UNIV OF TEXAS - AUSTIN	D HUBBARD	MSFC	D J HEINZMAN	NAG 8 1764	490
19	UNIV OF TEXAS-PAN AMERICAN	A BEAM	MSFC	A LUMSDAINE	NAG 8 1634	484
19	UNIV OF TOLEDO	B GUYNES	MSFC	G E BORGSTAHL	NAG 8 1825	421
19	UNIV OF TOLEDO	B GUYNES	MSFC	C SCHALL	NAG 8 1838	421
19	UNIV OF TOLEDO	B GUYNES	MSFC	G BORGSTAHL	NAG 8 1380	421
19	UNIV OF UTAH	R JAFFE	ARC	G SMITH	NCC 2 5516	497
19	UNIV OF UTAH	D STARR	GSFC	G MACE	NAG 5 6458	496
19	UNIV OF UTAH	P DOTY	MSFC	J J MAGDA	NAG 8 1665	497

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19	UNIV OF WISCONSIN - MADISON	D S HUBBARD	MSFC	T G WALKER	NAG 8 1783	545
19	UNIV OF WISCONSIN - MADISON	P DOTY	MSFC	J N PEREPEZKO	NAG 8 1672	544
19	VANDERBILT UNIV	R HOFFMAN	GSFC	C CHAPPELL	NAG 5 9565	466
19	WASHINGTON STATE UNIV	C R TALLEY	MSFC	B Q LI	NCC 8 92	537
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19	WASHINGTON UNIV - ST. LOUIS	E K STANSBERY	JSC	F A PODOSEK	NAG 9 1010	331
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19	YALE UNIV	C STAHLE	GSFC	D E PROBER	NAG 5 9595	146
19	YALE UNIV	J GURMAN	GSFC	S BASU	NAG 5 10912	147
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	49
21	CLARK ATLANTA UNIV	E ORDONEZ	MSFC	E MCDONALD	NAG 8 1814	178
21	CLARK ATLANTA UNIV	W LOVE	MSFC	A MSEZANE	NAG 8 1493	178
21	CORNELL UNIV	P J DRUMMOND	LARC	S B POPE	NGT 1 02011	376
21	ELIZABETH CITY STATE UNIV	M ANDRO	GRC	D SENGUPTA	NAG 3 2150	391
21	FAYETTEVILLE STATE UNIV	R A HATHAWAY	LARC	L EDWARDS	NAG 1 02107	391
21	HARVARD UNIV	S NASH-STEVENSON	MSFC	R PETERKIN	NGT 8 52922	283
21	IOWA STATE UNIV	P J HALEY	LARC	A G KELKAR	NCC 1 01047	221
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21	NORTH CAROLINA A&T STATE UNIV	L M ARMENDARIZ	JSC	D CLEMENCE	NAG 9 1402	392
21	NORTH CAROLINA STATE UNIV. - RALEIGH	E R GENERAZIO	LARC	H T BANKS	NGT 1 02004	396
21	NORTH CAROLINA STATE UNIV. - RALEIGH	J S HARRISON	LARC	R C SMITH	NAG 1 01041	393
21	NORTH CAROLINA STATE UNIV. - RALEIGH	W P WINFREE	LARC	G P	NGT 1 52242	396
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21	NORTH CAROLINA STATE UNIV. - RALEIGH	W P WINIFREE	LARC	H T BANKS	NGT 1 01032	396
21	OAKWOOD COLL	W LOVE	MSFC	A OSEI	NAG 8 1888	5
21	OHIO STATE UNIV	R OLIVERSEN	GSFC	S MATHUR	NAG 5 8913	411
21	OLD DOMINION UNIV	K S BEY	LARC	H KANEKO	NAG 1 01092	511
21	SALISH KOOTENAI COLL	D MENCHAN	GSFC	T OLSON	NAG 5 9541	334
21	SOUTH DAKOTA SCH OF MINES & TECH	N KHAZENIE	GSFC	F CAMPONE	NAG 5 7746	460
21	SOUTHERN UNIV & A&M COLL	A BEAM	MSFC	M C DUNN	NAG 8 1633	233
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21	SOUTHWEST TEXAS JUNIOR COLL	R A HATHAWAY	LARC	A HERNANDEZ	NAG 1 02112	474
21	TENNESSEE STATE UNIV	W LOVE	MSFC	L SHARPE	NAG 8 1855	463
21	TRENHOLM STATE TECH COLL	W LOVE	MSFC	C THOMPSON	NAG 8 1610	5
21	TURTLE MOUNTAIN COMM COLL	R M STARR	LARC	L J HENRY	NCC 1 02035	398
21	UNIV OF AKRON	M BRIGHT	GRC	H K QAMMAR	NAG 3 2494	415
21	UNIV OF CALIFORNIA - DAVIS	D KWAK	ARC	M HAFEZ	NCC 2 5447	81
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21	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	M S BURRELL	GSFC	P E SAYLOR	NGT 5 134	211
21	UNIV OF NEW ORLEANS	R TRAVIS	SSC	K M AKYUZLU	NGT13 52721	234
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21	UNIV OF TEXAS AT SAN ANTONIO	L M ARMENDARIZ	JSC	M P BERRIOZABAL	NAG 9 1301	495
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21	UNIV OF WASHINGTON	G SOFFEN	GSFC	J BURKE	NGT 5 66	535
21	WESLEYAN UNIV	R J OLIVERSEN	GSFC	K V JOHNSTON	NAG 5 9064	145
21	XAVIER UNIV - LOUISIANA	W LOVE	MSFC	R P HALE	NAG 8 1609	234
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22	ARIZONA STATE UNIV	R A MORRIS	ARC	S KAMBHAMPATI	NAG 2 1461	19
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22	ARIZONA STATE UNIV	R MORRIS	ARC	C BARAL	NCC 2 1232	23
22	ARIZONA STATE UNIV	B L DI VITO	LARC	G C GANNOD	NAG 1 2241	18
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22	CLEMSON UNIV - CLEMSON	J DORBAND	GSFC	D LIGON III	NAG 5 10018	457
22	CLEMSON UNIV - CLEMSON	P CORONADO	GSFC	D SASS	NAG 5 11329	458
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22	EAST CAROLINA UNIV	J P ZIEBARTH	ARC	J C HUSKAMP	NAG 2 6045	390
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22	GEORGE MASON UNIV	J DORBAND	GSFC	P Y WANG	NAG 5 9781	504
22	GEORGE MASON UNIV	K L MOE	GSFC	D KAFATOS	NAG 5 10177	504
22	GEORGE MASON UNIV	K MCDONALD	GSFC	L DI	NCC 5 645	505
22	GEORGE MASON UNIV	J J REHDER	LARC	T ARCISZEWSKI	NAG 1 2258	503
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22	JOHNS HOPKINS UNIV	H STEWART	ARC	K J HEERES	NAG 2 1476	238
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22	JOHNS HOPKINS UNIV	G H MUCKLOW	GSFC	S HAWKINS	NAG 5 8688	241
22	JOHNS HOPKINS UNIV	J BRISTOW	GSFC	D P WATSON	NAG 5 12555	249
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22	JOHNS HOPKINS UNIV	P E HUNTER	GSFC	P Z KUNSZT	NAG 5 10742	245
22	LOUISIANA STATE UNIV - BATON ROUGE	S SAINI	ARC	A NAKANO	NCC 2 5320	231
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22	MASSACHUSETTS INST OF TECH	M J AFTOSMIS	ARC	R HAIMES	NAG 2 1458	285
22	MASSACHUSETTS INST OF TECH	M LIVINGSTON	ARC	R HAIMES	NCC 2 1269	294
22	MASSACHUSETTS INST OF TECH	M M ESHOW	ARC	D N JACKSON	NAG 2 1338	284
22	MASSACHUSETTS INST OF TECH	P M JONES	ARC	N G LEVESON	NCC 2 1223	294
22	MASSACHUSETTS INST OF TECH	R A MORRIS	ARC	S ZILBERSTEIN	NAG 2 1463	285
22	MASSACHUSETTS INST OF TECH	R MORRIS	ARC	L KAELEBLING	NCC 2 1237	294
22	MASSACHUSETTS INST OF TECH	R MORRIS	ARC	B C WILLIAMS	NCC 2 1235	294
22	MASSACHUSETTS INST OF TECH	R MORRIS	ARC	B WILLIAMS	NAG 2 1466	285
22	MASSACHUSETTS INST OF TECH	S LAU	ARC	B C WILLIAMS	NAG 2 1388	284
22	MASSACHUSETTS INST OF TECH	S LAU	ARC	L R YOUNG	NCC 2 570	294
22	MASSACHUSETTS INST OF TECH	Y K LIU	ARC	R L RIVEST	NAG 2 1136	284
22	MASSACHUSETTS INST OF TECH	R T SAVELY	JSC	C BREAZEAL	NAG 9 1443	293
22	MASSACHUSETTS INST OF TECH	D E ECKMARDT	LARC	N LEVESON	NAG 1 2239	284
22	MICHIGAN TECHNOLOGICAL UNIV	J R FISCHER	GSFC	D MERKEY	NAG 5 8796	306
22	MOREHEAD STATE UNIV	V OXENHAM	GSFC	B K MALPHRUS	NAG 5 12319	228
22	MORGAN STATE UNIV	J MOIGNE	GSFC	D COLE-RHODES	NAG 5 10934	252
22	NATIONAL HISPANIC UNIV	A CARDENAS	ARC	M PEREZ	NCC 2 1343	52
22	NEW MEXICO STATE UNIV - LAS CRUCES	R SLYWCZAK	GRC	D HORAN	NAG 3 2793	358
22	NEW MEXICO STATE UNIV - LAS CRUCES	M CAULIELD	GSFC	N R PRASAD	NAG 5 12068	359
22	NEW MEXICO STATE UNIV - LAS CRUCES	R E STREITMATTER	GSFC	S STOCHAJ	NCC 5 422	360
22	NORTH CAROLINA A&T STATE UNIV	M G SHATTO	ARC	A C ESTERLINE	NAG 2 1413	391
22	NORTHEASTERN UNIV	S COLOMBANO	ARC	F KIRCHNER	NCC 2 1336	296
22	NORTHWESTERN UNIV	A GRADY	ARC	V E TAYLOR	NCC 2 1013	201
22	OHIO STATE UNIV	D L KAO	ARC	H SHEN	NCC 2 1261	413
22	OHIO UNIV	B B PFARR	GSFC	L WELCH	NAG 5 10349	414
22	OHIO UNIV	B PFAR	GSFC	L WELCH	NAS 5 00185	414
22	OLD DOMINION UNIV	R SAVELY	JSC	R LOFTIN	NAG 9 1270	512
22	OLD DOMINION UNIV	J N MOSS	LARC	D E KEYES	NAG 1 01076	511
22	OLD DOMINION UNIV	M M LITTLE	LARC	K MALY	NAS 1 99160	512
22	OLD DOMINION UNIV	S L VAZQUEZ	LARC	R MUKKAMALA	NAG 1 2279	510
22	OLD DOMINION UNIV	S L VAZQUEZ	LARC	R MUKKAMALA	NAG 1 02039	511
22	OREGON GRADUATE INST OF SCI OECH	I TUMER	ARC	T LEEN	NCC 2 1264	426
22	OREGON GRADUATE INST OF SCI OECH	J C COUGLAN	ARC	M PAVEL	NCC 2 1218	426
22	OREGON GRADUATE INST OF SCI OECH	T R GOVINDAN	ARC	M A JABRI	NCC 2 1253	426
22	OREGON STATE UNIV	K MOE	GSFC	M S ABBOTT	NAG 5 8400	427
22	PENN. ST. U. ERIE-BEHREND COLL	R OLIVERSEN	GSFC	R F KNACKE	NAG 5 3368	436
22	PENN STATE UNIV. - UNIV. PARK	A J AHUMADA	ARC	R KASTURI	NAG 2 1410	437
22	PENN STATE UNIV. - UNIV. PARK	A J AHUMADA	ARC	R KASTURI	NAG 2 1487	437
22	PENN STATE UNIV. - UNIV. PARK	J E PALLIX	ARC	J L WISE	NCC 2 1211	444
22	PENN STATE UNIV. - UNIV. PARK	S LIANG	ARC	H ZHA	NCC 2 5511	445
22	PENN STATE UNIV. - UNIV. PARK	J C NEWMAN	LARC	P RAGHAVAN	NAG 1 01085	437
22	PRAIRIE VIEW A&M UNIV	J HARRINGTON	GSFC	J R WILLIAMS	NCC 5 115	470
22	PRINCETON UNIV	M MEYAPPAN	ARC	I AKSAY	NAG 2 1475	347
22	PURDUE UNIV	C A HLAVKA	ARC	C BRODLEY	NCC 2 1245	217
22	PURDUE UNIV	A ROBERTS	GSFC	D S EBERT	NCC 5 627	217
22	PURDUE UNIV	A NURRIDIN	HQ	L H JAMIESON	NGT 5 50222	218
22	RICE UNIV	D FOLTZ	GRC	D B JOHNSON	NAG 3 2534	470
22	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	M R LOWRY	ARC	S AMAREL	NAG 2 1234	352
22	RUTGERS STATE UNIV OF NJ NEW BRUNS	M SCHWABACHER	ARC	H HIRSCH	NCC 2 1259	356
22	SAN FRANCISCO STATE UNIV	P R GRAMS	ARC	H SHAHNASSER	NCC 2 5301	54
22	SAN JOSE STATE UNIV	D KOZARSKY	ARC	G POUR	NAG 2 1421	54
22	SAN JOSE STATE UNIV	M E LIVINGSTON	ARC	R FATOOHI	NCC 2 1015	55
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22	STANFORD UNIV	K TURNER	ARC	I KROO	NCC 2 5495	65
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	64
22	STANFORD UNIV	N N MANSOUR	ARC	E F DARVE	NCC 2 5467	65
22	STANFORD UNIV	R MORRIS	ARC	S M ROCK	NAG 2 1464	59
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22	STATE UNIV OF NY - STONY BROOK	D WEST	GSFC	F SWETSY	NAG 5 8377	384
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22	SYRACUSE UNIV	E J MASUOKA	GSFC	P K VARSHNEY	NAG 5 11227	387
22	TENNESSEE STATE UNIV	K A FREEMAN	ARC	W A SMITH	NAG 2 1419	462
22	TENNESSEE STATE UNIV	M E DUENAS	ARC	W A SMITH	NCC 2 1205	463
22	TENNESSEE STATE UNIV	S COLOMBANO	ARC	M S ZIEN-SABATTO	NAG 2 1530	462
22	TENNESSEE STATE UNIV	S P COLOMBANO	ARC	M S ZEIN-SABATTO	NAG 2 1473	462
22	TENNESSEE STATE UNIV	J HARRINGTON	GSFC	W A SMITH	NCC 5 96	463
22	TEXAS A&M UNIV	A SANCHEZ	JSC	J DENTON	NCC 9 146	479
22	TEXAS A&M UNIV-KINGSVILLE	W LOVE	MSFC	B SCHREUR	NAG 8 1650	480
22	TEXAS TECH UNIV	J FRANK	ARC	R WATSON	NAG 2 1560	480
22	THE UNIV OF CENTRAL FLORIDA	J PENIX	ARC	G H WALTON	NAG 2 1465	167
22	THE UNIV OF CENTRAL FLORIDA	C STEVENSON	KSC	D GOMEZ	NAG10 318	168
22	TOWSON STATE UNIV	W TRUSZKOWSKI	GSFC	B N NAG	NCC 5 488	253
22	UNIV HOUSTON-HOUSTON	J YAN	ARC	B CHAPMAN	NCC 2 5394	482
22	UNIV HOUSTON-HOUSTON	R P KEHOE	JSC	G VALIAS	NAG 9 1223	482
22	UNIV HOUSTON-HOUSTON	R SAVELY	JSC	B LOFTIN	NAG 9 985	481
22	UNIV OF AKRON	S M ARNOLD	GRC	A SALEEB	NCC 3 992	417
22	UNIV OF ALABAMA - BIRMINGHAM	K TUCKER	MSFC	G CHENG	NAS 8 02062	7
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 ALABAMA - HUNTSVILLE	J BEHNKE	GSFC	D GRAVES	NAG 5 9585	10
22	UNIV OF ALABAMA - HUNTSVILLE	J BEHNKE	GSFC	D GRAVES	NAG 5 11633	11
22	UNIV OF ALABAMA - HUNTSVILLE	K L MOE	GSFC	D GRAVES	NAG 5 10407	10
22	UNIV OF ALABAMA - HUNTSVILLE	K L MOE	GSFC	D GRAVES	NAG 5 12368	11
22	UNIV OF ARIZONA	S LAU	ARC	T MILSTER	NAS 2 00117	37
22	UNIV OF ARIZONA	P E HUNTER	GSFC	M V SYKES	NAG 5 10749	32
22	UNIV OF CALIFORNIA - BERKELEY	J BREDEKAMP	GSFC	G SMOOT	NAG 5 3941	68
22	UNIV OF CALIFORNIA - DAVIS	D KWAK	ARC	M HAFEZ	NCC 2 5387	81
22	UNIV OF CALIFORNIA - DAVIS	E TU	ARC	J J CHATTOT	NAG 2 1558	79
22	UNIV OF CALIFORNIA - DAVIS	S DAINI	ARC	J DONGARRA	NCC 2 5313	81
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22	UNIV OF CALIFORNIA - IRVINE	J PENIX	ARC	D REDMIRE	NAG 2 1555	83
22	UNIV OF CALIFORNIA - LOS ANGELES	T J BARTH	ARC	T F CHAN	NAG 2 1238	86
22	UNIV OF CALIFORNIA - SAN DIEGO	C H SCHULBACK	ARC	F BERMAN	NGT 2 52251	104
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22	UNIV OF CHICAGO	D SPICER	GSFC	D OLSON	NAG 5 9016	203
22	UNIV OF COLORADO - BOULDER	D CAREK	GRC	E HANSEN	NAG 3 2643	122
22	UNIV OF COLORADO - BOULDER	G MUCKLOW	GSFC	E R HANSEN	NAG 5 8643	127
22	UNIV OF COLORADO - BOULDER	K L MOE	GSFC	R L WEAVER	NAG 5 11292	133
22	UNIV OF COLORADO - BOULDER	K MOE	GSFC	R L WEAVER	NAG 5 8399	127
22	UNIV OF CONNECTICUT	F MARTIN	JSC	M MOREAU	NAG 9 1243	144
22	UNIV OF DAYTON	W D IVANCIC	GRC	M ATIQUZZAMAN	NAG 3 2318	419
22	UNIV OF DELAWARE	J RASH	GSFC	C SHEN	NAG 5 11232	149
22	UNIV OF FLORIDA	H PARTRIDGE	ARC	S SINNOTT	NCC 2 5403	172
22	UNIV OF HAWAII AT MANOA - HONOLULU	R OLIVERSEN	GSFC	R D JOSEPH	NAG 5 3370	189
22	UNIV OF HOUSTON - CLEAR LAKE	R T SAVELY	JSC	E T DICKERSON	NCC 9 30	485
22	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	K A FREEMAN	ARC	K NAHRSTEDT	NAG 2 1406	207
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22	UNIV OF KENTUCKY	K MCGILL	GSFC	J HAYES	NAG 5 11732	228
22	UNIV OF MARYLAND - COLL PARK	H PARK	GSFC	C F MARTIN	NCC 5 353	268

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22	UNIV OF MARYLAND - COLL PARK	K MCGILL	GSFC	V BASILI	NAG 5 12494	265
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22	UNIV OF MARYLAND BALTIMORE COUNTY	J C COUGHLAN	ARC	H KARGUPTA	NCC 2 1252	274
22	UNIV OF MARYLAND BALTIMORE COUNTY	A ROBERTS	GSFC	D S EBERT	NCC 5 361	274
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22	UNIV OF MASSACHUSETTS - AMHERST	M LIVINGSTON	ARC	A DESHMUKH	NCC 2 1265	300
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22	UNIV OF MASSACHUSETTS - AMHERST	R A MORRIS	ARC	S ZILBERSTEIN	NCC 2 1311	300
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22	UNIV OF MEMPHIS	T R GOVINDAN	ARC	R KOZMA	NCC 2 1244	464
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22	UNIV OF MINN	R MORRIS	ARC	M HEIMDAHL	NCC 2 1240	321
22	UNIV OF MINN	K MCGILL	GSFC	M HEIMDAHL	NAG 5 11971	320
22	UNIV OF MINN	R W BUTLER	LARC	M E HEMDAHL	NAG 1 2242	317
22	U OF MONT	A PATTERSON-HINE	ARC	J HENRY	NCC 2 5397	335
22	U OF MONT	K P GOODEN	ARC	R NEMANI	NCC 2 1263	335
22	U OF MONT	K MCGILL	GSFC	D HENRY	NAG 5 11525	335
22	UNIV OF NEW MEXICO-ALBUQUERQUE	R MORRIS	ARC	M JAMSHIDI	NAG 2 1547	361
22	UNIV OF OKLAHOMA - NORMAN	W D IVANCIC	GRC	D ATIQUZZAMAN	NAG 3 2528	424
22	UNIV OF PUERTO RICO - MAYAGUEZ	R TRAVIS	SSC	M ROSADO	NGT13 52746	549
22	UNIV OF SOUTH CAROLINA-COLUMBIA	R TRAVIS	SSC	J JENSEN	NGT13 52723	460
22	UNIV OF SOUTHERN CALIFORNIA	C J PLAUNT	ARC	M TAMBE	NAG 2 1489	114
22	UNIV OF SOUTHERN CALIFORNIA	L STONE	ARC	T W BERGER	NCC 2 1242	116
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22	UNIV OF SOUTHERN CALIFORNIA	R T SAVELY	JSC	M J MATARIC	NAG 9 1444	116
22	UNIV OF TENNESSEE - KNOXVILLE	J R FISCHER	GSFC	J DONGARRA	NAG 5 8773	464
22	UNIV OF TEXAS - ARLINGTON	R BISWAS	ARC	S K DAS	NCC 2 5395	486
22	UNIV OF TEXAS - AUSTIN	K TUMER	ARC	J GHOSH	NCC 2 5482	491
22	UNIV OF TEXAS - EL PASO	J BENNETT	GSFC	M KOLITSKY	NCC 5 97	494
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22	UNIV. OF TX-HLTH SCIENCE CTR-HOUSTON	P M JONES	ARC	J ZHANG	NCC 2 1234	485
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22	UNIV OF VIRGINIA	K MOE	GSFC	J FRENCH	NAG 5 9747	518
22	UNIV OF VIRGINIA	K MOE	GSFC	J C FRENCH	NAG 5 12025	519
22	UNIV OF VIRGINIA	L H ROSENBERG	GSFC	D B DUGAN	NAG 5 11953	519
22	UNIV OF VIRGINIA	B L DIVITO	LARC	J C KNIGHT	NAG 1 02101	516
22	UNIV OF VIRGINIA	C M HOLLOWAY	LARC	J C KNIGHT	NAG 1 02103	516
22	UNIV OF VIRGINIA	K J HAYHURST	LARC	J C KNIGHT	NAG 1 2290	515
22	UNIV OF WASHINGTON	R A MORRIS	ARC	D WELD	NAG 2 1538	527
22	UNIV OF WASHINGTON	J STEPHENS	GSFC	S HAUCK	NAS 5 00212	534
22	UNIV OF WASHINGTON	J STEPHENS	GSFC	S HAUCK	NAS 5 00213	534
22	UNIV OF WEST FLORIDA	D CLANCY	ARC	J M BRADSHAW	NCC 2 1283	177
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22	UNIV OF WEST FLORIDA	M E DUENAS	ARC	K M FORD	NCC 2 1191	177
22	UNIV OF WEST FLORIDA	M SHAFTO	ARC	A CANAS	NCC 2 1297	177
22	UNIV OF WEST FLORIDA	R L ALENA	ARC	J M BRADSHAW	NCC 2 1254	177
22	UNIV OF WISCONSIN - MADISON	W E JOHNSTON	ARC	M LIVNY	NCC 2 5323	545
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22	UNIV OF WYOMING	M LOWRY	ARC	J R COWLES	NAG 2 1570	547
22	UNIV OF WYOMING	D G SICKOREZ	JSC	R 3 GANTENBEIN	NGT 9 36	548
22	UTAH STATE UNIV	P E HUNTER	GSFC	T BOSE	NAG 5 10716	499
22	VA POLYTECH INST & ST UNIV	T L HOLST	ARC	R K KAPANIA	NCC 2 5433	525
22	VA POLYTECH INST & ST UNIV	J M SEATON	LARC	G J OGLE	NGT 1 52224	525
22	VALENCIA COMM COLL	G BUCKINGHAM	KSC	K WOODBERRY	NAG10 165	177
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29	ARIZONA STATE UNIV	P W GOODE	LARC	M P MIGNOLET	NAG 1 2233	18
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29	CALIFORNIA INST OF TECH	J J RENTHER	ARC	N A PIERRE	NCC 2 5431	48
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29	CASE WESTERN RESERVE UNIV	C R MERCER	GRC	S H IZEN	NAG 3 2210	400
29	COLL OF WILLIAM AND MARY	P C SCHUTTE	LARC	S FEYOCK	NAG 1 2271	502
29	ELIZABETH CITY STATE UNIV	D C ROBINSON	GRC	D PENDHARKAR	NAG 3 2556	391
29	FLA INTERNATIONAL UNIV	R J MCKINNEY	KSC	G A ROIG	NAG10 268	161
29	FLORIDA A&M UNIV	T GUO	GRC	E G COLLINS	NAG 3 2193	162
29	FLORIDA A&M UNIV	R A HATHAWAY	LARC	F HAMILTON	NAG 1 02114	161
29	FLORIDA MEMORIAL COLL	R MC KINNEY	KSC	H HUISSO	NAG10 247	164
29	GEORGE MASON UNIV	J J RENDER	LARC	T ARCISZEWSKI	NAG 1 01030	503
29	GEORGIA INST OF TECH	C T RAMOS	GRC	I F AKYILDIZ	NAG 3 2580	181
29	GEORGIA INST OF TECH	P W GOODE	LARC	A J CALISE	NAG 1 2243	179
29	HOWARD UNIV	R M BUTTON	GRC	D A MOMOH	NAG 3 2429	152
29	JOHNS HOPKINS UNIV	J BREDEKAMP	GSFC	G MURPHY	NAG 5 8548	241
29	MASSACHUSETTS INST OF TECH	G FOLLEN	GRC	R HAIMES	NAG 3 2523	286
29	MASSACHUSETTS INST OF TECH	J FISCHER	GSFC	J MARSHALL	NCC 5 625	295
29	MT HOLYOKE COLL	C HOLLINGSWORTH	GSFC	J MORROW	NAG 5 10238	296
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29	OLD DOMINION UNIV	J J REHDER	LARC	A K NOOR	NCC 1 01040	513
29	OLD DOMINION UNIV	R C SINGLETERRY JR	LARC	J H HEINBOCKEL	NCC 1 404	513
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29	SAN JOSE STATE UNIV	J D SMITH	ARC	K M CORKER	NAG 2 1528	55
29	SOUTHERN UNIV & A&M COLL	G JERMAN	MSFC	J DYER	NCC 8 156	233
29	STILLMAN COLL	E S ORDONEZ	MSFC	H PRADO	NAG 8 1866	5
29	TEMPLE UNIV	B C DRAKE	GSFC	S K BISWAS	NAG 5 8649	447
29	TEXAS A&M UNIV-CORPUS CHRISTI	L M ARMENDARIZ	JSC	M MOORE	NAG 9 1401	479
29	UNIV OF AKRON	J R SCOTT	GRC	D I HAIHARAN	NAG 3 2182	415
29	UNIV OF CALIFORNIA - DAVIS	D KWAK	ARC	M HAFEZ	NCC 2 5426	81
29	UNIV OF CALIFORNIA - LOS ANGELES	J FISCHER	GSFC	C MECHOSO	NCC 5 624	94
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	419
29	UNIV OF HOUSTON - DOWNTOWN	J L HARRINGTON	GSFC	D A ALO	NAG 5 12467	486
29	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	J FISCHER	GSFC	P E SAYLOR	NCC 5 615	211
29	UNIV OF MICHIGAN - ANN ARBOR	J FISCHER	GSFC	T GOMBOSI	NCC 5 614	314
29	UNIV OF NEW HAMPSHIRE - DURHAM	M MAIDEN	GSFC	B MOORE	NCC 5 304	345
29	UNIV OF TENNESSEE SPACE INST-TULLAHOMA	G KLOPFER	ARC	S VENKATESWARAN	NCC 2 5493	466
29	UNIV OF TOLEDO	J D STEGEMAN	GRC	D D JOHNSON	NAG 3 2594	420
29	UNIV OF VIRGINIA	P M GOODE	LARC	B W JOHNSON	NGT 1 01016	521
29	UNIV OF VIRGINIA	P W GOODE	LARC	C R ELKS	NGT 1 52237	521
29	UNIV OF VIRGINIA	B MERRITT	WFF	G WILLIAMS	NAG 5 10956	519
29	UNIV OF WASHINGTON	S LIANG	ARC	H QIAN	NCC 2 5463	534
29	UNIV OF WASHINGTON	M S BURRELL	GSFC	T QUINN	NGT 5 126	535
29	WASHINGTON STATE UNIV	B A BIEGEL	ARC	M A OSMAN	NCC 2 5346	537
29	WEST VIRGINIA UNIV	D S OSBURN	ARC	A C COGLEY	NCC 2 979	538

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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	3
31	ALMA COLL	M J MCGILL	GSFC	J H GIBSON	NAG 5 10118	303
31	ALMA COLL	M J MCGILL	GSFC	J H GIBSON	NAG 5 11817	303
31	ARIZONA STATE UNIV	R LAWRENCE	GSFC	P R BUSECK	NAG 5 9838	20
31	BETHEL COLL	M G MLYNCZAK	LARC	B P BEECKEN	NAG 1 02012	317
31	BOSTON UNIV	C S POTTER	ARC	R B MYNENI	NAG 2 1432	275
31	BOSTON UNIV	D TOLL	GSFC	R B MYNENI	NAS 5 96061	278
31	BOSTON UNIV	H OSEROFF	GSFC	W STRAHLER	NAS 5 31369	278
31	BOSTON UNIV	W WISCOMBE	GSFC	Y KNYZAKHIN	NAG 5 12292	278
31	BOSTON UNIV	J ARNOLD	MSFC	G D SALVUCCI	NAG 8 1522	278
31	BRIGHAM YOUNG UNIV	R J LAWRENCE	GSFC	D G LONG	NAG 5 9638	495
31	CALIFORNIA INST OF TECH	D E SMITH	GSFC	D O MUHLEMAN	NAG 5 12384	47
31	CALIFORNIA INST OF TECH	E HILSENATH	GSFC	Y L YUNG	NAG 5 7230	43
31	CALIFORNIA INST OF TECH	G STRINGFELLOW	GSFC	G A BLAKE	NAG 5 11423	46
31	CALIFORNIA INST OF TECH	J BERGSTRAHLH	GSFC	D P INGERSOLL	NAG 5 4191	41
31	CALIFORNIA INST OF TECH	J HILLMAN	GSFC	D L YUNG	NAG 5 6263	42
31	CALIFORNIA INST OF TECH	M CHOU	GSFC	Y L YUNG	NAG 5 7680	43
31	CALIFORNIA INST OF TECH	P J DECOLA	GSFC	D OKUMURA	NAG 5 3911	41
31	CALIFORNIA INST OF TECH	R J LAWRENCE	GSFC	P O WENNBERG	NAG 5 11157	46
31	CALIFORNIA INST OF TECH	R LAWRENCE	GSFC	D O WENNBERG	NAG 5 9307	43
31	CALIFORNIA INST OF TECH	G L MADDREA	LARC	Y L YUNG	NAG 1 02081	41
31	CALIFORNIA INST OF TECH	G L MADDREA	LARC	Y L YUNG	NAG 1 2151	40
31	CARNEGIE - MELLON UNIV	P HUNTER	GSFC	A F PTAK	NAG 5 8093	431
31	CHRISTOPHER NEWPORT UNIV	G W SACHSE	LARC	N S POUGATCHEV	NCC 1 02018	502
31	CITY UNIV OF NY CITY COLL	L TRAVIS	GSFC	N A PARKER	NCC 5 343	365
31	CITY UNIV OF NY CITY COLL	L TRAVIS	GSFC	N A PARKER	NCC 5 520	365
31	CITY UNIV OF NY CITY COLL	O W THIELE	GSFC	S GEDZELMAN	NAG 5 7827	365
31	CLEMSON UNIV - CLEMSON	J BOYCE	GSFC	D CLAYTON	NAG 5 8304	457
31	CLEMSON UNIV - CLEMSON	O W THIELE	GSFC	C W ULBRICH	NAG 5 7782	457
31	COLL OF CHARLESTON	P HUNTER	GSFC	J HAKKILA	NAG 5 10625	458
31	COLL OF WILLIAM AND MARY	W CHU	LARC	D BRENNER	NAS 1 00146	502
31	COLORADO STATE UNIV	A J NEGRI	GSFC	M T MONTGOMERY	NAG 5 11140	119
31	COLORADO STATE UNIV	A J NEGRI	GSFC	G L STEPHENS	NCC 5 288	120
31	COLORADO STATE UNIV	D LEWIS	GSFC	G STEPHENS	NAS 5 99237	120
31	COLORADO STATE UNIV	E F STOCKER	GSFC	C KUMMEROW	NAG 5 11816	119
31	COLORADO STATE UNIV	J R HERMAN	GSFC	J SLUSSER	NAG 5 11018	119
31	COLORADO STATE UNIV	M MISHCHENKO	GSFC	S M KREIDENWEIS	NAG 5 7783	118
31	COLORADO STATE UNIV	O W THIELE	GSFC	V N BRINGI	NAG 5 7717	118
31	COLORADO STATE UNIV	O W THIELE	GSFC	G L STEPHENS	NAG 5 7719	118
31	COLORADO STATE UNIV	R ADLER	GSFC	C D KUMMEROW	NAG 5 12273	119
31	COLORADO STATE UNIV	R J LAWRENCE	GSFC	S A RUTLEDGE	NAG 5 9642	118
31	COLORADO STATE UNIV	R J LAWRENCE	GSFC	D A RANDALL	NAG 5 9647	118
31	COLORADO STATE UNIV	R J LAWRENCE	GSFC	V CHANDRASEKAR	NAG 5 9655	118
31	COLORADO STATE UNIV	R J LAWRENCE	GSFC	R H JOHNSON	NAG 5 9665	118
31	COLORADO STATE UNIV	R J LAWRENCE	GSFC	W K BERG	NAG 5 10482	118
31	COLORADO STATE UNIV	R J LAWRENCE	GSFC	W H SCHUBERT	NAG 5 11010	119
31	COLORADO STATE UNIV	R L LAWRENCE	GSFC	C D KUMMEROW	NAG 5 11189	119
31	COLORADO STATE UNIV	R LAWRENCE	GSFC	D J DEMOTT	NAG 5 9308	118
31	COLORADO STATE UNIV	V V SALOMONSON	GSFC	C KUMMEROW	NAG 5 12105	119
31	COLORADO STATE UNIV	B A WIELICKI	LARC	D A	NAS 1 98125	120
31	COLORADO STATE UNIV	D S MCDUGAL	LARC	W COTTON	NAG 1 2045	117
31	COLORADO STATE UNIV	G G GIBSON	LARC	D A RANDALL	NAG 1 02008	118
31	COLORADO STATE UNIV	G GIBSON	LARC	G L STEPHENS	NAS 1 99103	120
31	COLORADO STATE UNIV	V DELNORE	LARC	G STEPHENS	NAG 1 2247	117
31	COLORADO STATE UNIV	T MILLER	MSFC	S Q KIDDER	NAS 8 97082	120
31	COLUMBIA UNIV	A LACIS	GSFC	L M DRUYAN	NCC 5 546	370
31	COLUMBIA UNIV	B CARLSON	GSFC	C HARRIS	NCC 5 549	370
31	COLUMBIA UNIV	D RIND	GSFC	M CHANDLER	NCC 5 505	370
31	COLUMBIA UNIV	M IMISHCHENKO	GSFC	G KUKLA	NAG 5 7687	367
31	COLUMBIA UNIV	R B STOTHERS	GSFC	C K CHU	NCC 5 485	370
31	COLUMBIA UNIV	R B STOTHERS	GSFC	C K CHU	NCC 5 547	370
31	COLUMBIA UNIV	R STOTHERS	GSFC	L M POLVANI	NCC 5 558	370
31	CONCORDIA COLL IN MOORHEAD	P R MAHAFFY	GSFC	H L MANNING	NAG 5 8626	317
31	CORNELL UNIV	J ARNOLD	MSFC	W BRUTSAERT	NAG 8 1518	375
31	CORNELL UNIV	S NASH-STEVENSON	MSFC	K H COOK	NGT 8 52897	377

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31	DENISON UNIV	R BEEBE	GSFC	D E MICKELSON	NAG 5 4341	408
31	DREXEL UNIV	E HILSEN RATH	GSFC	D R BROOKS	NAG 5 8929	435
31	DREXEL UNIV	J L ROPER	LARC	A R BANDY	NCC 1 297	435
31	DREXEL UNIV	V E DELUORE	LARC	A R BANDY	NCC 1 409	435
31	DUKE UNIV	R ROOD	GSFC	P KABIBHATLA	NAG 5 3665	389
31	FLORIDA A&M UNIV	R LEE	KSC	F B GROSS	NAG10 264	162
31	FLORIDA STATE UNIV	A J KRUEGER	GSFC	X ZOU	NAG 5 9410	165
31	FLORIDA STATE UNIV	M HALL	GSFC	I NAVON	NAG 5 4873	164
31	FLORIDA STATE UNIV	O W THIELE	GSFC	S E NICHOLSON	NAG 5 7718	165
31	FLORIDA STATE UNIV	P K BHARTA	GSFC	X ZOU	NAG 5 11067	166
31	FLORIDA STATE UNIV	R ADLER	GSFC	G LIU	NAG 5 11889	166
31	FLORIDA STATE UNIV	R J LAWRENCE	GSFC	T N KRISHNAMURTI	NAG 5 9662	165
31	FLORIDA STATE UNIV	R J LAWRENCE	GSFC	H A COOPER	NAG 5 10001	165
31	FLORIDA STATE UNIV	W B ROSSOW	GSFC	G LIU	NAG 5 8647	165
31	FLORIDA STATE UNIV	J L RAPER, SR	LARC	H E FUELBERG	NCC 1 412	166
31	FLORIDA STATE UNIV	J R RAPER	LARC	T N KRISHNAURTI	NAG 1 2127	164
31	FLORIDA STATE UNIV	B LAPENTA	MSFC	X ZOU	NAG 8 1882	166
31	FLORIDA STATE UNIV	J ARNOLD	MSFC	T N KRISHNAMURTI	NAG 8 1537	166
31	FLORIDA STATE UNIV	J ARNOLD	MSFC	J J O'BRIEN	NCC 8 158	167
31	FLORIDA STATE UNIV	J E ARNOLD	MSFC	T N KRISHNAMURTI	NAG 8 1848	166
31	FLORIDA STATE UNIV	R MILLER	SSC	J J O'BRIEN	NAG13 02011	166
31	GEORGE MASON UNIV	G MADDREA	LARC	M SUMMERS	NAG 1 2316	503
31	GEORGE WASHINGTON UNIV	R J LAWRENCE	GSFC	R H LANG	NAG 5 9550	150
31	GEORGIA INST OF TECH	J BERGSTRALH	GSFC	D G STEFFES	NAG 5 4190	181
31	GEORGIA INST OF TECH	J C RIVERA	GSFC	D M CUNNOLD	NAG 5 00171	183
31	GEORGIA INST OF TECH	M I MISHCHENKO	GSFC	M CHIN	NAG 5 7682	181
31	GEORGIA INST OF TECH	M I MISHCHENKO	GSFC	M CHIN	NAG 5 12256	182
31	GEORGIA INST OF TECH	R MCPETERS	GSFC	P GINOUX	NAG 5 11063	182
31	GEORGIA INST OF TECH	S SCHUBERT	GSFC	R X BLACK	NAG 5 10374	182
31	GEORGIA INST OF TECH	W B ROSSOW	GSFC	J A CURRY	NAG 5 12545	182
31	GEORGIA INST OF TECH	Y SUD	GSFC	R DICKINSON	NAG 5 10209	182
31	GEORGIA INST OF TECH	G L MADDREA	LARC	D M CUNNOLD	NAG 1 18938	183
31	GEORGIA INST OF TECH	G L MADDREA	LARC	D M CUNNOLD	NAG 1 2202	179
31	GEORGIA INST OF TECH	J L RAPER	LARC	H W GUAN	NCC 1 375	183
31	GEORGIA INST OF TECH	J L RAPER, SR	LARC	R J WEBER	NCC 1 411	183
31	GEORGIA INST OF TECH	J L RAPER, SR	LARC	S T SANDHOLM	NCC 1 417	184
31	GEORGIA INST OF TECH	J L RAPER, SR	LARC	F L EISELE	NCC 1 421	184
31	GEORGIA INST OF TECH	J L ROPER	LARC	F L EISELE	NCC 1 301	183
31	GEORGIA INST OF TECH	J M HOELL	LARC	D D DAVIS	NCC 1 306	183
31	GEORGIA INST OF TECH	J M HOELL	LARC	S C LIU	NCC 1 317	183
31	GEORGIA INST OF TECH	J M HOELL	LARC	S T SANDHOLM	NCC 1 296	183
31	GEORGIA INST OF TECH	V E DELUORE	LARC	D D DAVIS	NCC 1 01024	184
31	HAMPTON UNIV	B A CAMPBELL	GSFC	J M RUSSELL	NAG 5 11409	507
31	HAMPTON UNIV	C JACKMAN	GSFC	D M RUSSELL	NAG 5 7001	506
31	HAMPTON UNIV	C JACKMAN	GSFC	J M RUSSELL	NAG 5 11065	507
31	HAMPTON UNIV	M I MISHCHENKO	GSFC	M MCCORMICK	NAG 5 8648	506
31	HAMPTON UNIV	G G GIBSON	LARC	N G LOEB	NAG 1 2318	505
31	HAMPTON UNIV	G G GIBSON	LARC	M P MCCORMICK	NAG 1 99108	507
31	HAMPTON UNIV	G L MADDREA	LARC	M P MCCORMICK	NAG 1 2170	505
31	HAMPTON UNIV	J FISHMAN	LARC	T H CHYBA	NAG 1 2224	505
31	HAMPTON UNIV	P MINNIS	LARC	M P MCCORMICK	NAG 1 2135	505
31	HAMPTON UNIV	P MINNIS	LARC	D P DUDA	NAG 1 02044	506
31	HAMPTON UNIV	R A HATHAWAY	LARC	D A TEMPLE	NCC 1 01059	508
31	HAMPTON UNIV	R L DUNCAN	LARC	P MCCORMICK	NAG 1 97042	507
31	HAMPTON UNIV	V E DELNORE	LARC	N G LOEB	NAG 1 01096	506
31	HAMPTON UNIV	V E DELNORE	LARC	N G LOEB	NAG 1 2206	505
31	HAMPTON UNIV	F J SCHMIDLIN	WFF	P MCCORMICK	NAG 5 5360	506
31	HARVARD UNIV	C P SCOFIELD	ARC	S C WOF SY	NAG 2 1310	280
31	HARVARD UNIV	R J LAWRENCE	GSFC	A P BARROS	NAG 5 9823	281
31	HARVARD UNIV	G L MADDREA	LARC	D J JACOB	NAG 1 2307	280
31	HARVARD UNIV	G L MADDREA	LARC	S C WOF SY	NAG 1 2025	279
31	HARVARD UNIV	J L RAPER, SR	LARC	D J JACOB	NAG 1 2328	280
31	HARVARD UNIV	J RAPER	LARC	D J JACOB	NAG 1 2126	279
31	HARVARD UNIV	L R POOLE	LARC	J G ANDERSON	NAG 1 01095	280
31	HOFSTRA UNIV	E LINDTSROM	GSFC	D WEISSMAN	NAG 5 11780	377
31	HOFSTRA UNIV	R MILLER	SSC	D E WEISSMAN	NAG13 02015	377

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31	HOWARD UNIV	W HOEGY	GSFC	S T SMITH	NCC 5 424	153
31	HOWARD UNIV	W R HOEGY	GSFC	S T SMITH	NCC 5 556	154
31	IOWA STATE UNIV	A DOUGLASS	GSFC	D L STANFORD	NAG 5 7133	220
31	IOWA STATE UNIV	M RIENECKER	GSFC	T C CHEN	NAG 5 8293	220
31	IOWA STATE UNIV	M RIENECKER	GSFC	T CHEN	NAG 5 12428	221
31	IOWA STATE UNIV	S CHANDRA	GSFC	S L STANFORD	NAG 5 7271	220
31	IOWA STATE UNIV	S SCHUBERT	GSFC	T CHEN	NAG 5 7530	220
31	JACKSON STATE UNIV	J JENNER	JSC	P CROFT	NAG13 99013	322
31	JACKSON STATE UNIV	R MILLER	JSC	R REDDY	NAG13 99012	322
31	JOHNS HOPKINS UNIV	A C AIKIN	GSFC	J YEE	NAG 5 9988	243
31	JOHNS HOPKINS UNIV	A R DOUGLASS	GSFC	D WAUGH	NCC 5 500	251
31	JOHNS HOPKINS UNIV	B A CAMPBELL	GSFC	L PAXTON	NAG 5 11412	247
31	JOHNS HOPKINS UNIV	D ANDERSON	GSFC	A ARKING	NAG 5 11909	248
31	JOHNS HOPKINS UNIV	D BOGAN	GSFC	D F STROBEL	NAG 5 4168	239
31	JOHNS HOPKINS UNIV	D BOGAN	GSFC	B MAUK	NAG 5 11034	246
31	JOHNS HOPKINS UNIV	D J BOGAN	GSFC	R J VERVACK	NAG 5 11051	246
31	JOHNS HOPKINS UNIV	E HILSENATH	GSFC	S A LLOYD	NAG 5 7227	240
31	JOHNS HOPKINS UNIV	J F SPANN	GSFC	B J ANDERSON	NAG 5 10849	245
31	JOHNS HOPKINS UNIV	J F SPANN	GSFC	R B DECKER	NAG 5 10900	245
31	JOHNS HOPKINS UNIV	J SHARBER	GSFC	K LIOU	NAG 5 9078	242
31	JOHNS HOPKINS UNIV	J SHARBER	GSFC	H KU	NAG 5 9109	242
31	JOHNS HOPKINS UNIV	P E HUNTER	GSFC	A F PTAK	NAG 5 11193	246
31	JOHNS HOPKINS UNIV	R MCPETERS	GSFC	S A LLOYD	NAG 5 11029	246
31	JOHNS HOPKINS UNIV	R W STEWART	GSFC	D W WAUGH	NAG 5 7361	240
31	JOHNS HOPKINS UNIV	W LAU	GSFC	A ARKING	NAG 5 8572	241
31	JOHNS HOPKINS UNIV	G L MADDREA	LARC	D W WAUGH	NAG 1 2043	237
31	JOHNS HOPKINS UNIV	G L MADDREA	LARC	D W WAUGH	NAG 1 2194	237
31	JOHNS HOPKINS UNIV	L R POOLE	LARC	S A LLOYD	NAG 1 2270	237
31	KNOX COLL	J FISHMAN	LARC	L C BUSH	NAG 1 02004	198
31	MASSACHUSETTS INST OF TECH	N LIU	GRC	D A WAITZ	NAG 3 2503	286
31	MASSACHUSETTS INST OF TECH	A DOUGLASS	GSFC	D NEWELL	NAG 5 6710	287
31	MASSACHUSETTS INST OF TECH	D BOGAN	GSFC	J D RICHARDSON	NAG 5 8947	288
31	MASSACHUSETTS INST OF TECH	G SMITH	GSFC	T A HERRING	NAS 5 99007	293
31	MASSACHUSETTS INST OF TECH	J C SHIUE	GSFC	D STAELIN	NAG 5 7487	287
31	MASSACHUSETTS INST OF TECH	J C SHIUE	GSFC	D STAELIN	NAG 5 11390	291
31	MASSACHUSETTS INST OF TECH	J SHARBER	GSFC	T CHANG	NAG 5 9117	289
31	MASSACHUSETTS INST OF TECH	M J KURYLO	GSFC	R G PRINN	NAG 5 3974	286
31	MASSACHUSETTS INST OF TECH	P L DECOLA	GSFC	P STEINFELD	NAG 5 3977	286
31	MASSACHUSETTS INST OF TECH	R J LAWRENCE	GSFC	E R WILLIAMS	NAG 5 9637	290
31	MASSACHUSETTS INST OF TECH	R J LAWRENCE	GSFC	R L BRAS	NAG 5 9640	290
31	MASSACHUSETTS INST OF TECH	S NIEBUR	GSFC	Q HU	NAG 5 9080	289
31	MASSACHUSETTS INST OF TECH	W WILDES	GSFC	G CARRIGAN	NAS 5 99198	294
31	MASSACHUSETTS INST OF TECH	D L MODDREA	LARC	R E NEWELL	NAG 1 2306	284
31	MASSACHUSETTS INST OF TECH	G L MADDREA	LARC	R A PLUMB	NAG 1 2027	283
31	MASSACHUSETTS INST OF TECH	G L MADDREA	LARC	R G PRINN	NAG 1 2152	283
31	MASSACHUSETTS INST OF TECH	G MADDREA	LARC	R PLUMB	NAG 1 2203	283
31	MASSACHUSETTS INST OF TECH	J L RAPER	LARC	R E NEWELL	NAG 1 2173	283
31	MASSACHUSETTS INST OF TECH	V E DELNORE	LARC	R E NEWELL	NCC 1 415	294
31	MASSACHUSETTS INST OF TECH	J ARNOLD	MSFC	D ENTEKHABI	NAG 8 1524	292
31	MICHIGAN TECHNOLOGICAL UNIV	A J KRUEGER	GSFC	W ROSE	NAG 5 7272	306
31	MICHIGAN TECHNOLOGICAL UNIV	R MVPETERS	GSFC	G BLUTH	NAG 5 11062	306
31	MOSCOW INST OF PHYSICS & TECH	W L GROSS	LARC	M L KOGAN	NCC 1 01005	551
31	NEW MEXICO HIGHLANDS UNIV	L ARMENDARIZ	JSC	J R JUAREZ	NAG 9 1375	357
31	NEW MEXICO HIGHLANDS UNIV	L ARMENDARIZ	JSC	J R JUAREZ	NAG 9 1922	357
31	NEW MEXICO INST OF MINING & TECH	J HERMAN	GSFC	D R MINSCHWANER	NAG 5 7109	357
31	NEW MEXICO INST OF MINING & TECH	M J KURYLO	GSFC	K MINSCHWANNER	NAG 5 4139	357
31	NEW MEXICO STATE UNIV - LAS CRUCES	J BERGSTRALH	GSFC	D MARLEY	NAG 5 4987	358
31	NIAGARA UNIV	R BLAKESLEE	MSFC	W BOECK	NCC 8 182	379
31	NORFOLK STATE UNIV	J C BARNES	LARC	E S GILLMAN	NAG 1 2228	509
31	NORFOLK STATE UNIV	R A HATHAWAY	LARC	C COLEMAN	NAG 1 2226	508
31	NORTH CAROLINA STATE UNIV. - RALEIGH	F H PROCTOR	LARC	M L KAPLAN	NAG 1 02007	394
31	NORTH CAROLINA STATE UNIV. - RALEIGH	J ARNOLD	MSFC	R ABT	NCC 8 159	396
31	OHIO STATE UNIV	M J KURYLO	GSFC	F C DEELUCIA	NAG 5 3983	410
31	OHIO STATE UNIV	M S BURRELL	GSFC	J HOBGOOD	NGT 5 131	414
31	OLD DOMINION UNIV	M N ABEDIN	GSFC	R P JOSHI	NAG 1 01077	511

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31	OLD DOMINION UNIV	R DEYOUNG	LARC	D H ELSAYED-ALII	NGT 1 01014	514
31	OREGON STATE UNIV	R M HABERLE	ARC	J R BARNES	NGT 2 52245	429
31	OREGON STATE UNIV	R M HABERLE	ARC	J R BARNES	NAG 2 1546	426
31	OREGON STATE UNIV	C RABER	GSFC	D H FREILICH	NAS 5 32965	429
31	OREGON STATE UNIV	D BOGAN	GSFC	J BARNES	NAG 5 11046	427
31	OREGON STATE UNIV	M I MISHCHENKO	GSFC	J A COAKLEY	NAG 5 7686	427
31	OREGON STATE UNIV	M MEYER	GSFC	B T SIMONEIT	NAG 5 9428	427
31	OREGON STATE UNIV	R A SCHIFFER	GSFC	G DALRYMPLE	NAG 5 8261	427
31	OREGON STATE UNIV	B A WIELICKI	LARC	J COAKLEY	NAS 1 98140	428
31	OREGON STATE UNIV	G GIBSON	LARC	J M COAKLEY	NAS 1 99104	429
31	PENN STATE UNIV. - UNIV. PARK	E P CONDON	ARC	W H BRUNE	NAG 2 1302	437
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31	UNIV OF ALABAMA - HUNTSVILLE	W B ROSSOW	GSFC	Q HAN	NAG 5 10134	10
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32	BROCK UNIV	M BEHRENFELD	GSFC	D BRUCE	NAG 5 9875	550
32	BROWN UNIV	D G SENSKE	GSFC	P H SCHULTZ	NAG 5 3877	451
32	BROWN UNIV	D SENSKE	GSFC	C M PIETERS	NAG 5 10401	453
32	BROWN UNIV	D SENSKE	GSFC	P H SCHULTZ	NAG 5 11538	453
32	BROWN UNIV	J BOYCE	GSFC	J W HEAD	NAG 5 9780	452
32	BROWN UNIV	J BOYCE	GSFC	J W HEAD	NAG 5 12254	453
32	BROWN UNIV	J GGRANT	GSFC	C M PIETERS	NAG 5 3871	451
32	BROWN UNIV	J GRANT	GSFC	J F MUSTARD	NAG 5 8972	452
32	BROWN UNIV	J GRANT	GSFC	C PIETERS	NAG 5 9287	452
32	BROWN UNIV	JG GRANTS	GSFC	E PARMENTIER	NAG 5 3659	451

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32	BROWN UNIV	P G ROGERS	GSFC	D W HEAD	NAG 5 3933	452
32	BROWN UNIV	D MACKAY	JSC	C PIETERS	NGT 9 53	454
32	BROWN UNIV	J JONES	JSC	M MACANTA	NGT 9 63	454
32	BROWN UNIV	L KELLER	JSC	C PIETERS	NGT 9 66	455
32	CALIFORNIA INST OF TECH	B BETTS	GSFC	G BLAKE	NAG 5 9471	44
32	CALIFORNIA INST OF TECH	D SENSKE	GSFC	D J STEVENSON	NAG 5 10189	44
32	CALIFORNIA INST OF TECH	D SENSKE	GSFC	K A FARLEY	NAG 5 10470	45
32	CALIFORNIA INST OF TECH	H V FREY	GSFC	K E SIEH	NAG 5 10406	45
32	CALVIN COLL	H V FREY	GSFC	J A CLARK	NAG 5 10348	303
32	CENTRAL WASHINGTON UNIV	H V FREY	GSFC	M MILLER	NAG 5 7672	526
32	CLEMSON UNIV - CLEMSON	M MELLOTT	GSFC	D HYSSELL	NAG 5 9267	457
32	COLUMBIA UNIV	H V FREY	GSFC	J K WEISSEL	NAG 5 8848	368
32	COLUMBIA UNIV	H V FREY	GSFC	C P STARK	NAG 5 9056	368
32	COLUMBIA UNIV	H V FREY	GSFC	R E BELL	NAG 5 9060	368
32	COLUMBIA UNIV	R KOSTER	GSFC	C P STARK	NAG 5 11799	369
32	COLUMBIA UNIV	V GRIFFIN	GSFC	R C WILSON	NAS 5 97164	370
32	CORNELL UNIV	D SENKSE	GSFC	J VERERKA	NAG 5 11514	375
32	CORNELL UNIV	D SENSKE	GSFC	J A BURNS	NAG 5 11480	374
32	CORNELL UNIV	D SENSKE	GSFC	P HELFENSTEIN	NAG 5 11492	374
32	CORNELL UNIV	D SENSKE	GSFC	P D NICHOLSON	NAG 5 11515	375
32	CORNELL UNIV	E T ENGMAN	GSFC	K H COOK	NAG 5 7497	372
32	CORNELL UNIV	H V FREY	GSFC	D L TURCOTTE	NAG 5 9067	373
32	CORNELL UNIV	H V FREY	GSFC	B L ISACKS	NAG 5 11424	374
32	CORNELL UNIV	J A GRANT	GSFC	D L TURCOTTE	NAG 5 9492	373
32	CORNELL UNIV	J G GRANT	GSFC	S W SQUYRES	NAG 5 4205	372
32	CORNELL UNIV	J GRANT	GSFC	B CAMPBELL	NAG 5 9034	373
32	CORNELL UNIV	J SPANN	GSFC	P M KINTNER	NAG 5 12089	375
32	CORNELL UNIV	M MELLOTT	GSFC	D L HYSSELL	NAG 5 12164	375
32	CORNELL UNIV	M MELLOTT	GSFC	C E SEYLER	NAG 5 9199	373
32	CORNELL UNIV	P G ROGERS	GSFC	J VEVERKA	NAG 5 3626	372
32	CORNELL UNIV	P G ROGERS	GSFC	P HELFENSTEIN	NAG 5 3639	372
32	CORNELL UNIV	P ROGERS	GSFC	D A BURNS	NAG 5 3910	372
32	CORNELL UNIV	P ROGERS	GSFC	D F BELL	NAG 5 4333	372
32	DARTMOUTH COLL	H V FREY	GSFC	G BRAKENRIDGE	NAG 5 10953	340
32	DARTMOUTH COLL	H V FREY	GSFC	G BRAKENRIDGE	NAG 5 12325	340
32	DARTMOUTH COLL	J SHARBER	GSFC	R E DENTON	NAG 5 11825	340
32	EAST CAROLINA UNIV	R MILLER	SSC	D CORBETT	NAG13 02034	390
32	FLA INTERNATIONAL UNIV	G BYRNE	JSC	J GEBELEIN	NAG 9 1404	160
32	FLORIDA STATE UNIV	H V FREY	GSFC	J C CAIN	NAG 5 7577	165
32	GEORGE WASHINGTON UNIV	M MELLOTT	GSFC	G M KEATING	NAG 5 11834	151
32	GEORGIA SOUTHERN UNIV	D SENSKE	GSFC	M S KELLEY	NAG 5 11540	186
32	HAMPTON UNIV	M MELLOTT	GSFC	S M BAILEY	NAG 5 9171	507
32	HARVARD UNIV	H V FREY	GSFC	J BLOXHAM	NAG 5 7616	281
32	HARVARD UNIV	M MEYER	GSFC	D H KNOLL	NAG 5 3645	280
32	HOWARD UNIV	J L HARRINGTON	GSFC	D N THORPE	NCC 5 656	154
32	INDIANA UNIV - BLOOMINGTON	H V FREY	GSFC	M W HAMBURGER	NAG 5 7619	213
32	IOWA STATE UNIV	E T ENGMAN	GSFC	W J GUTOWSKI	NAG 5 7561	220
32	JOHNS HOPKINS UNIV	H V FREY	GSFC	R K RANEY	NAG 5 9296	242
32	JOHNS HOPKINS UNIV	J SPAN	GSFC	A LUI	NAG 5 10475	244
32	JOHNS HOPKINS UNIV	J SPANN	GSFC	D G SIBECK	NAG 5 10479	244
32	JOHNS HOPKINS UNIV	M MELLOTT	GSFC	J CARBARY	NAG 5 9240	242
32	LOUISIANA STATE UNIV - BATON ROUGE	H FREY	GSFC	O HUH	NAG 5 9245	231
32	MASSACHUSETTS INST OF TECH	D G SENSKE	GSFC	J WISDOM	NAG 5 3915	286
32	MASSACHUSETTS INST OF TECH	D SENSKE	GSFC	M T ZUBER	NAG 5 11650	291
32	MASSACHUSETTS INST OF TECH	E ENGMAN	GSFC	R BRASS	NAG 5 7475	287
32	MASSACHUSETTS INST OF TECH	E KREINS	GSFC	D H STAELIN	NAS 5 31376	293
32	MASSACHUSETTS INST OF TECH	H BRINTON	GSFC	D R ZUBER	NAG 5 4555	287
32	MASSACHUSETTS INST OF TECH	H V FREY	GSFC	A E NIELL	NAG 5 6063	287
32	MASSACHUSETTS INST OF TECH	H V FREY	GSFC	R E REILINGER	NAG 5 9057	289
32	MASSACHUSETTS INST OF TECH	H V FREY	GSFC	M T ZURBER	NAG 5 9143	289
32	MASSACHUSETTS INST OF TECH	H V FREY	GSFC	K X WHIPPLE	NAG 5 10389	290
32	MASSACHUSETTS INST OF TECH	H V FREY	GSFC	R L BRAS	NAG 5 10684	290
32	MASSACHUSETTS INST OF TECH	J G GRANT	GSFC	D G FORD	NAG 5 4047	286
32	MICHIGAN TECHNOLOGICAL UNIV	B CAMPBELL	GSFC	D FTACLAS	NAG 5 6310	306
32	MICHIGAN TECHNOLOGICAL UNIV	H V FREY	GSFC	G J BLUTH	NAG 5 7576	306

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32	MORGAN STATE UNIV	P TAYLOR	GSFC	E C HAMMOND	NAG 5 11229	252
32	NORTHWESTERN UNIV	H V FREY	GSFC	S STEIN	NAG 5 10306	200
32	OHIO STATE UNIV	H V FREY	GSFC	C K SHUM	NAG 5 7574	410
32	OHIO STATE UNIV	P TAYLOR	GSFC	R R VON FRESE	NAG 5 9883	411
32	OHIO STATE UNIV	B DAVIS	SSC	K BOYER	NAG13 00039	413
32	OHIO UNIV	H V FREY	GSFC	R R VON FRESE	NAG 5 7645	414
32	OREGON STATE UNIV	H V FREY	GSFC	C GOLDFINGER	NAG 5 11404	428
32	PENN STATE UNIV. - UNIV. PARK	E T ENGMAN	GSFC	J L EVANS	NAG 5 7547	440
32	PENN STATE UNIV. - UNIV. PARK	H V FREY	GSFC	D W BURBANK	NAG 5 9039	440
32	PENN STATE UNIV. - UNIV. PARK	M MELLOTT	GSFC	V PASKO	NAG 5 11832	442
32	PENN STATE UNIV. - UNIV. PARK	M S BURRELL	GSFC	R B ALLEY	NGT 5 118	446
32	POMONA COLL	J BOYCE	GSFC	E GROSFILS	NAG 5 9618	52
32	PRINCETON UNIV	C D PETERS-LIDARD	GSFC	E WOOD	NAG 5 11884	350
32	PRINCETON UNIV	E T ENGMAN	GSFC	J A SMITH	NAG 5 7544	348
32	PURDUE UNIV	J ARNOLD	MSFC	R OGLESBY	NAG 8 1515	216
32	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	E T ENGMAN	GSFC	D ROBINSON	NAG 5 7564	353
32	SAN JOSE STATE UNIV	H L D'ANTONI	ARC	P MESSINA	NCC 2 5402	57
32	SAN JOSE STATE UNIV	J GRANT	GSFC	D A MAROUF	NAG 5 4372	55
32	SOUTHERN ILLINOIS UNIV - CARBONDALE	H V FREY	GSFC	D RAVAT	NAG 5 7662	202
32	SOUTHERN ILLINOIS UNIV - CARBONDALE	P T TAYLOR	GSFC	D RAVAT	NAG 5 7771	202
32	SOUTHERN ILLINOIS UNIV - CARBONDALE	P TAYLOR	GSFC	D RAVAT	NAG 5 9832	202
32	SOUTHERN METHODIST UNIV	D A SENSKE	GSFC	V L HANSEN	NAG 5 9142	473
32	SOUTHERN METHODIST UNIV	J GRANT	GSFC	D L HANSEN	NAG 5 4562	473
32	STANFORD UNIV	D J DES MARAIS	ARC	D R LOWE	NCC 2 721	64
32	STANFORD UNIV	H V FREY	GSFC	H ZEBKER	NAG 5 3441	60
32	STANFORD UNIV	H V FREY	GSFC	H A ZEBKER	NAG 5 6148	60
32	STANFORD UNIV	H V FREY	GSFC	P SEGALL	NAG 5 6167	60
32	STANFORD UNIV	H V FREY	GSFC	H A ZEBKER	NAG 5 9040	61
32	STANFORD UNIV	M MELLOTT	GSFC	U S INAN	NAG 5 11821	62
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	382
32	STATE UNIV OF NY - BINGHAMTON	H FREY	GSFC	S DICKMAN	NAG 5 9069	382
32	STATE UNIV OF NY - BUFFALO	J A GRANT	GSFC	T GREGG	NAG 5 9390	383
32	STATE UNIV OF NY - STONY BROOK	H V FREY	GSFC	W E HOLT	NAG 5 9053	384
32	STATE UNIV OF NY COLL	H V FREY	GSFC	M F SHERIDAN	NAG 5 7579	387
32	STATE UNIV OF NY COLL	H V FREY	GSFC	M BURSIK	NAG 5 7581	387
32	STATE UNIV OF NY COLL	H V FREY	GSFC	M I BURSIK	NAG 5 10648	387
32	STATE UNIV OF NY COLL	J G GRANT	GSFC	GREGG	NAG 5 4544	386
32	THE AMERICAN UNIV	P TAYLOR	GSFC	J KUTINA	NAG 5 10027	154
32	UNIV NACIONAL DE SAN AGUSTIN - AREQUIPA	D L CARTER	GSFC	N APPLICABLE	NAS 5 99121	551
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 ALBUQUERQUE	E K STANSBERY	JSC	C B AGEE	NAG 9 1439	360
32	UNIV OF ALBUQUERQUE	E K STANSBERY	JSC	C B AGEE	NAG 9 1449	360
32	UNIV OF ARIZONA	D BOGAN	GSFC	J I LUNINE	NAG 5 8949	28
32	UNIV OF ARIZONA	D SENSKE	GSFC	E TURTLE	NAG 5 10166	31
32	UNIV OF ARIZONA	D SENSKE	GSFC	R GREENBERG	NAG 5 10167	31
32	UNIV OF ARIZONA	D SENSKE	GSFC	J I LUNINE	NAG 5 10294	31
32	UNIV OF ARIZONA	D SENSKE	GSFC	D KRING	NAG 5 10332	31
32	UNIV OF ARIZONA	D SENSKE	GSFC	R MALHOTRA	NAG 5 10346	31
32	UNIV OF ARIZONA	D SENSKE	GSFC	H J MELOSH	NAG 5 11493	34
32	UNIV OF ARIZONA	E ENGMAN	GSFC	W SHUTTLEWORTH	NAG 5 7554	27
32	UNIV OF ARIZONA	H V FREY	GSFC	V R BAKER	NAG 5 9293	29
32	UNIV OF ARIZONA	J GRANT	GSFC	L KESZTHELYI	NAG 5 9176	29
32	UNIV OF ARIZONA	M S BURRELL	GSFC	A S MCEWEN	NGT 5 114	38
32	UNIV OF ARIZONA	P G ROGERS	GSFC	R GREENBERG	NAG 5 3631	25
32	UNIV OF ARIZONA	P G ROGERS	GSFC	R G STROM	NAG 5 3914	25
32	UNIV OF ARIZONA	P ROGERS	GSFC	D H BROWN	NAG 5 3796	25
32	UNIV OF ARIZONA	P ROGERS	GSFC	H MELOSH	NAG 5 6543	26
32	UNIV OF ARIZONA	T MORGAN	GSFC	S LARSON	NAG 5 10543	32
32	UNIV OF CALIFORNIA - BERKELEY	C MCKAY	ARC	R G AMUNDSON	NGT 2 52290	77
32	UNIV OF CALIFORNIA - BERKELEY	H V FREY	GSFC	R BURGMANN	NAG 5 7580	70
32	UNIV OF CALIFORNIA - BERKELEY	H V FREY	GSFC	W E DIETRICH	NAG 5 9629	71
32	UNIV OF CALIFORNIA - BERKELEY	P TAYLOR	GSFC	M RICHARDS	NAG 5 9864	71
32	UNIV OF CALIFORNIA - DAVIS	R MCKELLIP	SSC	K W TATE	NAG13 99023	80

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32	UNIV OF CALIFORNIA - LOS ANGELES	E T ENGMAN	GSFC	L C SMITH	NAG 5 7555	87
32	UNIV OF CALIFORNIA - LOS ANGELES	E T ENGMAN	GSFC	Y XUE	NAG 5 9014	89
32	UNIV OF CALIFORNIA - LOS ANGELES	H V FREY	GSFC	D E ALSDORF	NAG 5 10685	91
32	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	M EL-ALAOUI	NAG 5 9255	89
32	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	P L PRITCHETT	NAG 5 11823	92
32	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	K K KHURANA	NAG 5 11859	92
32	UNIV OF CALIFORNIA - LOS ANGELES	J SPANN	GSFC	D SCHRIVER	NAG 5 10473	90
32	UNIV OF CALIFORNIA - LOS ANGELES	M MELLOTT	GSFC	R M THORNE	NAG 5 11826	92
32	UNIV OF CALIFORNIA - LOS ANGELES	M MELLOTT	GSFC	L R LYONS	NAG 5 11858	92
32	UNIV OF CALIFORNIA - LOS ANGELES	M MELLOTT	GSFC	R L MCPHERRON	NAG 5 11898	92
32	UNIV OF CALIFORNIA - LOS ANGELES	M MELLOTT	GSFC	R M THORNE	NAG 5 11922	92
32	UNIV OF CALIFORNIA - LOS ANGELES	M MELLOTT	GSFC	M ASHOUR-ABDALLA	NAG 5 11923	92
32	UNIV OF CALIFORNIA - LOS ANGELES	M MEYER	GSFC	D F KERRIDGE	NAG 5 8470	88
32	UNIV OF CALIFORNIA - LOS ANGELES	P G ROGERS	GSFC	G SCHUBERT	NAG 5 3863	87
32	UNIV OF CALIFORNIA - LOS ANGELES	P G ROGERS	GSFC	W M KAULA	NAG 5 3956	87
32	UNIV OF CALIFORNIA - LOS ANGELES	W ABDALATI	GSFC	G PELTZER	NAG 5 11102	91
32	UNIV OF CALIFORNIA - SAN DIEGO	B BILLS	GSFC	J A ORCUTT	NAG 5 11682	101
32	UNIV OF CALIFORNIA - SAN DIEGO	B CAMPBELL	GSFC	P L BADA	NAG 5 4938	96
32	UNIV OF CALIFORNIA - SAN DIEGO	D SENSKE	GSFC	C L JOHNSON	NAG 5 11563	100
32	UNIV OF CALIFORNIA - SAN DIEGO	D SENSKE	GSFC	C L JOHNSON	NAG 5 12281	101
32	UNIV OF CALIFORNIA - SAN DIEGO	H B FREY	GSFC	R L PARKER	NAG 5 7612	97
32	UNIV OF CALIFORNIA - SAN DIEGO	H V FREY	GSFC	D C AGNEW	NAG 5 6149	96
32	UNIV OF CALIFORNIA - SAN DIEGO	H V FREY	GSFC	C G CONSTABLE	NAG 5 7614	97
32	UNIV OF CALIFORNIA - SAN DIEGO	H V FREY	GSFC	D T SANDWELL	NAG 5 9623	99
32	UNIV OF CALIFORNIA - SAN DIEGO	H V FREY	GSFC	D C AGNEW	NCC 5 230	103
32	UNIV OF CALIFORNIA - SAN DIEGO	J SHARBER	GSFC	K B QUEST	NAG 5 11824	101
32	UNIV OF CALIFORNIA - SANTA BARBARA	D G SENSKE	GSFC	S J PEALE	NAG 5 3646	105
32	UNIV OF CALIFORNIA - SANTA BARBARA	H V FREY	GSFC	D E ALSDORF	NAG 5 9055	106
32	UNIV OF CALIFORNIA - SANTA BARBARA	H V FREY	GSFC	L K MERTES	NAG 5 9811	107
32	UNIV OF CALIFORNIA - SANTA BARBARA	H V FREY	GSFC	D W BURBANK	NAG 5 10520	107
32	UNIV OF CALIFORNIA - SANTA BARBARA	T BRAKKE	GSFC	D DOZLER	NAG 5 31710	109
32	UNIV OF CALIFORNIA - SANTA BARBARA	R MCKELLIP	JSC	O CHADWICK	NAG13 99025	108
32	UNIV OF CALIFORNIA - SANTA CRUZ	D SENSKE	GSFC	E ASPHAUG	NAG 5 10676	111
32	UNIV OF CALIFORNIA - SANTA CRUZ	D SENSKE	GSFC	D KORYCANSKY	NAG 5 11521	112
32	UNIV OF CINCINNATI	C T RAMOS	GRC	R BECK	NCC 3 981	418
32	UNIV OF COLORADO - BOULDER	C P MCKAY	ARC	B TOON	NGT 2 52279	139
32	UNIV OF COLORADO - BOULDER	D SENSKE	GSFC	M T MELLON	NAG 5 10155	130
32	UNIV OF COLORADO - BOULDER	D SENSKE	GSFC	B JAKOSKY	NAG 5 10413	131
32	UNIV OF COLORADO - BOULDER	E T ENGMAN	GSFC	A FREI	NAG 5 7543	125
32	UNIV OF COLORADO - BOULDER	H V FREY	GSFC	J M WAHR	NAG 5 7703	126
32	UNIV OF COLORADO - BOULDER	H V FREY	GSFC	J B RUNDLE	NAG 5 9448	129
32	UNIV OF COLORADO - BOULDER	H V FREY	GSFC	R G BILHAM	NAG 5 10418	131
32	UNIV OF COLORADO - BOULDER	H V FREY	GSFC	V GUPTA	NAG 5 10954	132
32	UNIV OF COLORADO - BOULDER	H V FREY	GSFC	S R NEREM	NAG 5 11192	133
32	UNIV OF COLORADO - BOULDER	J A GRANT	GSFC	R E GRIMM	NAG 5 9491	129
32	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	A R HENDRIX	NAG 5 9590	129
32	UNIV OF COLORADO - BOULDER	J GRANT	GSFC	M T MELLON	NAG 5 8910	128
32	UNIV OF COLORADO - BOULDER	J SCHARBER	GSFC	S SOLOMON	NAG 5 9201	128
32	UNIV OF COLORADO - BOULDER	J SHARBER	GSFC	M HORANYI	NAG 5 9172	128
32	UNIV OF COLORADO - BOULDER	J SPANN	GSFC	X LI	NAG 5 10474	131
32	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	J SU	NAG 5 11924	135
32	UNIV OF COLORADO - BOULDER	M WEI	GSFC	J MENNIS	NAG 5 12598	137
32	UNIV OF DELAWARE	D SENSKE	GSFC	B P GLASS	NAG 5 11522	149
32	UNIV OF FLORIDA	P ROGERS	HQ	D F DERMOTT	NAG 5 4531	170
32	UNIV OF GEORGIA	E T ENGMAN	GSFC	T L MOTE	NAG 5 8469	188
32	UNIV OF HAWAII AT MANOA - HONOLULU	D SENSKE	GSFC	P G LUCEY	NAG 5 11516	195
32	UNIV OF HAWAII AT MANOA - HONOLULU	H V FREY	GSFC	P J MOUGINIS-MARK	NAG 5 7578	190
32	UNIV OF HAWAII AT MANOA - HONOLULU	H V FREY	GSFC	P J MOUGINIS-MARK	NAG 5 9038	192
32	UNIV OF HAWAII AT MANOA - HONOLULU	J GRANT	GSFC	S K ROWLAND	NAG 5 7963	191
32	UNIV OF HAWAII AT MANOA - HONOLULU	J GRANT	GSFC	B HAWKE	NAG 5 8903	192
32	UNIV OF HAWAII AT MANOA - HONOLULU	P G ROGERS	GSFC	P G LUCEY	NAG 5 3766	189
32	UNIV OF HAWAII AT MANOA - HONOLULU	P G ROGERS	GSFC	E R HAWKE	NAG 5 3875	189
32	UNIV OF HAWAII AT MANOA - HONOLULU	P G ROGERS	GSFC	F P FANALE	NAG 5 4150	189
32	UNIV OF HAWAII AT MANOA - HONOLULU	P ROGERS	GSFC	T OWEN	NAG 5 6829	190
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32	UNIV OF HOUSTON - DOWNTOWN	E K GIBSON	JSC	P A MORRIS-SMITH	NAG 9 1114	486
32	UNIV OF IDAHO - MOSCOW	D SENSKE	GSFC	S KATTENHORN	NAG 5 11495	197
32	UNIV OF IOWA	M MELLOTT	GSFC	C A KLETZING	NAG 5 11867	224
32	UNIV OF KANSAS	R MCKALLIP	SSC	M JAKUBAUSKAS	NAG13 99019	226
32	UNIV OF MARYLAND - COLL PARK	B F CHAO	GSFC	M HOFTON	NAG 5 11654	263
32	UNIV OF MARYLAND - COLL PARK	H V FREY	GSFC	G SUN	NAG 5 10388	261
32	UNIV OF MARYLAND - COLL PARK	H V FREY	GSFC	C M BIRKETT	NAG 5 11700	264
32	UNIV OF MARYLAND - COLL PARK	S B LUTHCKE	GSFC	M HOFTON	NAG 5 12112	264
32	UNIV OF MARYLAND BALTIMORE COUNTY	H V FREY	GSFC	E C PAVLIS	NAG 5 9054	271
32	UNIV OF MARYLAND BALTIMORE COUNTY	H V FREY	GSFC	M H BULMER	NAG 5 12199	273
32	UNIV OF MASSACHUSETTS - AMHERST	H V FREY	GSFC	C C DUNCAN	NAG 5 10649	299
32	UNIV OF MASSACHUSETTS - AMHERST	P ROGERS	GSFC	D E MCGILL	NAG 5 4373	298
32	UNIV OF MASSACHUSETTS - AMHERST	P ROGERS	GSFC	G MCGILL	NAG 5 4999	298
32	UNIV OF MEMPHIS	H V FREY	GSFC	M ELLIS	NAG 5 7617	463
32	UNIV OF MIAMI	H V FREY	GSFC	T H DIXON	NAG 5 9066	174
32	UNIV OF MIAMI	H V FREY	GSFC	T H DIXON	NAG 5 9068	174
32	UNIV OF MICHIGAN - ANN ARBOR	H V FREY	GSFC	K SARABANDI	NAG 5 8930	309
32	UNIV OF MICHIGAN - ANN ARBOR	H V FREY	GSFC	C DOBSON	NAG 5 11406	311
32	UNIV OF MICHIGAN - ANN ARBOR	M MELLOTT	GSFC	J U KOZYRA	NAG 5 11831	312
32	UNIV OF MINN	D SENKE	GSFC	D L KOHLSTEDT	NAG 5 10509	319
32	UNIV OF MINN	E T ENGMAN	GSFC	M PERSON	NAG 5 7599	318
32	UNIV OF MINN	J SHARBER	GSFC	N LIN	NAG 5 11856	320
32	UNIV OF MINN	J SHARBER	GSFC	R L LYSAK	NAG 5 11868	320
32	UNIV OF MINN	M MELLOTT	GSFC	R LYSAK	NAG 5 9254	319
32	UNIV OF MINN	J ARNOLD	MSFC	E FOUFOULA-GEORGIU	NAG 8 1519	320
32	UNIV OF MINN	C HILL	SSC	M E BAUER	NAG13 99002	320
32	UNIV OF MISSISSIPPI - MEDICAL CTR	H V FREY	GSFC	J K JOHNSON	NAG 5 7671	324
32	UNIV OF MISSISSIPPI - UNIV	N SOVIK	SSC	G EASSON	NAG13 00037	324
32	UNIV OF MISSOURI - COLUMBIA	H V FREY	GSFC	M LIU	NAG 5 9145	325
32	U OF MONT	E K GIBSON	JSC	N C HINMAN	NAG 9 1112	335
32	UNIV OF NEBRASKA - LINCOLN	F HORZZ	JSC	D R ALEXANDER	NAG 9 1310	336
32	UNIV. OF NEVADA - DESERT RES. INST	D SENSKE	GSFC	G M MARION	NAG 5 10445	337
32	UNIV OF NEVADA - RENO	D A SENSKE	GSFC	R A SCHULTZ	NAG 5 10926	338
32	UNIV OF NEVADA - RENO	D A SENSKE	GSFC	R A SCHULTZ	NAG 5 11447	338
32	UNIV OF NEVADA - RENO	D SENKE	GSFC	W CALVIN	NAG 5 10290	338
32	UNIV OF NEVADA - RENO	D SENSKE	GSFC	W CALVIN	NAG 5 11491	338
32	UNIV OF NEVADA - RENO	J A GRANT	GSFC	W CALVIN	NAG 5 9298	338
32	UNIV OF NEVADA - RENO	J A GRANT	GSFC	G M MARION	NAG 5 9467	338
32	UNIV OF NEW HAMPSHIRE - DURHAM	J SPANN	GSFC	K LYNCH	NAG 5 10472	343
32	UNIV OF NEW HAMPSHIRE - DURHAM	M MELLOTT	GSFC	R L KAUFMANN	NAG 5 11820	344
32	UNIV OF NEW MEXICO-ALBUQUERQUE	D SENSKE	GSFC	H NEWSOM	NAG 5 8804	361
32	UNIV OF NEW MEXICO-ALBUQUERQUE	D SENSKE	GSFC	H E NEWSOM	NAG 5 11496	362
32	UNIV OF NEW MEXICO-ALBUQUERQUE	E K GIBSON	JSC	J J PAPIKE	NAG 9 1111	363
32	UNIV OF NEW MEXICO-ALBUQUERQUE	J H JONES	JSC	C D HERD	NGT 9 31	363
32	UNIV OF PITTSBURGH	D SENSKE	GSFC	B W HAPKE	NAG 5 10222	449
32	UNIV OF PITTSBURGH	H V FREY	GSFC	M S RAMSEY	NAG 5 9438	449
32	UNIV OF PITTSBURGH	H V FREY	GSFC	M S RAMSEY	NAG 5 9439	449
32	UNIV OF PITTSBURGH	J A GRANT	GSFC	D A CROWN	NAG 5 9466	449
32	UNIV OF PITTSBURGH	M S BURRELL	GSFC	D A CROWN	NGT 5 125	450
32	UNIV OF PITTSBURGH	P G ROGERS	GSFC	S W HAPKE	NAG 5 3723	448
32	UNIV OF PUERTO RICO - MAYAGUEZ	H FREY	GSFC	G MATTIOLI	NAG 5 6031	548
32	UNIV OF TENNESSEE - KNOXVILLE	T L ROUSH, ARC	ARC	J E MOERSCH	NCC 2 1187	465
32	UNIV OF TEXAS - AUSTIN	F HERBERT	GSFC	B TAPLEY	NAG 5 9163	488
32	UNIV OF TEXAS - AUSTIN	H V FREY	GSFC	R R EM	NAG 5 5171	487
32	UNIV OF TEXAS - AUSTIN	H V FREY	GSFC	J G PAINE	NAG 5 7582	487
32	UNIV OF TEXAS - AUSTIN	H V FREY	GSFC	J C GIBEAUT	NAG 5 7660	487
32	UNIV OF TEXAS - AUSTIN	H V FREY	GSFC	J C CARTER	NAG 5 7693	487
32	UNIV OF TEXAS - AUSTIN	H V FREY	GSFC	C R WILSON	NAG 5 8798	488
32	UNIV OF TEXAS - AUSTIN	B DAVIS	SSC	B TAPLEY	NAG13 02049	491
32	UNIV OF TEXAS - EL PASO	D MENCHAN	GSFC	D SCHULZ-MAKUCH	NAG 5 9542	493
32	UNIV OF TEXAS - EL PASO	J SPANN	GSFC	R LOPEZ	NAG 5 10507	493
32	UNIV OF UTAH	E LINDSTROM	GSFC	R L BRUHN	NAG 5 10136	497
32	UNIV OF VIRGINIA	D SENSKE	GSFC	R E JOHNSON	NAG 5 10173	519
32	UNIV OF VIRGINIA	J G GRANT	GSFC	A D HOWARD	NAG 5 3931	517

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32	UNIV OF VIRGINIA	P ROGERS	GSFC	D A BARAGIOLA	NAG 5 4332	517
32	UNIV OF WASHINGTON	D SENSKE	GSFC	D CATLING	NAG 5 11499	532
32	UNIV OF WASHINGTON	E T ENGMAN	GSFC	L TSANG	NAG 5 7495	529
32	UNIV OF WASHINGTON	E T ENGMAN	GSFC	W J PLANT	NAG 5 7550	529
32	UNIV OF WASHINGTON	H FREY	GSFC	D LETTENMAIER	NAG 5 6505	528
32	UNIV OF WASHINGTON	H V FREY	GSFC	A GILLESPIE	NAG 5 6067	528
32	UNIV OF WASHINGTON	H V FREY	GSFC	D R MONTGOMERY	NAG 5 10342	531
32	UNIV OF WISCONSIN - MADISON	H V FREY	GSFC	P MENZEL	NAG 5 9688	542
32	UTAH STATE UNIV	E T ENGMAN	GSFC	D G TARBOTON	NAG 5 7597	498
32	WASHINGTON STATE UNIV	D SENSKE	GSFC	D HUDSON	NAG 5 10462	536
32	WASHINGTON STATE UNIV	J G GRANT	GSFC	D HUDSON	NAG 5 4035	536
32	WASHINGTON UNIV - ST. LOUIS	B CAMPBELL	GSFC	D FEGLEY	NAG 5 6125	329
32	WASHINGTON UNIV - ST. LOUIS	D SENSKE	GSFC	R E ARVIDSON	NAG 5 10190	330
32	WASHINGTON UNIV - ST. LOUIS	D SENSKE	GSFC	W B MCKINNON	NAG 5 11517	331
32	WASHINGTON UNIV - ST. LOUIS	H V FREY	GSFC	R E ARVIDSON	NAG 5 7613	329
32	WASHINGTON UNIV - ST. LOUIS	J GRANT	GSFC	B L JOLLIFF	NAG 5 8905	330
32	WASHINGTON UNIV - ST. LOUIS	P G ROGERS	GSFC	W B MCKINNON	NAG 5 3657	328
32	WASHINGTON UNIV - ST. LOUIS	P ROGERS	GSFC	D J PHILLIPS	NAG 5 4448	328
32	WELLESLEY COLL	J G GRANT	GSFC	R G FRENCH	NAG 5 4046	301
33	CALIFORNIA INST OF TECH	S LONG	WFF	T WU	NAG 5 5338	42
33	CLEMSON UNIV - CLEMSON	L BLIVEN	WFF	J SAYLOR	NAG 5 5384	456
33	COLORADO STATE UNIV	S HAKKINEN	GSFC	C MATSUMOTO	NAG 5 12275	120
33	COLUMBIA UNIV	J A MARRA	GSFC	J A BISHOP	NAG 5 6450	367
33	DARTMOUTH COLL	C DEL CASTILLO	SSC	D R LYNCH	NAG13 00041	341
33	FLORIDA STATE UNIV	E LINDSTROM	GSFC	D NOF	NAG 5 10860	165
33	FLORIDA STATE UNIV	E LINDSTROM	GSFC	J J O'BRIEN	NAG 5 7254	164
33	FLORIDA STATE UNIV	M RIENECKER	GSFC	W WEWAR	NAG 5 8291	165
33	FLORIDA STATE UNIV	W ESAIAS	GSFC	R L IVERSON	NAG 5 7618	165
33	GEORGE MASON UNIV	M RIENECKER	GSFC	P S SCHOPF	NCC 5 522	505
33	JOHNS HOPKINS UNIV	S R LONG	GSFC	O PHILLIPS	NAG 5 5047	239
33	JOHNS HOPKINS UNIV	S R LONG	GSFC	E GROSS	NAG 5 5314	239
33	JOHNS HOPKINS UNIV	S J KATZBERG	LARC	M S ASHER	NAG 1 2257	237
33	JOHNS HOPKINS UNIV	R MILLER	SSC	D R THOMPSON	NAG13 00045	250
33	MASSACHUSETTS INST OF TECH	C TREES	GSFC	M FELLOWS	NAG 5 12490	292
33	MASSACHUSETTS INST OF TECH	E LINDSTROM	GSFC	P RIZZOLI	NAG 5 11746	291
33	MISSISSIPPI STATE UNIV	D POWE	SSC	L RITCHIE	NAS13 98033	323
33	NY UNIV	M RIENECKER	GSFC	R KLEEMAN	NAG 5 12427	378
33	NORTH CAROLINA STATE UNIV. - RALEIGH	C A TREES	GSFC	D KAMYKOWSKI	NAG 5 6586	395
33	OHIO STATE UNIV	W ABDALATI	GSFC	C V DER VEEN	NAG 5 10978	412
33	OHIO STATE UNIV	W ABDALATI	GSFC	K JEZEK	NAG 5 11383	412
33	OHIO STATE UNIV	W ABDALATI	GSFC	C K SHUM	NAG 5 12585	412
33	OLD DOMINION UNIV	J MARRA	GSFC	G F COTA	NAG 5 10528	512
33	OREGON STATE UNIV	M FLYNN	ARC	G P KLINKHAMMER	NCC 2 5515	429
33	OREGON STATE UNIV	M T FLYNN	ARC	G P KLINKHAMMER	NCC 2 5427	429
33	OREGON STATE UNIV	H OSEROFF	GSFC	M R ABBOTT	NAS 5 31360	429
33	OREGON STATE UNIV	J A MARRA	GSFC	M R ABBOTT	NAG 5 4947	426
33	OREGON STATE UNIV	J MARRA	GSFC	K S SHIFRIN	NAG 5 10623	427
33	OREGON STATE UNIV	J MARRA	GSFC	E BOSS	NAG 5 11148	428
33	OREGON STATE UNIV	R RAY	GSFC	G D EGBERT	NAG 5 9159	427
33	OREGON STATE UNIV	S HAKKINEN	GSFC	R P MATANO	NAG 5 12378	428
33	PRINCETON UNIV	C TREES	GSFC	J SARMIENTO	NAG 5 12544	350
33	PRINCETON UNIV	S HAKKINEN	GSFC	G PHILANDER	NAG 5 12387	350
33	SALISBURY STATE UNIV	T MOISAN	WFF	T JONES	NAG 5 5342	252
33	SAN DIEGO STATE UNIV	C R CRANE	GSFC	J L MUELLER	NAS 5 00199	53
33	SAN DIEGO STATE UNIV	C R MCCLAIN	GSFC	C C TREES	NAS 5 00202	53
33	STANFORD UNIV	J MARRA	GSFC	K ARRIGO	NAG 5 11264	62
33	STATE UNIV OF NY - STONY BROOK	E LINDSTROM	GSFC	D WALISER	NAG 5 11033	385
33	TEXAS A&M UNIV	E LINDSTROM	GSFC	W NOWLIN	NAG 5 10829	475
33	TEXAS A&M UNIV	W ABDALATI	GSFC	S STOESSEL	NAG 5 10641	475
33	U OF MD CTR FOR ENVIR SCI - CAMBRIDGE	C R MCCLAIN	GSFC	L W HARDING	NAS 5 00195	253
33	UNIV OF ARIZONA	C R MCCCLAIN	GSFC	J ZALEWSKI	NAS 5 00197	37
33	UNIV OF CALIFORNIA - IRVINE	S R LONG	GSFC	J N YANG	NAG 5 5149	83
33	UNIV OF CALIFORNIA - LOS ANGELES	C TREES	GSFC	N GRUBER	NAG 5 12528	93
33	UNIV OF CALIFORNIA - SAN DIEGO	C KOBLINSKY	GSFC	P P NIILER	NAG 5 8351	98
33	UNIV OF CALIFORNIA - SAN DIEGO	C R MCCAIN	GSFC	R FROUIN	NAS 5 00194	102



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33	UNIV OF CALIFORNIA - SAN DIEGO	E LINDSTROM	GSFC	D STAMMER	NAG 5 11765	101
33	UNIV OF CALIFORNIA - SAN DIEGO	G A SOFFEN	GSFC	B G MITCHELL	NGT 5 106	104
33	UNIV OF CALIFORNIA - SAN DIEGO	J MARRA	GSFC	R KEELING	NAG 5 10737	100
33	UNIV OF CALIFORNIA - SAN DIEGO	S HAKKINEN	GSFC	S G LLEWELLYN SMITH	NAG 5 12388	102
33	UNIV OF CALIFORNIA - SAN DIEGO	S LONG	WFF	D HUANG	NAG 5 5386	96
33	UNIV OF CALIFORNIA - SANTA BARBARA	C R MCCLAIN	GSFC	S MARITORENA	NAS 5 00196	108
33	UNIV OF CALIFORNIA - SANTA BARBARA	C R MCCLAIN	GSFC	D A SIEGEL	NAS 5 00200	108
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33	UNIV OF CALIFORNIA - SANTA BARBARA	H OSEROFF	GSFC	Z WAN	NAS 5 31370	108
33	UNIV OF CALIFORNIA - SANTA CRUZ	W ABDALATI	GSFC	S TULACZYK	NAG 5 12574	112
33	UNIV OF DELAWARE	S K RUNCO	JSC	V KLEMAS	NAG 9 989	149
33	UNIV OF KANSAS	W ABDALATI	GSFC	P KANAGARATNAM	NAG 5 12588	226
33	UNIV OF MAINE - ORONO	J MARRA	GSFC	A THOMAS	NAG 5 10620	235
33	UNIV OF MARYLAND - COLL PARK	C R MCCLAIN	GSFC	A SUBRAMANIAM	NAS 5 00192	266
33	UNIV OF MARYLAND - COLL PARK	E LINDSTROM	GSFC	R WAJSOWICZ	NAG 5 3960	255
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33	UNIV OF MARYLAND - COLL PARK	G FLETCHERT	SSC	A SUBRAMANIAM	NAG13 02009	266
33	UNIV OF MARYLAND BALTIMORE COUNTY	C R MCCLAIN	GSFC	M WANG	NAS 5 00203	274
33	UNIV OF MIAMI	E LINDSTROM	GSFC	H GRABER	NAG 5 11864	174
33	UNIV OF MIAMI	H OSEROFF	GSFC	O B BROWN	NAS 5 31361	175
33	UNIV OF MIAMI	J DODGE	GSFC	R EVANS	NAG 5 10588	174
33	UNIV OF PUERTO RICO - MAYAGUEZ	C W WRIGHT	WFF	E WEIL	NAG 5 5302	548
33	UNIV OF PUGET SOUND	W ABDALATI	GSFC	A THORNDIKE	NAG 5 11836	527
33	UNIV OF RHODE ISLAND	J MARRA	GSFC	J YODER	NAG 5 10555	455
33	UNIV OF RHODE ISLAND	M MAIDEN	GSFC	P CORNILLON	NCC 5 307	456
33	UNIV OF SOUTH FLORIDA	G S HAYNE	GSFC	G T MITCHUM	NAG 5 5202	175
33	UNIV OF SOUTH FLORIDA	J MARRA	GSFC	C CHU	NAG 5 10738	175
33	UNIV OF SOUTH FLORIDA	J YODER	GSFC	P COBLE	NAG 5 6301	175
33	UNIV OF SOUTHERN MISSISSIPPI	J MARRA	GSFC	S E LOHRENZ	NAG 5 9770	324
33	UNIV OF WASHINGTON	A ANDERSON	GSFC	D L HARTMANN	NAG 5 10624	531
33	UNIV OF WASHINGTON	J A CURRAN	GSFC	D HARTMANN	NAG 5 6101	528
33	UNIV OF WASHINGTON	J MARRA	GSFC	S RISER	NAG 5 11079	532
33	UTAH STATE UNIV	M FLYNN	ARC	L POWERS	NCC 2 5514	500
33	WEST VIRGINIA UNIV	B R LONG	WFF	Y XU	NAG 5 5364	538
33	WOODS HOLE OCEANOGRAPHIC INST	C R MCCLAIN	GSFC	J R MORRISON	NAS 5 00198	302
33	WOODS HOLE OCEANOGRAPHIC INST	C TREES	GSFC	S C DONEY	NAG 5 12488	302
33	WOODS HOLE OCEANOGRAPHIC INST	J COMISO	GSFC	J YANG	NAG 5 7348	301
33	WOODS HOLE OCEANOGRAPHIC INST	J MARRA	GSFC	D M GLOVER	NAG 5 9858	302
33	WOODS HOLE OCEANOGRAPHIC INST	M RIENECKER	GSFC	L YU	NCC 5 441	302
39	ALABAMA A&M UNIV	R HOOVER	MSFC	M G TADROS	NAG 8 1624	2
39	ALABAMA A&M UNIV	S NASH-STEVENSON	MSFC	W MCALLISTER	NGT 8 52918	3
39	ARIZONA STATE UNIV	D ANDERSON	GSFC	P BUSECK	NAG 5 11552	21
39	ARIZONA STATE UNIV	H BLODGET	GSFC	P CHRISTENSEN	NAS 5 31371	22
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	4
39	AUBURN UNIV	J R ARNOLD	MSFC	U HATCH	NCC 8 151	4
39	BOISE STATE UNIV	E ENGMAN	GSFC	P DAWSON	NAG 5 7537	197
39	BOSTON UNIV	D E WICKLAND	GSFC	X LI	NAG 5 7217	276
39	BOSTON UNIV	D E WICKLAND	GSFC	M FRIEDL	NAG 5 7218	276
39	BOSTON UNIV	D L WILLIAMS	GSFC	C WOODCOCK	NAG 5 3439	275
39	BOSTON UNIV	D WICKLAND	GSFC	C SCHAAF	NAG 5 11263	277
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39	BOSTON UNIV	G GUTMAN	GSFC	G SALVUCCI	NAG 5 11338	277
39	BOSTON UNIV	M WEI	GSFC	R MYNENI	NGT 5 30223	278
39	BOSTON UNIV	P R HOUSER	GSFC	G D SALVUCCI	NAG 5 11695	277
39	BOWIE STATE UNIV	E MIDDLETON	GSFC	W T LAWRENCE	NCC 5 507	237
39	BOWIE STATE UNIV	M L IMHOFF	GSFC	W LAWRENCE	NAG 5 6476	236
39	BOWIE STATE UNIV	M L IMHOFF	GSFC	W LAWRENCE	NAG 5 7669	236
39	BOWIE STATE UNIV	M L IMHOFF	GSFC	W LAWRENCE	NAG 5 10034	236
39	BOWIE STATE UNIV	M L IMHOFF	GSFC	W LAWRENCE	NAG 5 11450	237

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39	BRIGHAM YOUNG UNIV	E LINDSTROM	GSFC	D LONG	NAG 5 8746	495
39	BRIGHAM YOUNG UNIV	J DODGE	GSFC	D LONG	NAG 5 9625	495
39	BROWN UNIV	G GUTMAN	GSFC	J F MUSTARD	NAG 5 11145	453
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39	BUCKNELL UNIV	E T ENGMAN	GSFC	R D CRAGO	NAG 5 8679	430
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39	CALIFORNIA INST OF TECH	D WICKLAND	GSFC	J RANDERSON	NAG 5 9462	43
39	CALIFORNIA INST OF TECH	D WICKLAND	GSFC	P WENNBEG	NAG 5 12247	47
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39	CALIFORNIA INST OF TECH	P HOUSER	GSFC	Y L YUNG	NAG 5 9487	44
39	CALIFORNIA POLYTECH STATE U-SAN LUIS	M WEI	GSFC	M A MOLINE	NAG 5 8674	49
39	CALIFORNIA STATE UNIV - LONG BEACH	A J TUYAHOV	GSFC	C T LEE	NAG 5 9310	50
39	CALIFORNIA STATE UNIV - LONG BEACH	B MEESON	GSFC	E AMBOS	NCC 5 329	50
39	CALIFORNIA STATE UNIV - MONTEREY BAY	J C COUGHLAN	ARC	S E ALEXANDER	NCC 2 1186	51
39	CALIFORNIA STATE UNIV - MONTEREY BAY	A JANETOS	GSFC	L PIERCE	NAG 5 6529	51
39	CALIFORNIA STATE UNIV - MONTEREY BAY	R MCKELLIP	SSC	L F JOHNSON	NAG13 99020	51
39	CARNEGIE - MELLON UNIV	CFARMER	JSC	D HERSHBERGER	NAG 9 1242	433
39	CASE WESTERN RESERVE UNIV	W HVANCIC	GRC	J ISHAC	NAG 3 2391	400
39	CITY UNIV OF NY CITY COLL	M KURYLO	GSFC	P M SOLOMON	NAG 5 11690	365
39	CLARK UNIV	S S WEGENER	ARC	S HERWITZ	NCC 2 1270	279
39	CLARK UNIV	M WEI	GSFC	B L TURNER	NGT 5 97	279
39	CLARK UNIV	M WEI	GSFC	B L TURNER	NGT 5 30197	279
39	CLARK UNIV	M WEI	GSFC	B L TURNER	NGT 5 30217	279
39	CLARK UNIV	M Y WEI	GSFC	J GEOGHEGAN	NAG 5 8559	279
39	CLARK UNIV	M Y WEI	GSFC	B L TURNER	NGT 5 30147	279
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39	COLORADO STATE UNIV	D ANDERSON	GSFC	G L STEPHENS	NAG 5 11475	119
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39	COLUMBIA UNIV	D L PIERCE	GSFC	B CAIRNS	NAG 5 5275	367
39	COLUMBIA UNIV	D RIND	GSFC	M A CANE	NAG 5 7044	367
39	COLUMBIA UNIV	J MARRA	GSFC	T TAKAHASHI	NAG 5 6877	367
39	COLUMBIA UNIV	J MARRA	GSFC	O ANDERSON	NAG 5 11215	369
39	COLUMBIA UNIV	J MARRA	GSFC	T TAKAHASHI	NAG 5 11357	369
39	COLUMBIA UNIV	M WEI	GSFC	D L WITTER	NAG 5 8675	368
39	COLUMBIA UNIV	M WEI	GSFC	A SOBEL	NAG 5 10607	369
39	COLUMBIA UNIV	M WEI	GSFC	W MENKE	NGT 5 30374	370
39	COLUMBIA UNIV	M WEI	GSFC	D MARTINSON	NGT 5 30391	370
39	COLUMBIA UNIV	M WEI	GSFC	M CANE	NGT 5 50323	371
39	COLUMBIA UNIV	M Y WEI	GSFC	T TAKAHASHI	NGT 5 30167	370
39	COLUMBIA UNIV	P R HOUSER	GSFC	M STIEGLITZ	NAG 5 9759	368
39	COLUMBIA UNIV	P R HOUSER	GSFC	S MENON	NAG 5 11697	369
39	COLUMBIA UNIV	Q BARKER	GSFC	R S CHEN	NAG 5 98162	370
39	COLUMBIA UNIV	R KOSTER	GSFC	M STIEGLITZ	NCC 5 218	370

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39	COLUMBIA UNIV	S GOGINENI	GSFC	S S JACOBS	NAG 5 7461	367
39	COLUMBIA UNIV	S GOGINENI	GSFC	D MARTINSON	NAG 5 7922	368
39	COLUMBIA UNIV	W ABDALATI	GSFC	X YUAN	NAG 5 12586	369
39	CORNELL UNIV	D DEERING	GSFC	E FERNANDES	NCC 5 298	376
39	CORNELL UNIV	J BOYCE	GSFC	R J SULLIVAN	NAG 5 9794	374
39	CORNELL UNIV	J CAMPBELL	GSFC	B MONGER	NAG 5 8188	373
39	CORNELL UNIV	J JODER	GSFC	G CHARLES	NAG 5 6273	372
39	CORNELL UNIV	J MARRA	GSFC	B MONGER	NAG 5 10848	374
39	CORNELL UNIV	M WEI	GSFC	L O HEDIN	NGT 5 30210	377
39	DARTMOUTH COLL	P HOUSER	GSFC	R BRAKENRIDGE	NAG 5 9470	340
39	DREXEL UNIV	R MILLER	SSC	M PIASECKI	NAG13 00040	435
39	DUKE UNIV	B W MEESON	GSFC	R B JACKSON	NAG 5 12497	389
39	DUKE UNIV	E T ENGMAN	GSFC	S ROJSTACZER	NAG 5 8533	389
39	DUKE UNIV	J MARRA	GSFC	R T BARBER	NAG 5 9348	389
39	DUKE UNIV	M S BURRELL	GSFC	B SCHESINGER	NGT 5 69	390
39	DUKE UNIV	M WEI	GSFC	J REYNOLDS	NGT 5 30355	390
39	DUKE UNIV	P DECOLA	GSFC	P KASIBHATLA	NAG 5 9605	389
39	DUKE UNIV	P HOUSER	GSFC	R AVISSAR	NAG 5 11401	389
39	DUKE UNIV	P R HOUSER	GSFC	R AVISSAR	NAG 5 11400	389
39	DUKE UNIV	P R HOUSER	GSFC	J ALBERTSON	NAG 5 11680	389
39	DUKE UNIV	Y SUD	GSFC	R AVISSAR	NAG 5 11402	389
39	DUKE UNIV	A NURRIDIN	HQ	R T BARBER	NGT 5 50224	390
39	ELIZABETH CITY STATE UNIV	B MEESON	GSFC	L HAYDEN	NAG 5 9371	391
39	ELIZABETH CITY STATE UNIV	B MEESON	GSFC	L B HAYDEN	NAG 5 9372	391
39	FLA INTERNATIONAL UNIV	J W CAMPBELL	GSFC	L L RICHARDSON	NAG 5 8156	160
39	FLORIDA STATE UNIV	D E WICKLAND	GSFC	E A SMITH	NAG 5 7302	165
39	FLORIDA STATE UNIV	D E WICKLAND	GSFC	E A SMITH	NAG 5 9866	165
39	FLORIDA STATE UNIV	D W DEERING	GSFC	E A SMITH	NCC 5 292	166
39	FLORIDA STATE UNIV	D WICKLAND	GSFC	E SMITH	NAG 5 6258	164
39	FLORIDA STATE UNIV	E LINDSTROM	GSFC	W DEWAR	NAG 5 7630	165
39	FLORIDA STATE UNIV	E LINDSTROM	GSFC	J J O'BRIEN	NAG 5 8327	165
39	FLORIDA STATE UNIV	E LINDSTROM	GSFC	J O'BRIEN	NAG 5 12487	166
39	FLORIDA STATE UNIV	E T ENGMAN	GSFC	S E NICHOLSON	NAG 5 8598	165
39	FLORIDA STATE UNIV	J C DODGE	GSFC	H J COOPER	NAG 5 6665	164
39	FLORIDA STATE UNIV	J C DODGE	GSFC	P G ELLINGSON	NAG 5 12097	166
39	FLORIDA STATE UNIV	M WEI	GSFC	S E NICHOLSON	NGT 5 30186	167
39	FLORIDA STATE UNIV	M Y WEI	GSFC	J J OBRIEN	NGT 5 30158	167
39	FLORIDA STATE UNIV	M Y WEI	GSFC	D NOF	NGT 5 30164	167
39	GEORGE MASON UNIV	A T CHANG	GSFC	L CHIU	NAG 5 10879	504
39	GEORGE MASON UNIV	A T CHANG	GSFC	L CHIU	NAG 5 11346	504
39	GEORGE MASON UNIV	J A WEINMAN	GSFC	L CHIU	NAG 5 9636	504
39	GEORGE MASON UNIV	W GRAHAM	SSC	M KAFATOS	NAG13 01009	504
39	GEORGIA INST OF TECH	A J TUYAHOV	GSFC	W L CHAMEIDES	NAG 5 9868	182
39	GEORGIA INST OF TECH	E T ENGMAN	GSFC	C D PETERS-LIDARD	NAG 5 8698	181
39	GEORGIA INST OF TECH	M KURYLO	GSFC	P H WINE	NAG 5 8931	181
39	GEORGIA INST OF TECH	M WEI	GSFC	W L CHAMEIDES	NGT 5 50330	186
39	GEORGIA INST OF TECH	M Y WEI	GSFC	R E DICKINSON	NAG 5 8880	181
39	GEORGIA INST OF TECH	P DECOLA	GSFC	M CHIN	NAG 5 11479	182
39	GEORGIA INST OF TECH	P R HOUSER	GSFC	R FU	NAG 5 11671	182
39	GEORGIA INST OF TECH	R TRAVIS	SSC	K MAXWELL	NGT13 52742	186
39	HAMPTON UNIV	D ANDERSON	GSFC	D WANG	NAG 5 11477	507
39	HARVARD UNIV	D ANDERSON	GSFC	J ANDERSON	NAG 5 11547	282
39	HARVARD UNIV	D ANDERSON	GSFC	J ANDERSON	NAG 5 11548	282
39	HARVARD UNIV	D ANDERSON	GSFC	S C WOFYSY	NAG 5 11638	282
39	HARVARD UNIV	D E WICKLAND	GSFC	S C WORSY	NAG 5 7534	281
39	HARVARD UNIV	D W DEERING	GSFC	S C WOFYSY	NCC 5 341	283
39	HARVARD UNIV	D W DEERING	GSFC	S C WOFYSY	NCC 5 590	283
39	HARVARD UNIV	M WEI	GSFC	S C WOFYSY	NGT 5 30205	283
39	HARVARD UNIV	M WEI	GSFC	J ANDERSON	NGT 5 30336	283
39	HARVARD UNIV	M Y WEI	GSFC	S C WOFYSY	NGT 5 30152	283
39	HARVARD UNIV	P DECOLA	GSFC	D J JACOB	NAG 5 9643	281
39	HARVARD UNIV	P DECOLA	GSFC	M MCELROY	NAG 5 11431	282
39	HARVARD UNIV	R CURRAN	GSFC	J ANDERSON	NAG 5 8779	281
39	HERITAGE COLL	D TRAVIS	SSC	D FALCO	NAG13 02057	526

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39	IDAHO STATE UNIV	W TURNER	GSFC	K T WEBER	NAG 5 12301	197
39	INDIANA UNIV - BLOOMINGTON	D DEERING	GSFC	E MORAN	NCC 5 334	213
39	IOWA STATE UNIV	M WEI	GSFC	T CHEN	NGT 5 30419	222
39	IOWA STATE UNIV	E K GIBSON	JSC	P A BAZLINSKI	NAG 9 1115	221
39	JAMES MADISON UNIV	N KHAZENIE	GSFC	J BARNES	NAG 5 6166	508
39	JOHNS HOPKINS UNIV	K H BERGMAN	GSFC	M B PARLANGE	NAG 5 9426	242
39	JOHNS HOPKINS UNIV	M WEI	GSFC	D WAUGH	NGT 5 50328	251
39	JOHNS HOPKINS UNIV	P E HUNTER	GSFC	A SZALAY	NAG 5 8590	241
39	JOHNS HOPKINS UNIV	W ABDALATI	GSFC	R RANEY	NAG 5 11829	247
39	KANSAS STATE UNIV	G GUTMAN	GSFC	L JOHNSON	NAG 5 11337	225
39	KENT STATE UNIV	T SCOTT	GRC	D MUNRO-STASIUK	NAG 3 2416	408
39	KENT STATE UNIV	M WEI	GSFC	D L WITTER	NAG 5 11266	408
39	LOUISIANA STATE UNIV - BATON ROUGE	C MCKAY	ARC	F A RAINEY	NCC 2 5469	231
39	LOUISIANA STATE UNIV - BATON ROUGE	R TRAVIS	SSC	B S GOODWIN	NGT13 52743	232
39	MASSACHUSETTS INST OF TECH	E LINDSTROM	GSFC	P RIZZOLI	NAG 5 7194	287
39	MASSACHUSETTS INST OF TECH	E LINDSTROM	GSFC	C WUNSCH	NAG 5 7857	288
39	MASSACHUSETTS INST OF TECH	E LINDSTROM	GSFC	P RIZZOLI	NAG 5 10793	291
39	MASSACHUSETTS INST OF TECH	E LINDSTROM	GSFC	C WUNSCH	NAG 5 11933	292
39	MASSACHUSETTS INST OF TECH	E T ENGMAN	GSFC	E B ELTAHIR	NAG 5 8617	288
39	MASSACHUSETTS INST OF TECH	E T ENGMAN	GSFC	D MCLAUGHLIN	NCC 5 416	295
39	MASSACHUSETTS INST OF TECH	J MARRA	GSFC	J MARSHALL	NCC 5 244	295
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	E ELTAHIR	NAG 5 7525	287
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	K X WHIPPLE	NGT 5 30188	295
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	J MARSHALL	NGT 5 30189	295
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	D ENTEKHABI	NGT 5 30190	295
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	R L BRAS	NGT 5 30212	295
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	B TROUT	NGT 5 30334	295
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	C WUNSCH	NGT 5 30337	295
39	MASSACHUSETTS INST OF TECH	M WEI	GSFC	R BRAS	NGT 5 30339	296
39	MASSACHUSETTS INST OF TECH	P DECOLA	GSFC	M MOLINA	NAG 5 8887	288
39	MASSACHUSETTS INST OF TECH	P L DECOLA	GSFC	R G PRINN	NAG 5 12099	292
39	MASSACHUSETTS INST OF TECH	P R HOUSER	GSFC	D ENTEKHABI	NAG 5 11602	291
39	MASSACHUSETTS INST OF TECH	P R HOUSER	GSFC	D B MCLAUGHLIN	NAG 5 11721	291
39	MIAMI UNIV	T M SCOTT	GRC	J MILLARD	NAG 3 2436	409
39	MICHIGAN STATE UNIV	A C JANETOS	GSFC	J LIU	NAG 5 8317	304
39	MICHIGAN STATE UNIV	A JANETOS	GSFC	D SKOLE	NAG 5 6538	304
39	MICHIGAN STATE UNIV	D DEERING	GSFC	D SKOLE	NCC 5 291	305
39	MICHIGAN STATE UNIV	D WILLIAMS	GSFC	D SKOLE	NAG 5 4810	304
39	MICHIGAN STATE UNIV	G GUTMAN	GSFC	R WALKER	NAG 5 9232	304
39	MICHIGAN STATE UNIV	G GUTMAN	GSFC	D L SKOLE	NAG 5 11740	304
39	MICHIGAN STATE UNIV	M WEI	GSFC	J MESSINA	NAG 5 12617	304
39	MICHIGAN STATE UNIV	M WEI	GSFC	D J CAMPBELL	NGT 5 30340	305
39	MICHIGAN STATE UNIV	M Y WEI	GSFC	J LIU	NGT 5 30166	305
39	MICHIGAN STATE UNIV	G GUTMAN	HQ	J QI	NAG 5 9286	304
39	MICHIGAN STATE UNIV	A JOYCE	SSC	P SORRANO	NGT13 52715	305
39	MICHIGAN TECHNOLOGICAL UNIV	S GOGINENI	GSFC	D PILANT	NAG 5 7051	306
39	MISSISSIPPI STATE UNIV	R MCKELLIP	SSC	S ROBERTS	NAG13 99018	323
39	MONTANA STATE UNIV	G GUTMAN	GSFC	A HANSEN	NAG 5 9300	332
39	MONTANA STATE UNIV	G GUTMAN	GSFC	A HANSEN	NAG 5 9806	332
39	MONTANA STATE UNIV	G GUTMAN	GSFC	A HANSEN	NAG 5 11158	333
39	MONTANA TECH OF THE U OF MONT	N KHAZENIE	GSFC	T MOON	NAG 5 9139	334
39	MT HOLYOKE COLL	M Y WEI	GSFC	J L BUBIER	NAG 5 8635	296
39	NEW MEXICO HIGHLANDS UNIV	K KRISHEN	JSC	J CAIBACA	NAG 9 1374	357
39	NEW MEXICO HIGHLANDS UNIV	L M ARMEDARIZ	JSC	J C'DE BACA	NAG 9 1139	357
39	NEW MEXICO HIGHLANDS UNIV	L M ARMEDARIZ	JSC	J C DE BACA	NAG 9 1393	357
39	NEW MEXICO INST OF MINING & TECH	D WICKLAND	GSFC	E E SMALL	NAG 5 9328	357
39	NEW MEXICO INST OF MINING & TECH	F K GIBSON	JSC	T L KIEFT	NAG 9 1106	358
39	NEW MEXICO STATE UNIV - LAS CRUCES	C E WADE	ARC	E E SERRANO	NAG 2 1334	358
39	NEW MEXICO STATE UNIV - LAS CRUCES	A RODRIGUEZ	GSFC	B BLEVINS	NAS 5 02087	359
39	NY UNIV	M REINECKER	GSFC	R KLEEMAN	NAG 5 9871	378
39	NORFOLK STATE UNIV	N KHAZENIE	GSFC	W J RODRIGUEZ	NAG 5 6298	509
39	NORFOLK STATE UNIV	N KHAZENIE	GSFC	W J RODRIQUEZ	NAG 5 9374	509
39	NORTH CAROLINA STATE UNIV. - RALEIGH	G GUTMAN	GSFC	S WALSH	NAG 5 11830	395
39	NORTH CAROLINA STATE UNIV. - RALEIGH	J MARRA	GSFC	J MORRISON	NAG 5 8865	395
39	NORTH CAROLINA STATE UNIV. - RALEIGH	M WEI	GSFC	J M MORRISON	NGT 5 30192	396

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39	OHIO STATE UNIV	T M SCOTT	GRC	J K KLEIN	NAG 3 2410	409
39	OHIO STATE UNIV	T M SCOTT	GRC	D L MORRISON	NAG 3 2412	409
39	OHIO STATE UNIV	T M SCOTT	GRC	S DAVIS	NAG 3 2428	409
39	OHIO STATE UNIV	D L WILLIAMS	GSFC	C MERRY	NAG 5 7685	410
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39	OHIO STATE UNIV	E LINDSTROM	GSFC	K C JEZEK	NAG 5 8608	411
39	OHIO STATE UNIV	E LINDSTROM	GSFC	C DER VEEN	NAG 5 8632	411
39	OHIO STATE UNIV	K PARTINGTON	GSFC	C K SHUM	NAG 5 9335	411
39	OHIO STATE UNIV	P HOUSER	GSFC	D BROMWICH	NAG 5 9596	411
39	OHIO STATE UNIV	P R HOUSER	GSFC	C J VAN DER VEEN	NAG 5 11749	412
39	OHIO STATE UNIV	R KAKAR	GSFC	D BROMWICH	NAG 5 9518	411
39	OHIO STATE UNIV	S GOGINENI	GSFC	E S MOSLEY-THOMPSON	NAG 5 6817	410
39	OHIO STATE UNIV	S GOGINENI	GSFC	K C JEZEK	NAG 5 7286	410
39	OHIO STATE UNIV	S GOGINENI	GSFC	D H BROMWICH	NAG 5 7750	410
39	OHIO STATE UNIV	S GOGINENI	GSFC	R R FORSTER	NAG 5 7848	410
39	OHIO STATE UNIV	W ABDALATI	GSFC	K JEZEK	NAG 5 9538	411
39	OHIO STATE UNIV	W ABDALATI	GSFC	D BROMWICH	NAG 5 11794	412
39	OHIO STATE UNIV	W ABDALATI	GSFC	D BROMWICH	NAG 5 12407	412
39	OHIO STATE UNIV	S GOGINENI	HQ	D BROMWICH	NAG 5 6001	410
39	OKLAHOMA STATE UNIV	D E WICKLAND	GSFC	S J STADLER	NAG 5 7451	423
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39	OREGON STATE UNIV	D ANDERSON	GSFC	C H TWOHY	NAG 5 11534	428
39	OREGON STATE UNIV	D E WICKLAND	GSFC	R H WARING	NAG 5 7506	426
39	OREGON STATE UNIV	D E WICKLAND	GSFC	M H UNSWORTH	NAG 5 7531	426
39	OREGON STATE UNIV	D E WICKLAND	GSFC	B LAW	NAG 5 7551	426
39	OREGON STATE UNIV	D E WICKLAND	GSFC	W B COHEN	NAG 5 7856	427
39	OREGON STATE UNIV	E T ENGMAN	GSFC	L MAHRT	NAG 5 8601	427
39	OREGON STATE UNIV	G C GUTMAN	GSFC	D E HARMON	NAG 5 6242	426
39	OREGON STATE UNIV	G GUTMAN	GSFC	O N KRANKINA	NAG 5 9677	427
39	OREGON STATE UNIV	G GUTMAN	GSFC	O KRANKINA	NAG 5 11250	428
39	OREGON STATE UNIV	J DODGE	GSFC	M R ABBOTT	NAG 5 8969	427
39	OREGON STATE UNIV	J MARRA	GSFC	M R ABBOTT	NAG 5 11125	428
39	OREGON STATE UNIV	M WEI	GSFC	R P DICK	NGT 5 96	429
39	OREGON STATE UNIV	M WEI	GSFC	B MATE	NGT 5 30185	429
39	OREGON STATE UNIV	M WEI	GSFC	W B COHEN	NGT 5 30214	429
39	OREGON STATE UNIV	P R HOUSER	GSFC	L MAHRT	NAG 5 11586	428
39	OREGON STATE UNIV	D WICKLAND	HQ	B E LAW	NAG 5 8315	427
39	PENN STATE UNIV. - UNIV. PARK	D ANDERSON	GSFC	J VERLINDE	NAG 5 11472	442
39	PENN STATE UNIV. - UNIV. PARK	D L WILLIAMS	GSFC	W L MYERS	NAG 5 10541	442
39	PENN STATE UNIV. - UNIV. PARK	E ENGMAN	GSFC	K DAVIS	NAG 5 10050	442
39	PENN STATE UNIV. - UNIV. PARK	E T ENGMAN	GSFC	D MILLER	NAG 5 8738	440
39	PENN STATE UNIV. - UNIV. PARK	J A MARRA	GSFC	R NAJJAR	NAG 5 6389	440
39	PENN STATE UNIV. - UNIV. PARK	J CAMPBELL	GSFC	R NAJJAR	NAG 5 6451	440
39	PENN STATE UNIV. - UNIV. PARK	M WEI	GSFC	E J BARRON	NAG 5 4553	439
39	PENN STATE UNIV. - UNIV. PARK	M WEI	GSFC	S BRANTLEY	NGT 5 30193	446
39	PENN STATE UNIV. - UNIV. PARK	M WEI	GSFC	J VERLINDE	NGT 5 30208	446
39	PENN STATE UNIV. - UNIV. PARK	M WEI	GSFC	D PEUQUET	NGT 5 30224	446
39	PENN STATE UNIV. - UNIV. PARK	M WEI	GSFC	G JENKINS	NGT 5 30420	446
39	PENN STATE UNIV. - UNIV. PARK	M Y WEI	GSFC	A P BARROS	NAG 5 6656	440
39	PENN STATE UNIV. - UNIV. PARK	M Y WEI	GSFC	R B ALLEY	NGT 5 30171	446
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39	PENN STATE UNIV. - UNIV. PARK	P R HOUSER	GSFC	D R STAUFFER	NAG 5 8735	440
39	PENN STATE UNIV. - UNIV. PARK	S GOGINENI	GSFC	R ALLEY	NAG 5 7776	440
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39	PRINCETON UNIV	D E WICKLAND	GSFC	E F WOOD	NAG 5 7297	348
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39	PRINCETON UNIV	J DODGE	GSFC	E WOOD	NAG 5 9414	349
39	PRINCETON UNIV	J DODGE	GSFC	E WOOD	NAG 5 9635	349
39	PRINCETON UNIV	M WEI	GSFC	L RUSSELL	NAG 5 8676	349
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39	PRINCETON UNIV	M Y WEI	GSFC	G PHILANDER	NGT 5 30134	351
39	PRINCETON UNIV	M Y WEI	GSFC	H LEVY	NGT 5 30137	351
39	PRINCETON UNIV	P DECOLA	GSFC	D L MAUZERALL	NAG 5 9810	349
39	PRINCETON UNIV	P HOUSER	GSFC	E WOOD	NAG 5 9486	349
39	PRINCETON UNIV	P R HOUSER	GSFC	E F WOOD	NAG 5 11610	350
39	PURDUE UNIV	E LINDSTROM	GSFC	J GARRISON	NAG 5 11747	216
39	PURDUE UNIV	M WEI	GSFC	J GARRISON	NAG 5 12551	216
39	PURDUE UNIV	M Y WEI	GSFC	P B SHEPSON	NGT 5 30163	218
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39	ROCHESTER INST OF TECH	B L MARKHAM	GSFC	J SCHOTT	NAG 5 11298	381
39	ROCHESTER INST OF TECH	T D GUBBELS	GSFC	A VODECEK	NAG 5 10051	381
39	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	E LINSTROM	GSFC	D HAIDVOGEL	NAG 5 9847	353
39	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	E T ENGMAN	GSFC	R AVISSAR	NAG 5 8213	353
39	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	J MARRA	GSFC	Y GAO	NAG 5 9340	353
39	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	J MARRA	GSFC	M J BEHRENFELD	NAG 5 9787	353
39	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	J MARRA	GSFC	P G FALKONSKI	NAG 5 11345	354
39	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	K BERGMAN	GSFC	A ROBECK	NAG 5 9792	353
39	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	P R HOUSER	GSFC	R AVISSAR	NAG 5 9746	353
39	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	P R HOUSER	GSFC	D A ROBINSON	NAG 5 11403	354
39	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	P R HOUSER	GSFC	J R MILLER	NAG 5 11720	354
39	RUTGERS STATE UNIV OF NJ COOK CAMPUS	K BERGMAN	GSFC	R AVISSAR	NAG 5 9359	355
39	RUTGERS STATE UNIV OF NJ NEW BRUNS	J MARRA	GSFC	P G FALKOWSKI	NAG 5 11356	355
39	RUTGERS STATE UNIV OF NJ NEW BRUNS	P R HOUSER	GSFC	J A FRANCIS	NAG 5 11585	355
39	SALISH KOOTENAI COLL	B MEESON	GSFC	J M GOBERT	NAG 5 9368	334
39	SALISH KOOTENAI COLL	N K HAZENIE	GSFC	T S OLSON	NAG 5 9102	334
39	SAN DIEGO STATE UNIV	C TREES	GSFC	J MUELLER	NAG 5 12401	53
39	SAN DIEGO STATE UNIV	G GUTMAN	GSFC	J FRANKLIN	NAG 5 9301	53
39	SAN DIEGO STATE UNIV	G GUTMAN	GSFC	A HOPE	NAG 5 11141	53
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	53
39	SAN DIEGO STATE UNIV	R MCKELLIP	JSC	D STOW	NAG13 99017	53
39	SAN FRANCISCO STATE UNIV	J W CAMPBELL	GSFC	D H ROBINSON	NAG 5 8013	54
39	SAN FRANCISCO STATE UNIV	J W MARRA	GSFC	D H ROBINSON	NAG 5 7511	54
39	SAN JOSE STATE UNIV	H L D'ANTONIO	ARC	E F METZGER	NCC 2 5476	58
39	SAN JOSE STATE UNIV	V VANDERBILT	ARC	P A HAMILL	NCC 2 1132	56
39	SOUTH DAKOTA SCH OF MINES & TECH	K BLANDING	GSFC	P R ZIMMERMAN	NGT 5 30402	461
39	SOUTH DAKOTA SCH OF MINES & TECH	N KHAZENIE	GSFC	L A VIERLING	NAG 5 8973	461
39	SOUTH DAKOTA SCH OF MINES & TECH	R MCKELLIP	JSC	M PRICE	NAG13 99021	461
39	SOUTH DAKOTA STATE UNIV	B L MARKHAM	GSFC	D HELDER	NAG 5 11351	461
39	SOUTH DAKOTA STATE UNIV	DL WILLIAMS	GSFC	D HELDER	NAG 5 3540	461
39	SOUTH DAKOTA STATE UNIV	S UNGAR	GSFC	D HELDER	NCC 5 472	461
39	SOUTHEASTERN UNIV	D MENCHAN	GSFC	G GRANTHAM	NAG 5 12500	154
39	SOUTHERN ILLINOIS UNIV - CARBONDALE	M WEI	GSFC	N PINTER	NGT 5 50321	202
39	ST UN NY COL-ENV SCI & FORESTRY	N SOVIK	SSC	P HOPKINS	NCC13 98001	381
39	STANFORD UNIV	J MARRA	GSFC	K ARRIGO	NAG 5 8866	61
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	61
39	STANFORD UNIV	M WEI	GSFC	M Z JACOBSON	NAG 5 8645	61
39	STANFORD UNIV	M WEI	GSFC	P MATSON	NGT 5 30204	66
39	STANFORD UNIV	M WEI	GSFC	P M VITOUSEK	NGT 5 30216	66
39	STANFORD UNIV	M WEI	GSFC	H ZEBKER	NGT 5 30342	66
39	STANFORD UNIV	M WEI	GSFC	G W ERNST	NGT 5 30360	66
39	STANFORD UNIV	M Y WEI	GSFC	K SETO	NAG 5 10534	62
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	STANFORD UNIV	A KELLEY	MSFC	F CHANG	NCC 8 197	66
39	STATE U NY COLL OF ENVIR SCI & FORESTRY	N SOVIK	SSC	P HOPKINS	NAG13 01003	381
39	STATE UNIV OF NY - ALBANY	A J TUYAHOV	GSFC	P F HOPKINS	NAG 5 9676	382
39	STATE UNIV OF NY - ALBANY	D W DEERING	GSFC	D R FRITZJARRALD	NCC 5 283	382
39	STATE UNIV OF NY - BUFFALO	G GUTMAN	GSFC	M SULTAN	NAG 5 12409	383
39	STATE UNIV OF NY - BUFFALO	M BECKER	GSFC	M BECKER	NAG 5 10608	383
39	STATE UNIV OF NY - STONY BROOK	D WICKLAND	GSFC	M LERDAU	NAG 5 6601	384
39	STATE UNIV OF NY - STONY BROOK	M WEI	GSFC	D WALISER	NGT 5 50322	386
39	STATE UNIV OF NY - STONY BROOK	P DECOLA	GSFC	M A GELLER	NAG 5 9786	385

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39	STATE UNIV OF NY - STONY BROOK	P DECOLA	GSFC	M GELLER	NAG 5 11615	385
39	TEXAS A&M UNIV	D K HALL	GSFC	A KLEIN	NAG 5 9455	475
39	TEXAS A&M UNIV	D K HALL	GSFC	A KLEIN	NAG 5 10877	475
39	TEXAS A&M UNIV	D K HALL	GSFC	A KLEIN	NAG 5 11847	476
39	TEXAS A&M UNIV	G GUTMAN	GSFC	R LACEY	NAG 5 11144	475
39	TEXAS A&M UNIV	J CAMPBELL	GSFC	W D NOWLIN	NAG 5 6446	475
39	TEXAS A&M UNIV	K BERGMAN	GSFC	P CHANG	NAG 5 9409	475
39	TEXAS A&M UNIV	M WEI	GSFC	T BOUTTON	NGT 5 30211	479
39	TEXAS A&M UNIV	M WEI	GSFC	C MUNSTER	NGT 5 30408	479
39	TEXAS A&M UNIV	M Y WEI	GSFC	R ZHANG	NAG 5 8706	475
39	TEXAS A&M UNIV	P R HOUSER	GSFC	B P MOHANTY	NAG 5 11375	476
39	TEXAS A&M UNIV	P R HOUSER	GSFC	A CAHILL	NAG 5 11681	476
39	TEXAS A&M UNIV	P R HOUSER	GSFC	B P MOHANTY	NAG 5 11702	476
39	TEXAS A&M UNIV	S GOGINENI	GSFC	A STOESSEL	NAG 5 7751	475
39	THE SCRIPPS RES INST (TSRI) -LA JOLLA	F E HOGE	GSFC	M VERNET	NAG 5 5191	67
39	THE SCRIPPS RES INST (TSRI) -LA JOLLA	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	168
39	THE UNIV OF CENTRAL FLORIDA	J W QUINN	KSC	C GEIGER	NAG10 312	168
39	THE UNIV OF CENTRAL FLORIDA	J W QUINN	KSC	D L GEIGER	NAG10 313	168
39	THE UNIV OF CENTRAL FLORIDA	M COLLINS	KSC	D C COOPER	NCC10 35	169
39	TULANE UNIV	R TRAVIS	JSC	B MCKEE	NGT13 52722	234
39	TUSKEGEE UNIV	C TERRELL	MSFC	N O EGREFOR	NCC 8 234	6
39	U OF ARKANSAS MAIN CAMP-FAYETTEVILLE	J BOYCE	GSFC	P BENOIT	NAG 5 9496	40
39	U OF MD CTR FOR ENVIR SCI - CAMBRIDGE	A C JANETOS	GSFC	P R FISHER	NAG 5 6249	253
39	U OF MD CTR FOR ENVIR SCI - CAMBRIDGE	G GUTMAN	GSFC	T FISHER	NAG 5 11083	253
39	U OF MD CTR FOR ENVIR SCI - CAMBRIDGE	J HARDING	GSFC	L HARDING	NAG 5 6286	253
39	U OF MD CTR FOR ENVIR SCI - CAMBRIDGE	J MARRA	GSFC	R G HOOD	NAG 5 6387	253
39	U OF MD CTR FOR ENVIR SCI - CAMBRIDGE	J W CAMPBELL	GSFC	L W HARDING	NAG 5 7602	253
39	U OF MD CTR FOR ENVIR SCI - CAMBRIDGE	S G UNGAR	GSFC	P A TOWNSEND	NCC 5 493	253
39	UNIV HOUSTON-HOUSTON	E K GIBSON	JSC	H S CHAFETZ	NAG 9 1103	481
39	UNIV OF AKRON	T M SCOTT	GRC	D SIEBERT	NAG 3 2444	415
39	UNIV OF ALABAMA - BIRMINGHAM	E PAYLOR	GSFC	L DELUCAS	NAG 5 8786	7
39	UNIV OF ALABAMA - BIRMINGHAM	E PAYLOR	GSFC	L DELUCAS	NAG 5 11267	7
39	UNIV OF ALABAMA - HUNTSVILLE	D L PIERCE	GSFC	J DIMMOCK	NAG 5 5273	8
39	UNIV OF ALABAMA - HUNTSVILLE	M WEI	GSFC	D CECIL	NAG 5 12563	11
39	UNIV OF ALABAMA - HUNTSVILLE	P R HOUSER	GSFC	R M WELCH	NAG 5 11941	11
39	UNIV OF ALABAMA - HUNTSVILLE	R J OLIVERSEN	GSFC	W PACIESAS	NAG 5 9045	9
39	UNIV OF ALABAMA - HUNTSVILLE	T BRAKE	GSFC	R WELCH	NAG 5 31718	13
39	UNIV OF ALABAMA - HUNTSVILLE	R GREENWOOD	MSFC	R MCNIDER	NCC 8 141	13
39	UNIV OF ALASKA - FAIRBANKS	C S POTTER	ARC	A MCGUIRE	NAG 2 1534	16
39	UNIV OF ALASKA - FAIRBANKS	A JANETOS	GSFC	D MCGUIRE	NAG 5 6275	16
39	UNIV OF ALASKA - FAIRBANKS	C TREES	GSFC	L MCNUTT	NAG 5 12411	18
39	UNIV OF ALASKA - FAIRBANKS	D E WICKLAND	GSFC	A D MCGUIRE	NAG 5 9859	17
39	UNIV OF ALASKA - FAIRBANKS	D WICKLAND	GSFC	C L WILLIAMS	NAG 5 7507	16
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	17
39	UNIV OF ALASKA - FAIRBANKS	G GUTMAN	GSFC	C WILLIAMS	NAG 5 9315	17
39	UNIV OF ALASKA - FAIRBANKS	G GUTMAN	GSFC	D MCGUIRE	NAG 5 11142	17
39	UNIV OF ALASKA - FAIRBANKS	M WEI	GSFC	S F CHAPIN	NGT 5 50324	18
39	UNIV OF ALASKA - FAIRBANKS	P J ONDRUS	GSFC	N AVAILBLE	NAG 5 98129	18
39	UNIV OF ALASKA - FAIRBANKS	P R HOUSER	GSFC	L D HINZMAN	NAG 5 11822	18
39	UNIV OF ALASKA - FAIRBANKS	S K HALL	GSFC	C S BENSON	NCC 5 379	18
39	UNIV OF ARIZONA	A TUYAHOV	GSFC	D YOUNG	NAG 5 8157	27
39	UNIV OF ARIZONA	A TUYAHOV	GSFC	S E MARSH	NAG 5 8341	28
39	UNIV OF ARIZONA	A TUYAHOV	GSFC	C F HUTCHINSON	NAG 5 9174	29
39	UNIV OF ARIZONA	A TUYAHOV	GSFC	S E MARSH	NAG 5 11957	34
39	UNIV OF ARIZONA	B L MARKHAM	GSFC	K THOME	NAG 5 11339	33
39	UNIV OF ARIZONA	D E WICKLAND	GSFC	K E SCHAUDT	NAG 5 7249	26
39	UNIV OF ARIZONA	D L WILLIAMS	GSFC	C J THOME	NAG 5 3436	25
39	UNIV OF ARIZONA	D W DEERING	GSFC	A R HUETE	NAG 5 11316	33
39	UNIV OF ARIZONA	D W DEERING	GSFC	A R HUETE	NCC 5 603	38
39	UNIV OF ARIZONA	E T ENGMAN	GSFC	J W SHUTTLEWORTH	NAG 5 8214	28
39	UNIV OF ARIZONA	E WOOD	GSFC	S SOROOSHIAN	NAG 5 8503	28
39	UNIV OF ARIZONA	E Y WOOD	GSFC	S SOROOSHAIN	NAG 5 3640	25
39	UNIV OF ARIZONA	J KAYE	GSFC	S SOROOSHIAN	NAG 5 12152	35
39	UNIV OF ARIZONA	J PRIVETTE	GSFC	A HAUTE	NAG 5 8660	28

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39	UNIV OF ARIZONA	M WEI	GSFC	M W WALLENDORF	NAG 5 10007	30
39	UNIV OF ARIZONA	M Y WEI	GSFC	C HUTCHINSON	NGT 5 30140	38
39	UNIV OF ARIZONA	M Y WEI	GSFC	C E GLASS	NGT 5 30148	38
39	UNIV OF ARIZONA	P R HOUSER	GSFC	W SHUTTLEWORTH	NAG 5 9796	30
39	UNIV OF ARIZONA	R SCHIEFFER	GSFC	S ROROOSHIAN	NAG 5 8502	28
39	UNIV OF ARIZONA	S G UNGAR	GSFC	S F BIGGAR	NCC 5 460	38
39	UNIV OF ARIZONA	S G UNGER	GSFC	A R HUETE	NCC 5 478	38
39	UNIV OF ARIZONA	S GOGINENI	GSFC	R BALES	NAG 5 6779	26
39	UNIV OF ARIZONA	C DEL CASTILLO	SSC	E P GLENN	NAG13 02001	36
39	UNIV OF ARIZONA	R HARRIS	SSC	C F HUTCHINSON	NAG13 02004	36
39	UNIV OF CALIFORNIA - BERKELEY	_ WEI	GSFC	K BOERING	NGT 5 30424	78
39	UNIV OF CALIFORNIA - BERKELEY	D E WICKLAND	GSFC	D BALDOCCHI	NAG 5 8510	70
39	UNIV OF CALIFORNIA - BERKELEY	D E WICKLAND	GSFC	W SILVER	NCC 5 352	77
39	UNIV OF CALIFORNIA - BERKELEY	D WICKLAND	GSFC	I FUNG	NAG 5 9514	71
39	UNIV OF CALIFORNIA - BERKELEY	D WICKLAND	GSFC	D BALDOCCHI	NAG 5 11651	73
39	UNIV OF CALIFORNIA - BERKELEY	G GUTMAN	GSFC	P GONG	NAG 5 9231	71
39	UNIV OF CALIFORNIA - BERKELEY	M KURYLO	GSFC	A GOLDSTEIN	NAG 5 11910	74
39	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	N KELLY	NAG 5 12541	75
39	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	T L BENNING	NGT 5 30183	77
39	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	R C COHEN	NGT 5 30219	77
39	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	I CHAPELA	NGT 5 30351	77
39	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	D M KAMMEN	NGT 5 30361	78
39	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	W SILVER	NGT 5 50331	79
39	UNIV OF CALIFORNIA - BERKELEY	M Y WEI	GSFC	W L SILVER	NGT 5 30141	77
39	UNIV OF CALIFORNIA - BERKELEY	M Y WEI	GSFC	F S CHAPIN	NGT 5 50216	78
39	UNIV OF CALIFORNIA - BERKELEY	N KHAZENIE	GSFC	A GOULD	NAG 5 9317	71
39	UNIV OF CALIFORNIA - BERKELEY	P T HOUSER	GSFC	X LIANG	NAG 5 8737	70
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	72
39	UNIV OF CALIFORNIA - BERKELEY	A NURRIDIN	HQ	O E GRANGER	NGT 5 50223	78
39	UNIV OF CALIFORNIA - DAVIS	D E WICKLAND	GSFC	S USTIN	NAG 5 9360	80
39	UNIV OF CALIFORNIA - DAVIS	M WEI	GSFC	C ANASTASIO	NGT 5 30187	82
39	UNIV OF CALIFORNIA - DAVIS	M WEI	GSFC	S USTIN	NGT 5 30352	82
39	UNIV OF CALIFORNIA - DAVIS	D L JAN	HQ	S D COLLINS	NAG 9 1048	80
39	UNIV OF CALIFORNIA - IRVINE	D DEERING	GSFC	S TRUMBORE	NCC 5 336	85
39	UNIV OF CALIFORNIA - IRVINE	D W DEERING	GSFC	M L GOULDEN	NCC 5 280	85
39	UNIV OF CALIFORNIA - IRVINE	D WICKLAND	GSFC	S TRUMBORE	NAG 5 7301	83
39	UNIV OF CALIFORNIA - IRVINE	M KURYLO	GSFC	D R BLAKE	NAG 5 8935	84
39	UNIV OF CALIFORNIA - IRVINE	M RIENECKER	GSFC	J S FAMIGLIETTI	NAG 5 11646	84
39	UNIV OF CALIFORNIA - IRVINE	M W WEI	GSFC	R J CICERONE	NGT 5 50325	85
39	UNIV OF CALIFORNIA - IRVINE	M WEI	GSFC	ZENDER	NAG 5 10546	84
39	UNIV OF CALIFORNIA - IRVINE	M WEI	GSFC	G MAGNUSDOTTIR	NGT 5 30203	85
39	UNIV OF CALIFORNIA - IRVINE	P DECOLA	GSFC	S TYLER	NAG 5 11429	84
39	UNIV OF CALIFORNIA - IRVINE	P R HOUSER	GSFC	J S FAMIGLIETTI	NAG 5 11718	84
39	UNIV OF CALIFORNIA - IRVINE	P R HOUSER	GSFC	J S FAMIGLIETTI	NAG 5 11753	84
39	UNIV OF CALIFORNIA - IRVINE	A NURRIDIN	HQ	R J RICE	NGT 5 50226	85
39	UNIV OF CALIFORNIA - LOS ANGELES	E LINDSTROM	GSFC	J MCWILLIAMS	NAG 5 9860	90
39	UNIV OF CALIFORNIA - LOS ANGELES	K BERGMAN	GSFC	D J NEELIN	NAG 5 9358	89
39	UNIV OF CALIFORNIA - LOS ANGELES	M JACKSON	GSFC	J KIM	NAG 5 11363	91
39	UNIV OF CALIFORNIA - LOS ANGELES	M WEI	GSFC	A ELDERING	NAG 5 8812	89
39	UNIV OF CALIFORNIA - LOS ANGELES	M WEI	GSFC	L SMITH	NGT 5 30338	94
39	UNIV OF CALIFORNIA - LOS ANGELES	M WEI	GSFC	R TURCO	NGT 5 50332	94
39	UNIV OF CALIFORNIA - LOS ANGELES	P R HOUSER	GSFC	Y XUE	NAG 5 9713	90
39	UNIV OF CALIFORNIA - LOS ANGELES	E STANSBERY	JSC	K D MCKEEGAN	NAS 9 02036	93
39	UNIV OF CALIFORNIA - RIVERSIDE	E T ENGMAN	GSFC	B P MOHANTY	NAG 5 8682	95
39	UNIV OF CALIFORNIA - SAN DIEGO	C TREES	GSFC	D STRAMSKI	NAG 5 12397	102
39	UNIV OF CALIFORNIA - SAN DIEGO	D ANDERSON	GSFC	F P VALERO	NAG 5 11637	101
39	UNIV OF CALIFORNIA - SAN DIEGO	D E WICKLAND	GSFC	C KEELING	NAG 5 11217	100
39	UNIV OF CALIFORNIA - SAN DIEGO	D E WICKLANDS	GSFC	R F KEELING	NAG 5 7637	97
39	UNIV OF CALIFORNIA - SAN DIEGO	E LINDSTROM	GSFC	D MILLER	NAG 5 6497	97
39	UNIV OF CALIFORNIA - SAN DIEGO	E LINDSTROM	GSFC	P NILER	NAG 5 8322	98
39	UNIV OF CALIFORNIA - SAN DIEGO	E LINDSTROM	GSFC	D STAMMER	NAG 5 8623	98
39	UNIV OF CALIFORNIA - SAN DIEGO	E LINDSTROM	GSFC	D STAMMER	NAG 5 8901	98
39	UNIV OF CALIFORNIA - SAN DIEGO	E LINSTROM	GSFC	A MILLER	NAG 5 9788	99
39	UNIV OF CALIFORNIA - SAN DIEGO	E PAYLOR	GSFC	J ROADS	NAG 5 8780	98
39	UNIV OF CALIFORNIA - SAN DIEGO	J A YODER	GSFC	R FROUIN	NAG 5 6202	96



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39	UNIV OF CALIFORNIA - SAN DIEGO	J DODGE	GSFC	J J SIMPSON	NAG 5 9721	99
39	UNIV OF CALIFORNIA - SAN DIEGO	J W CAMPBELL	GSFC	D STRAMSKI	NAG 5 7100	97
39	UNIV OF CALIFORNIA - SAN DIEGO	J YODER	GSFC	B MITCHELL	NAG 5 6559	97
39	UNIV OF CALIFORNIA - SAN DIEGO	M WEI	GSFC	K BARBEAU	NAG 5 12535	102
39	UNIV OF CALIFORNIA - SAN DIEGO	P DECOLA	GSFC	R F WEISS	NAG 5 8180	98
39	UNIV OF CALIFORNIA - SAN DIEGO	P R HOUSER	GSFC	J ROADS	NAG 5 11599	101
39	UNIV OF CALIFORNIA - SAN DIEGO	P R HOUSER	GSFC	A VOGELMANN	NAG 5 11716	101
39	UNIV OF CALIFORNIA - SAN DIEGO	P R HOUSER	GSFC	J NORRIS	NAG 5 11731	101
39	UNIV OF CALIFORNIA - SAN DIEGO	P R HOUSER	GSFC	J ROADS	NAG 5 11738	101
39	UNIV OF CALIFORNIA - SANTA BARBARA	G A SHELTON	ARC	D A ROBERTS	NAG 2 1140	105
39	UNIV OF CALIFORNIA - SANTA BARBARA	A J TUYAHOV	GSFC	D C CLARKE	NAG 5 3620	105
39	UNIV OF CALIFORNIA - SANTA BARBARA	A TUYAHOV	GSFC	J E ESTES	NAG 5 10457	107
39	UNIV OF CALIFORNIA - SANTA BARBARA	C TREES	GSFC	N NELSON	NAG 5 12400	108
39	UNIV OF CALIFORNIA - SANTA BARBARA	D DEERING	GSFC	J MELACK	NCC 5 281	109
39	UNIV OF CALIFORNIA - SANTA BARBARA	D W DEERING	GSFC	O A CHADWICK	NCC 5 282	109
39	UNIV OF CALIFORNIA - SANTA BARBARA	D W DEERING	GSFC	D A ROBERTS	NCC 5 589	109
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	107
39	UNIV OF CALIFORNIA - SANTA BARBARA	E T ENGMAN	GSFC	T DUNNE	NAG 5 8396	106
39	UNIV OF CALIFORNIA - SANTA BARBARA	E T ENGMAN	GSFC	J SHI	NAG 5 8616	106
39	UNIV OF CALIFORNIA - SANTA BARBARA	J A MARRA	GSFC	R C SMITH	NAG 5 6434	106
39	UNIV OF CALIFORNIA - SANTA BARBARA	J MARRA	GSFC	D A SIEGEL	NAG 5 9818	107
39	UNIV OF CALIFORNIA - SANTA BARBARA	J W CAMPBELL	GSFC	D A SIEGEL	NAG 5 8319	106
39	UNIV OF CALIFORNIA - SANTA BARBARA	J YODER	GSFC	D SIEGEL	NAG 5 6288	106
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	MERTES	NGT 5 30173	109
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	D A SIEGEL	NGT 5 30194	109
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	T DUNNE	NGT 5 30225	110
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	T DUNNE	NGT 5 30332	110
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	O CHADWICK	NGT 5 30357	110
39	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	D A ROBERTS	NGT 5 50327	110
39	UNIV OF CALIFORNIA - SANTA BARBARA	M Y WEI	GSFC	N M MAHOWALD	NAG 5 8680	106
39	UNIV OF CALIFORNIA - SANTA BARBARA	N KHAZENIE	GSFC	C GAUTIER	NAG 5 4963	105
39	UNIV OF CALIFORNIA - SANTA BARBARA	P DECOLA	GSFC	N M MAHOWALD	NAG 5 9671	107
39	UNIV OF CALIFORNIA - SANTA BARBARA	P R HOUSER	GSFC	J SHI	NAG 5 11709	108
39	UNIV OF CALIFORNIA - SANTA BARBARA	S G UNGAR	GSFC	D A ROBERTS	NCC 5 496	109
39	UNIV OF CALIFORNIA - SANTA BARBARA	S GOGINENI	GSFC	J C DOZIER	NAG 5 4814	105
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	107
39	UNIV OF CALIFORNIA - SANTA CRUZ	D DESMARAIS	ARC	G H RAU	NCC 2 5456	113
39	UNIV OF CALIFORNIA - SANTA CRUZ	D J DES MARAIS	ARC	G H RAU	NCC 2 5339	112
39	UNIV OF CALIFORNIA - SANTA CRUZ	J MARRA	GSFC	R KUDELA	NAG 5 8855	111
39	UNIV OF CALIFORNIA - SANTA CRUZ	J W MARRA	GSFC	R KUDELA	NAG 5 8750	111
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39	UNIV OF CHICAGO	E G STANSBERY	JSC	A J TUZZOLINO	NAG 9 1306	205
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39	UNIV OF COLORADO - BOULDER	J C DODGE	GSFC	D L ARMSTRONG	NAG 5 6636	124
39	UNIV OF COLORADO - BOULDER	J C DODGE	GSFC	W EMERY	NAG 5 10288	130
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39	UNIV OF MICHIGAN - ANN ARBOR	P E O'NEILL	GSFC	A ENGLAND	NAG 5 10036	310
39	UNIV OF MICHIGAN - ANN ARBOR	P R HOUSER	GSFC	A W ENGLAND	NAG 5 11580	312
39	UNIV OF MICHIGAN - ANN ARBOR	P T HOUSER	GSFC	A W ENGLAND	NAG 5 8661	309
39	UNIV OF MICHIGAN - ANN ARBOR	E G STANSBERY	JSC	P O SIETZER	NAG 9 1373	313
39	UNIV OF MICHIGAN - ANN ARBOR	R MCKELLIP	SSC	M DOBSON	NAG13 99024	313
39	UNIV OF MINN	D E WICKLAND	GSFC	P B REICH	NAG 5 7917	318

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39	UNIV OF MINN	G GUTMAN	GSFC	J PASTOR	NAG 5 9312	319
39	UNIV OF MINN	G GUTMAN	GSFC	P BOLSTAD	NAG 5 11130	319
39	UNIV OF MINN	M KURYLO	GSFC	R W CARR	NAG 5 8869	319
39	UNIV OF MINN	M Y WEI	GSFC	E FOUFOULA-GEORGI	NAG 5 6191	318
39	UNIV OF MINN	M Y WEI	GSFC	S HOBBIE	NGT 5 30111	321
39	UNIV OF MINN	P R HOUSER	GSFC	F FORTE-AGEL	NAG 5 11801	320
39	UNIV OF MINN	R MCKELLIP	SSC	M BAUER	NAG13 99022	320
39	UNIV OF MISSOURI - COLUMBIA	E LINDSTROM	GSFC	C K WIKLE	NAG 5 8344	325
39	UNIV OF MISSOURI - COLUMBIA	W ABDALATI	GSFC	C DAVIS	NAG 5 11081	326
39	UNIV OF MISSOURI - COLUMBIA	R MCKELLIP	JSC	D BLANCHARD	NAG13 99014	326
39	UNIV OF MISSOURI - COLUMBIA	R MCKELLIP	SSC	D D HIPPLE	NAG13 00006	326
39	U OF MONT	C S POTTER	ARC	J S KIMBALL	NAG 2 1531	334
39	U OF MONT	B MEESON	GSFC	W R SNYDER	NAG 5 9062	334
39	U OF MONT	D E WICKLAND	GSFC	S W RUNNING	NCC 5 382	335
39	U OF MONT	E G ENGMAN	GSFC	S W RUNNING	NAG 5 8599	334
39	U OF MONT	G GUTMAN	GSFC	R NEMANI	NAG 5 9332	334
39	U OF MONT	G GUTMAN	GSFC	J KIMBALL	NAG 5 9333	335
39	U OF MONT	H OSEROFF	GSFC	S W RUNNING	NAG 5 31368	335
39	U OF MONT	M WEI	GSFC	S RUNNING	NGT 5 50329	335
39	U OF MONT	W TURNER	GSFC	S W RUNNING	NAG 5 12540	335
39	U OF MONT	W TURNER	GSFC	R VAN DEN POL	NAG 5 12624	335
39	U OF MONT	C HALL	SSC	R NEMANI	NAG13 02002	335
39	UNIV OF NEBRASKA - LINCOLN	D C WICKLAND	GSFC	E WALTER-SHEA	NAG 5 6990	336
39	UNIV. OF NEVADA - DESERT RES. INST	S G UNGAR	GSFC	K C MCGWIRE	NCC 5 486	337
39	UNIV. OF NEVADA - DESERT RES. INST	S GOGINENI	GSFC	G L DANA	NAG 5 7870	337
39	UNIV OF NEVADA - RENO	D SENSKE	GSFC	R A SCHULTZ	NAG 5 9001	338
39	UNIV OF NEVADA - RENO	E LINDSTROM	GSFC	W M CALVIN	NAG 5 9127	338
39	UNIV OF NEVADA - RENO	M WEI	GSFC	S TYLER	NGT 5 30385	339
39	UNIV OF NEVADA - RENO	S G UNGAR	GSFC	R J WATTERS	NAG 5 9498	338
39	UNIV OF NEW HAMPSHIRE - DURHAM	A C JANETOS	GSFC	B MOORE	NAG 5 6137	342
39	UNIV OF NEW HAMPSHIRE - DURHAM	A C JANETOS	GSFC	C LI	NAG 5 7631	342
39	UNIV OF NEW HAMPSHIRE - DURHAM	C TREES	GSFC	M DOWELL	NAG 5 12402	344
39	UNIV OF NEW HAMPSHIRE - DURHAM	D DEERING	GSFC	B MOORE III	NAG 5 8828	343
39	UNIV OF NEW HAMPSHIRE - DURHAM	D E WICKLAND	GSFC	S FROLKING	NAG 5 6623	342
39	UNIV OF NEW HAMPSHIRE - DURHAM	D E WICKLAND	GSFC	S FROLKING	NAG 5 7095	342
39	UNIV OF NEW HAMPSHIRE - DURHAM	D E WICKLAND	GSFC	P CRILL	NCC 5 357	345
39	UNIV OF NEW HAMPSHIRE - DURHAM	D W DEERING	GSFC	B MOORE	NCC 5 338	345
39	UNIV OF NEW HAMPSHIRE - DURHAM	D WICKLAND	GSFC	C LI	NAG 5 6453	342
39	UNIV OF NEW HAMPSHIRE - DURHAM	D WICKLAND	GSFC	D BARTLETT	NCC 5 226	345
39	UNIV OF NEW HAMPSHIRE - DURHAM	D WICKLAND	GSFC	M DUCKEY	NCC 5 587	345
39	UNIV OF NEW HAMPSHIRE - DURHAM	D WICKLAND	GSFC	P CRILL	NCC 5 608	346
39	UNIV OF NEW HAMPSHIRE - DURHAM	E A LINDSTROM	GSFC	W S BROWN	NAG 5 6289	342
39	UNIV OF NEW HAMPSHIRE - DURHAM	E T ENGMAN	GSFC	C J VOROSMARTY	NAG 5 8683	343
39	UNIV OF NEW HAMPSHIRE - DURHAM	G Q GUTMAN	GSFC	X XIAO	NAG 5 11160	344
39	UNIV OF NEW HAMPSHIRE - DURHAM	J A YODER	GSFC	C VOROSMARTY	NAG 5 6452	342
39	UNIV OF NEW HAMPSHIRE - DURHAM	M WEI	GSFC	D BARTLETT	NAG 5 12369	344
39	UNIV OF NEW HAMPSHIRE - DURHAM	P HOUSER	GSFC	C VOROSMARTY	NAG 5 9617	343
39	UNIV OF NEW HAMPSHIRE - DURHAM	P R HOUSER	GSFC	C VOROSMARTY	NAG 5 11750	344
39	UNIV OF NEW HAMPSHIRE - DURHAM	P T HOUSER	GSFC	C J VOROSMARTY	NAG 5 8443	342
39	UNIV OF NEW HAMPSHIRE - DURHAM	S G UNGAR	GSFC	M E MARTIN	NCC 5 477	345
39	UNIV OF NEW HAMPSHIRE - DURHAM	W ABDALATI	GSFC	M FAHNESTOCK	NAG 5 12408	345
39	UNIV OF NEW MEXICO-ALBUQUERQUE	A C JANETOS	GSFC	C N DAHM	NAG 5 6999	361
39	UNIV OF NEW MEXICO-ALBUQUERQUE	A PEEK	SSC	S A MORAIN	NCC13 98002	363
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	397
39	UNIV OF NORTH CAROLINA - CHAPEL HILL	D E WICKLAND	GSFC	S C WHALEN	NAG 5 6278	397
39	UNIV OF NORTH CAROLINA - CHAPEL HILL	D W DEERING	GSFC	C S MARTENS	NCC 5 337	397
39	UNIV OF NORTH CAROLINA - CHAPEL HILL	G GUTMAN	GSFC	R RINDFUSS	NAG 5 11290	397
39	UNIV OF NORTH CAROLINA - CHAPEL HILL	P DECOLA	GSFC	R E MILLER	NAG 5 8924	397
39	UNIV OF NORTH CAROLINA AT WILMINGTON	J W CAMPBELL	GSFC	S D EMSLIE	NAG 5 8114	398
39	UNIV OF NORTH DAKOTA	C YUHAS	GSFC	M POELLET	NCC 5 503	399
39	UNIV OF NORTH DAKOTA	D ANDERSON	GSFC	M POELLOT	NAG 5 11509	399
39	UNIV OF NORTH DAKOTA	D E WICKLAND	GSFC	C A GRAINGER	NAG 5 7950	399
39	UNIV OF NORTH DAKOTA	J J COLLIER	GSFC	G A SEIELSTAD	NAG 5 3616	398
39	UNIV OF NORTH DAKOTA	B A SPIERING	SSC	G A SEIESTAD	NAG13 01006	399
39	UNIV OF NORTH DAKOTA	J ANDERSON	SSC	G SEIELSTAD	NAG13 02047	399

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39	UNIV OF OKLAHOMA - NORMAN	M Y WEI	GSFC	K CRAWFORD	NGT 5 30151	425
39	UNIV OF PENNSYLVANIA	M Y WEI	GSFC	H DAI	NGT 5 30165	448
39	UNIV OF PITTSBURGH	N KHAZENIE	GSFC	A I PANAH	NAG 5 9051	449
39	UNIV OF PUERTO RICO - MAYAGUEZ	J W CABBELL	GSFC	J CORREDOR	NAG 5 7198	548
39	UNIV OF PUERTO RICO - MAYAGUEZ	M WEI	GSFC	A J CRUZ	NGT 5 30364	549
39	UNIV OF PUERTO RICO-RIO PIEDRAS	N KHAZENIE	GSFC	I L APONTE-AVELLANE	NAG 5 9050	550
39	UNIV OF RHODE ISLAND	E LINDSTROM	GSFC	L ROTHSTEIN	NAG 5 12283	455
39	UNIV OF RHODE ISLAND	E T ENGMAN	GSFC	Y WANG	NAG 5 8739	455
39	UNIV OF RHODE ISLAND	J CAMPBELL	GSFC	J A YODER	NAG 5 6645	455
39	UNIV OF RHODE ISLAND	J DODGE	GSFC	P CORNILLON	NAG 5 9633	455
39	UNIV OF RHODE ISLAND	J DODGE	GSFC	J YODER	NAG 5 9724	455
39	UNIV OF RHODE ISLAND	J YODER	GSFC	P M STEGMANN	NAG 5 6560	455
39	UNIV OF RHODE ISLAND	M WEI	GSFC	Y WANG	NAG 5 8829	455
39	UNIV OF SAN DIEGO	M MAIDEN	GSFC	J J SIMPSON	NCC 5 308	114
39	UNIV OF SOUTH ALABAMA	R ARNOLD	MSFC	M CARPENTER	NCC 8 161	16
39	UNIV OF SOUTH CAROLINA-COLUMBIA	D WICKLAND	GSFC	V LAKSHMI	NAG 5 9233	460
39	UNIV OF SOUTH CAROLINA-COLUMBIA	E T ENGMAN	GSFC	V LAKSHMI	NAG 5 8875	460
39	UNIV OF SOUTH CAROLINA-COLUMBIA	P R HOUSER	GSFC	V LAKSHMI	NAG 5 11526	460
39	UNIV OF SOUTH CAROLINA-COLUMBIA	P T HOUSER	GSFC	V LAKSHMI	NAG 5 8837	460
39	UNIV OF SOUTH FLORIDA	D L WILLIAMS	GSFC	KARGER	NAG 5 3446	175
39	UNIV OF SOUTH FLORIDA	J DODGE	GSFC	F E MULLER-KARGER	NAG 5 8175	175
39	UNIV OF SOUTH FLORIDA	J DODGE	GSFC	F MULLER-KARGER	NAG 5 10532	175
39	UNIV OF SOUTH FLORIDA	J MARRA	GSFC	F MULLER-KARGER	NAG 5 6448	175
39	UNIV OF SOUTH FLORIDA	J MARRA	GSFC	J WALSH	NAG 5 6449	175
39	UNIV OF SOUTH FLORIDA	M WEI	GSFC	F MULLER-KARGER	NGT 5 30354	176
39	UNIV OF SOUTH FLORIDA	M Y WEI	GSFC	G T MITHCHUM	NGT 5 30143	176
39	UNIV OF SOUTH FLORIDA	G BYRNE	JSC	S ANDREFOUET	NAG 9 1431	176
39	UNIV OF SOUTHERN CALIFORNIA	C TREES	GSFC	M STRAMSKA	NAG 5 12396	116
39	UNIV OF SOUTHERN CALIFORNIA	J MARRA	GSFC	D CAPONE	NAG 5 8884	115
39	UNIV OF SOUTHERN CALIFORNIA	J MARRA	GSFC	R ITURRIAGA	NAG 5 9740	115
39	UNIV OF SOUTHERN CALIFORNIA	J MARRA	GSFC	D BOGUCKI	NAG 5 11218	116
39	UNIV OF SOUTHERN MAINE	N KHAZENIE	GSFC	S M LOCKE	NAG 5 9128	236
39	UNIV OF SOUTHERN MISSISSIPPI	M THOMAS	SSC	W HAWKINS	NAG13 01005	325
39	UNIV OF TENNESSEE - CHATTANOOGA	B MEESON	GSFC	T L PATTY	NAG 5 9031	464
39	UNIV OF TENNESSEE - KNOXVILLE	B V GUYNES	MSFC	G J BUNICK	NAG 8 1568	465
39	UNIV OF TEXAS - AUSTIN	M RIENECKER	GSFC	J S FAMIGLIETTI	NAG 5 8290	488
39	UNIV OF TEXAS - AUSTIN	M WEI	GSFC	J S FAMIGLIETTI	NGT 5 30162	492
39	UNIV OF TEXAS - AUSTIN	P R HOUSER	GSFC	J S FAMIGLIETTI	NAG 5 8611	488
39	UNIV OF TEXAS - AUSTIN	P R HOUSER	GSFC	D P CHAMBERS	NAG 5 11636	489
39	UNIV OF TEXAS - AUSTIN	R FITZGERALD	GSFC	B TAPLEY	NAG 5 97213	491
39	UNIV OF TEXAS - AUSTIN	S G UNGAR	GSFC	W A WHITE	NCC 5 463	491
39	UNIV OF TEXAS - AUSTIN	S GOGINENI	GSFC	D D BLANKENSHIP	NAG 5 7910	487
39	UNIV OF TOLEDO	T M SCOTT	GRC	D P CZAJKOWSKI	NAG 3 2409	419
39	UNIV OF TOLEDO	D E WICKLAND	GSFC	K P CZAJKOWSKI	NAG 5 8052	420
39	UNIV OF TOLEDO	M Y WEI	GSFC	K P CZAJKOWSKI	NAG 5 8671	421
39	UNIV OF UTAH	D ANDERSON	GSFC	G MACE	NAG 5 11478	497
39	UNIV OF UTAH	D ANDERSON	GSFC	K SASSEN	NAG 5 11503	497
39	UNIV OF UTAH	D ANDERSON	GSFC	S K KRUEGER	NAG 5 11504	497
39	UNIV OF UTAH	D ANDERSON	GSFC	E ZIPSER	NAG 5 11532	497
39	UNIV OF UTAH	D DEERING	GSFC	J EHLERINGER	NCC 5 297	497
39	UNIV OF UTAH	D E WICKLAND	GSFC	J R EHLERINGER	NAG 5 7447	496
39	UNIV OF UTAH	D Q ANDESRON	GSFC	T J GARRETT	NAG 5 11505	497
39	UNIV OF UTAH	D WICKLAND	GSFC	J EHLERINGER	NAG 5 12080	497
39	UNIV OF UTAH	D WICKLAND	GSFC	J EHLERINGER	NAG 5 12230	497
39	UNIV OF UTAH	J C DODGE	GSFC	K JEZEK	NAG 5 8550	496
39	UNIV OF UTAH	M WEI	GSFC	R FORSTER	NAG 5 12552	497
39	UNIV OF UTAH	M WEI	GSFC	R R FORSTER	NGT 5 30184	498
39	UNIV OF UTAH	M WEI	GSFC	J R EHLERINGER	NGT 5 30202	498
39	UNIV OF UTAH	S GOGINENI	GSFC	R FORESTER	NAG 5 7871	496
39	UNIV OF VERMONT	V C VANDERBILT	ARC	G P LIVINGSTON	NCC 2 5399	501
39	UNIV OF VIRGINIA	A C JANETOS	GSFC	P DESANKER	NAG 5 6384	517
39	UNIV OF VIRGINIA	A C JANETOS	GSFC	C O JUSTICE	NAG 5 8162	517
39	UNIV OF VIRGINIA	C J TUCKER	GSFC	C O JUSTICE	NAG 5 11341	519
39	UNIV OF VIRGINIA	D E WICKLAND	GSFC	H H SHUGART	NAG 5 7956	517
39	UNIV OF VIRGINIA	D E WICKLAND	GSFC	H H SHUGART	NAG 5 9357	518
39	UNIV OF VIRGINIA	D WICKLAND	GSFC	C O JUSTICE	NAG 5 7862	517

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39	UNIV OF VIRGINIA	G GUTMAN	GSFC	P V DESANKER	NAG 5 9289	518
39	UNIV OF VIRGINIA	J GRANT	GSFC	A HOWARD	NAG 5 8902	518
39	UNIV OF VIRGINIA	J PRIVETTE	GSFC	R J SWAPP	NAG 5 7266	517
39	UNIV OF VIRGINIA	J PRIVETTE	GSFC	R J SWAPP	NAG 5 10985	519
39	UNIV OF VIRGINIA	M WEI	GSFC	R SWAP	NAG 5 10606	519
39	UNIV OF VIRGINIA	M Y WEI	GSFC	J D ALBERTSON	NAG 5 8670	518
39	UNIV OF WASHINGTON	A C JANETOS	GSFC	J RICHEY	NAG 5 4712	528
39	UNIV OF WASHINGTON	A T CHANG	GSFC	L TSANG	NAG 5 4739	528
39	UNIV OF WASHINGTON	A T CHANG	GSFC	L TSANG	NAG 5 9835	531
39	UNIV OF WASHINGTON	A T CHANG	GSFC	L TSANG	NAG 5 11359	532
39	UNIV OF WASHINGTON	D W DEERING	GSFC	J E RICHEY	NCC 5 345	534
39	UNIV OF WASHINGTON	E LINDSTROM	GSFC	A T JESSUP	NAG 5 7526	529
39	UNIV OF WASHINGTON	E LINDSTROM	GSFC	K KELLY	NAG 5 8296	529
39	UNIV OF WASHINGTON	E LINDSTROM	GSFC	H STERN	NAG 5 9854	531
39	UNIV OF WASHINGTON	E LINDSTROM	GSFC	K KELLY	NAG 5 12539	533
39	UNIV OF WASHINGTON	J A WEINMAN	GSFC	J D SAHR	NAG 5 11372	532
39	UNIV OF WASHINGTON	J A WEINMAN	GSFC	R HOUZE	NCC 5 584	535
39	UNIV OF WASHINGTON	J DODGE	GSFC	R LINDSAY	NAG 5 6493	528
39	UNIV OF WASHINGTON	J DODGE	GSFC	D LETTENMAIER	NAG 5 9416	530
39	UNIV OF WASHINGTON	J W MARRA	GSFC	B FROST	NAG 5 7604	529
39	UNIV OF WASHINGTON	J ZWALLY	GSFC	C F RAYMOND	NAG 5 9906	531
39	UNIV OF WASHINGTON	K PATRINGTON	GSFC	D A ROTHROCK	NAG 5 9334	530
39	UNIV OF WASHINGTON	M WEI	GSFC	J DECOSMO	NAG 5 12410	533
39	UNIV OF WASHINGTON	M WEI	GSFC	S R EMERSON	NGT 5 30213	535
39	UNIV OF WASHINGTON	M WEI	GSFC	D P LETTENMAIER	NGT 5 30220	535
39	UNIV OF WASHINGTON	M WEI	GSFC	T HINCKLEY	NGT 5 30343	535
39	UNIV OF WASHINGTON	M WEI	GSFC	S WARREN	NGT 5 50334	536
39	UNIV OF WASHINGTON	M Y WEI	GSFC	J E RICHEY	NGT 5 30149	535
39	UNIV OF WASHINGTON	M Y WEI	GSFC	T M HINCKLEY	NGT 5 30157	535
39	UNIV OF WASHINGTON	M Y WEI	GSFC	J E RICHEY	NGT 5 30161	535
39	UNIV OF WASHINGTON	P HOUSER	GSFC	D LETTENMAIER	NAG 5 9454	530
39	UNIV OF WASHINGTON	P R HOUSER	GSFC	D LETTENMAIER	NAG 5 11622	532
39	UNIV OF WASHINGTON	P R HOUSER	GSFC	D P LETTENMAIER	NAG 5 11632	532
39	UNIV OF WASHINGTON	P R HOUSER	GSFC	R A HOUZE	NAG 5 11685	533
39	UNIV OF WASHINGTON	P R HOUSER	GSFC	A SCHWEIGER	NAG 5 11800	533
39	UNIV OF WASHINGTON	P R HOUSER	GSFC	D P LETTENMAIER	NAG 5 12548	533
39	UNIV OF WASHINGTON	S GOGINENI	GSFC	D A ROTHROCK	NAG 5 4375	528
39	UNIV OF WASHINGTON	S GOGINENI	GSFC	A SCHWEIGER	NAG 5 7847	529
39	UNIV OF WASHINGTON	J R BLOCKER	MSFC	M BAKER	NAG 8 1512	533
39	UNIV OF WISCONSIN - MADISON	D ANDERSON	GSFC	S A ACKERMAN	NAG 5 11529	544
39	UNIV OF WISCONSIN - MADISON	D DEERING	GSFC	J FOLEY	NCC 5 335	546
39	UNIV OF WISCONSIN - MADISON	D E WICKLAND	GSFC	J FOLEY	NAG 5 7214	541
39	UNIV OF WISCONSIN - MADISON	D E WICKLAND	GSFC	S T GOWER	NAG 5 8069	541
39	UNIV OF WISCONSIN - MADISON	D L PIERCE	GSFC	S ACKERMAN	NAG 5 5272	540
39	UNIV OF WISCONSIN - MADISON	D W DEERING	GSFC	J M NORMAN	NCC 5 294	546
39	UNIV OF WISCONSIN - MADISON	D WICKLAND	GSFC	J FOLEY	NAG 5 9452	542
39	UNIV OF WISCONSIN - MADISON	E KREINS	GSFC	W L SMITH	NAS 5 31377	545
39	UNIV OF WISCONSIN - MADISON	E T ENGMAN	GSFC	D MACKAY	NAG 5 8554	541
39	UNIV OF WISCONSIN - MADISON	E T ENGMAN	GSFC	J A FOLEY	NAG 5 8597	541
39	UNIV OF WISCONSIN - MADISON	G GUTMAN	GSFC	M COE	NAG 5 11085	543
39	UNIV OF WISCONSIN - MADISON	J DODGE	GSFC	A HUANG	NAG 5 9389	542
39	UNIV OF WISCONSIN - MADISON	J DODGE	GSFC	G DIAK	NAG 5 9436	542
39	UNIV OF WISCONSIN - MADISON	M WEI	GSFC	J MECIKALSKI	NAG 5 12536	544
39	UNIV OF WISCONSIN - MADISON	M Y WEI	GSFC	H F WANG	NGT 5 30146	546
39	UNIV OF WISCONSIN - MADISON	M Y WEI	GSFC	W BRINKMANN	NGT 5 30160	546
39	UNIV OF WISCONSIN - MADISON	N KHAZENIE	GSFC	S S LIMAYE	NAG 5 9028	542
39	UNIV OF WISCONSIN - MADISON	S GOGINENI	GSFC	J R KEY	NAG 5 8625	541
39	UNIV OF WYOMING	D E WICKLAND	GSFC	E HUNT	NAG 5 3861	547
39	UNIV OF WYOMING	M WEI	GSFC	W REINER	NGT 5 30350	548
39	UTAH STATE UNIV	P R HOUSER	GSFC	C NEALE	NAG 5 11673	499
39	UTAH STATE UNIV	P R HOUSER	GSFC	L HIPPS	NAG 5 11687	499
39	UTAH STATE UNIV	K DAUES	JSC	B G BUGBEE	NAG 9 1397	499
39	UTAH STATE UNIV	J F DOWDY	MSFC	F BAKER	NGT 8 52866	500
39	UTAH STATE UNIV	S PEARSON	MSFC	J R DENNISON	NAS 8 98221	500
39	VA POLYTECH INST & ST UNIV	M WEI	GSFC	R WYNNE	NAG 5 10548	524
39	VA POLYTECH INST & ST UNIV	M WEI	GSFC	R H WYNNE	NGT 5 30198	525

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39	WEST CHESTER UNIV OF PA	N KHAZENIE	GSFC	R M BUSCH	NAG 5 6080	451
39	WEST VIRGINIA UNIV	J POE	MSFC	T MELOY	NAG 8 1494	538
39	WHEELING JESUIT UNIV	M Y WEI	GSFC	R J MEYERS	NAG 5 8628	538
39	WOODS HOLE OCEANOGRAPHIC INST	C TREES	GSFC	L TRAYKOVSKI	NAG 5 12403	302
39	WOODS HOLE OCEANOGRAPHIC INST	E LINDSTROM	GSFC	R A KRISHFIELD	NAG 5 7770	301
39	WOODS HOLE OCEANOGRAPHIC INST	J MARRA	GSFC	D J MCGILLICUDDY	NAG 5 6455	301
39	WOODS HOLE OCEANOGRAPHIC INST	J MARRA	GSFC	H SOSIK	NAG 5 8868	302
39	WOODS HOLE OCEANOGRAPHIC INST	J W CAMPBELL	GSFC	H M SOSIK	NAG 5 7445	301
39	WOODS HOLE OCEANOGRAPHIC INST	M WEI	GSFC	H SOSIK	NGT 5 30206	302
39	WOODS HOLE OCEANOGRAPHIC INST	M WEI	GSFC	D M GLOVER	NGT 5 30362	302
39	YALE UNIV	G GUTMAN	GSFC	R SMITH	NAG 5 9316	146
39	YALE UNIV	J DODGE	GSFC	M ASHTON	NAG 5 9437	146
39	YALE UNIV	P DECOLA	GSFC	S SHERWOOD	NAG 5 12056	147
41	ALABAMA A&M UNIV	JR PRUITT	MSFC	R B LAL	NCC 8 211	3
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	18
41	ARIZONA STATE UNIV	D R AMBUR	LARC	A CHATTOPADHYAY	NAG 1 2283	19
41	ARIZONA STATE UNIV	W A SILVA	LARC	A CHATIPHADYAJ	NAG 1 02010	19
41	BETHUNE - COOKMAN COLL	S DUTCZAK	KSC	G W BECKLES	NAG10 195	159
41	BOWLING GREEN STATE UNIV	J L DOLCE	GRC	S BALLARD	NAS 3 99202	400
41	CALIFORNIA INST OF TECH	J H STARNES	GSFC	W G KNAUSS	NAG 1 1975	40
41	CALIFORNIA INST OF TECH	D R AMBUR	LARC	W G KNAUS	NAG 1 02029	41
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41	CALIFORNIA ST. UNIV. SAN BERNADINO	D GUPTA	DFRC	D USHER	NAG 4 225	50
41	CALIFORNIA STATE UNIV - FRESNO	J BRADEN	DFRC	S MAHANTY	NAG 4 153	50
41	CALIFORNIA STATE UNIV - FRESNO	K GUPTA	DFRC	S MAHANTY	NAG 4 172	50
41	CALIFORNIA STATE UNIV - FRESNO	L HUDSON	DFRC	N BENGIAMIN	NAG 4 207	50
41	CALIFORNIA STATE UNIV - LOS ANGELES	K GUPTA	DFRC	M MIRMIRANI	NAG 4 224	50
41	CALIFORNIA STATE UNIV - LOS ANGELES	K GUPTA	DFRC	C WU	NAG 4 174	50
41	CALIFORNIA STATE UNIV - LOS ANGELES	K GUPTA	DFRC	M MIRMIRANI	NAG 4 175	50
41	CARNEGIE - MELLON UNIV	M B TISCHER	ARC	W C MESSNER	NAG 2 1441	431
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41	CASE WESTERN RESERVE UNIV	B STEINETZ	GRC	S M PHILLIPS	NCC 3 892	402
41	CASE WESTERN RESERVE UNIV	D NG	GRC	D HAZONY	NAG 3 2243	400
41	CASE WESTERN RESERVE UNIV	M G POTAPCZUK	GRC	J D ALEXANDER	NAG 3 2581	400
41	CHRISTOPHER NEWPORT UNIV	R C SINGLETERRY	LARC	K CHANG	NCC 1 01028	502
41	CHRISTOPHER NEWPORT UNIV	R R ANTCLIFF	LARC	E B WARD	NCC 1 02041	502
41	CHRISTOPHER NEWPORT UNIV	T E PINELLI	LARC	R CATON	NAG 1 2219	501
41	CITY UNIV OF NY CITY COLL	D O DAVIS	GRC	Y ANDREOPOULOS	NAG 3 2163	364
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41	CLEVELAND STATE UNIV	W MORALES	GRC	J E GATICA	NCC 3 876	407
41	COLL OF WILLIAM AND MARY	D J JOBSON	LARC	Z RAHMAD	NCC 1 01030	503
41	COLL OF WILLIAM AND MARY	J H STARNES, JR.	LARC	D M MANOS	NCC 1 356	503
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41	DARTMOUTH COLL	D D MOERDER	LARC	M Q PHAN	NCC 1 01045	341
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41	EMBRY-RIDDLE AERONAUTICAL UNIV	B J HOLMES	LARC	S HAMPTON	NCA 1 133	160
41	EMBRY-RIDDLE AERONAUTICAL UNIV	JR BURLEY	LARC	S HAMPTON	NCA 1 01003	160
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41	ESTRELLA MOUNTAIN COMM COLL	M RODAN	DFRC	M A REYES	NAG 4 234	23
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41	VIRGINIA COMMONWEALTH UNIV	D E ASHPIS	GRC	D J DORNEY	NCC 3 645	526
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41	WASHINGTON UNIV - ST. LOUIS	B MERRITT	GSFC	P HINK	NAG 5 5215	329
41	WAYNE STATE UNIV	P C JORGENSON	GRC	S YU	NAG 3 2313	316
41	WAYNE STATE UNIV	P C JORGENSON	GRC	S YU	NAG 3 2542	316
41	WAYNE STATE UNIV	P JORGENSON	GRC	S YU	NCC 3 960	317
41	WAYNE STATE UNIV	R R ANTCLIFF	LARC	G W AUNER	NAG 1 02105	316
41	WEST VIRGINIA UNIV	W F BROOKS	ARC	M R NAPOLITANO	NAG 2 1158	538
41	WEST VIRGINIA UNIV	M BRENNER	DFRC	Y XU	NGT 4 52431	538
41	WESTERN MICHIGAN UNIV	S CHANG	GRC	W W LIU	NAG 3 2529	317
41	WESTERN MICHIGAN UNIV	J N MOSS	LARC	W W LIU	NAG 1 01023	317
41	WICHITA STATE UNIV	T H BOND	GRC	D ELLIS	NAG 3 2137	227
41	WICHITA STATE UNIV	T H BOND	GRC	D ELLIS	NCA 3 111	227
41	WICHITA STATE UNIV	T P RATVASKY	GRC	M PAPADAKIS	NCC 3 624	227
41	WICHITA STATE UNIV	W E RICKS	LARC	H WILLIFORD	NCA 1 106	227
41	YALE UNIV	A NURRIDIN	HQ	K GIBBLE	NGT 5 50067	148
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	277
42	BOWIE STATE UNIV	M S BURRELL	GSFC	N T WAKIM	NAG 5 9544	236
42	CALIFORNIA POLYTECH STATE U-SAN LUIS	L G LEMKE	ARC	D W HALL	NCC 2 5464	49
42	CALIFORNIA POLYTECH STATE U-SAN LUIS	J W PAULSON	LARC	D J DETURRIS	NCC 1 02012	49
42	CALIFORNIA POLYTECH STATE U-SAN LUIS	T A TALAY	LARC	D DETURRIS	NAG 1 2327	49
42	CAPITOL COLL	E CHANG	GSFC	P D SMIT	NAG 5 12463	237
42	CASE WESTERN RESERVE UNIV	P DOTY	MSFC	J I ALEXANDER	NAG 8 1727	401
42	CHRISTIAN BROTHERS COLL	E WONG	GRC	D SANTI	NAG 3 2454	461
42	CORNELL UNIV	B L EDWARDS	GSFC	M L PSIAKI	NCC 5 563	376
42	CORNELL UNIV	L COX	GSFC	M CAMPBELL	NAG 5 12231	375
42	GEORGE WASHINGTON UNIV	K L BRINKLEY	LARC	P A COOPER	NCC 1 01017	152
42	GEORGE WASHINGTON UNIV	R W BUCHAN	LARC	R H TOLSON	NCC 1 331	151
42	GEORGIA INST OF TECH	H S WRIGHT	LARC	J R OLDS	NAG 1 02088	180
42	HARVARD UNIV	F PERIGSFC		J ANDERSON	NAS 5 02037	282
42	JOHNS HOPKINS UNIV	C KREBS	GSFC	D FORD	NAS 5 32865	250
42	JOHNS HOPKINS UNIV	G H MUCKLOW	GSFC	P A STADTER	NAG 5 8665	241
42	JOHNS HOPKINS UNIV	J BREDEDAMP	GSFC	A S SZALAY	NAG 5 8347	241
42	JOHNS HOPKINS UNIV	C M MC ARTHUR	MSFC	P J WALTRUP	NAG 8 1648	250

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42	MASSACHUSETTS INST OF TECH	M SHIRLEY	ARC	N LEVESON	NAG 2 1543	285
42	MASSACHUSETTS INST OF TECH	S SCHNEIDER	GRC	D H EPSTEIN	NAG 3 2506	286
42	MASSACHUSETTS INST OF TECH	D E SMITH	GSFC	G H PETTENGHILL	NAG 5 11575	291
42	MASSACHUSETTS INST OF TECH	D MARGOLIES	GSFC	W MAYER	NAS 5 02094	293
42	MASSACHUSETTS INST OF TECH	G MOSIER	GSFC	D W MILLER	NAG 5 7839	288
42	MASSACHUSETTS INST OF TECH	N J DENNEHY	GSFC	D P HOW	NAG 5 10440	290
42	MASSACHUSETTS INST OF TECH	S MILLER DORNEY	MSFC	R HAIMES	NAG 8 1872	293
42	NORTH CAROLINA STATE UNIV. - RALEIGH	E M QUEEN	LARC	G O WALBERG	NAG 1 2222	393
42	NORTH CAROLINA STATE UNIV. - RALEIGH	E M QUEEN	LARC	G D WALBERG	NAG 1 01111	394
42	NORTHERN ARIZONA UNIV	D J BOGAN	GSFC	R YELLE	NAG 5 11078	24
42	OHIO UNIV	D R KRUPP	MSFC	J J ZHU	NAG 8 1789	414
42	OLD DOMINION UNIV	A A MOORE	LARC	R UNAL	NGT 1 52245	515
42	PENN STATE UNIV. - UNIV. PARK	B D REED	GRC	D KUO	NAG 3 2501	438
42	PENN STATE UNIV. - UNIV. PARK	B D REED	GRC	D A LEVIN	NAG 3 2590	438
42	PENN STATE UNIV. - UNIV. PARK	J H RUFF	MSFC	R J SANTORO	NAG 8 1844	443
42	POLYTECH UNIV - BROOKLYN	J A LEITNER	GSFC	V KAPILA	NAG 5 11365	379
42	PRINCETON UNIV	F L MARKLEY	GSFC	J KASDIN	NAG 5 10933	349
42	PURDUE UNIV	J A LEITNER	GSFC	J L GARRISON	NAG 5 10747	216
42	PURDUE UNIV	B WOOLFORD	JSC	B S CALDWELL	NAG 9 1292	217
42	PURDUE UNIV	J ANTOL	LARC	J L GARRISON	NAG 1 01083	214
42	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	L KALUZIENSKI	GSFC	J P HUGHES	NGT 5 50376	355
42	SAN JOSE STATE UNIV	G S HUBBARD	ARC	N IBRAHIM	NCC 2 1294	56
42	SANTA CLARA UNIV	P KOLODZIEJ	ARC	C A KITTS	NCC 2 1195	58
42	STANFORD UNIV	G ZILLAC	ARC	B J CANTWELL	NCC 2 1300	64
42	STANFORD UNIV	M T FLYNN	ARC	M REINHARD	NCC 2 1175	64
42	STANFORD UNIV	D M VENTO	GRC	B J CANTWELL	NAG 3 2615	60
42	STANFORD UNIV	S P HUGHES	GSFC	R L BYER	NAG 5 10719	62
42	TEXAS A&M UNIV	J A LEITNER	GSFC	K T ALFRIEND	NAG 5 11349	475
42	TEXAS A&M UNIV	E M BRADEN	JSC	S R VADALI	NAG 9 1239	477
42	TEXAS A&M UNIV	J W BELL	JSC	J L CRASSIDIS	NAG 9 1188	476
42	TEXAS A&M UNIV	L G HORTA	LARC	J L JUNKINS	NCC 1 386	477
42	UNIV HOUSTON-HOUSTON	J W BELL	JSC	J T WILLIAMS	NAG 9 1293	482
42	UNIV OF ALABAMA - HUNTSVILLE	C C LAPENTA	MSFC	S J GRAVES	NCC 8 180	13
42	UNIV OF ARIZONA	E P SMITH	GSFC	M MEYER	NAG 5 9325	30
42	UNIV OF ARIZONA	D MCKAY	JSC	D SARID	NAG 9 1307	36
42	UNIV OF CALIFORNIA - BERKELEY	M H ACUNA	GSFC	R LIN	NAG 5 9305	71
42	UNIV OF CALIFORNIA - LOS ANGELES	R CARPENTER	GSFC	J L SPEYER	NAG 5 8879	89
42	UNIV OF COLORADO - BOULDER	J A LEITNER	GSFC	P AXELRAD	NCC 5 564	138
42	UNIV OF COLORADO - BOULDER	J ALEITNER	GSFC	P AXELROD	NAG 5 11421	134
42	UNIV OF COLORADO - BOULDER	V GRIFFIN	GSFC	G ROTTMAN	NAS 5 97045	137
42	UNIV OF COLORADO - BOULDER	C MOORE	LARC	A BETY	NAG 1 01074	121
42	UNIV OF COLORADO - BOULDER	W K BELVIN	LARC	M M MIKULAS	NCC 1 01046	138
42	UNIV OF COLORADO - BOULDER	W K BELVIN	LARC	T O MANN	NGT 1 01023	139
42	UNIV OF COLORADO - BOULDER	W K BELVINLARC		K C PARK	NAG 1 02009	121
42	UNIV OF CONNECTICUT	W K BELVIN	LARC	K D MURPHY	NGT 1 01025	144
42	UNIV OF DENVER	G D OLSEN	MSFC	J E WILLIAMSEN	NCC 8 176	143
42	UNIV OF FLORIDA	L W GRIFFIN	MSFC	W SHYY	NAG 8 1729	171
42	UNIV OF GEORGIA	H HASAN	GSFC	P C STANCIL	NAG 5 11453	188
42	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	J P RIEHL	GRC	B CONWAY	NAG 3 2791	207
42	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	M C HICKS	GRC	J D BUCKMASTER	NAG 3 2516	207
42	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D G SICKOREZ	JSC	S R WHITE	NGT 9 33	212
42	UNIV OF MARYLAND - COLL PARK	M SHIRLEY	ARC	A MOSLEH	NAG 2 1536	254
42	UNIV OF MARYLAND - COLL PARK	D E JAMISON	GSFC	D R BASILI	NCC 5 464	268
42	UNIV OF MARYLAND - COLL PARK	L H ROSENBERG	GSFC	D SMIDTS	NAG 5 11952	264
42	UNIV OF MARYLAND - COLL PARK	M S BURRELL	GSFC	D SHAPIRO	NGT 5 116	269
42	UNIV OF MARYLAND - COLL PARK	B WOOLFORD	JSC	D L AKIN	NAG 9 1180	266
42	UNIV OF MARYLAND BALTIMORE COUNTY	A D SIMPSON	GSFC	S A BASS	NAG 5 12227	273
42	UNIV OF MICHIGAN - ANN ARBOR	G SOULAS	GRC	I D BOYD	NAG 3 2497	307
42	UNIV OF MICHIGAN - ANN ARBOR	F R CHANG-DIAZ	JSC	B E GILCHRIST	NAG 9 1167	313
42	UNIV OF MICHIGAN - ANN ARBOR	J L BALATICE	MSFC	B GILCHRIST	NAS 8 99128	313
42	UNIV OF MICHIGAN - ANN ARBOR	K J WELZYN	MSFC	G E GILCHRIST	NAS 8 99127	313
42	UNIV OF MINN	R TREVINO	JSC	V KOSCHEYER	NAG 9 1218	320
42	UNIV OF MISSOURI - COLUMBIA	J M HANSON	MSFC	C A KLUEVER	NAG 8 1741	326
42	UNIV OF MISSOURI - ROLLA	J A LEITNER	GSFC	H J PERNICKA	NAG 5 12589	327
42	UNIV OF NEW MEXICO-ALBUQUERQUE	G THOMAS	JSC	J BRINKER	NAG 9 1324	363
42	UNIV OF PITTSBURGH	P I CARAWAY	LARC	L HUMMEL	NAS 8 97111	450

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42	UNIV OF SOUTH FLORIDA	M L BLOSSER	LARC	R T HAFTA	NAG 1 01046	175
42	UNIV OF SOUTHERN CALIFORNIA	C CASTELLANO	ARC	G BEKEY	NAS 8 97115	116
42	UNIV OF SOUTHERN CALIFORNIA	E ROBINSON	ARC	K DOZIER	NAS 2 00091	116
42	UNIV OF TEXAS - AUSTIN	E L CHRISTIANSEN	JSC	E P FAHRENTHOLD	NAG 9 1244	490
42	UNIV OF TEXAS - AUSTIN	E M BRADEN	JSC	R BISHOP	NAG 9 1225	490
42	UNIV OF TEXAS - AUSTIN	G C BLACKBURN	JSC	G E LIGHTSEY	NAG 9 1187	490
42	UNIV OF TEXAS - AUSTIN	G L CONDON	JSC	C OCAMPO	NAG 9 1441	490
42	UNIV OF TEXAS - AUSTIN	J W BELL	JSC	G LIGHTSEY	NAG 9 1189	490
42	UNIV OF TEXAS - AUSTIN	T CRANE	JSC	R BISHOP	NAG 9 1323	490
42	UNIV OF WASHINGTON	E P SMITH	GSFC	B MARGON	NAG 5 9324	530
42	UNIV OF WISCONSIN - MADISON	R SPAGNUOLO	GSFC	J W PERCIVAL	NAG 5 7026	541
42	UTAH STATE UNIV	M A EDEN	JSC	C SWANSON	NAS 9 02002	500
42	UTAH STATE UNIV	M D VANEK	LARC	J ULWICK	NAS 1 20467	500
42	VA POLYTECH INST & ST UNIV	W K WILKIE	LARC	D J INMAN	NAG 1 01104	522
42	WASHINGTON UNIV - ST. LOUIS	D E SMITH	GSFC	R PHILLIPS	NAG 5 11574	331
43	ALABAMA A&M UNIV	J HINES	ARC	V HATZIMMANIKATIS	NAG 2 1527	1
43	BOWIE STATE UNIV	A CARDENAS	ARC	B BRADEN	NAG 2 1572	236
43	CASE WESTERN RESERVE UNIV	G W HUNTER	GRC	C LIU	NCC 3 679	402
43	CASE WESTERN RESERVE UNIV	G W HUNTER	GRC	C C LIU	NCC 3 772	402
43	CASE WESTERN RESERVE UNIV	G W HUNTER	GRC	C LIU	NCC 3 944	403
43	CASE WESTERN RESERVE UNIV	G W HUNTER	GRC	C LIU	NCC 3 983	403
43	CASE WESTERN RESERVE UNIV	H HUNTER	GRC	C C LIU	NCC 3 893	402
43	CASE WESTERN RESERVE UNIV	J D WRBANEK	GRC	C LIU	NCC 3 927	403
43	CLARK ATLANTA UNIV	R LAWRENCE	GRC	D OKHIO	NAG 3 2292	178
43	CLEVELAND STATE UNIV	S R LEVINE	GRC	J MASNOVI	NCC 3 759	406
43	CLEVELAND STATE UNIV	W MORALES	GRC	J E GATICA	NCC 3 971	407
43	CORNELL UNIV	H K NAHRA	GRC	D KOCH	NGT 3 52362	377
43	CORNELL UNIV	P DOTY	MSFC	N ZABARAS	NAG 8 1671	376
43	FISK UNIV	G HUNTER	GRC	D E COLLINS	NAG 3 2298	461
43	GEORGETOWN UNIV	D RISIN	JSC	J M JESSUP	NAG 9 1366	152
43	GEORGIA INST OF TECH	E WEISER	LARC	W H REES	NGT 1 52225	185
43	HARVARD UNIV	S D BAI	MSFC	I F SILVERA	NAG 8 1822	282
43	HOWARD UNIV	H L BELVIN	LARC	W E COLLINS	NAG 1 2019	152
43	JOHNS HOPKINS UNIV	D RISIN	KSC	J L HARDEN	NAG 9 1345	250
43	NORTHWESTERN UNIV	J HINES	ARC	V HATZIMANIKATI	NAG 2 1522	199
43	OHIO STATE UNIV	F J MONTEGANI	GRC	P K DUTTA	NGT 3 52363	413
43	PENN STATE UNIV. - UNIV. PARK	J H AGUI	GRC	D E SCHIFFER	NAG 3 2546	438
43	PENN STATE UNIV. - UNIV. PARK	B BULLARD	MSFC	V YANG	NAG 8 1877	443
43	PENN STATE UNIV. - UNIV. PARK	K TUCKER	MSFC	R J SANTORO	NAG 8 1792	443
43	POLYTECH UNIV - BROOKLYN	C TALLEY	MSFC	A S MEYERSON	NAG 8 1455	379
43	PRAIRIE VIEW A&M UNIV	A BEAM	MSFC	Z HAQUE	NAG 8 1644	469
43	RENSELAER POLYTECH INST	J SKARDA	GRC	P C WAGNER	NAG 3 2383	379
43	RUTGERS STATE UNIV OF NJ NEW BRUN	V KLOERIS	JSC	J L KOKINI	NAG 9 1318	355
43	TUSKEGEE UNIV	M COLLINS	KSC	N VAHDAT	NAG10 253	6
43	UNIV HOUSTON-HOUSTON	B FILES	JSC	C A MITCHELL	NAG 9 1305	482
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	36
43	UNIV OF CALIFORNIA - DAVIS	F P CHIARAMONTE	GRC	B L POWELL	NAG 3 2153	79
43	UNIV OF CALIFORNIA - SANTA BARBARA	B S SINGH	GRC	L G LEAL	NAG 3 2115	105
43	UNIV OF COLORADO - BOULDER	B S SINGH	GRC	R H DAVIS	NAG 3 2116	122
43	UNIV OF DELAWARE	B S SINGH	GRC	E W KALER	NAG 3 1955	148
43	UNIV OF FLORIDA	C BLACK	KSC	G B HOF LUND	NGT10 52633	173
43	UNIV OF FLORIDA	M LONERGAN	KSC	C SEGAL	NAG10 285	172
43	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	F J MONTEGANI	GRC	J S MOORE	NGT 3 52345	211
43	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	R S OKOJIE	GRC	I ADESIDA	NAG 3 2747	207
43	UNIV OF MICHIGAN - ANN ARBOR	F J MONTEGANI	GRC	A ATREYA	NGT 3 52365	315
43	UNIV OF NEVADA - RENO	D RISIN	JSC	G ALMEIDA-PORADA	NAG 9 1340	338
43	UNIV OF ROCHESTER	G A SOFFEN	GSFC	R H HEIST	NGT 5 104	388
43	UNIV OF TEXAS - ARLINGTON	S K KAHNG	LARC	S P JOSHI	NAG 1 01017	486
43	UNIV OF TEXAS - EL PASO	B REED	GRC	D KYPUROS	NAG 3 2773	493
43	UNIV OF TOLEDO	M RABINOWITZ	GRC	K L DEWITT	NAG 3 2338	419
43	UNIV OF WASHINGTON	D RISIN	JSC	A FOLCH	NAG 9 1343	534
43	VANDERBILT UNIV	J E FINN	ARC	M D LEVAN	NCC 2 1127	467
43	VANDERBILT UNIV	J E FINN	ARC	M D LEVAN	NCC 2 5384	467
43	VANDERBILT UNIV	A NURRIDIN	HQ	R BAYUZICK	NGT 5 50209	467
43	VIRGINIA COMMONWEALTH UNIV	J S HARRISON	LARC	G E WNEK	NAG 1 2302	526

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43	YALE UNIV	B S SINGH	GRC	D E ROSNER	NAG 3 1951	145
43	YALE UNIV	B SINGH	GRC	M LOEWENBERG	NAG 3 1935	145
44	LOUISIANA STATE UNIV - BATON ROUGE	S NASH-STEVENSON	MSFC	K ALSHIBLI	NGT 8 52919	232
44	POLYTECH UNIV - BROOKLYN	J DOWDY	MSFC	F LIN	NGT 8 52879	379
44	SALISH KOOTENAI COLL	P SAKIMOTO	GSFC	T S OLSON	NAG 5 10144	334
44	UNIV OF NEW MEXICO-ALBUQUERQUE	S NASH-STEVENSON	MSFC	T ROSS	NGT 8 52915	363
44	UNIV OF VIRGINIA	S M ARNOLD	GRC	M PINDERA	NAG 3 2524	516
44	VANDERBILT UNIV	S NASH-STEVENSON	MSFC	S MAHADEVAN	NGT 8 52907	468
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	ARIZONA STATE UNIV	T X NGUYEN	LARC	C BALANIS	NAG 1 1781	18
45	ARIZONA STATE UNIV	T X NGUYEN	LARC	C BALANIS	NCC 1 01051	22
45	AUBURN UNIV	F B BECK	LARC	M L WALLER	NGT 1 52205	4
45	AUBURN UNIV	M DESHPANDE	LARC	M E BAGINSKI	NGT 1 02015	4
45	AUBURN UNIV	D K HALL	MSFC	S A MERRYMAN	NAS 8 98249	3
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	495
45	BRIGHAM YOUNG UNIV	R D SAKAHARA	DFRC	M D RICE	NAG 4 220	495
45	BROWN UNIV	F J MONTEGANI	GRC	G P CRAWFORD	NGT 3 52369	454
45	BUCKNELL UNIV	J DORBAND	GSFC	M F ABURDENE	NAG 5 10821	430
45	CASE WESTERN RESERVE UNIV	K BHASIN	GRC	F L MERAT	NAG 3 2578	400
45	CASE WESTERN RESERVE UNIV	K BHASIN	GRC	F L MERAT	NAG 3 2799	401
45	CASE WESTERN RESERVE UNIV	L G MATUS	GRC	M MEHREGANY	NAG 3 2204	400
45	CASE WESTERN RESERVE UNIV	L G MATUS	GRC	M MEHREGANY	NCA 3 201	401
45	CITY UNIV OF NY CITY COLL	A LACIS	GSFC	F MOSHAIR	NCC 5 427	365
45	CITY UNIV OF NY CITY COLL	B CARLSON	GSFC	B GROSS	NAG 5 11813	365
45	CITY UNIV OF NY CITY COLL	H SHAW	GSFC	N SCHEINBERG	NAG 5 7160	365
45	CLEMSON UNIV - CLEMSON	J F DOWDY	MSFC	J N GOWDY	NGT 8 52858	458
45	CLEVELAND STATE UNIV	F J MONTEGANI	GRC	Z GAO	NGT 3 52387	407
45	CLEVELAND STATE UNIV	J F SOEDER	GRC	Z GAO	NCC 3 699	406
45	CLEVELAND STATE UNIV	J F SOEDER	GRC	Z GAO	NCC 3 931	407
45	CLEVELAND STATE UNIV	R E JONES	GRC	P P CHU	NAG 3 2040	404
45	CLEVELAND STATE UNIV	R KERCZEWSKI	GRC	V K KONANGI	NCC 3 764	406
45	CLEVELAND STATE UNIV	R R ROMANOWSKY	GRC	F XIONG	NAG 3 2531	405
45	CLEVELAND STATE UNIV	S G BAILEY	GRC	D G NEHEMANN	NCC 3 883	407
45	CLEVELAND STATE UNIV	T M WALLETT	GRC	V K KONANGI	NCC 3 595	406
45	CLEVELAND STATE UNIV	K CHUN	GSFC	F XIONG	NAG 3 2619	405
45	EMBRY-RIDDLE AERONAUTICAL UNIV	P G NEUDECK	GRC	A HELFRICK	NCC 3 685	160
45	FLORIDA A&M UNIV	F MCKENZIE	KSC	B A HARVEY	NAG10 289	162
45	FLORIDA ATLANTIC UNIV	T P BIZON	GRC	W E GLENN	NAG 3 2023	163
45	GEORGE WASHINGTON UNIV	M DUTTA	GSFC	M ZAGHLOUL	NAG 5 11343	151
45	GEORGIA INST OF TECH	C T RAMOS	GRC	D F AKYILDIZ	NAG 3 2585	181
45	GEORGIA INST OF TECH	G E PONCHAK	GRC	D M TENTZERIS	NAG 3 2329	180
45	GEORGIA INST OF TECH	G E PONCHAK	GRC	D PAPAPOLYMEROU	NCC 3 900	184
45	GEORGIA INST OF TECH	S D HARRAH	LARC	G GIMMESTAD	NAS 1 99073	183
45	GEORGIA INST OF TECH	T S DANIELS	LARC	G HOPKINS	NAS 1 02056	183
45	HAMPTON UNIV	F B BECK	LARC	A O OLADIPUPO	NCC 1 366	507
45	HOWARD UNIV	D F NOGA	GRC	D RUBAAI	NAG 3 2287	152
45	HOWARD UNIV	J L DOLCE	GRC	J A MOMOH	NAG 3 1978	152
45	HOWARD UNIV	M D KANKAM	GRC	A RUBAAI	NCC 3 571	153
45	HOWARD UNIV	R M BUTTON	GRC	D A MOMOH	NAG 3 2621	152
45	HOWARD UNIV	A SHARMA	GSFC	D MOHAMMAD	NAG 5 11118	153
45	IOWA STATE UNIV	W P WINFREE	LARC	S S UPDA	NAG 1 01040	220
45	JOHNS HOPKINS UNIV	E WEBB	GSFC	P EISENREICH	NAG 5 10778	245
45	JOHNS HOPKINS UNIV	F SELDON- JONES	GSFC	J KANG	NAS 5 00166	250
45	JOHNS HOPKINS UNIV	H SHAW	GSFC	J B KHURGIN	NAG 5 11332	247
45	JOHNS HOPKINS UNIV	P J LUERS	GSFC	M G DARRIN	NAG 5 10464	244
45	JOHNS HOPKINS UNIV	P LUERS	GSFC	R F CONDE	NAG 5 9456	242
45	JOHNS HOPKINS UNIV	P LUERS	GSFC	B ANDREWS	NAG 5 10234	243
45	JOHNS HOPKINS UNIV	P LUERS	GSFC	M DARRIN	NAG 5 12209	248
45	JOHNS HOPKINS UNIV	W S HEAPS	GSFC	B BOONE	NAG 5 11845	248
45	JOHNS HOPKINS UNIV	M E BEATTY, III	LARC	M A DARRIN	NCC 1 01019	250
45	JOHNS HOPKINS UNIV	Q A SHAMS	LARC	P D SCHWARTZ	NAG 1 01059	238
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47	UNIV OF CALIFORNIA - DAVIS	D R AMBUR	LARC	L W REHFELD	NAG 1 01116	79
47	UNIV OF CALIFORNIA - LOS ANGELES	R G BRYANT	LARC	G P CARMEN	NGT 1 52240	94
47	UNIV OF CALIFORNIA - SANTA BARBARA	C CZALAI	ARC	F MILSTEIN	NCC 2 1290	109
47	UNIV OF COLORADO - BOULDER	B V GUYNES	MSFC	S STURE	NAS 8 38779	137
47	UNIV OF FLORIDA	D E LUECK	KSC	E D WACHSMAN	NAG10 303	172
47	UNIV OF FLORIDA	D R AMBUR	LARC	B V SANKAR	NAG 1 01088	169
47	UNIV OF FLORIDA	M J VANDYKE	MSFC	S ANGHAI	NAG 8 1251	171
47	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	T L PANONTIN	ARC	R H DODDS	NAG 2 1424	207
47	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	T L PANONTIN	ARC	G H PAULINO	NGT 2 52271	211
47	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	S J HALES	LARC	R S AVERBACK	NAG 1 01035	206
47	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	S J HALES	LARC	R S AVERBACK	NAG 1 02013	206
47	UNIV OF IOWA	P DOTY	GSFC	C BECKERMANN	NCC 8 199	225
47	UNIV OF MARYLAND - COLL PARK	T T KING	GSFC	R GHODSSI	NAG 5 12011	264
47	UNIV OF MASSACHUSETTS - AMHERST	D L THOMSEN	LARC	E B COUGHLIN	NGT 1 02008	300
47	UNIV OF MICHIGAN - ANN ARBOR	M P NEMETH	LARC	A P WAAS	NCC 1 01050	313
47	UNIV OF MINN	P M DOTY	MSFC	J J DERBY	NAG 8 1676	320
47	UNIV OF MISSOURI - ROLLA	T S GATES	LARC	S ROY	NAG 1 01050	326

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47	UNIV OF PUERTO RICO - MAYAGUEZ	R TRAVIS	SSC	Y JIA	NAG13 02031	549
47	UNIV OF RHODE ISLAND	G C FRALICK	GRC	O GREGORY	NAG 3 2652	455
47	UNIV OF RHODE ISLAND	G C FRALICK	GRC	D GREGORY	NAG 3 2655	455
47	UNIV OF SOUTH FLORIDA	L MACDOWELL	KSC	D A SAGUESS	NAG10 310	176
47	UNIV OF TEXAS - AUSTIN	K MCLALLIN	GRC	R THOMPSON	NAG 3 2602	487
47	UNIV OF TEXAS - EL PASO	L ARMENDARIZ	JSC	L E MURR	NAG 9 1171	494
47	UNIV OF TEXAS - EL PASO	A BEAM	MSFC	J C MCCLURE	NAG 8 1645	494
47	UNIV OF TEXAS AT SAN ANTONIO	S RAJ	GRC	D L BAGLEY	NAG 3 2671	495
47	UNIV OF TOLEDO	M V NATHAL	GRC	T G KEITH	NCC 3 995	422
47	UNIV OF UTAH	B MCKISSOCK	GRC	G D SMITH	NAG 3 2624	496
47	UNIV OF UTAH	J R REEDERS	LARC	D O ADAMS	NCC 1 256	497
47	UNIV OF VIRGINIA	D L DICUS	LARC	E A STARKE	NAG 1 02090	516
47	UNIV OF VIRGINIA	M P NEMETH	LARC	C O HORGAN	NAG 1 01022	516
47	UNIV OF VIRGINIA	M S DOMACK	LARC	D A LITTLE	NAG 1 2282	515
47	UNIV OF VIRGINIA	R PIASCIK	LARC	G SHIFLET	NAG 1 2321	516
47	UNIV OF VIRGINIA	R S PIASCIK	LARC	G J SHIFLET	NAG 1 02049	516
47	UNIV OF VIRGINIA	R S PIASCIK	LARC	R G KELLY	NCC 1 01009	520
47	UNIV OF WASHINGTON	B J JENSEN	LARC	J C SEFERIS	NAG 1 01078	527
47	UNIV OF WISCONSIN - MADISON	P M DOTY	MSFC	S KOU	NAG 8 1459	544
47	VA POLYTECH INST & ST UNIV	M H JASKOWIAK	GRC	W A CURTIN	NAG 3 2100	523
47	VA POLYTECH INST & ST UNIV	D R AMBUR	LARC	L LIBRESCU	NAG 1 01101	522
47	VA POLYTECH INST & ST UNIV	D R AMBUR	LARC	Z GURDAL	NAG 1 01105	522
47	VA POLYTECH INST & ST UNIV	M P NEMETH	LARC	M W HYER	NAG 1 01072	522
47	VA POLYTECH INST & ST UNIV	R J CANO	LARC	A C LOOS	NCC 1 01037	525
47	VA POLYTECH INST & ST UNIV	R S PIASCIK	LARC	W T REYNOLDS	NAG 1 02063	523
47	VA POLYTECH INST & ST UNIV	M E PRINCE	MSFC	D A DILLIARD	NAG 8 1846	524
47	WASHINGTON UNIV - ST. LOUIS	P DOTY	MSFC	K F KELTON	NAG 8 1682	331
47	WICHITA STATE UNIV	A C NUNES	MSFC	G E TALIA	NCC 8 202	228
47	WINONA STATE UNIV	T S GATES	LARC	B ABDEL-MAGID	NAG 1 01054	322
49	ALABAMA A&M UNIV	W LOVE	MSFC	D ILA	NAG 8 1655	2
49	ALABAMA A&M UNIV	W T POWERS	MSFC	K B COOK	NAG 8 1861	2
49	ALCORN STATE UNIV	B ST. CYR	JSC	S ACEIL	NAG13 98005	322
49	ARKANSAS TECH UNIV	G R HALFORD	GRC	T GOSWAMI	NAG 3 2798	39
49	AUBURN UNIV	J HOWELL	MSFC	S A MERRYMAN	NAG 8 1728	3
49	AUBURN UNIV	J SAMS	MSFC	R A OVERFELT	NCC 8 240	4
49	AUBURN UNIV	S LAMBING	MSFC	H BRANDHORST	NCC 8 237	4
49	BOSTON UNIV	R B ROGERS	GRC	D HOLT	NAG 3 2392	275
49	BOWLING GREEN STATE UNIV	S RIDDLEBAUGH	GRC	B D PIERSOL	NAG 3 2790	399
49	BRANDEIS UNIV	F P CHIARAMONTE	GRC	D FRADEN	NAG 3 2386	279
49	BROWN UNIV	J B HURST	GRC	W A CURTIN	NAG 3 2668	451
49	BROWN UNIV	G A SOFFEN	GSFC	G CRAWFORD	NGT 5 91	454
49	CALIFORNIA INST OF TECH	J H AGUI	GRC	M L HUNT	NAG 3 2358	41
49	CALIFORNIA INST OF TECH	N R HALL	GRC	J F BRADY	NAG 3 2737	41
49	CALIFORNIA INST OF TECH	S C FARMER	GRC	U USTUNDAG	NAG 3 2686	41
49	CALIFORNIA INST OF TECH	B A MERRITT	GSFC	R A MEWALDT	NAG 5 5203	42
49	CALIFORNIA INST OF TECH	D NGUYEN	GSFC	F A HARRISON	NAG 5 11851	47
49	CALIFORNIA ST. POLYTECH U-POMONA	M BATTAGLIA	NMO	V GARNER	NCC 7 11	49
49	CALIFORNIA ST. POLYTECH U-POMONA	T J LLOYD	NMO	V H GARNER	NCC 7 10	49
49	CALIFORNIA STATE UNIV-BAKERSFIELD	K S SHY	DFRC	K L NYBERG	NAG 4 200	52
49	CARNEGIE - MELLON UNIV	F J MONTEGANI	GRC	P N KUMTA	NGT 3 52370	434
49	CARNEGIE - MELLON UNIV	F J MONTEGANI	GRC	M E MCHENRY	NGT 3 52379	434
49	CARNEGIE - MELLON UNIV	C J CULBERT	JSC	D APOSTOLOPOULOS	NAG 9 1248	433
49	CARNEGIE - MELLON UNIV	C J CULBERT	JSC	R W WHITTAKER	NAG 9 1240	433
49	CARNEGIE - MELLON UNIV	C J CULBERT	JSC	W R WHITTAKER	NAG 9 1256	433
49	CARNEGIE - MELLON UNIV	R D JUDAY	JSC	O AMIDI	NAG 9 1232	433
49	CARNEGIE - MELLON UNIV	T PENDLETON	JSC	R SIMMONS	NAG 9 1226	433
49	CASE WESTERN RESERVE UNIV	G MEYER	ARC	M S BRANICKY	NAG 2 1333	400
49	CASE WESTERN RESERVE UNIV	A CHAIT	GRC	P L TAYLOR	NAG 3 2541	400
49	CASE WESTERN RESERVE UNIV	A CHAIT	GRC	P L TAYLOR	NCC 3 969	403
49	CASE WESTERN RESERVE UNIV	D GREEN	GRC	Y KAMOTANI	NCC 3 823	402
49	CASE WESTERN RESERVE UNIV	D W YORK	GRC	D S ROSENBAUM	NCC 3 1001	403
49	CASE WESTERN RESERVE UNIV	F J MONTEGANI	GRC	J R KADAMBI	NGT 3 52352	404
49	CASE WESTERN RESERVE UNIV	F P CHIARAMONTE	GRC	B OVRYN	NAG 3 2504	400
49	CASE WESTERN RESERVE UNIV	G W HUNTER	GRC	C LIU	NCC 3 941	403

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49	CASE WESTERN RESERVE UNIV	K R SACKSTEDER	GRC	C SUNG	NCC 3 838	402
49	CASE WESTERN RESERVE UNIV	M M HASAN	GRC	J ALEXANDER	NAG 3 2742	401
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49	CASE WESTERN RESERVE UNIV	M NALL	GRC	D L WILSON	NAG 3 2808	401
49	CASE WESTERN RESERVE UNIV	S L OLSON	GRC	J S TIEN	NCC 3 658	402
49	CHRISTOPHER NEWPORT UNIV	J M SEATON	LARC	B H BARTELS	NCC 1 02042	502
49	CITY UNIV OF NY CITY COLL	F P CHIARMONTE	GRC	D KOPLIK	NAG 3 2335	364
49	CITY UNIV OF NY CITY COLL	M HASAN	GRC	D ACHRIVOS	NAG 3 2698	364
49	CITY UNIV OF NY CITY COLL	M HASAN	GRC	D MALDARELLI	NAG 3 2720	365
49	CLARK ATLANTA UNIV	H D ROSS	GRC	Y D YEBOAH	NCC 3 707	178
49	CLARKSON UNIV	M HASAN	GRC	R SUBRAMAIAN	NAG 3 2703	366
49	CLARKSON UNIV	R D GREEN	GRC	D H SHEN	NAG 3 2717	366
49	CLEMSON UNIV - CLEMSON	B G KANKI	ARC	A K GRAMOPADHYE	NCC 2 1114	458
49	CLEMSON UNIV - CLEMSON	T BEARD	ARC	B MELLO	NCC 2 1288	458
49	CLEMSON UNIV - CLEMSON	F P CHIARAMONTE	GRC	D M OCHTERBECK	NAG 3 2214	456
49	CLEMSON UNIV - CLEMSON	J BARTH	GSFC	P MCNUITY	NAG 5 9824	457
49	CLEVELAND STATE UNIV	H C DE GROH	GRC	S N TEWARI	NCC 3 829	406
49	CLEVELAND STATE UNIV	H DEGROH	GRC	D TEWARI	NCC 3 818	406
49	CLEVELAND STATE UNIV	H E KAUTZ	GRC	J HEMANN	NCC 3 582	406
49	CLEVELAND STATE UNIV	H KAUTZ	GRC	J T SAWICKI	NAG 3 2573	405
49	CLEVELAND STATE UNIV	J M MULLINS	GRC	G L KRAMERICH	NCC 3 647	406
49	CLEVELAND STATE UNIV	J MULLINS	GRC	G L KRAMERICH	NCC 3 908	407
49	CLEVELAND STATE UNIV	K JULES	GRC	P P LIN	NAG 3 2326	404
49	CLEVELAND STATE UNIV	P S GREENSBERG	GRC	J A LOCK	NAG 3 2423	404
49	CLEVELAND STATE UNIV	J MATURO	HQ	A LIU	NASW 02023	406
49	COLORADO SCH OF MINES	S A GOKOGLU	GRC	D J MOORE	NCC 3 659	117
49	COLORADO SCH OF MINES	J SAMS	MSFC	F D SCHOWENGERDT	NCC 8 238	117
49	CORNELL UNIV	D L DIETRICH	GRC	T AVEDISIAN	NAG 3 2224	371
49	CORNELL UNIV	F P CHIARMONTE	GRC	D T JENKINS	NAG 3 2353	371
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49	CORNELL UNIV	M HASAN	GRC	D LOUGE	NAG 3 2705	371
49	CORNELL UNIV	M HASAN	GRC	D STEEN	NAG 3 2713	371
49	DINE COLL (FORMERLY NAVAJO COMM COLL)	L ARMEDARIZ	JSC	M C BAUER	NAG 9 1172	23
49	DREXEL UNIV	D L URBAN	GRC	D CHOI	NCC 3 822	435
49	DREXEL UNIV	D L URBAN	GRC	D A RUFF	NCC 3 847	436
49	DREXEL UNIV	D L URBAN	GRC	D Y CHOI	NCC 3 913	436
49	DREXEL UNIV	D L URBAN	GRC	H PEARLMAN	NCC 3 1006	436
49	DREXEL UNIV	J E BROOKER	GRC	H PEARLMAN	NCC 3 1003	436
49	DUKE UNIV	R A WILKINSON	GRC	R P BEHRINGER	NAG 3 2372	389
49	EMORY UNIV	R B ROGERS	GRC	E R WEEKS	NAG 3 2728	179
49	FLA INTERNATIONAL UNIV	A MITSKEVICH	KSC	M A CENTENO	NAG10 212	161
49	FLA INTERNATIONAL UNIV	G BUCKINGHAM	KSC	M CENTENO	NAG10 321	161
49	FLORIDA A&M UNIV	D JOHSON	GRC	A F VAUGHN-COOKE	NAG 3 2786	162
49	FLORIDA A&M UNIV	D ABRAHAM	KSC	H LEWIS III	NAG10 314	162
49	FLORIDA A&M UNIV	E SMITH	KSC	F S HUMPHRIES	NAG10 238	162
49	FLORIDA ATLANTIC UNIV	S LAMBING	MSFC	W E GLENN	NCC 8 230	163
49	FLORIDA INST OF TECH	M M AVERNER	ARC	C E HELMSTETTER	NAG 2 1508	163
49	FLORIDA STATE UNIV	F P CHIARAMONTE	GRC	D CHELLA	NAG 3 2445	164
49	GEORGE WASHINGTON UNIV	M BROWN	GSFC	S SARKANI	NAG 5 11948	151
49	GEORGIA INST OF TECH	F P CHIARAMONTE	GRC	D YODA	NAG 3 2373	180
49	GEORGIA INST OF TECH	H K NAHRA	GRC	D MORRIS	NAG 3 2739	181
49	GEORGIA INST OF TECH	M M HASAN	GRC	M K SMITH	NAG 3 2763	181
49	GEORGIA INST OF TECH	R E YACKOVETSKY	GRC	D MAVRIS	NAG 1 2235	179
49	GEORGIA INST OF TECH	R SKARDA	GRC	D P NEITZEL	NAG 3 2431	180
49	GEORGIA INST OF TECH	C M BELCASTRO	LARC	A R PRITCHETT	NCC 1 401	183
49	GEORGIA INST OF TECH	S NASH-STEVENSON	MSFC	J SEITZMAN	NGT 8 52887	186
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49	HAMPTON UNIV	D GRIFFIN	GRC	D R LYONS	NAG 3 2189	506
49	HAMPTON UNIV	D W GRIFFIN	GRC	C M OKPODU	NAG 3 2618	506
49	HAMPTON UNIV	I BLANKSON	GRC	M H MORGAN	NAG 3 2249	506
49	HARVARD UNIV	B MOTIL	GRC	D A WEITZ	NAG 3 2376	280
49	HARVARD UNIV	D GRIFFIN	GRC	D A WEITZ	NAG 3 2492	280

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49	INDIANA UNIV - BLOOMINGTON	W CULPEPPER	JSC	J CAMERON	NAS 9 01103	213
49	IOWA STATE UNIV	F J MONTGOMERY	GRC	D ROTHMAYER	NGT 3 52380	222
49	IOWA STATE UNIV	S NASH-STEVENSON	MSFC	R NAPOLITANO	NGT 8 52903	222
49	JACKSON STATE UNIV	D F NOGA	GRC	D MITRA	NAG 3 2277	322
49	JAMES MADISON UNIV	A D LITTLE	LARC	J J MILES	NAG 1 2186	508
49	JOHNS HOPKINS UNIV	F P CHIARAMONTE	GRC	K J STEBE	NCC 3 812	251
49	JOHNS HOPKINS UNIV	G CHOMOS	GRC	L BACHMAN	NAS 3 01146	250
49	JOHNS HOPKINS UNIV	M HASAN	GRC	D HERMAN	NAG 3 2726	238
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49	KANSAS STATE UNIV	L GOSPER	KSC	D BEN-ARIEH	NAG10 325	225
49	LOUISIANA STATE UNIV - BATON ROUGE	J SKARDA	GRC	H WONG	NAG 3 2361	230
49	LOUISIANA STATE UNIV - BATON ROUGE	H C NEEDLEMAN	GSFC	J P WEFEL	NAG 5 5064	230
49	LOUISIANA STATE UNIV - BATON ROUGE	E SHAW	MSFC	B SARKER	NAG 8 1845	231
49	MARSHALL UNIV	M E KIELEN	GSFC	M R JULIAN	NCC 5 646	537
49	MARSHALL UNIV	M KIENLEN	GSFC	M R JULIAN	NCC 5 542	537
49	MASSACHUSETTS INST OF TECH	F J MONTEGANI	GRC	G H MCKINLEY	NGT 3 52360	295
49	MASSACHUSETTS INST OF TECH	J E BROOKER	GRC	J B HOWARD	NAG 3 1879	285
49	MASSACHUSETTS INST OF TECH	O SANDS	GRC	D MODIANO	NAG 3 2685	286
49	MASSACHUSETTS INST OF TECH	K HARTMAN	GSFC	D RICKER	NAG 5 12377	292
49	MASSACHUSETTS INST OF TECH	M E ROSENTHAL	MSFC	C R CANIZARES	NAS 8 38249	294
49	MICHIGAN STATE UNIV	C G DAVILA	LARC	R C AVERILL	NAG 1 02061	303
49	MISSISSIPPI STATE UNIV	Y K CHOO	GRC	B K SONI	NAG 3 2235	323
49	MOREHOUSE COLL	W LOVE	MSFC	J KING	NAG 8 1711	187
49	MOREHOUSE SCH MED	D W GRIFFIN	GRC	D J KLEMENT	NAG 3 2611	187
49	MORGAN STATE UNIV	G SOFFEN	GSFC	E DELOATCH	NAG 5 9215	252
49	MORGAN STATE UNIV	J OBERRIGHT	GSFC	G CHEN	NAG 5 10104	252
49	NEW JERSEY INST OF TECH	A WILKENSEN	GRC	L KONDIC	NAG 3 2367	346
49	NEW JERSEY INST OF TECH	R F FRIEDMAN	GRC	E L DREIZEN	NCC 3 746	347
49	NEW MEXICO HIGHLANDS UNIV	W LOVE	MSFC	R CLARK	NAG 8 1708	357
49	NEW MEXICO STATE UNIV - LAS CRUCES	B MERRITT	GSFC	S HOTTMAN	NAG 5 5351	358
49	NEW MEXICO STATE UNIV - LAS CRUCES	W H MILLER	GSFC	S HORAN	NAG 5 9323	359
49	NORFOLK STATE UNIV	S H CHOI	LARC	K D SONG	NAG 1 02076	509
49	NORTH CAROLINA A&T STATE UNIV	R F LAWRENCE	GRC	W COLLIS	NAG 3 2782	392
49	NORTH CAROLINA A&T STATE UNIV	D ABRAHAM	KSC	D DUNN	NAG10 317	393
49	NORTHEASTERN ILLINOIS UNIV	J SAMS	MSFC	A SACCO JR.	NCC 8 244	198
49	NORTHEASTERN UNIV	M NALL	MSFC	A SACCO	NCC 8 139	297
49	NORTHWESTERN UNIV	C E NIEDERHAUS	GRC	M SILBER	NAG 3 2364	199
49	NORTHWESTERN UNIV	F J MONTEGANI	GRC	D N SEIDMAN	NGT 3 52378	201
49	NORTHWESTERN UNIV	H C DEGROH	GRC	D H DAVIS	NAG 3 2369	199
49	NORTHWESTERN UNIV	K R SACKSTEDER	GRC	D MATALON	NAG 3 2511	199
49	NORTHWESTERN UNIV	S A GOGOKLU	GRC	B J MATKOWSKY	NAG 3 2209	199
49	NORTHWESTERN UNIV	W B DUVAL	GRC	P W VOORHEES	NAG 3 2474	199
49	OAKLAND UNIV	R ANSARI	GRC	F GIBLIN	NAG 3 2792	306
49	OAKWOOD COLL	R A HATHAWAY	LARC	F BLISS	NCC 1 02033	5
49	OAKWOOD COLL	W LOVE	MSFC	E GWEBU	NAG 8 1653	5
49	OHIO STATE UNIV	C H WILLIAMS	GRC	P J TURCHI	NAG 3 2316	409
49	OHIO STATE UNIV	M M HASAN	GRC	S TANVEER	NAG 3 2700	410
49	OHIO STATE UNIV	R S OKOJIE	GRC	L BRILLSON	NAG 3 2549	409
49	OHIO UNIV	W D IVANCIC	GRC	S OSTERMANN	NCC 3 680	415
49	OHIO UNIV	J M RANKIN	MSFC	J ZHU	NAS 8 01105	414
49	OLD DOMINION UNIV	J C NEWMAN	LARC	S A TIWARI	NCC 1 371	512
49	OLD DOMINION UNIV	K S BEY	LARC	G HOU	NAG 1 2300	510
49	OLD DOMINION UNIV	R D BRAUN	LARC	A K NOOR	NCC 1 01014	513
49	OLD DOMINION UNIV	W D MORRIS	LARC	R UNAL	NAG 1 02110	512
49	PENN STATE UNIV. - UNIV. PARK	C E JOHNSON	ARC	L R RADOVIC	NCC 2 1122	444
49	PENN STATE UNIV. - UNIV. PARK	F J MONTEGANI	GRC	K W WANG	NGT 3 52359	445
49	PENN STATE UNIV. - UNIV. PARK	F P CHIARAMONTE	GRC	D BANAVAR	NAG 3 2374	438
49	PENN STATE UNIV. - UNIV. PARK	F P CHIARAMONTE	GRC	D R COLLINS	NAG 3 2470	438
49	PENN STATE UNIV. - UNIV. PARK	M M HASAN	GRC	A BORHAN	NAG 3 2729	438
49	PENN STATE UNIV. - UNIV. PARK	P A PARSONS	GRC	D M TARBELL	NAG 3 2746	438
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49	PHIL COLL OF PHARMACY & SCIENCE	B S SINGH	GRC	D DUBLIN	NAG 3 2424	447
49	POLYTECH UNIV - BROOKLYN	R SEASHOLTZ	GRC	D OTUGAN	NAG 3 2679	379
49	PORTLAND STATE UNIV	M M HASAN	GRC	M M WEISLOGEL	NAG 3 2741	429
49	PRAIRIE VIEW A&M UNIV	M A MEADOR	GRC	D BINEY	NCC 3 972	470
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49	PRINCETON UNIV	B S SINGH	GRC	P M CHALKIN	NAG 3 2248	348
49	PRINCETON UNIV	D SACKKSTEDER	GRC	C K LAW	NCC 3 687	351
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49	PURDUE UNIV	B J MOTIL	GRC	D T REVANKAR	NAG 3 2715	215
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49	PURDUE UNIV	R WILKINSON	GRC	D R WASSGREN	NAG 3 2770	215
49	RENSSELAER POLYTECH INST	M M HASAN	GRC	D HIRSA	NAG 3 2714	379
49	RENSSELAER POLYTECH INST	R SKARDA	GRC	D C WAYNER	NAG 3 2351	379
49	RENSSELAER POLYTECH INST	T ROGERS	GRC	M D SMITH	NAG 3 2552	379
49	RICE UNIV	B FILES	JSC	E V BARRERA	NGT 9 23	473
49	RICE UNIV	F MARTIN	JSC	T E TEZDUYAR	NAG 9 1059	472
49	ROCHESTER INST OF TECH	D BAILEY	GRC	D P RAFFAELLE	NCC 3 937	381
49	ROWAN UNIV	K SACKSTEDER	GRC	D MARCHESE	NAG 3 2521	352
49	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	B J MOTIL	GRC	D J GLASSER	NAG 3 2350	352
49	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	K SACKSTEDER	GRC	D D TSE	NCC 3 967	354
49	SAINT LOUIS UNIV	E SHAW	MSFC	C RAHAIM	NAG 8 1852	325
49	SAN DIEGO STATE UNIV	S L OLSON	GRC	S BHATTACHARJEE	NCC 3 842	53
49	SAN JOSE STATE UNIV	D CLANCY	ARC	N IBRAHIM	NCC 2 1368	57
49	SAN JOSE STATE UNIV	N MUSCETTOLA	ARC	J MURPHY	NCC 2 1286	56
49	SAVANNAH STATE UNIV	R J ACOSTA	GRC	D KALU	NAG 3 2241	187
49	SOUTHERN ILLINOIS UNIV - CARBONDALE	S RUSSELL	MSFC	T CHU	NAG 8 1812	202
49	SOUTHERN UNIV & A&M COLL	B B ST. CYR	SSC	A AMINI	NAG13 98003	233
49	SPELMAN COLL	W LOVE	MSFC	C GILLYARD	NAG 8 1712	188
49	SPELMAN COLL	W LOVE	MSFC	E FALCONER	NAG 8 1635	188
49	SPELMAN COLL	W LOVE	MSFC	A THOMPSON	NCC 8 227	188
49	STANFORD UNIV	G MEYER	ARC	C TOMLIN	NCC 2 5422	65
49	STANFORD UNIV	F P CHIARAMONTE	GRC	G M HOMSY	NAG 3 2446	59
49	STANFORD UNIV	G ZIMMERLI	GRC	D SHAQFEH	NAG 3 2724	60
49	STANFORD UNIV	J H AGUI	GRC	A P GAST	NAG 3 2398	59
49	STANFORD UNIV	M M HASAN	GRC	J K EATON	NAG 3 2738	60
49	STATE UNIV OF NY - BUFFALO	K R SACKSTEDER	GRC	D GIVI	NAG 3 2225	383
49	STATE UNIV OF NY - BUFFALO	S L PADULA	LARC	K LEWIS	NGT 1 01034	383
49	STATE UNIV OF NY - BUFFALO	S L PADULA	LARC	K E LEWIS	NGT 1 52228	383
49	STATE UNIV OF NY - STONY BROOK	G MEYER	ARC	J S MITCHELL	NAG 2 1325	383
49	STATE UNIV OF NY - STONY BROOK	T TURNER	MSFC	D LARSON	NCC 8 100	386
49	STATE UNIV OF NY COLL	F P CHIARAMONTE 111	GRC	H MENG	NAG 3 2464	386
49	SYRACUSE UNIV	H K NAHRA	GRC	D SANGANI	NAG 3 2427	387
49	SYRACUSE UNIV	R D BRAUN	LARC	B D DAVIDSON	NCC 1 01004	387
49	TENNESSEE STATE UNIV	S MERRITT	GRC	D ROGERS	NAG 3 2471	462
49	TEXAS A&M UNIV	J TORRES	DFRC	W TURNER	NCC 4 152	478
49	TEXAS A&M UNIV	A J PROVENZA	GRC	D PALAZZOLO	NCC 3 928	478
49	TEXAS A&M UNIV	M M HASAN	GRC	D D KHIM	NAG 3 2712	474
49	TEXAS A&M UNIV	C G PARRA	JSC	D R BOYLE	NCC 9 69	478
49	TEXAS A&M UNIV	S LAMBING	MSFC	D BOYLE	NCC 8 226	478
49	TEXAS A&M UNIV	S LAMBING	MSFC	W F BEST	NCC 8 236	478
49	TEXAS TECH UNIV	C NIEDERHAUS	GRC	D BORNHOP	NCC 3 962	481
49	TEXAS TECH UNIV	D L HENNINGER	JSC	J L SMITH	NCC 9 143	481
49	THE AMERICAN UNIV	M M MATSUMURA	GSFC	R KAY	NCC 5 630	154
49	THE UNIV OF CENTRAL FLORIDA	D J CHATO	GRC	D L BLOCK	NAG 3 2751	167
49	THE UNIV OF CENTRAL FLORIDA	C G STEVENSON	KSC	F GOMEZ	NAG10 306	168
49	THE UNIV OF CENTRAL FLORIDA	J LYONS	KSC	T KOTNOUR	NAG10 296	168
49	THE UNIV OF CENTRAL FLORIDA	L GOSPER	KSC	D G KOTNOUR	NGT10 52625	169
49	THE UNIV OF CENTRAL FLORIDA	L GOSPER	KSC	NOT AVAILABLE	NGT10 52630	169
49	THE UNIV OF CENTRAL FLORIDA	R MCKINNEY	KSC	J SMITH	NAG10 258	168
49	TRINITY UNIV	K BAKER	JSC	K NICKELS	NAG 9 1278	481
49	TULANE UNIV	P A PARSONS-WINGERTE	GRC	D P GAVER	NAG 3 2734	233
49	TUSKEGEE UNIV	M A MEADOR	GRC	D HAGUE	NAG 3 2654	5
49	TUSKEGEE UNIV	S CAMPBELL	GRC	D DEAN	NAG 3 2432	5
49	UNIV HOUSTON-HOUSTON	B J MOTIL	GRC	D BALAKOTAIAH	NAG 3 2697	481



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49	UNIV HOUSTON-HOUSTON	S LAMBING	MSFC	A IGNATIEV	NCC 8 239	482
49	UNIV OF AKRON	A FREED	GRC	S C JANA	NCC 3 752	416
49	UNIV OF AKRON	G R HALFORD	GRC	S N PATNAIK	NAG 3 2420	415
49	UNIV OF AKRON	G R HALFORD	GRC	S N PATNAIK	NAG 3 2777	416
49	UNIV OF AKRON	G R HALFORD	GRC	V K ARYA	NCC 3 768	416
49	UNIV OF AKRON	H LEE	GRC	G SONG	NCC 3 839	417
49	UNIV OF AKRON	K R SACKSTEDER	GRC	D PERRY	NAG 3 2512	415
49	UNIV OF AKRON	M MANZO	GRC	D T HARTLEY	NCC 3 820	417
49	UNIV OF AKRON	W B DUVAL	GRC	C BATUR	NAG 3 2442	415
49	UNIV OF ALABAMA - BIRMINGHAM	K R SACKSTEDER	GRC	J BAKER	NAG 3 2560	6
49	UNIV OF ALABAMA - HUNTSVILLE	C M BELCASTRO	LARC	F C WESSLING	NAG 1 02073	8
49	UNIV OF ALABAMA - HUNTSVILLE	J PRESSON	MSFC	G WORKMAN	NCC 8 132	13
49	UNIV OF ALABAMA - HUNTSVILLE	J WEST	MSFC	W GATHINGS	NCC 8 243	14
49	UNIV OF ALABAMA - HUNTSVILLE	S C JOHNSON	MSFC	J DIMMOCK	NCC 8 146	13
49	UNIV OF ALABAMA - UNIV	K R SACKSTEDER	GRC	J BAKER	NCC 3 964	16
49	UNIV OF ALABAMA - UNIV	F Y KUO	JSC	G P	NAG 9 1419	15
49	UNIV OF ALABAMA - UNIV	A DUARTE	MSFC	P S RAY	NAG 8 1753	15
49	UNIV OF ALASKA - FAIRBANKS	W F LAU	GSFC	G W WALKER	NAS 5 01074	18
49	UNIV OF ARIZONA	C E NIEDERHAUS	GRC	C F CHEN	NAG 3 2354	25
49	UNIV OF ARIZONA	M HASAN	GRC	D NIEDERHAUS	NAG 3 2725	25
49	UNIV OF ARIZONA	P YEH	GSFC	W RYAN	NAG 5 10643	32
49	UNIV OF ARIZONA	P YEH	GSFC	W RYAN	NAG 5 11838	34
49	UNIV OF ARIZONA	C A HOSTETLER	LARC	J A REAGAN	NGT 1 52176	38
49	UNIV OF ARIZONA	D JACOBSON	MSFC	J H BURGE	NAS 8 97309	37
49	UNIV OF ARIZONA	M HUBBARD	MSFC	D R POIRIER	NCC 8 96	38
49	UNIV OF CALIFORNIA - BERKELEY	G MEYER	ARC	S S SASTRY	NAG 2 1479	67
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	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 L DIETRICH	GRC	B D SHAW	NCC 3 683	82
49	UNIV OF CALIFORNIA - DAVIS	D L DIETRICH	GRC	B D SHAW	NCC 3 890	82
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	82
49	UNIV OF CALIFORNIA - DAVIS	P YEH	GSFC	S LIN	NAG 5 10480	80
49	UNIV OF CALIFORNIA - DAVIS	W H MILLER	GSFC	S LIN	NAG 5 9025	80
49	UNIV OF CALIFORNIA - IRVINE	H D ROSS	GRC	D DUNN-RANKIN	NAG 3 2226	83
49	UNIV OF CALIFORNIA - IRVINE	B GUYNES	MSFC	F JURNAK	NAG 8 1572	85
49	UNIV OF CALIFORNIA - LOS ANGELES	K ILIFF	DFRC	A BALAKRISHNAN	NCC 4 153	93
49	UNIV OF CALIFORNIA - LOS ANGELES	D F CHAO	GRC	V K DHIR	NAG 3 2397	86
49	UNIV OF CALIFORNIA - LOS ANGELES	F P CHIARAMONTE	GRC	D J DURIAN	NAG 3 2481	86
49	UNIV OF CALIFORNIA - LOS ANGELES	K SACKSTEDER	GRC	O I SMITH	NCC 3 690	93
49	UNIV OF CALIFORNIA - LOS ANGELES	W DUVAL	GRC	S J PUTTERMAN	NAG 3 2735	86
49	UNIV OF CALIFORNIA - LOS ANGELES	K W IIIFF	SSC	A V BALAKRISHNAN	NCC 4 121	93
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	103
49	UNIV OF CALIFORNIA - SAN DIEGO	K R SACKSTEDER	GRC	F WILLIAMS	NAG 3 2554	96
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	103
49	UNIV OF CALIFORNIA - SAN DIEGO	L KALUZIENSKI	GSFC	R E ROTHSCHILD	NAG 5 8498	98
49	UNIV OF CALIFORNIA - SANTA BARBARA	F P CHIARAMONTE	GRC	E MEIBURG	NAG 3 2466	105
49	UNIV OF CALIFORNIA - SANTA BARBARA	F P CHIARAMONTE	GRC	D S CANNELL	NAG 3 2439	105
49	UNIV OF CALIFORNIA - SANTA BARBARA	F P CHIARAMONTE	GRC	E H MEIBURG	NAG 3 2493	105
49	UNIV OF CALIFORNIA - SANTA BARBARA	F P CHIARAMONTE III	GRC	G M HOMSY	NAG 3 2513	105
49	UNIV OF CALIFORNIA - SANTA BARBARA	J B MCQUILLEN	GRC	T G THEOFANOUS	NAG 3 2119	105
49	UNIV OF CALIFORNIA - SANTA BARBARA	J B MCQUILLIN	GRC	D THEOFANOUS	NAG 3 2761	105
49	UNIV OF CALIFORNIA - SANTA BARBARA	M M HASAN	GRC	E H MEIBURG	NAG 3 2785	105
49	UNIV OF CALIFORNIA - SANTA BARBARA	J H AGUI	LARC	P BANERJEE	NAG 3 2414	105
49	UNIV OF CHICAGO	C SAVINELL	GSFC	S S MEYER	NCC 5 653	205
49	UNIV OF CINCINNATI	H C DEGROH	GRC	W B KRANTZ	NAG 3 2451	417
49	UNIV OF COLORADO - BOULDER	B J MOTIL	GRC	J E COLWELL	NAG 3 2267	122
49	UNIV OF COLORADO - BOULDER	B J MOTIL	GRC	J E COLWELL	NAG 3 2400	122
49	UNIV OF COLORADO - BOULDER	B J MOTIL	GRC	D E COLWELL	NAG 3 2716	122

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49	UNIV OF COLORADO - BOULDER	F P CHIARAMONTE	GRC	J E HART	NAG 3 2402	122
49	UNIV OF COLORADO - BOULDER	F P CHIARAMONTE	GRC	N A CLARK	NAG 3 2457	122
49	UNIV OF COLORADO - BOULDER	R FRIEDMAN	GRC	M C BRANCH	NAG 3 2220	122
49	UNIV OF COLORADO - BOULDER	D CONTENT	GSFC	W CASH	NAG 5 11850	135
49	UNIV OF COLORADO - BOULDER	J R WEST	MSFC	L STODIECK	NCC 8 242	139
49	UNIV OF CONNECTICUT	E WENZEL	ARC	A BRAMMER	NAG 2 1544	143
49	UNIV OF CONNECTICUT	F P CHIARAMONTE	GRC	D FAGHRI	NCC 3 789	144
49	UNIV OF DAYTON	F J MONTEGANI	GRC	V JAIN	NGT 3 52351	419
49	UNIV OF DELAWARE	K R SACKSTER	GRC	D WANG	NCC 3 843	149
49	UNIV OF FLORIDA	B J MOTIL	GRC	A L LADD	NAG 3 2382	170
49	UNIV OF FLORIDA	D J CHATO	GRC	D GOSWAMI	NAG 3 2750	170
49	UNIV OF FLORIDA	F P CHIARAMONTE	GRC	D M HANES	NAG 3 2341	170
49	UNIV OF FLORIDA	F P CHIARAMONTE III	GRC	D NARAYANAN	NAG 3 2415	170
49	UNIV OF FLORIDA	M G JONES	LARC	L N SHEPLAK	NAG 1 01013	169
49	UNIV OF FLORIDA	M G JONES	LARC	M SHEPLAK	NAG 1 2261	169
49	UNIV OF FLORIDA	K TUCKER	MSFC	W SHYY	NAG 8 1791	171
49	UNIV OF HAWAII AT MANOA - HONOLULU	D L URBAN	GRC	B CHAO	NCC 3 696	196
49	UNIV OF IDAHO - MOSCOW	P YEH	GSFC	G MAKI	NAG 5 11734	197
49	UNIV OF IDAHO - MOSCOW	P YEH	GSFC	G MAKI	NAG 5 11805	197
49	UNIV OF IDAHO - MOSCOW	P YEH	GSFC	G DONOHOE	NAG 5 11970	197
49	UNIV OF ILLINOIS - CHICAGO CIRCLE	D L URBAN	GRC	Y CHOI	NCC 3 655	206
49	UNIV OF ILLINOIS - CHICAGO CIRCLE	K R SACKSTEDER	GRC	D K PURI	NCC 3 688	206
49	UNIV OF ILLINOIS - CHICAGO CIRCLE	S L OLSON	GRC	I K PURI	NCC 3 694	206
49	UNIV OF ILLINOIS - CHICAGO CIRCLE	W B DUVAL	GRC	D M MEGARIDIS	NAG 3 2456	205
49	UNIV OF ILLINOIS - CHICAGO CIRCLE	M DUTTA	GSFC	A FEINERMAN	NAG 5 10398	206
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49	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	F J MONTEGANI	GRC	M BRAGGS	NGT 3 52357	211
49	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	L G MATUS	GRC	I ADESIDA	NAG 3 2661	207
49	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	B MCGILL	MSFC	R H DODDS	NAG 8 1751	210
49	UNIV OF IOWA	C E NIEDERHAUS	GRC	D S MARSHALL	NAG 3 2368	222
49	UNIV OF IOWA	D P STOCKER	GRC	D CHEN	NCC 3 666	225
49	UNIV OF IOWA	R B ROGERS	GRC	A BHATTACHARJEE	NAG 3 2375	222
49	UNIV OF IOWA	R B ROGERS	GRC	D A GOREE	NAG 3 2771	222
49	UNIV OF KENTUCKY	D ASHIPS	GRC	D HUANG	NCC 3 940	229
49	UNIV OF KENTUCKY	K R SACKSTEDER	GRC	K SAITO	NAG 3 2567	228
49	UNIV OF KENTUCKY	C H ROLLINS	LARC	V SINGH	NAG 1 01036	228
49	UNIV OF MARYLAND - COLL PARK	D STOCKER	GRC	A K GUPTA	NCC 3 686	267
49	UNIV OF MARYLAND - COLL PARK	F MONTEGANI	GRC	D C WILSON JR	NGT 3 52367	269
49	UNIV OF MARYLAND - COLL PARK	F P CHIARAMONTE	GRC	D DEANE	NAG 3 2479	254
49	UNIV OF MARYLAND - COLL PARK	G A RUFF	GRC	J L TORERO	NAG 3 2568	254
49	UNIV OF MARYLAND - COLL PARK	J B MCQUILLEN	GRC	J KIM	NAG 3 2206	254
49	UNIV OF MARYLAND - COLL PARK	J B MCQUILLEN	GRC	J KIM	NCC 3 783	267
49	UNIV OF MARYLAND - COLL PARK	J H AGUI	GRC	W LOSERT	NAG 3 2736	254
49	UNIV OF MARYLAND - COLL PARK	S OLSON	GRC	T KASHIWAGI	NCC 3 919	267
49	UNIV OF MARYLAND - COLL PARK	D EVERETT	GSFC	M AUSTIN	NAG 5 12464	265
49	UNIV OF MARYLAND - COLL PARK	J ABSHIRE	GSFC	A CHRISTOU	NAG 5 12499	266
49	UNIV OF MARYLAND - COLL PARK	R AFZAL	GSFC	D CHRISTOU	NCC 5 238	268
49	UNIV OF MARYLAND - COLL PARK	C CULBERT	JSC	D AKIN	NAG 9 1290	266
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49	UNIV OF MICHIGAN - ANN ARBOR	C LEK	GRC	J B GROTBERG	NAG 3 2740	308
49	UNIV OF MICHIGAN - ANN ARBOR	D F CHAO	GRC	G TRYGGVASON	NAG 3 2332	307
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49	UNIV OF MICHIGAN - ANN ARBOR	F J MONTEGANI	GRC	A GALLIMORE	NGT 3 52348	314
49	UNIV OF MICHIGAN - ANN ARBOR	F J MONTEGANI	GRC	A D GALLIMORE	NGT 3 52349	315
49	UNIV OF MICHIGAN - ANN ARBOR	F J MONTEGANI	GRC	W J DAHM	NGT 3 52377	315
49	UNIV OF MICHIGAN - ANN ARBOR	F P CHIARAMONTE	GRC	M D SOLOMON	NAG 3 2356	307
49	UNIV OF MICHIGAN - ANN ARBOR	J E BROOKER	GRC	J F DRISCOLL	NCC 3 656	314
49	UNIV OF MICHIGAN - ANN ARBOR	K R SACKSTEDER	GRC	W DAHM	NCC 3 663	314

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49	UNIV OF MICHIGAN - ANN ARBOR	S NASH-STEVENSON	MSFC	T KAMMASH	NGT 8 52888	316
49	UNIV OF MINN	P S GREENBERG	GRC	D H PUI	NAG 3 2435	317
49	UNIV OF MISSOURI - COLUMBIA	P YEH	GSFC	C CHEN	NAG 5 10720	326
49	UNIV OF MISSOURI - COLUMBIA	C H LIN	JSC	S NAIR	NAG 9 1210	326
49	UNIV OF MISSOURI - COLUMBIA	M R KHORRAMI	LARC	O V VASILYEV	NAG 1 02085	325
49	UNIV OF MISSOURI - COLUMBIA	W K BELVIN	LARC	P PAI	NAG 1 01037	325
49	UNIV OF MISSOURI - ROLLA	S NASH-STEVENSON	MSFC	S N BALAKRISHNAN	NGT 8 52916	327
49	UNIV OF NEBRASKA - LINCOLN	P YEH	GSFC	K SAYOOD	NAG 5 8677	336
49	UNIV OF NEBRASKA - LINCOLN	P YEH	GSFC	K SAYOOD	NAG 5 9834	336
49	UNIV OF NEBRASKA - LINCOLN	P YEH	GSFC	K SAYOOD	NAG 5 10408	336
49	UNIV OF NEBRASKA - LINCOLN	P YEH	GSFC	K SAYOOD	NAG 5 12277	336
49	UNIV OF NEW MEXICO-ALBUQUERQUE	P YEH	GSFC	G DONOHUE	NAG 5 9469	361
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49	UNIV OF NEW MEXICO-ALBUQUERQUE	W H MILLER	GSFC	G K MAKI	NAG 5 10337	362
49	UNIV OF NEW ORLEANS	F P CHIARAMONTEH	GRC	J HEGSETH	NAG 3 2447	234
49	UNIV OF NEW ORLEANS	J VICKERS	MSFC	J N CRISP	NCC 8 223	234
49	UNIV OF NEW ORLEANS	R TRAVIS	SSC	R SAXTON	NGT13 52740	234
49	UNIV OF NOTRE DAME	B MOTIL	GRC	D J MCCREADY	NAG 3 2696	219
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49	UNIV OF NOTRE DAME	J H AGUI	GRC	D BARBASI	NAG 3 2384	219
49	UNIV OF NOTRE DAME	R ANSAH	GRC	D CHANG	NAG 3 2701	219
49	UNIV OF NOTRE DAME	R FRIEDMAN	GRC	A VARMA	NAG 3 2213	218
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49	UNIV OF NOTRE DAME	J L ROSEY	LARC	J E RENAUD	NAG 1 2240	218
49	UNIV OF OKLAHOMA - NORMAN	F P CHIARAMONTE	GRC	A K AGRAWAI	NAG 3 2388	424
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51	INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS	B GUYNES	MSFC	C M TRAYCOFF	NAG 8 1586	212
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51	UNIV OF CALIFORNIA - BERKELEY	M M AVERNER	ARC	D A WEISBLAT	NAG 2 1359	67
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51	UNIV OF COLORADO - BOULDER	M FONDA	ARC	R PAPPALARDO	NCC 2 1340	138
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51	UNIV OF ILLINOIS - CHICAGO CIRCLE	M M AVERNER	ARC	A LYSAKOWSKI	NAG 2 1358	205
51	UNIV OF IOWA	M ANDERSON	JSC	V G RODGERS	NAG 8 1591	224
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51	UNIV OF IOWA	B GUYNES	MSFC	J WIENECK	NAG 8 1588	224
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51	UNIV OF KANSAS MEDICAL CTR	C M WINGET	ARC	J S TASH	NAG 2 1016	227
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51	UNIV OF MARYLAND - COLL PARK	M M AVERNER	ARC	S I SUKHAREV	NAG 2 1352	253
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51	UNIV OF TENNESSEE - KNOXVILLE	D JAN	JPL	G S SAYLER	NAG 9 1080	465
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51	UNIV. OF TX-HLTH SCIENCE CTR-HOUSTON	B V GUYNES	MSFC	L P RUTZKY	NAG 8 1585	484
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51	UNIV OF WISCONSIN - MADISON	M M AVERNER	ARC	E SCHULTZ	NAG 2 1220	540
51	UNIV OF WISCONSIN - MADISON	M M AVERNER	ARC	P MASSON	NAG 2 1336	540
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51	UNIV OF WISCONSIN - MILWAUKEE	D R MORRISON	JSC	P I LELKES	NCC 8 173	547
51	UTAH STATE UNIV	C P MCKAY	ARC	L S POWERS	NCC 2 5466	500
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54	ARIZONA STATE UNIV	D RISEN	JSC	B C TOWE	NAG 9 1359	22
54	CLEVELAND STATE UNIV	T M SCOTT	GRC	D CLAPHAM	NAG 3 2664	405
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56	UNIV. OF TEXAS MD ANDERSON CANCER CTR	C LLOYD	JSC	J REUBEN	NAG 9 1454	484
56	UNIV OF TEXAS MED BRAN - GALVESTON	J W HINES	ARC	J F LEARY	NAS 2 02059	483
56	UNIV OF TEXAS MED BRAN - GALVESTON	A LEE	JSC	A FERRANDO	NAS 9 97147	483
56	UNIV OF TEXAS MED BRAN - GALVESTON	C LLOYD	JSC	A A FERRANDO	NAG 9 1155	483
56	UNIV OF TEXAS MED BRAN - GALVESTON	M ANDERSON	JSC	A D BARRET	NAS 9 01006	483
56	UNIV OF TEXAS MED BRAN - GALVESTON	V CHOPPA	MSFC	V CHOPPA	NCC 8 170	483
56	UNIV OF TX-HLTH SCI CTR-SAN ANTONIO	S GONDA	JSC	J M JESSUP	NAG 9 1206	483
56	UNIV. OF TX-HLTH SCIENCE CTR-HOUSTON	C SAWIN	JSC	B BUTLER	NAG 9 1040	485
56	UNIV. OF TX-HLTH SCIENCE CTR-HOUSTON	D RISIN	JSC	L P RUTZKY	NAG 9 1353	485
56	UNIV. OF TX-HLTH SCIENCE CTR-HOUSTON	J T JAMES	JSC	A HOLIAN	NAG 9 1144	485
56	UTAH STATE UNIV	K DAUES	JSC	G BINGHAM	NAG 9 1284	499
56	UTAH STATE UNIV	D RISEN	SSC	T HAMMOND	NCC13 02001	500
56	VIRGINIA COMMONWEALTH UNIV	A LEE	JSC	D ECKBURG	NAS 9 19539	526
59	ALABAMA A&M UNIV	A CARDENAS	ARC	P G KALE	NAG 2 1130	1
59	ARIZONA STATE UNIV	R A GRYMES	ARC	J D FARMER	NCC 2 1051	22
59	ARIZONA STATE UNIV	R V MORRIS	JSC	P R CHRISTENSON	NAG 9 1331	22
59	BAYLOR COLL OF MED	C LLOYD	JSC	C SMITH	NAG 9 1253	468
59	BAYLOR COLL OF MED	C W LLOYD	JSC	A D LE BLANC	NAG 9 1151	468
59	BAYLOR COLL OF MED	F A CUCINOTTA	JSC	L E PETERSON	NAG 9 1052	468
59	BRANDEIS UNIV	C W LLOYD	JSC	J LACKNER	NAG 9 1038	279
59	CALIFORNIA INST OF TECH	P DOTY	MSFC	W K RHIM	NAG 8 1743	47
59	CALIFORNIA INST OF TECH	P DOTY	MSFC	W L JOHNSON	NAG 8 1744	47
59	COLORADO STATE UNIV	S POTTER	ARC	G VOGT	NCC 2 1099	120
59	COLORADO STATE UNIV	W M KNOTT	KSC	A N REDDY	NAG10 234	120
59	COLUMBIA UNIV	F A CUCINOTTA	JSC	E J HALL	NAG 9 1148	370
59	CORNELL UNIV	H W JONES	ARC	J B HUNTER	NCC 2 5459	376
59	EAST TENNESSEE STATE UNIV	B GUYNES	MSFC	L WILSON	NAG 8 1375	461
59	FINCH UNIV HEALTH SCI/CHICAGO MED SCH	B GUYNES	MSFC	R S KAPLAN	NAG 8 1827	198
59	HARVARD UNIV	R A GRYMES	ARC	A H KNOLL	NCC 2 1053	282
59	IOWA STATE UNIV	D JAN	JPL	M D PORTER	NAG 9 1191	221
59	JOHNS HOPKINS UNIV	J A KAYE	GSFC	J YEE	NAG 5 7552	240
59	LOUISIANA STATE UNIV - BATON ROUGE	D L DEVINCENZI	ARC	J R BATTISTA	NAG 2 1320	230
59	MARQUETTE UNIV	D BAUMANN	JSC	D L COSTILL	NCC 9 116	539
59	MASSACHUSETTS INST OF TECH	V SCHNEIDER	GSFC	R COHEN	NAG 5 4989	287
59	MASSACHUSETTS INST OF TECH	D K BAUMAN	JSC	C M OMAN	NAS 9 00097	294
59	MASSACHUSETTS INST OF TECH	J DETROVE	JSC	C M OMAN	NAG 9 1004	293
59	MOREHOUSE SCH MED	P COWLINGS	ARC	E OFILI	NCC 2 1322	187
59	MOREHOUSE SCH MED	C SAMS	JSC	K DUTT	NAG 9 1164	187
59	MT SINAI SCH OF MED OF THE CUNY	V SCHNEIDER	GSFC	H KAUFMANN	NAG 5 6276	378
59	MT SINAI SCH OF MED OF THE CUNY	M E ANDERSON	JSC	S MOORE	NCC 9 128	378
59	NEW MEXICO HIGHLANDS UNIV	D SMCKAY	JSC	J R JUAREZ	NAG 9 1394	357
59	NORTH CAROLINA STATE UNIV. - RALEIGH	D P LISKOWSKY	GSFC	E DAVIES	NAG 5 3743	394
59	NORTHEASTERN OHIO UNIV COL OF MED	M M AVERNER	GSFC	W J LANDIS	NAG 5 7789	409
59	NORTHEASTERN UNIV	P DOTY	MSFC	A KARMA	NAG 8 1668	296

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59	OHIO STATE UNIV	R MORRIS	JSC	J BIGHAM	NGT 9 51	414
59	OLD DOMINION UNIV	J R COMSTOCK	LARC	J M STARK	NGT 1 52232	515
59	PENN STATE UNIV. - UNIV. PARK	R A GRYMES	ARC	H OHMOTO	NCC 2 1057	444
59	PENN STATE UNIV. - UNIV. PARK	M AVERNER	GSFC	N V FEDOROFF	NAG 5 3970	439
59	PENN STATE UNIV. - UNIV. PARK	M AVERNER	GSFC	R CYR	NAG 5 4840	439
59	PENN STATE UNIV. - UNIV. PARK	C LLOYD	JSC	J A PAWELCZYK	NAG 9 1173	443
59	RICE UNIV	D LASKOWSKY	GSFC	L MCINTIRE	NAG 5 4072	471
59	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	G FOGLEMAN	GSFC	H JANES	NAG 5 6011	353
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 COLL	G J FISHMAN	MSFC	J G STACY	NAG 8 1625	232
59	SPELMAN COLL	D O FRAIZER	MSFC	O SCRIVEN	NCC 8 194	188
59	STANFORD UNIV	R T WHALEN	ARC	B LUSIGNAN	NGT 2 52246	66
59	STANFORD UNIV	A JANETOS	GSFC	P MATSON	NAG 5 6615	60
59	STATE UNIV OF NY - STONY BROOK	V SCHNEIDER	GSFC	C T RUBIN	NAG 5 3950	384
59	TENNESSEE TECHNOLOGICAL UNIV	D HATHAWAY	MSFC	S HAN	NAG 8 1631	463
59	TEXAS A&M UNIV	C BLACK	KSC	D PILLAI	NGT10 52628	479
59	TEXAS TECH UNIV	D L HENNINGER	JSC	J L SMITH	NCC 9 108	481
59	THE SCRIPPS RES INST (TSRI) -LA JOLLA	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	168
59	TUFTS UNIV	D JAN	JPL	S P KOUNAVES	NAG 9 1182	297
59	TUSKEGEE UNIV	P X CALLAHAN	ARC	W A HILL	NAG 2 6049	5
59	TUSKEGEE UNIV	R WHEELER	KSC	D MARTLEY	NAG10 209	6
59	TUSKEGEE UNIV	S POTTER	KSC	D HILL	NAG10 281	6
59	UNIV HOUSTON-HOUSTON	C W LLOYD	JSC	D A MARTINEZ	NAG 9 1152	482
59	UNIV OF ALABAMA - BIRMINGHAM	D K COLLINS	MSFC	L J DELUCAS	NAS 8 40189	7
59	UNIV OF ALABAMA - HUNTSVILLE	P M DOTY	MSFC	M T ZUGRAV	NAG 8 1456	12
59	UNIV OF ALABAMA - HUNTSVILLE	P M DOTY	MSFC	R J NAUMANN	NAG 8 1464	12
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	36
59	UNIV OF CALIFORNIA - IRVINE	S ROBBINS	MSFC	A MCPHERSON	NAS 8 00017	85
59	UNIV OF CALIFORNIA - IRVINE	S ROBBINS	MSFC	A MCPHERSON	NAS 8 00019	85
59	UNIV OF CALIFORNIA - LOS ANGELES	R A GRYMES	ARC	B RUNNEGAR	NCC 2 1050	93
59	UNIV OF CALIFORNIA - SAN DIEGO	J MECK	JSC	P J MILLS	NCC 9 105	103
59	UNIV OF CALIFORNIA - SAN DIEGO	J MECK	JSC	M G ZEIGLER	NCC 9 106	103
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	104
59	UNIV OF CALIFORNIA - SANTA BARBARA	C LLOYD	JSC	M ECKSTIEN	NAG 9 1329	108
59	UNIV OF CALIFORNIA - SANTA CRUZ	M FONDA	ARC	J PEARSE	NCC 2 5351	112
59	UNIV OF COLORADO - BOULDER	R A GRYMES	ARC	B JAKOSKI	NCC 2 1052	138
59	UNIV OF COLORADO - BOULDER	M AVERNER	GSFC	A STAEHELIN	NAG 5 3967	123
59	UNIV OF COLORADO - BOULDER	S J LAMBING	MSFC	G MORGENTHALER	NCC 8 131	139
59	UNIV OF COLORADO - DENVER	R GLOBUS	ARC	S NIELSON-PREISS	NGT 2 52291	142
59	UNIV. OF CONNECTICUT HEALTH CTR	M AVERNER	GSFC	D ROWE	NAG 5 6316	143
59	UNIV OF FLORIDA	A L FROST	MSFC	B CARROLL	NAG 8 1821	171
59	UNIV OF GEORGIA	C KUNDROT	MSFC	B WANG	NCC 8 233	189
59	UNIV OF HOUSTON - CLEAR LAKE	M POWELL	JSC	R S CHHIKARA	NAG 9 1083	485
59	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	J R ROGERS	MSFC	C F ZOKOSKI	NAG 8 1376	210
59	UNIV OF MISSOURI - COLUMBIA	M AVERNER	GSFC	T A JONES	NAG 5 4607	325
59	UNIV OF MISSOURI - COLUMBIA	R P KEHOE	JSC	G M CHIPPENDALE	NAG 9 1230	326
59	UNIV OF NEVADA - RENO	M T FLYNN	ARC	V D ADAMS	NCC 2 5443	338
59	UNIV OF N TEXAS HLTH SCI CTR - FT. WORTH	V SCHNEIDER	GSFC	P B RAVEN	NAG 5 4668	486
59	UNIV OF PENNSYLVANIA	C W LLOYD	JSC	H VAN D	NAG 9 1161	448
59	UNIV OF PENNSYLVANIA	D RISEN	JSC	L M SHAPIRO	NAG 9 1357	448
59	UNIV OF PITTSBURGH	C W LLOYD	JSC	T H MONK	NAG 9 1036	450
59	UNIV OF PUERTO RICO - MAYAGUEZ	J SAYER	KSC	G COLON	NAG10 257	549
59	UNIV OF ROCHESTER	C TALLEY	MSFC	D WU	NAG 8 1382	388
59	UNIV OF SOUTHERN CALIFORNIA	B J WOOLFORD	JSC	U NEUMANN	NAG 9 1165	116
59	UNIV OF TENNESSEE - KNOXVILLE	F A CUCINOTTA	JSC	L W TOWNSEND	NAG 9 1123	465
59	UNIV OF TEXAS - EL PASO	F HORZ	JSC	L E MURR	NAG 9 1100	494
59	UNIV OF TEXAS	V SCHNEIDER	GSFC	B LEVINE	NAG 5 4846	484
59	UNIV OF TEXAS MED BRAN - GALVESTON	R BILLICA	JSC	J R DAVIS	NCC 9 81	483
59	UNIV OF TX-HLTH SCI CTR-SAN ANTONIO	W M KNOTT	KSC	M L WIEDERHOLD	NAG10 180	483
59	UNIV. OF TX-HLTH SCIENCE CTR-HOUSTON	M AVERNER	GSFC	E DURBAN	NAG 5 4710	484
59	UNIV. OF TX-HLTH SCIENCE CTR-HOUSTON	J MECK	JSC	R F LODATO	NCC 9 103	485

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59	UNIV OF VIRGINIA	B Q GUYNES	MSFC	M C WIENER	NAG 8 1832	520
59	UNIV OF WISCONSIN - LA CROSSE	J D SMITH	ARC	S O SENGER	NCC 2 1163	539
59	UNIV OF WYOMING	C LUNDQUIST	GSFC	R E GANTENBEIN	NAG 9 1176	547
59	UTAH STATE UNIV	R WHEELER	KSC	P GROSSEL	NGT10 52617	501
59	VANDERBILT UNIV	R GRUGEL	MSFC	A V ANIKUMER	NAG 8 1745	467
59	WASHINGTON STATE UNIV	M AVERNER	GSFC	B POOVAIAH	NAG 5 4841	536
59	WRIGHT STATE UNIV	R J WILLIAMS	GSFC	S R MOHLER	NGT 5 30091	423
61	CLEVELAND STATE UNIV	B GUYNES	MSFC	J M BELOVICH	NAG 8 1584	405
61	DREXEL UNIV	N PELLIS	JSC	P LELKES	NAG 9 1380	435
61	MOREHOUSE COLL	R RICHMOND	MSFC	G L SANFORD	NAG 8 1636	187
61	NY UNIV	A J AHUMADA	ARC	M S LANDY	NCC 2 5513	379
61	OLD DOMINION UNIV	A T POPE	LARC	F G FREEMAN	NGT 1 52219	514
61	OLD DOMINION UNIV	A T POPE	LARC	G D COATES	NGT 1 52220	515
61	RUTGERS STATE UNIV OF NJ NEW BRUNS	J B HARTLEY	GSFC	Z KOLBER	NAS 5 99138	355
61	STANFORD UNIV	R W REMINGTON	ARC	J E GABRIELI	NCC 2 5261	64
61	UNIV OF MICHIGAN - ANN ARBOR	C LLOYD	JSC	G L AMIDON	NAG 9 1154	313
61	UNIV OF PITTSBURGH	B GUYNES	MSFC	X L WU	NAG 8 1587	450
61	UNIV OF TENNESSEE - KNOXVILLE	A NURRIDIN	HQ	G SAYLER	NGT 5 50206	466
62	FLORIDA A&M UNIV	R MCKINNEY	KSC	B MCCUNE	NAG10 248	162
62	GEORGIA INST OF TECH	J ORASANU	ARC	U M FISCHER	NCC 2 1332	184
62	HERITAGE COLL	R TRAVIS	SSC	J W FALCO	NAG13 99027	527
62	OLD DOMINION UNIV	P C SHUTTIE	LARC	D D DAVIS	NCC 1 2303	510
62	SAN FRANCISCO STATE UNIV	M E DUENAS	ARC	S UJLAKI	NCC 2 6059	54
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	6
69	CARNEGIE - MELLON UNIV	J ORASANU	ARC	K CARLEY	NAG 2 1569	431
69	GEORGE MASON UNIV	S M CASNER	ARC	D B DAVIS	NAG 2 1289	503
69	GEORGIA INST OF TECH	J M ORASANU	ARC	U M FISCHER	NCC 2 1124	184
69	MASSACHUSETTS INST OF TECH	S C LOZITO	ARC	R J HANSMAN	NAG 2 1299	284
69	MASSACHUSETTS INST OF TECH	S C LOZITO	ARC	T B SHERIDAN	NAG 2 729	284
69	NEW MEXICO STATE UNIV - LAS CRUCES	J ORASANU	ARC	N J COOKE	NAG 2 1562	358
69	NY UNIV	A J AHUMADA	ARC	M LANDY	NCC 2 5417	378
69	NY UNIV	B L BEARD	ARC	M S LANDY	NCC 2 5472	378
69	NORTH CAROLINA STATE UNIV. - RALEIGH	I BARSHI	ARC	D H MERSHON	NAG 2 1281	394
69	NORTH CAROLINA STATE UNIV. - RALEIGH	L J PRINZEL	LARC	D KABER	NAG 1 01039	393
69	NORTH CAROLINA STATE UNIV. - RALEIGH	L J PRINZEL, III	LARC	D KABER	NGT 1 01004	396
69	NORTH CAROLINA STATE UNIV. - RALEIGH	L J PRINZEL	LARC	D B KABER	NAG 1 02056	394
69	NORTH CAROLINA STATE UNIV. - RALEIGH	P TROUTMAN	LARC	H K KHACHATOORIAN	NGT 1 02010	396
69	NORTHWESTERN UNIV	B G KANKI	ARC	E J CZEPIEL	NCC 2 1098	201
69	OHIO UNIV	J M ORASANU	ARC	C E MCCOY	NCC 2 1030	415
69	OHIO UNIV	J ORASANU	ARC	C E MCCOY	NCC 2 1258	415
69	OLD DOMINION UNIV	I BARSHI	ARC	D S MCNAMARA	NAG 2 1481	512
69	OLD DOMINION UNIV	A T POPE	LARC	T L DICKINSON	NAG 1 2252	510
69	OLD DOMINION UNIV	A T POPE	LARC	M SCERBO	NAG 1 02062	511
69	OLD DOMINION UNIV	A T POPE	LARC	F G FREEMAN	NCC 1 364	512
69	OLD DOMINION UNIV	J R COMSTOCK	LARC	J P BLISS	NGT 1 01019	514
69	OLD DOMINION UNIV	L J PRENZEL	LARC	F G FREEMAN	NGT 1 01015	514
69	OLD DOMINION UNIV	L J PRINZEL	LARC	F G FREEMAN	NCC 1 01012	513
69	OLD DOMINION UNIV	L J PRINZEL	LARC	F G FREEMAN	NGT 1 52231	515
69	OLD DOMINION UNIV	P C SCHUTTE	LARC	D D DOVES	NGT 1 01021	514
69	OLD DOMINION UNIV	P C SCHUTTE	LARC	M MIHALECZ	NGT 1 52230	515
69	OLD DOMINION UNIV	T PINELLI	LARC	G J MCAULIFFE	NGT 1 02020	514
69	OREGON GRADUATE INST OF SCI OECH	A J AHUMADA	ARC	M PAVEL	NCC 2 1190	426
69	OREGON GRADUATE INST OF SCI OECH	B L BEARD	ARC	M PAVEL	NCC 2 1215	426
69	PENN STATE UNIV. - UNIV. PARK	L J PRINZEL	LARC	W J RAY	NAG 1 2273	437
69	RICE UNIV	B L BEARD	ARC	M BYRNE	NCC 2 1219	472
69	RICE UNIV	D C FOYLE	ARC	M BYRNE	NCC 2 1321	473
69	SAN FRANCISCO STATE UNIV	J M ORASANU	ARC	K L MOSIER	NAG 2 1285	54
69	SAN JOSE STATE UNIV	B BEARD	ARC	K CORKER	NCC 2 1313	56
69	SAN JOSE STATE UNIV	D C FOYLE	ARC	K CORKER	NCC 2 1307	56
69	SAN JOSE STATE UNIV	D FOYLE	ARC	K CORKER	NAG 2 1563	55
69	SANTA CLARA UNIV	B KANKI	ARC	J C TAYLOR	NCC 2 1320	58
69	TEXAS A&M UNIV	S NASH-STEVEN	MSFC	S SMITH	NGT 8 52913	479
69	THE CATHOLIC UNIV OF AMERICA	L J PRINZEL	LARC	R PARASURAMAN	NAG 1 01066	154
69	THE CATHOLIC UNIV OF AMERICA	P C SHUTTIE	LARC	S M GALSTER	NGT 1 52190	159

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69	UNIV OF ARKANSAS - LITTLE ROCK	C SAWIN	JSC	P A TESCH	NAG 9 1061	39
69	UNIV OF CALIFORNIA - IRVINE	J MULLIGAN	ARC	T M DZMURA	NCC 2 5378	85
69	UNIV OF COLORADO - BOULDER	I BARSHI	ARC	A F HEALY	NCC 2 1112	138
69	UNIV OF COLORADO - BOULDER	I BARSHI	ARC	A F HEALY	NCC 2 1310	138
69	UNIV OF COLORADO - BOULDER	I BARSHI	ARC	L E BOURNE	NAG 2 1561	122
69	UNIV OF IDAHO - MOSCOW	B G KANKE	ARC	L T OSTROM	NCC 2 1174	198
69	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	B BEARD	ARC	C D WICKENS	NCC 2 1214	211
69	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	B L BEARD	ARC	C WICKENS	NCC 2 1293	211
69	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D C FOYLE	ARC	C D WICKENS	NAG 2 1120	206
69	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	D FOYLE	ARC	C D WICKENS	NAG 2 1535	207
69	UNIV OF ILLINOIS AT URBANA-CHAMPAIGN	I BARSHI	ARC	H L TAYLOR	NAG 2 1282	206
69	UNIV OF MASSACHUSETTS - AMHERST	J M ORASANU	ARC	D FISHER	NAG 2 1551	298
69	UNIV OF NEVADA - RENO	J B MULLIGAN	ARC	M A CROGNALE	NCC 2 5503	339
69	UNIV OF OREGON - EUGENE	I BARSHI	ARC	R MAURO	NCC 2 1089	430
69	UNIV OF OREGON - EUGENE	I BARSHI	ARC	R MAURO	NCC 2 1304	430
69	UNIV OF VIRGINIA	M K KAISER	ARC	D R PROFFITT	NCC 2 1093	520
69	UNIV OF WEST FLORIDA	D C FOYLE	ARC	D L STILL	NAG 2 1225	177
69	UNIV OF WEST FLORIDA	J DEMAIO	ARC	A K RAJ	NAG 2 1490	177
69	WAYNE STATE UNIV	B KANKI	ARC	A BATTEAU	NCC 2 1318	317
71	RUTGERS STATE UNIV OF NJ NEW BRUNS	R TRAVIS	SSC	D HARRIS	NGT13 52758	356
71	TULANE UNIV	T TRAVIS	SSC	W ANDREWS	NGT13 52754	234
73	SOUTHWEST TEXAS STATE UNIV	W A LARSEN	JSC	K MARGERISON	NCC 9 54	474
74	WRIGHT STATE UNIV	J ORASANU	ARC	V SHALIN	NCC 2 1351	423
75	UNIV OF MARYLAND - COLL PARK	J BOYCE	HQ	L MUKHIN	NASW 00028	267
76	LAWSON STATE COMM COLL	W J LOVE	MSFC	B CRAWFORD	NAG 8 1871	5
79	ALBANY STATE UNIV	R J MCKINNEY	KSC	D HODGES-TILLER	NAG10 265	178
79	BETHUNE - COOKMAN COLL	W B WILLIAMS	KSC	A D TAYLOR	NAG10 269	159
79	FLA INTERNATIONAL UNIV	R MCKINNEY	KSC	C MENDEZ	NAG10 254	161
79	FLORIDA A&M UNIV	R J MCKINNEY	KSC	S C MOBLEY	NAG10 267	162
79	HAMPTON UNIV	R A HATHAWAY	LARC	R SCHWAN	NAG 1 2331	505
79	MIAMI-DADE COMM COLL	D CULBERTSON	KSC	E J PADRON	NAG10 282	167
79	SAVANNAH STATE UNIV	R J MCKINNEY	KSC	D SAJWAN	NAG10 266	188
79	TUSKEGEE UNIV	C D BLACK	KSC	H J FINDLAY	NAG10 298	6
79	UNIV OF MICHIGAN - ANN ARBOR	J F DOWDY	MSFC	H T WRIGHT	NGT 8 52864	316
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	ALABAMA A&M UNIV	G BUCKINGHAM	KSC	E TEMPLE	NAG10 324	2
99	ALBANY STATE UNIV	R F LAWRENCE	GRC	G WRENSFORD	NAG 3 2806	177
99	ALCORN STATE UNIV	N SULLIVAN	JSC	D ADDIE	NAG13 98010	322
99	AMERICAN RIVER COLL	D HALE	GSFC	S GRIFFITH	NAG 5 12576	40
99	ARIZONA STATE UNIV	A TUYAHOV	GSFC	D BOYER	NAG 5 10899	21
99	ARIZONA STATE UNIV	D SENSKE	GSFC	M A PRESLEY	NAG 5 10214	21
99	ARIZONA STATE UNIV	D SENSKE	GSFC	J FINK	NAG 5 11655	22
99	ARIZONA STATE UNIV	D SENSKE	GSFC	R GREELEY	NAG 5 11787	22
99	ARIZONA STATE UNIV	J BOYCE	GSFC	A S MCEWEN	NAG 5 10268	21
99	ARIZONA STATE UNIV	K BLANDING	GSFC	T SHARP	NGT 5 50276	23
99	ARIZONA STATE UNIV	M MEYER	GSFC	P KNAUTH	NAG 5 9430	20
99	ARIZONA STATE UNIV	M MEYER	GSFC	R BLANKENSHIP	NAG 5 10689	21
99	ARIZONA STATE UNIV	M MEYER	GSFC	E SHOCK	NAG 5 12543	22
99	AUBURN UNIV	J E DUDENHOEFER	GRC	D W BRANDHORST	NCC 3 511	3
99	AUBURN UNIV	S COLEMAN	MSFC	C MORIARTY	NCC 8 247	4
99	BALL STATE UNIV	D WICKLAND	GSFC	A F RAHMAN	NAG 5 11261	212
99	BARNARD COLL	L P CHAMBERS	GSFC	R SILVER	NAG 5 11863	363
99	BAYLOR COLL OF MED	C LLOYD	JSC	B A BRODY	NAG 9 1153	468
99	BETHUNE - COOKMAN COLL	S DUTCZAK	KSC	A LONG	NCC10 55	160
99	BLUEFIELD STATE COLL	M MATHEWS	GSFC	F WOOTEEN BLANKS	NAG 5 11072	537
99	BOSTON COLL	W J WAGNER	GSFC	D F WEBB	NAG 5 10833	275
99	BOSTON UNIV	D WICKLAND	GSFC	R B MYNENI	NAG 5 10156	276
99	BOSTON UNIV	J HILLMAN	GSFC	M MENDILLO	NAG 5 12095	278
99	BOSTON UNIV	J SHARBER	GSFC	G ERICKSON	NAG 5 9110	276
99	BOSTON UNIV	J SHARBER	GSFC	M MENDILLO	NAG 5 10286	277
99	BOSTON UNIV	J SPANN	GSFC	H E SPENCE	NAG 5 12003	278
99	BOSTON UNIV	K BLANDING	GSFC	S KANDARIAN	NGT 5 50307	278
99	BOSTON UNIV	L SMITH	GSFC	M OPPENHEIM	NGT 5 50288	278
99	BOSTON UNIV	L SMITH	GSFC	L ODDSSON	NGT 5 50309	279

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99	BOSTON UNIV	M MELLOTT	GSFC	M OPPENHEIM	NAG 5 9444	276
99	BOSTON UNIV	M WEI	GSFC	C WOODSTOCK	NGT 5 30401	278
99	BOSTON UNIV	M WEI	GSFC	M FRIEDL	NGT 5 30405	278
99	BOSTON UNIV	M WEI	GSFC	R MYNENI	NGT 5 30462	278
99	BOSTON UNIV	P CRANE	GSFC	S CHAKRABARTI	NAG 5 11454	277
99	BOWIE STATE UNIV	C HOLLINGSWORTH	GSFC	V B GUILFORD	NAG 5 9843	236
99	BOWIE STATE UNIV	D MENCHAN	GSFC	D W CRIM	NAG 5 8370	236
99	BOWIE STATE UNIV	D MENCHAN	GSFC	D LANGDON	NAG 5 9458	236
99	BOWIE STATE UNIV	D MENCHAN	GSFC	D LANGDON	NAG 5 10697	236
99	BOWIE STATE UNIV	D MENCHAN	GSFC	D LANGDON	NAG 5 12165	237
99	BOWIE STATE UNIV	D MENCHAN	GSFC	J E TAYLOR	NAG 5 12237	237
99	BOWIE STATE UNIV	D MENCHAN	GSFC	E J DAVIS	NCC 5 516	237
99	BOWIE STATE UNIV	P CROUSE	GSFC	N WAKIM	NAG 5 8787	236
99	BOWLING GREEN STATE UNIV	V L KLOERIS	JSC	D L HENTGES	NAG 9 1186	400
99	BROWN UNIV	D D DETROYE	GSFC	P H SCHULTZ	NGT 5 40106	454
99	BROWN UNIV	D E SMITH	GSFC	J W HEAD	NAG 5 6144	452
99	BROWN UNIV	D SENSKE	GSFC	J W HEAD	NAG 5 11774	453
99	BROWN UNIV	D SENSKE	GSFC	J W HEAD	NAG 5 11775	453
99	BROWN UNIV	M MEYER	GSFC	P H SCHULTZ	NAG 5 12327	454
99	BROWN UNIV	K BLANDING	HQ	R BRANDENBERGER	NGT 5 50355	454
99	BROWN UNIV	H CARR	SSC	J F MUSTARD	NCC13 98005	454
99	CALIFORNIA INST OF TECH	B BETTS	GSFC	J L KIRSCHVINK	NAG 5 9687	44
99	CALIFORNIA INST OF TECH	D E SMITH	GSFC	D O MUHLEMAN	NAG 5 4437	41
99	CALIFORNIA INST OF TECH	D SENSKE	GSFC	T AHRENS	NAG 5 10198	44
99	CALIFORNIA INST OF TECH	G STRINGFELLOW	GSFC	J ZMUIDZINAS	NAG 5 9493	44
99	CALIFORNIA INST OF TECH	J BOYCE	GSFC	A P INGERSOLL	NAG 5 11214	46
99	CALIFORNIA INST OF TECH	J BREDEKAMP	GSFC	S DJORGOVSKI	NAG 5 9482	44
99	CALIFORNIA INST OF TECH	J BREDEKAMP	GSFC	S DJORGOVSKI	NAG 5 9603	44
99	CALIFORNIA INST OF TECH	J F SPANN	GSFC	Y L YUNG	NAG 5 10901	46
99	CALIFORNIA INST OF TECH	K BLANDING	GSFC	A ALBEE	NAG 5 11932	47
99	CALIFORNIA INST OF TECH	K BLANDING	GSFC	G BLAKE	NGT 5 50231	48
99	CALIFORNIA INST OF TECH	K BLANDING	GSFC	F CULICK	NGT 5 50280	48
99	CALIFORNIA INST OF TECH	K BLANDING	GSFC	N YEH	NGT 5 50308	48
99	CALIFORNIA INST OF TECH	K BLANDING	GSFC	M KAMIONKOWSKI	NGT 5 50339	49
99	CALIFORNIA INST OF TECH	K BLANDING	GSFC	A ALBEE	NGT 5 60003	49
99	CALIFORNIA INST OF TECH	L K SMITH	GSFC	A LANGE	NGT 5 50278	48
99	CALIFORNIA INST OF TECH	L SMITH	GSFC	A LANGE	NGT 5 50249	48
99	CALIFORNIA INST OF TECH	M WEI	GSFC	J STOCK	NGT 5 30393	48
99	CALIFORNIA INST OF TECH	M WEI	GSFC	M SIMONS	NGT 5 30407	48
99	CALIFORNIA INST OF TECH	M WEI	GSFC	M OKUMURA	NGT 5 30452	48
99	CALIFORNIA INST OF TECH	P E HUNTER	GSFC	R BRUNNER	NAG 5 12000	47
99	CALIFORNIA INST OF TECH	T MORGAN	GSFC	M BROWN	NAG 5 11273	46
99	CALIFORNIA INST OF TECH	W WAGNER	GSFC	C S COHEN	NAG 5 12492	47
99	CALIFORNIA INST OF TECH	J BOYCE	HQ	A ALBEE	NAG 5 11257	46
99	CALIFORNIA STATE UNIV - LONG BEACH	M PHELPS	GSFC	R WEST	NAG 5 12361	50
99	CALIFORNIA STATE UNIV - LOS ANGELES	M MCCARTY	DFRC	T ADENIKA-MORROW	NAG 4 173	50
99	CALIFORNIA STATE UNIV - LOS ANGELES	B WHITE	GSFC	T ADENIKA-MORROW	NCC 5 439	51
99	CALIFORNIA STATE UNIV - LOS ANGELES	J MALONE	GSFC	H R BOUSSALIS	NAG 5 8889	51
99	CALIFORNIA STATE UNIV - LOS ANGELES	M STOUTSENBERGER	GSFC	M EPSTEIN	NAG 5 9160	51
99	CALIFORNIA STATE UNIV - NORTHRIDGE	M MCCARTHY	DFRC	W FURUMOTO	NAG 4 162	51
99	CALIFORNIA STATE UNIV - NORTHRIDGE	C PERSON	GSFC	S RENGARAJAN	NAG 5 9726	51
99	CALIFORNIA STATE UNIV - NORTHRIDGE	C PERSON	GSFC	B BAVARIAN	NCC 5 513	51
99	CALIFORNIA STATE UNIV - NORTHRIDGE	M MATTHEWS	GSFC	C SHUBIN	NCC 5 489	51
99	CALIFORNIA STATE UNIV	M MC CARTHY	DFRC	E KRINSKY	NAG 4 161	52
99	CALIFORNIA STATE UNIV	C HILL	JSC	C LEE	NAG13 99010	52
99	CAPITOL COLL	D MENCHAN	GSFC	H JARRELL	NAG 5 12066	237
99	CARNEGIE - MELLON UNIV	D SMITH	ARC	R SIMMONS	NGT 2 52286	434
99	CARNEGIE - MELLON UNIV	J BREDEKAMP	GSFC	C GLYMOUR	NAG 5 9309	431
99	CARNEGIE - MELLON UNIV	K BLANDING	GSFC	A W MOORE	NGT 5 50279	434
99	CARNEGIE - MELLON UNIV	P E HUNTER	GSFC	R NICHOL	NAG 5 10740	432
99	CARNEGIE - MELLON UNIV	P E HUNTER	GSFC	C GLYMOUR	NAG 5 11998	432
99	CARNEGIE - MELLON UNIV	R E GABRYS	GSFC	P COPPIN	NCC 5 431	434
99	CARNEGIE - MELLON UNIV	A KEYS	MSFC	L R CARLEY	NAG 8 1799	432
99	CASE WESTERN RESERVE UNIV	G STRINGFELLOW	GSFC	G STARKMAN	NAG 5 11059	401
99	CASE WESTERN RESERVE UNIV	K BLANDING	GSFC	J T'HEN	NGT 5 50369	404
99	CASE WESTERN RESERVE UNIV	K BLANDING	GSFC	R QUINN	NGT 5 50413	404

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99	CAYUGA COUNTY COMM COLL	D POWE	SSC	R FRESTOPKIK	NAG13 00043	364
99	CAYUGA COUNTY COMM COLL	M MICK	SSC	R BROWER	NAG13 00044	364
99	CAYUGA COUNTY COMM COLL	W DAMAGGIO	SSC	M FLINTON	NAG13 02053	364
99	CHICAGO STATE UNIV	C HOLLINGSWORTH	GSFC	J RICHARD	NAG 5 12091	198
99	CHRISTOPHER NEWPORT UNIV	D GABRYS	GSFC	D B CATON	NCC 5 435	502
99	CHRISTOPHER NEWPORT UNIV	D BUSHNELL	LARC	L LAMBERT	NAG 1 2284	501
99	CITY U COL OF NY YORK COLL	M STOUTSENBERGER	GSFC	J SCHEIN	NAG 5 7532	364
99	CITY UNIV OF NY CITY COLL	R F LAWRENCE	GRC	L P JOHNSON	NAG 3 2258	364
99	CITY UNIV OF NY CITY COLL	C PERSON	GSFC	F MOSHARY	NAG 5 9732	365
99	CITY UNIV OF NY CITY COLL	J HARRINGTON	GSFC	S AUSTIN	NCC 5 530	366
99	CITY UNIV OF NY CITY COLL	M MATEU	GSFC	J BARBA	NAG 5 4911	365
99	CITY UNIV OF NY CITY COLL	M MATEU	GSFC	J BARBA	NAG 5 10845	365
99	CITY UNIV OF NY CITY COLL	B WHITE	HQ	R KHANBILVARDI	NCC 5 344	365
99	CITY UNIV OF NY SYSTEM	M MATEU	GSFC	J BARBA	NAG 5 12280	366
99	CITY UNIV OF NY HERBERT H. LEHMAN COLL	R F LAWRENCE	GRC	A L ROTHSETIN	NAG 3 2268	364
99	CLAFLIN COLL	C PERSON	GSFC	A WILLIAMS	NAG 5 11761	456
99	CLARK ATLANTA UNIV	H HASAN	GSFC	S S TAYAL	NAG 5 11434	178
99	CLARK ATLANTA UNIV	M MATEU	GSFC	B FLOURNOY	NCC 5 666	179
99	CLARK ATLANTA UNIV	M MATHEWS	GSFC	C H WILLIAMS	NCC 5 347	178
99	CLARK ATLANTA UNIV	A C BEAM	MSFC	B E ALICK	NAG 8 1535	178
99	CLARK UNIV	G GUTMAN	GSFC	B TURNER	NAG 5 11134	279
99	CLARK UNIV	M Y WEI	GSFC	L LEWIS	NGT 5 30061	279
99	CLEMSON UNIV - CLEMSON	J KU	GSFC	D M OCHTERBECK	NAG 5 10367	457
99	CLEMSON UNIV - CLEMSON	M MELLOTT	GSFC	M HICKEY	NAG 5 10251	457
99	CLEMSON UNIV - CLEMSON	S DAVISON	GSFC	I D WALKER	NAG 5 8759	457
99	CLEVELAND STATE UNIV	D WHITE	GRC	D M KOCHER	NAG 3 2296	404
99	CLEVELAND STATE UNIV	M L BOROWSKI	GRC	P CHARITY	NAG 3 2075	404
99	COLL OF CHARLESTON	D DETROYE	GSFC	M COLGAN	NCC 5 413	459
99	COLL OF CHARLESTON	D DETROYE	GSFC	M COLGAN	NGT 5 40099	459
99	COLL OF CHARLESTON	DDETOYE	GSFC	M COLGAN	NCC 5 575	459
99	COLL OF CHARLESTON	L KEFFER	GSFC	M COLGAN	NGT 5 40050	459
99	COLL OF CHARLESTON	P SAKIMOTO	GSFC	C RUNYON	NCC 5 607	459
99	COLL OF SANTA FE	L ARMENDARIZ	JSC	B COLEMAN	NAG 9 1066	356
99	COLL OF WILLIAM AND MARY	T E PINELLI	LARC	M HINDERS	NGT 1 52204	503
99	COLORADO SCH OF MINES	D MCKAY	JSC	M B DUKE	NAG 9 1207	117
99	COLORADO STATE UNIV	J BOYCE	GSFC	H PERKON	NAG 5 11280	119
99	COLORADO STATE UNIV	K BLANDING	GSFC	J NELSON	NGT 5 50164	121
99	COLORADO STATE UNIV	M MELLOTT	GSFC	C SHE	NAG 5 10076	118
99	COLORADO STATE UNIV	M WEI	GSFC	R PIELKE	NGT 5 30344	120
99	COLORADO STATE UNIV	M WEI	GSFC	W LAUENROTH	NGT 5 30438	121
99	COLORADO STATE UNIV	M WEI	GSFC	G STEPHENS	NGT 5 30458	121
99	COLUMBIA UNIV	K E BLANDING	GSFC	S KAHN	NGT 5 50353	371
99	COLUMBIA UNIV	M WEI	GSFC	D PETEET	NGT 5 30226	370
99	COLUMBIA UNIV	M WEI	GSFC	M VISBECK	NGT 5 30442	371
99	COLUMBIA UNIV	M WEI	GSFC	M A CANE	NGT 5 30465	371
99	COLUMBIA UNIV	W ABDALATI	GSFC	X YUAN	NAG 5 8725	368
99	COLUMBIA UNIV	K BLANDING	HQ	C HAILEY	NGT 5 50392	371
99	COPPIN STATE COLL	D MENCHAN	GSFC	D C WILSON	NAG 5 11846	237
99	CORNELL UNIV	D D DETROYE	GSFC	Y TERZIAN	NGT 5 40078	377
99	CORNELL UNIV	D SENSKE	GSFC	P THOMAS	NAG 5 10168	374
99	CORNELL UNIV	G ASRAR	GSFC	B ISACKS	NGT 5 30126	377
99	CORNELL UNIV	G STRINGFELLOW	GSFC	S EIKENBERRY	NAG 5 10356	374
99	CORNELL UNIV	J BOYCE	GSFC	D BANFIELD	NAG 5 12187	375
99	CORNELL UNIV	J HILLMAN	GSFC	D J BANFIELD	NAG 5 12470	375
99	CORNELL UNIV	J Q SPANN	GSFC	M PSIAKI	NAG 5 12211	375
99	CORNELL UNIV	K BLANDING	GSFC	M H VAN DER MUELEN	NGT 5 50375	377
99	CORNELL UNIV	M MEYER	GSFC	D A USHER	NAG 5 12332	375
99	CORNELL UNIV	M WEI	GSFC	T JORDAN	NGT 5 30461	377
99	CORNELL UNIV	P E HUNTER	GSFC	T LOREDO	NAG 5 12082	375
99	CORNELL UNIV	S DAVISON	GSFC	C MONTEEMAGNO	NAG 5 8775	373
99	CORNELL UNIV	K BLANDING	HQ	J HOUCK	NGT 5 50390	377
99	CORNELL UNIV	R V MORRIS	JSC	R V MORRIS	NCC 9 89	376
99	CUYAHOGA COMM COLL	R L BONDURANT	GRC	L L DARLING	NAS 3 98099	408
99	CUYAHOGA COMM COLL	R ROMERO	GRC	T L BUTLER	NAG 3 2663	407
99	CUYAHOGA COMM COLL	C HOLLINGSWORTH	GSFC	A JOHNSON	NAG 5 12154	407
99	CUYAHOGA COMM COLL	M MICK	SSC	R BROWER	NAG13 02059	408

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99	DARTMOUTH COLL	J SPANN	GSFC	B O SONNERUP	NAG 5 12005	340
99	DARTMOUTH COLL	J SPANN	GSFC	M K HUDSON	NAG 5 12202	340
99	DARTMOUTH COLL	J SPANN	GSFC	M HUDSON	NGT 5 50403	341
99	DARTMOUTH COLL	M MELLOTT	GSFC	A V STRELTSOV	NAG 5 10216	340
99	DARTMOUTH COLL	M MELLOTT	GSFC	M R LESSARD	NAG 5 10219	340
99	DENISON UNIV	J HILLMAN	GSFC	M E MICKELSON	NAG 5 11966	408
99	DINE COLL (FORMERLY NAVAJO COMM COLL)	R TRAVIS	JSC	D ISELY	NAG13 99028	23
99	DUKE UNIV	J SPANN	GSFC	S A CUMMER	NAG 5 12072	389
99	DUKE UNIV	L SMITH	GSFC	G TRUSKEY	NGT 5 50266	390
99	DUKE UNIV	M MELLOTT	GSFC	S CUMMER	NAG 5 10270	389
99	DUKE UNIV	M MEYER	GSFC	D MCSHEA	NAG 5 12336	389
99	DUKE UNIV	M WEI	GSFC	S ROJSTACZER	NGT 5 30379	390
99	DUKE UNIV	M WEI	GSFC	W H SCHESSINGER	NGT 5 30397	390
99	DUKE UNIV	M WEI	GSFC	N L CHRISTENSEN	NGT 5 30472	390
99	DUKE UNIV	M GERNHARDT	JSC	R VANN	NCC 9 83	390
99	EAST NEW MEX. UNIV - MAIN CAMP	L ARMENDARIZ	JSC	J MILLER	NAG 9 1255	356
99	ELIZABETH CITY STATE UNIV	D MENCHAN	GSFC	W PORTER	NAG 5 11842	391
99	ELIZABETH CITY STATE UNIV	J HARRINGTON	GSFC	L HAYDEN	NCC 5 533	391
99	EMBRY-RIDDLE AERONAUTICAL UNIV	M MELLOTT	GSFC	G G SIVJEE	NAG 5 10066	160
99	ESTRELLA MOUNTAIN COMM COLL	M MATEU	HQ	M REYES	NAG 5 12476	23
99	FAYETTEVILLE STATE UNIV	M STOUTSENBERGER	GSFC	L EDWARDS	NAG 5 9155	391
99	FISK UNIV	C HUA SU	MSFC	A BURGER	NCC 8 195	462
99	FLA INTERNATIONAL UNIV	A CARDENAS	ARC	X HE	NAG 2 1440	160
99	FLA INTERNATIONAL UNIV	H T STEWART	ARC	I R FERNANDEZ	NAG 2 1384	160
99	FLA INTERNATIONAL UNIV	D MENCHAN	GSFC	N RISHE	NAG 5 9478	160
99	FLA INTERNATIONAL UNIV	M MATEU	GSFC	C MENDEZ	NCC 5 663	161
99	FLA INTERNATIONAL UNIV	H BURSIA	KSC	G A ROIG	NAG10 311	161
99	FLA INTERNATIONAL UNIV	R MC KINNEY	KSC	C MENDEZ	NAG10 251	161
99	FLORIDA A&M UNIV	B J COLLINS	ARC	M ENCINOSA	NAG 2 1439	161
99	FLORIDA A&M UNIV	J E BOYD	GRC	F S HUMPHRIES	NAG 3 1759	162
99	FLORIDA A&M UNIV	J MALONE	GSFC	J H AMMONS	NAG 5 9119	162
99	FLORIDA A&M UNIV	J MALONE	GSFC	J ZHENG	NAG 5 9420	162
99	FLORIDA A&M UNIV	J MALONE	GSFC	B KELLY	NAG 5 10726	162
99	FLORIDA A&M UNIV	E JOHNSON	KSC	B SAMUELS	NAG10 242	162
99	FLORIDA INST OF TECH	L SMITH	GSFC	C HELMSTETTER	NGT 5 50257	163
99	FLORIDA INST OF TECH	L SMITH	GSFC	T OSWALT	NGT 5 50290	164
99	FLORIDA INST OF TECH	W WAGNER	GSFC	M ZHANG	NAG 5 11036	163
99	FLORIDA STATE UNIV	M WEI	GSFC	J O'BRIEN	NGT 5 30370	167
99	FLORIDA STATE UNIV	M WEI	GSFC	J C CAIN	NGT 5 30454	167
99	FOOTHILL-DE ANZA COM COLL SYSTEM OFF	G JAMES	ARC	V K SERMON	NGT 2 52280	52
99	FOOTHILL-DE ANZA COM COLL SYSTEM OFF	M E LOPEZ	ARC	M CONWAY	NGT 2 1001	52
99	FRANKLIN-MARSHALL COLL	L CAROFF	ARC	D BACKMAN	NCC 2 5365	436
99	FURMAN UNIV	R K DISMUKES	ARC	G O EINSTEIN	NCC 2 1085	459
99	GEORGE MASON UNIV	A J MATURO	GSFC	R R STOUGH	NCC 5 360	505
99	GEORGE MASON UNIV	H HASSAN	GSFC	S SATYAPAL	NAG 5 11432	504
99	GEORGE MASON UNIV	M MAIDEN	GSFC	M KAFATOS	NCC 5 306	505
99	GEORGE MASON UNIV	M MELLOTT	GSFC	M E SUMMERS	NAG 5 9669	504
99	GEORGE MASON UNIV	M GIARDINO	SSC	M KAFATOS	NAG13 02054	505
99	GEORGE WASHINGTON UNIV	G BLANEY	GSFC	M PHILLIPS	NAG 5 11317	151
99	GEORGE WASHINGTON UNIV	J BOYCE	GSFC	G KEATING	NAG 5 11175	151
99	GEORGE WASHINGTON UNIV	J I TROMBKA	GSFC	D A ROWLEY	NAG 5 10417	150
99	GEORGE WASHINGTON UNIV	P E O'NEIL	GSFC	R LANG	NAG 5 12264	151
99	GEORGE WASHINGTON UNIV	R A HATHAWAY	LARC	J WHITESIDES	NCC 1 01020	152
99	GEORGE WASHINGTON UNIV	D JAN	NMO	J H MILLER	NAG 9 1185	151
99	GEORGIA INST OF TECH	I STATLER	ARC	A R PRITCHETT	NCC 2 1306	184
99	GEORGIA INST OF TECH	K GUPTA	DFRC	W M HADDAD	NGT 4 52434	185
99	GEORGIA INST OF TECH	D D DETROYE	GSFC	E ARMANIOS	NGT 5 40116	186
99	GEORGIA INST OF TECH	J HILLMAN	GSFC	P G STEFFES	NAG 5 12122	182
99	GEORGIA INST OF TECH	K BLANDING	GSFC	P NEITZEL	NGT 5 50363	186
99	GEORGIA INST OF TECH	L SMITH	GSFC	R FUJIMOTO	NGT 5 50284	186
99	GEORGIA INST OF TECH	M WEI	GSFC	L HUEY	NGT 5 30384	185
99	GEORGIA INST OF TECH	P DECOLA	GSFC	Y WANG	NAG 5 12498	182
99	GEORGIA INST OF TECH	C GRIFFIN	KSC	D BRIDGES	NAS10 01025	183
99	GEORGIA INST OF TECH	J E GARDNER	LARC	B V GIBBENS	NGT 1 52162	185
99	GEORGIA INST OF TECH	J HOWELL	MSFC	J OLDS	NAG 8 1713	182
99	GEORGIA INST OF TECH	S COLEMAN	MSFC	J L GODDARD	NCC 8 253	184



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99	GEORGIA SOUTHERN UNIV	J HILLMAN	GSFC	M S KELLEY	NAG 5 12445	186
99	GLENDALE COMM COLL	H KASS	GSFC	L SEROT	NAG 5 9700	52
99	HAMPTON UNIV	B W MEESON	GSFC	J RUSSELL	NAG 5 11126	507
99	HAMPTON UNIV	C P HOLMES	GSFC	S M BAILEY	NAG 5 10063	507
99	HAMPTON UNIV	M MATHEWS	GSFC	T A CHYBA	NCC 5 348	508
99	HAMPTON UNIV	M STOUTSENBERGER	GSFC	C RANKINS	NAG 5 9156	506
99	HAMPTON UNIV	N KHAZENIE	GSFC	D A TEMPLE	NAG 5 6296	506
99	HAMPTON UNIV	P S BOELLNER	GSFC	C L REAVES	NAG 5 10015	507
99	HAMPTON UNIV	R A HATHAWAY	LARC	R SCHWAN	NAG 1 01089	506
99	HAMPTON UNIV	R A HATHAWAY	LARC	R SCHWAN	NCC 1 01034	507
99	HAMPTON UNIV	R HATHAWAY	LARC	D DEPRIEST	NCC 1 358	507
99	HARVARD UNIV	D E WICKLAND	GSFC	S C WOFYSY	NAG 5 11154	282
99	HARVARD UNIV	L SMITH	GSFC	W H PARKINSON	NGT 5 50258	283
99	HARVARD UNIV	M WEI	GSFC	S WOFYSY	NGT 5 30366	283
99	HARVARD UNIV	M WEI	GSFC	J ANDERSON	NGT 5 30410	283
99	HARVARD UNIV	M WEI	GSFC	D JACOB	NGT 5 30466	283
99	HARVARD UNIV	P DECOLA	GSFC	D JACOB	NAG 5 11270	282
99	HARVARD UNIV	P R HOUSER	GSFC	A P BARROS	NAG 5 10792	281
99	HEIDELBERG COLL	F SAVINO	GRC	D A KRIEGER	NAG 3 2768	408
99	HERITAGE COLL	A CARDENAS	ARC	P T ALEXANDER	NAG 2 6034	526
99	HOUSTON COMM COLL	M MATEU	GSFC	C GARCIA	NAG 5 8566	469
99	HOUSTON COMM COLL	M MATEU	GSFC	C GARCIA	NAG 5 10239	469
99	HOWARD UNIV	G COOPER	ARC	P HAMBRIGHT	NAG 2 1526	152
99	HOWARD UNIV	C PERSON	GSFC	A N THORPE	NAG 5 10675	153
99	HOWARD UNIV	C PERSON	GSFC	A THORPE	NAG 5 12021	153
99	HOWARD UNIV	D MENCHAN	GSFC	W WOODARD	NAG 5 9279	153
99	HOWARD UNIV	D MENCHAN	GSFC	M C WOODARD	NAG 5 10838	153
99	HOWARD UNIV	DMENCHAN	GSFC	D WOODARD	NAG 5 12172	153
99	HOWARD UNIV	G A SOFFEN	GSFC	A N THORPE	NCC 5 184	153
99	HOWARD UNIV	M S BURRELL	GSFC	J B HALPERN	NGT 5 77	154
99	HOWARD UNIV	M S BURRELL	GSFC	J B HALPERN	NGT 5 113	154
99	HOWARD UNIV	N KHAZANIE	GSFC	V M MORRIS	NAG 5 9175	152
99	ILLINOIS STATE UNIV	J SHARBER	GSFC	D HOLLAND	NAG 5 9584	198
99	INDIANA UNIV - BLOOMINGTON	M MEYER	GSFC	D H BURKE	NAG 5 12360	213
99	INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS	K BLANDING	GSFC	R DUNCAN	NGT 5 50366	212
99	INDIANA UNIV.-PURDUE U. AT INDIANAPOLIS	K BLANDING	GSFC	W WAGNER	NGT 5 50373	213
99	INTER AMER UNIV OF PR - AGUADILLA	M STOUTSENBERGER	HQ	R GONZALEZ	NAG 5 9311	377
99	IOWA STATE UNIV	D D DETROYE	GSFC	W J BYRD	NGT 5 40081	222
99	JACKSON STATE UNIV	M MATEU	GSFC	C CRAIG	NCC 5 667	323
99	JACKSON STATE UNIV	A JOYCE	SSC	A K MOHAMED	NAG13 98007	322
99	JACKSON STATE UNIV	A JOYCE	SSC	H GORE	NAG13 99004	322
99	JACKSON STATE UNIV	R P TRAVIS	SSC	A K MOHAMED	NAG13 02056	322
99	JACKSONVILLE STATE UNIV	K BLANDING	GSFC	T HUDDLESTON	NAG 5 12251	4
99	JAMES MADISON UNIV	J JOHNSON	GSFC	J BLANDINO	NAG 5 10701	508
99	JAMES MADISON UNIV	R A HATHAWAY	LARC	A A TEATE	NAG 1 2155	508
99	JOHNS HOPKINS UNIV	D D DETROYE	GSFC	R C HENRY	NGT 5 40079	251
99	JOHNS HOPKINS UNIV	J F SPANN	GSFC	J M RUOHONIEMI	NAG 5 10902	245
99	JOHNS HOPKINS UNIV	J HILLMAN	GSFC	X ZHU	NAG 5 11962	248
99	JOHNS HOPKINS UNIV	J HILLMAN	GSFC	D F STROBEL	NAG 5 12051	248
99	JOHNS HOPKINS UNIV	J Q SPANN	GSFC	K TAKAHASHI	NAG 5 12201	248
99	JOHNS HOPKINS UNIV	J SHARBER	GSFC	K TAKAHASHI	NAG 5 8964	242
99	JOHNS HOPKINS UNIV	J SHARBER	GSFC	B MAUK	NAG 5 10281	244
99	JOHNS HOPKINS UNIV	J SHARBER	GSFC	S OHTANI	NAG 5 10941	246
99	JOHNS HOPKINS UNIV	J SPANN	GSFC	S OHTANI	NAG 5 12050	248
99	JOHNS HOPKINS UNIV	J SPANN	GSFC	J SHUE	NAG 5 12108	248
99	JOHNS HOPKINS UNIV	JSHARBER	GSFC	D G SIBECK	NAG 5 10285	244
99	JOHNS HOPKINS UNIV	K BLANDING	GSFC	P C SEARSON	NGT 5 50372	251
99	JOHNS HOPKINS UNIV	L SMITH	GSFC	K J STEBE	NGT 5 50259	251
99	JOHNS HOPKINS UNIV	L SMITH	GSFC	K J STEBE	NGT 5 50268	251
99	JOHNS HOPKINS UNIV	M KURYLO	GSFC	S A LLOYD	NAG 5 11035	246
99	JOHNS HOPKINS UNIV	M MELLOTT	GSFC	R A GREENWALD	NAG 5 10060	243
99	JOHNS HOPKINS UNIV	M MEYER	GSFC	W B BRINCKERHOFF	NAG 5 12169	248
99	JOHNS HOPKINS UNIV	M MEYER	GSFC	W B BRINCKERHOFF	NAG 5 12354	249
99	JOHNS HOPKINS UNIV	M MEYER	GSFC	W B BRINCKERHOFF	NAG 5 12363	249
99	JOHNS HOPKINS UNIV	P CRANE	GSFC	S R MCCANDLISS	NAG 5 11456	247
99	JOHNS HOPKINS UNIV	P DECOLA	GSFC	D WAUCH	NAG 5 11283	246

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99	JOHNS HOPKINS UNIV	P DECOLA	GSFC	W SWARTZ	NAG 5 11297	246
99	JOHNS HOPKINS UNIV	P E HUNTER	GSFC	A R THAKAR	NAG 5 12092	248
99	JOHNS HOPKINS UNIV	P EHUNTER	GSFC	D SIBECK	NAG 5 12085	248
99	JOHNS HOPKINS UNIV	T MORGAN	GSFC	B MAUK	NAG 5 12224	249
99	JOHNS HOPKINS UNIV	W ABDALATI	GSFC	R RANEY	NAG 5 10261	243
99	JOHNS HOPKINS UNIV	W J WAGNER	GSFC	D LARIO	NAG 5 10787	245
99	JOHNS HOPKINS UNIV	W J WAGNER	GSFC	G HO	NAG 5 10836	245
99	JOHNS HOPKINS UNIV	W WAGNER	GSFC	D HAGGERTY	NAG 5 12479	249
99	LAWSON STATE COMM COLL	C PERSON	GSFC	B CRAWFORD	NAG 5 11986	5
99	LEHIGH UNIV	K BLANDING	GSFC	F J PAZZAGLIA	NGT 5 50418	436
99	LINCOLN UNIV - PA.	D MENCHAN	GSFC	R LANGLEY	NAG 5 10172	436
99	LINCOLN UNIV - PA.	M MATEU	GSFC	O RICHARD	NCC 5 662	436
99	LOUISIANA STATE UNIV - BATON ROUGE	D DETROYE	GSFC	J P WEFEL	NCC 5 167	231
99	LOUISIANA STATE UNIV - BATON ROUGE	D DETROYE	HQ	J WEFEL	NCC 5 393	231
99	LOUISIANA STATE UNIV - BATON ROUGE	D DETROYE	HQ	J WEFEL	NGT 5 40115	231
99	MARIST COLL	M MEYER	GSFC	R KEPNER	NAG 5 9889	377
99	MARQUETTE UNIV	C W LLOYD	JSC	R H FITTS	NAG 9 1156	539
99	MASSACHUSETTS INST OF TECH	D D DETROYE	GSFC	L YOUNG	NGT 5 40075	296
99	MASSACHUSETTS INST OF TECH	D E SMITH	GSFC	G H PETTENGILL	NAG 5 4434	287
99	MASSACHUSETTS INST OF TECH	D E SMITH	GSFC	M T ZUBER	NAG 5 4806	287
99	MASSACHUSETTS INST OF TECH	D E SMITH	GSFC	M T ZUBER	NAG 5 11113	291
99	MASSACHUSETTS INST OF TECH	D SENKE	GSFC	A RIVKIN	NAG 5 10328	290
99	MASSACHUSETTS INST OF TECH	D SPEARS	GSFC	D PRITCHARD	NAG 5 12515	292
99	MASSACHUSETTS INST OF TECH	J HILLMAN	GSFC	R BINZEL	NAG 5 12355	292
99	MASSACHUSETTS INST OF TECH	K BLANDING	GSFC	J B HOWARD	NGT 5 50302	296
99	MASSACHUSETTS INST OF TECH	K BLANDING	GSFC	B C WILLIAMS	NGT 5 50411	296
99	MASSACHUSETTS INST OF TECH	K BLANDING	GSFC	R WALSWORTH	NGT 5 50414	296
99	MASSACHUSETTS INST OF TECH	L SMITH	GSFC	M FLEMINGS	NGT 5 50306	296
99	MASSACHUSETTS INST OF TECH	M KURYLO	GSFC	J I STEINFELD	NAG 5 10613	290
99	MASSACHUSETTS INST OF TECH	M MEYER	GSFC	J GROTZINGER	NAG 5 9445	289
99	MASSACHUSETTS INST OF TECH	M MEYER	GSFC	R SUMMONS	NAG 5 12356	292
99	MASSACHUSETTS INST OF TECH	M SALAMON	GSFC	S A RAPPORT	NAG 5 12522	292
99	MASSACHUSETTS INST OF TECH	M SISTILLI	GSFC	S C TING	NAG 5 10711	290
99	MASSACHUSETTS INST OF TECH	M WEI	GSFC	R BRAS	NGT 5 30469	296
99	MASSACHUSETTS INST OF TECH	P DECOLA	GSFC	R A PLUMB	NAG 5 11285	291
99	MASSACHUSETTS INST OF TECH	R CROUCH	GSFC	G MCKINLEY	NAG 5 8776	288
99	MASSACHUSETTS INST OF TECH	T MATURO	GSFC	J KLEIN	NAG 5 11268	291
99	MEDGAR EVERS COLL	M STOUTSENBERGER	HQ	L JOHNSON	NAG 5 9256	377
99	MEHARRY MEDICAL COLL	C PERSON	GSFC	M F LIMA	NAG 5 12093	462
99	MICHIGAN STATE UNIV	R GRYMES	ARC	M THOMASHOW	NCC 2 1274	305
99	MICHIGAN STATE UNIV	S OLSON	GRC	I S WICHMAN	NCC 3 662	305
99	MICHIGAN STATE UNIV	G GUTMAN	GSFC	J LIU	NAG 5 10200	304
99	MICHIGAN STATE UNIV	K BLANDING	GSFC	P PIERRE	NGT 5 50378	305
99	MICHIGAN STATE UNIV	M MAIDEN	GSFC	D SKOLE	NCC 5 303	305
99	MICHIGAN STATE UNIV	W WAGNER	GSFC	R F STEIN	NAG 5 12450	304
99	MICHIGAN STATE UNIV	A NURRIDIN	HQ	P WEBBER	NGT 5 50150	305
99	MICHIGAN STATE UNIV	D S MCKAY	JSC	M A VELBEL	NAG 9 1211	305
99	MICHIGAN TECHNOLOGICAL UNIV	M WEI	GSFC	R SHAW	NAG 5 10568	306
99	MIDDLE TENNESSEE STATE UNIV	L BILBROUGH	GSFC	E R PHILLIPS	NAG 5 11692	462
99	MIDDLE TENNESSEE STATE UNIV	L BILBROUGH	GSFC	E KLUMPE	NAG 5 12561	462
99	MISSISSIPPI STATE UNIV	M MATHEWS	GSFC	B JOINER	NAG 5 11127	323
99	MISSISSIPPI STATE UNIV	R MCKELLIP	SSC	D SHAW	NCC13 99001	323
99	MISSISSIPPI VALLEY STATE UNIV.	C PERSON	GSFC	C BLAND	NAG 5 9535	324
99	MISSISSIPPI VALLEY STATE UNIV.	M MATEU	GSFC	O CATHEY	NCC 5 665	324
99	MISSISSIPPI VALLEY STATE UNIV.	M STOUTSENBERGER	GSFC	C G BLAND	NAG 5 9197	323
99	MISSISSIPPI VALLEY STATE UNIV.	N S SULLIVAN	SSC	S J WHITE	NAG13 99003	324
99	MONTANA STATE UNIV	R A GRYMES	ARC	D L DICKENSHEETS	NCC 2 5437	333
99	MONTANA STATE UNIV	D D DETROYE	GSFC	W HISCOCK	NGT 5 40092	334
99	MONTANA STATE UNIV	D DETROYE	GSFC	W HISCOCK	NCC 5 410	333
99	MONTANA STATE UNIV	D DETROYE	GSFC	W HISCOCK	NCC 5 579	333
99	MONTANA STATE UNIV	L SMITH	GSFC	J C PRISCU	NGT 5 50297	334
99	MONTANA STATE UNIV	M SALAMON	GSFC	R HELLINGS	NAG 5 11467	333
99	MONTANA STATE UNIV	M SALAMON	GSFC	R HELLINGS	NAG 5 11469	333
99	MONTANA STATE UNIV	M V PHELPS	GSFC	G TUTHILL	NAG 5 4576	332
99	MONTANA STATE UNIV	W WALTER	GSFC	D LONGCOPE	NAG 5 10489	332
99	MONTANA STATE UNIV	D JAN	JPL	B H PYLE	NAG 9 1082	333

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99	MONTANA STATE UNIV	K LASSMAN	JSC	W SWEARINGEN	NCC 9 44	334
99	MOREHOUSE SCH MED	A J CARDENAS	ARC	M THIERRY-PALMER	NAG 2 1381	187
99	MOREHOUSE SCH MED	C E WADE	ARC	B J KLEMENT	NAG 2 1448	187
99	MORGAN STATE UNIV	B WHITE	GSFC	E N ISUK	NAG 5 10947	252
99	MORGAN STATE UNIV	C PERSON	GSFC	D N WILLIAMS	NAG 5 9710	252
99	MORGAN STATE UNIV	D MENCAHN	GSFC	E ISUK	NAG 5 11852	252
99	MORGAN STATE UNIV	J BENNETT	GSFC	E DELOATCH	NAG 5 11405	252
99	MORGAN STATE UNIV	J HARRINGTON	GSFC	W LUPTON	NCC 5 532	252
99	MORGAN STATE UNIV	P HOLLOWAY	GSFC	H WILLIAMS	NAG 5 8574	251
99	MORGAN STATE UNIV	K KRISHEN	JSC	J E WHITNEY	NAG 9 998	252
99	MT HOLYOKE COLL	C HOLLINGSWORTH	GSFC	J MORROW	NAG 5 11759	296
99	MUHLENBERG COLL	S CANRIGHT	HQ	R MILLIGAN	NAG 5 12416	436
99	NATIONAL HISPANIC UNIV	A CARDENAS	ARC	J HAWKINS	NAG 2 6062	52
99	NATIONAL HISPANIC UNIV	A CARDENAS	ARC	J S HAWKINS	NCC 2 6055	52
99	NATIONAL HISPANIC UNIV	M MATEU	GSFC	J HAWKINS	NCC 5 664	52
99	NEW JERSEY INST OF TECH	W WAGNER	GSFC	D E GARY	NAG 5 10212	347
99	NEW JERSEY INST OF TECH	P DOTY	MSFC	E DREIZIN	NAG 8 1714	347
99	NEW MEXICO HIGHLANDS UNIV	G HENDERSEN	JSC	J R JUAREZ	NAG 9 1260	357
99	NEW MEXICO HIGHLANDS UNIV	L ARMENDARIZ	JSC	J R JUAREZ	NAG 9 1921	357
99	NEW MEXICO HIGHLANDS UNIV	L M ARMENDARIZ	JSC	J R JUAREZ	NAG 9 1330	357
99	NEW MEXICO HIGHLANDS UNIV	L M ARMENDARIZ	JSC	E RYAN	NAG 9 1409	357
99	NEW MEXICO HIGHLANDS UNIV	P BAKER	WFF	J JUAREZ	NAG 9 1369	357
99	NEW MEXICO STATE UNIV - LAS CRUCES	A CARDENAS	ARC	G V GARCIA	NAG 2 6030	358
99	NEW MEXICO STATE UNIV - LAS CRUCES	B J COLLINS	ARC	N R PRASAD	NAG 2 6053	358
99	NEW MEXICO STATE UNIV - LAS CRUCES	B WHITE	GSFC	H BAPTISTE	NCC 5 466	360
99	NEW MEXICO STATE UNIV - LAS CRUCES	D BOGAN	GSFC	M MARLEY	NAG 5 8919	359
99	NEW MEXICO STATE UNIV - LAS CRUCES	D D DETROYE	GSFC	P HYNES	NGT 5 40087	360
99	NEW MEXICO STATE UNIV - LAS CRUCES	D DETROYE	GSFC	P HYNES	NGT 5 40061	360
99	NEW MEXICO STATE UNIV - LAS CRUCES	J HILLMAN	GSFC	J R MURPHY	NAG 5 12123	359
99	NEW MEXICO STATE UNIV - LAS CRUCES	D M RUSSO	JSC	G A EICEMAN	NAG 9 1291	359
99	NY UNIV	W ABDALATI	GSFC	D HOLLAND	NAG 5 12419	378
99	NORFOLK STATE UNIV	B L WHITE	GSFC	G GOLEMBIEWSKI	NAG 5 9257	509
99	NORFOLK STATE UNIV	M MATTHEWS	GSFC	L MATTIX	NCC 5 457	510
99	NORFOLK STATE UNIV	N KHAZENIE	GSFC	S CHAUDHURY	NAG 5 8541	509
99	NORFOLK STATE UNIV	R A HATHAWAY	LARC	P TUCKER-HOGAN	NCC 1 01053	510
99	NORFOLK STATE UNIV	R A HATHAWAY	LARC	W RODRIGUEZ	NCC 1 01055	510
99	NORFOLK STATE UNIV	R A HATHAWAY	LARC	S M PROCTOR	NCC 1 02024	510
99	NORTH CAROLINA A&T STATE UNIV	A CARDENAS	ARC	J MONROE	NAG 2 6061	392
99	NORTH CAROLINA A&T STATE UNIV	D F NOGA	GRC	Y ELLEN	NAG 3 2165	392
99	NORTH CAROLINA A&T STATE UNIV	B WHITE	GSFC	J D MONROE	NCC 5 349	393
99	NORTH CAROLINA A&T STATE UNIV	J MALONE	GSFC	N DOGAN	NAG 5 9419	392
99	NORTH CAROLINA CENTRAL UNIV	R F LAWRENCE	GRC	B V VIAHOVIC	NAG 3 2804	393
99	NORTH CAROLINA STATE UNIV. - RALEIGH	A GHASSEM	GSFC	D REICHLER	NGT 5 30054	396
99	NORTH CAROLINA STATE UNIV. - RALEIGH	D D DETROYE	GSFC	F R DEJARNETTE	NGT 5 40109	397
99	NORTH CAROLINA STATE UNIV. - RALEIGH	D DETROYE	GSFC	F R DEJARNETTE	NGT 5 40011	397
99	NORTH CAROLINA STATE UNIV. - RALEIGH	J BREDEKAMP	GSFC	K J BORKOWSKI	NAG 5 9490	395
99	NORTH CAROLINA STATE UNIV. - RALEIGH	J A WHITE	LARC	J R EDWARDS	NAG 1 2216	393
99	NORTH CAROLINA STATE UNIV. - RALEIGH	S SPEARMAN	MSFC	K J BACHMANN	NCC 8 95	396
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	24
99	NORTHWESTERN UNIV	D SENSKE	GSFC	B BUSSEY	NAG 5 12587	200
99	NORTHWESTERN UNIV	K BLANDING	GSFC	P VOORHEES	NGT 5 50368	202
99	NORTHWESTERN UNIV	K BLANDING	GSFC	M MATALON	NGT 5 50405	202
99	NORTHWESTERN UNIV	L SMITH	GSFC	B J MATKOWSKY	NGT 5 50263	201
99	NORTHWESTERN UNIV	M WEI	GSFC	F GEIGER	NGT 5 30456	201
99	NORTHWESTERN UNIV	M WEI	GSFC	P SCHEUERMANN	NGT 5 30471	201
99	NORTHWESTERN UNIV	P CRANE	GSFC	M P ULMER	NAG 5 11457	200
99	NORTHWESTERN UNIV	K DAUES	JSC	R N LUEPTOW	NAG 9 1398	201
99	OAKWOOD COLL	W LOVE	MSFC	A OSEI	NAG 8 1868	5
99	OGLALA LAKOTA COLL	D MENCHAN	GSFC	S PHELPS	NAG 5 10935	460
99	OGLALA LAKOTA COLL	T GULL	GSFC	J HAAS	NAG 5 7548	460
99	OHIO STATE UNIV	G STRINGFELLO	GSFC	E HERBST	NAG 5 10207	412
99	OHIO STATE UNIV	H HASAN	GSFC	A K PRADHAN	NAG 5 11462	412
99	OHIO STATE UNIV	K PARTINGTON	GSFC	K JEZEK	NAG 5 10112	411
99	OHIO STATE UNIV	L SMITH	GSFC	E MOSLEY-THOMPSON	NGT 5 30178	414
99	OHIO STATE UNIV	M WEI	GSFC	D BRZEZINSKA	NAG 5 10619	412

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99	OHIO STATE UNIV	W ABDALATI	GSFC	B CSATHO	NAG 5 10199	411
99	OHIO STATE UNIV	W ABDALATI	GSFC	E MOSLEY-THOMPSON	NAG 5 10266	412
99	OHIO STATE UNIV	W ABDALATI	GSFC	K JEZEK	NAG 5 12290	412
99	OHIO STATE UNIV	W ABDALTI	GSFC	K JEZEK	NAG 5 10275	412
99	OHIO WESLEYAN UNINERITY	F SAVINO	GRC	W C LOUTHAN	NAG 3 2645	415
99	OHIO WESLEYAN UNINERITY	J ROSENDHAL	HQ	W LOUTHAN	NAG 5 10453	415
99	OKLAHOMA STATE UNIV	L BILBROUGH	GSFC	S MARKS	NCC 5 629	424
99	OKLAHOMA STATE UNIV	L BILLBROUGH	GSFC	T COLLINS	NCC 5 561	424
99	OKLAHOMA STATE UNIV	L L BILBROUGH	GSFC	S K MARKS	NCC 5 185	424
99	OKLAHOMA STATE UNIV	K BLANDING	HQ	S MCKEEVERS	NGT 5 50420	424
99	OKLAHOMA STATE UNIV	C W LLOYD	JSC	B J STOECKER	NAG 9 1159	423
99	OLD DOMINION UNIV	D D DETROYE	GSFC	M SANDY	NGT 5 40080	515
99	OLD DOMINION UNIV	D DETROYE	GSFC	M SANDY	NGT 5 40070	515
99	OLD DOMINION UNIV	J GORMAN	GSFC	M SANDY	NCC 5 592	513
99	OLD DOMINION UNIV	J MARRA	GSFC	E HOFMANN	NAG 5 11259	512
99	OLD DOMINION UNIV	L KEFFER	GSFC	M L SANDY	NGT 5 40059	515
99	OLD DOMINION UNIV	D L HARM	JSC	R B LOFTIN	NCC 9 135	514
99	OLD DOMINION UNIV	R A HATHAWAY	LARC	B TIWARI	NCC 1 01043	513
99	OLD DOMINION UNIV	R HATHAWAY	LARC	M SCERBO	NGT 1 01005	514
99	ORAL ROBERTS UNIV	R HARMAN	GSFC	D HALSMER	NAG 5 7378	424
99	OREGON STATE UNIV	R K DISMUKES	ARC	K H FUNK	NAG 2 1287	426
99	OREGON STATE UNIV	D D DETROYE	GSFC	A C KLEIN	NGT 5 40103	429
99	OREGON STATE UNIV	D WICKLAND	GSFC	D P TURNER	NAG 5 11222	428
99	OREGON STATE UNIV	D WICKLAND	GSFC	B LAW	NAG 5 11223	428
99	OREGON STATE UNIV	D WICKLAND	GSFC	L MAHRT	NAG 5 11231	428
99	OREGON STATE UNIV	E LINDSTROM	GSFC	A BENNET	NAG 5 12443	428
99	OREGON STATE UNIV	G GUTMAN	GSFC	O N KRANKINA	NAG 5 10614	427
99	OREGON STATE UNIV	J MARRA	GSFC	Y SPITZ	NAG 5 11190	428
99	OREGON STATE UNIV	M MEYER	GSFC	M FISK	NAG 5 9446	427
99	OREGON STATE UNIV	M MEYER	GSFC	M FISK	NAG 5 12351	428
99	OREGON STATE UNIV	M WEI	GSFC	W PEGAU	NGT 5 30347	429
99	OREGON STATE UNIV	M Y WEI	GSFC	B BOND	NGT 5 30181	429
99	OREGON STATE UNIV	W WEI	GSFC	L MAHRT	NGT 5 30387	429
99	OUR LADY OF THE LAKE UNIV	L ARMENDARIZ	JSC	K A WARD	NAG 9 1170	469
99	PAINE COLL	M STOUTSENBERGER	GSFC	R KESSLER	NAG 5 9157	187
99	PASADENA CITY COLL	P J SAKIMOTO	GSFC	J SEPIKAS	NAG 5 11197	52
99	PASSAIC COUNTY COMM COLL	STOUTSENBERGER	HQ	R EPSTEIN	NAG 5 9103	347
99	PAUL QUINN COLL	C PERSON	GSFC	S JONES	NAG 5 11658	469
99	PENN. STATE UNIV.-RADNOR	K BLANDING	GSFC	M ERACLEOUS	NGT 5 50387	437
99	PENN STATE UNIV. - UNIV. PARK	M MC CARTHY	DFRC	B GRABOWSKI	NAG 4 160	439
99	PENN STATE UNIV. - UNIV. PARK	D DETROYE	GSFC	R DEVON	NGT 5 40090	446
99	PENN STATE UNIV. - UNIV. PARK	D GOLOMBEK	GSFC	G BABU	NAG 5 10542	442
99	PENN STATE UNIV. - UNIV. PARK	K BLANDING	GSFC	M BERSHADY	NGT 5 50236	446
99	PENN STATE UNIV. - UNIV. PARK	K BLANDING	GSFC	R WADE	NGT 5 50399	446
99	PENN STATE UNIV. - UNIV. PARK	L K SMITH	GSFC	W BRANDT	NGT 5 50277	446
99	PENN STATE UNIV. - UNIV. PARK	L SMITH	GSFC	N BRANDT	NGT 5 50247	446
99	PENN STATE UNIV. - UNIV. PARK	L SMITH	GSFC	S COUTU	NGT 5 50296	446
99	PENN STATE UNIV. - UNIV. PARK	M MEYER	GSFC	J GE	NAG 5 12115	442
99	PENN STATE UNIV. - UNIV. PARK	M MEYER	GSFC	S BRANTLEY	NAG 5 12330	443
99	PENN STATE UNIV. - UNIV. PARK	M MEYER	GSFC	M E PATZKOWSKY	NAG 5 12338	443
99	PENN STATE UNIV. - UNIV. PARK	M MEYER	GSFC	J F KASTING	NAG 5 12352	443
99	PENN STATE UNIV. - UNIV. PARK	P CRANE	GSFC	R A WADE	NAG 5 9586	441
99	PENN STATE UNIV. - UNIV. PARK	P CRANE	GSFC	J GE	NAG 5 11427	442
99	PENN STATE UNIV. - UNIV. PARK	R E GABRYS	GSFC	D L GRABOWSKI	NCC 5 432	445
99	PENN STATE UNIV. - UNIV. PARK	J DASCH	HQ	R DEVON	NGT 5 40064	446
99	PENN STATE UNIV -HERSHEY MED.	C W LLOYD	JSC	D MACLEAN	NAG 9 1259	437
99	POLYTECH UNIV PUERTO RICO	G MOAK	GSFC	E LEAL-QUIROS	NAG 5 11711	548
99	POMONA COLL	D SENSKE	GSFC	E GROSFILS	NAG 5 10157	53
99	PORTLAND STATE UNIV	M MEYER	GSFC	S CADY	NAG 5 9579	429
99	PORTLAND STATE UNIV	M MEYER	GSFC	N LEHMAN	NAG 5 11441	430
99	PORTLAND STATE UNIV	M MEYER	GSFC	T STEVENS	NAG 5 11442	430
99	PORTLAND STATE UNIV	W ABDALATI	GSFC	C HULBE	NAG 5 11309	429
99	PRAIRIE VIEW A&M UNIV	J HARRINGTON	GSFC	J WILLIAMS	NCC 5 529	470
99	PRAIRIE VIEW A&M UNIV	J MALONE	GSFC	R WILKINS	NAG 5 11070	469
99	PRAIRIE VIEW A&M UNIV	A JOYCE	SSC	S SHAKIR	NAG13 46	470

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99	PRESCOTT COLL	RVENEZIA	GSFC	W ORR	NAG 5 11550	24
99	PRINCETON UNIV	J HILLMAN	GSFC	R Q WILSON	NAG 5 12015	350
99	PRINCETON UNIV	J MARRA	GSFC	M BENDER	NAG 5 11301	350
99	PRINCETON UNIV	K BLANDING	GSFC	E CHOUERI	NGT 5 50356	351
99	PRINCETON UNIV	K BLANDING	GSFC	D SAVILLE	NGT 5 50370	352
99	PRINCETON UNIV	K BLANDING	GSFC	U SELJAK	NGT 5 50383	352
99	PRINCETON UNIV	K BLANDING	GSFC	W RUSSEL	NGT 5 50407	352
99	PRINCETON UNIV	M WEI	GSFC	S HUBBELL	NGT 5 30113	351
99	PURDUE UNIV	D DETROYE	GSFC	D ANDRISANI	NGT 5 40114	218
99	PURDUE UNIV	D FOLTA	GSFC	K C HOWELL	NCC 5 358	217
99	PURDUE UNIV	D SENSKE	GSFC	B PICKETT	NAG 5 10262	216
99	PURDUE UNIV	J HILLMAN	GSFC	T ZWIER	NAG 5 12098	216
99	PURDUE UNIV	J M BOYCE	GSFC	J SHAN	NAG 5 11080	216
99	PURDUE UNIV	K BLANDING	GSFC	J M LONGUSKI	NGT 5 50275	218
99	PURDUE UNIV	K BLANDING	GSFC	T ZWEIR	NGT 5 50336	218
99	PURDUE UNIV	M MATEU	GSFC	S BAST	NAG 5 12562	216
99	PURDUE UNIV	M MEYER	GSFC	J A CHMIELEWSKI	NAG 5 10735	216
99	PURDUE UNIV	P ULRICH	GSFC	C NOUSSAIR	NAG 5 10061	215
99	PURDUE UNIV	B J WOOLFORD	JSC	G SALVENDY	NAG 9 1281	217
99	RENSSELAER POLYTECH INST	D MONTEGANI	GRC	J A TICHY	NGT 3 52341	380
99	RENSSELAER POLYTECH INST	K BLANDING	GSFC	M GAFFEY	NGT 5 50382	380
99	RENSSELAER POLYTECH INST	M MEYER	GSFC	J P FERRIS	NAG 5 9607	380
99	RICE UNIV	A TUYAHOV	GSFC	P REIFF	NCC 5 311	473
99	RICE UNIV	J SHARBER	GSFC	R WOLF	NAG 5 9077	471
99	RICE UNIV	J SPANN	GSFC	F R TOFFOLETTO	NAG 5 12144	472
99	RICE UNIV	P HUNTER	GSFC	E MERENYI	NAG 5 10432	471
99	RICE UNIV	C L FARMER	JSC	D SUBRAMANIAN	NAG 9 1249	472
99	ROCHESTER INST OF TECH	M GIARDINO	SSC	MCKEOWN	NAG13 02051	381
99	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	K BLADING	GSFC	C MAVROIDIS	NGT 5 50364	355
99	RUTGERS ST UNIV N.J.-INCLUDES PSCTWY	P CRANE	GSFC	J SELLWOOD	NAG 5 10110	354
99	RUTGERS STATE UNIV OF NJ NEW BRUNS	L P CHAMBERS	GSFC	H JANES	NAG 5 12435	355
99	RUTGERS STATE UNIV OF NJ NEW BRUNS	P DECOLA	GSFC	Y WANG	NAG 5 11244	355
99	SAINT CLOUD STATE UNIV	J HILLMAN	GSFC	M WOMACK	NAG 5 11287	317
99	SALISH KOOTENAI COLL	D MENCHAN	GSFC	T S OLSON	NAG 5 12205	334
99	SALISH KOOTENAI COLL	M STOUTSENBERGER	GSFC	J M GOBERT	NAG 5 9147	334
99	SAN BERNARDINO VALLEY COLL	A CARDENAS	ARC	D AVILA	NAG 2 6060	53
99	SAN DIEGO STATE UNIV	M WEI	GSFC	A HOPE	NGT 5 30367	54
99	SAN DIEGO STATE UNIV	M WEI	GSFC	C TAGUE	NGT 5 30439	54
99	SAN DIEGO STATE UNIV	M WEI	GSFC	J FRANKLIN	NGT 5 30444	54
99	SAN DIEGO STATE UNIV	A PEEK	SSC	D STOWE	NCC13 00002	53
99	SAN JACINTO COLL	D DENTON-MISFELDT	JSC	N J ANTHA	NAS 9 00106	473
99	SAN JACINTO COLL	D SICKOREZ	JSC	M DALTON	NCC 9 137	473
99	SAN JACINTO COLL	N AVAILABLE	JSC	N AVAILABLE	NCC 9 141	473
99	SAN JOSE STATE UNIV	I STATLER	ARC	K CORKER	NAG 2 1454	54
99	SAN JOSE STATE UNIV	I STATLER	ARC	K CORKER	NCC 2 1305	56
99	SAN JOSE STATE UNIV	K DISMUKES	ARC	K JORDAN	NCC 2 1289	56
99	SAN JOSE STATE UNIV	L K COE	ARC	E M LANDESMAN	NAG 2 6056	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	56
99	SAN JOSE STATE UNIV	R J DISMUKES	ARC	K JORDON	NCC 2 1155	56
99	SAN JOSE STATE UNIV	R K DISMUKES	ARC	K JORDAN	NCC 2 1302	56
99	SAN JOSE STATE UNIV	R K DISMUKES	ARC	K P JORDAN	NCC 2 1095	55
99	SAN JOSE STATE UNIV	J BOYCE	GSFC	S C RAFKIN	NAG 5 9500	55
99	SAN JOSE STATE UNIV	J BOYCE	GSFC	A BRIDGER	NAG 5 11185	55
99	SANTA ANA COL-RANCHO SANTA COMM COL	M PHELPS	HQ	P BOSTIC	NAG 5 12113	58
99	SHAW UNIV	M STOUTSENBERGER	GSFC	K SATAGOPAN	NAG 5 9195	397
99	SONOMA STATE UNIV	D GABRYS	GSFC	L COMINSKY	NCC 5 429	58
99	SOUTH CAROLINA STATE UNIV	D MENCHAN	GSFC	J D SALLEY	NAG 5 8246	459
99	SOUTH CAROLINA STATE UNIV	J HARRINGTON	GSFC	D WALTER	NCC 5 534	459
99	SOUTH CAROLINA STATE UNIV	M MATTHEWS	GSFC	D K WALTER	NCC 5 454	459
99	SOUTH CAROLINA STATE UNIV	MMATEU	GSFC	J SALLEY	NCC 5 651	459
99	SOUTH DAKOTA SCH OF MINES & TECH	D DETROYE	GSFC	S FARWELL	NCC 5 402	461
99	SOUTH DAKOTA SCH OF MINES & TECH	D DETROYE	GSFC	S O FARWELL	NCC 5 588	461
99	SOUTH DAKOTA SCH OF MINES & TECH	D DETROYE	GSFC	S O FARWELL	NGT 5 40042	461
99	SOUTH DAKOTA SCH OF MINES & TECH	D DETROYE	GSFC	S O FARWELL	NGT 5 40095	461
99	SOUTHERN METHODIST UNIV	L CHAMBERS	GSFC	J NEEL	NAG 5 12289	473

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99	SOUTHERN UNIV & A&M COLL	B WHITE	GSFC	D BAGAYOKO	NAG 5 8552	232
99	SOUTHERN UNIV & A&M COLL	J L HARRINGTON	GSFC	D BAGAYOKO	NAG 5 11936	232
99	SOUTHERN UNIV & A&M COLL	G GORDON	MSFC	M A STUNNLEFIELD	NAG 8 1536	232
99	SOUTHERN UNIV & A&M COLL	W J LOVE	MSFC	L L LAURENCE	NAG 8 1627	232
99	SOUTHERN UNIV & A&M COLL	R TRAVIS	SSC	D BAGAYOKO	NCC13 00010	233
99	SOUTHWEST TEXAS JUNIOR COLL	L ARMENDARIZ	JSC	A HERNANDEZ	NAG 9 1019	474
99	SOUTHWESTERN INDIAN POLYTECH INST	L M ARMENDARIZ	JSC	C L ABEITA	NAG 9 1407	360
99	STANFORD UNIV	T J BARTH	ARC	T HUGHES	NCC 2 5363	64
99	STANFORD UNIV	B BETTS	GSFC	L TYLER	NAG 5 9494	61
99	STANFORD UNIV	D BOGAN	GSFC	G TYLER	NAG 5 9556	61
99	STANFORD UNIV	J SHARBER	GSFC	U S INAN	NGT 5 50351	66
99	STANFORD UNIV	L SMITH	GSFC	A B WALKER	NGT 5 50254	66
99	STANFORD UNIV	M WEI	GSFC	K ARRIGO	NGT 5 30392	66
99	STANFORD UNIV	P CRANE	GSFC	B CABRERA	NAG 5 11439	62
99	STANFORD UNIV	W WAGNER	GSFC	P H SCHERRER	NAG 5 12452	63
99	STANFORD UNIV	K BLANDING	HQ	A FOX	NGT 5 50358	67
99	STATE UNIV OF NY - ALBANY	M WEI	GSFC	D KIEBER	NGT 5 30431	382
99	STATE UNIV OF NY - ALBANY	M GIARDINO	SSC	P F HOPKINS	NAG13 02043	382
99	STATE UNIV OF NY - BUFFALO	D SENSKE	GSFC	T K GREGG	NAG 5 11835	383
99	STATE UNIV OF NY - BUFFALO	J BOYCE	GSFC	T GREGG	NAG 5 9619	383
99	STATE UNIV OF NY - BUFFALO	S DAWSON	GSFC	B GONG	NAG 5 9873	383
99	STATE UNIV OF NY - STONY BROOK	J HILLMAN	GSFC	J L FOX	NAG 5 12070	385
99	STATE UNIV OF NY - STONY BROOK	M Y WEI	GSFC	M LERDAU	NGT 5 30124	386
99	STATE UNIV OF NY - STONY BROOK	P DECOLA	GSFC	M GELLER	NAG 5 11240	385
99	STATE UNIV OF NY - STONY BROOK	R R ANTCLIFF	LARC	Y SHAMASH	NAG 1 01052	383
99	STATE UNIV OF NY COL - PLATTSBURGH	M MEYER	GSFC	G J FLYNN	NAG 5 12358	386
99	STATE UNIV OF NY COLL - PURCHASE	D SENSKE	GSFC	G FLYNN	NAG 5 10221	386
99	STEVENS INST OF TECH	D D DETROYE	GSFC	S THANGAM	NGT 5 40096	356
99	SYRACUSE UNIV	H HASAN	GSFC	G VIDALI	NAG 5 11438	387
99	TENNESSEE STATE UNIV	A CARDENAS	ARC	W A SMITH	NAG 2 6052	462
99	TENNESSEE STATE UNIV	M BOROWSKI	GRC	D ROGERS	NAG 3 2606	462
99	TENNESSEE STATE UNIV	M BOROWSKI	GRC	D ROGERS	NAG 3 2781	463
99	TENNESSEE STATE UNIV	M CAWTHON	GRC	D B ROGERS	NAG 3 2441	462
99	TENNESSEE STATE UNIV	R F LAWRENCE	GRC	D B ROGERS	NAG 3 2272	462
99	TENNESSEE STATE UNIV	R LAWRENCE	GRC	D ROGERS	NAG 3 2577	462
99	TENNESSEE STATE UNIV	J HARRINGTON	GSFC	W A SMITH	NCC 5 531	463
99	TENNESSEE STATE UNIV	M MATHEWS	GSFC	M BUSBY	NAG 5 10896	463
99	TENNESSEE STATE UNIV	M MATHEWS	GSFC	M BUSBY	NCC 5 511	463
99	TENNESSEE TECHNOLOGICAL UNIV	C K CARRINGTON	MSFC	S CANFIELD	NAG 8 1749	463
99	TEXAS A&M UNIV	J E CALOGERAS	GRC	F R BEST	NCC 3 516	478
99	TEXAS A&M UNIV	K W LASSMAN	GRC	G SERA	NAS 9 00100	477
99	TEXAS A&M UNIV	C PERSON	GSFC	C STEIDLEY	NCC 5 517	478
99	TEXAS A&M UNIV	J HILLMAN	GSFC	M T LEMMON	NAG 5 11992	476
99	TEXAS A&M UNIV	K BLANDING	GSFC	G R NORTH	NGT 5 50417	479
99	TEXAS A&M UNIV	M MEYER	GSFC	M C KENNICUT	NAG 5 9485	475
99	TEXAS A&M UNIV	M WEI	GSFC	D COLLINS	NAG 5 10549	475
99	TEXAS A&M UNIV	M WEI	GSFC	P CHANG	NGT 5 30417	479
99	TEXAS A&M UNIV	M WEI	GSFC	L HONGXING	NGT 5 30467	479
99	TEXAS A&M UNIV	P MOUNTJPOY	HQ	S BEDNARZ	NCC 5 359	478
99	TEXAS A&M UNIV	A STRAHAN	JSC	D T WARD	NAG 9 1268	477
99	TEXAS A&M UNIV	D BARTA	JSC	M C DREW	NAG 9 1067	476
99	TEXAS A&M UNIV	D SICKOREZ	JSC	W A HYMAN	NGT 9 39	479
99	TEXAS A&M UNIV	D SICKOREZ	JSC	W A HYMAN	NGT 9 54	479
99	TEXAS A&M UNIV	F J DELGADO	JSC	A P BANERJEE	NAG 9 1442	477
99	TEXAS A&M UNIV	J HOWELL	MSFC	K CHANG	NAG 8 1618	476
99	TEXAS A&M UNIV-CORPUS CHRISTI	N KHAZENIE	GSFC	G BLOUNT	NAG 5 9196	479
99	TEXAS COLL	C PERSON	GSFC	M NAMBOODIRI	NAG 5 11002	480
99	TEXAS COLL	L M ARMENDEZ	JSC	W STENGER	NAG 9 1416	480
99	TEXAS SOUTHERN UNIV	C PERSON	GSFC	D C DAVIS	NAG 5 12599	480
99	TEXAS TECH UNIV	J BREDEKAMP	GSFC	D COOKE	NAG 5 9505	480
99	THE AMERICAN UNIV	D DETROYE	GSFC	R BERENDZEN	NGT 5 40068	154
99	THE CATHOLIC UNIV OF AMERICA	B THOMPSON	GSFC	D C WANG	NAG 5 12389	158
99	THE CATHOLIC UNIV OF AMERICA	J BOYCE	GSFC	D CRIDER	NAG 5 11225	157
99	THE CATHOLIC UNIV OF AMERICA	J HILLMAN	GSFC	M A DISANTI	NAG 5 12208	158
99	THE CATHOLIC UNIV OF AMERICA	J HILLMAN	GSFC	N DELLA RUSSO	NAG 5 12285	158
99	THE CATHOLIC UNIV OF AMERICA	J HILLMAN	GSFC	F BRUHWEILER	NAG 5 12331	158

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99	THE CATHOLIC UNIV OF AMERICA	P CRANE	GSFC	S KRAEMER	NAG 5 10500	156
99	THE CATHOLIC UNIV OF AMERICA	R CROUCH	GSFC	R D PARASURAMAN	NAG 5 8761	155
99	THE CATHOLIC UNIV OF AMERICA	W J WAGNER	GSFC	N GOPALSWAMY	NAG 5 10837	156
99	THE SCRIPPS RES INST (TSRI) -LA JOLLA	M MEYER	GSFC	M GHADIRI	NAG 5 12160	67
99	THE SCRIPPS RES INST (TSRI) -LA JOLLA	M MEYER	HQ	G JOYCE	NAG 5 9386	67
99	THE UNIV OF CENTRAL FLORIDA	D DETROYE	GSFC	S DURRANCE	NGT 5 40069	169
99	THE UNIV OF CENTRAL FLORIDA	D DETROYE	GSFC	S DURRANCE	NGT 5 40071	169
99	THE UNIV OF CENTRAL FLORIDA	D DETROYE	GSFC	S DURRANCE	NGT 5 40107	169
99	THE UNIV OF CENTRAL FLORIDA	C BLACK	KSC	R HOSLER	NAG10 299	168
99	THE UNIV OF CENTRAL FLORIDA	C D BLACK	KSC	D KOTNOUR	NAG10 315	168
99	THE UNIV OF CENTRAL FLORIDA	J P GORDON	KSC	D HOSIER	NAG10 280	168
99	TUFTS UNIV	P E HUNTER	GSFC	K R LANG	NAG 5 10350	297
99	TUFTS UNIV	R E GABRYS	GSFC	C ROGERS	NCC 5 434	297
99	TUFTS UNIV	W J WAGNER	GSFC	K R LANG	NAG 5 9725	297
99	TURTLE MOUNTAIN COMM COLL	L ARMENDARIZ	JSC	C DAVIS	NAG 9 1413	398
99	TUSKEGEE UNIV	M MATHEWS	GSFC	R D PACE	NAG 5 10535	6
99	TUSKEGEE UNIV	B WHITE	HQ	N O EGIEBOR	NCC 5 346	6
99	TUSKEGEE UNIV	R MCKINNEY	KSC	C DAVIS	NAG10 256	6
99	U OF ARKANSAS MAIN CAMP-FAYETTEVILLE	M J LEON	ARC	T KRAL	NCC 2 5360	40
99	U OF MD CTR FOR ENVIR SCI - CAMBRIDGE	E LINDSTROM	GSFC	L HARDING	NAG 5 11302	253
99	UNIV DEL ESTE	M MATEU	HQ	M HUERTAS	NCC 5 652	548
99	UNIV HOUSTON-HOUSTON	F J MONTEGANI	GRC	V BALAKOTAIAH	NGT 3 52356	483
99	UNIV HOUSTON-HOUSTON	D G SICHAREZ	JSC	R B BANNEROT	NAG 9 1422	482
99	UNIV HOUSTON-HOUSTON	H L DAVIS	JSC	A V VAILLAS	NCC 9 70	482
99	UNIV HOUSTON-HOUSTON	L ARMENDARIZ	JSC	T MINDIOLA	NAG 9 1055	481
99	UNIV HOUSTON-HOUSTON	L M ARMENDARIZ	JSC	T MINDIOLA	NAG 9 1363	482
99	UNIV HOUSTON-HOUSTON	L M ARMENDARIZ	JSC	T MINDIOLA	NAG 9 1410	482
99	UNIV OF ALABAMA - BIRMINGHAM	B BETTS	GSFC	T WDWIAK	NAG 5 9424	7
99	UNIV OF ALABAMA - BIRMINGHAM	K BLANDING	GSFC	J HAGOOD	NGT 5 50409	8
99	UNIV OF ALABAMA - BIRMINGHAM	L P CHAMBERS	GSFC	L J DELUCAS	NAG 5 11146	7
99	UNIV OF ALABAMA - BIRMINGHAM	S COLEMAN	MSFC	J F LORDEN	NCC 8 248	7
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 GREGORY	NCC 5 391	13
99	UNIV OF ALABAMA - HUNTSVILLE	D DETROYE	GSFC	J C GREGORY	NCC 5 580	13
99	UNIV OF ALABAMA - HUNTSVILLE	D E DETROYE	GSFC	J GREGORY	NGT 5 40018	14
99	UNIV OF ALABAMA - HUNTSVILLE	J F SPANN	GSFC	D F SMART	NAG 5 10943	10
99	UNIV OF ALABAMA - HUNTSVILLE	J SHARBER	GSFC	N SINGH	NAG 5 9397	9
99	UNIV OF ALABAMA - HUNTSVILLE	J SPANN	GSFC	S CHANG	NAG 5 12008	11
99	UNIV OF ALABAMA - HUNTSVILLE	L KEFFER	GSFC	J C GREGORY	NCC 5 165	13
99	UNIV OF ALABAMA - HUNTSVILLE	M WEI	GSFC	S CHRISTOPHER	NGT 5 30430	14
99	UNIV OF ALABAMA - HUNTSVILLE	M WEI	GSFC	R M WELCH	NGT 5 30455	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	P E HUNTER	GSFC	S J GRAVES	NAG 5 11995	11
99	UNIV OF ALABAMA - HUNTSVILLE	P E HUNTER	GSFC	T NEWMAN	NAG 5 12109	11
99	UNIV OF ALABAMA - HUNTSVILLE	W WAGNER	GSFC	M A SHEA	NAG 5 10785	10
99	UNIV OF ALABAMA - HUNTSVILLE	N PELLIS	JSC	K CHITTUR	NAG 8 1355	12
99	UNIV OF ALABAMA - HUNTSVILLE	N Q QURAISHI	JSC	J RUPERT	NCC 9 109	14
99	UNIV OF ALABAMA - HUNTSVILLE	G HULLETT-SMITH	MSFC	S J GRAVES	NAS 8 00180	13
99	UNIV OF ALABAMA - HUNTSVILLE	J F DOWDY	MSFC	G R KARR	NGT 8 52874	14
99	UNIV OF ALABAMA - HUNTSVILLE	J R PRUITT	MSFC	G KARR	NAG 8 1786	12
99	UNIV OF ALABAMA - HUNTSVILLE	M WATSON	MSFC	Y TAKAHASHI	NAS 8 98226	13
99	UNIV OF ALABAMA - HUNTSVILLE	S COLEMAN	MSFC	L R GREENWOOD	NCC 8 200	13
99	UNIV OF ALABAMA - UNIV	J HARRINGTON	GSFC	M FREEMAN	NAG 5 9855	15
99	UNIV OF ALABAMA - UNIV	M PHELPS	GSFC	L FREEMAN	NAG 5 9388	15
99	UNIV OF ALABAMA - UNIV	D V GALLAWAY	HQ	M FREEMAN	NAG 5 4346	15
99	UNIV OF ALABAMA - UNIV	J R PRUITT	MSFC	L M FREEMAN	NAG 8 1724	15
99	UNIV OF ALABAMA - UNIV	S COLEMAN	MSFC	R L WELLS	NCC 8 256	16
99	UNIV OF ALABAMA - UNIV	S STEVENSON	MSFC	M FREEMAN	NAG 8 1859	15
99	UNIV OF ALASKA - FAIRBANKS	D DETROYE	GSFC	J G HAWKINS	NGT 5 40100	18
99	UNIV OF ALASKA - FAIRBANKS	J BOYCE	GSFC	K YOSHIKAWA	NAG 5 11213	17
99	UNIV OF ALASKA - FAIRBANKS	J SHARBER	GSFC	A OTTO	NAG 5 9457	17
99	UNIV OF ALASKA - FAIRBANKS	J SPANN	GSFC	D LUMMERZHEIM	NAG 5 12192	18
99	UNIV OF ALASKA - FAIRBANKS	K BLANDING	GSFC	T CHAPIN	NGT 5 50423	18
99	UNIV OF ALASKA - FAIRBANKS	M MELLOTT	GSFC	M CONDE	NAG 5 10069	17
99	UNIV OF ALASKA - FAIRBANKS	M MEYER	GSFC	G PLUMLEY	NAG 5 9513	17

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99	UNIV OF ALASKA - FAIRBANKS	M WEI	GSFC	J FREYMUELLER	NGT 5 30381	18
99	UNIV OF ALASKA - FAIRBANKS	W ABDALATI	GSFC	C LINGLE	NAG 5 11226	17
99	UNIV OF ALASKA - FAIRBANKS	W WAGNER	GSFC	S M BAILEY	NAG 5 12449	18
99	UNIV OF ALBUQUERQUE	L M ARMENDARIZ	JSC	R A LAFARGE	NAG 9 1312	360
99	UNIV OF ARIZONA	A TUYAHOV	GSFC	C F HUTCHINSON	NAG 5 12484	35
99	UNIV OF ARIZONA	B BETTS	GSFC	T SWINDLE	NAG 5 9198	29
99	UNIV OF ARIZONA	B BETTS	GSFC	W BOYNTON	NAG 5 9425	30
99	UNIV OF ARIZONA	D BOGAN	GSFC	E P TURTLE	NAG 5 8937	28
99	UNIV OF ARIZONA	D BOGAN	GSFC	R GREENBERG	NAG 5 8941	28
99	UNIV OF ARIZONA	D BOGAN	GSFC	F HERBERT	NAG 5 8952	29
99	UNIV OF ARIZONA	D BOGAN	GSFC	D HUNTEN	NAG 5 8970	29
99	UNIV OF ARIZONA	D D DETROYE	GSFC	M J DRAKE	NGT 5 40082	39
99	UNIV OF ARIZONA	D SENSKE	GSFC	P GEISSLER	NAG 5 10162	31
99	UNIV OF ARIZONA	D SENSKE	GSFC	R GREENBERG	NAG 5 11497	34
99	UNIV OF ARIZONA	G STRINGFELLOW	GSFC	L M ZIURYS	NAG 5 11471	34
99	UNIV OF ARIZONA	G STRINGFELLOW	GSFC	P BERNATH	NAG 5 10205	31
99	UNIV OF ARIZONA	G STRINGFELLOW	GSFC	L ZIURYS	NAG 5 10333	31
99	UNIV OF ARIZONA	G STRINGFELLOW	GSFC	E T YOUNG	NAG 5 11433	34
99	UNIV OF ARIZONA	J BOYCE	GSFC	M J DRAKE	NAG 5 9435	30
99	UNIV OF ARIZONA	J BREDEKAMP	GSFC	J HOLBERG	NAG 5 9408	30
99	UNIV OF ARIZONA	J HILLMAN	GSFC	K KARKOSCHKA	NAG 5 12014	35
99	UNIV OF ARIZONA	J HILLMAN	GSFC	C GRIFFITH	NAG 5 12272	35
99	UNIV OF ARIZONA	K BLANDING	GSFC	C WALKER	NGT 5 50246	39
99	UNIV OF ARIZONA	K BLANDING	GSFC	L CLOSE	NGT 5 50394	39
99	UNIV OF ARIZONA	K BLANDING	GSFC	M MEYER	NGT 5 50400	39
99	UNIV OF ARIZONA	K HOLLAND	GSFC	U FINK	NGT 5 50243	39
99	UNIV OF ARIZONA	L SMITH	GSFC	L ZIURYS	NGT 5 50282	39
99	UNIV OF ARIZONA	L SMITH	GSFC	D MCCARTHY	NGT 5 50283	39
99	UNIV OF ARIZONA	L SMITH	GSFC	R GREENBERG	NGT 5 50289	39
99	UNIV OF ARIZONA	L SMITH	GSFC	A BURROWS	NGT 5 50300	39
99	UNIV OF ARIZONA	L SMITH	GSFC	D DELUCA	NGT 5 50303	39
99	UNIV OF ARIZONA	M JASINSKI	GSFC	S SOROOSHIAN	NAG 5 11044	33
99	UNIV OF ARIZONA	M WEI	GSFC	R C BALES	NGT 5 30386	38
99	UNIV OF ARIZONA	P HUNTER	GSFC	J A LARSEN	NAG 5 8095	27
99	UNIV OF ARIZONA	T MORGAN	GSFC	S LARSON	NAG 5 9465	30
99	UNIV OF ARIZONA	T MORGAN	GSFC	S LARSEN	NAG 5 10853	32
99	UNIV OF ARIZONA	T MORGAN	GSFC	R S MCMILLAN	NAG 5 11828	34
99	UNIV OF ARIZONA	T MORGAN	GSFC	R GREENBERG	NAG 5 12619	35
99	UNIV OF ARIZONA	W ABDALATI	GSFC	V BAKER	NAG 5 10123	30
99	UNIV OF ARIZONA	W ABDALATI	GSFC	R BALES	NAG 5 10264	31
99	UNIV OF ARIZONA	W J WAGNER	GSFC	J KOTA	NAG 5 10884	32
99	UNIV OF ARIZONA	W J WAGNER	GSFC	G M WEBB	NAG 5 10974	33
99	UNIV OF ARIZONA	W J WAGNER	GSFC	J R JOKIPII	NAG 5 10990	33
99	UNIV OF ARIZONA	W WAGNER	GSFC	L L HOOD	NAG 5 12433	35
99	UNIV OF ARIZONA	K BLANDING	HQ	J BURGE	NGT 5 50419	39
99	UNIV OF ARIZONA	C HILL	SSC	R DAVIS	NAG13 99005	37
99	UNIV OF ARKANSAS - LITTLE ROCK	D DETROYE	GSFC	K HUDSON	NCC 5 404	40
99	UNIV OF ARKANSAS - LITTLE ROCK	D DETROYE	GSFC	K HUDSON	NCC 5 597	40
99	UNIV OF ARKANSAS - LITTLE ROCK	D DETROYE	GSFC	M HUDSON	NGT 5 40119	40
99	UNIV OF ARKANSAS - LITTLE ROCK	R TRAVIS	SSC	K HUDSON	NGT13 52757	40
99	UNIV OF CALIFORNIA - BERKELEY	R GRYMES	ARC	J F BANFIELD	NAG 2 1523	68
99	UNIV OF CALIFORNIA - BERKELEY	D WICKLAND	GSFC	I FUNG	NAG 5 11200	73
99	UNIV OF CALIFORNIA - BERKELEY	F S HERRERO	GSFC	D SIEGMUND	NAG 5 7615	70
99	UNIV OF CALIFORNIA - BERKELEY	G STRINGFELLOW	GSFC	A LEE	NAG 5 11422	73
99	UNIV OF CALIFORNIA - BERKELEY	J HILLMAN	GSFC	I DEPATER	NAG 5 12062	74
99	UNIV OF CALIFORNIA - BERKELEY	J SHARBER	GSFC	L MUSCHIETTI	NAG 5 10300	72
99	UNIV OF CALIFORNIA - BERKELEY	J SPANN	GSFC	T PHAN	NAG 5 10471	72
99	UNIV OF CALIFORNIA - BERKELEY	J SPANN	GSFC	T PHAN	NAG 5 11987	74
99	UNIV OF CALIFORNIA - BERKELEY	J SPANN	GSFC	J P MCFADDEN	NAG 5 12004	74
99	UNIV OF CALIFORNIA - BERKELEY	J SPANN	GSFC	J BONNELL	NAG 5 12039	74
99	UNIV OF CALIFORNIA - BERKELEY	J SPANN	GSFC	V ANGELOPOULOS	NAG 5 12047	74
99	UNIV OF CALIFORNIA - BERKELEY	J SPANN	GSFC	C CHASTON	NAG 5 12453	75
99	UNIV OF CALIFORNIA - BERKELEY	J SPANN	GSFC	S D BALE	NAG 5 12483	75
99	UNIV OF CALIFORNIA - BERKELEY	K BLANDING	GSFC	R LIN	NGT 5 50338	79
99	UNIV OF CALIFORNIA - BERKELEY	K BLANDING	GSFC	J TAYLOR	NGT 5 50342	79
99	UNIV OF CALIFORNIA - BERKELEY	K BLANDING	GSFC	S FREEDMAN	NGT 5 50365	79



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99	UNIV OF CALIFORNIA - BERKELEY	K BLANDING	GSFC	C M D'ANTONIO	NGT 5 50424	79
99	UNIV OF CALIFORNIA - BERKELEY	L SMITH	GSFC	J GRAHAM	NGT 5 50245	78
99	UNIV OF CALIFORNIA - BERKELEY	M MEYER	GSFC	R SAYKALLY	NAG 5 7457	70
99	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	D DE PAOLO	NGT 5 30380	78
99	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	R AMUNDSON	NGT 5 30383	78
99	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	J HARTE	NGT 5 30403	78
99	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	M FIRESTONE	NGT 5 30463	78
99	UNIV OF CALIFORNIA - BERKELEY	M WEI	GSFC	Y QUI	NGT 5 30473	78
99	UNIV OF CALIFORNIA - BERKELEY	P E HUNTER	GSFC	I HAWKINS	NAG 5 10314	72
99	UNIV OF CALIFORNIA - BERKELEY	R PFAFF	GSFC	C W CARLSON	NAS 5 99242	76
99	UNIV OF CALIFORNIA - BERKELEY	W WAGNER	GSFC	J G LUHMANN	NAG 5 10925	73
99	UNIV OF CALIFORNIA - BERKELEY	K BLANDING	HQ	S BOGGS	NGT 5 50393	79
99	UNIV OF CALIFORNIA - DAVIS	E LINDSTROM	GSFC	S USTIN	NAG 5 11260	80
99	UNIV OF CALIFORNIA - DAVIS	J HILLMAN	GSFC	W M JACKSON	NAG 5 12124	80
99	UNIV OF CALIFORNIA - DAVIS	K BLANDING	GSFC	L H KELLOGG	NGT 5 50230	82
99	UNIV OF CALIFORNIA - DAVIS	K BLANDING	GSFC	L KNOX	NGT 5 50388	83
99	UNIV OF CALIFORNIA - DAVIS	L SMITH	GSFC	S CARLIP	NGT 5 50281	82
99	UNIV OF CALIFORNIA - DAVIS	M WEI	GSFC	S USTIN	NGT 5 30373	82
99	UNIV OF CALIFORNIA - DAVIS	M WEI	GSFC	S USTIN	NGT 5 30411	82
99	UNIV OF CALIFORNIA - DAVIS	M WEI	GSFC	S L USTIN	NGT 5 30451	82
99	UNIV OF CALIFORNIA - IRVINE	R WILKINSON	GRC	P TABOREK	NAG 3 2389	83
99	UNIV OF CALIFORNIA - IRVINE	G GUTMAN	GSFC	C ZENDER	NAG 5 10147	84
99	UNIV OF CALIFORNIA - IRVINE	L SMITH	GSFC	R E PURDY	NGT 5 50317	85
99	UNIV OF CALIFORNIA - IRVINE	M WEI	GSFC	S TYLER	NGT 5 30409	85
99	UNIV OF CALIFORNIA - IRVINE	M WEI	GSFC	J FAMIGLIETTI	NGT 5 30443	85
99	UNIV OF CALIFORNIA - IRVINE	P DECOLA	GSFC	M PRATHER	NAG 5 11272	84
99	UNIV OF CALIFORNIA - LOS ANGELES	D BOGAN	GSFC	C T RUSSELL	NAG 5 8938	89
99	UNIV OF CALIFORNIA - LOS ANGELES	D BOGAN	GSFC	R THORNE	NAG 5 9074	89
99	UNIV OF CALIFORNIA - LOS ANGELES	D J BOGAN	GSFC	G SCHUBERT	NAG 5 11210	91
99	UNIV OF CALIFORNIA - LOS ANGELES	J HILLMAN	GSFC	C R WU	NAG 5 11960	92
99	UNIV OF CALIFORNIA - LOS ANGELES	J HILLMAN	GSFC	C T RUSSELL	NAG 5 12022	92
99	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	C WU	NAG 5 9111	89
99	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	R WALKER	NAG 5 10282	90
99	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	P L PRITCHETT	NAG 5 10287	90
99	UNIV OF CALIFORNIA - LOS ANGELES	J SHARBER	GSFC	D SCHRIVER	NAG 5 11989	92
99	UNIV OF CALIFORNIA - LOS ANGELES	J SPANN	GSFC	R M THORNE	NAG 5 12006	92
99	UNIV OF CALIFORNIA - LOS ANGELES	J SPANN	GSFC	E ZESTAV	NAG 5 12007	92
99	UNIV OF CALIFORNIA - LOS ANGELES	J SPANN	GSFC	M EL-ALAOU	NAG 5 12106	92
99	UNIV OF CALIFORNIA - LOS ANGELES	J SPANN	GSFC	J RAEDER	NAG 5 12107	92
99	UNIV OF CALIFORNIA - LOS ANGELES	K BLANDING	GSFC	C RUSSELLI	NGT 5 50359	94
99	UNIV OF CALIFORNIA - LOS ANGELES	K BLANDING	GSFC	I MCLEAN	NGT 5 50395	95
99	UNIV OF CALIFORNIA - LOS ANGELES	L SMITH	GSFC	D K JACOBS	NGT 5 50310	94
99	UNIV OF CALIFORNIA - LOS ANGELES	M MAIDEN	GSFC	R MUNTZ	NCC 5 301	93
99	UNIV OF CALIFORNIA - LOS ANGELES	M MEYER	GSFC	W J SCHOPF	NAG 5 12357	93
99	UNIV OF CALIFORNIA - LOS ANGELES	M WEI	GSFC	L SMITH	NAG 5 10609	90
99	UNIV OF CALIFORNIA - LOS ANGELES	M WEI	GSFC	A ELDERING	NGT 5 30372	94
99	UNIV OF CALIFORNIA - LOS ANGELES	M WEI	GSFC	L SMITH	NGT 5 30435	94
99	UNIV OF CALIFORNIA - LOS ANGELES	S CURTIS	GSFC	M ABDALLA	NAG 5 6689	87
99	UNIV OF CALIFORNIA - LOS ANGELES	W J WAGNER	GSFC	C T RUSSELL	NAG 5 10834	91
99	UNIV OF CALIFORNIA - LOS ANGELES	S MCGEE	HQ	P WANG	NGT 5 50220	94
99	UNIV OF CALIFORNIA - LOS ANGELES	C W LLOYD	JSC	B	NAG 9 1252	93
99	UNIV OF CALIFORNIA - LOS ANGELES	G MADDERA	LARC	R P TURCO	NAG 1 1899	85
99	UNIV OF CALIFORNIA - SAN DIEGO	D D DETROYE	GSFC	J ARNOLD	NGT 5 40085	104
99	UNIV OF CALIFORNIA - SAN DIEGO	J A YODER	GSFC	P NILLER	NAG 5 6375	97
99	UNIV OF CALIFORNIA - SAN DIEGO	J BREDEKAMP	GSFC	R P PUETTER	NAG 5 9506	99
99	UNIV OF CALIFORNIA - SAN DIEGO	J GASCH	GSFC	E FURTEK	NAG 5 10669	100
99	UNIV OF CALIFORNIA - SAN DIEGO	J MARRA	GSFC	B MITCHELL	NAG 5 10276	100
99	UNIV OF CALIFORNIA - SAN DIEGO	J SHARBER	GSFC	K QUEST	NAG 5 10993	100
99	UNIV OF CALIFORNIA - SAN DIEGO	J SPANN	GSFC	C E MCIWAIN	NAG 5 12190	101
99	UNIV OF CALIFORNIA - SAN DIEGO	K PARTINGTON	GSFC	D SANDWELL	NAG 5 10065	99
99	UNIV OF CALIFORNIA - SAN DIEGO	L KEFFER	GSFC	J A ARNOLD	NGT 5 40007	104
99	UNIV OF CALIFORNIA - SAN DIEGO	M MEYER	GSFC	J L BADA	NAG 5 12139	101
99	UNIV OF CALIFORNIA - SAN DIEGO	M WEI	GSFC	M A TOLBERT	NGT 5 30368	104
99	UNIV OF CALIFORNIA - SAN DIEGO	M WEI	GSFC	R SOMERVILLE	NGT 5 30446	104
99	UNIV OF CALIFORNIA - SAN DIEGO	P HUNTER	GSFC	B V JACKSON	NAG 5 9423	99
99	UNIV OF CALIFORNIA - SAN DIEGO	P L MOUNTJOY	GSFC	S RIDE	NCC 5 540	103

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99	UNIV OF CALIFORNIA - SAN DIEGO	P MOUNTJOY	GSFC	S RIDE	NCC 5 585	103
99	UNIV OF CALIFORNIA - SAN DIEGO	R CROUCH	GSFC	T JUNG	NAG 5 8768	98
99	UNIV OF CALIFORNIA - SAN DIEGO	T MORGAN	GSFC	N OMIDI	NAG 5 9314	99
99	UNIV OF CALIFORNIA - SAN DIEGO	W WAGNER	GSFC	W B WHITE	NAG 5 12465	102
99	UNIV OF CALIFORNIA - SAN DIEGO	P MOUNTJOY	HQ	D K RIDE	NCC 5 257	103
99	UNIV OF CALIFORNIA - SAN FRANCISCO	M H NEW	ARC	M A WILSON	NCC 2 5509	104
99	UNIV OF CALIFORNIA - SANTA BARBARA	D SENSKE	GSFC	S J PEALE	NAG 5 11666	108
99	UNIV OF CALIFORNIA - SANTA BARBARA	D SPEARS	GSFC	G HOMSY	NAG 5 11249	107
99	UNIV OF CALIFORNIA - SANTA BARBARA	G STRINGFELLOW	GSFC	A CLELAND	NAG 5 11426	107
99	UNIV OF CALIFORNIA - SANTA BARBARA	J MARRA	GSFC	N NELSON	NAG 5 10146	107
99	UNIV OF CALIFORNIA - SANTA BARBARA	L SMITH	GSFC	J RUHL	NGT 5 50269	110
99	UNIV OF CALIFORNIA - SANTA BARBARA	M MAIDEN	GSFC	J FREW	NCC 5 302	109
99	UNIV OF CALIFORNIA - SANTA BARBARA	M MEYER	GSFC	L R BECKER	NAG 5 11560	108
99	UNIV OF CALIFORNIA - SANTA BARBARA	M MEYER	GSFC	K PLAXCO	NAG 5 12150	108
99	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	D ROBERTS	NGT 5 30400	110
99	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	D SIEGEL	NGT 5 30406	110
99	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	N MAHOWALD	NGT 5 30413	110
99	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	D M CLARK	NGT 5 30436	110
99	UNIV OF CALIFORNIA - SANTA BARBARA	M WEI	GSFC	S A SIEGEL	NGT 5 30440	110
99	UNIV OF CALIFORNIA - SANTA BARBARA	P CRANE	GSFC	P LUBIN	NAG 5 12053	108
99	UNIV OF CALIFORNIA - SANTA CRUZ	S . PARKHUST	ARC	D L STANSBURY	NCC 2 1037	112
99	UNIV OF CALIFORNIA - SANTA CRUZ	D J BOGAN	GSFC	G A GLATZMAIER	NAG 5 11220	112
99	UNIV OF CALIFORNIA - SANTA CRUZ	M WEI	GSFC	D POTTS	NGT 5 30415	113
99	UNIV OF CHICAGO	G STRINGFELLOW	GSFC	S MEYER	NAG 5 11443	204
99	UNIV OF CHICAGO	J BOYCE	GSFC	A M DAVIS	NAG 5 9510	203
99	UNIV OF CHICAGO	J BOYCE	GSFC	M HUMAYUN	NAG 5 9800	204
99	UNIV OF CHICAGO	MSALAMON	GSFC	A OLINTO	NAG 5 12153	205
99	UNIV OF CHICAGO	P E HUNTER	GSFC	P C FRISCH	NAG 5 11999	204
99	UNIV OF CHICAGO	W J WAGNER	GSFC	F CATTANEO	NAG 5 10831	204
99	UNIV OF CINCINNATI	G ASRAR	GSFC	S ISLAM	NGT 5 30108	418
99	UNIV OF CINCINNATI	L SMITH	GSFC	J W PIKE	NGT 5 50265	419
99	UNIV OF CINCINNATI	M WEI	GSFC	S ISLAM	NGT 5 30453	418
99	UNIV OF COLORADO - BOULDER	B BETTS	GSFC	A L BETZ	NAG 5 9474	129
99	UNIV OF COLORADO - BOULDER	C P HOLMES	GSFC	C A BARTH	NAG 5 10106	130
99	UNIV OF COLORADO - BOULDER	D BOGAN	GSFC	K SIMMONS	NAG 5 8940	128
99	UNIV OF COLORADO - BOULDER	D D DETROYE	GSFC	E R HANSEN	NGT 5 40028	140
99	UNIV OF COLORADO - BOULDER	D D DETROYE	GSFC	E R HANSEN	NGT 5 40072	141
99	UNIV OF COLORADO - BOULDER	D SENSKE	GSFC	M MELLON	NAG 5 10265	130
99	UNIV OF COLORADO - BOULDER	D SENSKE	GSFC	G R STEWART	NAG 5 11562	134
99	UNIV OF COLORADO - BOULDER	D SENSKE	GSFC	B M JAKOSKY	NAG 5 11648	135
99	UNIV OF COLORADO - BOULDER	D WICKLAND	GSFC	A NOLIN	NAG 5 12288	136
99	UNIV OF COLORADO - BOULDER	H HASAN	GSFC	T P SNOW	NAG 5 11487	134
99	UNIV OF COLORADO - BOULDER	J BOYCE	GSFC	S ZHONG	NAG 5 11224	133
99	UNIV OF COLORADO - BOULDER	J F SPANN	GSFC	T FULLER-ROWELL	NAG 5 10937	132
99	UNIV OF COLORADO - BOULDER	J FROGEL	GSFC	G S STRINGFELLOW	NAG 5 11907	135
99	UNIV OF COLORADO - BOULDER	J FROGEL	GSFC	G S STRINGFELLOW	NAG 5 11963	135
99	UNIV OF COLORADO - BOULDER	J HILLMAN	GSFC	F BAGENAL	NAG 5 12394	137
99	UNIV OF COLORADO - BOULDER	J M BOYCE	GSFC	J FORBES	NAG 5 11167	133
99	UNIV OF COLORADO - BOULDER	J SHARBER	GSFC	R ERGUN	NAG 5 9336	128
99	UNIV OF COLORADO - BOULDER	J SPANN	GSFC	W K PETERSON	NAG 5 12002	135
99	UNIV OF COLORADO - BOULDER	J SPANN	GSFC	R E ERGUN	NAG 5 12026	136
99	UNIV OF COLORADO - BOULDER	J SPANN	GSFC	R A AKMAEV	NAG 5 12197	136
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	R RAPPALARDO	NGT 5 50337	141
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	J GREEN	NGT 5 50340	141
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	M HORANYI	NGT 5 50345	141
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	E ZWEIBEL	NGT 5 50350	141
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	J FORBES	NGT 5 50352	142
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	M A TOLBERT	NGT 5 50380	142
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	J GLENN	NGT 5 50384	142
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	G STEWART	NGT 5 50389	142
99	UNIV OF COLORADO - BOULDER	K BLANDING	GSFC	D KLAUS	NGT 5 50426	142
99	UNIV OF COLORADO - BOULDER	K E BLANDING	GSFC	J GREEN	NGT 5 50341	141
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	C A WESSMAN	NGT 5 30180	140
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	J FORBES	NGT 5 50232	141
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	R CANUP	NGT 5 50237	141
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	A BROWN	NGT 5 50241	141

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99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	J LINSKY	NGT 5 50242	141
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	L ESPOSITO	NGT 5 50273	141
99	UNIV OF COLORADO - BOULDER	L SMITH	GSFC	J E COLDWELL	NGT 5 50294	141
99	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	R ERGUN	NAG 5 9353	128
99	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	S ROBERTSON	NAG 5 9443	129
99	UNIV OF COLORADO - BOULDER	M MELLOTT	GSFC	M CODRESCU	NAG 5 10309	130
99	UNIV OF COLORADO - BOULDER	M S BURRELL	GSFC	D AXELRAD	NGT 5 123	139
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	G ASNER	NGT 5 30345	140
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	K STEFFEN	NGT 5 30376	140
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	S NEREM	NGT 5 30394	140
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	R BARRY	NGT 5 30399	140
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	T PFEFFER	NGT 5 30416	140
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	M A TOLBERT	NGT 5 30422	140
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	V VAIDA	NGT 5 30464	140
99	UNIV OF COLORADO - BOULDER	M WEI	GSFC	J MASLANIK	NGT 5 30470	140
99	UNIV OF COLORADO - BOULDER	P CRANE	GSFC	A L BETZ	NAG 5 10213	130
99	UNIV OF COLORADO - BOULDER	P DECOLA	GSFC	O B TOON	NAG 5 11243	133
99	UNIV OF COLORADO - BOULDER	P DECOLA	GSFC	J B MILLER	NAG 5 11430	134
99	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	J WAHR	NAG 5 10211	130
99	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	T ARBETTER	NAG 5 10556	131
99	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	T SCAMBOS	NAG 5 10983	132
99	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	T SCAMBOS	NAG 5 11308	133
99	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	W EMERY	NAG 5 11559	134
99	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	J MASLANIK	NAG 5 12372	136
99	UNIV OF COLORADO - BOULDER	W ABDALATI	GSFC	J MASLANIK	NAG 5 12432	137
99	UNIV OF COLORADO - BOULDER	W WAGNER	GSFC	D W RUSCH	NAG 5 12349	136
99	UNIV OF COLORADO - BOULDER	W WAGNER	GSFC	B W HINDMAN	NAG 5 12491	137
99	UNIV OF COLORADO - BOULDER	W WAGNER	GSFC	J TOOMRE	NGT 5 50416	142
99	UNIV OF COLORADO - BOULDER	F VILAS	JSC	A R HENDRIX	NAG 9 1209	137
99	UNIV OF COLORADO - DENVER	M MELLOTT	GSFC	J M FORBES	NAG 5 10521	142
99	UNIV OF CONNECTICUT	E SHEFFNER	GSFC	D CIVCO	NAG 5 11307	144
99	UNIV OF CONNECTICUT	J I TROMBKA	GSFC	J S SCHWEITZER	NAG 5 11713	144
99	UNIV OF CONNECTICUT	M MEYER	GSFC	J GOGARTEN	NAG 5 12367	144
99	UNIV OF CONNECTICUT	M PHELPS	GSFC	D MOSS	NAG 5 10599	144
99	UNIV OF CONNECTICUT	M WEI	GSFC	E ANAGNOSTOU	NGT 5 30369	145
99	UNIV OF CONNECTICUT	M WEI	GSFC	E N ANAGNOSTOU	NGT 5 30437	145
99	UNIV OF CONNECTICUT	C HILL	SSC	D CIVCO	NAG13 99001	144
99	UNIV OF DELAWARE	K BLANDING	GSFC	P DHUJATI	NGT 5 50367	149
99	UNIV OF DELAWARE - BARTOL RES INST	D DETROYE	GSFC	N F NESS	NGT 5 40122	150
99	UNIV OF DELAWARE - BARTOL RES INST	L SMITH	GSFC	A M LENHOFF	NGT 5 50167	150
99	UNIV OF DISTRICT OF COLUMBIA	C HOLLINSWORTH	GSFC	W COLEMAN	NAG 5 10855	159
99	UNIV OF DISTRICT OF COLUMBIA	D HALE	GSFC	G DAVIS	NAG 5 12335	159
99	UNIV OF DISTRICT OF COLUMBIA	L RANDOLPH	GSFC	W R COLEMAN	NAG 5 4724	159
99	UNIV OF FLORIDA	D BOGAN	GSFC	L KOLOKOLOVA	NAG 5 8944	171
99	UNIV OF FLORIDA	D SENSKE	GSFC	S F DERMOTT	NAG 5 11643	171
99	UNIV OF FLORIDA	L SMITH	GSFC	E A LADA	NGT 5 50233	173
99	UNIV OF FLORIDA	M MEYER	GSFC	L B GOWER	NAG 5 10670	171
99	UNIV OF FLORIDA	R KOCZOR	MSFC	D TREISE	NCC 8 149	172
99	UNIV OF GEORGIA	D BOGAN	GSFC	N G ADAMS	NAG 5 8951	188
99	UNIV OF GEORGIA	K BLANDING	HQ	P YAGER	NGT 5 50427	189
99	UNIV OF HARTFORD	D D DETROYE	GSFC	S TOWNSEND	NGT 5 40093	145
99	UNIV OF HARTFORD	D DETROYE	GSFC	S TOWNSEND	NCC 5 390	145
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99	UNIV OF NORTH CAROLINA - CHAPEL HILL	L BILBROUGH	GSFC	R R GOLWALS	NAG 5 12504	397
99	UNIV OF NORTH CAROLINA - CHAPEL HILL	L SMITH	GSFC	T M WHITMORE	NGT 5 30177	398
99	UNIV OF NORTH CAROLINA - CHAPEL HILL	L SMITH	GSFC	R W MURRAY	NGT 5 50311	398
99	UNIV OF NORTH CAROLINA - CHAPEL HILL	M WEI	GSFC	J BANE	NGT 5 30389	398
99	UNIV OF NORTH CAROLINA - CHAPEL HILL	M WEI	GSFC	L BAND	NGT 5 30390	398
99	UNIV OF NORTH CAROLINA	L BILLBROUGH	GSFC	W R VEAL	NAG 5 12537	398
99	UNIV OF NORTH DAKOTA	A TUYAHOV	GSFC	G SEIELSTAD	NAG 5 12054	399
99	UNIV OF NORTH DAKOTA	A TUYAHOV	GSFC	G SEIELSTAD	NCC 5 310	399
99	UNIV OF NORTH DAKOTA	D D DETROYE	GSFC	R ANDRES	NGT 5 40117	399
99	UNIV OF NORTH DAKOTA	D DETROYE	GSFC	C WOOD	NCC 5 399	399
99	UNIV OF NORTH DAKOTA	D DETROYE	GSFC	S L DE SILVA	NCC 5 582	399
99	UNIV OF NORTH DAKOTA	C HILL	SSC	P R ZIMMERMAN	NAG13 99006	399
99	UNIV OF NORTH TEXAS	R K DISMUKES	ARC	M BINK	NCC 2 1316	486
99	UNIV OF N TEXAS HLTH SCI CTR - FT. WORTH	C W LLOYD	JSC	M L SMITH	NAG 9 1262	486
99	UNIV OF NOTRE DAME	R LAWRENCE	GRC	S JOHNSON	NAG 3 2418	219
99	UNIV OF OKLAHOMA - NORMAN	D D DETROYE	GSFC	V DUCA-SNOWDEN	NGT 5 40111	425
99	UNIV OF OKLAHOMA - NORMAN	D DETROYE	GSFC	V DUCA-SNOWDEN	NCC 5 398	425
99	UNIV OF OKLAHOMA - NORMAN	D DETROYE	GSFC	V DUCA-SNOWDEN	NCC 5 586	425
99	UNIV OF OKLAHOMA - NORMAN	D DETROYE	GSFC	V DUCA-SNOWDEN	NGT 5 40013	425
99	UNIV OF OKLAHOMA - NORMAN	J DASCH	GSFC	V DUCA-SNOWDEN	NCC 5 171	425
99	UNIV OF OREGON - EUGENE	P E HUNTER	GSFC	J SCHOMBERT	NAG 5 11300	430
99	UNIV OF PENNSYLVANIA	K BLANDING	GSFC	D HAMMER	NGT 5 50415	448
99	UNIV OF PENNSYLVANIA	L SMITH	GSFC	D A HAMMER	NGT 5 50267	448
99	UNIV OF PENNSYLVANIA	M WEI	GSFC	D HAI-LUNG	NGT 5 30460	448
99	UNIV OF PENNSYLVANIA	R CROUCH	GSFC	D N METAXAS	NAG 5 8767	447
99	UNIV OF PENNSYLVANIA	J STANFORD	JSC	C J LAMBERTSEN	NAG 9 1265	448
99	UNIV OF PITTSBURGH	D SENSKE	GSFC	B HAPKE	NAG 5 12521	450
99	UNIV OF PITTSBURGH	J HILLMAN	GSFC	R JOHNSEN	NAG 5 11959	449
99	UNIV OF PITTSBURGH	K BLANDING	GSFC	M DRUZDZEL	NGT 5 50252	450
99	UNIV OF PITTSBURGH	K BLANDING	GSFC	B J YATES	NGT 5 50292	450
99	UNIV OF PITTSBURGH	K BLANDING	GSFC	B YATES	NGT 5 50408	450
99	UNIV OF PITTSBURGH	L SMITH	GSFC	B J YATES	NGT 5 50256	450
99	UNIV OF PITTSBURGH	L SMITH	GSFC	C L COLBY	NGT 5 50318	450
99	UNIV OF PUERTO RICO - MAYAGUEZ	R ROMERO	GRC	B RAMIREZ	NAG 3 2707	548
99	UNIV OF PUERTO RICO - MAYAGUEZ	D DETROYE	GSFC	D G WEINER	NGT 5 40012	549
99	UNIV OF PUERTO RICO - MAYAGUEZ	D L WILLIAMS	GSFC	R FERNANDEZ-SEIN	NCC 5 518	549
99	UNIV OF PUERTO RICO - MAYAGUEZ	J MARRA	GSFC	J CORREDOR	NAG 5 11296	548
99	UNIV OF PUERTO RICO - MAYAGUEZ	M MATHEWS	GSFC	L MORELL	NCC 5 340	549
99	UNIV OF PUERTO RICO - MAYAGUEZ	J DIGGS	KSC	B RAMIREZ	NAG10 243	549
99	UNIV OF PUERTO RICO-RIO PIEDRAS	M E PEREZ-DAVIS	GRC	C R CABRERA	NAG 3 2749	549
99	UNIV OF PUERTO RICO-RIO PIEDRAS	D DETROYE	GSFC	B R WEINER	NCC 5 407	550
99	UNIV OF PUERTO RICO-RIO PIEDRAS	D DETROYE	GSFC	B WEINER	NCC 5 595	550
99	UNIV OF PUERTO RICO-RIO PIEDRAS	D DETROYE	GSFC	W WEINER	NGT 5 40091	550
99	UNIV OF PUERTO RICO-RIO PIEDRAS	M MENCHAN	GSFC	J AYALA	NAG 5 11814	550
99	UNIV OF PUGET SOUND	M MEYER	GSFC	B PIERSON	NAG 5 12328	527
99	UNIV OF REDLANDS	M V PHELPS	GSFC	J R APPLETON	NAG 5 11366	113
99	UNIV OF REDLANDS	M PHELPS	GSFC	J R APPLETON	NAG 5 12538	113
99	UNIV OF RHODE ISLAND	R A GRYMES	ARC	S D'HONDT	NCC 2 1275	456
99	UNIV OF RHODE ISLAND	J MARRA	GSFC	B UZ	NAG 5 10554	455
99	UNIV OF ROCHESTER	G FOGLEMAN	GSFC	G PAIGE	NAG 5 11557	388
99	UNIV OF ROCHESTER	K BLANDING	GSFC	M BOCKO	NGT 5 50360	388
99	UNIV OF SAN DIEGO	M PHELPS	GSFC	S LOWERY	NAG 5 10049	113
99	UNIV OF SAN DIEGO	M PHELPS	GSFC	F M LAZARUS	NAG 5 11590	113
99	UNIV OF SOUTH ALABAMA	S COLEMAN	MSFC	J E AYLING	NCC 8 249	16
99	UNIV OF SOUTH CAROLINA-COLUMBIA	D DETROYE	GSFC	J D ODOM	NCC 5 174	460
99	UNIV OF SOUTH CAROLINA-COLUMBIA	J MARRA	GSFC	R THUNELL	NAG 5 11253	460
99	UNIV OF SOUTH CAROLINA-COLUMBIA	MMEYERS	GSFC	J BERNHARD	NAG 5 12339	460
99	UNIV OF SOUTH CAROLINA-COLUMBIA	N SOVIK	SSC	J JENSEN	NCC13 00003	460
99	UNIV OF SOUTH FLORIDA	J MARRA	GSFC	S ANDREFOUET	NAG 5 10908	176
99	UNIV OF SOUTH FLORIDA	J MARRA	GSFC	F MULLER-KARGER	NAG 5 11254	176
99	UNIV OF SOUTH FLORIDA	K BLANDING	GSFC	P COBLE	NGT 5 30346	176
99	UNIV OF SOUTH FLORIDA	M WEI	GSFC	F MULLER-KARGER	NGT 5 30414	176
99	UNIV OF SOUTH FLORIDA	K BLANDING	HQ	J WALSH	NGT 5 50422	176
99	UNIV OF SOUTHERN CALIFORNIA	D SPEARS	GSFC	S SADHAL	NAG 5 11304	116
99	UNIV OF SOUTHERN CALIFORNIA	W J WAGNER	GSFC	P K GANGOPADHAY	NAG 5 10989	115
99	UNIV OF SOUTHERN CALIFORNIA	W J WAGNER	GSFC	E J RHODES	NAG 5 11001	115

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99	UNIV OF SOUTHERN CALIFORNIA	P DOTY	MSFC	P RONNEY	NAG 8 1701	116
99	UNIV OF TENNESSEE - KNOXVILLE	J M BOYCE	GSFC	L A TAYLOR	NAG 5 11558	465
99	UNIV OF TENNESSEE - KNOXVILLE	K BLANDING	GSFC	H Y MCSWEEN	NGT 5 50286	466
99	UNIV OF TENNESSEE - KNOXVILLE	M HARTMAN	GSFC	R GREENBERG	NAG 5 12134	465
99	UNIV OF TENNESSEE - KNOXVILLE	R CROUCH	GSFC	G S SAYLER	NAG 5 8760	464
99	UNIV OF TENNESSEE - KNOXVILLE	W WAGNER	GSFC	L TOWNSEND	NAG 5 12477	465
99	UNIV OF TEXAS - ARLINGTON	M WEI	GSFC	D COOK	NGT 5 30382	486
99	UNIV OF TEXAS - AUSTIN	D D DETROYE	GSFC	B TAPLEY	NGT 5 40083	492
99	UNIV OF TEXAS - AUSTIN	D L CARTER	GSFC	P J SHELUS	NAS 5 01096	491
99	UNIV OF TEXAS - AUSTIN	J HILLMAN	GSFC	D GOLDSTEIN	NAG 5 11991	490
99	UNIV OF TEXAS - AUSTIN	J LABRECQUE	GSFC	B D TAPLEY	NAG 5 9989	489
99	UNIV OF TEXAS - AUSTIN	J MCGARRY	GSFC	P J SHELUS	NAS 5 32997	491
99	UNIV OF TEXAS - AUSTIN	K BLANDING	GSFC	M CRAWFORD	NGT 5 50239	492
99	UNIV OF TEXAS - AUSTIN	K BLANDING	GSFC	C OCAMPO	NGT 5 50361	492
99	UNIV OF TEXAS - AUSTIN	K BLANDING	GSFC	S ROUX	NGT 5 50371	492
99	UNIV OF TEXAS - AUSTIN	K BLANDING	GSFC	N EVANS	NGT 5 50401	492
99	UNIV OF TEXAS - AUSTIN	L SMITH	GSFC	G J HILL	NGT 5 50301	492
99	UNIV OF TEXAS - AUSTIN	M SALOMON	GSFC	P J SHELUS	NAG 5 10195	489
99	UNIV OF TEXAS - AUSTIN	M WEI	GSFC	C WILSON	NGT 5 30447	492
99	UNIV OF TEXAS - AUSTIN	M WEI	GSFC	B TAPLEY	NGT 5 30468	492
99	UNIV OF TEXAS - AUSTIN	T MORGAN	GSFC	E BARKER	NAG 5 10183	489
99	UNIV OF TEXAS - AUSTIN	W J WAGNER	GSFC	P KUMAR	NAG 5 12299	490
99	UNIV OF TEXAS - AUSTIN	D J PEARSON	JSC	R H BISHOP	NGT 9 20	492
99	UNIV OF TEXAS - AUSTIN	H C MANDELL	JSC	B D TAPLEY	NAG 9 1060	490
99	UNIV OF TEXAS - DALLAS	M E MELLOTT	GSFC	R A HEELIS	NGT 5 50354	493
99	UNIV OF TEXAS - DALLAS	M MELLOTT	GSFC	R HEELIS	NAG 5 10271	493
99	UNIV OF TEXAS - DALLAS	P HUNTER	GSFC	M HAIRSTON	NAG 5 9297	493
99	UNIV OF TEXAS - EL PASO	J BRADEN	DFRC	R WICKER	NAG 4 150	493
99	UNIV OF TEXAS - EL PASO	C HOLLINGSWORTH	GSFC	S BLAKE	NCC 5 468	494
99	UNIV OF TEXAS - EL PASO	J HARRINGTON	GSFC	H L SCHULTE	NCC 5 535	494
99	UNIV OF TEXAS - EL PASO	J LAMBRECQUE	GSFC	S STARKS	NCC 5 498	494
99	UNIV OF TEXAS - EL PASO	B DELIWALA	KSC	R QUINTANA	NAG10 225	494
99	UNIV OF TEXAS AT BROWNSVILLE	B WHITE	GSFC	J TELESE	NCC 5 438	494
99	UNIV OF TEXAS AT BROWNSVILLE	L ARMENDARIZ	JSC	O RIVAS	NAG 9 1054	494
99	UNIV OF TEXAS AT BROWNSVILLE	L ARMENDARIZ	JSC	A RIVAS	NAG 9 1304	494
99	UNIV OF TEXAS AT BROWNSVILLE	L M ARMENDARIZ	JSC	H SILVA	NAG 9 1406	494
99	UNIV OF TEXAS AT BROWNSVILLE	L MARMENDARIZ	JSC	L V LOF	NAG 9 1391	494
99	UNIV OF TEXAS AT SAN ANTONIO	B J COLLINS	ARC	A T CHRONPOULOS	NAG 2 1383	495
99	UNIV OF TEXAS AT SAN ANTONIO	M J LEON	ARC	R F SINCOVEC	NAG 2 6040	495
99	UNIV OF TEXAS AT SAN ANTONIO	M MATEU	GSFC	M P BERRIOZABAL	NAG 5 11741	495
99	UNIV. OF TX-HLTH SCIENCE CTR-HOUSTON	M GERNHARDT	JSC	B BUTLER	NCC 9 82	485
99	UNIV OF TEXAS-PAN AMERICAN	M MATEU	GSFC	H MEDRANO	NAG 5 11928	484
99	UNIV OF TEXAS-PAN AMERICAN	M MATEU	GSFC	H MEDRADO	NAG 5 12549	484
99	UNIV OF THE INCARNATE WORD	B WHITE	GSFC	J BEAUFORD	NCC 5 465	495
99	UNIV OF TOLEDO	H HASAN	GSFC	S R FEDERMAN	NAG 5 11440	421
99	UNIV OF TOLEDO	J BOYCE	GSFC	P JAMES	NAG 5 12186	421
99	UNIV OF TURABO	M MATEAU	GSFC	A M COURTIE	NAG 5 11727	550
99	UNIV OF UTAH	D D DETROYE	GSFC	W WESTENSKOW	NGT 5 40101	498
99	UNIV OF UTAH	K BLANDING	GSFC	S MILLER	NGT 5 50410	498
99	UNIV OF UTAH	M WEI	GSFC	G MACE	NGT 5 30398	498
99	UNIV OF UTAH	M WEI	GSFC	E SIPZER	NGT 5 30423	498
99	UNIV OF VERMONT	D DETROYE	GSFC	W LAKIN	NCC 5 394	501
99	UNIV OF VERMONT	D DETROYE	GSFC	W D LAKIN	NCC 5 581	501
99	UNIV OF VERMONT	D DETROYE	GSFC	W LAKIN	NGT 5 40110	501
99	UNIV OF VERMONT	J DASCH	HQ	W D LAKIN	NGT 5 40045	501
99	UNIV OF VIRGINIA	D HALE	GSFC	D BALL	NAG 5 12405	520
99	UNIV OF VIRGINIA	D SENSKE	GSFC	A D HOWARD	NAG 5 11647	519
99	UNIV OF VIRGINIA	J HILLMAN	GSFC	R E JOHNSON	NAG 5 12061	519
99	UNIV OF VIRGINIA	K BLANDING	GSFC	R JOHNSON	NGT 5 50385	521
99	UNIV OF VIRGINIA	L SMITH	GSFC	M C WIENER	NGT 5 50305	521
99	UNIV OF VIRGINIA	M MEYER	GSFC	S MACKO	NAG 5 9758	518
99	UNIV OF VIRGINIA	M WEI	GSFC	J FUENTES	NGT 5 30365	521
99	UNIV OF VIRGINIA	M WEI	GSFC	H SHUGART	NGT 5 30418	521
99	UNIV OF VIRGINIA	M WEI	GSFC	P DESANKER	NGT 5 30448	521
99	UNIV OF VIRGINIA	T MORGAN	GSFC	R A BARAGIOLA	NAG 5 12620	520



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99	UNIV OF WASHINGTON	R A GRYMES	ARC	P D WARD	NCC 2 1273	534
99	UNIV OF WASHINGTON	C YUHAS	GSFC	P HOBBS	NCC 5 550	534
99	UNIV OF WASHINGTON	D D DETROYE	GSFC	J DECOSMO	NGT 5 40084	536
99	UNIV OF WASHINGTON	D DETROYE	GSFC	J K DECOSMO	NGT 5 40017	536
99	UNIV OF WASHINGTON	D SENSKE	GSFC	K HOLSAAPPLE	NAG 5 11446	532
99	UNIV OF WASHINGTON	G ASRAR	GSFC	D HEGG	NGT 5 30121	535
99	UNIV OF WASHINGTON	J F SPANN	GSFC	M J BRITTNACHER	NAG 5 10903	532
99	UNIV OF WASHINGTON	K BLANDING	GSFC	J BARDEEN	NGT 5 50298	536
99	UNIV OF WASHINGTON	K OGILVIE	GSFC	G PARKS	NAG 5 7114	528
99	UNIV OF WASHINGTON	K PARTINGTON	GSFC	D LETTENMAIER	NAG 5 10092	531
99	UNIV OF WASHINGTON	L SMITH	GSFC	R WINGLEE	NGT 5 50285	536
99	UNIV OF WASHINGTON	L SMITH	GSFC	J DALCANTON	NGT 5 50299	536
99	UNIV OF WASHINGTON	M WEI	GSFC	R TYLER	NAG 5 10570	531
99	UNIV OF WASHINGTON	M WEI	GSFC	C NEWHALL	NGT 5 98	535
99	UNIV OF WASHINGTON	M WEI	GSFC	R HOUZE	NGT 5 30378	536
99	UNIV OF WASHINGTON	M WEI	GSFC	J RICHEY	NGT 5 30427	536
99	UNIV OF WASHINGTON	M WEI	GSFC	C RAYMOND	NGT 5 30445	536
99	UNIV OF WASHINGTON	P E HUNTER	GSFC	T R QUINN	NAG 5 11892	533
99	UNIV OF WASHINGTON	P SAKIMOTO	GSFC	J H LUTZ	NCC 5 605	535
99	UNIV OF WASHINGTON	S DAVISON	GSFC	V VOGEL	NAG 5 8784	530
99	UNIV OF WASHINGTON	W ABDALATI	GSFC	P MOURAD	NAG 5 10114	531
99	UNIV OF WASHINGTON	W ABDALATI	GSFC	D WINEBRENNER	NAG 5 10225	531
99	UNIV OF WASHINGTON	W ABDALATI	GSFC	R LINDSAY	NAG 5 10621	531
99	UNIV OF WASHINGTON	W ABDALATI	GSFC	J MORRISON	NAG 5 11386	532
99	UNIV OF WASHINGTON	C W LLOYD	JSC	F H SHEEHAN	NAG 9 1258	533
99	UNIV OF WASHINGTON	D HARM	JSC	D E PARKER	NCC 9 56	535
99	UNIV OF WASHINGTON	D L JAN	JSC	D STAHL	NAG 9 1271	534
99	UNIV OF WASHINGTON	G L MADDREA	LARC	J R HOLTON	NAG 1 2193	527
99	UNIV OF WEST FLORIDA	B H WHITAKER	ARC	A J CANAS	NCC 2 1036	177
99	UNIV OF WEST FLORIDA	R CROUCH	GSFC	A K RAJ	NAG 5 8782	177
99	UNIV OF WISCONSIN - GREEN BAY	D D DETROYE	GSFC	R A YINGST	NGT 5 40097	539
99	UNIV OF WISCONSIN - MADISON	W W DOLCI	ARC	C M JOHNSON	NCC 2 5449	545
99	UNIV OF WISCONSIN - MADISON	D WICKLAND	GSFC	S T GOWER	NAG 5 11242	543
99	UNIV OF WISCONSIN - MADISON	G STRINGFELLOW	GSFC	P TIMBIE	NAG 5 10204	543
99	UNIV OF WISCONSIN - MADISON	H HASAN	GSFC	J E LAWLER	NAG 5 11436	543
99	UNIV OF WISCONSIN - MADISON	J HILLMAN	GSFC	L A SROMOVSKY	NAG 5 12012	544
99	UNIV OF WISCONSIN - MADISON	J HILLMAN	GSFC	W M HARRIS	NAG 5 12057	544
99	UNIV OF WISCONSIN - MADISON	J HILLMAN	GSFC	L A SROMOVSKY	NAG 5 12206	544
99	UNIV OF WISCONSIN - MADISON	J MARRA	GSFC	A WINGUTH	NAG 5 11245	543
99	UNIV OF WISCONSIN - MADISON	L SMITH	GSFC	J FOLEY	NGT 5 30176	546
99	UNIV OF WISCONSIN - MADISON	L SMITH	GSFC	J S GALLAGHER	NGT 5 50295	546
99	UNIV OF WISCONSIN - MADISON	M WEI	GSFC	J FOLEY	NGT 5 30396	546
99	UNIV OF WISCONSIN - MADISON	P DECOLA	GSFC	M HITCHMAN	NAG 5 11303	543
99	UNIV OF WISCONSIN - MADISON	T LEE	GSFC	G WAHBA	NAG 5 10273	543
99	UNIV OF WISCONSIN - MADISON	A PEEK	SSC	T LILLESAND	NCC13 00004	546
99	UNIV OF WISCONSIN - MADISON	C HILL	SSC	G DIAK	NAG13 99008	545
99	UNIV OF WYOMING	D BOGAN	GSFC	R N HOWELL	NAG 5 8917	547
99	UNIV OF WYOMING	D D DETROYE	GSFC	P E JOHNSON	NGT 5 40102	548
99	UNIV OF WYOMING	D DETROYE	GSFC	P JOHNSON	NCC 5 414	548
99	UNIV OF WYOMING	D DETROYE	GSFC	P E JOHNSON	NCC 5 578	548
99	UNIV OF WYOMING	D SENSKE	GSFC	R R HOWELL	NAG 5 11730	547
99	UNIV OF WYOMING	J GRANT	GSFC	R HOWELL	NAG 5 8904	547
99	UNIV OF WYOMING	G L MADDREA	LARC	T DESHLER	NAG 1 2164	547
99	UTAH STATE UNIV	D DETROYE	GSFC	D BAKER	NGT 5 40047	500
99	UTAH STATE UNIV	D WICKLAND	GSFC	M WHITE	NAG 5 11282	499
99	UTAH STATE UNIV	J SPANN	GSFC	A R BARAKAT	NAG 5 12170	499
99	UTAH STATE UNIV	K BLANDING	GSFC	T BOSE	NGT 5 50398	500
99	UTAH STATE UNIV	M MELLOTT	GSFC	B G FEJER	NAG 5 10215	499
99	UTAH STATE UNIV	P BUCHANAN	GSFC	J J SOJKA	NAG 5 12117	499
99	UTAH STATE UNIV	A PEEK	SSC	R D RAMSEY	NCC13 00005	500
99	VA POLYTECH INST & ST UNIV	K BLANDING	GSFC	W G HERBERT	NGT 5 50425	526
99	VA POLYTECH INST & ST UNIV	L SMITH	GSFC	B M KLEINER	NGT 5 50260	526
99	VANDERBILT UNIV	D D DETROYE	GSFC	A M STRAUSS	NGT 5 40074	467
99	VANDERBILT UNIV	L KEFFER	GSFC	A M STRAUSS	NGT 5 40054	467
99	VANDERBILT UNIV	L P CHAMBERS	GSFC	T G WANG	NAG 5 12429	466
99	VANDERBILT UNIV	P DOTY	MSFC	K A DEBELAK	NAG 8 1662	466

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99	VANDERBILT UNIV	S COLEMAN	MSFC	S H SMARTT	NCC 8 255	467
99	VIRGINIA COMMONWEALTH UNIV	J S LOGAN	JSC	R C MERRELL	NCC 9 87	526
99	VIRGINIA COMMONWEALTH UNIV	J S LOGAN	JSC	R C MERRELL	NCC 9 148	526
99	VOORHEES COLL	C PERSON	GSFC	C SMITH	NAG 5 9624	460
99	WASHINGTON STATE UNIV	M AVERNER	GSFC	B W POOVAIAH	NAG 5 11364	537
99	WASHINGTON STATE UNIV	M WEI	GSFC	L JAEGLER	NAG 5 10637	537
99	WASHINGTON UNIV - ST. LOUIS	D E SMITH	GSFC	R J PHILLIPS	NAG 5 4435	328
99	WASHINGTON UNIV - ST. LOUIS	D SENSKE	GSFC	R ARVIDSON	NAG 5 10158	330
99	WASHINGTON UNIV - ST. LOUIS	D SENSKE	GSFC	B JOLLIFF	NAG 5 10227	330
99	WASHINGTON UNIV - ST. LOUIS	J HILLMAN	GSFC	B FEGLEY	NAG 5 11958	331
99	WASHINGTON UNIV - ST. LOUIS	K BLANDING	GSFC	M ISRAEL	NGT 5 50240	332
99	WASHINGTON UNIV - ST. LOUIS	K BLANDING	GSFC	J AMEND	NGT 5 50348	332
99	WASHINGTON UNIV - ST. LOUIS	K BLANDING	GSFC	M ISRAEL	NGT 5 50386	332
99	WASHINGTON UNIV - ST. LOUIS	K BLANDING	GSFC	M SWARTOUT	NGT 5 50402	332
99	WASHINGTON UNIV - ST. LOUIS	M MEYER	GSFC	A WANG	NAG 5 12114	331
99	WASHINGTON UNIV - ST. LOUIS	P CRANE	GSFC	C M WILL	NAG 5 10186	330
99	WESLEYAN UNIV	P E HUNTER	GSFC	M S GILMORE	NAG 5 12001	145
99	WEST VIRGINIA STATE COLL	M MATHEWS	GSFC	J MAYHUGH	NAG 5 11088	537
99	WEST VIRGINIA STATE COLL	M MATHEWS	GSFC	E V GRIFFIN	NAG 5 11103	537
99	WEST VIRGINIA UNIV	D OZBURN	ARC	K DAVIS	NCC 2 6043	538
99	WEST VIRGINIA UNIV	D DETROYE	GSFC	M JARAIEDI	NCC 5 406	538
99	WEST VIRGINIA UNIV	D DETROYE	GSFC	M JARAIEDI	NCC 5 570	538
99	WEST VIRGINIA UNIV	D DETROYE	GSFC	M JARAIEDI	NGT 5 40120	538
99	WEST VIRGINIA UNIV	G BLANEY	GSFC	E J PYLE	NAG 5 12608	538
99	WEST VIRGINIA UNIV	L KEFFER	GSFC	M JARAIEDI	NGT 5 40055	538
99	WEST VIRGINIA UNIV	M MELLOTT	GSFC	M KOEPKE	NAG 5 10218	538
99	WESTERN KENTUCKY UNIV	D D DETROYE	GSFC	R HACKNEY	NGT 5 40105	230
99	WESTERN KENTUCKY UNIV	D DETROYE	GSFC	R HACKNEY	NCC 5 222	229
99	WESTERN KENTUCKY UNIV	D DETROYE	GSFC	R HACKNEY	NCC 5 396	229
99	WESTERN KENTUCKY UNIV	D DETROYE	GSFC	R HACKNEY	NCC 5 571	230
99	WESTERN KENTUCKY UNIV	L KEFFER	GSFC	R HACKNEY	NGT 5 40051	230
99	WHEELING JESUIT UNIV	N CHEEKS	GSFC	J P ALLEN	NCC 5 440	539
99	WHEELING JESUIT UNIV	P SAKIMOTO	GSFC	N NAIK	NCC 5 604	539
99	WHEELING JESUIT UNIV	P STEFFEN	GSFC	N STRUM	NAG 5 12489	539
99	WHEELING JESUIT UNIV	S CANRIGHT	GSFC	N NAIK	NCC 5 451	539
99	WILLIAM JEWELL COLL	M P BODIFORD	MSFC	P BUNTON	NAG 8 1851	332
99	WOODS HOLE OCEANOGRAPHIC INST	C TREES	GSFC	S DONEY	NAG 5 12520	302
99	WOODS HOLE OCEANOGRAPHIC INST	E LINDTSROM	GSFC	R SCHMITT	NAG 5 12444	302
99	WOODS HOLE OCEANOGRAPHIC INST	J MARRA	GSFC	D MCGILLICUDDY	NAG 5 11265	302
99	WORCESTER POLYTECH INST	S J BRODEUR	GSFC	F J LOOFT	NAG 5 10712	303
99	WORCESTER POLYTECH INST	S J BRODEUR	GSFC	F J LOOFT	NAG 5 11755	303
99	WRIGHT STATE UNIV	R S WILLIAMS	GSFC	S MOHLER	NGT 5 30428	423
99	XAVIER UNIV - LOUISIANA	C COLLINGSWORTH	GSFC	A CHATTERS	NGT 5 70010	234
99	XAVIER UNIV - LOUISIANA	C PERSON	GSFC	A Z CHATTERS	NGT 5 90086	235
99	XAVIER UNIV - LOUISIANA	R TRAVIS	JSC	S O'CONNOR	NAG13 98006	234
99	YALE UNIV	G GUTMAN	GSFC	L M CURRAN	NAG 5 11335	147
99	YALE UNIV	K BLANDING	GSFC	C E BAILYN	NGT 5 50287	148
99	YALE UNIV	M WEI	GSFC	D FISH	NGT 5 30371	147
99	YALE UNIV	M WEI	GSFC	L M CURRAN	NGT 5 30457	148



