PAYLOAD FLIGHT ASSIGNMENTS
NASA MIXED FLEET

NASA-TM-108246

(NASA-TM-108246) PAYLOAD FLIGHT ASSIGNMENTS. NASA MIXED FLEET (NASA) 97 p

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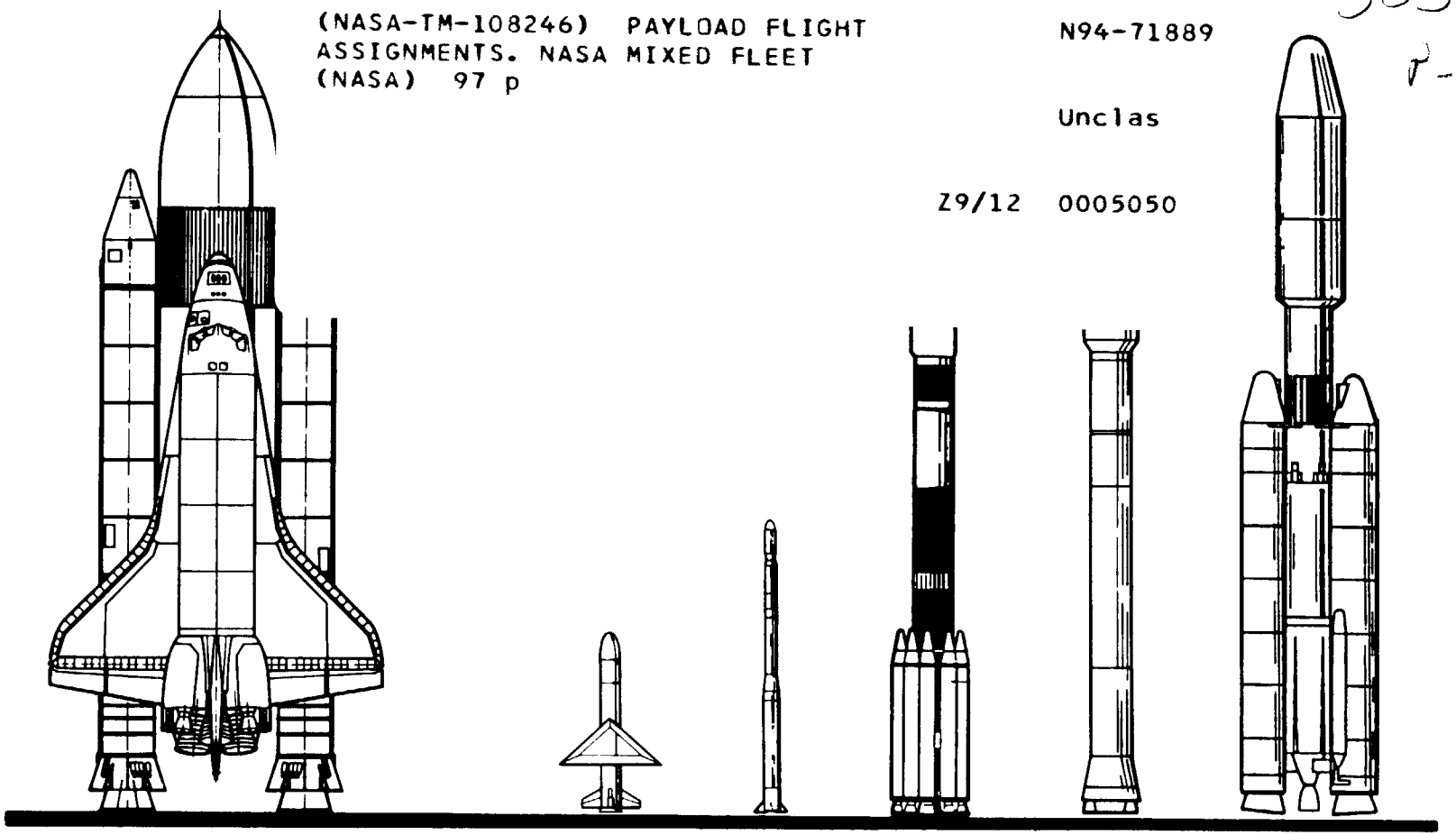

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
U.S.A.

APRIL 1994

PAYLOAD FLIGHT ASSIGNMENTS

NASA MIXED FLEET

APRIL 1994

APPROVED BY

THOMAS E. UTSMAN
DIRECTOR, SPACE SHUTTLE PROGRAM

APPROVED BY

WILBUR C. TRAFTON
DIRECTOR, SPACE STATION PROGRAM

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MIXED FLEET MANIFEST NOTES

- THIS MANIFEST SERVES AS THE BASELINE FOR PLANNING PURPOSES. IT INCLUDES PAYLOAD FLIGHT ASSIGNMENTS FOR THE SPACE SHUTTLE THROUGH CALENDAR YEAR 1997 AND NASA EXPENDABLE LAUNCH VEHICLE (ELV) MISSIONS THROUGH CY 2001.

  NOTE: THE CY 98-02 SHUTTLE MANIFEST PLANNING IS OMITTED PENDING FINAL RESOLUTION OF THE REQUIRED SPACE STATION ASSEMBLY SEQUENCE LAUNCH DATES.

- SPACE SHUTTLE LAUNCH DATES ARE SHOWN BY MONTH AND REPRESENT REASONABLE EXPECTATION AS TO WHEN THE LAUNCH WILL OCCUR; HOWEVER IN MOST CASES, NASA'S INTERNAL PLANNING WILL BE AGAINST EARLIER LAUNCH DATE TARGETS.

- PRIMARY AND COMPLEX SECONDARY SPACE SHUTTLE PAYLOAD FLIGHT ASSIGNMENTS ARE BASELINED IN SPACE SHUTTLE PROGRAM CONTROL DOCUMENTATION APPROXIMATELY 17 MONTHS PRIOR TO LAUNCH. OTHER SECONDARY PAYLOAD ASSIGNMENTS ARE NORMALLY BASELINED 8 TO 12 MONTHS PRIOR TO LAUNCH. NOTE: ONCE BASELINED, THE FLIGHT NUMBERS ARE MAINTAINED WITH THE PRIMARY PAYLOAD; THESE BASELINED FLIGHTS MAY NOT REMAIN IN NUMERICAL ORDER WITH SUBSEQUENT MANIFEST CHANGES.

- FOR FURTHER SHUTTLE OR ELV INFORMATION PLEASE CONTACT:

SPACE OPERATIONS UTILIZATION DIVISION
MAIL CODE MO
NASA HEADQUARTERS
300 E STREET, S.W.
WASHINGTON, DC 20546 - USA
TELEPHONE:(202)358-4400 FAX:(202)358-2885

EXPENDABLE LAUNCH VEHICLES OFFICE
MAIL CODE SV
NASA HEADQUARTERS
300 E STREET, S.W.
WASHINGTON, DC 20546 - USA
TELEPHONE: (202) 358-2469 FAX: (202) 358-4163

SECTION 1

MIXED FLEET MANIFEST NOTES AND SUMMARY

SECTION 2

SHUTTLE PAYLOAD FLIGHT ASSIGNMENTS

NOTES:

1. **MISSION DURATION CONTAINS THE POTENTIAL EXTENSION IN PARENTHESIS**
2. **PAYLOADS IN PARENTHESIS ARE CONFIGURED USING THE SAME CARRIER**

APRIL 1994 SHUTTLE/STATION MANIFEST

FY94 2 3 4 | FY95 1 2 3 4 | FY96 1 2
CY94 | CY95 | CY96

COLUMBIA — OV 102

- 4-MAR — 62 — 14 — OAST-02, USMP-02, DEE, SSBUV/A-03, LDCE-03, APCG-01, PSE-03, CPCG-04, CGBA-02, MODE-RFL, BDS-01, AMOS-17, APE-B-04
- <JUL> — 65 — 14 — IML-02, CPCG-05, OARE-01, SAREX II-12, AMOS-18, MAST-01
- OMDP
- <SEP> — 73 — 16 — USML-02

DISCOVERY — OV 103

- 3-FEB — 60 — 8 — SPACEHAB-02, WSF-01, (CAPL/GBA (4)), (ODERACS-1R), (BREMSAT), SAREX II-10, APE-B-03
- SEP — 64 — 9+ (1) — LITE I, SPTN 201-02, ROMPS-01, GBA (12), MAST-02, BRIC-02, SSCE-05, RME III-12, SAREX II-13, AMOS-19
- FEB — 63 — 8 — SPACEHAB-03, SPTN 204, (CGP/ODERACS-02), (CONCAP II), SSCE-06, AMOS-20
- JUL — 70 — 5 — TDRS-G
- OMDP

ATLANTIS — OV 104

- OMDP
- NOV — 65 — 11 — ATLAS-03, CRISTA-SPAS-01, SSBUV/A-04, ESCAPE-II, PARE/NIH-R-01, PCG-TES-02, PCG-STES-01, STL/NIH-C-02, SAMS-02, HPP-02
- [MAY] — 71 — 9+1 — S/MM-01, SL-M
- OCT — 74 — 6+1 — S/MM-02, DM

ENDEAVOUR — OV 105

- APR — 59 — 9+ (1) — SRL-01, STL-04 (NIH-C-01), STL-05, VFT-4-01, SAREX II-11, CONCAP IV-02, GAS (4)
- SEP — 66 — 9+ (1) — SRL-02, GAS (5) **, CHROMEX-05, CPCG-06, BRIC-01, CREAM-05, MAST**
- FEB — 67 — 14+ (2) — ASTRO-02, GAS (2), CMIX-03, PCG-TES-03, PCG-STES-02
- MAY — 69 — 10 — OAST-FLYER, WSF-02, IEH-01
- SEP — 72 — 9 — SFU-RETR, SPTN 201-03, GBA (12), SSBUV/A-05

FLIGHT RATE: CY-7 / FY-6 | CY-8 / FY-6

EDO PALLET (13 TO 16 DAYS)
< > MODULE 1 [ ] MODULE 2
( ) POTENTIAL DURATION EXTENSION DAY (S)

NOTE: ** PAYLOADS UNDER REVIEW FOR ADDITION
PAYLOADS WITHIN ( ) CONFIGURED SHARING SAME CARRIER
(NF) NOT FUNDED

APRIL 1994 SHUTTLE/STATION MANIFEST

FY95 (CY95: 1; CY96: 2, 3, 4) | FY97 (CY97: 1, 2, 3, 4) | FY98 (1)

COLUMBIA — OV 102

- MAR — (76) 16 — TSS-1R, USMP-03
- JUL — [79] 9 — SPACEHAB-05, WSF-03, SSBUV/A-06, IEH-02
- DEC — [82] 10 — CRISTA-SPAS-02, IAE, SPACEHAB-06
- <APR> — (85) 16 — MSL-01
- OCT — [90] 9 — SPACEHAB-08, EURECA-2R (NF), IEH-03, SSBUV/A-07

DISCOVERY — OV 103

- OMDP
- [SEP] — [81] 10 — S/MM-05, LONG MODULE
- [MAR] — [84] 10 — S/MM-07, LONG MODULE
- JUL — [87] 10 — S/MM-08, SOLAR DYNAMIC, JFD
- NOV — [91] 10 — S/MM-10

ATLANTIS — OV 104

- [APR] — [77] 10 — S/MM-03, LONG MODULE
- AUG — [80] 10 — S/MM-04
- DEC — [83] 10 — S/MM-06
- JUN — [86] 10 — USMP-04, WSF-04, EURECA-2L (NF), SPACEHAB-07
- [SEP] — [89] 10 — S/MM-09, LONG MODULE

ENDEAVOUR — OV 105

- OMDP
- JAN — [75] 10 — SPACEHAB-04, ORFEUS-SPAS-02, OAST-03, GBA (12)
- JUN — [78] 7 — SPAS-III**, PL OPPTY
- AUG — [88] 9 — HST SM-02
- DEC — [92] 9+1 — SSAF-01-1A, NODE 1 (2 LAB SYS, 2 ISPR RACKS), PMA1, PMA2

FLIGHT RATE

CY-9 / FY-8 | CY-9 / FY-8

(⬡) EDO PALLET (13 TO 16 DAYS)
< > MODULE 1 [ ] MODULE 2
( ) POTENTIAL DURATION EXTENSION DAY(S)

NOTE: ** PAYLOADS UNDER REVIEW FOR ADDITION
(NF) NOT FUNDED

**** SHUTTLE PAYLOAD FLIGHT ASSIGNMENTS ****
APRIL 1994

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
60	3 FEB 94 DISCOVERY	57.0 190	6 8	SPACEHAB-02 WSF-01 (CAPL/GBA(4)) (ODERACS-1R) (BREMSAT)	SPACEHAB WSF GBA GBA GBA	SAREX II-10 APE-B-03	CDR:CHARLES F. BOLDEN, JR. PLT:KENNETH S. REIGHTLER, JR. MS:FRANKLIN R. CHANG-DIAZ MS:N. JAN DAVIS MS:SERGEI KRIKALEV (RUSSIA) MS:RONALD M. SEGA
62	4 MAR 94 COLUMBIA	39.0 160	5 14	OAST-02 USMP-02 DEE SSBUV/A-03 LDCE-03	HH-M 2-MPESS+EDO GAS BEAM SSBUV/A CAP/SW	APCG-01 PSE-03 CPCG-04 CGBA-02 MODE-RFL BDS-01 AMOS-17 APE-B-04	CDR:JOHN H. CASPER PLT:ANDREW M. ALLEN MS:CHARLES D. "SAM" GEMAR MS:MARSHA S. IVINS MS:PIERRE THUOT
59	APR 94 ENDEAVOUR	57.0 120	6 9 + (1)	SRL-01 CONCAP IV-02 GAS(4)	PAL+MPESS CAP/GBA GAS CAN	STL-04(NIH-C-01) STL-05 VFT-4-01 SAREX II-11	CDR:SIDNEY M. GUTIERREZ PLT:KEVIN P. CHILTON MS (PLC):LINDA M. GODWIN MS:JAY APT MS:MICHAEL R. CLIFFORD MS:THOMAS D. JONES
65	JUL 94 COLUMBIA	28.5 160	7 14	IML-02 OARE-01	LM+EDO UNIQUE	CPCG-05 SAREX II-12 AMOS-18 MAST-01	CDR:ROBERT D. CABANA PLT:JAMES D. HALSELL, JR. MS (PLC):RICHARD J. HIEB MS:LEROY CHIAO MS:DONALD A. THOMAS MS:CARL E. WALZ PS:CHIAKI MUKAI (JAPAN)

**** SHUTTLE PAYLOAD FLIGHT ASSIGNMENTS ****
APRIL 1994

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
68	SEP 94 ENDEAVOUR	57.0 120	6 9 + (1)	SRL-02 GAS(5)**	PAL+MPESS GAS CAN	CHROMEX-05 CPCG-06 BRIC-01 CREAM-05 MAST**	CDR:MICHAEL A. BAKER PLT:TERRENCE W. WILCUTT MS (PLC):THOMAS DAVID JONES MS:DANIEL W. BURSCH MS:STEVEN L. SMITH MS:PETER J. K. WISOFF
64	SEP 94 DISCOVERY	57.0 140	6 9 + (1)	LITE I SPTN 201-02 ROMPS-01 GBA(12)	PAL SPARTAN HH-G GBA	MAST-02 BRIC-02 SSCE-05 RME III-12 SAREX II-13 AMOS-19	CDR:RICHARD N. RICHARDS PLT:L. BLAINE HAMMOND MS:SUSAN J. HELMS MS:MARK C. LEE MS:JERRY M. LINENGER MS:CARL J. MEADE
66	NOV 94 ATLANTIS	57.0 164	6 11	ATLAS-03 CRISTA-SPAS-01 SSBUV/A-04 ESCAPE-II	IG+1-PAL ASTRO-SPAS SSBUV/A CAP/SW	PARE/NIH-R-01 PCG-TES-02 PCG-STES-01 STL/NIH-C-02 SAMS-02 HPP-02	CDR:DONALD R. MCMONAGLE PLT:CURTIS L. BROWN MS (PLC):ELLEN OCHOA MS:JEAN-FRANCOIS CLERVOY (FRANCE) MS:SCOTT E. PARAZYNSKI MS:JOSEPH R. TANNER
67	FEB 95 ENDEAVOUR	28.5 190	7 14 + (2)	ASTRO-02 GAS(2)	IG+2-PAL+EDO GAS CAN	CMIX-03 PCG-TES-03 PCG-STES-02	CDR:STEPHEN S. OSWALD PLT:WILLIAM G. GREGORY MS (PLC):TAMARA E. JERNIGAN MS:JOHN M. GRUNSFELD MS:WENDY B. LAWRENCE PS:SAMUEL T. DURRANCE PS:RONALD A. PARISE

** PAYLOADS UNDER REVIEW FOR ADDITION.

**** SHUTTLE PAYLOAD FLIGHT ASSIGNMENTS ****
APRIL 1994

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
63	FEB 95 DISCOVERY	51.6 170	6 8	SPACEHAB-03 SPTN 204 (CGP/ODERACS-02) (CONCAP II)	SPACEHAB SPARTAN HH-M HH-M	AMOS-20 SSCE-06	CDR:JAMES D. WETHERBEE PLT:EILEEN M. COLLINS MS:C. MICHAEL FOALE MS:BERNARD A. HARRIS, JR. MS:VLADIMIR G. TITOV (RUSSIA) MS:JANICE VOSS FORD
69	MAY 95 ENDEAVOUR	28.5 165	5 10	OAST-FLYER WSF-02 IEH-01	SPARTAN WSF HH-M		
71	MAY 95 ATLANTIS	51.6 170	7* 9 + 1	S/MM-01 SL-M	 LM		
70	JUL 95 DISCOVERY	28.5 160	5 5	TDRS-G	IUS		
72	SEP 95 ENDEAVOUR	28.5 250	5 9	SFU-RETR SPTN 201-03 GBA(12) SSBUV/A-05	UNIQUE SPARTAN GBA SSBUV/A		
73	SEP 95 COLUMBIA	28.5 145	7 16	USML-02	LM+EDO		
74	OCT 95 ATLANTIS	51.6 170	5 6 + 1	S/MM-02 DM			

* CREW EXCHANGE MISSION - 7 UP, 8 DOWN.

**** SHUTTLE PAYLOAD FLIGHT ASSIGNMENTS ****
APRIL 1994

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
75	JAN 96 ENDEAVOUR	28.5 160	6 10	SPACEHAB-04 ORFEUS-SPAS-02 OAST-03 GBA(12)	SPACEHAB ASTRO-SPAS HH-M GBA		
76	MAR 96 COLUMBIA	28.5 160	6 16	TSS-1R USMP-03	PAL+MPESS 2-MPESS+EDO		
77	APR 96 ATLANTIS	51.6 170	7 10	S/MM-03 LONG MODULE	 LM		
78	JUN 96 ENDEAVOUR	28.5 160	5 7	SPAS-III** PL OPPTY	SPAS+UNIQUE		
79	JUL 96 COLUMBIA	28.5 170	6 9	SPACEHAB-05 WSF-03 SSBUV/A-06 IEH-02	SPACEHAB WSF SSBUV/A HH-M		
80	AUG 96 ATLANTIS	51.6 170	7 10	S/MM-04	UNIQUE		
81	SEP 96 DISCOVERY	51.6 170	7 10	S/MM-05 LONG MODULE	 LM		
82	DEC 96 COLUMBIA	57.0 160	5 10	CRISTA-SPAS-02 IAE SPACEHAB-06	ASTRO-SPAS SPARTAN SPACEHAB		
83	DEC 96 ATLANTIS	51.6 170	7 10	S/MM-06	UNIQUE		

** PAYLOADS UNDER REVIEW FOR ADDITION.

**** SHUTTLE PAYLOAD FLIGHT ASSIGNMENTS ****
APRIL 1994

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
84	MAR 97 DISCOVERY	51.6 170	7 10	S/MM-07 LONG MODULE	 LM		
85	APR 97 COLUMBIA	28.5 145	7 16	MSL-01	LM+EDO		
86	JUN 97 ATLANTIS	28.5 190	6 10	USMP-04 WSF-04 EURECA-2L SPACEHAB-07	2-MPESS WSF EURECA-A SPACEHAB		
87	JUL 97 DISCOVERY	51.6 170	7 10	S/MM-08 SOLAR DYNAMIC JFD	UNIQUE MPESS		
88	AUG 97 ENDEAVOUR	28.5 310	7 9	HST SM-02	FSS+UNIQUE		
89	SEP 97 ATLANTIS	51.6 170	7 10	S/MM-09 LONG MODULE	 LM		
90	OCT 97 COLUMBIA	28.5 160	6 9	SPACEHAB-08 EURECA-2R IEH-03 SSBUV/A-07	SPACEHAB EURECA-A HH-M SSBUV/A		
91	NOV 97 DISCOVERY	51.6 170	7 10	S/MM-10	UNIQUE		

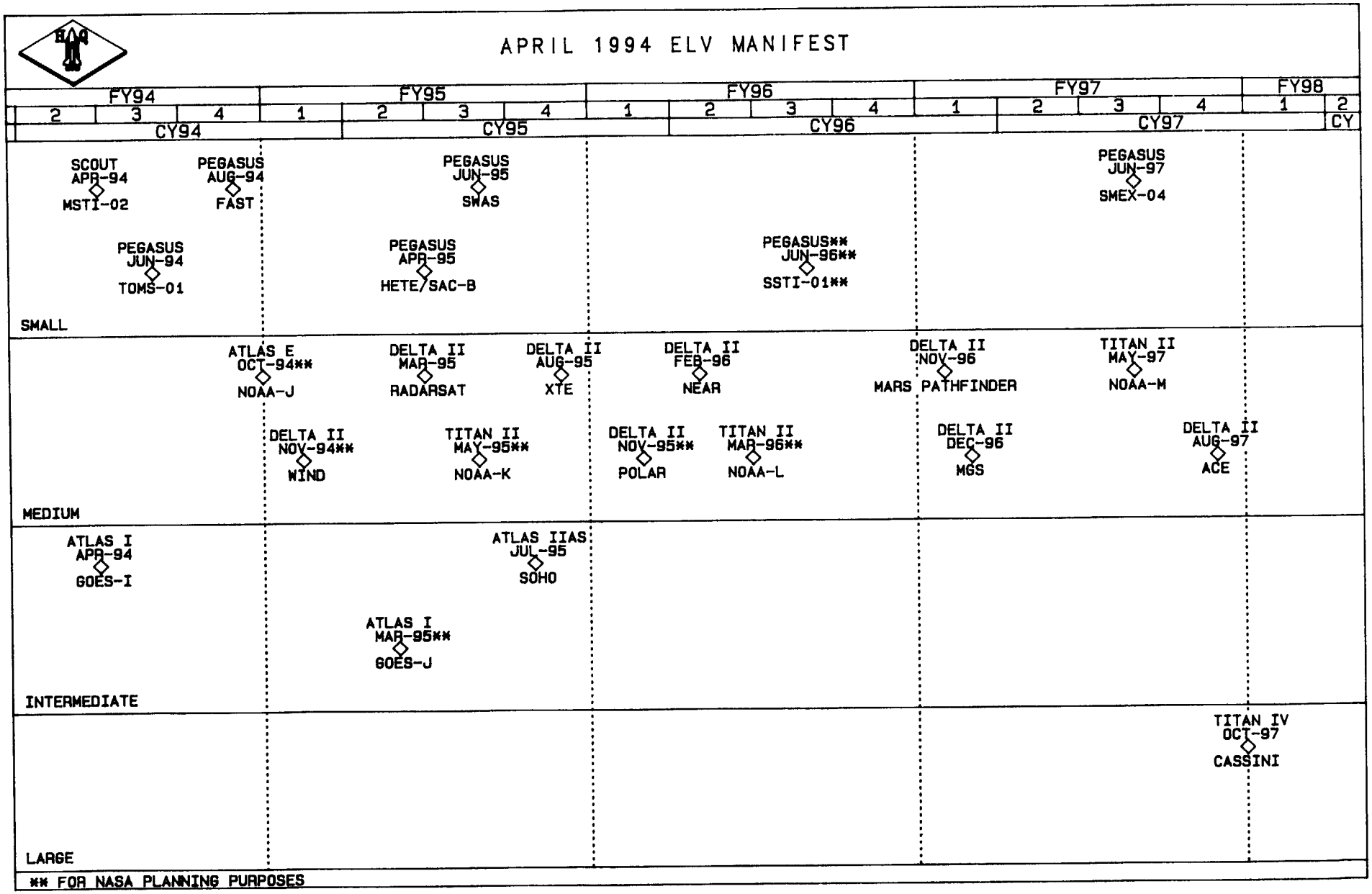
**** SHUTTLE PAYLOAD FLIGHT ASSIGNMENTS ****
APRIL 1994

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
92	DEC 97 ENDEAVOUR	51.6 190	5 9 + 1	SSAF-01-1A NODE 1 (2 LAB SYS, 2 ISPR RACKS) PMA1 PMA2	UNIQUE		

SECTION 3

ELV PAYLOAD FLIGHT ASSIGNMENTS

APRIL 1994 ELV MANIFEST



** FOR NASA PLANNING PURPOSES

APRIL 1994 ELV MANIFEST

FY98				FY99				FY00				FY01				FY02	
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
CY97	CY98			CY99				CY00				CY01				CY02	

SMALL

- PEGASUS JUN-98 — SMEX-05
- PEGASUS JUN-99 — SMEX-06
- PEGASUS JUN-00 — SMEX-07
- PEGASUS SEP-00 — AERO-01

MEDIUM

- DELTA II JAN-98 — LANDSAT-07
- MEDLITE DEC-98 — MARS LANDER1
- MEDLITE DEC-98 — MARS ORBITER2
- TBD MAY-00** — NOAA-N
- DELTA II DEC-00 — FUSE
- MEDLITE DEC-01 — MARS LANDER3
- MEDLITE DEC-01 — MARS LANDER2

INTERMEDIATE

- ATLAS IIAS** JUN-98 — EOS-AM-1
- ATLAS I APR-99 — GOES-K
- TBD APR-99** — TDRS-F08
- TBD APR-00 — TDRS-F09
- TBD MAR-00 — GOES-L
- TBD APR-01 — TDRS-F10
- TBD DEC-00 — EOS-PM-1

LARGE

** FOR NASA PLANNING PURPOSES

**** ELV PAYLOAD FLIGHT ASSIGNMENTS ****
APRIL 1994

DATE MO YR	CLASS	LAUNCH VEHICLE TYPE	INCL	PAYLOAD ORBIT	LAUNCH SITE	PAYLOAD
APR 94	INTERMEDIATE	ATLAS I	28.5	GSO	CCAFS	GOES-I
APR 94	SMALL	SCOUT	97.0	POLAR	VAFB	MSTI-02
JUN 94	SMALL	PEGASUS	99.3	SS	VAFB	TOMS-01
AUG 94	SMALL	PEGASUS	90.0	LEO	VAFB	FAST
OCT 94**	MEDIUM	ATLAS E	98.7	SS	VAFB	NOAA-J
NOV 94**	MEDIUM	DELTA II	28.7	L1	CCAFS	WIND
MAR 95**	INTERMEDIATE	ATLAS I	28.5	GSO	CCAFS	GOES-J
MAR 95	MEDIUM	DELTA II	98.6	SS	VAFB	RADARSAT
APR 95	SMALL	PEGASUS	38.0	LEO	WFF	HETE/SAC-B
MAY 95**	MEDIUM	TITAN II	98.7	SS	VAFB	NOAA-K
JUN 95	SMALL	PEGASUS	38.0	LEO	WFF	SWAS
JUL 95	INTERMEDIATE	ATLAS IIAS	28.5	HE	CCAFS	SOHO
AUG 95	MEDIUM	DELTA II	28.5	LEO	CCAFS	XTE
NOV 95**	MEDIUM	DELTA II	90.0	HE	VAFB	POLAR
FEB 96	MEDIUM	DELTA II	28.5	PLAN	CCAFS	NEAR

** FOR NASA PLANNING PURPOSES.

**** ELV PAYLOAD FLIGHT ASSIGNMENTS ****
APRIL 1994

DATE MO YR	CLASS	LAUNCH VEHICLE TYPE	INCL	PAYLOAD ORBIT	LAUNCH SITE	PAYLOAD
MAR 96**	MEDIUM	TITAN II	98.7	SS	VAFB	NOAA-L
JUN 96**	SMALL	PEGASUS**	TBD	TBD	WFF	SSTI-01**
NOV 96	MEDIUM	DELTA II	28.5	MARS	CCAFS	MARS PATHFINDER
DEC 96	MEDIUM	DELTA II	28.5	MARS	CCAFS	MGS
MAY 97	MEDIUM	TITAN II	98.7	SS	VAFB	NOAA-M
JUN 97	SMALL	PEGASUS	TBD	TBD	VAFB**	SMEX-04
AUG 97	MEDIUM	DELTA II	28.5	L1	CCAFS	ACE
OCT 97	LARGE	TITAN IV /CENTAUR	28.5	PLAN	CCAFS	CASSINI
JAN 98	MEDIUM	DELTA II	98.7	SS	VAFB	LANDSAT-07
JUN 98	SMALL	PEGASUS	TBD	TBD	WFF	SMEX-05
JUN 98	INTERMEDIATE	ATLAS IIAS**	98.2	SS	VAFB	EOS-AM-1
DEC 98	MEDIUM	MEDLITE	28.5	MARS	CCAFS	MARS ORBITER2
DEC 98	MEDIUM	MEDLITE	28.5	MARS	CCAFS	MARS LANDER1
APR 99	INTERMEDIATE	TBD	28.5	GTO	CCAFS	TDRS-F08
APR 99**	INTERMEDIATE	ATLAS I	28.5	GSO	CCAFS	GOES-K

** FOR NASA PLANNING PURPOSES.

**** ELV PAYLOAD FLIGHT ASSIGNMENTS ****
APRIL 1994

DATE MO YR	CLASS	LAUNCH VEHICLE TYPE	INCL	PAYLOAD ORBIT	LAUNCH SITE	PAYLOAD
JUN 99	SMALL	PEGASUS	TBD	TBD	VAFB**	SMEX-06
MAR 00	INTERMEDIATE	TBD	28.5	GSO	CCAFS	GOES-L
APR 00	INTERMEDIATE	TBD	28.5	GTO	CCAFS	TDRS-F09
MAY 00**	MEDIUM	TBD	98.7	SS	VAFB	NOAA-N
JUN 00	SMALL	PEGASUS	TBD	TBD	WFF	SMEX-07
SEP 00	SMALL	PEGASUS	TBD	LEO	VAFB	AERO-01
DEC 00	INTERMEDIATE	TBD	98.2	SS	VAFB	EOS-PM-1
DEC 00	MEDIUM	DELTA II	28.5	HE	CCAFS	FUSE
APR 01	INTERMEDIATE	TBD	28.5	GTO	CCAFS	TDRS-F10
DEC 01	MEDIUM	MEDLITE	28.5	MARS	CCAFS	MARS LANDER2
DEC 01	MEDIUM	MEDLITE	28.5	MARS	CCAFS	MARS LANDER3

** FOR NASA PLANNING PURPOSES

SECTION 4

PREVIOUS FLIGHTS

NOTES:

1. PAYLOADS IN PARENTHESIS ARE CONFIGURED USING THE SAME CARRIER

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO- BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
1	12-APR-81 COLUMBIA	40.3 145	2 2	DFI-01	DFI PAL	OEX-01	CDR:JOHN W. YOUNG PLT:ROBERT L. CRIPPEN
2	12-NOV-81 COLUMBIA	38.0 137	2 2	OSTA-01 DFI-02 IECM-01	PAL DFI PAL UNIQUE	OEX-02	CDR:JOE H. ENGLE PLT:RICHARD H. TRULY
3	22-MAR-82 COLUMBIA	38.0 128	2 8	OSS-01 DFI-03 IECM-02 GAS TEST	PAL DFI PAL UNIQUE GAS CAN	OEX-03 MLR-01 EEVT SE-81-08	CDR:JACK R. LOUSMA PLT:C. GORDON FULLERTON
4	27-JUN-82 COLUMBIA	28.5 139	2 7	DOD 82-01 DFI-04 IECM-03 GAS(1)	 DFI PAL UNIQUE GAS CAN	OEX-04 MLR-02 CFES-01 NOSL-01 SE-81-04 SE-81-06	CDR:THOMAS K. MATTINGLY PLT:HENRY W. HARTSFIELD
5	11-NOV-82 COLUMBIA	28.5 162	4 5	SBS-C TELESAT-E GAS(1)	PAM-D PAM-D GAS CAN	ISAL SE-81-02 SE-81-05 SE-81-09	CDR:VANCE D. BRAND PLT:ROBERT F. OVERMYER MS:JOSEPH P. ALLEN MS:WILLIAM B. LENOIR
6	4-APR-83 CHALLENGER	28.5 155	4 5	TDRS-A GAS(3)	IUS GAS CAN	CFES-02 MLR-03 NOSL-02	CDR:PAUL J. WEITZ PLT:KAROL J. BOBKO MS:F. STORY MUSGRAVE MS:DONALD H. PETERSON

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
7	18-JUN-83 CHALLENGER	28.5 161	5 6	SPAS-01 OSTA-02 TELESAT-F PALAPA B-1 GAS(7)	 MPESS PAM-D PAM-D GAS CAN	CFES-03 MLR-04	CDR:ROBERT L. CRIPPEN PLT:FREDERICK H. HAUCK MS:JOHN M. FABIAN MS:SALLY K. RIDE MS:NORMAN E. THAGARD
8	30-AUG-83 CHALLENGER	28.5 161	5 6	PDRS/PFTA OIM INSAT 1-B GAS(4)	 PAM-D GAS CAN	CFES-04 RME-01 SE-81-01	CDR:RICHARD H. TRULY PLT:DANIEL C. BRANDENSTEIN MS:GUION S. BLUFORD, JR. MS:DALE A. GARDNER MS:WILLIAM E. THORNTON
9	28-NOV-83 COLUMBIA	57.0 137	6 10	SPACELAB-01	LM+PAL		CDR:JOHN W. YOUNG PLT:BREWSTER H. SHAW, JR. MS:OWEN K. GARRIOTT MS:ROBERT A. R. PARKER PS:BYRON K. LICHTENBERG PS:ULF MERBOLD (GERMANY)
10 41-B	3-FEB-84 CHALLENGER	28.5 166	5 8	SPAS-01A PALAPA B-2 WESTAR-VI C-360b-01 GAS(5) IRT	 PAM-D PAM-D GAS CAN GAS CAN UNIQUE	ACES C-360c RME-02 IEF-01 MLR-05 SE-81-10	CDR:VANCE D. BRAND PLT:ROBERT L. GIBSON MS:BRUCE MCCANDLESS II MS:RONALD E. MCNAIR MS:ROBERT L. STEWART
11 41-C	6-APR-84 CHALLENGER	28.5 252	5 7	LDEF-01 SMRM C-360b-02	 FSS GAS CAN	RME-03 SE-82-17 IMAX-01	CDR:ROBERT L. CRIPPEN PLT:FRANCIS R. SCOBEE MS:TERRY J. HART MS:JAMES D. VAN HOFTEN MS:GEORGE D. NELSON

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
12 41-D	30-AUG-84 DISCOVERY	28.5 162	6 6	OAST-01 SBS-D TELSTAR 3-C SYNCOM IV-02	MPESS PAM-D PAM-D	CFES-05 IMAX-02 RME-04 CLOUDS SE-82-14	CDR:HENRY W. HARTSFIELD PLT:MICHAEL L. COATS MS:STEVEN A. HAWLEY MS:RICHARD M. MULLANE MS:JUDITH A. RESNIK PS:CHARLES WALKER
13 41-G	5-OCT-84 CHALLENGER	57.0 192	7 8	OSTA-03 ERBS LFC ORS GAS(8)	PAL MPESS MPESS GAS CAN	IMAX-03 RME-05 TLD APE-01 CANEX	CDR:ROBERT L. CRIPPEN PLT:JON A. MCBRIDE MS:DAVID C. LEESTMA MS:SALLY K. RIDE MS:KATHRYN D. SULLIVAN PS:MARC GARNEAU (CANADA) PS:PAUL SCULLY-POWER (AUSTRALIA)
14 51-A	8-NOV-84 DISCOVERY	28.5 161	5 8	HS-376 RETV-P HS-376 RETV-W TELESAT-H SYNCOM IV-01	PAL PAL PAM-D	DMOS-01 RME-06	CDR:FREDERICK H. HAUCK PLT:DAVID M. WALKER MS:JOSEPH P. ALLEN MS:ANNA L. FISHER MS:DALE A. GARDNER
15 51-C	24-JAN-85 DISCOVERY	XX X	5 3	DOD			CDR:THOMAS K. MATTINGLY PLT:LOREN J. SHRIVER MS:JAMES F. BUCHLI MS:ELLISON S. ONIZUKA PS:GARY E. PAYTON

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
16 51-D	12-APR-85 DISCOVERY	28.5 249	7 7	TELESAT-I SYNCOM IV-03 CFES-06 GAS(2)	PAM-D UNIQUE GAS CAN	AFE-01 PPE-01 SE-82-03 SE-83-03 SAS	CDR:KAROL J. BOBKO PLT:DONALD E. WILLIAMS MS:S. DAVID GRIGGS MS:JEFFREY A. HOFFMAN MS:M. RHEA SEDDON PS:E. JAKE GARN PS:CHARLES WALKER
17 51-B	29-APR-85 CHALLENGER	57.0 192	7 7	SPACELAB-03 GLOMR NUSAT	LM+MPESS GAS CAN GAS CAN		CDR:ROBERT F. OVERMYER PLT:FREDERICK D. GREGORY MS:DON L. LIND MS:NORMAN E. THAGARD MS:WILLIAM E. THORNTON PS:L. VAN DEN BERG (NETHERLANDS) PS:TAYLOR G. WANG
18 51-G	17-JUN-85 DISCOVERY	28.5 192	7 7	SPTN-01 MORELOS-A ARABSAT-1B TELSTAR 3-D GAS(6)	MPESS PAM-D PAM-D PAM-D GAS CAN	FEE FPE ADSF-01 HPTE	CDR:DANIEL C. BRANDENSTEIN PLT:JOHN O. CREIGHTON MS:JOHN M. FABIAN MS:SHANNON W. LUCID MS:STEVEN R. NAGEL PS:SULTAN AL-SAUD (SAUDIA ARABIA) PS:PATRICK BAUDRY (CAMERON)
19 51-F	29-JUL-85 CHALLENGER	50.0 173	7 8	SPACELAB-02	IG+3-PAL	SAREX SLSTP-01 CBDE	CDR:C. GORDON FULLERTON PLT:ROY D. BRIDGES MS:ANTHONY W. ENGLAND MS:KARL G. HENIZE MS:F. STORY MUSGRAVE PS:LOREN W. ACTON PS:JOHN-DAVID F. BARTOE

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
20 51-I	27-AUG-85 DISCOVERY	28.5 191	5 7	AUSSAT-01 ASC-01 SYNCOM IV-04 SYNCOM-SALVAGE	PAM-D PAM-D	PVTOS	CDR:JOE H. ENGLE PLT:RICHARD O. COVEY MS:WILLIAM F. FISHER MS:JOHN M. LOUNGE MS:JAMES D. VAN HOFTEN
21 51-J	3-OCT-85 ATLANTIS	XX X	5 4	DOD			CDR:KAROL J. BOBKO PLT:RONALD J. GRABE MS:DAVID C. HILMERS MS:ROBERT L. STEWART PS:WILLIAM A. PAILES
22 61-A	30-OCT-85 CHALLENGER	57.0 179	8 7	SPACELAB D-1 GLOMR	LM GAS CAN		CDR:HENRY W. HARTSFIELD PLT:STEVEN R. NAGEL MS:GUION S. BLUFORD, JR. MS:JAMES F. BUCHLI MS:BONNIE J. DUNBAR PS:REINHARD FURRER (GERMANY) PS:ERNST MESSERSCHMID (GERMANY) PS:WUBBO J. OCKELS (NETHERLANDS)
23 61-B	26-NOV-85 ATLANTIS	28.5 191	7 7	EASE/ACCESS MORELOS-B SATCOM KU-02 AUSSAT-02 GAS(1) CFES-07 ICBC-01	MPESS PAM-D PAM-D2 PAM-D GAS CAN UNIQUE UNIQUE	DMOS-02 MPSE	CDR:BREWSTER H. SHAW, JR. PLT:BRYAN D. O'CONNOR MS:MARY L. CLEAVE MS:JERRY L. ROSS MS:SHERWOOD C. SPRING PS:RODOLFO NERI VELA (MEXICO) PS:CHARLES WALKER

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
24 61-C	12-JAN-86 COLUMBIA	28.5 176	7 6	MSL-2 SATCOM KU-01 GBA(12) HH-G1 GAS(1)	MPESS PAM-D2 GBA HH-G GAS CAN	IR-IE HPCG IBSE CHAMP-01 SE-82-19 SE-83-04 SE-83-06	CDR:ROBERT L. GIBSON PLT:CHARLES F. BOLDEN, JR. MS:FRANKLIN R. CHANG-DIAZ MS:STEVEN A. HAWLEY MS:GEORGE D. NELSON PS:ROBERT CENKER PS:BILL NELSON
25 51-L	28-JAN-86 CHALLENGER	- -	7 -	SPTN-HALLEY TDRS-B	MPESS IUS	TISP-01 FDE CHAMP-02 RME II-01 PPE-02 SE-82-04 SE-82-05 SE-82-09	CDR:FRANCIS R. SCOBEE PLT:MICHAEL J. SMITH MS:RONALD E. MCNAIR MS:ELLISON S. ONIZUKA MS:JUDITH A. RESNIK PS:GREGORY JARVIS SFP:CHRISTA MCAULIFFE
26	29-SEP-88 DISCOVERY	28.5 162	5 4	TDRS-C OASIS I-01	IUS UNIQUE	ADSF-02 PVTOS-02 IRCFE SE-82-04 PCG-II-01 IEF-02 ARC-02 MLE-01 ELRAD SE-82-05 PPE-03	CDR:FREDERICK H. HAUCK PLT:RICHARD O. COVEY MS:DAVID C. HILMERS MS:JOHN M. LOUNGE MS:GEORGE D. NELSON

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO- BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
27	2-DEC-88 ATLANTIS	XX X	5 4	DOD			CDR:ROBERT L. GIBSON PLT:GUY S. GARDNER MS:RICHARD M. MULLANE MS:JERRY L. ROSS MS:WILLIAM M. SHEPHERD
29	13-MAR-89 DISCOVERY	28.5 163	5 5	TDRS-D SHARE OASIS I-02	IUS UNIQUE UNIQUE	IMAX-04 SE-83-09 PCG-III-01 CHROMEX-01 SE-82-08 AMOS-01	CDR:MICHAEL L. COATS PLT:JOHN E. BLAHA MS:JAMES P. BAGIAN MS:JAMES F. BUCHLI MS:ROBERT C. SPRINGER
30	4-MAY-89 ATLANTIS	28.9 161	5 4	MAGELLAN	IUS	FEA-01 MLE-02 AMOS-02	CDR:DAVID M. WALKER PLT:RONALD J. GRABE MS:MARY L. CLEAVE MS:MARK C. LEE MS:NORMAN E. THAGARD
28	8-AUG-89 COLUMBIA	XX X	5 5	DOD			CDR:BREWSTER H. SHAW, JR. PLT:RICHARD N. RICHARDS MS:JAMES C. ADAMSON MS:MARK N. BROWN MS:DAVID C. LEESTMA
34	18-OCT-89 ATLANTIS	34.3 162	5 5	GALILEO SSBUV-01	IUS UNIQUE	IMAX-05 SE-82-15 GHCD PM-01 MLE-03 STEX AMOS-03	CDR:DONALD E. WILLIAMS PLT:MICHAEL J. MCCULLEY MS:ELLEN S. BAKER MS:FRANKLIN R. CHANG-DIAZ MS:SHANNON W. LUCID

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO- BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
33	22-NOV-89 DISCOVERY	XX X	5 5	DOD			CDR:FREDERICK D. GREGORY PLT:JOHN E. BLAHA MS:MANLEY L. CARTER, JR. MS:F. STORY MUSGRAVE MS:KATHRYN C. THORNTON
32	9-JAN-90 COLUMBIA	28.5 193	5 11	SYNCOM IV-05 LDEF-RETR IOCM-01	UNIQUE NONE UNIQUE	IMAX-06 CNCR PCG-III-02 FEA-02 AFE-02 MLE-04 L3 AMOS-04	CDR:DANIEL C. BRANDENSTEIN PLT:JAMES D. WETHERBEE MS:BONNIE J. DUNBAR MS:MARSHA S. IVINS MS:G. DAVID LOW
36	28-FEB-90 ATLANTIS	XX X	5 5	DOD			CDR:JOHN O. CREIGHTON PLT:JOHN H. CASPER MS:DAVID C. HILMERS MS:RICHARD M. MULLANE MS:PIERRE J. THUOT
31	24-APR-90 DISCOVERY	28.5 330	5 5	HST APM-01 ICBC-02	NONE UNIQUE UNIQUE	IMAX-07 SE-82-16 RME III-01 AMOS-05 IPMP-01 PCG-III-03	CDR:LOREN J. SHRIVER PLT:CHARLES F. BOLDEN, JR. MS:STEVEN A. HAWLEY MS:BRUCE MCCANDLESS II MS:KATHRYN D. SULLIVAN

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
41	6-OCT-90 DISCOVERY	28.5 160	5 4	ULYSSES SSBUV-02 ISAC	IUS/PAM UNIQUE UNIQUE	SSCE-01 CHROMEX-02 VCS IPMP-02 PSE-01 RME III-02 AMOS-06	CDR:RICHARD N. RICHARDS PLT:ROBERT D. CABANA MS:THOMAS D. AKERS MS:BRUCE E. MELNICK MS:WILLIAM M. SHEPHERD
38	15-NOV-90 ATLANTIS	XX X	5 5	DOD			CDR:RICHARD O. COVEY PLT:FRANK L. CULBERTSON, JR. MS:CHARLES D. "SAM" GEMAR MS:CARL J. MEADE MS:ROBERT C. SPRINGER
35	2-DEC-90 COLUMBIA	28.5 190	7 9	ASTRO-01 BBXRT-01	IG+2-PAL TAPS	SAREX II-01 AMOS-07 UVPI-01	CDR:VANCE D. BRAND PLT:GUY S. GARDNER MS:JEFFREY A. HOFFMAN MS:JOHN M. LOUNGE MS:ROBERT A. R. PARKER PS:SAMUEL T. DURRANCE PS:RONALD A. PARISE
37	5-APR-91 ATLANTIS	28.5 244	5 6	GRO CETA APM-02	NONE UNIQUE UNIQUE	AMOS-08 BIMDA-01 PCG-III-04 RME III-03 SAREX II-02	CDR:STEVEN R. NAGEL PLT:KENNETH D. CAMERON MS:JAY APT MS:LINDA M. GODWIN MS:JERRY L. ROSS

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
39	28-APR-91 DISCOVERY	57.0 140	7 8	IBSS AFP-675 STP-01 MPEC-01	SPAS PAL HH-M UNIQUE	CLOUDS-1A-1 RME III-04 UVPI-02	CDR:MICHAEL L. COATS PLT:L. BLAINE HAMMOND, JR. MS:GUION S. BLUFORD, JR. MS:GREGORY J. HARBAUGH MS:RICHARD J. HIEB MS:DONALD R. MCMONAGLE MS:CHARLES LACY VEACH
40	5-JUN-91 COLUMBIA	39.0 161	7 9	SLS-01 GBA(12)	LM GBA	MODE-A	CDR:BRYAN D. O'CONNOR PLT:SIDNEY M. GUTIERREZ MS:JAMES P. BAGIAN MS:TAMARA E. JERNIGAN MS:M. RHEA SEDDON PS:F. DREW GAFFNEY PS:MILLIE HUGHES-FULFORD
43	2-AUG-91 ATLANTIS	28.5 161	5 9	TDRS-E SSBUV-03 SHARE II OCTW-01 TPCE-01	IUS UNIQUE UNIQUE UNIQUE CAP/SW	SSCE-02 BIMDA-02 SAMS-01 PCG-III-05 IPMP-03 AMOS-09 APE-B-01 UVPI-03	CDR:JOHN E. BLAHA PLT:MICHAEL A. BAKER MS:JAMES C. ADAMSON MS:G. DAVID LOW MS:SHANNON W. LUCID

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
48	12-SEP-91 DISCOVERY	57.0 292	5 6	UARS APM-03	UNIQUE UNIQUE	AMOS-10 PCG-II-02 RME III-05 PARE-01 MODE-B CREAM-01 IPMP-04 SAM-02	CDR:JOHN O. CREIGHTON PLT:KENNETH S. REIGHTLER, JR. MS:MARK N. BROWN MS:JAMES F. BUCHLI MS:CHARLES D. "SAM" GEMAR
44	24-NOV-91 ATLANTIS	28.5 195	6 7	DSP IOCM-02	IUS UNIQUE	M88-1 CREAM-02 SAM-01 RME III-06 VFT-1-01 TERRA SCOUT AMOS-11 UVPI-04	CDR:FREDERICK D. GREGORY PLT:TERENCE T. HENRICKS MS:F. STORY MUSGRAVE MS:MARIO RUNCO, JR. MS:JAMES S. VOSS PS:THOMAS J. HENNEN
42	22-JAN-92 DISCOVERY	57.0 162	7 8	IML-01 GBA(10)	LM GBA	GOSAMR-01 SE-83-02 SE-81-09 IPMP-05 RME III-07 UVPI-05	CDR:RONALD J. GRABE PLT:STEPHEN S. OSWALD MS (PLC):NORMAN E. THAGARD MS:DAVID C. HILMERS MS:WILLIAM F. READDY PS:ROBERTA L. BONDAR (CANADA) PS:ULF MERBOLD (GERMANY)

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
45	24-MAR-92 ATLANTIS	57.0 160	7 9	ATLAS-01 SSBUV/A-01 GAS(1)	IG+2-PAL UNIQUE GAS CAN	STL-01 RME III-08 VFT-2-01 CLOUDS-1A-2 SAREX II-03 IPMP-06 UVPI-06	CDR:CHARLES F. BOLDEN, JR. PLT:BRIAN DUFFY MS (PLC):KATHRYN D. SULLIVAN MS:C. MICHAEL FOALE MS:DAVID C. LEESTMA PS:DIRK D. FRIMOUT (BELGIUM) PS:BYRON K. LICHTENBERG
49	7-MAY-92 ENDEAVOUR	28.3 183	7 9	INTELSAT-VI-R ASEM	UNIQUE MPESS	CPCG-01 AMOS-12 UVPI-07	CDR:DANIEL C. BRANDENSTEIN PLT:KEVIN P. CHILTON MS:THOMAS D. AKERS MS:RICHARD J. HIEB MS:BRUCE E. MELNICK MS:KATHRYN C. THORNTON MS:PIERRE J. THUOT
50	25-JUN-92 COLUMBIA	28.5 160	7 14	USML-01	LM+EDO	IPMP-07 UVPI-08 SAREX II-04	CDR:RICHARD N. RICHARDS PLT:KENNETH D. BOWERSOX MS (PLC):BONNIE J. DUNBAR MS:ELLEN S. BAKER MS:CARL J. MEADE PS:LAWRENCE J. DELUCAS PS:EUGENE H. TRINH
46	31-JUL-92 ATLANTIS	28.5 230	7 7	TSS-01 EURECA-1L ICBC-03 EOIM-III/TEMP2A-03 CONCAP II-01 CONCAP III-01 LDCE-01	PAL+MPESS EURECA-A UNIQUE MPESS CAP/SW CAP/SW CAP/SW	PHCF-01 UVPI-09	CDR:LOREN J. SHRIVER PLT:ANDREW M. ALLEN MS (PLC):JEFFREY A. HOFFMAN MS:FRANKLIN R. CHANG-DIAZ MS:MARSHA S. IVINS MS:CLAUDE NICOLLIER (SWITZERLAND) PS:FRANCO MALERBA (ITALY)

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
47	12-SEP-92 ENDEAVOUR	57.0 163	7 7	SL-J GBA(9)	LM GBA	ISAIAH SAREX II-05 SSCE-03	CDR:ROBERT L. GIBSON PLT:CURTIS L. BROWN, JR. MS (PLC):MARK C. LEE MS:JEROME APT MS:N. JAN DAVIS MS:MAE C. JEMISON PS:MAMORU MOHRI (JAPAN)
52	22-OCT-92 COLUMBIA	28.5 160	6 10	LAGEOS II USMP-01 ASP CANEX-02 TPCE-02	IRIS USMP HH-G UNIQUE CAP/SW	CMIX-01 CPCG-02 CVTE-01 HPP-01 PSE-02 SPIE	CDR:JAMES D. WETHERBEE PLT:MICHAEL A. BAKER MS:TAMARA E. JERNIGAN MS:WILLIAM M. SHEPHERD MS:CHARLES LACY VEACH PS:STEVEN G. MACLEAN (CANADA)
53	2-DEC-92 DISCOVERY	57.0 200	5 7	DOD-1 GCP ODERACS-01	UNIQUE HH-G CAP/SW	BLAST-01 CLOUDS-1A-3 CREAM-03 FARE-01 HERCULES-01 MIS I-01 RME III-09 STL-02 VFT-2-02	CDR:DAVID M. WALKER PLT:ROBERT D. CABANA MS:GUION S. BLUFORD MS:MICHAEL R. U. CLIFFORD MS:JAMES S. VOSS
54	13-JAN-93 ENDEAVOUR	28.5 160	5 6	TDRS-F DXS	IUS HH-G	CGBA-01 CHROMEX-03 PARE-02 SSCE-04	CDR:JOHN H. CASPER PLT:DONALD R. MCMONAGLE MS:GREGORY J. HARBAUGH MS:SUSAN J. HELMS MS:MARIO RUNCO, JR.

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
56	8-APR-93 DISCOVERY	57.0 160	5 9	ATLAS-02 SSBUV/A-02 SPTN 201-01 SUVE	IG+1-PAL SSBUV/A SPARTAN CAP/SW	CMIX-02 HERCULES-02 PARE-03 RME III-10 SAREX II-06 STL-03 CREAM-04 AMOS-13	CDR:KENNETH D. CAMERON PLT:STEPHEN S. OSWALD MS:KENNETH D. COCKRELL MS:C. MICHAEL FOALE MS:ELLEN OCHOA
55	26-APR-93 COLUMBIA	28.5 160	7 10	SL-D2	LM+USS+2 CAP	SAREX II-07	CDR:STEVEN R. NAGEL PLT:TERRENCE T. HENRICKS MS (PLC):JERRY L. ROSS MS:BERNARD A. HARRIS, JR. MS:CHARLES J. PRECOURT, JR. PS:HANS SCHLEGEL (GERMANY) PS:ULRICH WALTER (GERMANY)
57	21-JUN-93 ENDEAVOUR	28.5 250	6 10	EURECA-1R SPACEHAB-01 CONCAP IV-01 SHOOT GBA(11)	EURECA-A SPACEHAB CAP/GBA HH-M GBA	FARE-02 SAREX II-08 AMOS-14	CDR:RONALD J. GRABE PLT:BRIAN DUFFY MS (PLC):G. DAVID LOW MS:NANCY J. SHERLOCK MS:JANICE E. VOSS MS:PETER J. K. WISOFF
51	12-SEP-93 DISCOVERY	28.5 160	5 10	ACTS ORFEUS-SPAS-01 LDCE-02	TOS ASTRO-SPAS CAP/SW	IMAX-08 IPMP-08 HRSGS-A-01 APE-B-02 CPCG-03 RME III-11 CHROMEX-04 AMOS-15	CDR:FRANK L. CULBERTSON, JR. PLT:WILLIAM F. READDY MS:DANIEL W. BURSCH MS:JAMES H. NEWMAN MS:CARL E. WALZ

**** PREVIOUS SHUTTLE FLIGHTS ****

FLT	DATE ORBITER	INCL ALT	CRW DUR	MISSION/CARGO-BAY PAYLOADS	CARRIER	MIDDECK PAYLOADS	CREW ASSIGNMENT
58	18-OCT-93 COLUMBIA	39.0 153	7 14	SLS-02	LM+EDO	SAREX II-09	CDR:JOHN E. BLAHA PLT:RICHARD A. SEARFOSS MS (PLC):M. RHEA SEDDON MS:SHANNON W. LUCID MS:WILLIAM S. MCARTHUR, JR. MS:DAVID A. WOLF PS:MARTIN J. FETTMAN
61	2-DEC-93 ENDEAVOUR	28.5 310	7 11	HST SM-01 ICBC-04	FSS+UNIQUE ICBC	AMOS-16 IMAX-09	CDR:RICHARD O. COVEY PLT:KENNETH J. BOWERSOX MS (PLC):F. STORY MUSGRAVE MS:THOMAS D. AKERS MS:JEFFERY A. HOFFMAN MS:CLAUDE NICOLLIER (SWITZERLAND) MS:KATHRYN C. THORTON
60	3-FEB-94 DISCOVERY	57.0 190	6 8	SPACEHAB-02 WSF-01 (CAPL/GBA(4)) (ODERACS-1R) (BREMSAT)	SPACEHAB WSF GBA GBA GBA	SAREX II-10 APE-B-03	CDR:CHARLES F. BOLDEN, JR. PLT:KENNETH S. REIGHTLER, JR. MS:FRANKLIN R. CHANG-DIAZ MS:N. JAN DAVIS MS:SERGEI KRIKALEV (RUSSIA) MS:RONALD M. SEGA
62	4-MAR-94 COLUMBIA	39.0 160	5 14	OAST-02 USMP-02 DEE SSBUV/A-03 LDCE-03	HH-M 2-MPESS+EDO GAS BEAM SSBUV/A CAP/SW	APCG-01 PSE-03 CPCG-04 CGBA-02 MODE-RFL BDS-01 AMOS-17 APE-B-04	CDR:JOHN H. CASPER PLT:ANDREW M. ALLEN MS:CHARLES D. "SAM" GEMAR MS:MARSHA S. IVINS MS:PIERRE THUOT

**** PREVIOUS SCOUT VEHICLE FLIGHTS ****

PROGRAM INITIATION DATE: 1959
FIRST FLIGHT: 1960

LAUNCHES TO DATE: 117
LAUNCH VEHICLE SUCCESSES: 103

LAST 20 FLIGHTS

LAUNCH DATE	FLIGHT NUMBER	SPACECRAFT	FINAL PAYLOAD ORBIT ACHIEVED	NOTES
26-APR-78	S-201	HCMM	LEO	SUCCESS
18-FEB-79	S-202	SAGE	LEO	SUCCESS
2-JUN-79	S-198	UK-6	LEO	SUCCESS
30-OCT-79	S-203	MAGSAT	LEO	SUCCESS
14-MAY-81	S-192	NOVA I	LEO	SUCCESS
27-JUN-83	S-205	HILAT	LEO	SUCCESS
11-OCT-84	S-208	NOVA-III	LEO	SUCCESS
2-AUG-85	S-209	SOOS-I	LEO	SUCCESS
12-DEC-85	S-207	AFITV	LEO	SUCCESS
13-NOV-86	S-199	AF POLAR BEAR	LEO	SUCCESS
16-SEP-87	S-204	SOOS-II	LEO	SUCCESS
25-MAR-88	S-206	SAN MARCO-DL	LEO	SUCCESS
25-APR-88	S-211	SOOS-III	LEO	SUCCESS
15-JUN-88	S-213	NOVA-II	LEO	SUCCESS
25-AUG-88	S-214	SOOS-IV	LEO	SUCCESS
9-MAY-90	S-212	MACSAT	LEO	SUCCESS
29-JUN-91	S-216	REX	LEO	SUCCESS
3-JUL-92	S-215	SAMPEX	LEO	SUCCESS
21-NOV-92	S-210	MSTI-I	LEO	SUCCESS
25-JUN-93	S-217	RADCAL	LEO	SUCCESS

**** PREVIOUS DELTA VEHICLE FLIGHTS ****

PROGRAM INITIATION DATE: 1959
FIRST FLIGHT: 1960

LAUNCHES TO DATE: 226
LAUNCH VEHICLE SUCCESSES: 214

LAST 20 FLIGHTS

LAUNCH DATE	FLIGHT NUMBER	SPACECRAFT	FINAL PAYLOAD ORBIT ACHIEVED	NOTES
23-FEB-92	207	NAVSTAR-12	GSO	SUCCESS
9-APR-92	208	NAVSTAR-13	GSO	SUCCESS
13-MAY-92	209	PALAPA-B4	GSO	SUCCESS
7-JUN-92	210	EUVE	LEO	SUCCESS
7-JUL-92	211	NAVSTAR-14	GSO	SUCCESS
24-JUL-92	212	GEOTAIL	HEEO	SUCCESS
31-AUG-92	213	SATCOM C-4	GSO	SUCCESS
9-SEP-92	214	NAVSTAR-15	GSO	SUCCESS
12-OCT-92	215	DFS KOPERNIKUS	GSO	SUCCESS
22-NOV-92	216	NAVSTAR-16	GSO	SUCCESS
18-DEC-92	217	NAVSTAR-17	GSO	SUCCESS
2-FEB-93	218	NAVSTAR-18	GSO	SUCCESS
29-MAR-93	219	NAVSTAR-19	GSO	SUCCESS
12-MAY-93	220	NAVSTAR-20	GSO	SUCCESS
26-JUN-93	221	NAVSTAR-21	GSO	SUCCESS
30-AUG-93	222	NAVSTAR-22	GSO	SUCCESS
26-OCT-93	223	NAVSTAR-23	GSO	SUCCESS
7-DEC-93	224	NATO IVB	GSO	SUCCESS
19-FEB-94	225	GALAXY-1R	GSO	SUCCESS
9-MAR-94	226	NAVSTAR-24/SEDS II	GSO	SUCCESS

**** PREVIOUS ATLAS CENTAUR VEHICLE FLIGHTS ****

PROGRAM INITIATION DATE: 1958
FIRST FLIGHT: 1962

LAUNCHES TO DATE: 81
LAUNCH VEHICLE SUCCESSES: 67

LAST 20 FLIGHTS

LAUNCH DATE	FLIGHT NUMBER	SPACECRAFT	FINAL PAYLOAD ORBIT ACHIEVED	NOTES
9-JUN-84	62	INTELSAT V		FAILURE
22-MAR-85	63	INTELSAT VA	GSO	SUCCESS
29-JUN-85	64	INTELSAT VA	GSO	SUCCESS
28-SEP-85	65	INTELSAT VA	GSO	SUCCESS
4-DEC-86	66	FLTSATCOM-7	GSO	SUCCESS
26-MAR-87	67	FLTSATCOM-6		FAILURE
25-SEP-89	68	FLTSATCOM-8	GSO	SUCCESS
25-JUL-90	69	CRRES	GTO	SUCCESS
18-APR-91	70	BS-3H		FAILURE
7-DEC-91	71	EUTELSAT II F3	GSO	SUCCESS
10-FEB-92	72	DSCS-3 F1	GSO	SUCCESS
13-MAR-92	73	GALAXY V	GSO	SUCCESS
9-JUN-92	74	INTELSAT-K	GSO	SUCCESS
2-JUL-92	75	DSCS-3 F2	GSO	SUCCESS
22-AUG-92	76	GALAXY 1R		FAILURE
25-MAR-93	77	UHF-F1		FAILURE
19-JUL-93	78	DSCS-3F3	GSO	SUCCESS
3-SEP-93	79	UHF-F2	GSO	SUCCESS
28-NOV-93	80	DSCS-3F5	GSO	SUCCESS
7-DEC-93	81	TELSTAR 401	GSO	SUCCESS

**** PREVIOUS COMMERCIAL TITAN III FLIGHTS ****

PROGRAM INITIATION DATE: 1987
FIRST FLIGHT: 1989

LAUNCHES TO DATE: 4
LAUNCH VEHICLE SUCCESSES: 3

ALL FLIGHTS

LAUNCH DATE	FLIGHT NUMBER	SPACECRAFT	FINAL PAYLOAD ORBIT ACHIEVED	NOTES
31-DEC-89	1	JCSAT/SKYNET	GSO	SUCCESS
14-MAR-90	2	INTELSAT VI/F3	*	FAILURE
23-JUN-90	3	INTELSAT VI/F4	GSO	SUCCESS
25-SEP-92	4	MARS OBSERVER	PLANETARY	SUCCESS

*Retrieved by Space Shuttle Endeavour in May 1992 and successfully boosted into geosynchronous orbit.

SECTION 5

PAYLOAD REQUESTS

NOTES:

1. INCLUDES PRIMARY, COMPLEX SECONDARY, AND MANIFESTED NON-COMPLEX SECONDARY PAYLOADS.

2. REQUEST DATE: LAUNCH DATE REQUESTED BY THE PAYLOAD ORGANIZATION

3. FLIGHT DATE : LAUNCH DATE SHOWN IN THE MANIFEST.
   IF NOT MANIFESTED, NO DATE IS GIVEN.

4. SPACE STATION FLIGHTS ARE UNDER REVIEW PENDING FINAL RESOLUTION OF THE REQUIRED ASSEMBLY SEQUENCE LAUNCH DATES.

5. CARRIER DESIGNATED AS SPACEHAB LOCKER ARE FOR NON-SPACEHAB DEDICATED MIDDECK PAYLOADS MANIFESTED IN THE SPACEHAB MODULE.

**** PAYLOAD REQUESTS ****

PAYLOAD	CARRIER	REQ DATE	FLIGHT DATE	FLIGHT/VEHICLE	TYPE	SPONSOR
ACE	NONE	AUG 97		DELTA II	PRIMARY	OSS
AERO-01	NONE	SEP 00		PEGASUS	PRIMARY	OSS
AERO-02	NONE	JAN 03		PEGASUS**	PRIMARY	OSS
AERO-03	NONE	JAN 06		PEGASUS**	PRIMARY	OSS
AERO-04	NONE	JAN 09		PEGASUS**	PRIMARY	OSS
AIM	NONE	JUN 04		MEDIUM	PRIMARY	OSS
ALT/L1	NONE	JUN 02		MEDLITE**	PRIMARY	OSS
ALT/L2	NONE	JUN 07		MEDLITE**	PRIMARY	OSS
ALT/R1	NONE	SEP 02		MEDLITE**	PRIMARY	OSS
ALT/R2	NONE	SEP 07		MEDLITE**	PRIMARY	OSS
AMOS-18	NONE	APR 94	JUL 94	STS-65	SECONDARY*	DOD
AMOS-19	NONE	APR 94	SEP 94	STS-64	SECONDARY*	DOD
AMOS-20	NONE	JUL 94	SEP 94	STS-64	SECONDARY*	DOD
ASTRO-02	IG+2-PAL+EDO	OCT 93	FEB 95	STS-67	PRIMARY	OLMSA/OSS
ATLAS-03	IG+1-PAL	JAN 94	NOV 94	STS-66	PRIMARY	OLMSA/MTPE
ATLAS-04**	IG+1-PAL	JAN 95		SHUTTLE	PRIMARY	OLMSA/MTPE
ATLAS-05**	IG+1-PAL	JAN 96		SHUTTLE	PRIMARY	OLMSA/MTPE
ATLAS-06**	IG+1-PAL	JAN 97		SHUTTLE	PRIMARY	OLMSA/MTPE
AXAF-I	NONE	AUG 98		SHUTTLE	PRIMARY	OSS
BRIC-01	LOCKER	APR 94	SEP 94	STS-68	SECONDARY*	OLMSA
BRIC-02	LOCKER	OCT 94	SEP 94	STS-64	SECONDARY*	OLMSA
BRIC-03	SPACEHAB LOCKER	JAN 95	FEB 95	STS-63	SECONDARY*	OLMSA
CAPL-02	HH-M	OCT 94		SHUTTLE	SECONDARY	MTPE
CASSINI	CENTAUR	OCT 97		TITAN IV	PRIMARY	OSS
CGP/ODERACS-02	HH-M	AUG 93	FEB 95	STS-63	SECONDARY	OSSD

* NON-COMPLEX SECONDARY PAYLOAD
** FOR NASA PLANNING PURPOSES (NOT CURRENTLY BUDGETED)

**** PAYLOAD REQUESTS ****

PAYLOAD	CARRIER	REQ DATE	FLIGHT DATE	FLIGHT/VEHICLE	TYPE	SPONSOR
CHROMEX-05	LOCKER	APR 94	SEP 94	STS-68	SECONDARY*	OLMSA
CHROMEX-06	SPACEHAB LOCKER	JAN 95	FEB 95	STS-63	SECONDARY*	OLMSA
CMIX-03	LOCKER	OCT 94	FEB 95	STS-67	SECONDARY*	OACT
CONCAP IV-02	CAP/GBA	JUL 93	APR 94	STS-59	SECONDARY*	OACT
CONE	HH-M	JUL 96		SHUTTLE	SECONDARY	OACT
CPCG-05	LOCKER	OCT 94	JUL 94	STS-65	SECONDARY*	OACT
CPCG-06	LOCKER	OCT 94	SEP 94	STS-68	SECONDARY*	OACT
CREAM-05	LOCKER	JUL 94	SEP 94	STS-68	SECONDARY*	DOD
CREAM-06***	SPACEHAB LOCKER	JUL 94	FEB 95	STS-63	SECONDARY*	DOD
CRISTA-SPAS-01	ASTRO-SPAS	JAN 94	NOV 94	STS-66	PRIMARY	OLMSA/MTPE
CRISTA-SPAS-02	ASTRO-SPAS	APR 96	DEC 96	STS-82	PRIMARY	OLMSA/MTPE
CSE	HH-G	APR 94		SHUTTLE	SECONDARY	OACT
DEBRIS	PAL	OCT 96		SHUTTLE	SECONDARY	OACT
DISCOVERY-03	NONE	DEC 99		MEDIUM	PRIMARY	OSS
DISCOVERY-04	NONE	MAR 01		MEDLITE	PRIMARY	OSS
DISCOVERY-05	NONE	JUN 02		MEDLITE	PRIMARY	OSS
DISCOVERY-06	NONE	SEP 03		MEDIUM	PRIMARY	OSS
DISCOVERY-07	NONE	DEC 04		MEDLITE	PRIMARY	OSS
DISCOVERY-08	NONE	MAR 06		MEDIUM	PRIMARY	OSS
DISCOVERY-09	NONE	JUN 07		MEDLITE	PRIMARY	OSS
DISCOVERY-10	NONE	SEP 08		MEDIUM	PRIMARY	OSS
DISCOVERY-11	NONE	DEC 09		MEDLITE	PRIMARY	OSS
DISCOVERY-12	NONE	MAR 11		MEDIUM	PRIMARY	OSS
EARTH PROBE-01	NONE	JUN 01		MEDIUM	PRIMARY	OSS
EARTH PROBE-02	NONE	JUN 03		MEDIUM	PRIMARY	OSS

* NON-COMPLEX SECONDARY PAYLOAD
** FOR NASA PLANNING PURPOSES (NOT CURRENTLY BUDGETED)
*** PAYLOAD UNDER REVIEW FOR ADDITION

**** PAYLOAD REQUESTS ****

PAYLOAD	CARRIER	REQ DATE	FLIGHT DATE	FLIGHT/VEHICLE	TYPE	SPONSOR
EARTH PROBE-03	NONE	JUN 05		MEDIUM	PRIMARY	OSS
EARTH PROBE-04	NONE	JUN 07		MEDIUM	PRIMARY	OSS
EARTH PROBE-05	NONE	JUN 09		MEDIUM	PRIMARY	OSS
EOS-AM-1	NONE	JUN 98		INTERMEDIATE	PRIMARY	OSS
EOS-AM-2	NONE	JUN 03		INTERMEDIATE**	PRIMARY	OSS
EOS-AM-3	NONE	JUN 08		INTERMEDIATE**	PRIMARY	OSS
EOS-CHEM-1	NONE	JAN 02		INTERMEDIATE	PRIMARY	OSS
EOS-CHEM-2	NONE	JAN 07		INTERMEDIATE**	PRIMARY	OSS
EOS-PM-1	NONE	DEC 00		INTERMEDIATE	PRIMARY	OSS
EOS-PM-2	NONE	DEC 05		INTERMEDIATE**	PRIMARY	OSS
EOS-PM-3	NONE	DEC 10		INTERMEDIATE**	PRIMARY	OSS
EOS/SAR**	NONE	JUN 00		MEDIUM**	PRIMARY	OSS
ESCAPE-II	CAP/SW	AUG 94	NOV 94	STS-66	SECONDARY*	MTPE
EURECA-2L	EURECA-A	DEC 94	JUN 97	STS-86	PRIMARY	OLMSA/OSS
EURECA-2R	EURECA-A	JUL 95	OCT 97	STS-90	PRIMARY	OLMSA/OSS
FAST	NONE	AUG 94		PEGASUS	PRIMARY	OSS
FUSE	NONE	DEC 00		DELTA II	PRIMARY	OSS
GAMES**	NONE	APR 98		SMALL	PRIMARY	MTPE
GOES-I	NONE	APR 94		ATLAS I	PRIMARY	OSS
GOES-J	NONE	MAR 95		ATLAS I	PRIMARY	OSS
GOES-K	NONE	APR 99		ATLAS I	PRIMARY	OSS
GOES-L	NONE	MAR 00		INTERMEDIATE	PRIMARY	OSS
GOES-M	NONE	APR 05		INTERMEDIATE**	PRIMARY	OSS
GOES-N	NONE	MAR 06		INTERMEDIATE**	PRIMARY	OSS
GP-B	NONE	DEC 00		MEDIUM	PRIMARY	OSS

* NON-COMPLEX SECONDARY PAYLOAD
** FOR NASA PLANNING PURPOSES (NOT CURRENTLY BUDGETED)

**** PAYLOAD REQUESTS ****

PAYLOAD	CARRIER	REQ DATE	FLIGHT DATE	FLIGHT/VEHICLE	TYPE	SPONSOR
GTC	NONE	AUG 98		INTERMEDIATE**	PRIMARY	OSS
HESI	NONE	JAN 00		SMALL**	PRIMARY	OSS
HETE/SAC-B	NONE	APR 95		PEGASUS	PRIMARY	OSS
HPP-02	LOCKER	NOV 94	NOV 94	STS-66	SECONDARY*	OACT
HST SM-02	FSS+UNIQUE	NOV 96	AUG 97	STS-88	PRIMARY	OSS
HST SM-03	FSS+UNIQUE	NOV 99		SHUTTLE	PRIMARY	OSS
HST SM-04	FSS+UNIQUE	NOV 02		SHUTTLE	PRIMARY	OSS
HST SM-05	FSS+UNIQUE	NOV 05		SHUTTLE	PRIMARY	OSS
IAE	SPARTAN	JUL 95	DEC 96	STS-82	PRIMARY	OACT
IEH-01	HH-M	APR 94	MAY 95	STS-69	SECONDARY	OSS
IEH-02	HH-M	MAR 95	JUL 96	STS-79	SECONDARY	OSS
IEH-03	HH-M	APR 96	OCT 97	STS-90	SECONDARY	OSS
IEH-04	HH-M	MAY 97		SHUTTLE	SECONDARY	OSS
IEH-05	HH-M	JUN 98		SHUTTLE	SECONDARY	OSS
IMI	NONE	JUN 02		MEDLITE**	PRIMARY	OSS
IML-02	LM+EDO	JAN 93	JUL 94	STS-65	PRIMARY	OLMSA
ISEM-01	HH-M	JUL 95		SHUTTLE	SECONDARY	OACT
ISEM-02	HH-M	JUL 96		SHUTTLE	SECONDARY	OACT
ISF-01	FM+DS	JUL 97		SHUTTLE	PRIMARY	SII
ISF-02	AM+DS	JAN 98		SHUTTLE	PRIMARY	SII
ISF-03	FM+DS	JAN 99		SHUTTLE	PRIMARY	SII
JFD	MPESS	JUN 96	JUL 97	STS-87	PRIMARY	NASDA
LAGEOS III	NONE	MAY 97		MEDLITE**	PRIMARY	OSS
LITE I	PAL	OCT 93	SEP 94	STS-64	PRIMARY	OLMSA/MTPE
MARS LANDER1	NONE	DEC 98		MEDLITE	PRIMARY	OSS

* NON-COMPLEX SECONDARY PAYLOAD
** FOR NASA PLANNING PURPOSES (NOT CURRENTLY BUDGETED)

**** PAYLOAD REQUESTS ****

PAYLOAD	CARRIER	REQ DATE	FLIGHT DATE	FLIGHT/VEHICLE	TYPE	SPONSOR
MARS LANDER2	NONE	DEC 01		MEDLITE	PRIMARY	OSS
MARS LANDER3	NONE	DEC 01		MEDLITE	PRIMARY	OSS
MARS ORBITER2	NONE	DEC 98		MEDLITE	PRIMARY	OSS
MARS PATHFINDER	NONE	NOV 96		DELTA II	PRIMARY	OSS
MAST-01	LOCKER	APR 94	JUL 94	STS-65	SECONDARY*	DOD
MAST-02	LOCKER	JUL 94	SEP 94	STS-64	SECONDARY*	DOD
MGS	NONE	DEC 96		DELTA II	PRIMARY	OSS
MIDEX-01	NONE	JAN 00		MEDLITE	PRIMARY	OSS
MIDEX-02	NONE	JAN 01		MEDLITE	PRIMARY	OSS
MIDEX-03	NONE	JAN 02		MEDLITE	PRIMARY	OSS
MIDEX-04	NONE	JAN 03		MEDLITE	PRIMARY	OSS
MIDEX-05	NONE	JAN 04		MEDLITE	PRIMARY	OSS
MIDEX-06	NONE	JAN 05		MEDLITE	PRIMARY	OSS
MIDEX-07	NONE	JAN 06		MEDLITE	PRIMARY	OSS
MIDEX-08	NONE	JAN 07		MEDLITE	PRIMARY	OSS
MIDEX-09	NONE	JAN 08		MEDLITE	PRIMARY	OSS
MIDEX-10	NONE	JAN 09		MEDLITE	PRIMARY	OSS
MSL-01	LM+EDO	JUN 97	APR 97	STS-85	PRIMARY	OLMSA
MSL-02	LM+EDO	AUG 98		SHUTTLE	PRIMARY	OLMSA
MSTI-02	NONE	APR 94		SCOUT	PRIMARY	SDIO
NEAR	NONE	FEB 96		DELTA II	PRIMARY	OSS
NEUROLAB	LM+EDO	OCT 97		SHUTTLE	PRIMARY	OLMSA
NOAA-J	NONE	OCT 94		ATLAS E	PRIMARY	OSS
NOAA-K	NONE	MAY 95		TITAN II	PRIMARY	OSS
NOAA-L	NONE	MAR 96		TITAN II	PRIMARY	OSS

* NON-COMPLEX SECONDARY PAYLOAD
** FOR NASA PLANNING PURPOSES (NOT CURRENTLY BUDGETED)

**** PAYLOAD REQUESTS ****

PAYLOAD	CARRIER	REQ DATE	FLIGHT DATE	FLIGHT/VEHICLE	TYPE	SPONSOR
NOAA-M	NONE	MAY 97		TITAN II	PRIMARY	OSS
NOAA-N	NONE	MAY 00		MEDLITE**	PRIMARY	OSS
OARE-01	UNIQUE		JUL 94	STS-65	SECONDARY*	OLMSA
OAST-03	HH-M	JUL 95	JAN 96	STS-75	SECONDARY	OACT
OAST-04	HH-M	JUN 96		SHUTTLE	SECONDARY	OACT
OAST-05	HH-M	JUN 96		SHUTTLE	SECONDARY	OACT
OAST-FLYER	SPARTAN	JUL 94	MAY 95	STS-69	PRIMARY	OACT
ORFEUS-SPAS-02	ASTRO-SPAS	APR 95	JAN 96	STS-75	PRIMARY	OLMSA/OSS
ORSTED	NONE	JAN 96		DELTA II	SECONDARY	OSS
PARE/NIH-R-01	LOCKER	JUL 94	NOV 94	STS-66	SECONDARY*	AGENCY
PCG-STES-01	LOCKER	JUL 94	NOV 94	STS-66	SECONDARY*	OLMSA
PCG-STES-02	LOCKER	OCT 94	FEB 95	STS-67	SECONDARY*	OLMSA
PCG-STES-03	SPACEHAB LOCKER	JAN 95	FEB 95	STS-63	SECONDARY*	OLMSA
PCG-TES-02	LOCKER	APR 94	NOV 94	STS-66	SECONDARY*	OLMSA
PCG-TES-03	LOCKER	JUL 94	FEB 95	STS-67	SECONDARY*	OLMSA
PFF-01**	TBD	FEB 01		TBD**	PRIMARY	TBD
PFF-02**	TBD	FEB 02		TBD**	PRIMARY	TBD
POLAR	NONE	NOV 95		DELTA II	PRIMARY	OSS
RADARSAT	NONE	MAR 95		DELTA II	PRIMARY	OSS
RANGER	NONE	DEC 97		MEDLITE	PRIMARY	OSS
RME III-12	LOCKER	JAN 94	SEP 94	STS-64	SECONDARY*	DOD
RME III-13***	SPACEHAB LOCKER	APR 94	FEB 95	STS-63	SECONDARY*	DOD
ROMPS-01	HH-G	JUL 94	SEP 94	STS-64	SECONDARY	OACT
ROMPS-02**	HH-G	APR 95		SHUTTLE	SECONDARY	OACT
ROMPS-03**	HH-G	JUL 96		SHUTTLE	SECONDARY	OACT

* NON-COMPLEX SECONDARY PAYLOAD
** FOR NASA PLANNING PURPOSES (NOT CURRENTLY BUDGETED)
*** PAYLOAD UNDER REVIEW FOR ADDITION

**** PAYLOAD REQUESTS ****

PAYLOAD	CARRIER	REQ DATE	FLIGHT DATE	FLIGHT/VEHICLE	TYPE	SPONSOR
S/MM-01 SL-M	LM	MAY 95	MAY 95	STS-71	PRIMARY	OSF
S/MM-02 DM	UNIQUE	OCT 95	OCT 95	STS-74	PRIMARY	OSF
S/MM-03 LONG MODULE	LM	TBD	APR 96	STS-77	PRIMARY	OSF
S/MM-04	UNIQUE	TBD	AUG 96	STS-80	PRIMARY	OSF
S/MM-05 LONG MODULE	LM	TBD	SEP 96	STS-81	PRIMARY	OSF
S/MM-06	UNIQUE	TBD	DEC 96	STS-83	PRIMARY	OSF
S/MM-07 LONG MODULE	LM	TBD	MAR 97	STS-84	PRIMARY	OSF
S/MM-08	UNIQUE	TBD	JUL 97	STS-87	PRIMARY	OSF
S/MM-09 LONG MODULE	LM	TBD	SEP 97	STS-89	PRIMARY	OSF
S/MM-10	UNIQUE	TBD	NOV 97	STS-91	PRIMARY	OSF
SAMS-02	LOCKER	DEC 92	NOV 94	STS-66	SECONDARY*	OLMSA
SAMS-03	SPACEHAB LOCKER	APR 94	FEB 95	STS-63	SECONDARY*	OLMSA
SAREX II-11	LOCKER	APR 94	APR 94	STS-59	SECONDARY*	OC
SAREX II-12	LOCKER	JUL 94	JUL 94	STS-65	SECONDARY*	OC
SAREX II-13	LOCKER	JAN 95	SEP 94	STS-64	SECONDARY*	OC
SFU-RETR	UNIQUE	AUG 95	SEP 95	STS-72	PRIMARY	ISAS
SIRTF**	NONE	JUN 01		INTERMEDIATE**	PRIMARY	OSS
SL-E1**	LM+USS	SEP 94		SHUTTLE	PRIMARY	OLMSA
SLA-01	HH-G	SEP 94		SHUTTLE	SECONDARY	OLMSA/MTPE
SLA-02	HH-G	SEP 95		SHUTTLE	SECONDARY	OLMSA/MTPE
SLA-03	HH-G	SEP 96		SHUTTLE	SECONDARY	OLMSA/MTPE
SLA-04	HH-G	SEP 97		SHUTTLE	SECONDARY	OLMSA/MTPE
SMEX-04	NONE	JUN 97		PEGASUS	PRIMARY	OSS
SMEX-05	NONE	JUN 98		PEGASUS	PRIMARY	OSS
SMEX-06	NONE	JUN 99		PEGASUS	PRIMARY	OSS

* NON-COMPLEX SECONDARY PAYLOAD
** FOR NASA PLANNING PURPOSES (NOT CURRENTLY BUDGETED)

**** PAYLOAD REQUESTS ****

PAYLOAD	CARRIER	REQ DATE	FLIGHT DATE	FLIGHT/VEHICLE	TYPE	SPONSOR
SMEX-07	NONE	JUN 00		PEGASUS	PRIMARY	OSS
SMEX-08**	NONE	JUN 00		SMALL**	PRIMARY	OSS
SMEX-09**	NONE	JUN 01		SMALL**	PRIMARY	OSS
SMEX-10**	NONE	JUN 02		SMALL**	PRIMARY	OSS
SMEX-11**	NONE	JUN 03		SMALL**	PRIMARY	OSS
SMEX-12**	NONE	JUN 04		SMALL**	PRIMARY	OSS
SMEX-13**	NONE	JUN 05		SMALL**	PRIMARY	OSS
SMEX-14**	NONE	JUN 06		SMALL**	PRIMARY	OSS
SOHO	CENTAUR	JUL 95		ATLAS IIAS	PRIMARY	OSS
SOLAR PROBE	NONE	MAY 05		MEDIUM	PRIMARY	OSS
SPACEHAB-03	SPACEHAB	FEB 94	FEB 95	STS-63	PRIMARY	SPACEHAB
SPACEHAB-04	SPACEHAB	AUG 94	JAN 96	STS-75	PRIMARY	SPACEHAB
SPACEHAB-05	SPACEHAB	MAR 95	JUL 96	STS-79	PRIMARY	SPACEHAB
SPACEHAB-06	SPACEHAB	OCT 95	DEC 96	STS-82	PRIMARY	SPACEHAB
SPACEHAB-07	SPACEHAB	APR 96	JUN 97	STS-86	PRIMARY	SPACEHAB
SPACEHAB-08	SPACEHAB	NOV 96	OCT 97	STS-90	PRIMARY	SPACEHAB
SPAS-III	SPAS+UNIQUE	JUN 94	JUN 96	STS-78	PRIMARY	DOD
SPTN 201-02	SPARTAN	JUN 94	SEP 94	STS-64	PRIMARY	OSS
SPTN 201-03	SPARTAN	JUN 95	SEP 95	STS-72	PRIMARY	OSS
SPTN 204	SPARTAN	SEP 93	FEB 95	STS-63	PRIMARY	OSS
SRL-01	PAL+MPESS	SEP 93	APR 94	STS-59	PRIMARY	OLMSA/MTPE
SRL-02	PAL+MPESS	SEP 94	SEP 94	STS-68	PRIMARY	OLMSA/MTPE
SRL-03**	PAL+MPESS	JAN 96		SHUTTLE	PRIMARY	OLMSA/MTPE
SSAF-01-1A	UNIQUE	DEC 97	DEC 97	STS-92	PRIMARY	OSF
SSAF-02-2A	UNIQUE	JAN 98		SHUTTLE	PRIMARY	OSF

* NON-COMPLEX SECONDARY PAYLOAD
** FOR NASA PLANNING PURPOSES (NOT CURRENTLY BUDGETED)

**** PAYLOAD REQUESTS ****

PAYLOAD	CARRIER	REQ DATE	FLIGHT DATE	FLIGHT/VEHICLE	TYPE	SPONSOR
SSAF-03-3A	UNIQUE	MAY 98		SHUTTLE	PRIMARY	OSF
SSAF-04-4A	UNIQUE	JUL 98		SHUTTLE	PRIMARY	OSF
SSAF-05-5A	UNIQUE	OCT 98		SHUTTLE	PRIMARY	OSF
SSAF-06-6A	UNIQUE	FEB 99		SHUTTLE	PRIMARY	OSF
SSAF-07-7A	UNIQUE	JUN 99		SHUTTLE	PRIMARY	OSF
SSAF-08-8A	UNIQUE	JUL 99		SHUTTLE	PRIMARY	OSF
SSAF-09-9A	UNIQUE	SEP 99		SHUTTLE	PRIMARY	OSF
SSAF-10-10A	UNIQUE	NOV 99		SHUTTLE	PRIMARY	OSF
SSAF-11-1J/A	UNIQUE	FEB 00		SHUTTLE	PRIMARY	OSF
SSAF-12-1J	UNIQUE	MAR 00		SHUTTLE	PRIMARY	OSF
SSAF-13-11A	UNIQUE	AUG 00		SHUTTLE	PRIMARY	OSF
SSAF-14-2J/A	UNIQUE	NOV 00		SHUTTLE	PRIMARY	OSF
SSAF-15-1E	UNIQUE	MAR 01		SHUTTLE	PRIMARY	OSF
SSAF-16-2E	UNIQUE	MAY 01		SHUTTLE	PRIMARY	OSF
SSAF-17-12A	UNIQUE	OCT 01		SHUTTLE	PRIMARY	OSF
SSAF-18-13A	UNIQUE	FEB 02		SHUTTLE	PRIMARY	OSF
SSAF-19-14A	UNIQUE	MAY 02		SHUTTLE	PRIMARY	OSF
SSAF-20-15A	UNIQUE	JUN 02		SHUTTLE	PRIMARY	OSF
SSBUV/A-04	SSBUV/A	JUL 95	NOV 94	STS-66	SECONDARY	MTPE
SSBUV/A-05	SSBUV/A	APR 96	SEP 95	STS-72	SECONDARY	MTPE
SSBUV/A-06	SSBUV/A	JAN 97	JUL 96	STS-79	SECONDARY	MTPE
SSBUV/A-07	SSBUV/A	OCT 97	OCT 97	STS-90	SECONDARY	MTPE
SSBUV/A-08	SSBUV/A	JAN 99		SHUTTLE	SECONDARY	MTPE
SSBUV/A-09	SSBUV/A	JAN 00		SHUTTLE	SECONDARY	MTPE
SSBUV/A-10	SSBUV/A	JAN 01		SHUTTLE	SECONDARY	MTPE

* NON-COMPLEX SECONDARY PAYLOAD

** FOR NASA PLANNING PURPOSES (NOT CURRENTLY BUDGETED)

**** PAYLOAD REQUESTS ****

PAYLOAD	CARRIER	REQ DATE	FLIGHT DATE	FLIGHT/VEHICLE	TYPE	SPONSOR
SSCE-05	LOCKER	FEB 93	SEP 94	STS-64	SECONDARY*	OLMSA
SSCE-06	LOCKER	JUL 94	FEB 95	STS-63	SECONDARY*	OLMSA
SSTI-01**	NONE	JUN 96		SMALL	PRIMARY	OACT
SSTI-02**	NONE	JUN 97		SMALL	PRIMARY	OACT
SSUF-01	UNIQUE	OCT 98		SHUTTLE	PRIMARY	OSF
SSUF-02	UNIQUE	APR 99		SHUTTLE	PRIMARY	OSF
SSUF-03	UNIQUE	OCT 99		SHUTTLE	PRIMARY	OSF
SSUF-04	UNIQUE	JUN 00		SHUTTLE	PRIMARY	OSF
SSUF-05	UNIQUE	JAN 01		SHUTTLE	PRIMARY	OSF
SSUF-06	UNIQUE	OCT 01		SHUTTLE	PRIMARY	OSF
SSUF-07	UNIQUE	JAN 02		SHUTTLE	PRIMARY	OSF
STL-04(NIH-C-01)	LOCKER	JAN 94	APR 94	STS-59	SECONDARY*	AGENCY
STL-05	LOCKER	FEB 94	APR 94	STS-59	SECONDARY*	OLMSA
STL/NIH-C-02	LOCKER	JUL 94	NOV 94	STS-66	SECONDARY*	AGENCY
STL/NIH-C-03	SPACEHAB LOCKER	OCT 94	FEB 95	STS-63	SECONDARY*	AGENCY
SURFSAT-1	NONE	MAR 95		DELTA II	SECONDARY	OSS
SWAS	NONE	JUN 95		PEGASUS	PRIMARY	OSS
TDRS-F08	NONE	APR 99		INTERMEDIATE	PRIMARY	OSC
TDRS-F09	NONE	APR 00		INTERMEDIATE	PRIMARY	OSC
TDRS-F10	NONE	APR 01		INTERMEDIATE	PRIMARY	OSC
TDRS-G	IUS	APR 95	JUL 95	STS-70	PRIMARY	OSC
TIMED-H	TBD	JUN 99		MEDLITE**	PRIMARY	OSS
TIMED-L	TBD	JUL 99		MEDLITE**	PRIMARY	OSS
TOMS-01	NONE	JUN 94		PEGASUS	PRIMARY	OSS
TSS-02**	PAL+MPESS	OCT 94		SHUTTLE	PRIMARY	OSS/OSF

* NON-COMPLEX SECONDARY PAYLOAD
** FOR NASA PLANNING PURPOSES (NOT CURRENTLY BUDGETED)

**** PAYLOAD REQUESTS ****

PAYLOAD	CARRIER	REQ DATE	FLIGHT DATE	FLIGHT/VEHICLE	TYPE	SPONSOR
TSS-03**	PAL+MPESS	OCT 96		SHUTTLE	PRIMARY	OSS/OSF
TSS-1R	PAL+MPESS	OCT 95	MAR 96	STS-76	PRIMARY	OSS/OSF
UNEX-01	NONE	JUL 00		SMALL	PRIMARY	OSS
UNEX-02	NONE	JUL 01		SMALL	PRIMARY	OSS
UNEX-03	NONE	JUL 02		SMALL	PRIMARY	OSS
UNEX-04	NONE	JUL 03		SMALL	PRIMARY	OSS
UNEX-05	NONE	JUL 04		SMALL	PRIMARY	OSS
UNEX-06	NONE	JUL 05		SMALL	PRIMARY	OSS
UNEX-07	NONE	JUL 06		SMALL	PRIMARY	OSS
UNEX-08	NONE	JUL 07		SMALL	PRIMARY	OSS
UNEX-09	NONE	JUL 08		SMALL	PRIMARY	OSS
UNEX-10	NONE	JUL 09		SMALL	PRIMARY	OSS
USML-02	LM+EDO	SEP 94	SEP 95	STS-73	PRIMARY	OLMSA
USMP-03	2-MPESS+EDO	AUG 94	MAR 96	STS-76	PRIMARY	OLMSA
USMP-04	2-MPESS	OCT 96	JUN 97	STS-86	PRIMARY	OLMSA
USMP-05**	MSL+MPESS	SEP 97		SHUTTLE	PRIMARY	OLMSA
USMP-06**	MSL+MPESS	AUG 98		SHUTTLE	PRIMARY	OLMSA
USMP-07**	MSL+MPESS	JUL 99		SHUTTLE	PRIMARY	OLMSA
USMP-08**	2-MPESS	AUG 99		SHUTTLE	PRIMARY	OLMSA
USMP-09**	2-MPESS	AUG 00		SHUTTLE	PRIMARY	OLMSA
USMP-10**	2-MPESS	AUG 01		SHUTTLE	PRIMARY	OLMSA
VFT-4-01	LOCKER	JAN 94	APR 94	STS-59	SECONDARY*	DOD
WIND	NONE	NOV 94		DELTA II	PRIMARY	OSS
WINDEX-01***	SPACEHAB LOCKER	MAY 94	FEB 95	STS-63	SECONDARY*	DOD
WSF-02	WSF	SEP 93	MAY 95	STS-69	PRIMARY	OACT

* NON-COMPLEX SECONDARY PAYLOAD
** FOR NASA PLANNING PURPOSES (NOT CURRENTLY BUDGETED)
*** PAYLOAD UNDER REVIEW FOR ADDITION

**** PAYLOAD REQUESTS ****

PAYLOAD	CARRIER	REQ DATE	FLIGHT DATE	FLIGHT/VEHICLE	TYPE	SPONSOR
WSF-03	WSF	SEP 94	JUL 96	STS-79	PRIMARY	OACT
WSF-04	WSF	SEP 95	JUN 97	STS-86	PRIMARY	OACT
XTE	NONE	AUG 95		DELTA II	PRIMARY	OSS

* NON-COMPLEX SECONDARY PAYLOAD
** FOR NASA PLANNING PURPOSES (NOT CURRENTLY BUDGETED)

SECTION 6

PAYLOAD/ACRONYM LIST

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
ACE	Advanced Composition Explorer	Charged particle detector for study of isotopic and elemental composition of energetic particles in interplanetary science.
ACES	Acoustic Containerless Experiment System	Technical demonstration to obtain early microgravity tests of gas transport phenomena in a 3-axis levitation furnace.
ACTS	Advanced Communications Technology Satellite	Flight verification of high risk communications technology to support future satellite communications systems.
ADSF	Automatic Directional Solidification Furnace	Technology demonstration of directional solidification of magnetic materials, immiscibles, and IR detection materials.
AERO	EOS Aerosol	Earth Observing System payload to observe aerosols in the troposphere and stratosphere.
AFE	American Flight Echocardiograph	Collects quantitative in-flight data on cardiovascular changes in the crew.
AFITV	Air Force Instrumented Test Vehicle	Anti-satellite target vehicle.
AFP-675	Air Force Program-675	Collects infrared data to support Strategic Defense Initiative program. Formerly, Cryogenic Infrared Radiance Instrument for Shuttle (CIRRIS).
AIM	Astrometric Interferometry Mission	Mission to perform high resolution astrometric interferometry.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
ALT	Altitude	Orbit altitude in nautical miles.
AM	Auxiliary Module	Provides consumables resupply, payload changeout and additional on-orbit volume for the ISF Facility Module (FM).
AMOS	Air Force Maui Optical Station	Technology development/geophysical environment study. Calibrate AMOS ground-based electro-optical sensors and study on-orbit plume phenomenology using the Shuttle as a test object.
APCG	Advanced Protein Crystal Growth	Enhances scientific knowledge about dynamics of protein crystal growth in reduced gravity.
APE	Aurora Photography Experiment	Enhance understanding of the geographic extent and dynamics of the aurora.
APM	Ascent Particle Monitor	Collects particulate materials from the Orbiter during ascent, using an automated mechanical/electrical assembly.
ARABSAT	Arab Satellite	Communications satellite of the Arab Satellite Communications Organization.
ARC	Aggregation of Red Cells	Studies aggregation of red cells and blood viscosity under low-g conditions.
ASC	American Satellite Company	Satellite to provide commercial communication service to continental United States, Hawaii, Alaska, and Puerto Rico.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
ASEM	Assembly of Station by Extravehicular Activity Methods	Supports international space station development by demonstrating strut handling and EVA translation techniques.
ASP	Attitude Sensor Package	Foreign reimbursable Hitchhiker-G payload.
ASTRO	Astronomy	Program designed to obtain ultraviolet (UV) data on astronomical objects using a UV telescope flying on SPACELAB.
ASTRO-SPAS	Astronomy Platform-Shuttle Pallet Satellite	A shuttle deployable astronomy platform developed by the German Space Agency.
ATLAS	Atmospheric Laboratory for Applications and Science	Series of Spacelab flights that measure long term variability in the total energy radiated by the sun and determines the variability in the solar spectrum.
ATLAS CENTAUR		Intermediate class expendable launch vehicle.
ATLAS I/II AS		Commercial and DOD intermediate class expendable launch vehicles.
ATLAS-E		DOD medium class expendable launch vehicle.
AUSSAT	Australian Communication Satellite	Direct broadcast communication satellite which provides services to continental Australia and offshore territories.
AXAF-I	Advanced X-Ray Astrophysics Facility-Imager	Mission to perform high-quality X-ray imaging over an extended lifetime.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
B/U		Back-up
BBXRT	Broad Band X-Ray Telescope	Provides high resolution x-ray spectra for both point and extended sources, including stellar coronae, x-ray, binaries, active agalactic nuclei, and clusters of galaxies.
BDS	Bioreactor Demonstration System	Determines the threshold mass for the transfer/diffusion of glucose and oxygen into a static cell in the microgravity environment.
BIMDA	Bioprocessing With the Materials Dispersion Apparatus	A wide range of tests focused on the assembly of macromolecules. Uses a middeck thermal enclosure system (TES) unit.
BLAST	Battlefield Laser Acquisition Sensor Test	Evaluates the concept of utilization of a spaceborne laser receiver to detect laser energy from specific ground-based test locations.
BREMSAT	Bremen Satellite	University of Bremen's satellite that will be ejected from a GAS canister.
BRIC	Biological Research In Canisters	Investigates the effects of microgravity on life science specimens utilizing the KSC Plant Canister and gaseous nitrogen freezer.
BS-3H	Broadcast Satellite	Japanese geosynchronous direct-broadcast satellite.
BSB	British Satellite Broadcasting	British commercial direct broadcast satellite.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
C360	Cinema 360	35mm motion picture camera for the purpose of photographing crew and mission activities.
CANEX	Canadian Experiments	Group of Canadian experiments conducted aboard STS-13 (41-G) by a Canadian Payload Specialist.
CANEX-2	Canadian Experiments-2	Tests the Canadian developed Space Vision System Experiment Development Tests (VISET) using an RMS deployed target (CTA), experiments in material exposure, spacecraft glow, phase partitioning, metal diffusion and space adaptation tests.
CAP	Complex Autonomous Payload	Program to allow use of GAS hardware for payloads requiring more costly Shuttle service.
CAPL	Capillary Pump Loop Experiment	Hitchhiker experiment to quantify behavior of a full-scale capillary pumped loop heat transfer system in microgravity.
CAPL/GBA	Capillary Pump Loop Experiment/GAS Bridge Assembly	Experiment to quantify behavior of a full-scale capillary pumped loop heat transfer system in microgravity flying on the Gas Bridge.
CASSINI		A spacecraft planned to conduct a four year detailed exploration of the Saturnian System and an ESA probe planned to penetrate and study the thick atmosphere of the moon Titan.
CBDE	Carbonated Beverage Dispenser Evaluation	Pepsico, Inc. experiment to evaluate packaging and dispensing techniques for space flight consumption of carbonated beverages.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
CCAFS	Cape Canaveral Air Force Station	U.S. Air Force launch range on central Florida coast.
CDR	Commander	Member of the Shuttle flight crew in command of the flight.
CENTAUR		Upper stage system for Atlas and Titan ELVs.
CETA	Crew and Equipment Translation Aid	Experiment that evaluates the design concept and operational procedures of 3 prototype cart designs that are part of an effort to develop a transportation device for use on the exterior of the international space station.
CFES	Continuous Flow Electrophoresis System	Demonstrates the technology of pharmaceutical processing in space.
CGBA	Commercial Generic Bioprocessing Apparatus	Develop advanced systems for, and investigations in, bioprocessing of materials.
CGP	Cryo Systems Experiment GLO-II Payload	Cryogenic system for cooling focal plane optics for space-based scientific instruments. GLO-II provides observations of earth's thermosphere, ionosphere, and mesosphere energetics and dynamics and shuttle surface glow.
CHAMP	Comet Halley Active Monitoring Program	Observes Comet Halley on shuttle flights.
CHROMEX	Chromosomes and Plant Cell Division in Space Experiment	Investigation of the effects of space flight on plant tissue growth.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
CLOUDS	Cloud Logic to Optimize Use of Defense Systems	Hand-held 35 mm photography for observations of cloud formation, dissipation, and opaqueness.
CMIX	Commercial Middeck Instrumentation Technology Associates (ITA) Experiment	Private sector funded and developed payload consisting of multiple materials dispersion apparatus mini-lab devices, plus a self-contained power supply/controller. Uses a middeck thermal enclosure system (TES) unit.
CNCR	Characterization of Neurospora Circadian Rhythms in Space	Microgravity effects on circadian rhythms of neurospora.
CONCAP-II	Consortium for Materials Development in Space (Complex Autonomous Payload)-II	Investigates materials surface reactions to exposure to atomic oxygen flow in earth orbit for high temperature super conducting films and for materials degradation/reaction samples.
CONCAP-III	Consortium for Materials Development in Space (Complex Autonomous Payload)-III	Determine the influence of change in acceleration environment while performing materials processing.
CONCAP-IV	Consortium for Materials Development in Space (Complex Autonomous Payload)-IV	Several non-linear organic optical materials (crystals & films) will be grown by the vapor transport growth method.
CPCG	Commercial Protein Crystal Growth	The CPCG produces large, high-quality protein crystals for analysis of molecular structures via x-ray diffraction and computer modeling.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
CREAM	Cosmic Radiation Effects and Activation Monitor	Uses an active cosmic ray monitor and seven passive packages to record on-orbit cosmic ray environments.
CRISTA-SPAS	Cryogenic Infrared Spectrometer Telescope for Atmosphere	A U.S./German joint aeronomy payload intended to explore the variability of the atmosphere and to provide measurements that will complement those provided by UARS.
CRRES	Combined Release & Radiation Effects Satellite	Joint NASA/USAF spacecraft to produce dynamic model of Van Allen radiation belts.
CRW	Crew	The Shuttle flight crew for a particular mission.
CVTE	Crystals By Vapor Transport Experiment	Investigate application of chemical vapor transport crystal growth process to materials of practical value in semiconductor and electro-optical device.
DEE	Dexterous End Effector	Demonstrates a sensor for the Shuttle RMS which will allow for more precise control.
DELTA II		Medium class expendable launch vehicle.
DFI	Development Flight Instrument	Special instrumentation generally available on orbiter vehicle 102 (Columbia).
DFI PAL	Development Flight Instrumentation Pallet	A pallet used to accommodate the DFI used on the first four Shuttle flights.
DISCOVERY		Series of inexpensive planetary flight opportunities, starting with a first flight in 1999 and launching at 15 month intervals thereafter.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
DLR	Deutsche Forschungsanstalt fur Luft-und Raumfahrt	Federal German aerospace research establishment.
DM	Docking Module	Hardware that will provide pressurized Shuttle access to the Russian MIR space station.
DMOS	Diffusive Mixing of Organic Solutions	Grow crystals of organic compounds for research programs for the 3M Corporation's Science Research Laboratory.
DOD	Department of Defense	
DSCS	Defense Satellite Communications System	Series of U.S. Air Force communications satellites.
DSP	Defense Support Program	Geosynchronous DOD satellite.
DUR	Duration	The number of days for a Shuttle flight.
DXS	Diffuse X-ray Spectrometer	Shuttle experiment to conduct spectral observations of the diffuse galactic soft x-ray background to determine the ionic, elemental abundances and the plasma temperature of the hot phase of the interstellar medium. Flown on a Hitchhiker.
EARTH PROBES		Series of missions to provide critical data for earth science investigations.
EASE/ACCESS	Experimental Assembly of Structures in EVA/Assembly Concept for Construction of Erectable Space Structures	Obtains human factors data during assembly of structures in space during Extra Vehicular Activity.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
EDO	Extended Duration Orbiter	Kit added to Orbiter to extend energy resources to support mission durations up to sixteen days.
EEVT	Electrophoresis Equipment Verification Test	Technology demonstration of apparatus to evaluate the effects of electrophoresis on biological cells in zero-g.
ELRAD	Earth-Limb Radiance Equipment	Obtain measurements of earth-limb radiance for various positions of the sun from near limb up to 9 degrees below earth horizon.
ELV	Expendable Launch Vehicle	Unmanned rocket used to deploy spacecraft into Earth's orbit.
EOIM	Evaluation of Oxygen Interaction with Materials	Examines effects of atomic oxygen degradation on and determines reaction rates of varoius materials.
EOS	Earth Observing System	A complement of polar orbiting satellites conducting Earth science observations.
EOS-ALT	EOS Altimeter	Earth Observing System payload to observe ocean circulation and global ice sheet mass balance. Mission consists of laser spacecraft and radar spacecraft.
EOS-AM	EOS A.M. (Morning)	Earth Observing System payload to observe clouds, aerosols, radiative balance, and characterization of terrestrial surface.
EOS-CHEM	EOS Chemistry	Earth Observing System payloads to observe atmospheric chemical species and their transformations, and ocean surface stress.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
EOS-PM	EOS P.M. (Afternoon)	Earth Observing System payloads to observe clouds and precipitation, terrestrial snow and sea ice, and sea surface temperature and ocean productivity.
EOS-SAR	EOS Synthetic Aperture Radar	L, C, and X-band SAR to produce multi-frequency, multi-polarization images of the Earth.
ERBS	Earth Radiation Budget Satellite	Collects global earth radiation budget data.
ESA	European Space Agency	Provide for and promote cooperation among European States in space research, technology and applications.
ESCAPE-II	Experiment of the Sun for Complementing the Atmospheric Laboratory for Applications and Science (ATLAS) Payload and for Education-II	To collect solar data with the solar imaging and UV solar irradiance experiments. The data will be correlative with the co-manifested ATLAS-3 solar experiments for the understanding of the upper atmosphere photochemistry.
EURECA	European Retrievable Carrier	Platform placed in orbit for six months offering conventional services to experimenters.
EUTELSAT	European Telecommunications Satellite	European commercial communications satellite.
EUVE	Extreme Ultraviolet Explorer	Produces definitive sky map and catalog of extreme ultra violet portion of electomagnetic spectrum (100-1000 angstroms).

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
FARE	Fluid Acquisition and Resupply Experiment	Obtains data to evaluate fluid dynamics associated with capillary liquid acquisition devices.
FAST	Fast Auroral Snapshot Explorer	Spacecraft to investigate the processes operating within the auroral region.
FDE	Fluid Dynamics Experiment	A package of six experiments flown in the middeck that involve simulating the behavior of liquid propellants in low gravity.
FEA	Fluids Experiment Assembly	Investigate floating zone crystal growth processing investigations on selected semi-conductor materials.
FEE	French Echocardiograph Equipment	Obtains on-orbit cardiovascular system data.
FEL	First Element Launch	Initial launch of components for the international space station.
FLT	Flight	The flight sequence number for Shuttle missions.
FLTSATCOM	Fleet Communication Satellite	U.S. Navy communications satellite.
FLUIDS-GBA	Fluids Generic Bioprocessing Apparatus	Automated fluid/gas mixing and dispensing device that will be used to monitor fluid intake in crew members and to pioneer needed controlled environmental life support system fluids management technologies.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
FM	Facility Module	A man-tended module in support of ISF providing space for middeck locker inserts and common racks for payload accommodations.
FPE	French Postural Experiment	Studies sensory-motor adaptations in weightlessness.
FSS	Flight Support System	Support system of cradles and avionics used for satellite servicing.
FUSE	Far Ultraviolet Spectroscopy Explorer	Astronomy Ultraviolet Satellite
GALAXY		Hughes communications satellite.
GALILEO		Investigates the chemical composition and physical state of Jupiter's atmosphere and satellites.
GAS	Get Away Special	Alternate name for the Small Self-contained Payload (SSCP) program, providing standard canisters to accommodate low-cost space experimentation.
GAS BRIDGE	Get Away Special Bridge	Structure in the payload bay that can hold up to twelve GAS canisters.
GAS CAN	GAS Canister	Structure which can carry small payloads.
GAS TEST		Test instrumentation to verify ability of the GAS hardware to function properly in flight.
GBA(xx)	GAS Bridge Assembly(xx)	(xx) denotes number of payloads on the GAS Bridge Assembly.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
GCP	GLO/CRYOHP Payload	DOD Hitchhiker payload. The GLO portion of the Hitchhiker experiment is to measure optical emissions on the surface of the shuttle. The CRYOHP portion of the payload uses liquid oxygen as the heat pipe working fluid.
GEOTAIL		NASA-Japan cooperative mission to explore Geotail of the Earth Plasma Physics.
GHCD	Growth Hormone Concentration & Distribution in Plants	Microgravity effects on growth hormone distribution of various plant life.
GLOMR	Global Low Orbit Message Relay	Packet data relay satellite.
GOES	Geostationary Operational Environmental Satellite	NOAA weather satellites.
GOSAMR	Gelation of Sols: Applied Microgravity Research	Investigate gelation of multicomponent colloidal solutions and suspensions (SOL).
GP-B	Gravity Probe-B	Scientific probe to test Einstein's Theory of Relativity.
GRO	Gamma Ray Observatory	Investigates extraterrestrial gamma-ray sources.
GSFC	Goddard Space Flight Center	NASA center in Greenbelt, Maryland.
GSO	Geosynchronous Orbit	Earth orbit that has a period equal to 24 hours.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
GTC	Grand Tour Cluster	Cluster of five spacecraft to provide a comprehensive study of the micro- and mesoscale processes of the magnetosphere.
GTO	Geosynchronous Transfer Orbit	
HCMM	Heat Capacity Mapping Mission	Produces thermal maps for discrimination of rock types, mineral resources, plant temperatures, soil moisture, snow fields, and water runoff.
HE	High Eccentricity Orbit	
HEEO	Highly Eliptical Earth Orbit	
HELIO	Heliocentric	
HERCULES	Hand-held, Earth-oriented, Real-time, Cooperative, User-friendly, Location, Targeting and Environmental System	This experiment upgrades/expands the Latitude/Longitude Locator (L3) experiment using a charge coupled device with inertial reference gyros. The objective is to locate earth surface sites within 1 nautical mile.
HESI	High Energy Solar Imager	Mission to study neutral radiation consisting of hard x-rays, gamma rays, and neutrons.
HETE	High Energy Transient Experiment	Spacecraft to study gamma ray burst sources and source locations, and x-ray burst sources and source locations.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
HH-G	Hitchhiker-G	Shuttle cargo bay sidewall mounted carrier for small experiments.
HH-G1	Hitchhiker-G1	Demonstration flight of Hitchhiker-G hardware.
HH-M	Hitchhiker-M	Shuttle cargo bay across-bay carrier for small experiments.
HILAT	High Latitude	Evaluate propagation effects of disturbed plasmas on radar and communications systems.
HME	Handheld Microgravity Experiment	Provides for middeck experiments of limited scope in order to allow for low-cost, timely testing of concepts or procedures, or the early acquisition of data.
HPCG	Handheld Protein Crystal Growth	Develops techniques to produce, in the microgravity environment, protein crystals of sufficient size and quality to permit molecular analysis by diffraction techniques.
HPP	Heat Pipe Performance & Working Fluid Behavior in Micro-gravity	Environment experiment to study the microgravity effects of working fluids used in heat pipes.
HPTE	High Precision Tracking Experiment	Demonstrates ability to propagate a low power laser beam through the atmosphere.
HRSGS	High Resolution Shuttle Glow Spectroscopy	Obtains high resolution spectra, in the visible and near visible wavelength range, of the Shuttle surface glow as observed on the vertical tail of the Orbiter in LEO.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
HS-376 RETV-P	HS-376 Retrieval-PALAPA	Salvage of HS-376 (PALAPA) communication satellite launched on the tenth Shuttle mission.
HS-376 RETV-W	HS-376 Retrieval-WESTAR	Salvage of HS-376 (WESTAR) communication satellite launched on the tenth Shuttle mission.
HST	Hubble Space Telescope	Observes the universe to gain information about its origin, evolution and disposition of stars, galaxies, etc.
HST SM	Hubble Space Telescope Servicing Mission	Servicing mission to the Hubble Space Telescope to replace science instruments or other orbital replacement units (ORU's).
IAE	Inflatable Antenna Experiment	Validates erection of a packaged 28 meter paraboloid and determines the structural dynamics and surface accuracy.
IBSE	Initial Blood Storage Experiment	Evaluates changes in blood tissue during various storage conditions.
IBSS	Infrared Background Signature Survey	Obtains infrared measurements on rocket plumes, shortwave infrared Earth-limb, Shuttle environment, and chemical release from the payload bay while detached in proximity to the Orbiter.
ICBC	IMAX Cargo Bay Camera	

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
IECM	Induced Environment Contamination Monitor	A package of ten instruments designed to fly in the Orbiter payload bay on a special pallet to check for contamination in and around the Orbiter. It also has the capability to be operated on the end of the RMS outside of the payload bay.
IEF	Isoelectric Focussing Experiment	Gathers experimental data on the extent of electroosmosis in space.
IEH	International Extreme-UV Far-UV Hitchhiker	Hitchhiker experiment to study ultraviolet emissions of Jupiter system and stellar sources.
IG	Igloo	Structure which provides a pressurized and thermally controlled environment for Spacelab pallet subsystems.
IMAX	IMAX Systems Corp., Toronto, Ontario, Canada	A large screen motion picture format used by the NASA/Smithsonian project to document significant space activities.
IMI	Inner Magnetosphere Imager	Mission to image the charged particle population of the Earth's magnetosphere.
IML	International Microgravity Laboratory	Series of microgravity missions devoted to material and life sciences studies using the Spacelab Long Module.
INCL	Inclination	Orbit inclination in degrees.
INMARSAT	International Maritime Satellite	Commercial satellite series providing global maritime and aviation communications.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
INSAT	Indian Satellite	Communication and meteorological satellite for the government of India.
INTELSAT-VI-R	INTELSAT-VI-Reboost	The retrieval, repair and deployment of a communications satellite for the International Telecommunication Satellite organization.
IOCM	Interim Operational Contamination Monitor	Measures molecular and particulate contamination in the cargo bay from prelaunch to post-landing.
IPMP	Investigation into Polymer Membranes Processing	Investigates low-g environment effects on industrial processing techniques for developing polymer membranes.
IR-IE	Infrared Imaging Equipment	Infrared video camera used to measure temperature gradients on the Orbiter surface.
IRAS	Infrared Astronomical Satellite	All sky survey for objects that emit infrared radiation.
IRCFE	Infrared Communications Flight Experiment	Demonstrates the feasibility of using diffuse infrared light as a carrier for Shuttle crew communications.
IRIS	Italian Research Interim Stage	Italian upper stage for use on the Shuttle.
IRT	Integrated Rendezvous Radar Target	A target for testing of Shuttle Orbiter rendezvous techniques and capabilities in orbit.
ISAC	INTELSAT Solar Array Coupons	Studies atomic oxygen effects on materials (silver and zinc sulphite).

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
ISAIAH	Israeli Space Agency Investigation About Hornets	Gravity perceptions by hornets and their reactions to changes in gravity.
ISAL	Investigation of STS Atmospheric Luminosities	Determination of the spectral content of luminosity near Shuttle surfaces, to assess influence on optical experiments.
ISAS	Institute of Space and Astronautical Science	The Institute of Space and Astronautical Science, under the auspices of Japan's Ministry of Education, is responsible for promoting space science and technology, coordinating space-science research in Japan, and advancing education of space in Japan.
ISF	Industrial Space Facility	Commercially-owned, man-tended orbiting facility for research and manufacturing activities.
IUS	Inertial Upper Stage	Upper stage system for Shuttle and Titan.
JCSAT	Japan Communications Satellite	Japanese geosynchronous commercial communications satellite.
JEM	Japanese Experiment Module	The Japanese-provided laboratory module that is part of the international space station configuration.
JFD	JEM Flight Demonstration	Demonstrates on-orbit capability of JEM Manipulator system with its dextrous Small Fine Arm in replacing Orbital Replacement Units on JEM Exposed Facility. Also serves as an end-to-end verification test for the prototype of JEM Operations System.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
JSC	Johnson Space Center	NASA center in Houston, Texas.
KSC	Kennedy Space Center	NASA center in Cape Canaveral, Florida.
L1	First Earth-Sun Libration Point	Indication of a halo-type orbit around L1.
L3	Latitude/Longitude Locator	Tests the capability of a space sextant/camera system to locate earth surface targets within 10 nautical miles.
LAGEOS	Laser Geodynamics Satellite	Spherical passive satellite covered with retroflectors which are illuminated by ground-based lasers to determine precise measurements of the Earth's crustal movements.
LDCE	Limited Duration Space Environment Candidate Materials Exposure	Evaluation of candidate space structure composite materials for degradation due to exposure in LEO (passive systems).
LDEF	Long Duration Exposure Facility	Free-flying satellite providing accommodations for experiments requiring long-term exposure to the space environment.
LEO	Low Earth Orbit	
LFC	Large Format Camera	Acquires synoptic, high-resolution images of the Earth's surface.
LITE	Lidar In-Space Technology Experiment systems	Project to measure the atmospheric parameters from a space platform utilizing laser sensors and to verify space-born Lidar systems.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
LM	Long Module	Spacelab habitable module that provides a safe shirt-sleeve environment in which science crew members can conduct their experiments.
M88-01	Department of Defense M88-01	Evaluates the capability of man in space to enhance air, naval, and ground force operations and assesses the feasibility of observations of space debris while in orbit.
MACSAT	Multi-Access Communications Satellite	DOD battlefield tactical communications satellite.
MAGELLAN		Spacecraft designed to globally map the surface of Venus.
MAGSAT	Magnetic Field Satellite	Spacecraft to map the magnetic field of the Earth.
MAR	Middeck Accommodations Rack	An experiment integration facility installed in the middeck of the orbiter with stowage volume equivalent to five middeck lockers. Power distribution and active thermal control options are available.
MARS (MSP)	Mars Surveyer Program	MSP program consists of a series of up to two Orbiters and up to four Landers.
MARS PATHFINDER		Initial mission concept validation precursor for follow-on MARS Lander series.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
MAST	Military Applications of Ship Tracks	Defines ship track characteristics with high resolution imagery to develop an understanding of the processes responsible for shiptrack formations, maintenance, and dissipation.
MBB	Messerschmitt-Boelkow-Blohm	A German industrial aerospace organization.
MD	Middeck	Lower deck of the orbiter crew compartment.
MGS	Mars Global Surveyer	First Mars Orbiter in Mars Surveyer Program.
MIDEX	Mid-Sized Explorer	Series of mid-sized explorer platforms.
MIR		Current Russian orbiting Space Station.
MIS I	Drug Microencapsulation in Microgravity	Evaluates the effects of microgravity on methods used to encapsulate drugs within biodegradable polymers. Combines materials science with biomedical product development and results in the production of a pharmaceutical product in space.
MLE	Mesoscale Lightning Experiment	Records and observes the visual characteristics of large scale lightning as seen from space using on-board television cameras.
MLR	Monodisperse Latex Reactor	Produces monodisperse latex particles in the two to forty micron range.
MO	Mars Observer	Spacecraft to study the surface, climate, gravitational, and magnetic fields of the planet Mars.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
MODE	Middeck O-Gravity Dynamics Experiment	Studies the dynamics of liquids and skewed space structures in the microgravity environment.
MODE-RFLT	Middeck O-Gravity Dynamics Experiment-Reflight	Reflight of the MODE payload
MORELOS		Mexican communication satellite system.
MPEC	Multi-Purpose Experiment Canister	An extended Hitchhiker-G. GAS canister capable of deploying an internally stowed payload.
MPESS	Mission Peculiar Equipment Support Structure	A cross-bay Shuttle payload carrier and support system for payloads weighing up to 3000 pounds.
MPSE	Mexican Payload Specialist Experiment	Experiment performed by a Mexican payload specialist on the Shuttle flight which deployed the MORELOS satellite.
MS	Mission Specialist	A member of Shuttle flight crew primarily responsible for Orbiter subsystem and payload activities.
MSFC	Marshall Space Flight Center	NASA center in Huntsville, Alabama.
MSL	Microgravity Science Laboratory	A payload which remains attached to the Shuttle to perform materials processing experiments in low-g.
MSTI	Miniature Seeker Technology Integration	SDIO experimental payload -- part of program to develop advanced seeker/sensor technology.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
MTPE	Mission to Planet Earth NASA Office	Code Y
N/A	Not Applicable	
NASDA	National Space Development Agency of Japan	Advances space exploration and utilization and their practical applications on earth for the government of Japan.
NAVSTAR		USAF Global Positioning Satellite (GPS) system.
NEAR	Near Earth Asteroid Rendezvous	Mission to rendezvous with an asteroid in near-Earth trajectory. First in planned MTPE "Discovery" series.
NEUROLAB	Space Life Sciences Laboratory	Investigates the effects of weightlessness exposure using both man and animal specimens.
NIH-C	National Institutes of Health-Cells	To understand the biological changes that occur in cultured cells when exposed to the reduced gravity environment of space flight.
NIH-R	National Institutes of Health-Rodents	To understand the physiological and anatomical changes that occur in mammals under weightless space flight conditions.
NOAA	National Oceanic and Atmospheric Administration	Conducts research and gathers data about the global oceans, atmosphere, space, and sun, and applies this knowledge to science and service that touch the lives of all Americans.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
NOSL	Night/Day Optical Survey of Lightning	Optical survey of lightning.
NOVA		Advanced Navy Navigation Satellite.
NUSAT	Northern Utah Satellite	University developed packet communications satellite; first successful payload ejection from a GAS canister.
OA	NASA Office of the Administrator	Code A
OACT	NASA Office of Advanced Concepts and Technology	Code C
OARE	Orbital Acceleration Research Experiment	Keel-mounted accelerometer that characterizes the very low frequency acceleration environment of the orbiter payload bay during space flight.
OASIS	OEX Autonomous Supporting Instrumentation System	Collects environmental data in the Orbiter during dynamic shuttle flight phases.
OAST	Office of Aeronautics and Space Technology payload	Collection of experiments designed to enable or extend space flight technology.
OAST-FLYER	Office of Aeronautics and Space Technology-Flyer	Free flyer deployed from the Shuttle containing several space technology experiments.
OCTW	Optical Communication Thru the Shuttle Window Flight Demonstration	Demonstrates a system that allows the Shuttle crew to interface with payloads without depending on Orbiter communication systems.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
ODERACS	Orbital Debris Radar Calibration Spheres Project	Releases radar dipoles into earth orbit for purposes of calibrating ground-based radar.
OEX	Orbiter Experiments	Series of engineering experiments on the Orbiter.
OIM	Oxygen Interaction with Materials	Tests which obtained quantitative rates of oxygen interaction with materials used on the Orbiter and advanced payloads.
OLMSA	NASA Office of Life and Microgravity Sciences and Applications	Code U
OMDP	Orbiter Maintenance Down Period	Program requirement to take an orbiter out of service for structural inspections and periodic maintenance based on number of flights and/or time elapsed. (approximately every 3 years)
ORFEUS-SPAS	Orbiting, Retrievable Far and Extreme Ultraviolet Spectrometer-Shuttle Pallet Satellite	A German developed payload to explore the distribution and character of radiation absorbing material in the solar system and to perform direct ultraviolet observations of the direct interstellar component.
ORS	Orbiter Refueling System	An experiment to demonstrate the ability of the shuttle to perform on-orbit satellite refueling.
ORSTEDSAT	ORSTED Scientific Microsatellite	Danish ELV secondary payload to conduct accurate global mapping of the Earth vector magnetic field.
OSC	NASA Office of Space Communications	Code O

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
OSF	NASA Office of Space Flight	Code M
OSL	Orbiting Solar Laboratory	Provides detailed data on the sun, to augment our studies of distant stars and cosmic processes.
OSS	NASA Office of Space Science	Code S
OSS-1	Office of Space Science-1	Single Pallet carrying eight experiments to demonstrate the use of the Shuttle for investigations in space plasma physics, solar physics, astronomy, etc. and to characterize the Orbiter and payload bay environment.
OSSD	NASA Office of Space Systems Development	Code D
OSTA-1	Office of Space and Terrestial Applications-1	Shuttle attached payload using the Shuttle Imaging Radar (SIR-A) to obtain high resolution images of earth.
OSTA-2	Office of Space and Terrestial Applications-2	Microgravity experiments.
OSTA-3	Office of Space and Terrestial Applications -3	Acquire photographic and radar images of the Earth's surface.
PAL	Pallet	Spacelab Pallet structure.
PALAPA		Geosynchronous satellite communication system for the Republic of Indonesia.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
PAM	Payload Assist Module	An upper stage system used on the Shuttle and the Delta ELV.
PARE	Physiological & Anatomical Rodent Experiment	Studies the physiological and anatomical changes that occur in mammals under weightless space flight conditions.
PCG	Protein Crystal Growth	Obtain high quality protein crystals to facilitate analysis of structures.
PCG-STES	Protein Crystal Growth-Single Thermal Enclosure System	Investigate the mechanisms of protein crystal growth and retrieve high quality crystals grown during space flight using a single locker thermal enclosure system.
PCG-TES	Protein Crystal Growth-Thermal Enclosure System	Investigate the mechanisms of protein crystal growth and retrieve high quality crystals grown during space flight using a double locker thermal enclosure system.
PDRS/PFTA	Payload Deployment and Retrieval System/Payload Flight Test Article	Tests the performance of the RMS in handling a massive object by unberthing and reberthing a payload using the RMS.
PEGASUS		Small class air-launched expendable launch vehicle.
PFF	Pluto Fast Flyby	Small spacecraft to image and take environmental measurements of Pluto and its moon Charon in rapid fly-by.
PHCF	Pituitary Growth Hormone Cell Function	Microgravity induced effects on pituitary (active growth) hormones in various types of living cells.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
PL OPPTY	Payload Opportunity	
PLAN	Planetary Trajectory	High Energy Trajectory to Outer Planets.
PLC	Payload Commander	A member of the Shuttle crew having overall crew responsibility for planning, integration, and on-orbit coordination of payload mission activities.
PLT	Pilot	A member of the Shuttle crew whose primary responsibility is to pilot the Orbiter.
PM	Polymer Morphology	Determines effects of weightlessness on morphological formation of polymers as they undergo physical transition.
PMC	Permanently Manned Capability	Ability for a four person crew to occupy the international space station on a permanent basis with periodic crew rotation. Accomplished at the completion of SSA20-15A.
PMG	Plasma Motor Generator	ELV secondary payload experiment to verify ability of plasma sources to couple electric current along a wire.
POLAR		Polar auroral plasma physics spacecraft.
PPE	Phase Partitioning Experiment	Studies separation behavior of two phase system generated by the mixture in water of polyglucose and polyethylene glycol.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
PS	Payload Specialist	A member of the Shuttle crew, who is not a NASA astronaut, but whose presence is required to perform specialized functions with respect to one or more payloads or other mission unique activities.
PSE	Physiological Systems Experiment	Examines effects of hormone therapy on changes in organic systems during spaceflight.
PVTOS	Physical Vapor Transport of Organic Solids	Grows crystalline films on selected substrates of organic solids.
RADARSAT	Radar Satellite	Remote free flyer sensing satellite that will monitor land, sea and ice for five years over the poles (U.S./Canadian).
RADCAL	Radar Calibration Satellite	USAF STP satellite carring C-band transponders and precise position determination equipment for calibrating radars used for space and missile tracking.
RANGER		Free-flying telerobotics flight experiment.
REQ	Request	
RETV	Retrieval	
REX	Radiation Experiment	Researches effects of electron density irregularities on transionosphere radio signals.
RME	Radiation Monitoring Equipment	Measures gamma radiation levels in the Shuttle environment.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
RMS	Remote Manipulator System	A Canadian developed, remotely controlled (from the Orbiter crew cabin) arm for deployment and/or retrieval of payloads from the Orbiter payload bay.
ROMPS	Robot Operated Materials Processing System	Investigates zero gravity anealing of semiconductor thin film and investigates robot handling of thin film samples.
S/MM	Shuttle MIR Mission	Shuttle mission to the Russian Space Station MIR to support design and assembly of the international space station.
SAC-B	Satelite de Aplicaciones Cientificas-B	Argentine spacecraft carrying hard x-ray spectrometer to investigate solar flares and cosmic transient x-ray emissions.
SAGE	Strategic Aerosol and Gas Experiment	Map vertical profiles of the ozone, aerosol, and nitrogen Rayleigh molecular extinction around the globe.
SAM	Shuttle Activation Monitor	Collects gamma and x-ray data as a function of geomagnetic location from spacecraft materials.
SAMPEX	Solar, Anomalous, and Magnetospheric Particle Explorer	A spacecraft to study solar energetic particles, anomalous cosmic rays, galactic cosmic rays, and magnetospheric electrons.
SAMS	Space Acceleration Measurement System	Provides Orbiter acceleration measurements in support of microgravity experiments.
SAN MARCO		NASA-owned Scout launch platform in the Indian Ocean off the coast of Kenya.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
SAREX	Shuttle Amateur Radio Experiment	Low cost space to ground voice and slow scan television experiment.
SAS	Space Adaptation Syndrome	Physiological changes which occur when adapting to microgravity.
SATCOM		RCA communications satellite.
SBS	Satellite Business Systems	All digital domestic communication system servicing large industry, the government, etc.
SCOUT		Small class expendable launch vehicle.
SDIO	Strategic Defense Initiative Organization	
SE	Student Experiment	Experiments sponsored by the Shuttle Student Involvement Program (SSIP).
SEDS	Small Expendable Deployer System	Experimental tether deployment device.
SFP	Space Flight Participant	A Shuttle crew member whose presence is not required for operation of payloads or mission unique activities, but is determined by the NASA Administrator to contribute to other approved NASA objectives or to be in the national interest.
SFU-RETR	Space Flyer Unit Retrieval	A reusable, retrievable unmanned free flyer to be launched on the Japanese H-II rocket and retrieved by Shuttle.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
SHARE	Space Station Heat Pipe Advanced Radiator Element	Demonstrates and quantifies the thermal performance of a high capacity, 50 foot, space constructible, heat pipe radiator element.
SHOOT	Super Fluid Helium On Orbit Transfer Demonstration	Demonstrates the feasibility of on-orbit transfer of superfluid helium using thermomechanical techniques.
SII	Space Industries, Inc.	U.S. company providing commercially-owned Industrial Space Facility (ISF).
SIRTF	Space Infrared Telescope Facility	Provides infrared imaging and spectroscopy.
SKYNET		United Kingdom military communication satellite.
SL-D1	Spacelab D1	First dedicated German Spacelab mission.
SL-D2	Spacelab D2	Second German Spacelab Mission. Objectives included microgravity research and technology preparation for space station use.
SL-E	European Spacelab	ESA sponsored science mission directed toward multidiscipline research in materials science, fluid science, life sciences, space science, observation and technology research.
SL-J	Spacelab J	Combined NASDA/NASA Spacelab mission. Objectives included life sciences, microgravity, and technology research.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
SL-M	Joint USA/Russian MIR Docking/Spacelab Life Science	Shuttle mission dedicated to rendezvous and docking with the Russian Space Station (MIR). Life Sciences experiments will be performed on the Spacelab.
SLA	Shuttle Laser Altimeter	Acquire space-based sample data sets of land topography and vegetation heights and provide testbed for future laser altimeter subsystem.
SLS	Space Life Sciences Laboratory	Investigates the effects of weightlessness exposure using both man and animal specimens.
SLSTP	Space Life Sciences Training Program	Series of payloads to support a broad range of life sciences studies.
SMEX	Small Explorer	Payloads being designed to fly on Small Class ELV's.
SMRM	Solar Maximum Repair Mission	A technology demonstration of the shuttle capability to rendezvous, service, checkout and deploy an on-orbit satellite.
SOHO	Solar Heliospheric Observatory	ESA spacecraft to provide optical measurements as well as plasma field and energetic particle observations of the sun system for studies of the solar interior, atmosphere and solar wind.
SOLAR PROBE		Studies unexplored region of the solar atmosphere, measures electromagnetic fields and studies the particle populations close to the sun.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
SOOS	Stacked OSCAR on Scout	Two OSCAR (Orbiting Satellite Carrying Amateur Radio) communication satellites.
SPACEHAB		U.S. company providing commercially-owned pressurized module for conducting experiments in a man-tended environment. Also a series of payloads to be flown on the Space Shuttle.
SPACELAB-01		Demonstrated Spacelab's capabilities for multidisciplinary research.
SPACELAB-02		Demonstrated Spacelab's capabilities for multidisciplinary research and verified system performance.
SPACELAB-03		Dedicated materials processing mission emphasizing research in microgravity conditions.
SPAS	Shuttle Pallet Satellite	Payload Carrier developed by MBB of Germany.
SPAS-01/01A	German Shuttle Pallet Satellite	Demonstrated the utilization of the MBB platform and systems as a carrier for science experiments.
SPAS-III	Shuttle Pallet Satellite III	A reflight of the Infrared Background Survey (IBSS) mission.
SPIE	Shuttle Plume Impingement Experiment	Obtains quantitative measurements of the Primary Reaction Control System (PRCS) engine plume impingement effects on materials useful for space station design.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
SPTN	Shuttle Pointed Autonomous Research Tool for Astronomy (SPARTAN)	X-ray astronomy, medium energy survey mission, using retrievable free flyer.
SPTN-HALLEY	SPARTAN-HALLEY	Search for molecules containing nitrogen, carbon or sulfur and observes the UV spectrum between 2100 and 3400A.
SRL	Space Radar Laboratory	Series of flights to acquire radar images of the Earth's surface. The images will be used for making maps, interpreting geological features, and conducting resource studies.
SS	Sun Synchronous	Sun-synchronous polar orbit.
SSAF-XX-XE	Space Station Assembly Flight - European element	International space station assembly flight supporting the Attached Pressurized Module which will contain European and US payload racks and associated support equipment.
SSAF-XX-XJ	Space Station Assembly Flight - Japanese element	International space station assembly flight supporting the Japanese Experiment Module which will contain Japanese and US payload racks and associated support equipment.
SSAF-XX-XJ/A	Space Station Assembly Flight - Japanese and American elements	Dedicated flights for the assembly of Japanese and American cargo elements for the international space station.
SSAF-XX-XXA	Space Station Assembly Flight - American element	International space station assembly flight supporting the US components of the international space station.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
SSBUV	Shuttle Solar Backscatter Ultra-Violet Experiment	Series of flights to measure ozone characteristics of the atmosphere.
SSBUV/A	Shuttle Solar Backscatter Ultra-Violet Experiment/A	SSBUV/A differs from SSBUV in that it has avionics and a power connection with the orbiter.
SSCE	Solid Surface Combustion Experiment	Determines the gas-phase flame spread over solid fuel surfaces in microgravity.
SSIP	Shuttle Student Involvement Program	Competitions held between 1981-1985 in which the winning High School students proposed experiments which were accepted for Shuttle flights.
SSTI	Small Spacecraft Technology Initiative	Series of two missions to provide flight opportunities for testing advanced spacecraft technology.
SSUF	Space Station Utilization Flight	Mission dedicated to the scientific users of the international space station.
STEX	Sensor Technology Experiment	Demonstrates radiation measurement technology.
STL	Space Tissue Loss	An experiment to validate or confirm model of skeletal and cardiac muscle atrophy, collect data on catabolic pathway and control mechanisms, and test candidate pharmaceuticals for efficacy.
STP-x	Space Test Program-x	A series of payloads which include DOD STP secondary experiments.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
STS	Space Transportation System	The Space Shuttle; Manned launch vehicle dedicated to space exploration.
STTP	Life Sciences Space Technology Training Program	Activity to develop and encourage interest on the part of college students in space biology and medicine.
SURFSAT	Summer Undergraduate Research Fellowship Satellite	Secondary payload launched on a Delta to simulate a deep space vehicle by radiating in S,X,Ku and Ka Bands.
SUVE	Solar Ultra Violet Experiment	To collect solar data with the solar imaging and extreme ultraviolet solar irradiance experiments. The data will be correlative with the co-manifested ATLAS-2 solar experiments for understanding of the upper atmosphere photochemistry.
SW	Sidewall	
SWAS	Submillimeter Wave Astronomy Satellite	Spacecraft to study how molecular clouds collapse to form stars and planetary systems.
SYNCOM	Hughes Geosynchronous Communication Satellite	Provides communication services from geosynchronous orbit principally to the U.S. government.
TAPS	Two Axis Pointing System	An instrument support system which allows pitch, roll, or combinations thereof to precisely point instruments at different targets.
TBD	To Be Determined	

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
TDRS	Tracking and Data Relay Satellite	Series of NASA tracking, data and communications satellites to replace the NASA ground based network.
TELESAT	Canadian Telecommunication Satellite	Communication satellite built for Telesat Canada to provide voice and TV coverage to trans-Canada network of Earth stations.
TELSTAR	AT&T Communications Satellite	AT&T COMSTAR replacement -- provides communication services to the continental U.S., Alaska, Hawaii, and Puerto Rico.
TEMP (TEMP 2A-3)	Thermal Energy Management Process	Demonstrates a mechanically pumped two phase heat acquisition, transport, and rejection thermal control system proposed for Space Station.
TERRA SCOUT		Evaluates the ability of an expert imagery analyst to conduct realtime analysis from low earth orbit.
TIMED-H/-L	Thermosphere-Ionosphere-Mesosphere Energetics and Dynamics/High and Low Inclination	Dual-spacecraft mission to investigate physical and chemical processes in the mesosphere and lower thermosphere/ionosphere.
TISP	Teacher in Space Program	Six experiments including hydrophonics, magnetism, Newton's laws, effervescence, chromatography, and simple machines.
TITAN II		DOD medium class expendable launch vehicle.
TITAN III		Commercial intermediate class expendable launch vehicle.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
TITAN IV		DOD large class expendable launch vehicle.
TLD	Thermoluminescent Dosimeter	Obtains gamma ray measurements of the Shuttle environment.
TOMS	Total Ozone Mapping Spectrometer	Study of Stratospheric ozone.
TOS	Transfer Orbit Stage	Upper stage system for Shuttle and Titan.
TPCE	Tank Pressure Control Experiment	A study to determine the effects of microgravity on the thermal stratification of fluids and to validate the effects of jet induced mixing.
TPFE	Two Phase Flow Experiment	Demonstration of a High Efficiency Thermal Interface (HETI) in an integrated thermal control system.
TSS	Tethered Satellite System	Cooperative system developed by the Italian Space Agency (ASI) and NASA which is capable of deploying and retrieving a satellite which is attached by a wire tether from distances up to 100 km from the Orbiter.
U.S.	United States	
UARS	Upper Atmosphere Research Satellite	Satellite to study chemical processes acting within and upon the stratosphere, mesosphere, and lower thermosphere.
UK-6	United Kingdom-6	British Scientific Satellite

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
ULYSSES	Formerly ISPM (International Solar Polar Mission)	Investigates the properties of the heliosphere (sun and its environment).
UNEX	University-class Explorers	Series of explorers small than SMEX (Small Explorer).
USAF	United States Air Force	
USML	United States Microgravity Laboratory	Series of flights of a microgravity materials processing laboratory attached to the Shuttle.
USMP	United States Microgravity Payload	Series of flights that conduct materials processing and fundamental experiments in the microgravity environment available in the Orbiter cargo bay while in low earth orbit.
USS	Unique Support Structure	
UVPI	Ultraviolet Plume Imager	Free-flying satellite observation of Obiter Maneuvering System burns.
VAFB	Vandenberg Air Force Base	U.S. Air Force launch range on central California coast.
VCS	Voice Controlled System	Evaluates effectiveness of voice controlled system on the Shuttle cargo bay closed circuit television.
VFT	Visual Function Test in Space	A biomedical study to determine effects of microgravity on human visual performance.

**** PAYLOAD/ACRONYM LIST ****

PAYLOAD/ACRONYM	NAME	DESCRIPTION
VTRE	Vented Tank Resupply Experiment	Investigation of concepts to provide tank fill-while-venting to 90 percent full capacity.
WESTAR	Western Union Telegraph Communication Satellite	A C-band satellite to replenish and expand the Westar system (Western Union domestic communication system).
WFF	Wallops Flight Facility	NASA small class ELV and sounding rocket launch range on Virginia coast.
WIND		Satellite to measure solar wind input to magnetosphere. Part of ISTP program.
WINDEX	Window Experiment	To obtain calibrated measurements of environmentally induced optical emissions.
WSF	Wake Shield Facility	Satellite for molecular and chemical beam epitaxy growth of compound semiconductors, high temperature superconductors, and other materials using techniques requiring ultra-high vacuum, high pumping speeds, and relatively large working volumes.
XTE	X-Ray Timing Explorer	A payload to be used in Earth orbit to investigate the physical nature of compact x-ray sources by studying fluctuations in x-ray brightness over time-scales ranging from microseconds to years.