

SPACE SHUTTLE MISSIONS SUMMARY

FLT NO.	ORBITER	CREW 7 UP/7DOWN	LAUNCH SITE, LIFTOFF TIME, LANDING SITES, ABORT TIMES	LANDING SITE/ RUNWAY, CROSSRANGE LANDING TIMES FLT DURATION, WINDS	SSME-TL NOM- ABORT EMERG THROTTLE PROFILE ENG. S.N.	SRB RSRM AND ET	ORBIT		FSW	PAYLOAD WEIGHTS, PAYLOADS/ EXPERIMENT S	MISSION HIGHLIGHTS (LAUNCH SCRUBS/DELAYS, TAL WEATHER, ASCENT I-LOADS, FIRSTS, SIGNIFICANT ANOMALIES, ETC.)
		TITLE, NAMES & EVA'S					INC	HA/HP			

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STS-108/ISS UF-1 SEQ FLT #107 KSC-107 PAD: 39B-47 MLP-1 TWELFTH SHUTTLE FLIGHT TO ISS	OV-105 (Flight 17) Endeavor OMS PODS: LPO4-24 RPO1-31 FRC5-17	CDR: Dominic L. Gorie (Flt 3 - STS-91, STS-99) P640/R242/V157/M211 PLT: Mark E. Kelly P641/R271/M237 M/S 1: Linda M. Godwin (Flt 4 - STS-37, STS-59, STS-76) P642/R122/V105/F13 M/S 2: Daniel M. Tani P643/R272/M238 M/S 3 UP/EXP 4 Fit Eng: Carl E. Walz (Flt 4 - STS-51, STS-65, STS-79) P644/R170/V106/M148 M/S 4 UP/EXP 4 Fit Eng: Daniel W. Bursch (Flt 4 - STS-51, STS-68, STS-77) P645/R169/V109/M147 M/S 5 UP/EXP 4 CDR: Yuri I. Onufrienko (Russia) P646/R273/M239 M/S 3 DN/EXP 3 CDR: Frank L. Culbertson, Jr. (Flt 3 - STS-38, STS-51, STS-105) /R116/V95/M105 1 DN/EXP 3 SPLT: Jimir N. Iurov (Russia) 2 - STS-71, STS-UP) P648/R195/V174/M170	KSC 39B 339:22:19:28Z 5:19:28 PM EST (P) 5:19:28 PM EST (A) Wednesday 12 12/5/01 (6) LAUNCH WINDOW: 7M34S USING PLT (IN-PLANE TIME) EOM PLS: KSC TAL: ZZA TAL WX: MRN, BEN SELECTED: RTLS: KSC 33/N/N TAL: ZZA 30/N/N AOA: NOR 17/N/SF PLS: EDW 22/N/N TDEL: 0.03 -0.1568 MAX Q NAV: 714 708 SRB STG: 2:05 2:04 PERF: NOMINAL 2 ENG TAL (MRN): 2:19 2:26 NEG RETURN: 3:48 3:53 PTA (U/S 154): 4:51 4:58 SE TAL (ZZA 104): 6:03 6:06 PTM (U/S 154): 6:20 6:20 SE PTM (U/S 736): 6:52 6:57 MECO CMD: 8:23.8 8:25.7 Continued...	KSC 15 (KSC 57) 351:17:55:12Z 12:55:12 AM EST Monday 20 12/17/01 (13) DEORBIT BURN: 351:16:48:13Z XRANGE: 26 NM ORBIT DIR: AR 11 AIM PT: NOMINAL MLGTD: 3024 FT 351:17:55:12Z VEL: 198 KGS HDOT: -1.6 FPS TD NORM 205: 2734 FT NLGTD: 6901 FT 351:17:55:24Z VEL: 143 KGS HDOT: -6.3 FPS DRAG CHUTE DEPLOY: 191 KEAS 351:17:55:16Z BRK INIT: 92 KGS DRAG CHUTE JETTISON: 57 KGS 351:17:56:18Z BRK DECEL FPS ² : AVE 4.2 PK 6.9 WHEELS STOP: 351:17:56:18Z 11965 FT ROLLOUT: 8941 FT 66 SEC WINDS: 6H, 2L OFFICIAL: 14006P13 SS: 6H, 2L PK: 13H, 2L Continued...	104/104/109% PREDICTE D: 100/104.5/104.5/72/104.5 ACTUAL: 100/104.5/93/72/104.5 1 = 2049 (6) 2 = 2043 (7) 3 = 2050 (2) ENGINE 2050 IS BLOCK II ENGINE. OTHER TWO BLOCK IIA ENGINES. M 3 EOM: WEIGHT: 220623 LBS X CG: 1083.79 LANDING: WEIGHT: 220556 LBS X CG: 1085.49	BI-110 51.6 0 (12) RSRM 82 ET-111 SLWT 16 ET IMPACT 1:14:20 MET LAT: 36.3°S LONG: 158.3°W	DIRECT INSERTION POST OMS-2: 124.2 X 121.6 NM DEORBIT: 204 X 191 NM VELOCITY: 25888 FPS ENTRY RANGE: 4416 NM	OI-28 (6) CARGO: 38177 LBS PAYLOAD CHARGEABLE: 31393 LBS DEPLOYED: 6454 LBS NON-DEPLOYED: 8635 LBS MIDDECK: 690 LBS SHUTTLE ACCUMULATED WEIGHTS: DEPLOYED: 1082139 LBS NON-DEPLOYED: 1520683 LBS CARGO TOTAL: 3336416 LBS PERFORMANCE MARGINS (LBS): FPR: 3065 FUEL BIAS: 937 FINAL TDDP: 2881 RECON: 1182 PAYLOADS: PLB: ISS UF-1 (MPLM, LMC) MACH-1, SEM (1), GAS (5), RMS, ODS, Crew Transfer MIDDECK: ADF CBTM SIMPLEX ISS UF-1 5 CRYO TK SETS 6 GN ₂ TANKS RMS 64 RMS used for ISS MPLM deploy and retrieve and EVA support	KSC W/D: OPF 142, VAB 6, PAD 34 = 182 days total. LAUNCH POSTPONEMENTS: - Baselined launch date of 10/4/01 on 9/21/00 - Postponed launch date to NET 11/1/01 - Postponed launch date to 11/29/01 LAUNCH SCRUBS: - Scrubbed Thursday 11/29/01 EDT (11/30/01 GMT) Launch at ET Tanking MMT at L-9.5 Hours due to an ISS problem. Progress 6 had Soft Docked with SM Aft Port; however, did not achieve Hard Dock. Suspect debris within the docking interface. U.S. ISS Mgmt wanted to work problem and it was decided to go into a 24-hour scrub turnaround, then 48-hr scrub turnaround. Initially IP Russia was GO. U.S. ISS management wanted to scrub to work problem. Then IP Russia announced at ISS MMT on 11/30/01 that they planned an EVA on 12/3/01 to clear debris in docking mechanism. SSP MMT on 11/30/01 set launch for 12/4/01 to allow review of results of EVA. IP Russia EVA crew removed damaged seal from previous Progress enabling Progress 6 to Hard Dock. ISS Technical Scrub (new category of scrub). - Scrubbed Tuesday 12/4/01 launch due to RTLS and Range weather (light precipitation and low ceiling). Low clouds moved into launch area from the Northeast bringing dynamic weather conditions particularly in last hour before launch. RTLS runway selection alternated between 33 and 15. Light rain was reported only by the STA as it was not visible on radar or by SLF Observer. Counted down to T-5 minutes and held while evaluating the observed and forecast weather. Scrubbed at 338:22:44:43Z (Preferred Launch Time was 22:45:08Z) while holding at T-5 minutes based on STA observations of precipitation and cloud cover and a late update SMG forecast of broken clouds over SLF runway. RTLS and Range WX Scrub. Went into a 24 hour scrub turnaround. All three TAL sites were GO. LAUNCH WINDOW: - Window opened at 339:22:15:35Z and closed at 339:22:27:02Z giving a total window of 11:37 in two panes with a 19-second gap between panes. Preferred Launch Time (PLT) in-plane time for pane 1 was 339:22:19:28Z giving a window of 7M34S. LAUNCH DELAYS: None - Launch occurred On-Time at 339:22:19:27.951Z, 5:19:28 PM EST, on Wednesday, 12/5/01. TAL WX: - All three TAL sites (ZZA, MRN, and BEN) were GO. Zaragoza was prime but it was a low energy day there, so Moron was selected. - MRN was 2-Eng TAL Call PERFORMANCE ENHANCEMENTS: - Standard Set plus PE Operational High O. OMS Assist is 4000 lbs, 52 nm MECO, and Del Psi. FLIGHT DURATION CHANGES: - Extended flight one docked day to allow time for additional ISS tasks. Initially planned (before extension) to land at KSC on orbit 170. After one day extension, planned landing at KSC on orbit 186. Endeavour landed at KSC on Runway 15 on orbit 186 at 351:17:55:11Z, 12:55:11 PM EST on Monday, December 17, 2002.
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