SPACE SHUTTLE MISSIONS SUMMARY

FLT NO.	ORBITER	CREW (5) TITLE, NAMES & EVA'S	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 INC	ORBIT HA/HP	FSW	PAYLOAD WEIGHTS, PAYLOADS/ EXPERIMENTS	MISSION HIGHLIGHTS (LAUNCH SCRUBS/DELAYS, TAL WEATHER, ASCENT I-LOADS, FIRSTS, SIGNIFICANT ANOMALIES, ETC.)
STS 51-A (STS-19) SEQ FLT # 14 KSC 14 PAD 39A-14	OV-103 Flight 2 DIscovery OMS PODS LPO3 - 3 RPO3 - 2 FRC3 - 2	CDR: Frederick H. Hauck (Flt 2 - STS-7) P56/R17/V7/M17 PLT: David M. Walker P57/R48/M45 M/S: Joseph P. Allen (Flt 2 - STS-5) P58/R12/V8/M12 M/S: Anna L. Fisher P59/R49/F4 M/S: Dale A. Gardner (Flt 2 - STS-8) P60/R23/V9/M22 UNTETHERED EVA'S (MMU): EV1=Allen EV2=Gardner EVA1-6:13 11/12/84 - SS EVA #7 EVA2-6:01 11/14/84 - SS EVA #8 CAPTURE AND STOW OF PALAPA-B & WESTAR-IV FREE FLYER EVA'S #5 & #6 MCC FCR-1 (6) FLIGHT DIRECTORS Ascent - J. H. Greene Ld/O 1 - L. S. Bourgeois Orbit 2 - B. R. Stone Plng - W. D. Reeves Entry - T. C. Lacefield MOD - E. F. Kranz	KSC 39A 313:12:15:00Z 7:15:00 AM EST (P) 7:15:00 AM EST (A) Thursday 4 11/8/84 (4) LAUNCH WINDOW: 18 Minutes PLANAR WINDOW (MAX YAW STEERING MPS LIMIT 1000 LBS FOR RENDEZVOUS) PLS - KSC TAL - DAKAR (Selected) TAL WX - MORON AOA - EDW AOA WX-NOR,KSC MAX Q = 651 M = 1.10 SRB SEP: 2:05.72 MET MECO: 8:33.16 MET ET SEP: 8:51.29 MET OMS-1: 10:33.3 MET 150.7 Seconds OMS-2: 44:43 MET 114.8 Seconds	KSC 15 (KSC 3) 6:59:56 AM EST Friday 3 11/16/84 (3) XRANGE: 486 NM ORB DIR: DL9 AIM PT: CLOSE IN MLGTD: 2724 FT 321:11:59:56Z VEL: 190 KGS 192 KEAS HDOT: -1.0 FPS TD NORM 195: 2454 FT NLGTD: 6380 FT 321:12:00:09Z VEL: 160 KGS HDOT: -4.6 FPS BRK INIT: 142 KGS AVE BRK DECEL: 6.5 FPS/S WHEELS STOP: 321:12:00:54Z 12178 FT ROLLOUT: 9461FT 58 SEC WINDS: 4 H, O X KNOTS OFFICIAL: 2T, 1R DENS ALT: -100 FT FLT DURATION: 7:23:44:56 191:44:56 S/T: 89:08:47:24 OV-103: 14:00:41:00 DISTANCE: 2,870,000 sm	104/104 109 100/89/ 67/104/ 65 1 = 2109 (4) 2 = 2018 (3) 3 = 2012 (6) M 3 EOM WEIGHT: 207983 X CG: 1081.4 LANDING WEIGHT: 207506 X CG: 1082.6	BI-014 61-84 SRM: HPM LWC 136 FT Chutes LWT-9 ET-16 ET RPT 226K 47:06 MET ET IMPACT LAT: 27.7°S LONG: 82.0°E	28.487° (9)	STANDARD INSERTION INSERTION ALTITUDE: POST OMS-2 161.22 X 151.17 NM TELESAT DEPLOY 163.48 NM SYNCOM DEPLOY 168.14 NM PALAPA RETRIEVE 194.44 NM WESTAR RETRIEVE 189.55 NM DEORBIT 191 X 188 NM VELOCITY 25870 FPS RANGE 4141 NM	OI-4 (3)	CARGO: 45306 lbs PAYLOAD CHARGEABLE: 38003 lbs DEPLOYED: 22764 lbs NON-DEPLOYED: 15052 lbs MIDDECK: 187 lbs RETRIEVED: 2381 lbs RETURNED: 24883 lbs SHUTTLE ACCUMULATED WEIGHTS: DEPLOYED: 168793 lbs NON-DEPLOYED: 212528 lbs CARGO TOTAL: 444739 lbs PERFORMANCE MARGINS (LBS): FPR: 4633 FUEL BIAS: 1566 FINAL TDDP: 281 RECON: 1003 SYNCOM IV-1 (DEPLOYED) TELESAT-H/ ANIK-D2/PAM-D (DEPLOYED) PALAPA-B2- (RETRIEVED & RETURNED) WESTAR-IV - (RETRIEVED & RETURNED) RME DMOS-3M EXP. MMU (2), EMU (3) 4 CRYO TK SETS RMS 10 (S.N. 301) Used for PALAPA/ WESTAR capture and berth, waste water dump monitor, and SYNCOM and TELESAT PKM viewing	KSC W/D: OPF 34, VAB 5, PAD 17 = 56 VEHICLE CHANGE: - OV-103 replaced OV-099 (TPS screed deterioration cased by waterproofing). LAUNCH POSTPONEMENT: None. LAUNCH SCRUBS: - 11/7/84 launch scrubbed because winds aloft exceeded Orbiter structural limits (excessive wind shear) - 1-day slip. LAUNCH DELAYS: None. TAL WX: - Dakar GO, Moron NO GO - low clouds. FLIGHT DURATION CHANGES: None. FIRSTS: - First retrieval and return of satellites. PALAPA-B AND WESTAR-IV were deployed on STS 41-B but PAM Upper Stages failed. - EVA crewmen captured spacecrafts using MMU/Stinger and stowed in payload bay. RENDEZVOUS 3 & 4: - To capture and return PALAPA & WESTAR. SIGNIFICANT ANOMALIES: - APU 2 water spray valve system A failed. - CRT 4 failed. - RCS F4R fuel leak. - Both left side EMU helmet lights failed (Bad Batteries). - Arriflex 16 mm camera failed (IFM bypassed failed microswitch). - FWD RCS Manifold 3 fuel and oxidizer iso valves lost open indications. - LRCS Sys B Fuel tank Iso Valve for manifold 3/4/5 lost open indication. - PLB blankets and metal discolored. - Brake hydraulic pressure increased when Iso valves opened at 200k (Iso valve leak). IFM's - Arriflex camera repaired, EVA helmut light repaired and DAP key changeout