

STS-109 HST-SM3B Overview Timeline 11+2 Day Mission, 2 EVA Crews, 5 EVAs

4	0/	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	
FD 1	January 17, 2002 Launch														POST INSERTION			Pre Sleep		Sleep						
Orb Att.															-ZLV +YVV			⊙ NC1	-ZLV -XVV							
0/	12	13	14	15	16	17	18	19	20	21	22	23	1/0	1	2	3	4	5	6	7	8	9	10	11		
FD 2	Sleep		Post Sleep		RMS C/O, SSE C/O, EMU C/O, 10.2 DEPRESS, PRE-RNDZ										Pre Sleep		Sleep									
10.2/14.7																										
Orb Att.	⊙ NC2										⊙ NPC			-ZLV -XVV			⊙ NC3									
1/	12	13	14	15	16	17	18	19	20	21	22	23	2/0	1	2	3	4	5	6	7	8	9	10	11		
FD 3	Sleep		Post Sleep		HST Grapple						BRTH		SA RETRACT				Pre Sleep		Sleep							
10.2/14.7																										
Orb Att.	-ZLV -XVV		-ZLV +YVV		NH ⊙	RNDZ		⊙ Ti		FREE		BATT CHG		BIAS -ZSI		-ZLV -XVV										
HST ATT	RNDZ										CAPT		BERTH		-V3 AXIS FWD		-V2	+V2	-V3 AXIS FWD							
*Grapple 1/22:34																										
2/	12	13	14	15	16	17	18	19	20	21	22	23	3/0	1	2	3	4	5	6	7	8	9	10	11		
FD 4	Sleep		Post Sleep		Pre-EVA			EVA 1 (-V2 SA & DIODE BOX)						Post-EVA		Pre Sleep		Sleep								
10.2/14.7																										
Orb Att.	-ZLV -XVV														BATT CHG			-ZLV -XVV								
HST ATT	-V3 AXIS FWD						-V2 AXIS FWD						-V3 AXIS FWD													
3/	12	13	14	15	16	17	18	19	20	21	22	23	4/0	1	2	3	4	5	6	7	8	9	10	11		
FD 5	Sleep		Post Sleep		Pre-EVA			EVA 2 (+V2 SA & DIODE BOX, ASLR)						Post-EVA		Pre Sleep		Sleep								
10.2/14.7																										
Orb Att.	-ZLV -XVV														BATT CHG			-ZLV +YVV		-ZLV -XVV						
HST ATT	-V3 AXIS FWD						+V2 AXIS FWD						-V3 AXIS FWD													
4/	12	13	14	15	16	17	18	19	20	21	22	23	5/0	1	2	3	4	5	6	7	8	9	10	11		
FD 6	Sleep		Post Sleep		Pre-EVA			EVA 3 (PCU)						Post-EVA		Pre Sleep		Sleep								
10.2/14.7																										
Orb Att.	-ZLV -XVV														BATT CHG			RGA F/T								
HST ATT	-V3 AXIS FWD						225°, (BAY 4 FWD)						-V3 AXIS FWD													
5/	12	13	14	15	16	17	18	19	20	21	22	23	6/0	1	2	3	4	5	6	7	8	9	10	11		
FD 7	Sleep		Post Sleep		Pre-EVA			EVA 4 (ACS, ESM)						Post-EVA		Pre Sleep		Sleep								
10.2/14.7																										
Orb Att.	RGA F/T						SUN PROTECT						-ZLV +YVV			-ZLV -XVV										
HST ATT	-V3 AXIS FWD						-V2 AXIS FWD						+V3 AXIS FWD													
6/	12	13	14	15	16	17	18	19	20	21	22	23	7/0	1	2	3	4	5	6	7	8	9	10	11		
FD 8	Sleep		Post Sleep		Pre-EVA			EVA 5 (NCS)						Post-EVA		Pre Sleep		Sleep								
10.2/14.7																										
Orb Att.	-ZLV -XVV						RBST		SUN PROTECT						-ZLV -XVV											
HST ATT	+V3 AXIS FWD						+V2 AXIS FWD						-V3 AXIS FWD													
7/	12	13	14	15	16	17	18	19	20	21	22	23	8/0	1	2	3	4	5	6	7	8	9	10	11		
FD 9	Sleep		Post Sleep		HST Release - 7/21:58						FSS STW, 14.7 RPR						Pre Sleep		Sleep							
10.2/14.7																										
Orb Att.	-ZLV -XVV						BATT CHRG		RELEASE		SEP		-ZLV -XVV													
HST ATT	-V3 AXIS FWD						RMS						-ZLV -XVV													
8/	12	13	14	15	16	17	18	19	20	21	22	23	9/0	1	2	3	4	5	6	7	8	9	10	11		
FD 10	Sleep		Post Sleep		OFF DUTY						POST EVA ENT PREP						Pre Sleep		Sleep							
Orb Att.	-ZLV -XVV		-ZLV +YVV		-ZLV -XVV																					
9/	12	13	14	15	16	17	18	19	20	21	22	23	10/0	1	2	3	4	5	6	7	8	9	10	11		
FD 11	Sleep		Post Sleep		FCS C/O, RCS HF						CABIN STOW						Pre Sleep		Sleep							
Orb Att.	-ZLV -XVV														ADJ		-ZLV -XVV				-ZLV -YVV					
10/	12	13	14	15	16	17	18	19	20	21	22	KSC LANDING														
FD 12	Sleep		Post Sleep		IMU		D/O PREP			ENT		KSC LANDING														
Orb Att.	-ZLV -YVV		IMU		-XSI			COMM		ENTRY		KSC LANDING														
14.7			10.2		*LDG 10/21:57																					