

STS-117/13A

FD 13 Execute Package



MSG	Page(s)	Title
107A	1 - 19	FD13 and FD14 Flight Plan Revision (pdf)
108	20	FD13 Mission Summary (pdf)
109A	---	FD12 MMT Summary (pdf - Electronic Only)

Approved by FAO: Linda DeLapp

Last Updated: Jun 20 2007 9:04AM GMT

JEDI (Joint Execute package Development and Integration), v2.04.0003

MSG 107A - FD13 FLIGHT PLAN REVISION

1 MSG INDEX

2		
3	<u>MSG NO.</u>	<u>TITLE</u>
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7	110	FD13 PAO Event Summary Message (Electronic Only)
8	111	Sunday Funnies (Electronic Only)

- 9
- 10
- 11 1. As a reminder, please place Crew Shirts in Return to Houston Bag and stow behind the
- 12 Middeck Retention Net for quick retrieval post-landing. The dirty towels can be put in a
- 13 laundry bag and stowed in the airlock.
- 14
- 15 2. Prior to the Dump Activities, pre-gather CWCs (S/N 5093 and 5082), WWD filter and Y-Y
- 16 hose per step 2 in CWC OVERBOARD DUMP. MCC will TMBU all limits in both dump
- 17 procedures.
- 18

19 **Waste Water Dump Details:**

20 For the Waste Water Dump at 11/20:00 MET, perform SUPPLY/WASTE WATER

21 DUMP (ORB OPS, ECLS) page 5-2, steps E, G, & I. Dump the tank to 5%. Waste

22 Water Nozzle open time will be ~25 minutes.

23

24 **CWC Overboard Dump Details:**

25 Once the waste dump is complete, perform CWC OVERBOARD DUMP (ORB OPS,

26 ECLS) page 5-32, for two condensate CWCs (S/N 5093 and 5082). Dump S/N 5093

27 first.

28

29 CWC 5093 will take ~50 minutes to dump.

30 CWC 5082 will take ~20 minutes to dump.

31

32 After the CWC dump, stow empty CWCs in Middeck Bag C.

33

- 34 3. Prior to Ku Stow this afternoon, we will downlink your Outlook Personal Folders so that
- 35 you may have them when you return to Houston. Please move any messages that you
- 36 would like to keep from your INBOX and SENT ITEMS folders into your Personal Folder
- 37 before MET 11/20:30. We will also perform one final mail synch at the same time to
- 38 deliver any messages you want to send.
- 39
- 40 4. REPLACE PAGES 2-46 THROUGH 2-48, AND 3-140 THROUGH 3-154.
- 41
- 42
- 43
- 44
- 45
- 46
- 47
- 48
- 49
- 50
- 51

FD13

06/20/07 03:54:48

REPLANNED

GMT 06/20/07 (171)

MET Day 011

		12	13	14	15	16	17	18	19	20	21	22	23	012/00					
STS-117	CDR STURCKOW	POST SLEEP	FILTER CLEANING	FCS C/O	RFCS R HOT	PILOT OPS	D/O BRIEF	MEAL	CABIN STOW	L-1 COMM CHK	PEAVO ENT	CABIN STOW	EXERCISE	MA L-1 COMM CHK	RCS BURN	PRE SLEEP			
	PLT/R2/M1 ARCHAMBAULT	POST SLEEP	W/POST SLEEP	CABIN STOW	FCS C/O	RFCS R HOT	PILOT OPS	D/O BRIEF	MEAL	CABIN STOW	PEAVO ENT	-ZLVV	W/ANISITTE	CABIN STOW	WTAE SR TME	CWC DUMP	-ZLVV	EXERCISE	PRE SLEEP
	MS1/EV3/R1 FORRESTER	POST SLEEP	CABIN STOW	EXERCISE	CABIN STOW	D/O BRIEF	MEAL	CABIN STOW	PEAVO ENT	CABIN STOW	CABIN STOW	PRE SLEEP	KU STOW	ERG STOW					
	MS2/EV4/M2 SWANSON	POST SLEEP	CABIN STOW	FCS C/O	RFCS R HOT	PILOT OPS	D/O BRIEF	MEAL	CABIN STOW	PEAVO ENT	W/ANISITTE	EXERCISE	CABIN STOW	W/DELEA S C T	RCS BURN	PGSC STOW PART 1	PRE SLEEP		
	MS3/EV2/R1 OLIVAS	POST SLEEP	CABIN STOW	EXERCISE	CABIN STOW	D/O BRIEF	MEAL	EVS NIE TDT REU YOP	PSAE OTUP	CABIN STOW	PEAVO ENT	S/DEVA C T	CABIN STOW	PRE SLEEP					
	MS4/EV1 REILLY	POST SLEEP	CABIN STOW	EXERCISE	D/O BRIEF	MEAL	CABIN STOW	PEAVO ENT	CABIN STOW	LAUNCH ENTRY SUIT CK	CABIN STOW	PRE SLEEP	ERG STOW						
	MS5 WILLIAMS	POST SLEEP	CABIN STOW	D/O BRIEF	MEAL	CABIN STOW	PEAVO ENT	EXERCISE	LAUNCH ENTRY SUIT CK	CABIN STOW	PRE SLEEP								
STS	DAY/NIGHT	[Timeline bars for Day/Night]																	
	ORBIT	[Timeline bars for Orbit]																	
	TDRS	W -171	[Timeline bars for TDRS]																
		E -46	[Timeline bars for TDRS]																
	Z -275	[Timeline bars for TDRS]																	
	GND	[Timeline bars for GND]																	
	ORB ATT	[Timeline bars for ORB ATT]																	
	NOTES	#HEATER ACT *DUMP INIT #HTR RCNFG *DUMP TERM *PWR ON																	

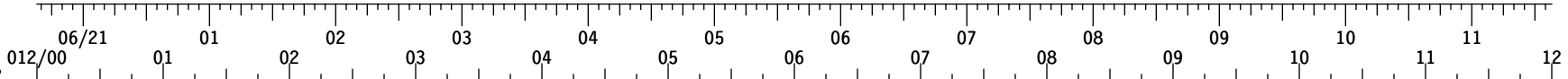
FD13

06/20/07 03:54:48

REPLANNED

GMT 06/20/07 (171)

MET Day 012



STS-117	CDR STURCKOW	PRE SLEEP	PMC A/G	PRE SLEEP	SLEEP	POST SLEEP	PMC A/G	PSOLSTEP	
	PLT/R2/M1 ARCHAMBAULT	PRE SLEEP		SLEEP		POST SLEEP			
	MS1/EV3/R1 FORRESTER	PRE SLEEP		SLEEP		POST SLEEP			
	MS2/EV4/M2 SWANSON	PRE SLEEP		SLEEP		POST SLEEP			
	MS3/EV2/R1 OLIVAS	PRE SLEEP		SLEEP		POST SLEEP			
	MS4/EV1 REILLY	RCMBNT SEAT S/U	PRE SLEEP		SLEEP		POST SLEEP		
	MS5 WILLIAMS	RCMBNT SEAT S/U	PRE SLEEP	PMC A/G	PRE SLEEP	SLEEP		POST SLEEP	
STS	DAY/NIGHT	[Night]		[Day]		[Night]		[Day]	
	ORBIT	191	192	193	194	195	196	197	198
	TDRS	W -171	E -46	Z -275					
	GND	-WSS -DFR	-MLA -DFR	-MLA -WSS -DFR	-WSS -DFR	-WSS -DFR			
	ORB ATT					-ZLV -XVV			
NOTES									

FD14

GMT 06/21/07 (172)

06/20/07 03:54:48

REPLANNED

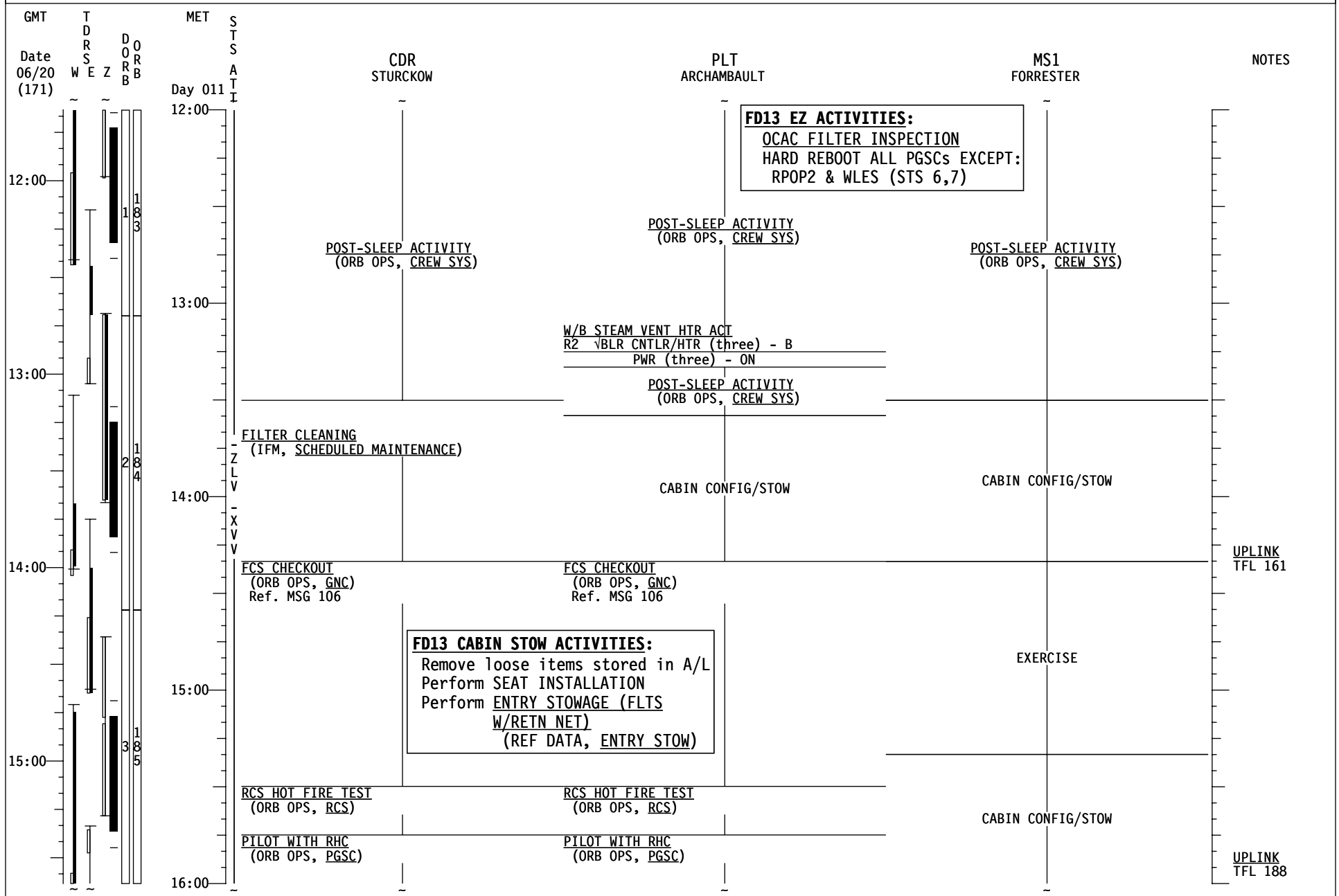
MET Day 012

		12	13	14	15	16	17	18	19	20	21	22	23	013/00	
S T S - 1 1 7	CDR STURCKOW	POST SLEEP	MADSS* IMU ALIGN & VERIF	T-RX KSI	DEORBIT PREP					DEORBIT PREP BACKOUT			+ZLV -XLV -ZLV -XLV	PRE SLEEP	
	PLT/R2/M1 ARCHAMBAULT	POST SLEEP	GRUP2 IMU	POST SLEEP	FCPRG*	DEORBIT PREP					DEORBIT PREP BACKOUT			K S C / B	PRE SLEEP
	MS1/EV3/R1 FORRESTER	POST SLEEP	GRUP2 IMU	POST SLEEP	GSITROW	DEORBIT PREP					DEORBIT PREP BACKOUT			D / O	PRE SLEEP
	MS2/EV4/M2 SWANSON	POST SLEEP	PGSC STOW PART II	DEORBIT PREP					DEORBIT PREP BACKOUT			L A N D I N G *			PRE SLEEP
	MS3/EV2/R1 OLIVAS	POST SLEEP	FSMTKOW	DEORBIT PREP					DEORBIT PREP BACKOUT			T I G *			PRE SLEEP
	MS4/EV1 REILLY	POST SLEEP	SACTPAOLCWE	DEORBIT PREP					DEORBIT PREP BACKOUT			O S C E A T C U P			PRE SLEEP
	MS5 WILLIAMS	POST SLEEP	DEORBIT PREP					DEORBIT PREP BACKOUT						PRE SLEEP	
DAY/NIGHT		[Timeline bars for Day/Night]													
S T S	ORB	[Timeline bars for ORB]													
	TDRS	W -171	[Timeline bars for TDRS]												
	GND	E -46	Z -275	[Timeline bars for GND]										-MLA -WSS	-WSS -DFR
ORB ATT		IMU	-XSI	COMM	ENTRY	+ZLV -XVV					-ZLV -XVV				
NOTES		*ENABLE *MANUAL					*D/O TIG 12/17:15					*KSC LANDING 12/18:17			

ORBIT	TIG
K202	EOM 12/17:15
K203	12/18:50
E204	12/20:20
E205	12/21:56

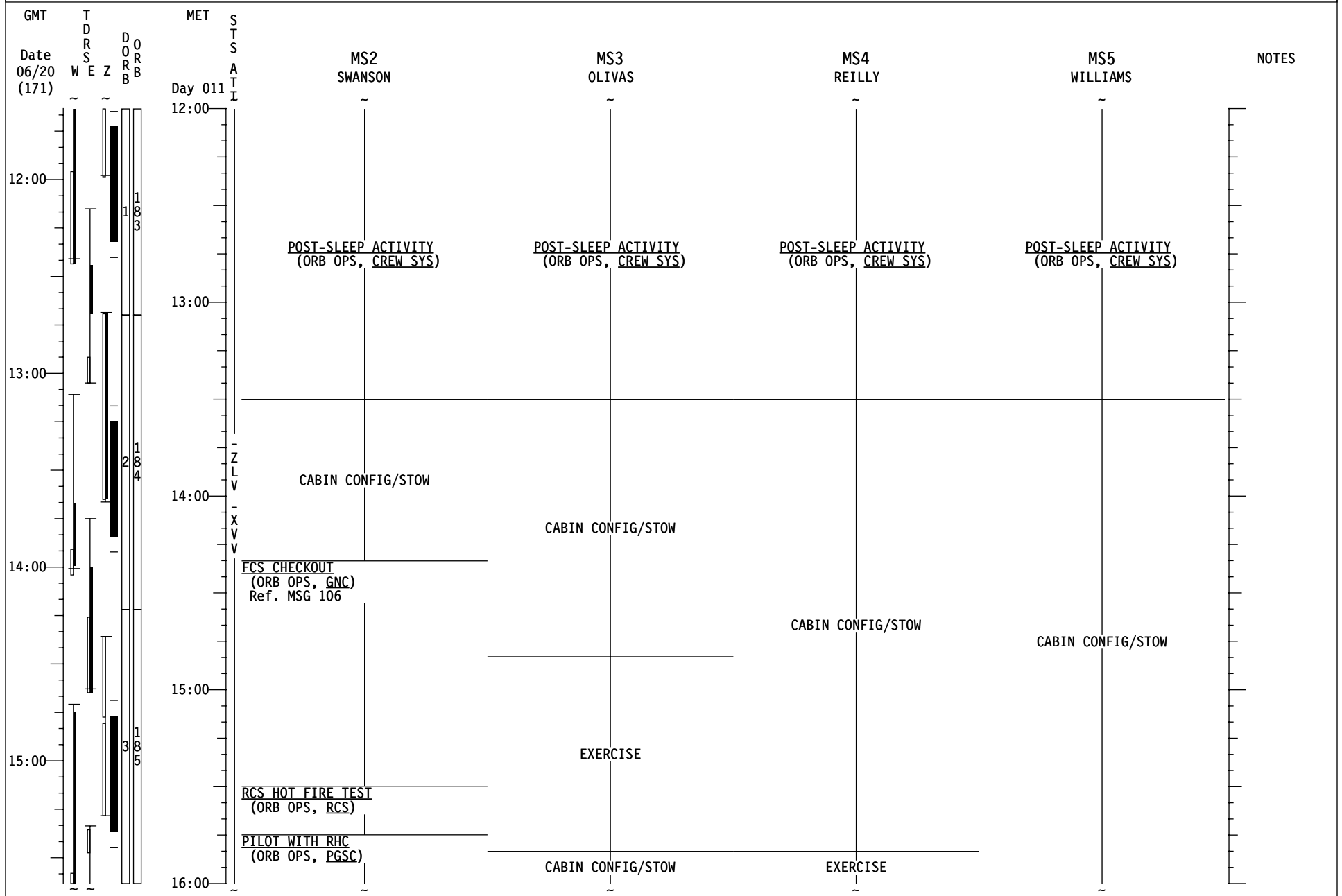
STS-117 (FD13)

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STS-117 (FD13)

REPLANNED



STS-117 (FD13)

REPLANNED

GMT	T D R S E Z	D O R B	MET	S T S A T I	CDR	PLT	MS1	NOTES
Date 06/20 (171)	W E Z		Day 011		STURCKOW	ARCHAMBAULT	FORRESTER	
16:00		3			PILOT WITH RHC (ORB OPS, PGSC)	PILOT WITH RHC (ORB OPS, PGSC)		
16:00		4					CABIN CONFIG/STOW	
		6			SUPPLY H2O DUMP USING FES (ORB OPS, ECLS) Step 1, Pri A	RCS/OMS HEATER RCNFG A		
17:00					DEORBIT PREP BRIEFING	DEORBIT PREP BRIEFING	DEORBIT PREP BRIEFING	
17:00								A A14 RCS/OMS HTR L POD - B OFF - A AUTO R POD - B OFF - A AUTO
					MEAL	MEAL	MEAL	
18:00								
18:00		5			CABIN CONFIG/STOW	CABIN CONFIG/STOW	CABIN CONFIG/STOW	
		7						
19:00					LANDING-1 COMM C/O (ORB OPS, COMM/INST) MILA AOS: 11/19:15 LOS: 11/19:23			
19:00					PUBLIC AFFAIRS EVENT KU AVAIL: 19:23-19:51 Ref. MSG 110	PUBLIC AFFAIRS EVENT KU AVAIL: 19:23-19:51 Ref. MSG 110	PUBLIC AFFAIRS EVENT KU AVAIL: 19:23-19:51 Ref. MSG 110	
		6						
		8			CABIN CONFIG/STOW	MNVR (TRK) -ZLV +YVV (Waste Dump) TG=2 BV=3 OM=270 A1/AUTO/VERN Init TRK	CABIN CONFIG/STOW	
20:00								UPLINK TFL 161

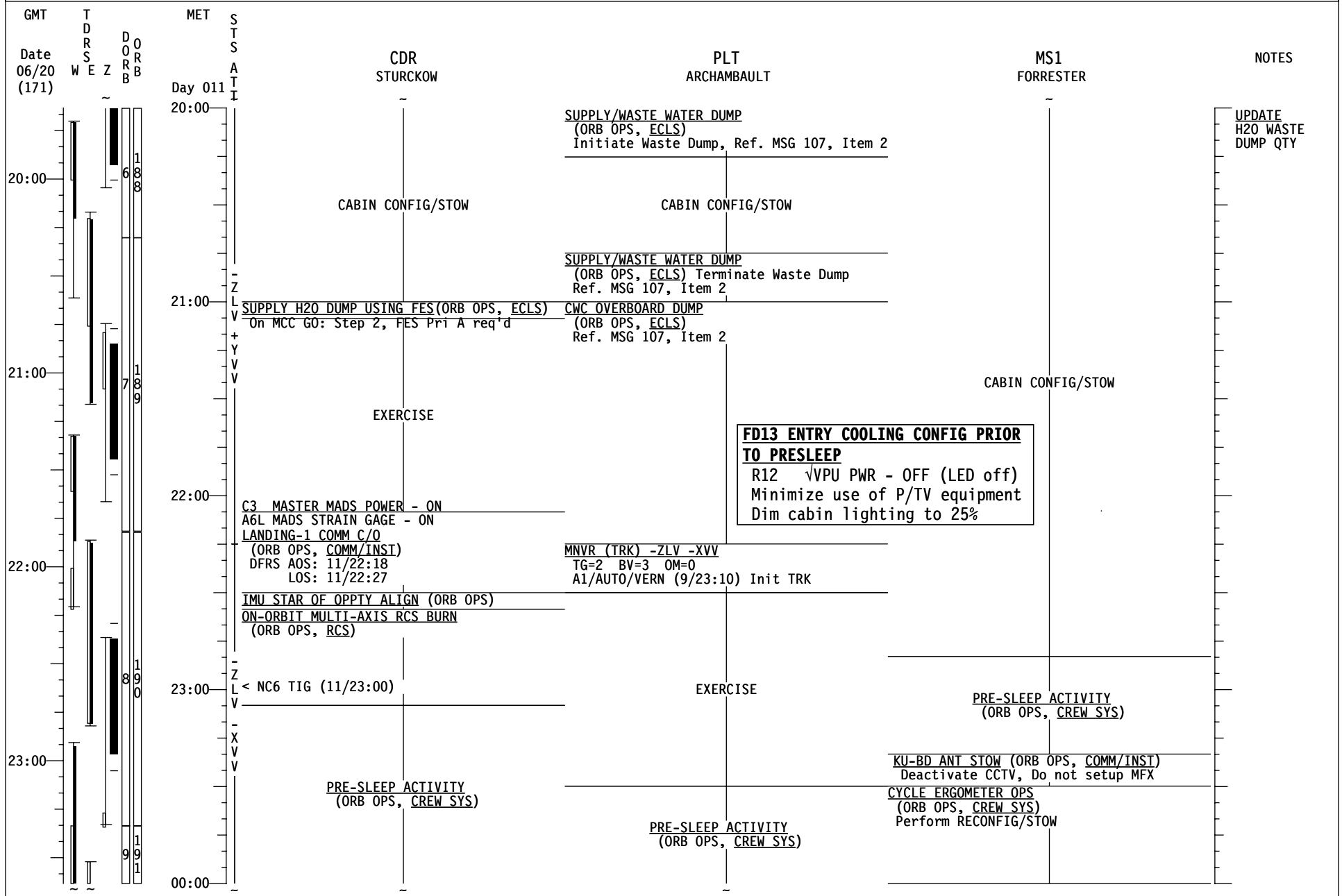
STS-117 (FD13)

REPLANNED

GMT Date 06/20 (171)	T W E Z	D R S E	Z	D O R B	MET Day 011	S T S A T I	MS2 SWANSON	MS3 OLIVAS	MS4 REILLY	MS5 WILLIAMS	NOTES
16:00				3			PILOT WITH RHC (ORB OPS, PGSC)				
16:00				4				CABIN CONFIG/STOW	EXERCISE	CABIN CONFIG/STOW	
17:00				6			DEORBIT PREP BRIEFING	DEORBIT PREP BRIEFING	DEORBIT PREP BRIEFING	DEORBIT PREP BRIEFING	
17:00							MEAL	MEAL	MEAL	MEAL	
18:00				5				ENTRY VIDEO SETUP (PHOTO/TV, MINI-CAM)			
18:00				7				ANALOG PAO CC (PHOTO/TV, SONY PD100)			
19:00				8			CABIN CONFIG/STOW		CABIN CONFIG/STOW	CABIN CONFIG/STOW	
19:00				8				CABIN CONFIG/STOW			
19:00				8			PUBLIC AFFAIRS EVENT KU AVAIL: 19:23-19:51 Ref. MSG 110	PUBLIC AFFAIRS EVENT KU AVAIL: 19:23-19:51 Ref. MSG 110	PUBLIC AFFAIRS EVENT KU AVAIL: 19:23-19:51 Ref. MSG 110	PUBLIC AFFAIRS EVENT KU AVAIL: 19:23-19:51 Ref. MSG 110	
19:00								SSV DEACTIVATION (P/TV, SSV)			
20:00									CABIN CONFIG/STOW	EXERCISE	

STS-117 (FD13)

REPLANNED



FD13 ENTRY COOLING CONFIG PRIOR TO PRESLEEP
 R12 √VPU PWR - OFF (LED off)
 Minimize use of P/TV equipment
 Dim cabin lighting to 25%

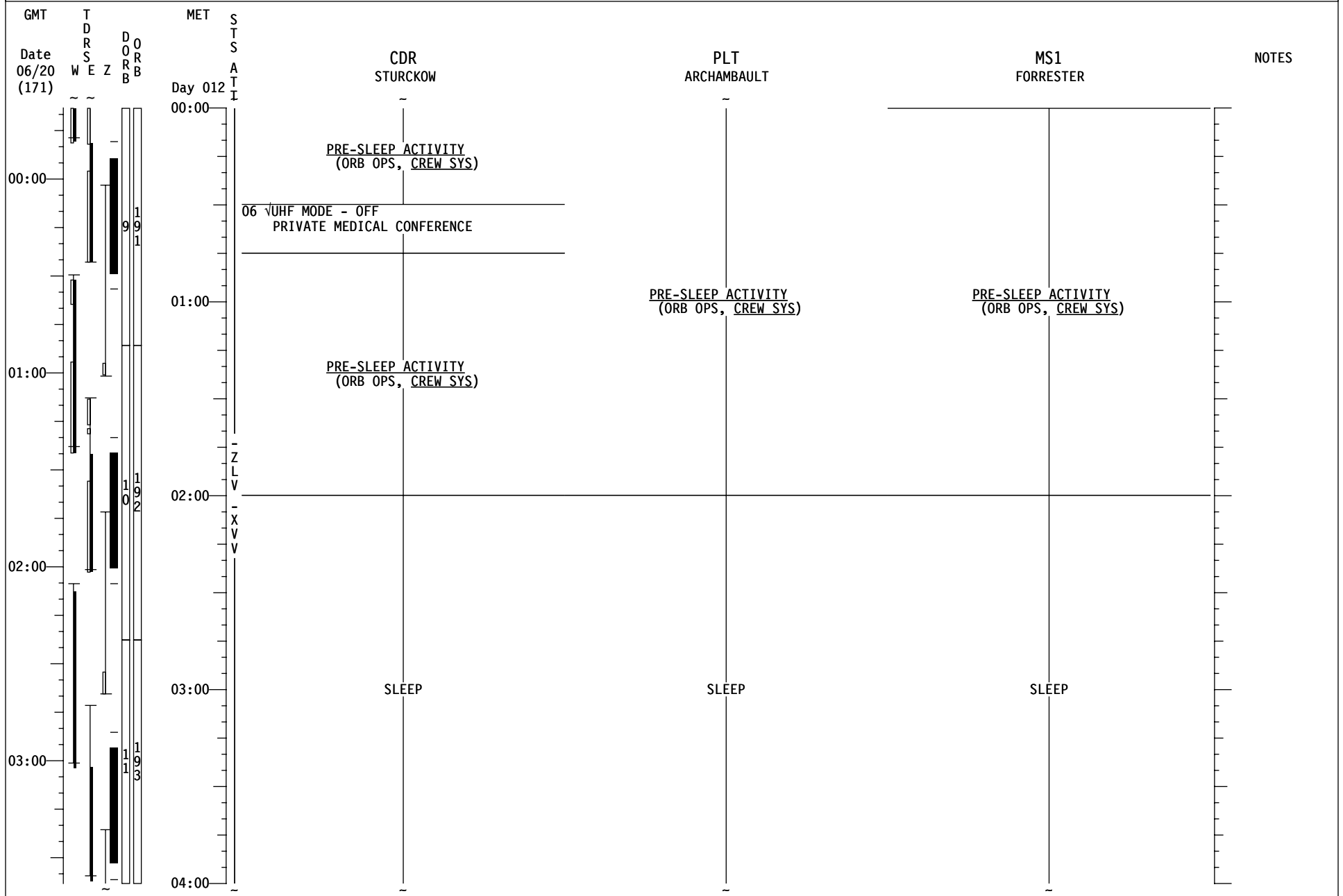
STS-117 (FD13)

REPLANNED

GMT	TDRS WSEZ	DORB	MET	STS ATTI	MS2 SWANSON	MS3 OLIVAS	MS4 REILLY	MS5 WILLIAMS	NOTES
Date 06/20 (171)			Day 011						
20:00		188			<u>SUPPLY/WASTE WATER DUMP</u> (ORB OPS, ECLS) Init Waste Dump Ref. MSG 107, Item 2	<u>SSV DEACTIVATION (P/TV, SSV)</u>			
20:00		688			EXERCISE		CABIN CONFIG/STOW	EXERCISE	
21:00		789					<u>LAUNCH ENTRY SUIT CHECK</u> Verify Fit	<u>LAUNCH ENTRY SUIT CHECK</u> Verify Fit	
21:00					CABIN CONFIG/STOW	CABIN CONFIG/STOW			
22:00							CABIN CONFIG/STOW	CABIN CONFIG/STOW	
22:00					<u>DEACTIVATION & TEARDOWN</u> (ORB OPS, WLE SENSORS)				
22:00					<u>ON-ORBIT MULTI-AXIS RCS BURN</u> (ORB OPS, RCS)				
23:00		890			L < NC6 TIG (11/23:00)		<u>PRE-SLEEP ACTIVITY</u> (ORB OPS, CREW SYS)		
23:00					<u>PGSC DEACT</u> (ORB OPS, PGSC) Stow all PGSCs except WinDecom Do not Setup MFX			<u>PRE-SLEEP ACTIVITY</u> (ORB OPS, CREW SYS)	
23:00					<u>PRE-SLEEP ACTIVITY</u> (ORB OPS, CREW SYS)	<u>PRE-SLEEP ACTIVITY</u> (ORB OPS, CREW SYS)	<u>CYCLE ERGOMETER OPS</u> (ORB OPS, CREW SYS) Perform RECONFIG/STOW		
00:00		991							

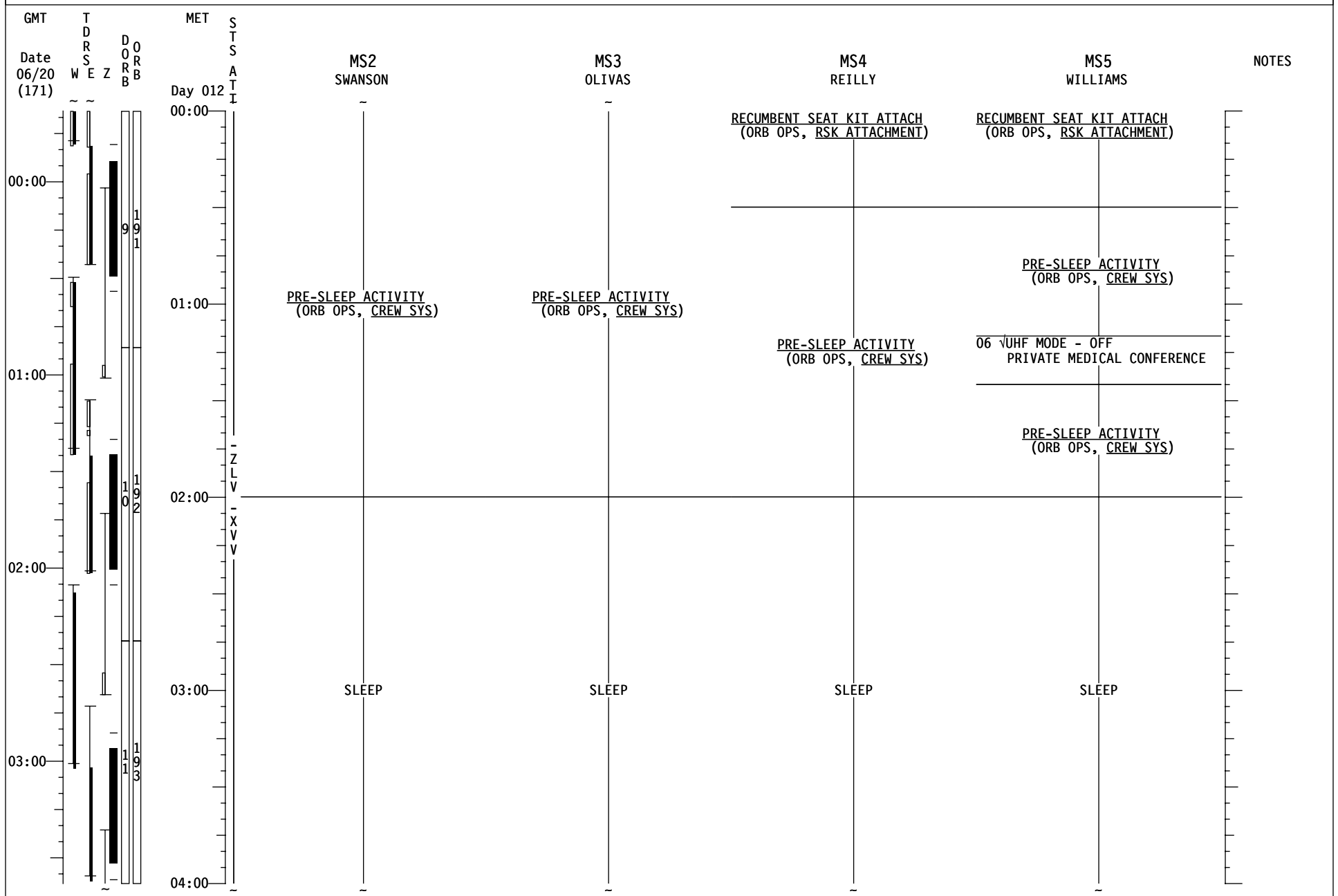
STS-117 (FD14)

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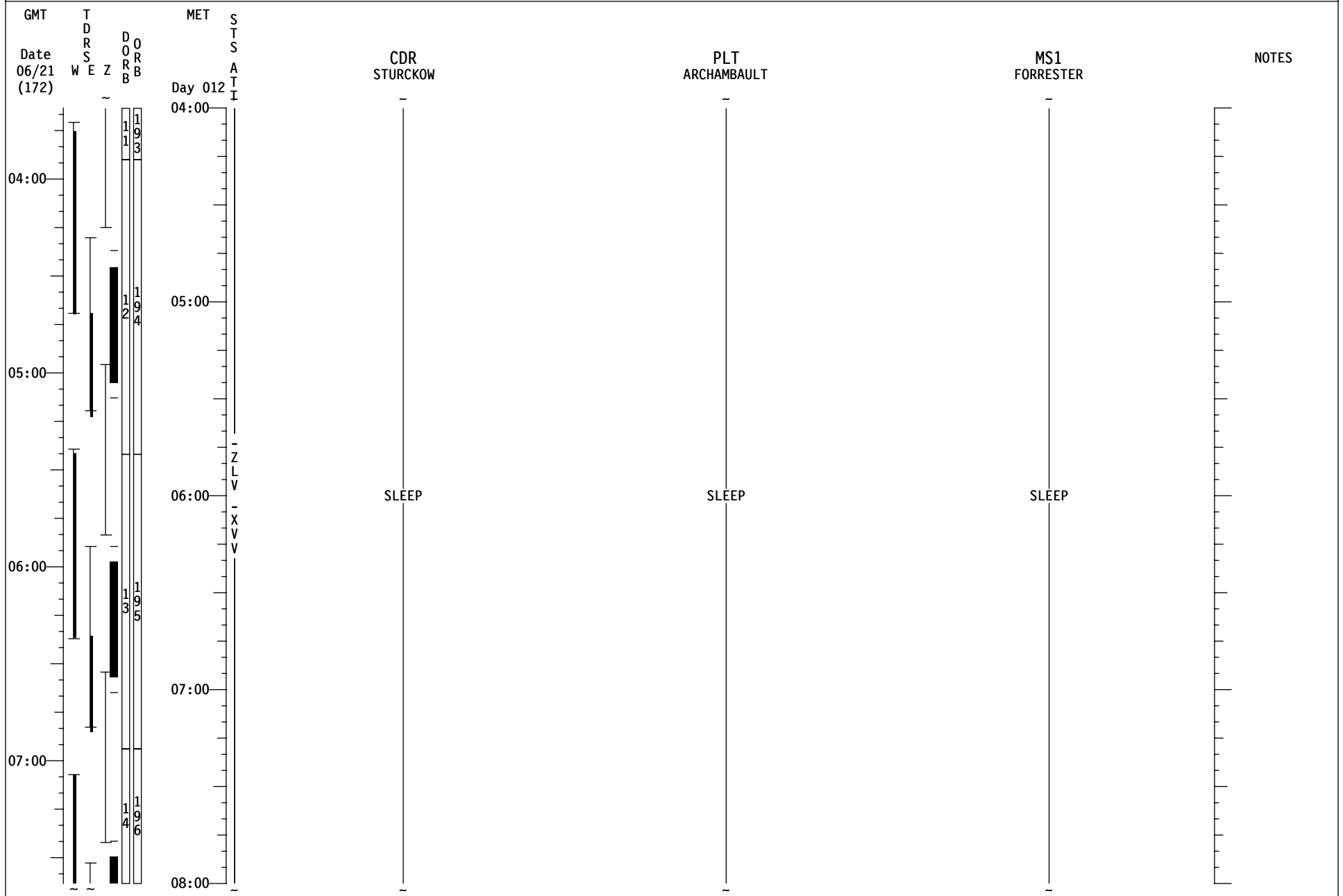
STS-117 (FD14)

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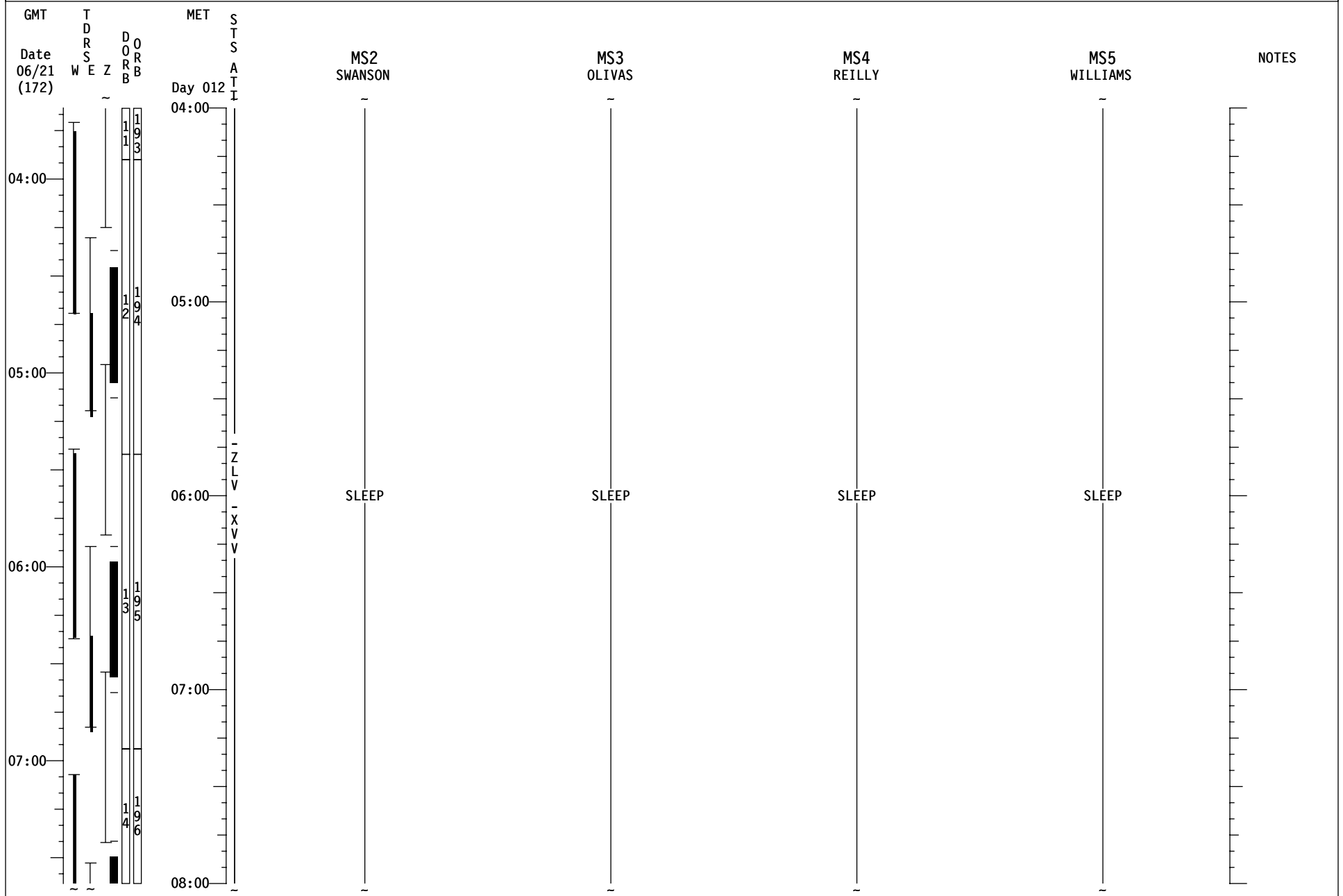
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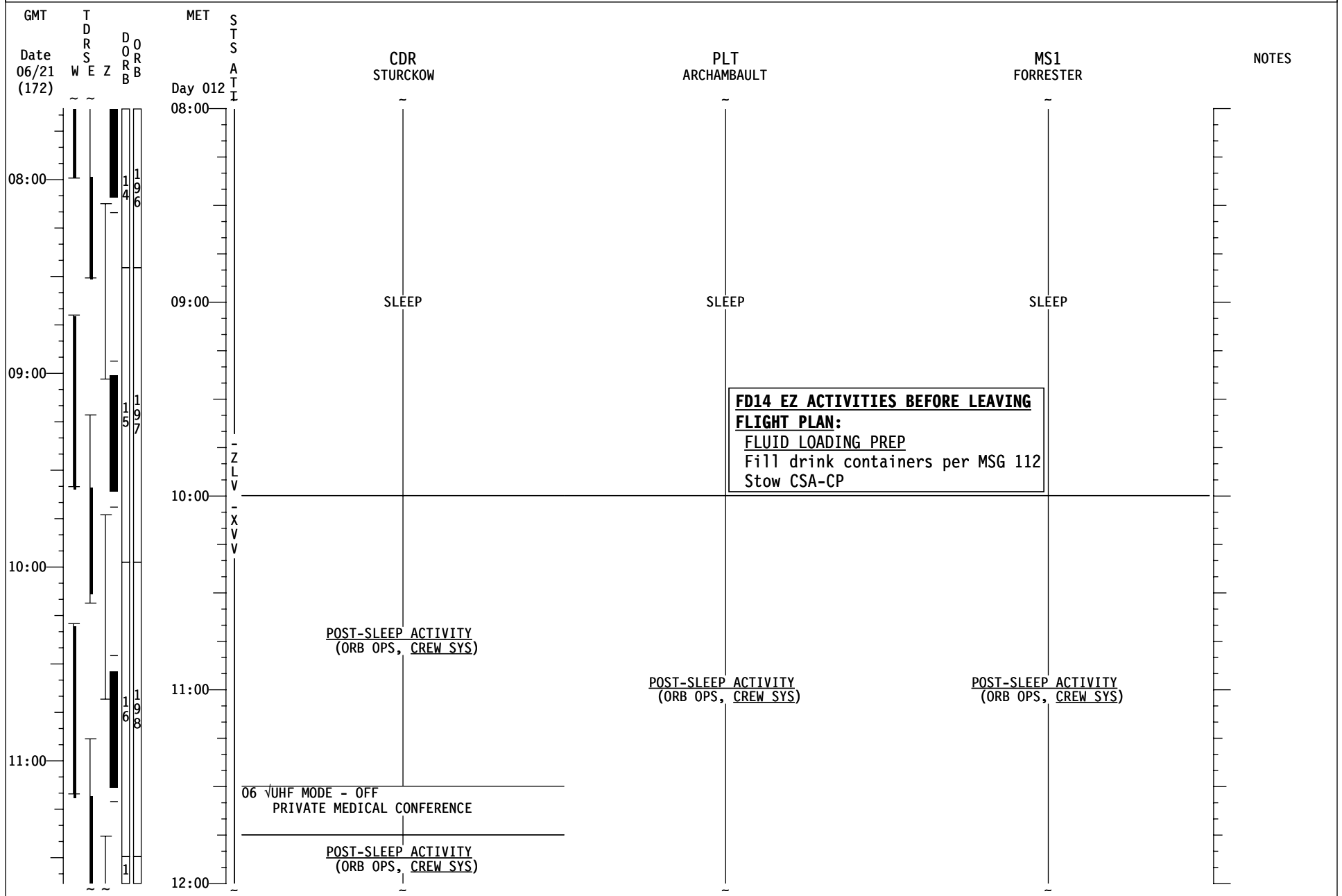
STS-117 (FD14)

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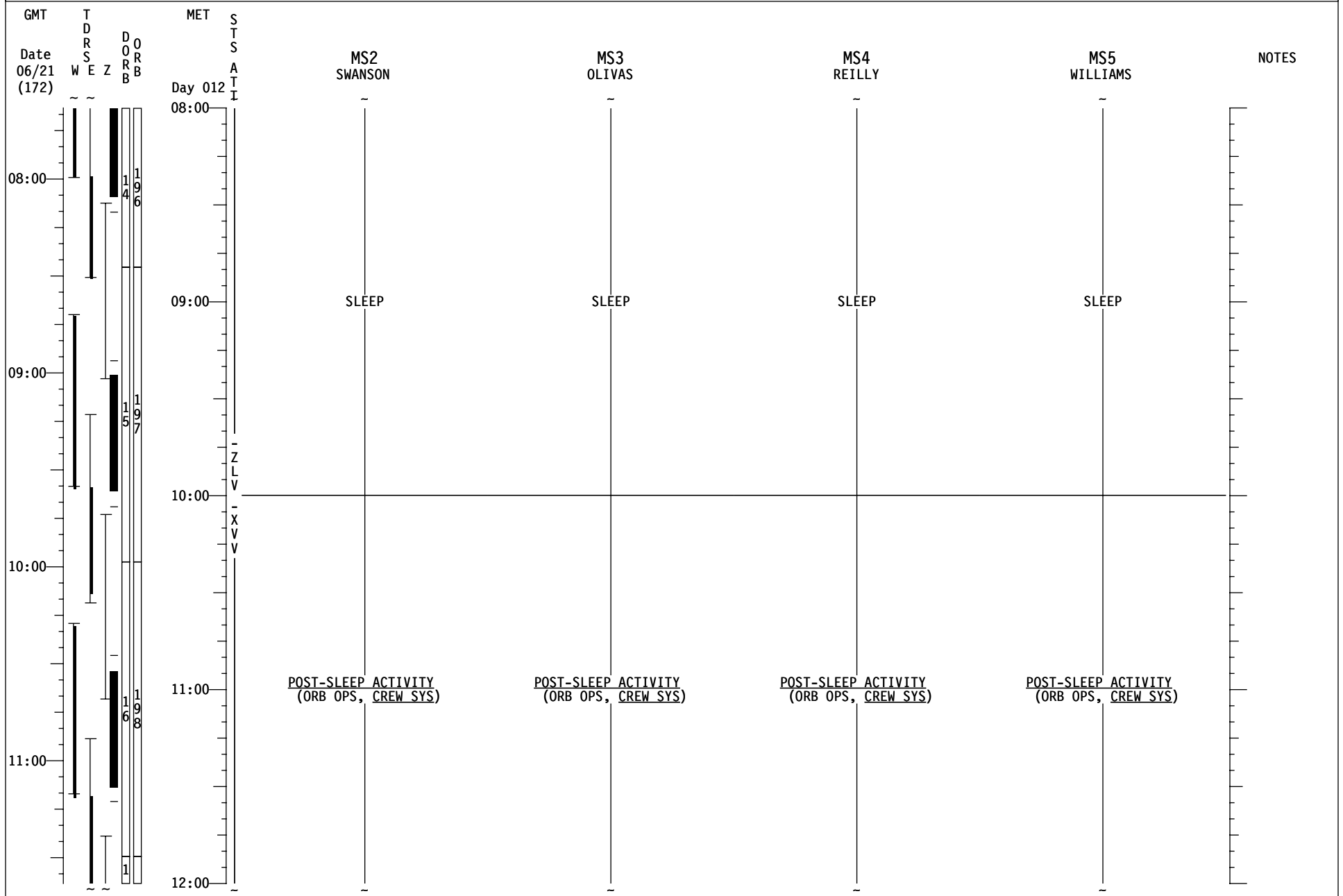
STS-117 (FD14)

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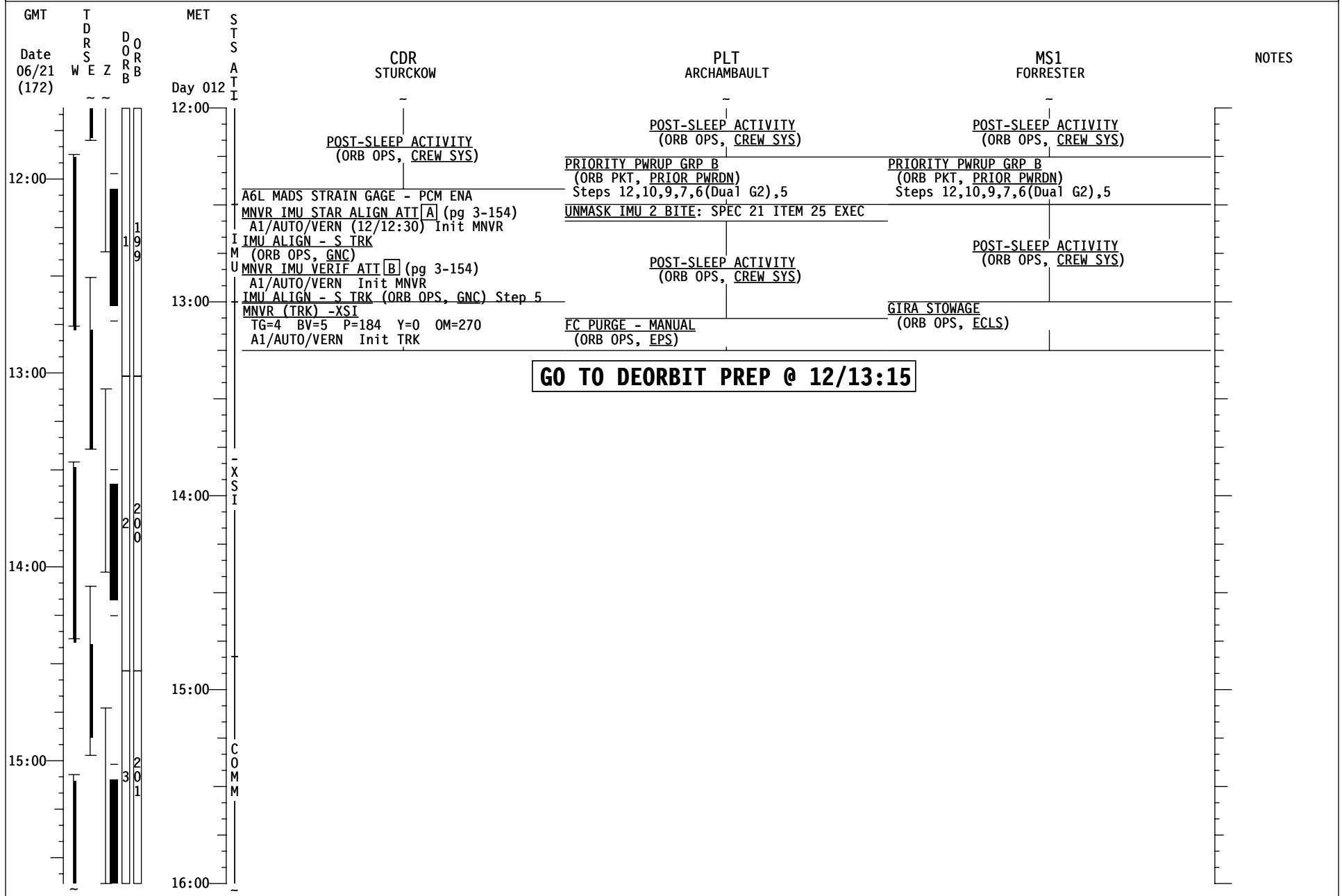
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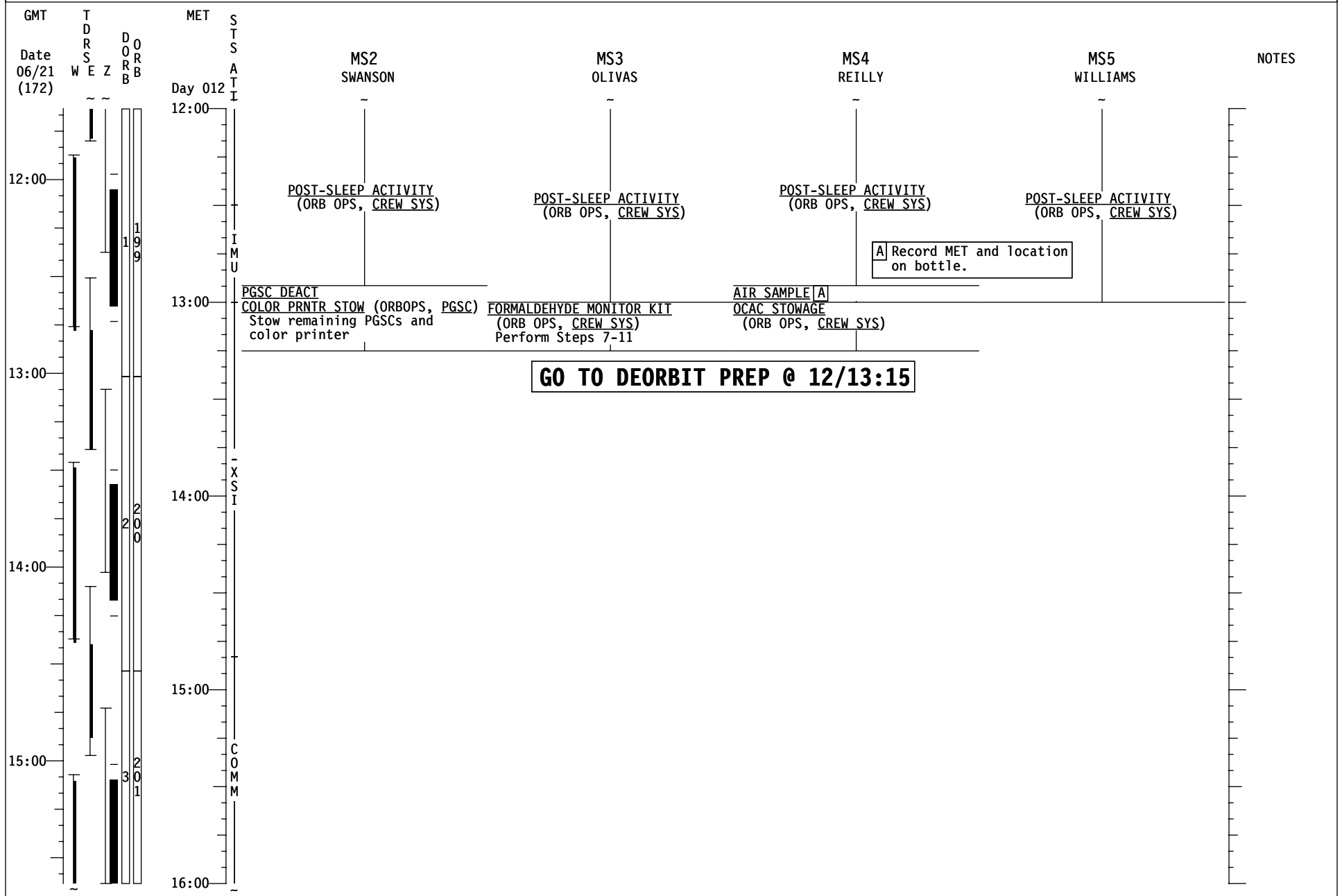
STS-117 (FD14)

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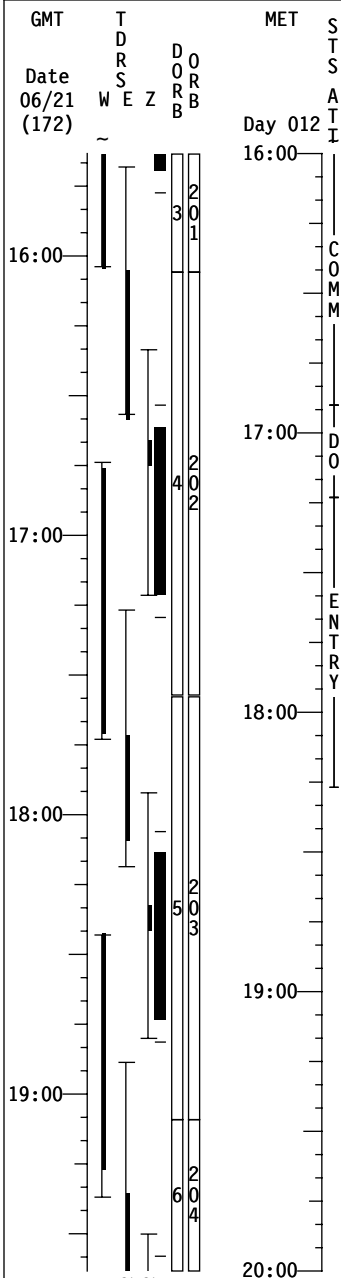


STS-117 (FD14)

REPLANNED



STS-117 (FD14)

REPLANNED

CDR
STURCKOW

PLT
ARCHAMBAULT

MS1
FORRESTER

NOTES

A IMU STAR ALIGN PAD

ID: -Y: 22, ALTAIR
MET (12/12:20 TO 12/13:04)

-Z: 51, ATRIA
MET (12/12:27 TO 12/13:16)

ANG DIFF: 84.0

DUAL S TRKR <u>ALIGNMENT</u>	2nd ATTITUDE (SINGLE S TRKR)
-Z: 22	-Y: 51

R 343	R 261	64
P 15	P 5	28
Y 13	Y 24	21

REQD ID:
-Y: ____, -Z: ____, ANG ERR ____, ____, ____, ____,

ANG: 1 2 3

ΔX () ____, ____, ____, ____, ____, ____,
ΔY () ____, ____, ____, ____, ____, ____,
ΔZ () ____, ____, ____, ____, ____, ____,

EXECUTION TIME: __/__:__:__ MET

B IMU VERIFICATION STAR ALIGN PAD

ID: -Y: 34, MIAPLACIDUS
MET (12/12:36 TO 12/13:27)

-Z: 54, DIPHDA
MET (12/12:39 TO 12/13:38)

ANG DIFF: 84.9

DUAL S TRKR <u>ALIGNMENT</u>	2nd ATTITUDE (SINGLE S TRKR)
-Z: 34	-Y: 54

R 155	R 86	221
P 82	P 100	59
Y 296	Y 286	296

REQD ID:
-Y: ____, -Z: ____, ANG ERR ____, ____, ____, ____,

ANG: 1 2 3

ΔX () ____, ____, ____, ____, ____, ____,
ΔY () ____, ____, ____, ____, ____, ____,
ΔZ () ____, ____, ____, ____, ____, ____,

If any ΔX, ΔY, or ΔZ > 0.1 Check MCC

EXECUTION TIME: __/__:__:__ MET

MSG 108 - FD13 MISSION SUMMARY

1 Good Morning Atlantis!
2 Tremendous job yesterday on the undock, fly-around, and late inspection. As you head
3 back towards planet Earth today, you have FCS Checkout, RCS Hot Fire Test and
4 cabin stow on your schedule. Enjoy another great day in space!

5
6 YOUR CURRENT ORBIT IS: 185 X 178 NM
7

8 NOTAMS:
9

10 MORON (MRN) – CLOSED
11 WAKE ISLAND (WAK) - CLOSED
12 GOOSE BAY (YYR) – RWY 08/26 CLOSED
13 LAJES (LAJ) – TACAN LAJ CH45 UNUSABLE
14 KEFLAVIK (IKF) – UNUSABLE
15 RIO GALLEGOS (AWG) – UNUSABLE
16 HONOLULU (HNL) – VORTAC UNSERVICEABLE 11/17:50 UNTIL 12/01:50
17 WILMINGTON (ILM) – VORTAC UNMONITORED UFN
18

19 NEXT 2 PLS OPPORTUNITIES:
20

21 EDW22 ORB 188 – 11/19:59 (SKC 240/12P22) AFTER 12/00:11 (SKC 240/17P27)
22 EDW22 ORB 204 – 12/20:20 (SKC 230/12P18) AFTER 12/21:30 (SKC 230/16P24)
23

24 OMS TANK FAIL CAPABILITY:
25

26 L OMS FAIL: NO R OMS FAIL: NO
27

28 LEAKING OMS PRPLT BURN:
29

30 L OMS LEAK: ALWAYS RETROGRADE
31 R OMS LEAK: ALWAYS RETROGRADE
32

33 OMS QUANTITIES(%)
34

35 L OMS OX = 31.0 R OMS OX = 33.0
36 FU = 30.8 FU = 32.5
37

38 SUBTRACT I'CNCT COUNTER FOR CURRENT OMS QUANTITIES
39

40 DELTA V AVAILABLE:
41

42	OMS	315 FPS
43	<u>ARCS (TOTAL ABOVE QTY1)</u>	<u>51 FPS</u>
44	TOTAL IN THE AFT	366 FPS
45		
46	ARCS (TOTAL ABOVE QTY2)	86 FPS
47	FRCS (ABOVE QTY 1)	13 FPS
48		
49	AFT QTY 1	75 %
50	AFT QTY 2	37 %
51		

52 THERE ARE NO FAILURE/IMPACT/WORK AROUNDS FOR TODAY.

1 **FD12 Final MMT Crew Summary**

2
3 The MMT met to discuss the current mission status and to review the entry plan including a
4 preliminary look at the weather forecasts. All orbiter systems continue to perform nominally
5 and the teams are looking forward to FCS checkout and RCS hotfire tomorrow. Additionally,
6 your tremendous work in continuing with space station assembly is greatly appreciated by
7 both the Shuttle and ISS Programs. The flyaround gave all of us a great view of the ISS
8 with its new set of solar arrays. Pending a nominal late inspection and good FCS checkout
9 tomorrow, the MMT will be GO for deorbit and landing.

10
11 **Entry Plan:** Entry Flight Director/Norm Knight briefed the entry plan at today's MMT.
12 Thanks to your power conservation, we have EOM+3 and a 2-3-3-2 deorbit capability with 2
13 deorbit opportunities on EOM and EOM+3 and 3 opportunities on EOM+1 and EOM+2. The
14 limiting consumable for deorbit opportunities will be supply water with at least 7 deorbit
15 opportunities available over four days. The plan for EOM and possibly EOM+1 will be to
16 target KSC only. There are only two opportunities to KSC on EOM on orbits 202 and 203.
17 In the event of an EOM wave-off, EDW may be considered on EOM+1 pending the latest
18 weather forecast with all three sites (KSC, EDW, NOR) activated on EOM+2.

19
20 **Entry Landing Sites/Weather:** All three landing sites are ready with nominal convoy
21 support, landing aids, and navigation aids. Both the EDW and NOR lakebeds are green.
22 There is a low pressure trough over Florida that may produce showers at KSC over all three
23 days. As of today, the EOM forecast calls for a ceiling of 5,000 ft and thunderstorms within
24 30 at KSC, which is typical for this time of day in June. KSC looks slightly better on Friday
25 and Saturday based on the preliminary models. EDW has clear skies for all three days with
26 winds right down EDW-22. Obviously, we'll have to watch the winds which are forecast to
27 be within limits on both EOM and EOM+1 for both opportunities.

28
29 The MMT reviewed the impacts of the MDM OA2 card failure and associated APU plan.
30 The specifics of this will be conveyed to you by your Entry Team on FD13. In addition, the
31 plan for a possible reoccurrence of the pre-launch anomaly on MLS3 and the nominal GPS
32 plan were reviewed by the MMT.