

STS-126/ULF2

FD 06 Execute Package



MSG	Page(s)	Title
041B	1 - 14	FD06 Flight Plan Revision (pdf)
042	15 - 16	FD06 Mission Summary (pdf)
043	17 - 20	FD06 Transfer Message (pdf)
044	21 - 23	FD05 MMT Summary (pdf)
045	---	FD06 PAO Event Summary (pdf - Electronic Only)
046	24 - 26	Canon G1 (pdf)
047A	---	Stowage Locations for FD06 (GMT 324) (pdf - Electronic Only)
048A	27	Combo Dump Details (pdf)
049	28 - 29	ULF2 Joint Mission Task List Message (pdf)
050	30	FD06 EVA Deltas (pdf)
051	31	STBD SARJ Cue Card for EVA2 (pdf)

Approved by FAO: M. Blanton

A handwritten signature in black ink, appearing to read 'M. Blanton'.

Last Updated: Nov 19 2008 1:32PM GMT

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

MSG 041B - FD06 FLIGHT PLAN REVISION

1 MSG INDEX

2

3 <u>MSG NO.</u>	<u>TITLE</u>
4 041	FD06 Flight Plan Revision
5 042	FD06 Mission Summary
6 043	FD06 Transfer Message (18-0248)
7 044	FD05 MMT Summary
8 045	FD06 PAO Event Summary (18-0249)
9 046	Canon G1
10 047	Stowage Locations for FD06 (GMT 324) (18-0243)
11 048	Combo Dump Details
12 049	Task Planning Priorities for Timeline and Task List (18-0253)
13 050	FD06 EVA Deltas (18-0254)
14 051	SARJ Cue Card for EVA2 (18-0255)

15

16 1. For today's cryo config, O2 tanks 1 and 2 will be active with dual heaters and H2 tanks 1
17 and 5 will be active with dual heaters.

18

19 R1	O2,H2 MANF VLV TK1 (two) - OP (tb-OP)
20	O2 TK2 HTRS A,B (two) - AUTO

21

22 A15 CRYO TK5 HTRS O2 A,B (two) - OFF

23

24 2. Since your Regen ECLSS training and the publication of the Regen Assembly Ops
25 procedures, a concern has surfaced that touching the wetted surfaces (the internal
26 surfaces) of demated potable water QDs could lead to the introduction of sources of
27 microbial growth in the potable water system. Therefore, we have added a warning to
28 the Execute Note and Flight Plan Detail Pages of each of the Regen activities that deals
29 with potable water QDs. If these surfaces do get touched or contaminated in any way, a
30 generic cleaning step has also been added to the Ops Notes.

31

32 3. The downlinked imagery shows the camera's ISO set at 800, and the image quality is
33 degraded. Please change the ISO setting on the D2Xs camera (S/N 1119) from 800 to
34 100.

35

36 4. We noticed that the audio tone on the G1 camcorder was not enabled during the FD3
37 high-definition test. The audio tone on both Canon G1 Camcorders (SN's 1006 and
38 1008) needs to be enabled via the attached procedure prior to the FD15 high-
39 definition PAO event. This tone, which is generated by the G1 when the color bars are
40 enabled, is needed to verify that ground equipment is correctly processing the audio.
41 Please perform the procedure in MSG 046 to enable an audio tone on both Canon G-1
42 camcorders.

43

44 5. During the CHANGEOUT of SHUTTLE CONDENSATE COLLECTION, replace CWC s/n
45 5060 with the empty CWC s/n 5111 in Bag F on MDDK Ceiling Port 2. Temp stow CWC
46 s/n 5060, which will be dumped later today.

47

48

49

50

MSG 041B - FD06 FLIGHT PLAN REVISION

- 1 6. Due to the fact that we can now obtain the NLG tunnel temperature data using ground
2 resources, we will no longer require the daily TFL swap to 129. You can still expect to
3 activate two brake line heaters during the docked phase in order to evaluate their effect
4 on the tire temps. These heaters actions will be added to your Flight Plan on FD9 and
5 then again post undocking.
6
- 7 7. FD6 EVA Deltas (MSG 050) is provided for your information. In short, EVA 2 will run as
8 planned with a few tool config modifications. MSG 051 is the updated SARJ Cue Card
9 for EVA2. We will uplink an Updated EVA2 Tool Config (MSG 052) later today.
10
- 11 8. REPLACE PAGES 3-56 THROUGH 3-65.
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51

REPLANNED

FD06

GMT 11/19/08 (324)

MET Day 004

005/00

	13	14	15	16	17	18	19	20	21	22	23	23	11/20	
S T S - 1 2 6	CDR FERGUSON	SLEEP	POST SLEEP	POST SLEEP	MCI DMAN DCCI KS#14	PRE EQUIP GATHERS	CTCX MEME CRCE M	MPLM XFER	EXERCISE	MEAL	HND AN VMSI GRPE	WC SN TD TI	CT OE NR DM	MT NE VA R
	R1 PLT BOE	SLEEP	POST SLEEP	POST SLEEP	MCI DMAN DCCI KS#14	PRE EQUIP GATHERS	EXERCISE	MPLM XFER	MEAL	MPLM XFER				
	R3/M1 MS1 PETTIT	SLEEP	POST SLEEP	POST SLEEP	WRS XFER			WRS CONFIG	MEAL	MPLM XFER				
	EV2 MS2 BOWEN	SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	MDDK XFER	EXERCISE	EMU SWAP	COND CMC C/O	MEAL	MPLM XFER			
	EV1 MS3 PIPER	SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	EXERCISE	SAFER C/O	BSA INIT	EMU SWAP	MEAL	E-LK PREP	TOOL CONFIG		
	R2/EV3/M2 MS4 KIMBROUGH	SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	EXERCISE	MDDK XFER	MPLM XFER	MEAL	MPLM XFER				
D N	FE-2 CHAMITOFF	SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	MIDDAY-MEAL	MPLM XFER	RED		
	ISS CDR FINCKE	SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	MIDDAY-MEAL	WRS-KIT3-PT1-INSTL		KIT3	
	FE-1 LONCHAKOV	SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	MIDDAY-MEAL	5M0-5 XFER	COX MNT	VELO	P60
U P	FE-2 EXP18 MAGNUS	SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	MIDDAY-MEAL	D2XS FLSH	DC 2A XM SR	MPLM XFER	
	DAY/NIGHT ORBIT	72	73	74	75	76	77	78	79	80				
TDRS	W	-171.0												
	E	-46.0												
	Z	-275.0												
ORB ATT														
NOTES	*STATUS CHECK *BIAS -XLV -ZIV *FILTER CHECK *I'CNCT ROMS TO RCS @TERM DUMP													

REPLANNED

FD06

GMT 11/20/08 (325)

MET Day 005

12
11
10
09
08
07
06
05
04
03
02
01
00
05
00

S T S - 1 2 6	CDR FERGUSON	M D H D /K O #	EVA2 PROC REVIEW	M U S P M C A/G	PRE SLEEP	SLEEP					
	R1 PLT BOE	X T F A E G R	EVA2 PROC REVIEW	M U S	PRE SLEEP	SLEEP					
R3/M1 MS1 PETTIT	EXE R CISE	X T F A E G R	EVA2 PROC REVIEW	P S M R L X F E R B R I E F	PRE SLEEP	SLEEP					
	EVA2 MS2 BOWEN	M P L M X F E R	EVA2 PROC REVIEW	C/L C A M P L B K	PRE SLEEP	SLEEP					
EV1 MS3 PIPER	PRE SLEEP	EVA2 PROC REVIEW	EVA2 PROC REVIEW	M A S K P B /T O O L C O N F I G	PRE SLEEP	ISS A/L CAMPOUT @10.2 PSI SLEEP					
	R2/EV3/M2 MS4 KIMBROUGH	M U S	EVA2 PROC REVIEW	M A S K P B /T O O L C O N F I G	PRE SLEEP	SLEEP					
D N	FE-2 CHAMITOFF	CEVIS		D P C P W	PRE SLEEP-ISS	SLEEP					
	M2 ISS CDR FINCKE	KIT3	EVA2 PROC REVIEW	C O M M D N C S D S	PRE SLEEP-ISS H A M S L E E P - I S S	SLEEP					
I S S	FE-1 LONCHAKOV	P60		D P C P W	PRE SLEEP-ISS	SLEEP					
	FE-2 EXP18 MAGNUS	ADAPT		D P C P W	PRE SLEEP-ISS	SLEEP					
DAY/NIGHT ORBIT	W -171.0 E -46.0 Z -275.0	80	81	82	83	84	85	86	87	88	
TDRS	ORB ATT	BIAS -XLV -ZVV									
NOTES	#HAM S/U										

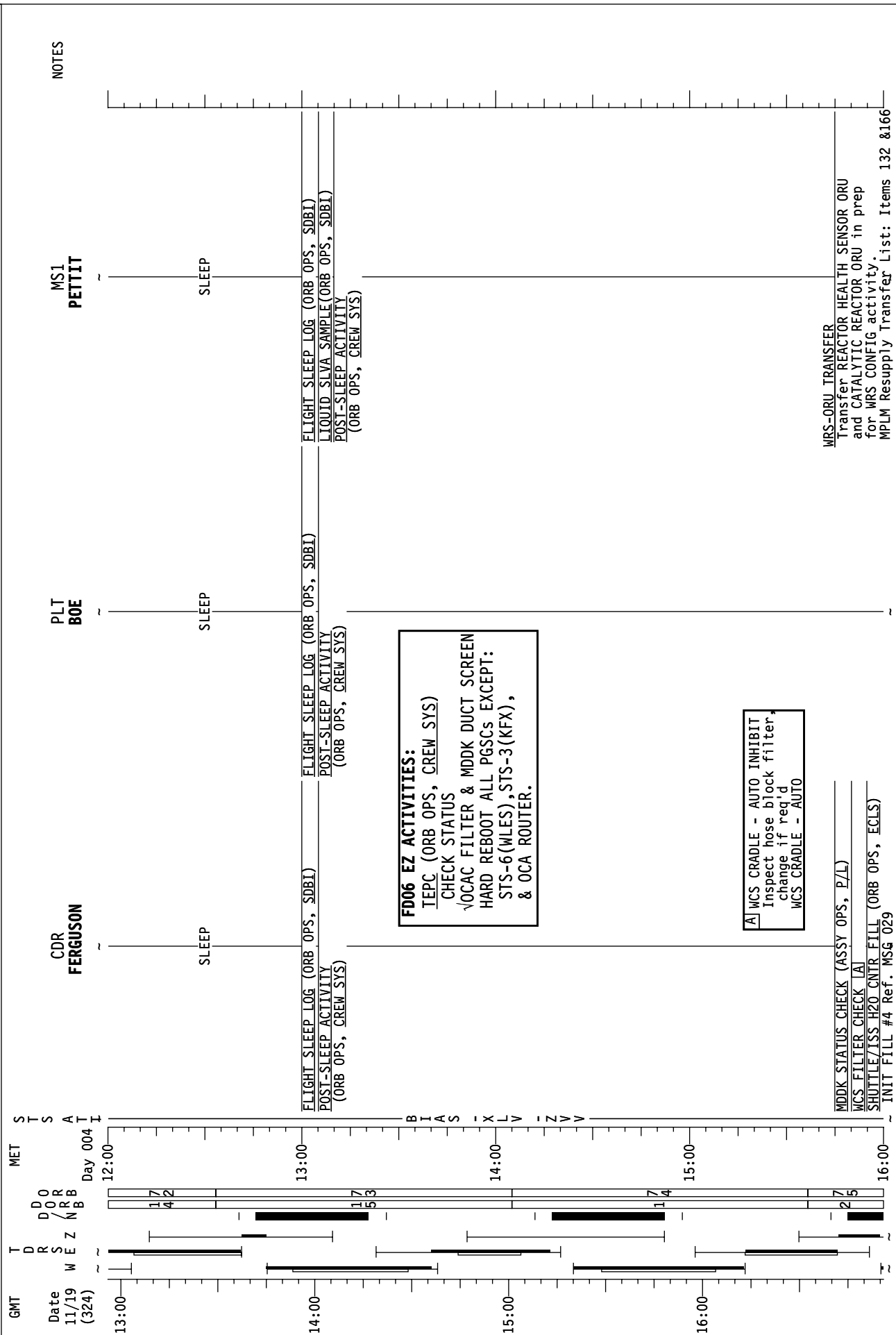
#STATUS CHECK

2-20

FLT PLN/126/FLIGHT

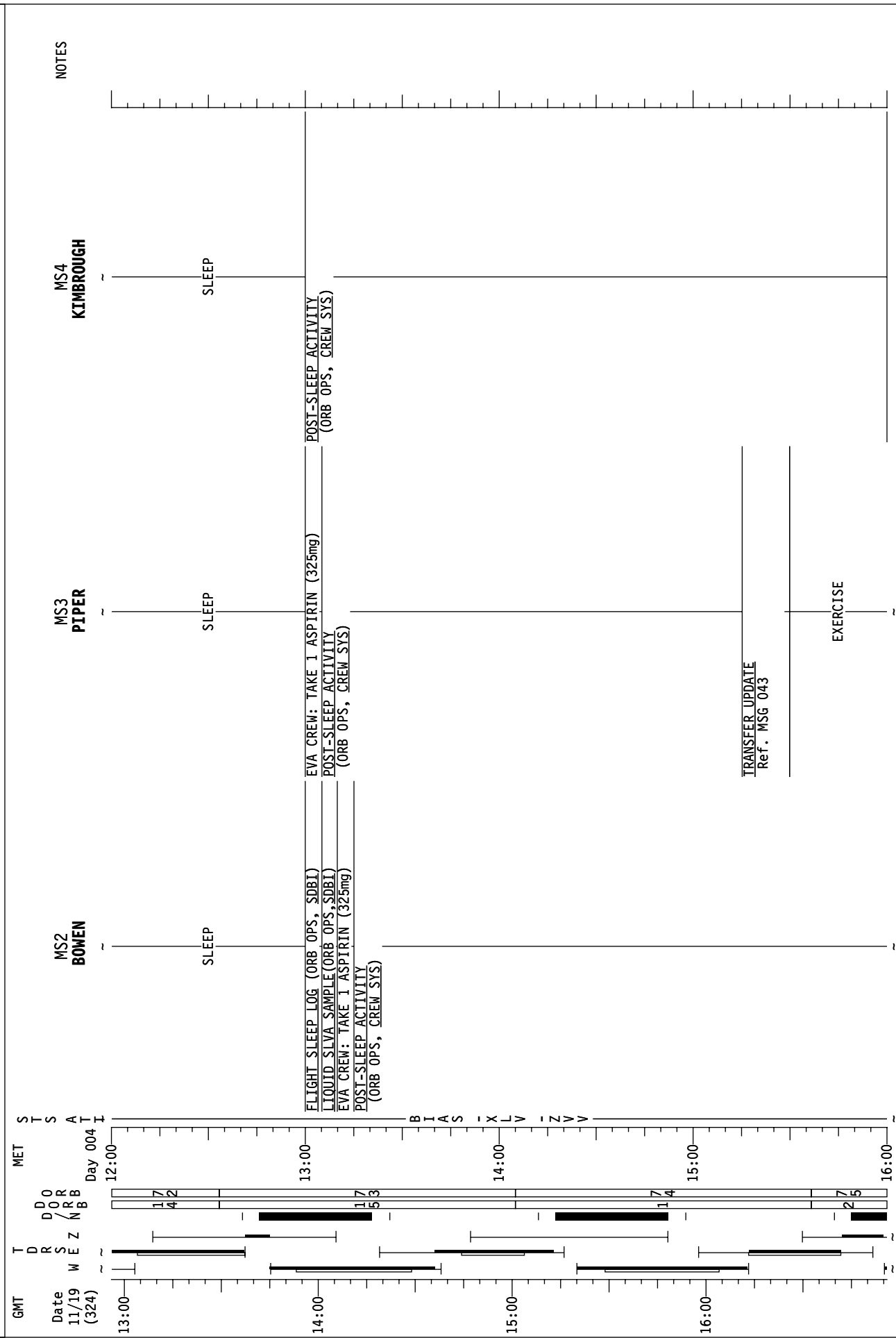
STS-126 FD (06)

REPLANNED



REPLANNED

STS-126 FD (06)



REPLANNED

STS-126 FD (06)

GMT	Date 11/19 (324)	DRS W E Z	T D S	MET D O R / R B	Day 004 I	CDR FERGUSON	PLT BOE	MS1 PETTIT	NOTES
17:00						SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS) INIT FILL #4 Ref. MSG 029 PRE GATHER DUMP EQUIPMENT Ref. MSG 048	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) L17 Check MCIU filter screen TV (ILLUMINATOR OPS)(PHOTO/TV, CC) ILLUMINATORS OFF - ALL	WRS-ORU TRANSFER Transfer REACTOR HEALTH SENSOR ORU and CATALYTIC REACTOR ORU in prep for WRS CONFIG activity. MPLM Resupply Transfer List: Items 132 &166	
17:00						CHANGE D2Xs ISO Ref. MSG 041 Item 3 CANON G-I AUDIO ENABLE Ref. MSG 041 Item 4		1.135 WRS RACKS CONFIGURE FOR ACTIVATION (ASSY OPS, ACTIVATION AND CHECKOUT) Ref: MPLM Resupply Transfer List: Items 132, 144, 166	
17:00						SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS) Perform FILL TERMINATION CWC TRANSFER Transfer I CWC to ISS	EXERCISE	Ref: MPLM Return Transfer List: Items 753, 754, 761, 780, 796 WARNING: Inadvertent contact of the wetted surfaces of the potable water system QDS can potentially lead to contamination and crew illness. If contact is made, clean surfaces with Povidone Iodine Pads from the ALSP kit and inform MCC-H. CAUTION: To avoid hardware damage, use 8.5" handrails to transfer & install WRS Distillation Assembly, Catalytic Reactor ORU, and Reactor Health Sensor ORU.	
18:00						TRANSFER OPS Ref. MPLM Resupply & Return Xfer List books	TRANSFER OPS Ref. MPLM Resupply Transfer List: Item 144		
18:00						For RSP rotation, reference S&M: 1.261 RSP Rotate Down	For RSP rotation, reference S&M: 1.261 RSP Rotate Down		
19:00									
19:00									
20:00									
20:00									

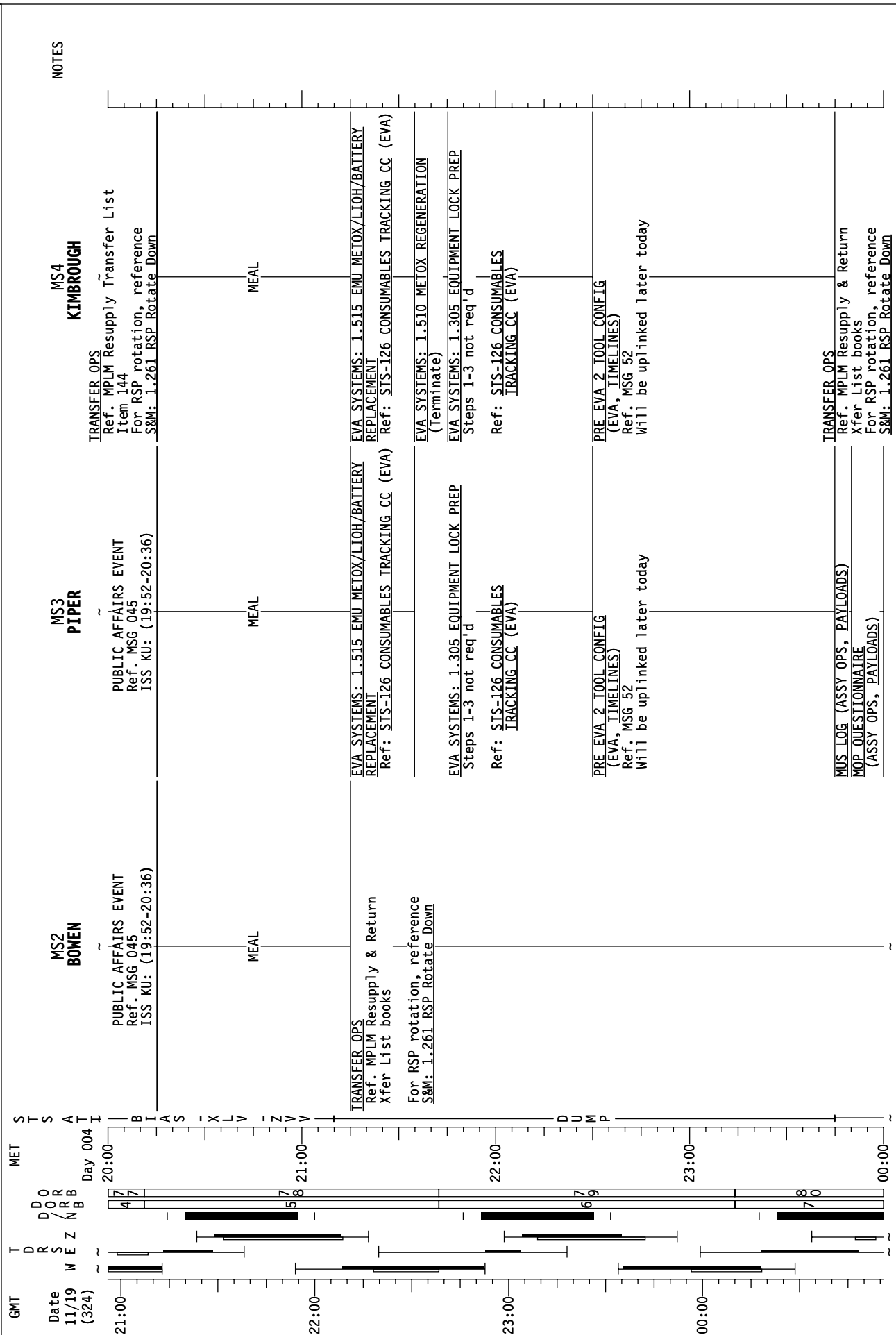
STS-126 FD (06)

REPLANNED

GMT	Date 11/19 (324)	DRS W E Z	T D S	DO OR RB NB	MET Day 004 I	CDR FERGUSON	PLT BOE	MS1 PETTIT	NOTES
21:00					20:00	TRANSFER OPS I'CNCT: R OMS TO RCS (OPCL, RCS)		1.135 WRS RACKS CONFIGURE FOR ACTIVATION (ASSY OPS, ACTIVATION AND CHECKOUT)	
21:00					21:00	MEAL	MEAL	MEAL	
21:00					21:00	Select DAP B then JOINT OPS: 3.110 HANDOVER ATTITUDE CONTROL CMG TA TO ORBITER MNVR (TRK) BIAS -XLV -ZVV (Dump) TG=2 BV=5 P=160 Y=354 OM=194 B12/AUTO/VERN Init TRK When in attitude, select DAP A SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) Initiate Waste Dump, Ref. MSG 048	TRANSFER OPS Ref. MPLM Resupply & Return Xfer List books		
22:00					22:00	SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) Terminate Waste Dump CWC OVERBOARD DUMP (ORB OPS, ECLS) Initiate Condensate Dump U Ref. MSG 048	TRANSFER OPS Ref. MPLM Resupply & Return Xfer List books		
23:00					23:00	CWC OVERBOARD DUMP (ORB OPS, ECLS) Term			
00:00					00:00	PWR DUMP - SUPPLY LINE (ORB OPS, ECLS) Ref. MSG 048 Dump PWR S/N's 1007, 1023, 1024, 2003			
00:00					00:00	MNVR (TRK) BIAS -XLV -ZVV TG=2 BV=5 P=160 Y=354 OM=177 B12/AUTO/VERN Init TRK When in attitude, select DAP A		EXERCISE	UPDATE H2O WASTE DUMP QTY

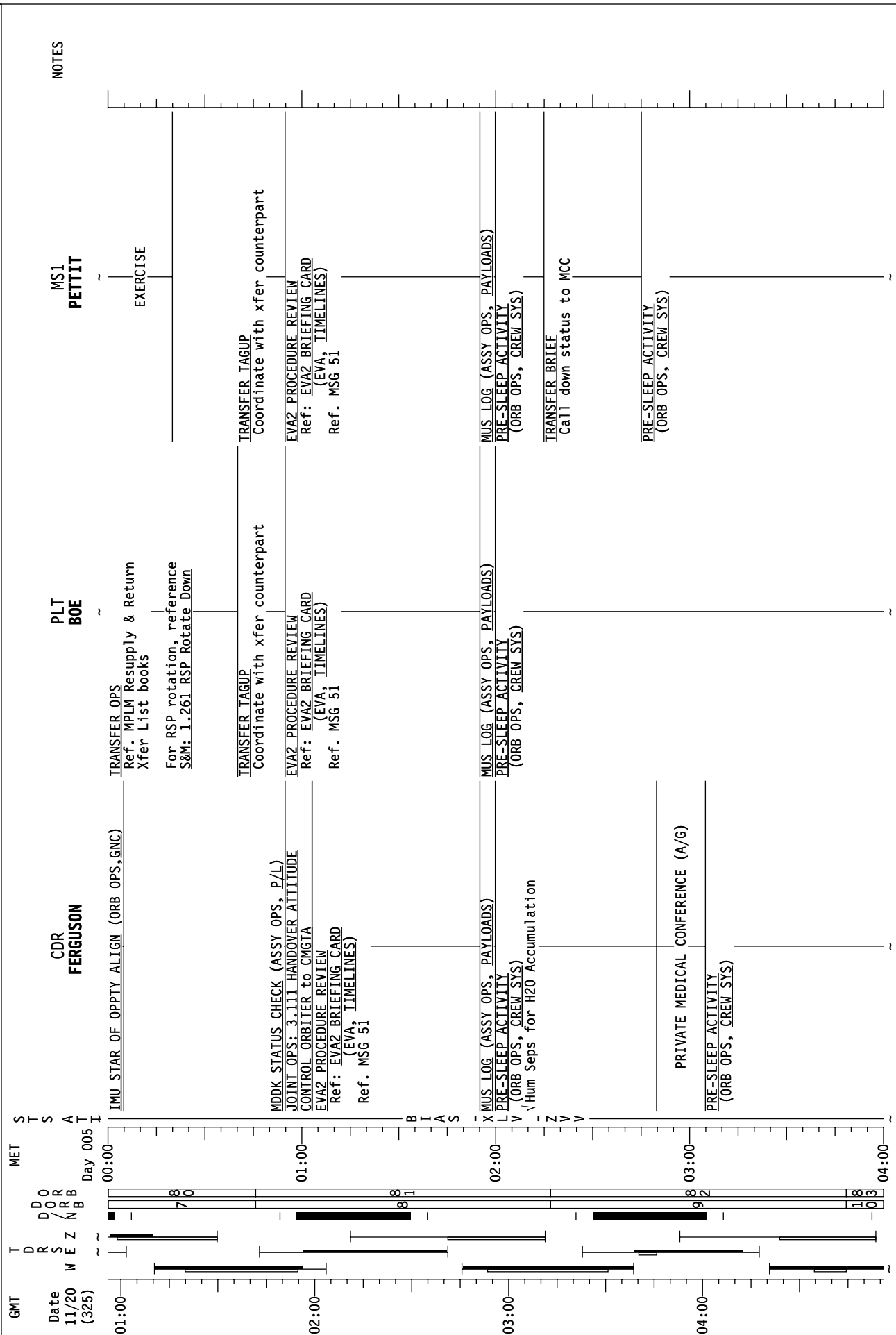
REPLANNED

STS-126 FD (06)



REPLANNED

STS-126 FD (06)



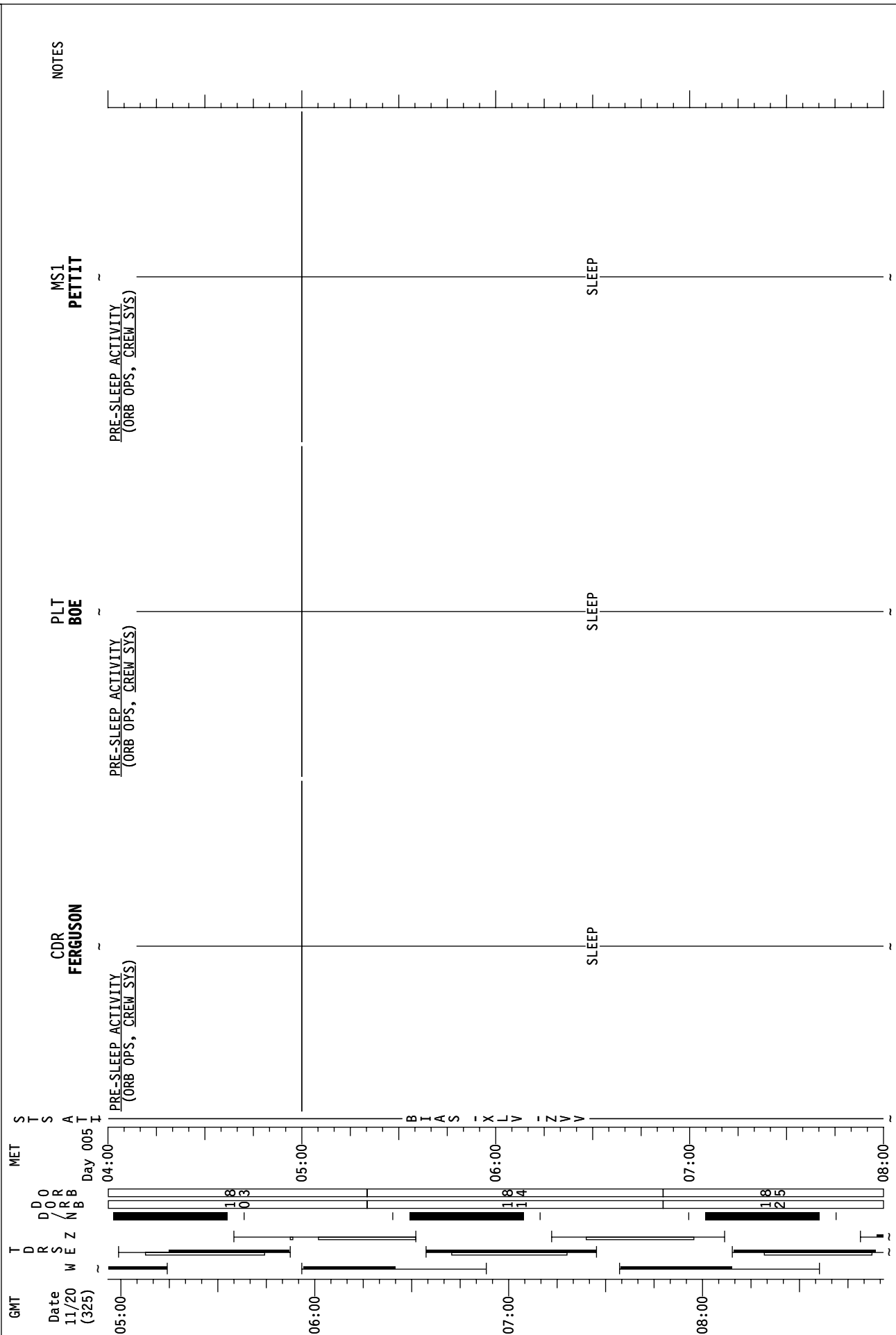
REPLANNED

STS-126 FD (06)

GMT	Date 11/20 (325)	DRS W E Z	TDRS M E Z	MET Day 005 I	MS2 BOWEN	MS3 PIPER	MS4 KIMBROUGH	NOTES
01:00				00:00	TRANSFER OPS Ref. MPLM Resupply & Return Xfer List books For RSP rotation, reference S&M: 1.261 RSP Rotate Down	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	TRANSFER OPS Ref. MPLM Resupply & Return Xfer List books For RSP rotation, reference S&M: 1.261 RSP Rotate Down	
02:00				01:00	EVA2 PROCEDURE REVIEW Ref: EVA2 BRIEFING CARD (EVA, TIMELINES) Ref. MSG 51	EVA2 PROCEDURE REVIEW Ref: EVA2 BRIEFING CARD (EVA, TIMELINES) Ref. MSG 51	MUS LOG (ASSY OPS, PAYLOADS) EVA2 PROCEDURE REVIEW Ref: EVA2 BRIEFING CARD (EVA, TIMELINES) Ref. MSG 51	
03:00				02:00	X MUS LOG (ASSY OPS, PAYLOADS) L MOP QUESTIONNAIRE V (ASSY OPS, PAYLOADS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
04:00				03:00	Z PLAYBACK (DIGITAL) (PHOTO/TV, CUE CARD) V C/L CAMERA DOCKING VIDEO V -GMT 321/21:54 to 321/22:06 STS KU TDRW 01:58-02:34	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)		
				04:00	EVA SYSTEMS: 1.206 10.2 PSIA CAMPOUT MASK PREBREATHE REF: PRE EVA 2 TOOL CONFIG (EVA, TIMELINES) REF: STS-126 CONSUMABLES TRACKING CC (EVA)	EVA SYSTEMS: 1.206 10.2 PSIA CAMPOUT MASK PREBREATHE REF: PRE EVA 2 TOOL CONFIG (EVA, TIMELINES) REF: STS-126 CONSUMABLES TRACKING CC (EVA)	EVA SYSTEMS: 1.206 10.2 PSIA CAMPOUT MASK PREBREATHE REF: PRE EVA 2 TOOL CONFIG (EVA, TIMELINES) REF: STS-126 CONSUMABLES TRACKING CC (EVA)	

REPLANNED

STS-126 FD (06)

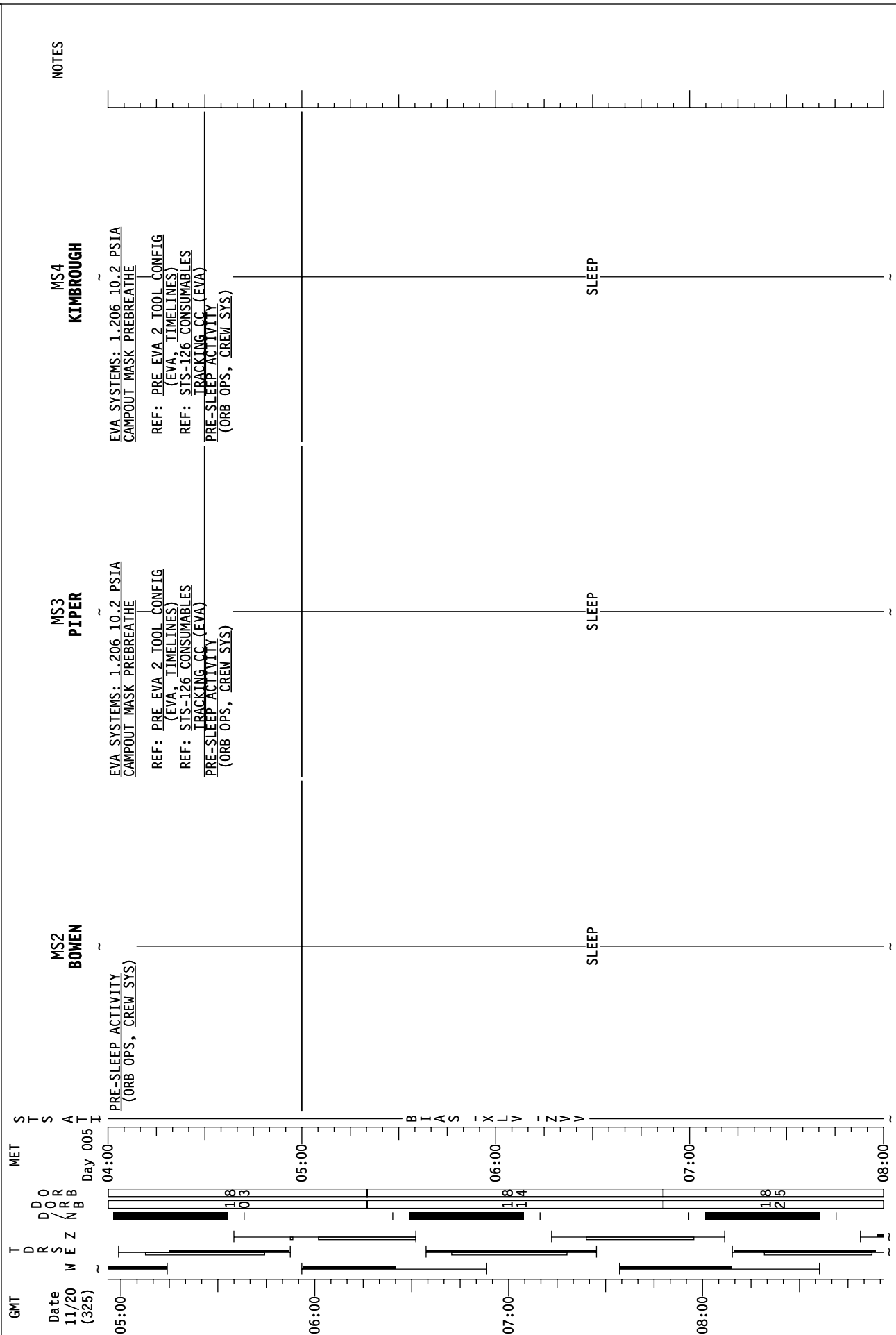


FLT PLN/126/FLIGHT

3-64

REPLANNED

STS-126 FD (06)



MSG 042 - FD06 MISSION SUMMARY

1 Good Morning Endeavour!!!
2
3 Yesterday was yet another awesome day of work by the entire crew!

4
5 Thank you!
6

7
8 YOUR CURRENT ORBIT IS: 193 X 186 NM
9

10 NOTAMS:

11
12 **NOTAMS - ONE CHANGE**

13
14 **PTN – RWY 14 THLD DISPLACED 2,000'. LDA 7,000'.**
15 EDW – EDT IN USE FOR STS-126. EDW ELS DAY / VFR ONLY.
16 EDW – LAKEBED RUNWAY 15/33 ELS ONLY. OTHER LAKEBED RWYS RED.
17 NOR – LAKEBED RUNWAYS GREEN.
18 MRN – RWY 02 THLD DISPL 1,000' FOR MAINT. RWY 20 LDA 10,800'.
19 ZZA – 20' HIGH BARRIER IN OVERRUN OF RWY 30L. LDA 12,200'.
20 DOV – RWY 14/32 CLOSED.
21 HAW – RWY 13 THLD DISPLACED, 9,019' USABLE.
22 AMB – RWY 15/33 CLOSED.
23 ILM – RWY 06/24 CLOSED.
24 YHZ – RWY 05/23 CLOSED.
25 YYT – RWY 16/34 CLOSED.
26 IKF – NOT USABLE. NO AGREEMENT.
27 BEN – NOT RECOMMENDED/NOT SUPPORTED
28

29
30 NEXT 2 PLS OPPORTUNITIES:

31
32 EDT22R ORB 80 – 5/00:07 FEW250 7 240/07P11
33 EDT22R ORB 95 – 5/22:57 SKC 7 270/09P15
34

35
36 OMS TANK FAIL CAPABILITY:

37
38 L OMS FAILS: NO
39 R OMS FAILS: NO
40

41
42 LEAKING OMS PRPLT BURN:

43
44 L OMS LEAK: ALWAYS BURN RETROGRADE
45 R OMS LEAK: ALWAYS BURN RETROGRADE
46
47
48
49
50
51

END OF PAGE 1 OF 2, MSG 042

MSG 042 - FD06 MISSION SUMMARY

1 OMS QUANTITIES(%)

2

3 L OMS OX = 33.6 R OMS OX = 34.0

4 FU = 33.3 FU = 33.8

5 Subtract interconnect counter for current OMS quantities.

6

7 DELTA V AVAILABLE:

8

9 OMS 352 FPS

10 ARCS (TOTAL ABOVE QTY1) 34 FPS

11

12 TOTAL IN THE AFT 386 FPS

13

14 ARCS (TOTAL ABOVE QTY2) 67 FPS

15 FRCS (ABOVE QTY 1) 41 FPS

16

17 AFT QTY 1 85 %

18 AFT QTY 2 47 %

19

20 There are no Failure/Impact/Workarounds for FD6

21

22

23

24

25

26

27

28

29

30

31

32

33

34

35

36

37

38

39

40

41

42

43

44

45

46

47

48

49

50

END OF PAGE 2 OF 2, MSG 042

MSG 043 - FD06 TRANSFER MESSAGE (18-0248)

1 Good morning Heide, STS-126 & Increment 18 crews!

2
3 All we can say is...WOW! You've thoroughly impressed us again with your transfer
4 efficiency. It appears the drones have earned their graduate degrees in transfer ops from
5 Doctor Don!

6
7 Today you'll be completing the last three rack transfers, as well as transferring the three
8 ORUs required for the WRS Config activities. We've also added the SAFER swap activity to
9 your timeline, in addition to accelerating the WRS Mod Kit 3 Install. Finally, we've planned
10 for you to rotate both the A4 and F4 RSPs today as well. You'll notice we also added
11 Middeck Transfer to your timeline to complete some of the open items.

12
13 The Transfer List Excel file, FD6_Transfer_List_STS126.xls, locations are:

- 14 • Shuttle: **C:\OCA-up\transfer** (KFX machine)
- 15 • Station: **K:\OCA-up\transfer**

16
17
18 **Transfer Questions**

- 19
20 • **Don:** OSO appreciates the K-Bar data you detailed during last night's transfer brief.
21 However, since we have duplicate numbers, can you confirm which serial numbers
22 correspond to the Left and Right K-Bars on the WRS-2 rack? For your reference, we
23 copied the following K-Bar configuration: WRS-2: K-bars s/n 2005 & 2006.

24
25 **Transfer Notes**

- 26
27 • **Scopemeter:** During last night's transfer brief, we did not copy that you transferred the
28 Scopemeter (item 241.9) to ISS. We wanted to remind you that the Scopemeter will
29 need to charge for approximately 21 hours prior to using it on FD07 for the EFBM
30 activities. We recommend you initiate charging no later than GMT 324/19:00. In
31 addition, the Scopemeter Current Probe (item 241.7) will also be required for the EFBM
32 activities.

- 33
34 • **Bay 4 GLA Scavenge:** Since you reported that you'd like to rotate the A4 and F4 racks
35 today, PHALCON will be opening the RPCs for GLAs 4 (MPL1PF4) and 8 (MPL1PA4)
36 this morning so you can perform these activities anytime during your day. Please
37 reference the following for scavenging these GLAs:

38
39 US SODF; IFM - In Flight Maintenance: Common (Volume 1): 1.2.4 Corrective/EPS;
40 1.2.403 Baseplate Ballast Assembly R&R;

41
42 For removal as a single unit: steps 1.2, 1.9 (verify complete), 1.10, 3.1, (if BBA is not
43 free, perform step 2.4 for two fasteners furthest from lamp controls), 3.2, and 7.

44
45 If LHA screws removed, tape that end of LHA to BBA for stowage. For either
46 method, cover all connectors (Kapton tape) and secure loose BBA connectors in
47 MPLM Standoff (zip ties).

48
49
50
END OF PAGE 1 OF 9, MSG 043

MSG 043 - FD06 TRANSFER MESSAGE (18-0248)

- 1 • **Don:** Just a reminder that we have an existing return plan for all the launch restraints
2 you will be removing from the WRS racks and the WHC Kabin. The restraints you will
3 be removing today from the WRS racks are included in MPLM return items 753, 754,
4 761, 780, and 796. The four corner brackets you stowed in the K-bars/Pivot Pins CTB
5 can remain in that CTB and should be returned as item 794.
6
- 7 • **Don & Mike:** We've added a WRS ORU Transfer activity to your timeline first thing in
8 the morning to transfer both the Catalytic Reactor ORU (item 166) and Reactor Health
9 Sensor (item 132). These are the first two ORUs you'll need for the WRS Config
10 activities. Before the Distillation Assembly (item 144) is required, there will be other
11 crew members with scheduled MPLM transfer time available to retrieve it for you.
12

13 **FD06 Choreography**

- 14 • **Transfer the following items from MPLM for the WRS Racks Config for Activation:**
 - 15 ○ **Item 132:** Reactor Health Sensor ORU in MPL1A1_H1 (RSP back)
 - 16 ○ **Item 166:** Catalytic Reactor ORU in MPL1F4_H1 (RSP back)
 - 17 ○ **Item 144:** WRS Distillation Assembly in MPL1F2_A1 (RSP front)
- 18 • **Item 127:** Transfer PORT CQ rack from MPL1A3 to NOD2P5.
- 19 • **Item 776:** Transfer RSR from NOD2S5 to MPL1P3.
- 20 • **Item 215:** Transfer STBD CQ rack from MPL1S1 to NOD2S5.
- 21 • **Deploy inter-rack bungee jails across A3 and F3 empty bays.**
- 22 • **Items 203, 203.1, 783, & 783.1:** Swap SAFERs per SAFER Xfer and C/O activities.
23
- 24 • **Rotate A4 RSP down:**
 - 25 • Remove all resupply items from P4_A1: **Items 182 & 183**
 - 26 • Remove all resupply items from P4_A2: **Item 184**
 - 27 • Remove all resupply items from P4_B1: **Items 185, 186, & 187**
 - 28 • Remove all resupply items from P4_B2: **Items 188, 189, & 190**
 - 29 • Stow return items in P4_A1: **Item 410**
 - 30 • Stow return items in P4_A2: only has launch foam for return
 - 31 • Stow return items in P4_B1: **Item 626**
 - 32 • Stow return items in P4_B2: **Items 430 & 433**
 - 33 • Remove PA4 GLA (before rotating rack back up): **Item 105**
- 34 • **Rotate A4 RSP up.**
35
- 36 • **Rotate F4 RSP down:**
 - 37 • Remove all resupply items from P4_K1: **Items 207, 208, & 209**
 - 38 • Remove all resupply items from P4_K2: **Items 211, 212, 213, & 214**
 - 39 • Stow return items in P4_K1: **Items 447, 447.1, 447.2, & 447.3**
 - 40 • Stow return items in P4_K2: **Items 417 & 418**
 - 41 • Remove PF4 GLA (before rotating rack back up): **Item 105**
- 42 • **Rotate F4 RSP up.**
43
44
45
46
47
48
49

END OF PAGE 2 OF 9, MSG 043

MSG 043 - FD06 TRANSFER MESSAGE (18-0248)

- 1 • **Item 753, 754:** Stow Catalytic Reactor Connector Launch Restraint Panel & Bracket for
2 return.
- 3 • **Item 761:** Stow Distillation Assembly Spacer for return.
- 4 • **Item 780:** Stow Reactor Health Sensor Launch Restraint Bracket for return.
- 5 • **Item 796:** WRS 1 and 2 Launch Restraint Bolts and Brackets
- 6 • **Item 445.1:** Pack Root Module for return in bag 445.
- 7 • **Item 46.6:** WPA Check Valve required for Mod Kit 3 Install activity.
- 8 • Gather WRS Water Process Jumpers for Mod Kit 3 Install activity.
- 9 • **Items 231 & 797:** Swap Velcro/Tape Caddies during EVA 2 prep activities.
- 10 • **Item 108:** Transfer GPS Antennas and Electrical Connectors from MPL1A1_A1 for FD07
11 GPS assembly.
- 12 • **Item 128:** Transfer GPS Brackets from MPL1A4_A1 for FD07 GPS assembly.
- 13 **Please incorporate uplink pages as follows (we've listed the updates in the order they**
14 **printed out for you):**

15
16 **MIDDECK TRANSFER BOOK**

17
18 In the Middeck Transfer List **MDDK RTN REALTIME ADDITIONS** tab
19 Replace the following page:
20 Return 10

21
22 **MPLM RESUPPLY TRANSFER BOOK**

23
24 In the MPLM Resupply Transfer List **A1 RSP** tab
25 Replace the following page:
26 Resupply 18

27
28 In the MPLM Resupply Transfer List **SWAP** tab
29 Replace the following page:
30 Swap 7

31
32 **MPLM RETURN TRANSFER BOOK**

33
34 In the MPLM Return Transfer List **LAYOUTS** tab
35 Replace the following page:
36 L-9

37
38 In the MPLM Return Transfer List **RETURN** tab
39 Replace the following page:
40 Return 26

41
42
43
44
45
46
47
48
49
50

END OF PAGE 3 OF 9, MSG 043

MSG 043 - FD06 TRANSFER MESSAGE (18-0248)

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50

Changes to the Transfer List are detailed below:

MDDK RETURN

Item 953 – new item

MPLM RESUPPLY

Item 116 and 117 – updates to notes

MPLM SWAP

Item 241.9 – added Scopemeter charging words

MPLM RETURN

Item 793 – added temp stow location

Item 794 – updated quantity and added note

Item 795 – added temp stow location

FD07 Choreography

- Transfer remaining resupply items from F1, F2, A1, and A2 back-side bags.
- Pack return items in F1, F2, A1, and A2 back-side bags.
- **Item 121:** Transfer REFH Kit from MPL1A2_A1 for RFTA Fill.
- **Items 241.10 & 241.11:** Transfer Compressor and Compressor Cable prior to RFTA fill activity.
- **Item 299:** Transfer REBAs post-EVA for charging activities.
- **Item 312:** Transfer PWRs from MPL1S4_K2 for first PWR FILL activity on FD08.

Have a great day!

- The STS-126 Transfer Team

END OF PAGE 4 OF 9, MSG 043

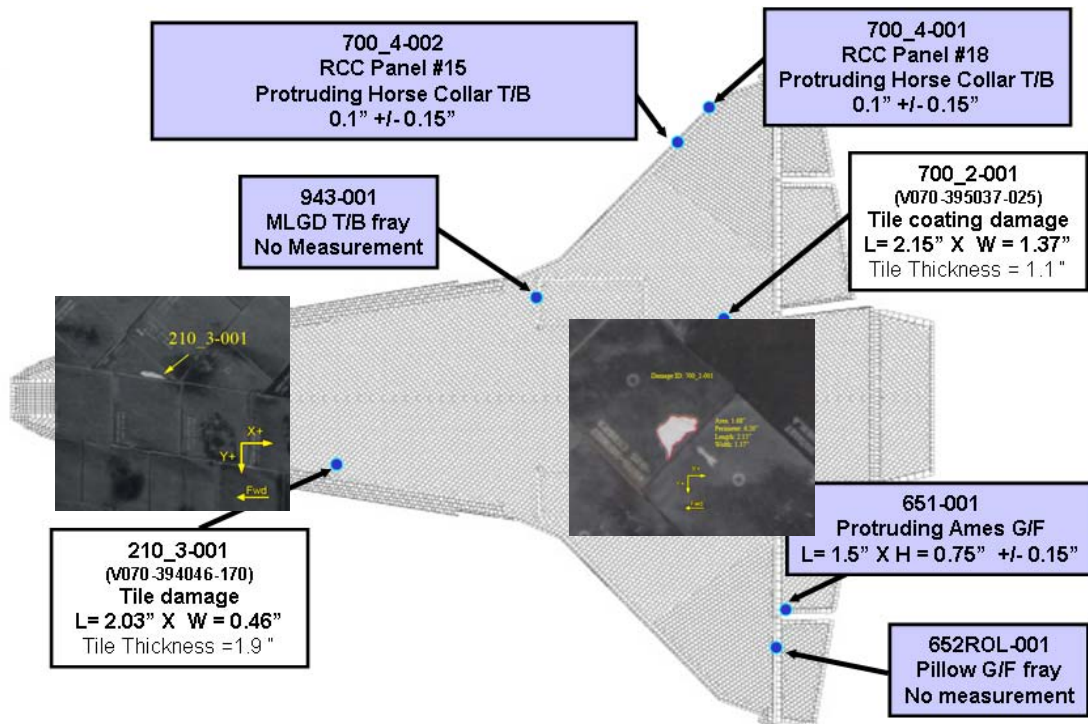
MSG 044 - FD05 MMT SUMMARY

1 The MMT met to review inspection results, mission progress, and orbiter status. The DAT
2 has completed the review and analysis of the TPS, and the MMT has determined the orbiter
3 TPS is cleared for entry. Endeavour continues to perform well and everyone is quite
4 pleased with the progress of the mission. The MMT met today just as EVA 1 was beginning.

5
6 **Orbiter Systems** - Endeavour continues to perform well. The MMT briefly reviewed the
7 anomalies to date. The only item of interest from that discussion is concurrence that the
8 rendezvous radar is available for undocking, if desired, in spite of yesterday's bypass.

9
10 **Ascent Imagery** - The Right SRB video has been retrieved and review is in progress. The
11 Left SRB has not been brought into port yet due to some minor challenges associated with
12 the recovery operations.

13
14 **Damage Assessment Team** - The DAT presented their analysis of the 13 ROIs identified at
15 yesterday's MMT. None of the items are significant and all are within the historical data
16 base. Pictures of the damaged tile and the LOMS pod gap fillers are included below.



19
20
21
22 Figure 1 - Orbiter Lower Surface + 2 Tile Damage Sites
23
24
25
26
27
28
29
30

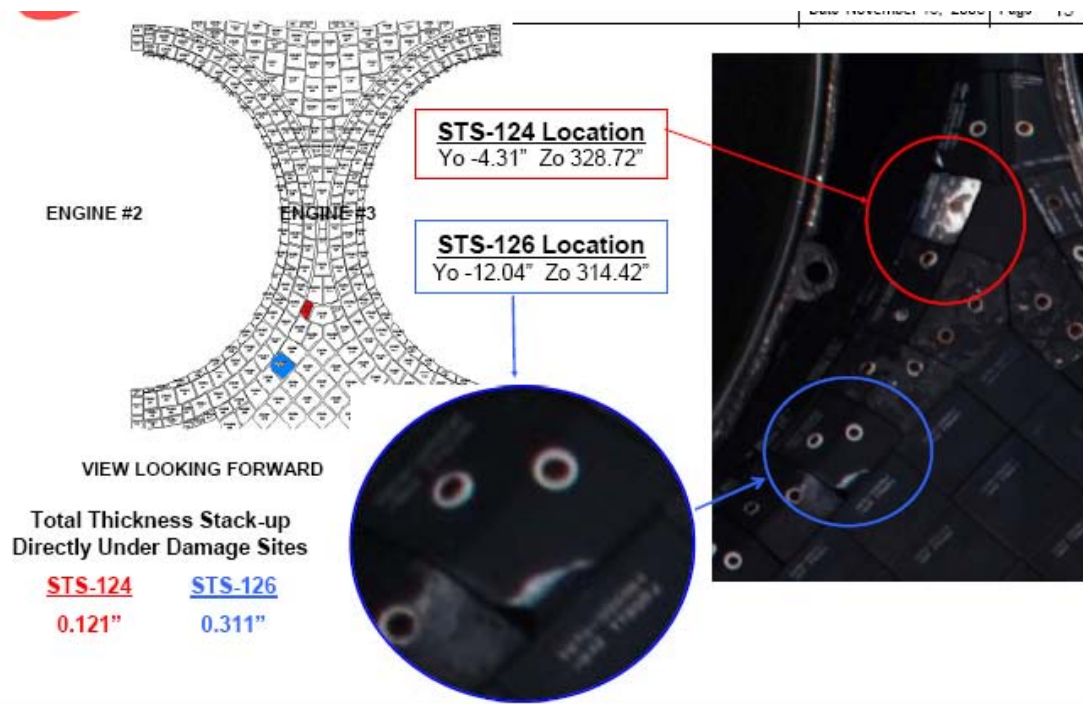


Figure 2 - Dome Heat Shield with STS-124 Damage Overlay (red circle)

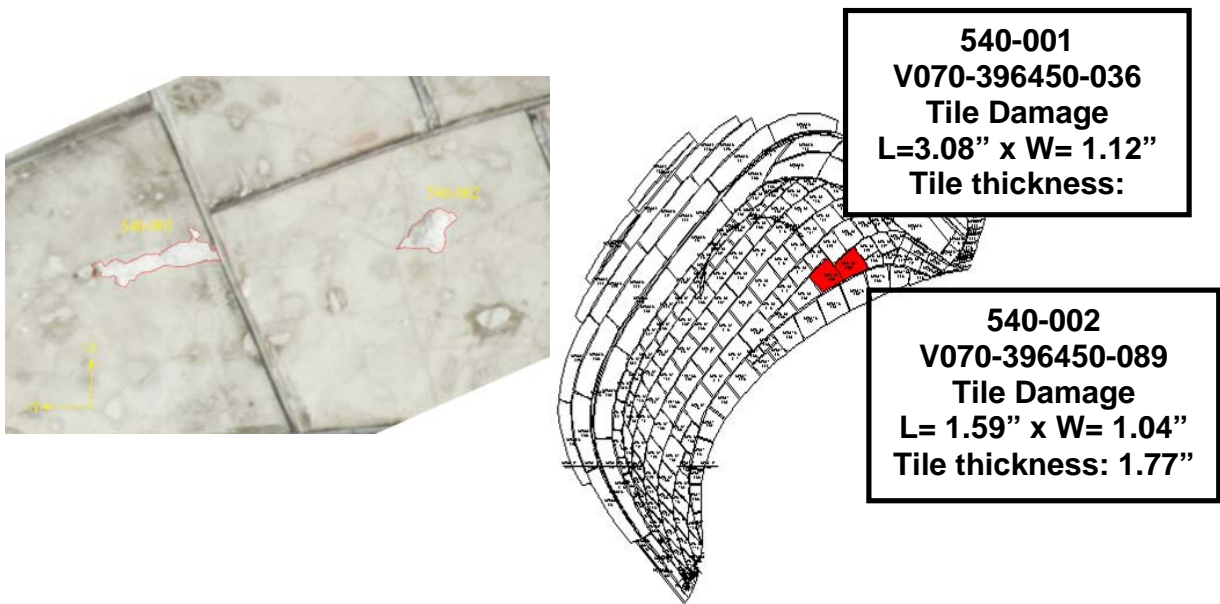


Figure 3 - ROMS Pod Tile Damage

MSG 044 - FD05 MMT SUMMARY

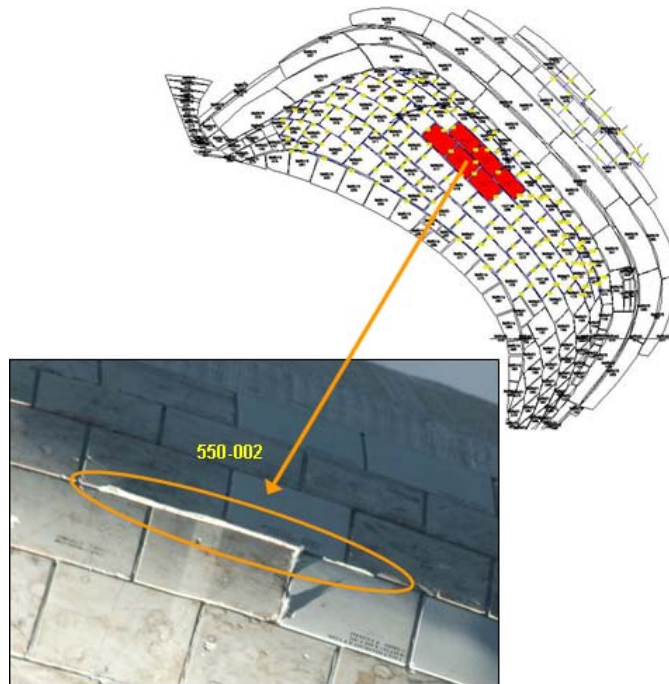


Figure 4 - LOMS Pod Gap Fillers

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25
- 26
- 27
- 28
- 29
- 30
- 31

END OF PAGE 3 OF 3, MSG 044

CANON G1

AUDIO TONE FOR G1

NOTE

The tone generated by the G1 when the color bars are enabled is used to verify gnd equipment is processing the audio properly.

PWR dial – “green”

Open LCD

MENU pb – press (back left side of cc)

NOTE

To select, set functions in menu, use SELECT/SET wheel on back of Camr next to Batt compartment. Up/down will navigate menus; pressing in will select(set) function(parameter)

SELECT/SET – sel 'CUSTOMIZE'



SELECT/SET – sel 'CUSTOM FUNCTION'



CANON G1 (Continued)

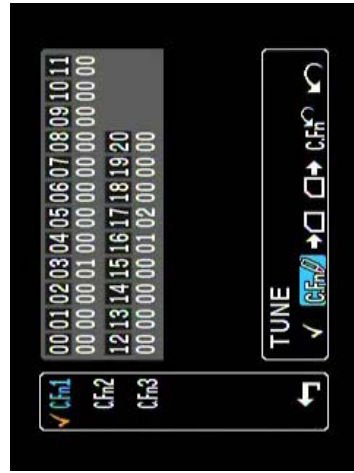
I

AUDIO TONE FOR G1 (Continued)

SELECT/SET – sel 'C.Fn1'



SELECT/SET – sel 'TUNE' (C.Fn1)



CANON G1 (Concluded)

AUDIO TONE FOR G1 (Concluded)

SELECT/SET – sel '14'
– sel '01' -12dB'



MENU pb – press

MSG 048A - COMBO DUMP DETAILS

Combo Dump Details

Pregather Equipment

Prior to starting the dump, pregather the following equipment and temp stow on the middeck:

- a. A/L1D1_B2: EVA PWR s/n 1007 and 1023, and OGS PWR s/n 2003
- b. A/L1D1_A2: EVA PWR s/n 1024
- c. Middeck: Condensate CWC s/n 5060 (temp stowed after FD6 changeout)
- d. Break Out Box Locker (MF28E): Waste Water Dump (WWD) Filter
- e. Contingency Hose and Cable Kit (CHCK) in the window shade bag: SPLY H2O Dumpline Purge Device, B-B hose, R-Y QD adapter, and 8 ft Y-Y hose.

Prior to opening either supply or waste dump valve, verify with MCC-H that the solar arrays are in the proper config, and the stack is in the proper attitude.

Waste Water Dump

Perform a Waste dump using SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) p. 5-2. Perform steps E, G and I. After completing step I-2, proceed to CWC OVERBOARD DUMP (ORB OPS, ECLS). MCC-H will TMBU FDA in steps B and K.

Waste dump valve open time will be ~25 minutes. Dump the waste tank to 5%.

CWC Dump

After performing the Waste dump step I-2, perform CWC OVERBOARD DUMP (ORB OPS, ECLS) p. 5-36. Perform steps A, D, E, F, and G. MCC-H will TMBU FDA in steps B and H. Dump CWC s/n 5060.

Waste dump valve open time for CWC s/n 5060 will be ~50 minutes.

Leaky ISS CWC S/N 1096 will not be dumped at this time.

Temp stow CWC S/N 5060 for FD8 condensate changeout.

Stow the WWD in a separate ziplock bag in the BOB.

Stow the Y-Y hose in a separate ziplock bag in the CHCK

PWR Dumps

After CWC OVERBOARD DUMP is complete, perform PWR DUMP-SUPPLY LINE (ORB OPS, ECLS) pg. 5-44. Dump PWR s/n 1007, 1023, 1024, and 2003. MCC-H will TMBU FDA in steps 2 and 7. It is not necessary to close the Supply H2O Dump Valve in between each PWR in step 4. DO NOT dump PWR and CWC at the same time.

Dump PWRs even if they appear empty to ensure any residual air is removed in preparation for refilling the PWRs later in the mission. Temp stow the PWRs near the Galley for future fills.

In step 6, this will be the final PWR dump of the flight. After stowing the B-B hose and R-Y QD adaptor in ziplock bags, label them "USED" with gray tape. Stow the bags in the CHCK.

Note: MSG 029, the H2O OPS CC, instructs that PWR s/n 1024 will be vented post EVA2. This PWR will be vented during today's dump opportunity instead.

18-0253 (MSG 049) – ULF2 Joint Mission Task List Message

Page 1 of 2

1 Mike, Yury, Greg and Sandy,

2
3 Since you and the Endeavour crew have done such an amazing job of
4 working ahead on the timeline, we wanted to provide you an overview of the tasks
5 remaining for the mission and their planning prioritization so you can see what your
6 hard work has made possible. Pre-flight, we had discussed providing this just for the
7 task list items we had identified as good get-aheads for the stage. However,
8 because of your great work, we now may be able to accommodate activation and
9 checkout of the Potable Water Bus which requires too much coordination to task list.
10 Therefore we have changed the concept of this overview to include the major tasks
11 that have been identified as scheduled activities for the docked mission integrated
12 with the task-listed get-aheads for the ULF2 stage and activities that aren't
13 scheduled ...yet. For the tasks that aren't scheduled, we've tried to identify where
14 we are targeting to add them into the timeline.

15
16 To sequence the activities, we considered the mission priorities provided by the
17 Program Office along with the expected crew availability and task scheduling
18 constraints in the docked mission versus the stage then utilized the crew time in the
19 most efficient way we could.
20
21

Sequencing	Task Description	Target crew day
1	WRS Mod Kit #3	FD6 (scheduled)
2	RFTA Fill for the first UPA Process	FD7(scheduled, can be done once Mod Kit #3 complete)
3	Catalytic Reactor Flush	FD7 (scheduled)
4	WRS Sampling	FD11 (scheduled, could move earlier)
5	TOCA Assembly and Installation	FD9 (scheduled, but could be done as early as FD7)
6	PWD Routing	Targeted to start FD9
7	Express Rack 6 Activation and Laptop deploy	Targeted for FD12
8	Potable Water Bus Configure and Flush	Targeted for FD12
9	PWD Sampling	Targeted for FD13
10	WHC Config for Activation <ul style="list-style-type: none">Consists of 8 parts with the activities numbered WHC1-WHC8	Task List (Stage get-ahead)
11	WHC Flush Jumper Installation	Task List (Stage get-ahead)
12	LHA and BBA R&Rs in USOS and IP Module	Task List (after GLA Scavenge on FD11)
13	Node 2 Hatch Handle Guide Ring Install	Task List – Can only be performed while MPLM is berthed

18-0253 (MSG 049) – ULF2 Joint Mission Task List Message

Page 2 of 2

14	ULF2 Unpacking (including CD Transfer)	Task List (Stage get-ahead)
15	WRS Foam Installation	Task List (Stage get-ahead)
16	HTV Hardware Command Panel Install	Task List (Stage get-ahead for Week 6)
17	Clean Bench (CB) Stow	Task List (Stage get-ahead)
18	Remove JLP-HCTL-LTA and install JLP Exposed Facility Unit (EFU) Driver Unit (EDU).	Task List (Prep for 2J/A)
19	SCOF Cable Connect	Task List (Stage get-ahead)
20	CO2 Concentrations SDTO for Mike	May be hard scheduled if a good spot is identified
21	Water Dump Imagery DTO	May be hard scheduled for MS1/Pettit if MPLM Transfer continues to go well

1

18-0254 (MSG 050) - FD06 EVA Deltas

Page 1 of 1

1 FD 6 EVA Deltas

2

3 Heide, Eric, Shane, & Steve,

4

5 Great job yesterday on EVA 1!

6

7 This message contains EVA 2 Deltas.

8

9 **Execute Notes** - Due to EVA 1 Impacts:

10

- 11 • Tool config impacts are being evaluated for EVAs 2, 3, and 4
 - 12 ○ Tool config for EVA 2 will be uplinked later today after execute team has had
 - 13 a chance to “sleep on it.”
 - 14 ○ If you have comments or suggestions, please feel free to call them down.
- 15 • We would like a report on the TUS reel damage: Were there any exposed wire
- 16 conductors? Also remember the TUS cable photos should be stereo images from
- 17 various angles.
- 18 • As a reminder, we would like confirmation that the J nozzle grease gun has been
- 19 primed prior to each application.
- 20 • We would like the serial numbers for the tools retrieved from the Z1 Toolbox:
 - 21 ○ Adjustable Equipment Tether s/n: _____
 - 22 ○ Large trash bag from Z1 port tool box s/n: _____
- 23 • Remember to inspect and clean, any tools/bags contaminated by grease as
- 24 previously discussed.
- 25 • Please retrieve an extra 1” scraper from the 1J mesh bag labeled “EVA ISS Temp
- 26 Stow #3” in DC1 and report the serial number s/n _____. Temp stow the
- 27 scraper with the Crew Lock bags. This will be used in Tool Config later today.
- 28 • We need to get an accurate inventory of equipment tethers post EVA 1. Could you
- 29 please provide a count of the following:
 - 30 ○ RET (eq-eq) _____
 - 31 ○ RET (eq-eq) w/PIP Pin _____
 - 32 ○ RET (Lg-eq) _____
 - 33 ○ Adj Equip Tether _____
- 34 • We are working on a plan to wrap the grease guns in a wipe to contain any leaking
- 35 grease.
 - 36 ○ You will see this plan later today in tool config.

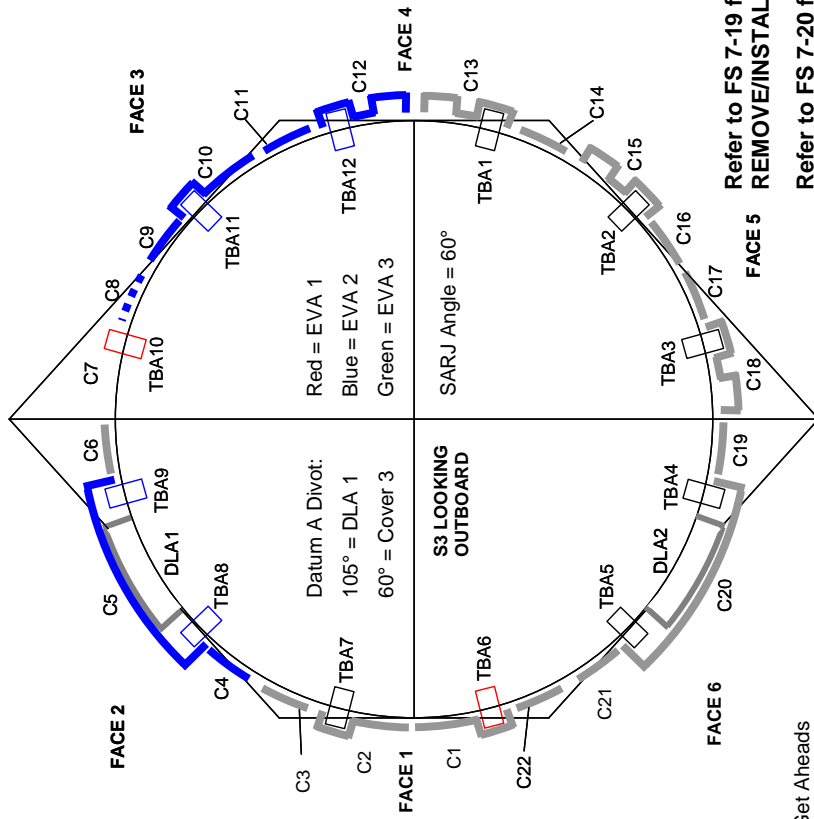
37

38 **EVA 2 Deltas:**

- 39 • We would like configure the ingress aid to its proper install position. Therefore,
- 40 please add the following step on page FS 7-47, EV2 column, after step 11:
 - 41 ○ “11a. Remove Ingress Aid from APFR on CETA 1 WIF 2, rotate 180 degrees,
 - 42 and re-install in same APFR. Verify slot is facing APFR foot plate.”
- 43 • MSG 051 is the updated STBD SARJ Cue Card.

Page 1 of 1, 18-0254 (MSG 050)

18-0255 (MSG 051) - STBD SARJ Cue Card for EVA 2
Page 1 of 1



Get Aheads
Can leave covers 15-18 off between EVAs 2 and 3
Can leave 13 and 14 off but cannot remove covers 5-12 on EVA 3

MLI COVERS

- CAUTION**
To prevent loss of inboard MLI cover fasteners during removal:
Limit turn count to minimum required for fastener release
Minimize side loading bolt head
Maintain axial force on fastener to compress spring during rotation
- REMOVE: Tether to cover; **PGT/A6 8.3 ft-lb, CCW2 30 RPM, MTL 30.5]-6ext 7/16:** Release inboard MLI cover fasteners, 9 turns
 - INSTALL: **PGT/A1 2.5 ft-lb, CW2 30 RPM, MTL 30.5]-6ext 7/16:** Engage MLI cover fasteners, 9 turns

SARJ Angle	Cover #	# of Bolts	Cover Removed	Item Under Cover	S/N	TBA Removed	SARJ Cleaned	SARJ Lubed	TBA Installed	Cover Installed	
105	7	6	X	TBA 10	1037	X	X	X	X	X	
	8	4	X				X	X		X	
	9	4	X				X	X		X	
	10	6	X	TBA 11**	1023	X	X	X		X	
	11	4	X				X	X		X	
	1	6	X	TBA 6	1017	X	X	X	X	X	
	22	4	X				X	X		X	
	4	4									
	60	5	4		TBA 8 DLA 1*** TBA 9	1031 1004 1030					
		8	4								
		9	4								
		10	6		TBA 11**						
11		4									
12		6		TBA 12	1034						
19		4									
20			4		TBA 4 DLA 2*** TBA 5*	1035 1005 1039					
		21	4								
		22	4								
1		1	6		TBA 6*						
		2	6		TBA 7	1036					
	3	4									
	13	6		TBA 1	1032						
	14	4									
	15	6		TBA 2	1029						
17	16	4									
	17	4									
	18	5/6		TBA 3	1033						

*These TBAs are clean already, so only the bearing package needs to be removed to enable cleaning and lubing of outboard ring
**TBA 11 is removed on EVA 1, installed on EVA 2.
***DLA cleaning should occur prior to installing second TBA by DLA