

STS-126/ULF2

FD 15 Execute Package



MSG	Page(s)	Title
156A	1 - 15	FD15 Flight Plan Revision (pdf)
157	16 - 17	FD15 Mission Summary (pdf)
158	18	FD15 Crew Choice Video Downlink Options (pdf)

Approved by FAO: T. Clancy

A handwritten signature in black ink, appearing to read 'T. Clancy', written over a horizontal line.

Last Updated: Nov 28 2008 9:23AM GMT

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

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MSG 156A - FD15 FLIGHT PLAN REVISION

1 MSG INDEX

2

3 <u>MSG NO.</u>	<u>TITLE</u>
4 156	FD15 Flight Plan Revision
5 157	FD15 Mission Summary
6 158	FD15 Crew Choice Video Downlink Options

7

- 8 1. For today's cryo config, O2 Tanks 3 and 4 will be active with single heaters. O2 Tank 2
9 and H2 Tanks 1 and 2 will be active with dual heaters.

10

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

13

14 A11 CRYO TK4 HTRS H2 A, B (two) – OFF

15

- 16 2. FD14 MMT Summary:

17 The MMT met briefly to review orbiter systems and mission progress. Endeavour
18 continues to perform quite well and there were no systems issues discussed. Thanks to
19 hard work, the mission is progressing extremely well and all parties are very excited
20 about the accomplishments of this mission. The MMT was polled and gave a go for
21 undock tomorrow.

22

- 23 3. Notes for Late Inspection Surveys:

24 In OBSS LDRI/IDC RCC SURVEY - STBD (PDRS, OBSS NOMINAL), ignore the "If
25 Performing Late Inspection" block at the end of step 4 and perform step 5, IDC/LCS
26 Characterization. Performing this step again will help ground engineers understand the
27 LCS contamination seen during post-flight processing.

28

29 During FD2 surveys and follow-on testing, the ground observed an error in the tilt
30 direction of up to 14 degrees. As a result, ground verification of each view is essential
31 before proceeding through the scans. Regardless of this bias, we anticipate no
32 problems with late inspection.

33

- 34 4. On FD 14, PSP 1 lost I/O with the SM GPC twice during a nine hour period. The PSP
35 was off overnight. INCO will configure PSP 2 early FD15 to support MPLM Environment
36 checks and Undock. The Detail Timeline will contain a switchthrow on SSP 1 for OIU 2
37 to complete the configuration.
- 38

- 39 5. Today you will terminate NLP Cells GAPs 3-9. It is OK to terminate GAP #7 and then
40 restow in the Ziplock bag.
- 41

- 42 6. For the EHS-Micro-T+2 Pictures activity at 13/22:00:

43 Please retrieve the MCD Incubation bag located at MF14G (Return Item #998).

- 44 1) Call down the temperature indicated on the temperature strip.
45 2) Remove the MCDs from the incubation bag and take several pictures ensuring to
46 differentiate sample #1 and sample #2 (sample #2 is labeled with a #2).
47 3) Re-stow the MCDs in the incubation bag back at MF14G.
48 4) Notify MCC when MCD photos are ready for downlink.
- 49
- 50

MSG 156A - FD15 FLIGHT PLAN REVISION

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7. Gather Dump Equipment

Pre-gather the following equipment and temp stow on the middeck for the waste and CWC dumps tomorrow:

- a. Condensate CWC S/N 5060 (temp stowed after condensate teardown)
- b. Break Out Box Locker (MA16D): Waste Water Dump (WWD) Filter
- c. Contingency Hose and Cable Kit (CHCK) in the window shade bag: 8 ft Y-Y hose.

8. REPLACE PAGES 3-162 THROUGH 3-171.

FD14

GMT 11/28/08 (333)

MET Day 013

013/00

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

REPLANNED

S T S - 1 2 6	CDR FERGUSON	PRE SLEEP	SLEEP	POST SLEEP	FD15					
	PLT BOE	PRE SLEEP	SLEEP	POST SLEEP						
	MS1 PETTIT	PRE SLEEP	SLEEP	POST SLEEP						
	MS2 BOWEN	PRE SLEEP	SLEEP	POST SLEEP						
	MS3 PIPER	PRE SLEEP	SLEEP	POST SLEEP						
	MS4 KIMBROUGH	PRE SLEEP	SLEEP	POST SLEEP						
D N	FE-2 CHAMITOFF	PRE SLEEP	SLEEP	POST SLEEP						
	ISS CDR FINCKE	PRE SLEEP-ISS	SLEEP	POST SLEEP	DPC PW					
I S S	FE-1 LONCHAKOV	PRE SLEEP	SLEEP	POST SLEEP	DPC PW					
	FE-2 EXP18 MAGNUS	PRE SLEEP	SLEEP	POST SLEEP	DPC PW					
U P	DAY/NIGHT ORBIT	206	207	208	209	210	211	212	213	214
	TDRS	W -171.0	E -46.0	Z -275.0						
	ORB ATT	BIAS -XLV -ZVV								
	NOTES	*ACT								
		*COFC-5MPT-φ1-MNT-INIT								

REPLANNED

FD15 GMT 11/28/08 (333) Day 013 11/29 23 22 21 20 19 18 17 16 15 14 13 12

MET	13	14	15	16	17	18	19	20	21	22	23	014/00	
CDR FERGUSON	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP ³ SEP	MEAL	GPI RWR PRT BND	C B R T A R T I C L E S K E P T I B E	EXERCISE	E S I T	E E Q U I P S G A T H E R S M R V I	PRE SLEEP	PMC A/G
R1 PLT BOE	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	OBSS MNV	NOSE CAP SURVEY	PORT WING SURVEY	PRE SLEEP	PRE SLEEP	
R3 MS1 PETTIT	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	SS D M V O A E - R C S 4	NOSE CAP SURVEY	PORT WING SURVEY	PRE SLEEP	PRE SLEEP	
EV2 MS2 BOWEN	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	EVA UNPACK & STOW	PST ISS EVA ENT PREP	EXERCISE	PRE SLEEP	PRE SLEEP	
EV1 MS3 PIPER	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	EVA UNPACK & STOW	PST ISS EVA ENT PREP	EXERCISE	PRE SLEEP	PRE SLEEP	
R2/EV3 MS4 KIMBROUGH	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	OBSS MNV	NOSE CAP SURVEY	PORT WING SURVEY	PRE SLEEP	PRE SLEEP	
MS5 CHAMITOFF	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	POST UNDK PGSC CNFG	EXERCISE	PORT WING SURVEY	PRE SLEEP	PRE SLEEP	
ISS CDR FINCKE	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	PMA2 PT1	EXERCISE RED	EXERCISE TVIS	PRE SLEEP-ISS	PRE SLEEP-ISS	
FE-1 LONCHAKOV	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	CB-A5-EVAL	EXERCISE TVIS	VELO + RED	PRE SLEEP-ISS	PRE SLEEP-ISS	
FE-2 EXP18 MAGNUS	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	EXERCISE RED	EXERCISE CEVIS	PRE SLEEP-ISS	PRE SLEEP-ISS	PRE SLEEP-ISS	
DAY/NIGHT ORBIT	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	STBD SURVEY	NOSE CAP	PORT SURVEY	PRE SLEEP-ISS	PRE SLEEP-ISS	
TDRS W -171 E -46 Z -275	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	STBD SURVEY	NOSE CAP	PORT SURVEY	PRE SLEEP-ISS	PRE SLEEP-ISS	
ORBIT	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	STBD SURVEY	NOSE CAP	PORT SURVEY	PRE SLEEP-ISS	PRE SLEEP-ISS	
NOTES	GPI RWR PRT BND	PS MUL HNS PRT VDT E RK P	UNDOCK OPS	FLYAROUND	SEP	MEAL	GPI RWR PRT BND	STBD SURVEY	NOSE CAP	PORT SURVEY	PRE SLEEP-ISS	PRE SLEEP-ISS	

*POST SLEEP ^DEACT *UNDOCK 13/13:52 *FLAT FIELD *STATUS CHECK *DEACT #ACT %CELLS TERM1 *SSC-OCA ROUTER-R/B #STATUS CHECK

REPLANNED

FD15

GMT 11/29/08 (334)

MET Day 014

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

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

CDR FERGUSON	PRE SLEEP	SLEEP	POST SLEEP	POST SLEEP	M D K #			
R1 PLT BOE	PRE SLEEP	SLEEP	POST SLEEP	POST SLEEP	M D K #			
R3 MS1 PETTIT	PRE SLEEP	SLEEP	POST SLEEP	POST SLEEP	A P C U #			
MS2 BOWEN	PRE SLEEP	SLEEP	POST SLEEP	POST SLEEP				
MS3 PIPER	PRE SLEEP	SLEEP	POST SLEEP	POST SLEEP				
R2/EV3 MS4 KIMBROUGH	PRE SLEEP	SLEEP	POST SLEEP	POST SLEEP				
MSS CHAMITOFF	PRE SLEEP	SLEEP	POST SLEEP	POST SLEEP				
DAY/NIGHT ORBIT	222	223	224	225	226	227	228	229
TDRS	W -171.0	E -46.0	Z -275.0					
ORB ATT	-DFR	-DFR -MLA	-MSS -DFR -MLA	-ZLV -XVV -DFR				DUMP
GND								
NOTES								

S T S - 1 2 6

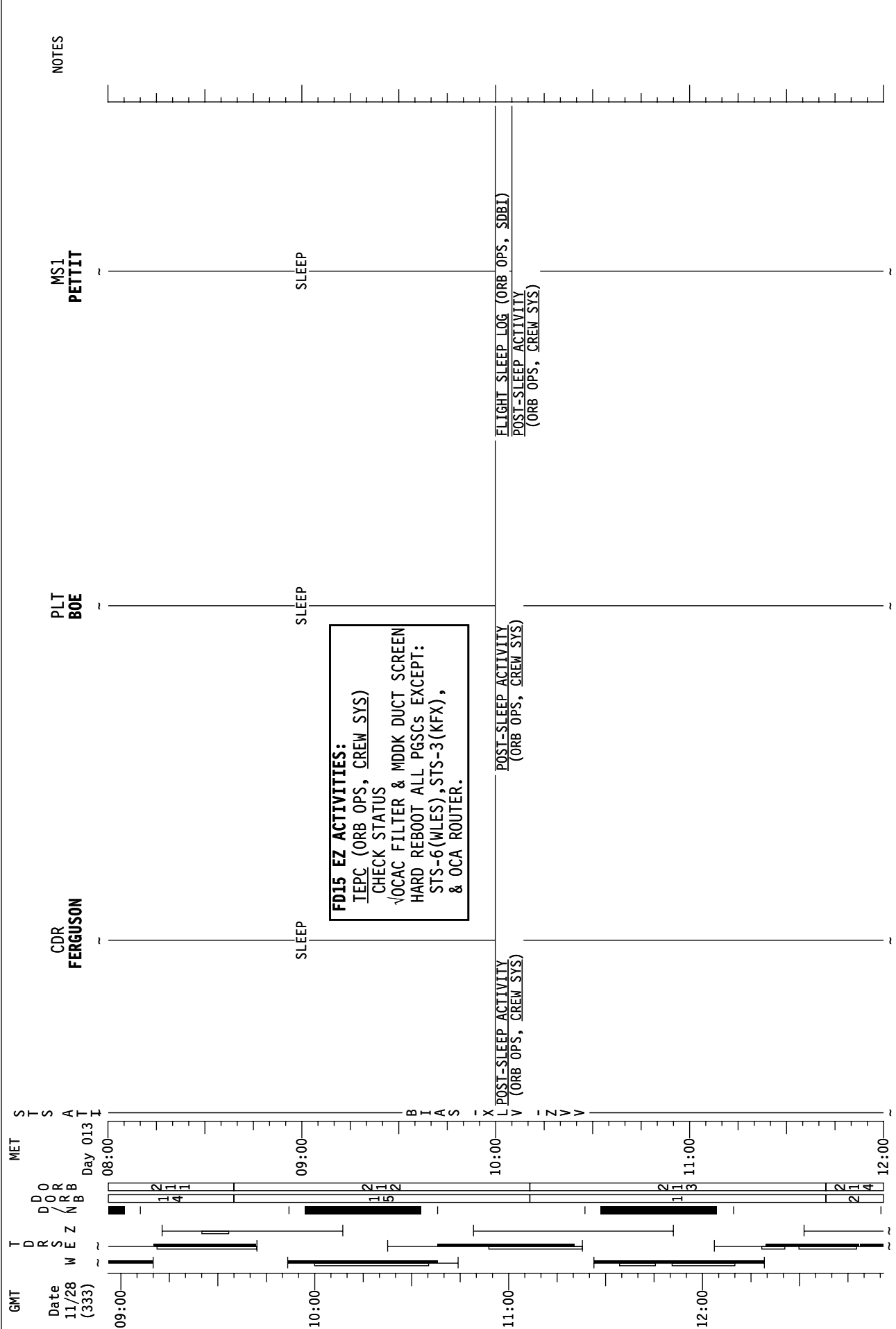
2-56

FLT PLN/126/FLIGHT

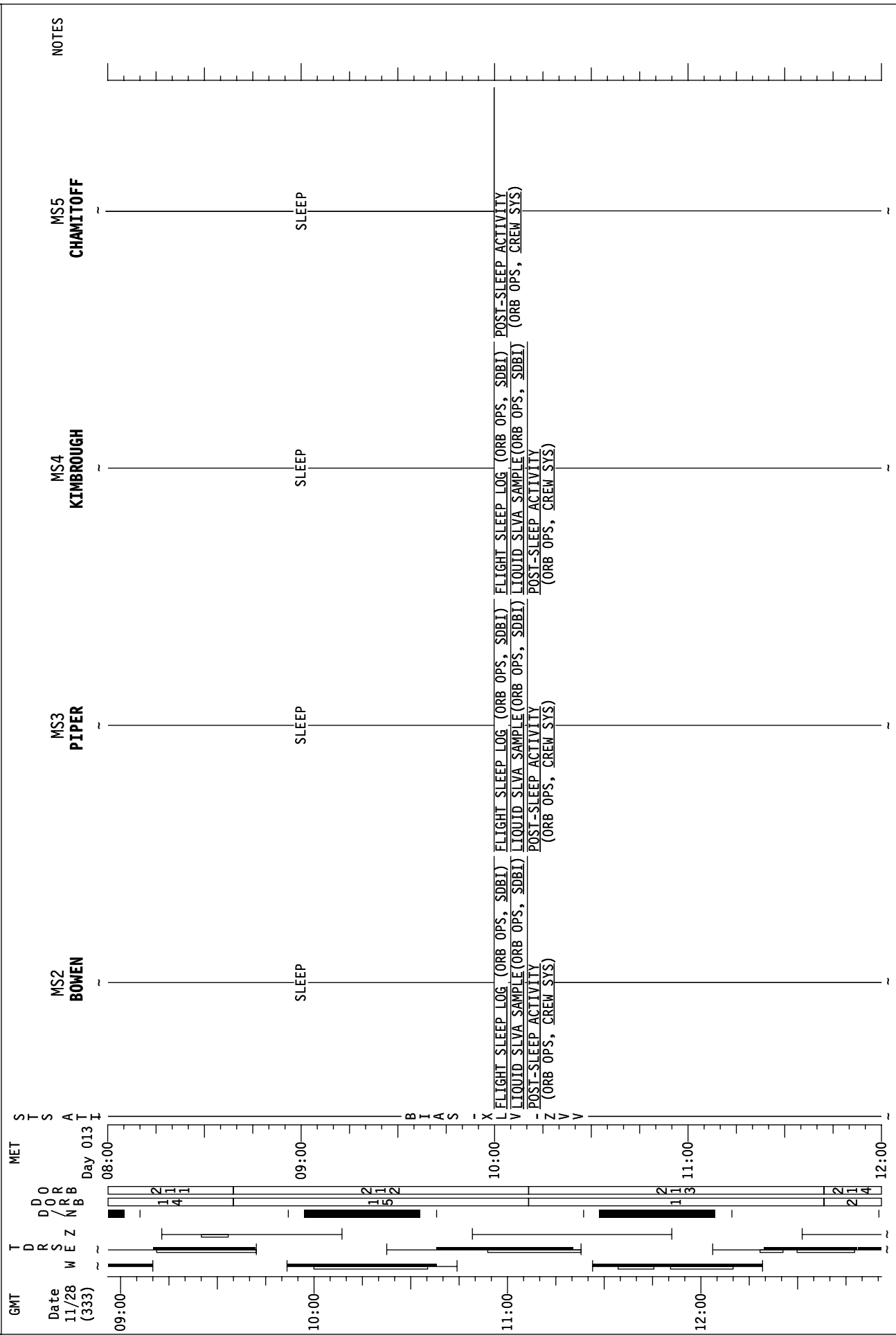
*POST SLEEP
#STATUS C
#ACT

STS-126 FD (15)

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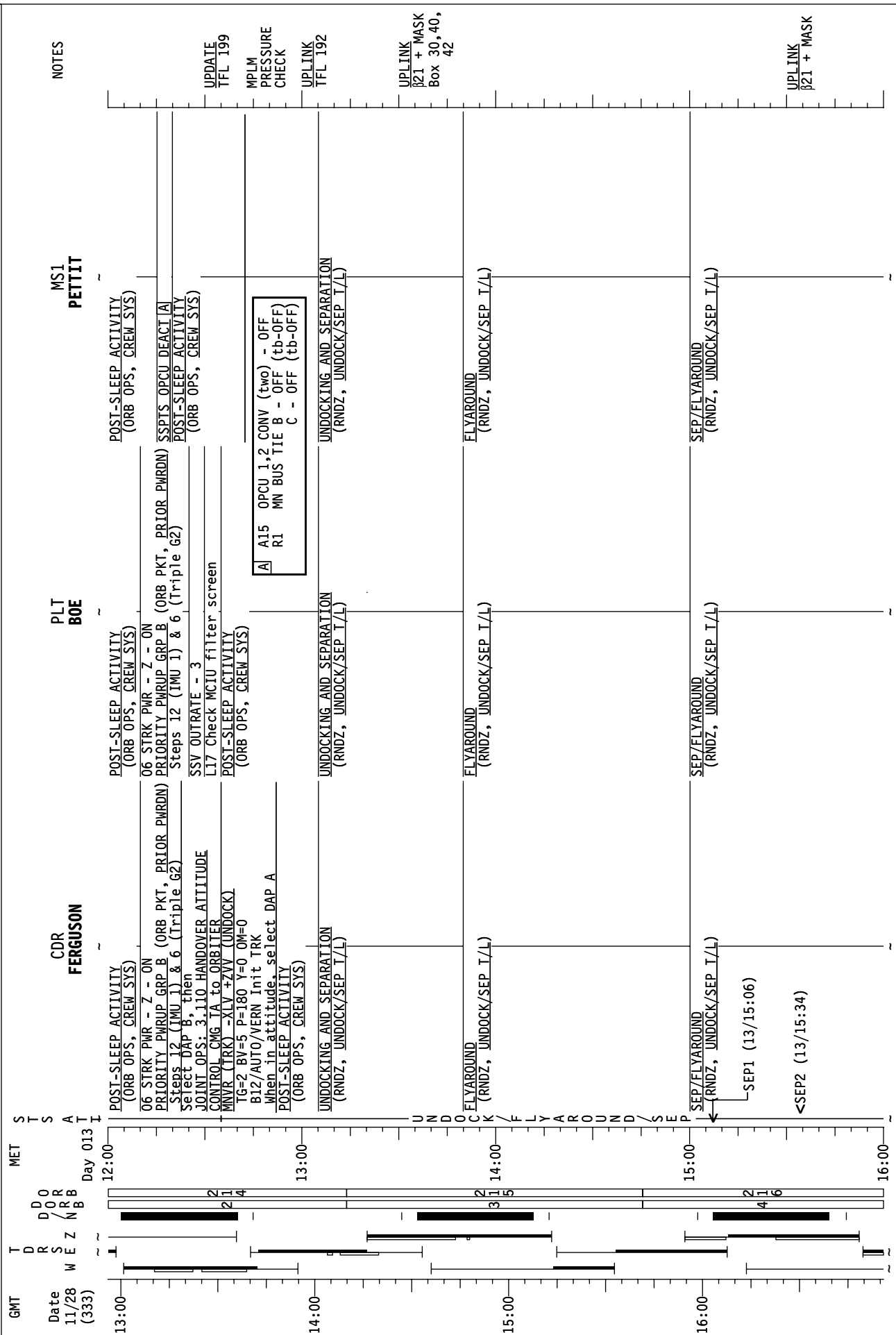


STS-126 FD (15) REPLANNED



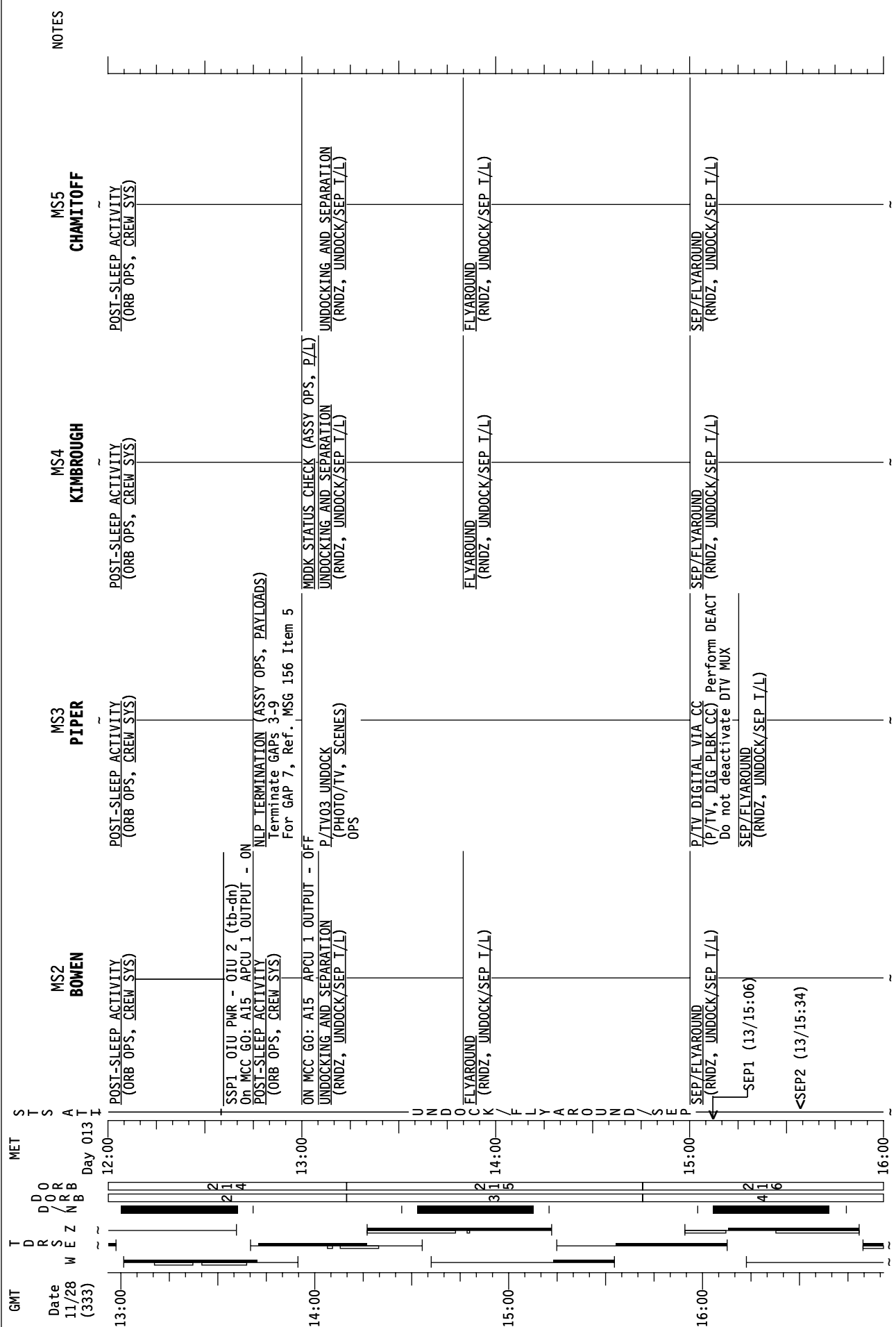
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STS-126 FD (15)



STS-126 FD (15)

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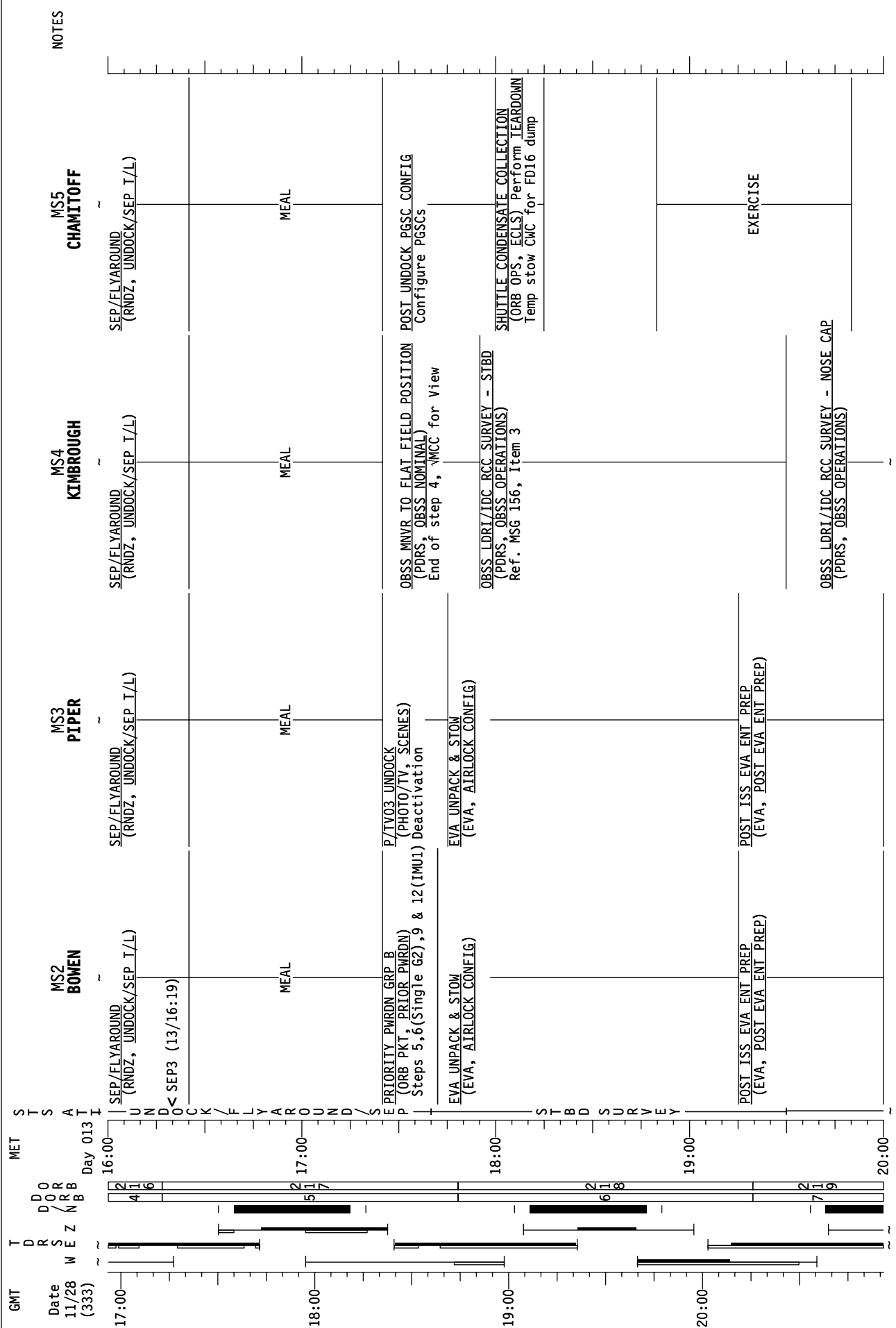
STS-126 FD (15)

REPLANNED

GMT	Date 11/28 (333)	DRS W E Z	TDRS D O R / R B	MET Day 013 T	CDR FERGUSON	PLT BOE	MS1 PETTIT	NOTES
17:00				16:00	SEP/FLYAROUND (RNDZ, UNDOCK/SEP T/L)	SEP/FLYAROUND (RNDZ, UNDOCK/SEP T/L)	SEP/FLYAROUND (RNDZ, UNDOCK/SEP T/L)	
					< SEP3 (13/16:19)			
					C CHANGE DAP TO A14			
					MEAL	MEAL	MEAL	
18:00				17:00	PRIORITY PWDRN_GRP_B (ORB OPS, ECLS)	OBSS MNVR TO FLAT FIELD POSITION (PDRS, OBSS NOMINAL) End of step 4, MCC for View	SSV OUTFRATE - 4 JOINT OPS: 6.106 SSOR DEACTIVATION	UPLINK TFL 188
					MNVR (TRK) BIAS +YSI (Stbd Survey) TG=4 BV=5 P=0 Y=40 OM=100 A14/AUTO/VERN Init TRK		WLES DK/UNDK_RECVR (ORB OPS, WLE_SENSORS)	
					CABIN TEMP CONTROLLER RECONFIG 2(1) (ORB OPS, ECLS)	OBSS LDRI/IDC RCC SURVEY - STBD (PDRS, OBSS_OPERATIONS) Ref. MSG 156, Item 3	OBSS LDRI/IDC RCC SURVEY - STBD (PDRS, OBSS_OPERATIONS) Ref. MSG 156, Item 3	
					R4 HYD BK HTR B,C (two) - OFF			
					HEATER RECONFIG-CONFIG B (ORB OPS, EPS)			
					RCS REGULATOR RCNFG (ORB OPS, RCS)			
					EXERCISE			
19:00				18:00	SUPPLY H2O DUMP USING FES (ORB OPS, ECLS) Step 1 using FES Pri A	OBSS LDRI/IDC RCC SURVEY - NOSE CAP (PDRS, OBSS_OPERATIONS)	OBSS LDRI/IDC RCC SURVEY - NOSE CAP (PDRS, OBSS_OPERATIONS)	
					MNVR (TRK) BIAS +XSI (Nose Cap) TG=4 BV=5 P=330 Y=0 OM=90 A14/AUTO/VERN Init TRK			
20:00				19:00				

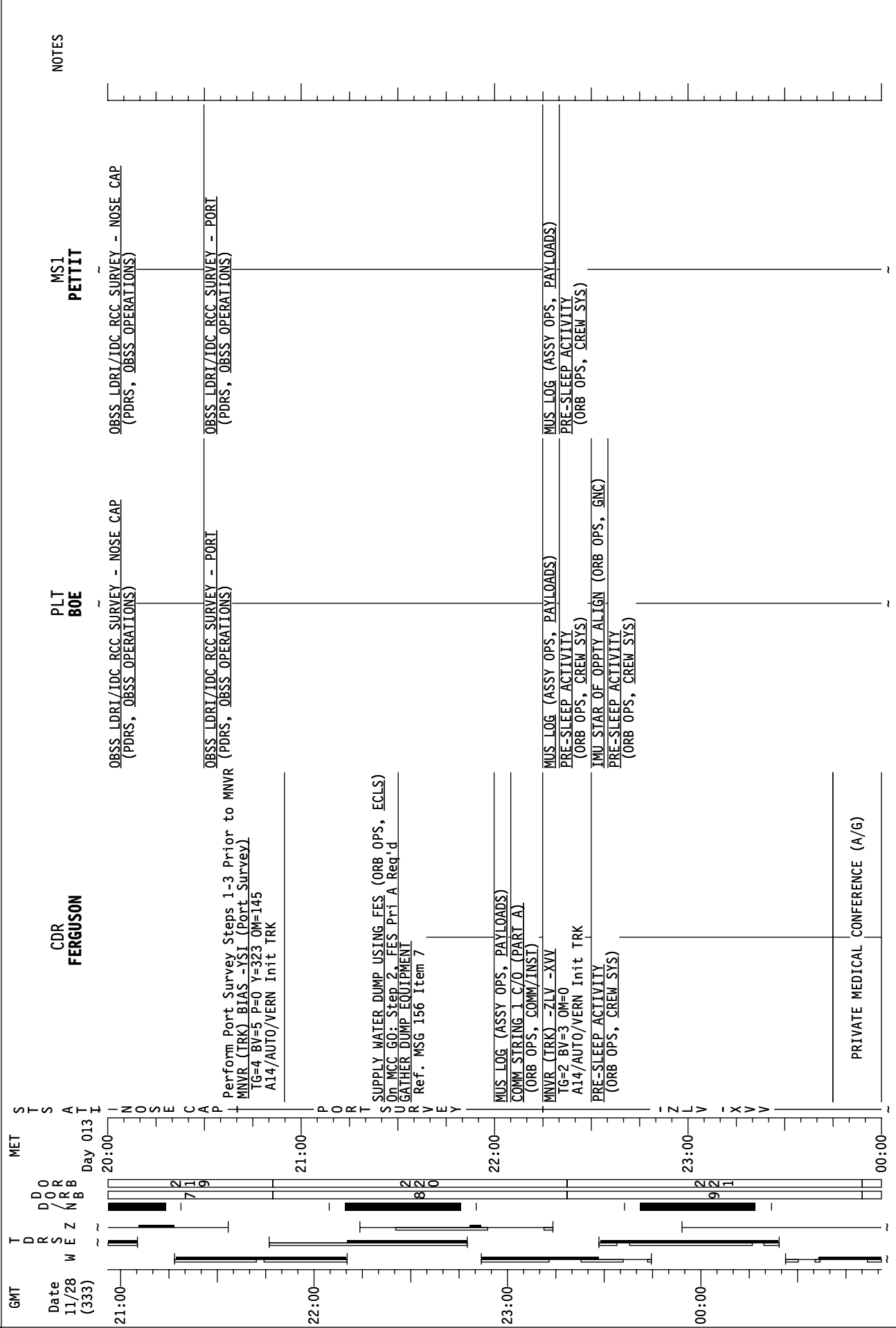
STS-126 FD (15)

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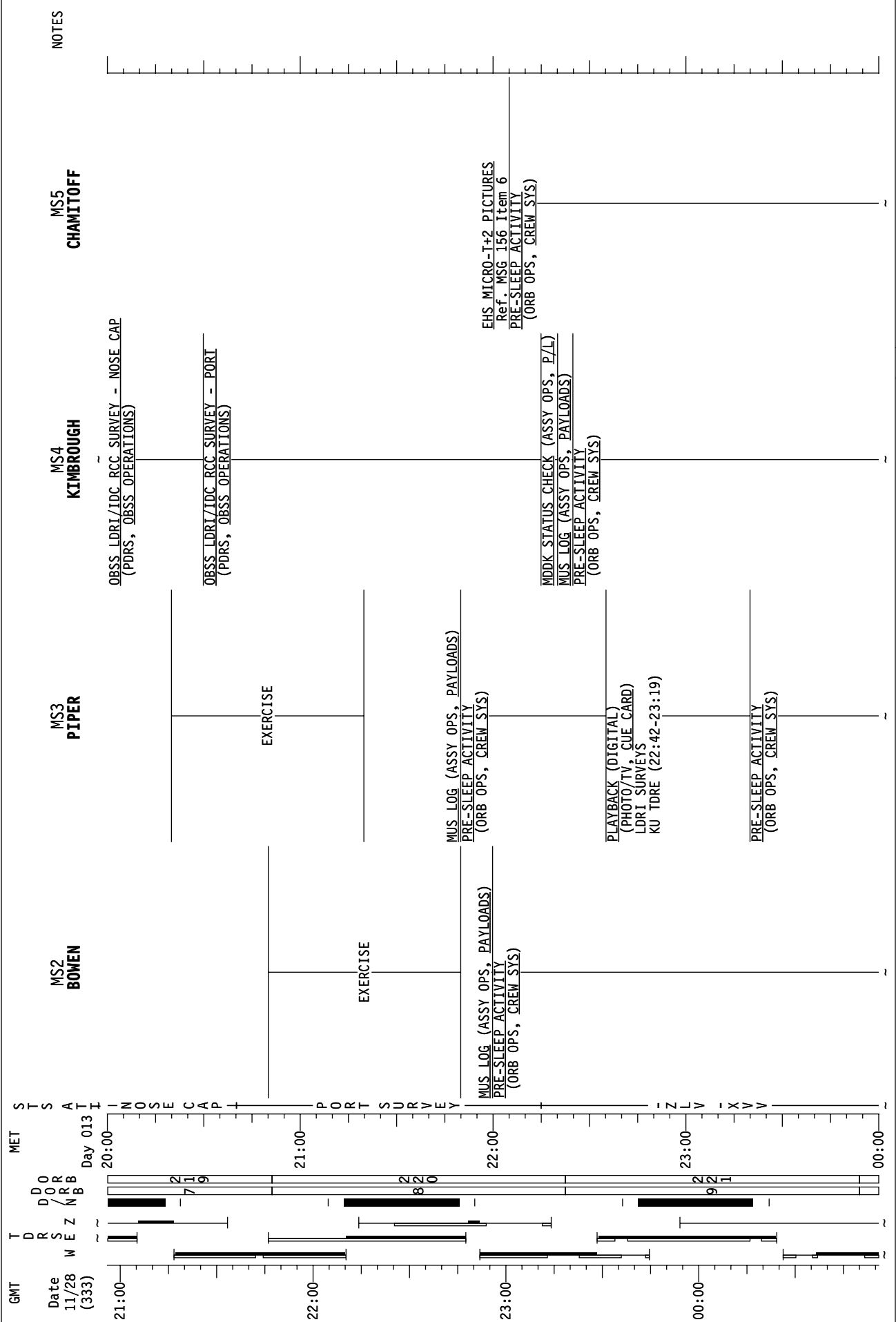
STS-126 FD (15)

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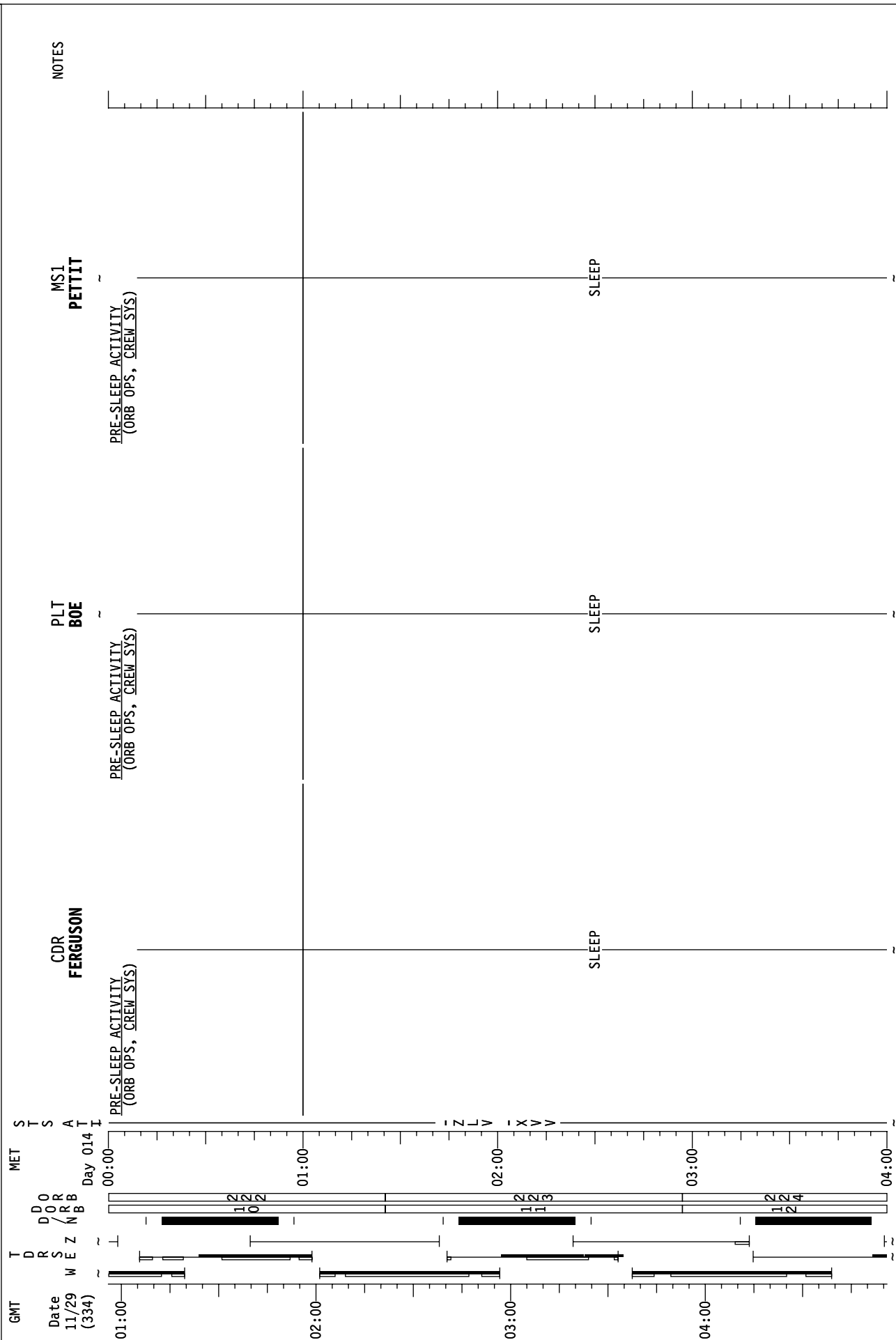
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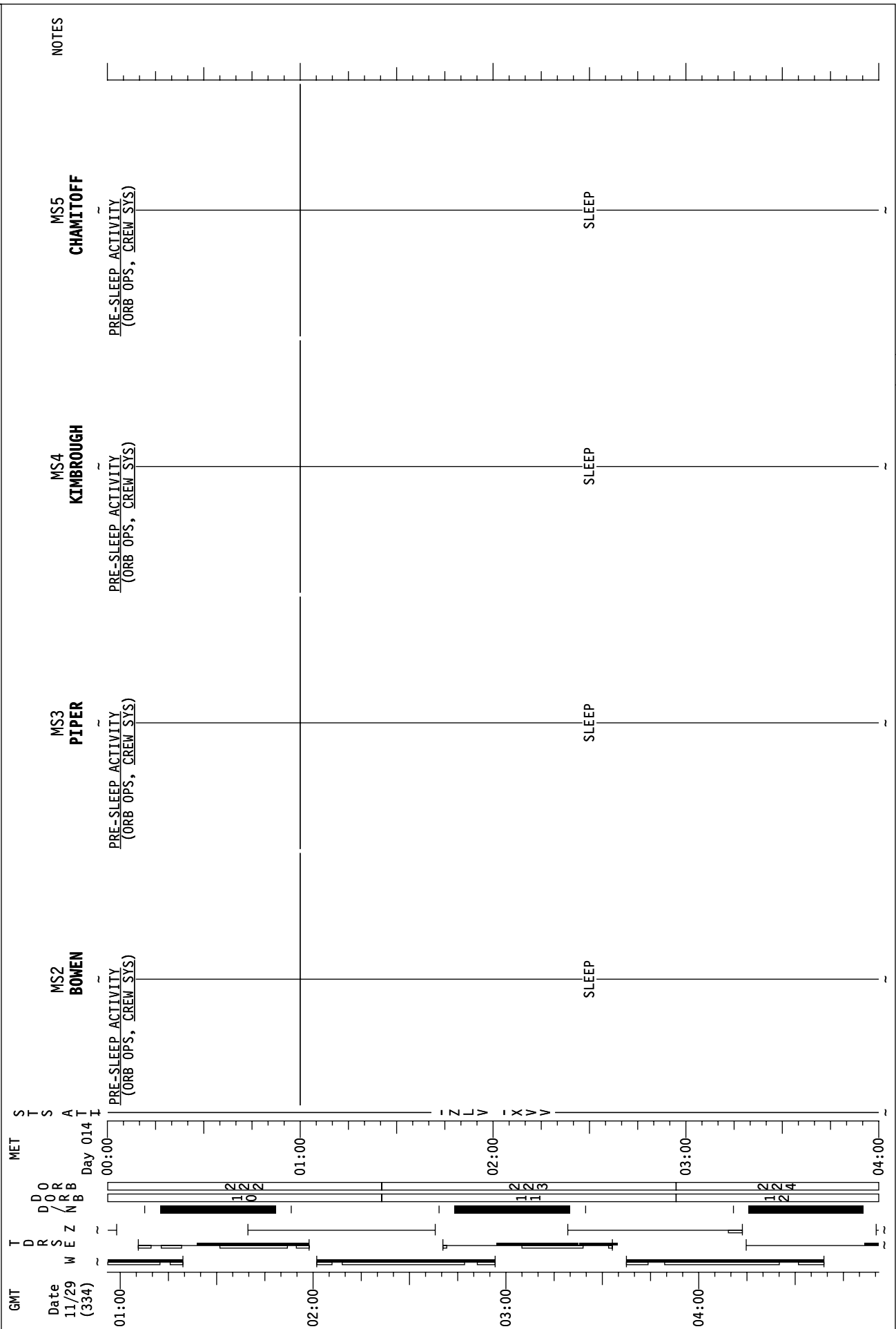
STS-126 FD (15)

REPLANNED



REPLANNED

STS-126 FD (15)



MSG 157 - FD15 MISSION SUMMARY

1 Good Morning Endeavour!!!

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3 Have a great undocking day!!!!

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6 YOUR CURRENT ORBIT IS: 196 X 186 NM

7
8 NOTAMS:

9
10 **NOTAMS – ONE CHANGE**

11
12 **WAK –AERODROME CLOSED 28 NOV 1930Z TO 29 NOV 1930Z.**

13 EDW – LAKEBED RUNWAYS RED.

14 EDW – EDT IN USE FOR STS-126. EDW ELS DAY / VFR ONLY.

15 NOR – LAKEBED RUNWAYS GREEN.

16 MRN – RWY 02 THLD DISPL 2,000'. RWY 20 LDA 9,800'.

17 DYS – AERODROME CLOSED 26 NOV 2300Z TO 29 NOV 0700Z.

18 JTY – AERODROME CLOSED 26 NOV 1300Z TO 28 NOV 2100Z.

19 NKT – AERODROME CLOSED 25 NOV 2200Z TO 02 DEC 1200Z.

20 NTU – AERODROME CLOSED 26 NOV 2100Z TO 01 DEC 1500Z.

21 JDG – AERODROME CLOSED 27 NOV 0000Z TO 01 DEC 0630Z.

22 GUA – AERODROME CLOSED 26 NOV 1200Z 28 NOV 2000Z.

23 DOV – RWY 14/32 CLOSED.

24 AMB – RWY 15/33 CLOSED.

25 YYT – RWY 16/34 CLOSED.

26 IKF – NOT USABLE. NO AGREEMENT.

27 BEN – NOT RECOMMENDED/NOT SUPPORTED.

28
29 NEXT 2 PLS OPPORTUNITIES:

30
31 EDT04L ORB 219 – 13/20:11 SCT300 7 040/10P17

32 EDT04L ORB 234 – 14/19:01 SCT300 7 050/12P18

33
34 OMS TANK FAIL CAPABILITY:

35
36 L OMS FAILS: NO

37 R OMS FAILS: NO

38
39 LEAKING OMS PRPLT BURN:

40
41 L OMS LEAK: ALWAYS BURN RETROGRADE

42 R OMS LEAK: ALWAYS BURN RETROGRADE

43
44 OMS QUANTITIES(%):

45
46 L OMS OX = 33.6 R OMS OX = 34.0

47 FU = 33.3 FU = 33.8

48 Subtract interconnect counter for current OMS quantities.

MSG 157 - FD15 MISSION SUMMARY

DELTA V AVAILABLE:

OMS	312 FPS
<u>ARCS (TOTAL ABOVE QTY1)</u>	<u>21 FPS</u>
TOTAL IN THE AFT	333 FPS
ARCS (TOTAL ABOVE QTY2)	52 FPS
FRCS (ABOVE QTY 1)	11 FPS
AFT QTY 1	75 %
AFT QTY 2	37 %

<u>SYSTEM</u>	<u>FAILURE</u>	<u>IMPACT</u>	<u>WORK AROUND</u>
COMM/INST	PSP 1	No commanding to OIU 1 for MPLM checks.	Early on FD15, INCO will command to PSP2, Crew will switch to OIU2.
OMS	The LOME GN2 leak is now manifesting itself as an accumulator leak. The accumulator leak rate is roughly the same as the rate previously seen in the tank, normalizing for volume.	At the current accumulator leak rate of 1.2 psi/hr, there is no impact to using the LOME. Periodic accumulator represses will be required to avoid nuisance alarms.	No additional action.

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MSG 158 - FD15 CREW CHOICE VIDEO DOWNLINK OPTIONS

1 Here are the available Ku times for your Crew Choice Video Downlink. Let us know which
2 time works best for you.

3
4

Crew Choice KU FD15

TDRS	AOS	LOS	DURATION (min)	COMMENT
East	13/09:58	13/10:24	26	
Z	13/13:21	13/13:47	26	No DTV
Z	13/15:27	13/15:52	25	No DTV
East	13/16:22	13/16:42	20	
East	13/17:43	13/18:25	42	
West	13/18:44	13/19:12	28	
East	13/19:13	13/20:09	56	
West	13/20:21	13/20:46	25	
West	13/20:49	13/21:14	25	
East	13/21:15	13/21:51	36	
West	13/21:56	13/22:16	20	
East	13/22:42	13/23:19	37	
West	13/23:56	14/00:16	20	
East	14/00:36	14/00:55	19	

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