

STS-125

FD 02 Execute Package



MSG	Page(s)	Title
002A	1 - 13	FD02 Flight Plan Revision (pdf)
003	14 - 15	FD02 Mission Summary (pdf)
004	16	SSE Contingency Procedure (pdf)

Approved by FAO:

Last Updated: May 12 2009 8:22AM GMT

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

Page Intentionally Left Blank

MSG 002A - FD02 FLIGHT PLAN REVISION

1 MSG INDEX

2

3 <u>MSG NO.</u>	<u>TITLE</u>
4 MSG002	FD02 Flight Plan Revision
5 MSG003	FD03 Mission Summary
6 MSG004	SSC Contingency Procedure

7

8

9 1. Post Sleep Cryo Config:

10 R1 O2,H2 MANF VLV TK1 (two) - OP (tb-OP)

11 TK3 HTRS A,B (four) - OFF

12

13 A11 CRYO TK4 HTRS O2,H2 A,B (four) - AUTO

14

15 2. Pre-Sleep and Post-Sleep Deltas

16 Make the following P&I changes to the Pre-Sleep and Post-Sleep procedures:

17

18 PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

19 Under FLIGHT DECK ACTIVITY LIST, delete step 4 until FD9.

20

21 POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

22 Under FLIGHT DECK ACTIVITY LIST, delete step 6 until FD10.

23

24 The O2/N2 Controller valve actions in Pre- and Post-Sleep are not required until the

25 PCS is active. This will occur FD9 after the cabin is repressurized to 14.7 psia.

26

27 3. SSV is currently not functional and MCC would like to utilize this capability during the

28 upcoming OBSS Inspections. In the FS P/TV C/L on p. 1-8, please re-perform P/TV01

29 Video Setup step 7, and report the status of the SSV LEDs to MCC.

30

31 4. Since the PCS will be configured for 10.2 psi later today, PCS 1(2) CONFIG (ORB OPS,

32 ECLS) which was called out in the FD1 EZ Block but was not performed, will not be

33 required. Because PCS Config isn't going to be performed add these additional

34 switchthrows to PREP FOR 10.2 PSI CABIN (EVA C/L, 10.2 PSI CABIN) after step 5 on

35 page 1-3 to be in a good PCS config:

36

37 MO10W √H20 TK N2 REG INLET SYS 1 – OP

38 SYS 2 – CL

39

40 5. PGSC: The MCC has uplinked the latest HazMat data file to the PGSCs.

41

42 6. UMB WELL PHOTOS: Drew, thank you for staying up late to attempt the image transfer

43 from the ET Umbilical Well camera to the laptop. The error message you received last

44 night is the same error message that has been recently seen during ground

45 troubleshooting with this camera. Since these images can be obtained from the memory

46 card post-flight, no further attempts to download these images while on-orbit are

47 required at this time.

48

49

50 7. REPLACE PAGES 2-4 THROUGH 2-5 and 3-8 THROUGH 3-17.

END OF PAGE 1 OF 13, MSG 002A

REPLANNED

05/12/09 03:02:09

FD02

GMT 05/12/09 (132)

Day 000

MET	12	07	08	09	10	11	12	13	14	15	16	17	18
CDR/R2 ALTMAN		SLEEP	SLEEP	POST SLEEP	POST SLEEP	OM FSS PREP S FOR BRTHG	POST SLEEP	SRT WING TCC - RCC D	STBD WING BELLY RCC SRVY	STBD WING RCC SRVY	MN NOSE CAP VS SRVY	MEAL	P 10.2 R DPRS E P
PLT/R3 JOHNSON		SLEEP	SLEEP	POST SLEEP	POST SLEEP	03 P/TV 03 S FSS OPS U	POST SLEEP	SRT WING TCC - RCC D	STBD WING BELLY RCC SRVY	STBD WING RCC SRVY	NOSE CAP SRVY	MEAL	P 10.2 R DPRS E P
MS1/EV4/R2 GOOD		SLEEP	SLEEP	POST SLEEP	POST SLEEP	SSP SP S DO LD V IS EII T P T EP S	POST SLEEP	EMU C/O	EMU C/O	MEAL	NOSE CAP SRVY	PORT WING RCC SRVY	PORT BELLY TILE SRVY
MS2/R1 MCARTHUR		SLEEP	SLEEP	POST SLEEP	POST SLEEP	← SSE SURVEY w/ELBOW CAM	POST SLEEP	MSSRT WING TCC - RCC D	STBD WING BELLY RCC SRVY	STBD WING RCC SRVY	MEAL	PRIMP PORT OCIN O WING R CVR R T RT SRVY	PORT BELLY TILE SRVY
MS3/EV1 GRUNSFELD		SLEEP	SLEEP	POST SLEEP	POST SLEEP	FSS PREP FOR BRTHGS	POST SLEEP	BATT & CHRGR SETUP	EMU C/O	EMU C/O	MEAL	REBA C/O	EVA TOOL UNSTOW CNFG
MS4/EV3/R2 MASSIMINO		SLEEP	SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	OBSS UNBRTH	EMU C/O	EMU SWAP	EMU C/O	MEAL	PORT WING RCC SRVY	PORT BELLY TILE SRVY
MS5/EV2 FEUSTEL		SLEEP	SLEEP	POST SLEEP	POST SLEEP	POST SLEEP	A/L PREP	EMU C/O	EMU SWAP	EMU C/O	MEAL	REBA C/O	EVA TOOL UNSTOW CNFG
HST CMD		SSR PLAY BACK	SSR PLAY BACK	SSR PLAY BACK	SSR PLAY BACK	SSR PLAY BACK	SSR PLAY BACK	SSR PLAY BACK	SSR PLAY BACK	SSR PLAY BACK	SSR PLAY BACK	SSR PLAY BACK	SSR PLAY BACK
DAY/NIGHT ORBIT													
TDRS													
ORB ATT HST ATT SA ANGLE													
NOTES													

S T S - 1 2 5

2

REPLANNED

05/12/09 03:02:09

FD02

GMT 05/12/09 (132)

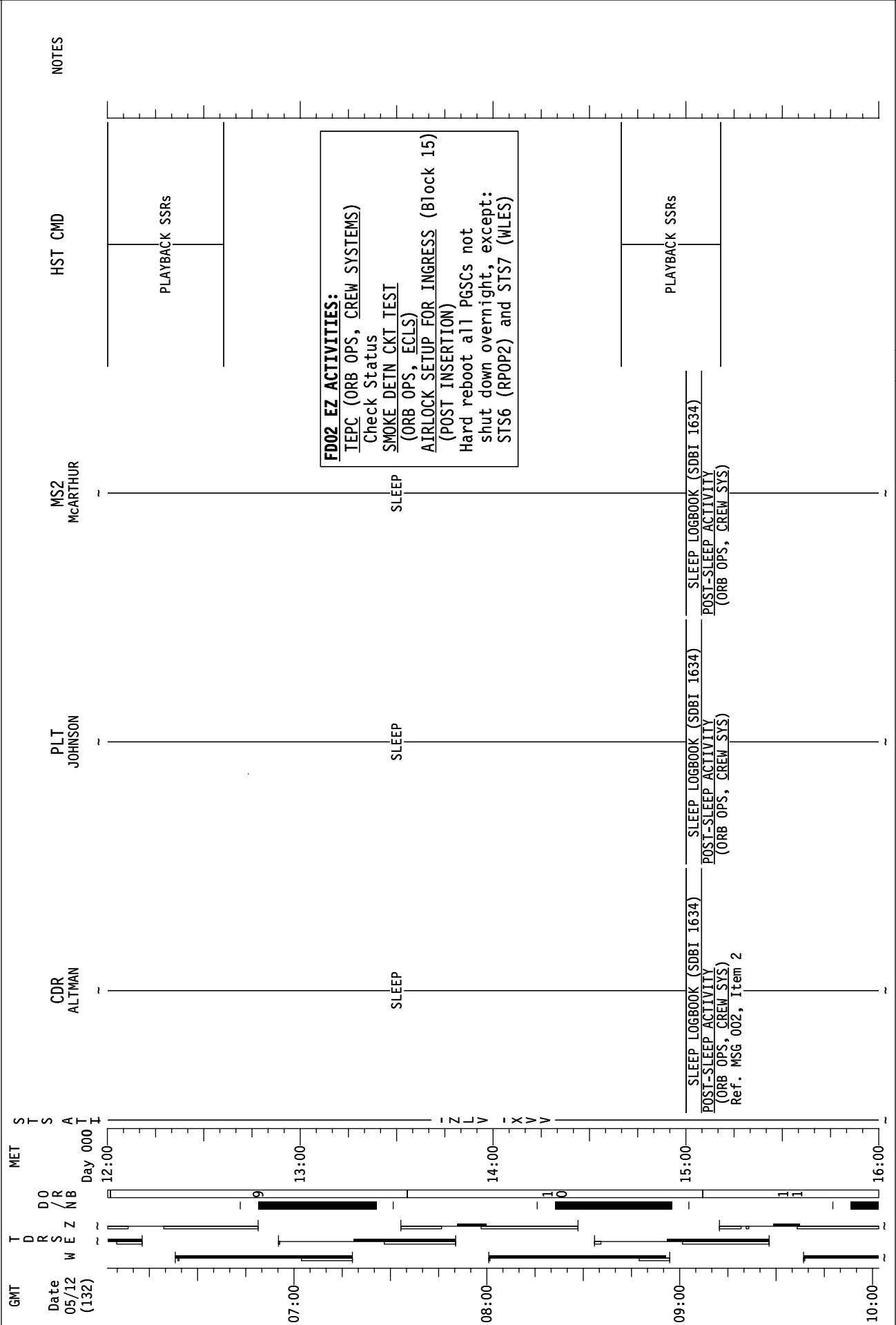
Day 001

MET	001/00	19 01	20 02	21 03	22 04	23 05	05/13 06	07	08	09	10	11	12
CDR/R2 ALTMAN	C N S F S G H	ERG SETUP	FILTER CLEANING	M S L V M V V U	PRE SLEEP	NC3^ G 2 OMS BURN	PRE SLEEP*						
PLT/R3 JOHNSON	C N P F I C B C 3 D G S E T U P O	I A P/TV09 CU BD	P/TV01 VIDEO SETUP	T C B C	OMS POD SRVY	OMS BURN	PRE SLEEP*						
MS1/EV4/R2 GOOD	PORT BELLY TILE SRVY	PORT MING RCC SRVY	T S O V Y	OBSS BERTH	P S R L E E P	RNDZ TOOLS C/O	PRE SLEEP						
MS2/R1 MCARTHUR	PORT BELLY TILE SRVY	PORT MING RCC SRVY	T S O V Y	F C R Y O P 02 R S N S R G C K	F C M S O P S	PRE SLEEP	PRE SLEEP*						
MS3/EV1 GRUNSFELD	ERG SETUP ACT	EXERCISE	EXERCISE	PRE SLEEP	LDRI DNLK		PRE SLEEP						
MS4/EV3/R2 MASSIMINO	PORT BELLY TILE SRVY	PORT MING RCC SRVY	T S O V Y	OBSS BERTH			PRE SLEEP						
MS5/EV2 FEUSTEL	P/TV09 ICBC3D SETUP	EXERCISE	EXERCISE	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP						
HST CMD				SSR PLAYBACK		D D U U M M P P	HST TO RNDZ ATT	HST LGA DRCT TDRS	3 GYRO OPS RECONFIG	H/W CNTRL MACROS & SPCS	LOAD FOR HGA ARRC	PREP GT S	HR A R C
DAY/NIGHT ORBIT	16	17	18	19	20	21	22	23	24				
TDRS													
ORB ATT HST ATT SA ANGLE		BIAS +XSI	-ZLV -XVW	NC-3	SMS DEFINED	SUN TRACK	#P/L MAX						
NOTES	*10.2 DPRS *CNTLR SWAP *10.2 DPRS *HUM SEP *EVA TOOL UNSTOW CNFG *EVA TOOL UNSTOW CNFG												

S T S - 1 2 5

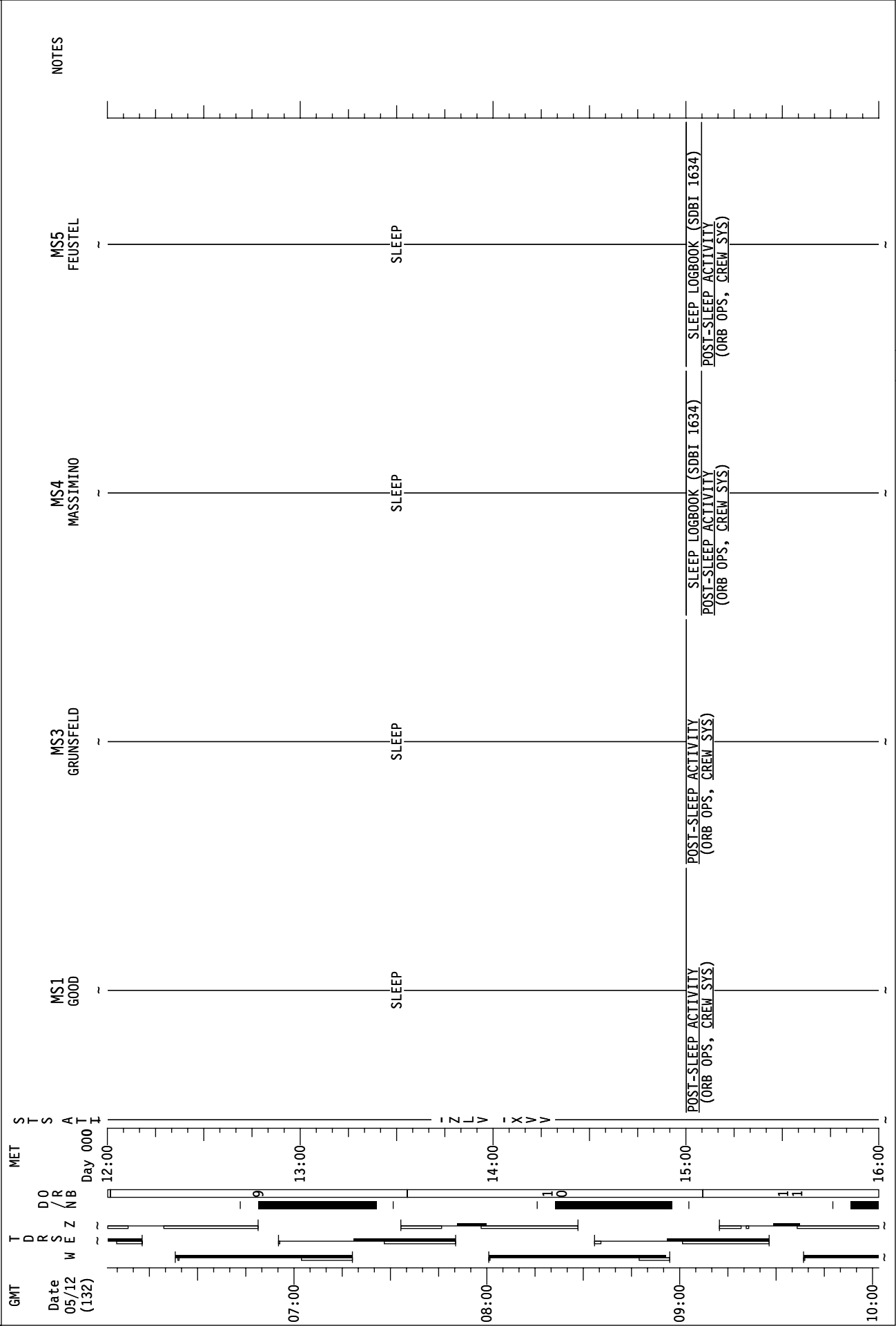
STS-125 (FD02)

REPLANNED



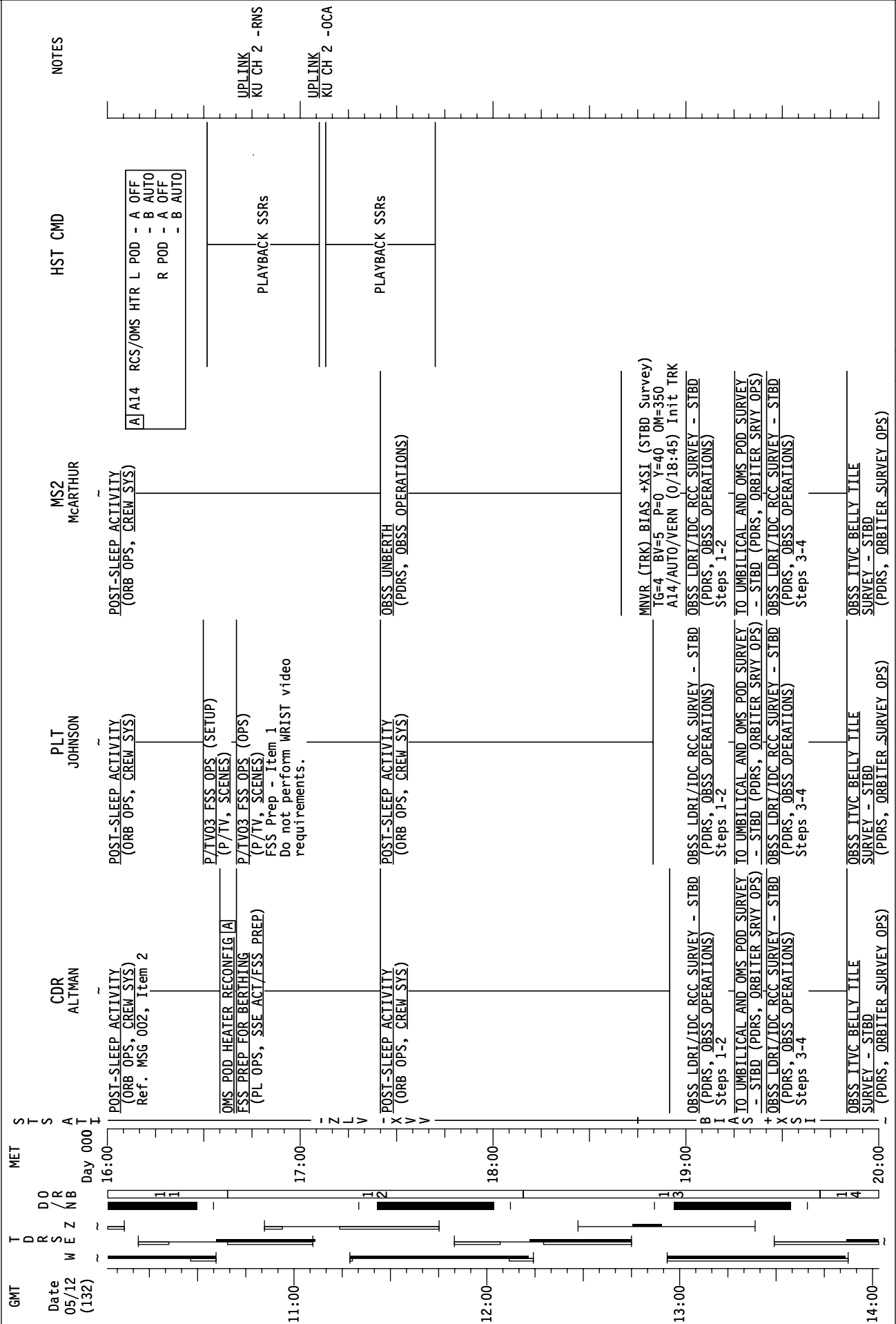
STS-125 (FD02)

REPLANNED



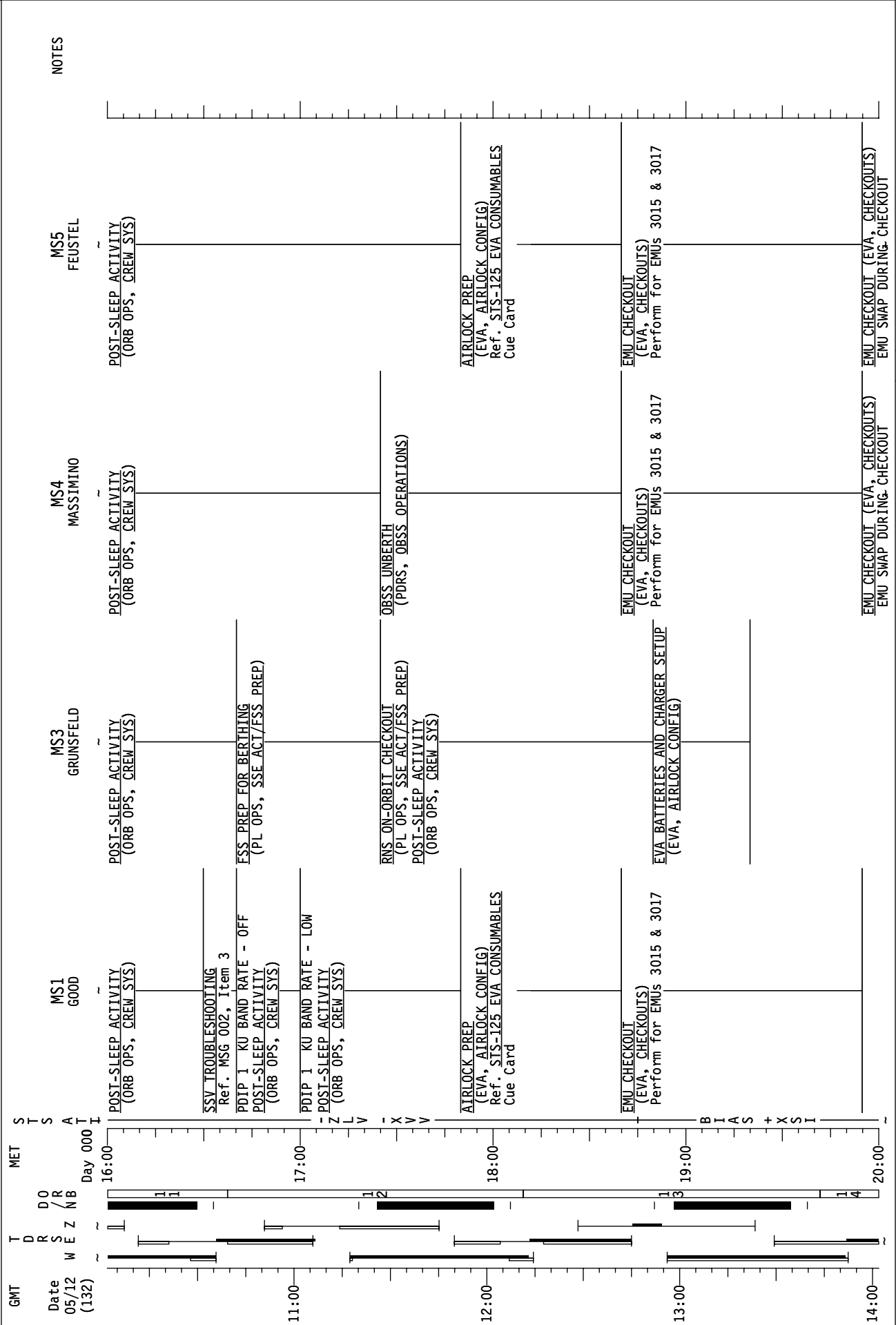
STS-125 (FD02)

REPLANNED



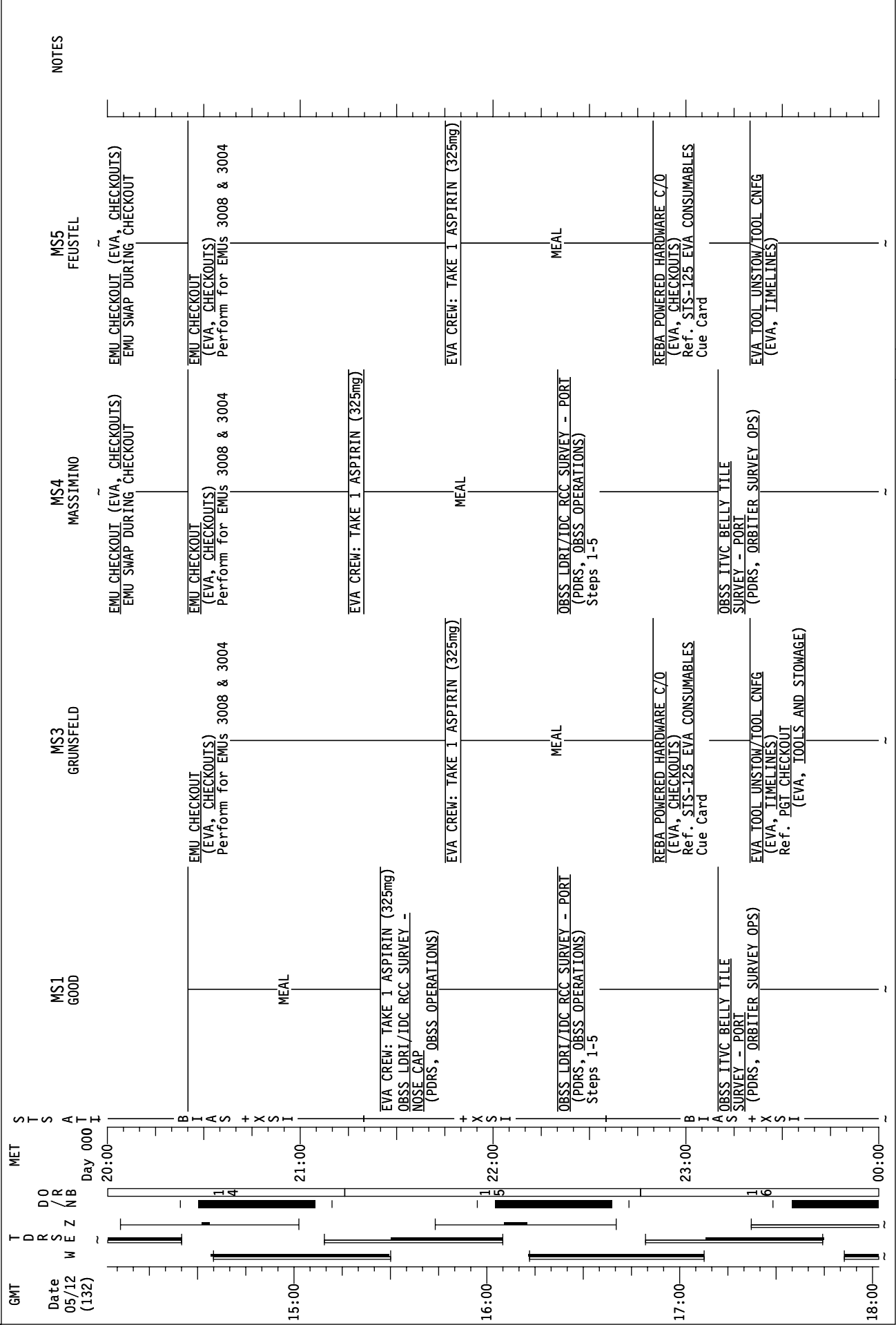
STS-125 (FD02)

REPLANNED



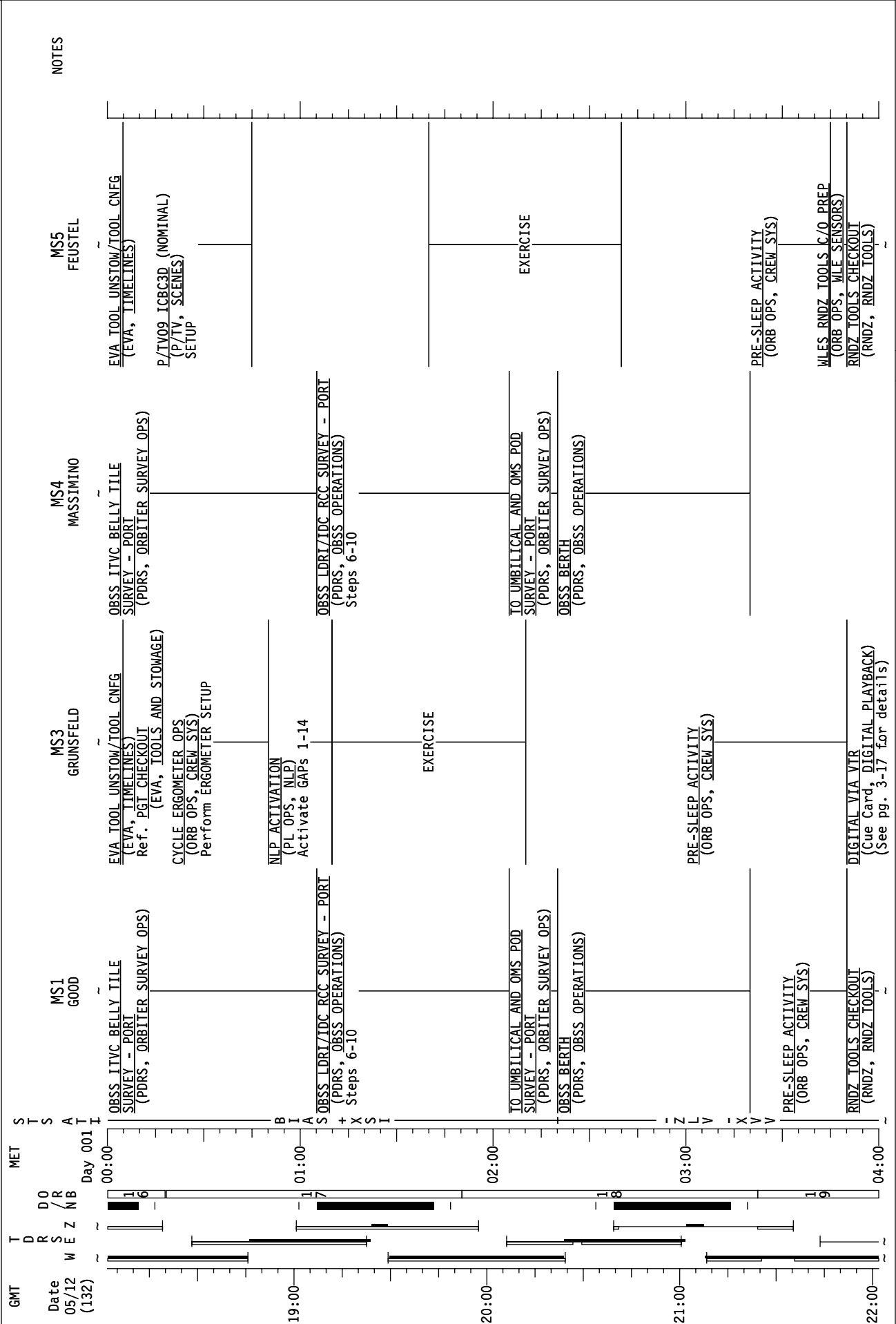
STS-125 (FD02)

REPLANNED



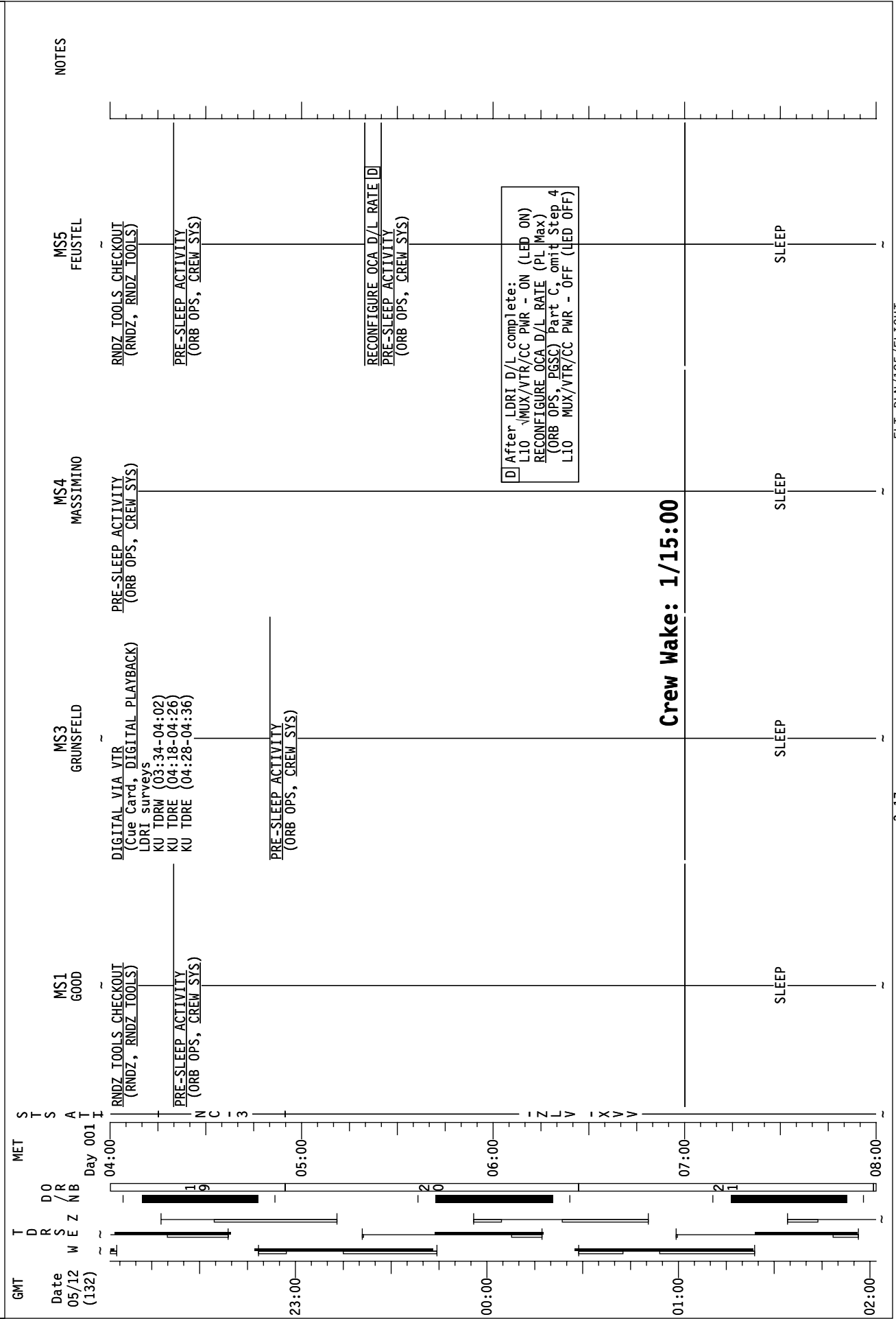
STS-125 (FD02)

REPLANNED



STS-125 (FD02)

REPLANNED



MSG 003 - FD02 MISSION SUMMARY

1 Good Morning Atlantis!!!

2
3 Your launch yesterday was spectacular!!!

4
5 You will notice on your flight plan for today that we have rearranged a few events. NC2 is
6 no longer required due to your trajectory. That allows us to put FSS Prep for Berthing
7 before OBSS Unberth. This is much more efficient and actually, the ideal way to arrange
8 things!

9
10 Have a great day!!!

11
12
13 YOUR CURRENT ORBIT IS: 298 X 118 NM

14
15 NOTAMS:

16
17 EDW – LAKEBED RUNWAY 15/33 ELS ONLY. OTHER LAKEBED RWYS RED.
18 NOR – LAKEBED RUNWAYS GREEN.
19 GUA – 06R/24L CLOSED.
20 GDV – RWY 03R/21L CLOSED.
21 KIN – UNUSABLE.
22 GSA – UNUSABLE.
23 AMB – UNUSABLE.
24 EIP – NOT USABLE. NO AGREEMENT.
25 BEN – NOT RECOMMENDED/NOT SUPPORTED.
26 BYD – POLITICALLY NOT RECOMMENDED.
27 AAT – POLITICALLY NOT RECOMMENDED.
28 LRB – POLITICALLY NOT RECOMMENDED. TACAN CH 85 OUT.
29

30 NEXT 2 PLS OPPORTUNITIES:

31
32 NOR23 ORB 15 – 00/21:53 FEW250 230/12P19
33 EDW04 ORB 31 – 01/22:49 SCT250 330/08P14
34

35 OMS TANK FAIL CAPABILITY:

36
37 L OMS FAILS: YES
38 R OMS FAILS: YES
39

40 LEAKING OMS PRPLT BURN:

41
42 L OMS LEAK: ALWAYS BURN OUT-OF-PLANE
43 R OMS LEAK: ALWAYS BURN OUT-OF-PLANE
44

45 OMS QUANTITIES (%)

46
47 L OMS OX = 82.4 R OMS OX = 81.8
48 FU = 82.0 FU = 81.9
49
50
51

MSG 003 - FD02 MISSION SUMMARY

DELTA V AVAILABLE:

OMS	781 FPS
<u>ARCS (TOTAL ABOVE QTY1)</u>	<u>55 FPS</u>
TOTAL IN THE AFT	836 FPS
ARCS (TOTAL ABOVE QTY2)	83 FPS
FRCS (ABOVE QTY 1)	39 FPS
AFT QTY 1	87 %
AFT QTY 2	49 %

<u>SYSTEM</u>	<u>FAILURE</u>	<u>IMPACT</u>	<u>WORK AROUND</u>
GNC	ASA 1 Power	Channel 1 Aerosurfaces failed. No mission duration or landing site impacts for 1 FCS failure. Next Aerosurface failure will cause mission duration and landing site impacts.	Deselect feedbacks PASS and BFS prior to Entry.
EPS	Loss of the MIC KEY light at panel A2.	Loss of visual confirmation on the Flight Deck Speaker that the MS ATU is keyed.	none

MSG 004 - SSE CONTINGENCY PROCEDURE

1 **SSE SSR-1 FMDM SWAP A->B (B->A) (PL SYS, SSE), pg 1-38, delete step 9.**

2
3 *Rationale: The MULE Survival Htr and MULE COPE Htr strings are fully operable and*
4 *monitorable thru either of the Flex 2 (MULE) FMDMs. There is no need to swap these*
5 *heaters with the FMDMs.*

6
7 **RAPID SAFING WITHOUT HST (PL OPS, CONTINGENCY OPERATIONS), pg 5-24:**

8
9 WAS:

10 3. ROTATE (SINGLE MOTOR DRIVE)

11 Perform this step only if BSP installed and B/L not aligned with fixed target (+V3 FWD);
12 else, go to step 4

13 NOTE

14 Rotate to align closest berthing latch to fixed target. If hardstop encountered, reverse
15 direction

16
17 IS:

18 3. ROTATE (SINGLE MOTOR DRIVE)

19 Perform this step only if BSP installed and B/L 1 or 3 not aligned with fixed target; else,
20 go to step 4

21 NOTE

22 Rotate to align berthing latch 1 or 3 to fixed target. If hardstop encountered, reverse
23 direction

24
25 *Rationale: Berthing Latch 2 forward is not an acceptable Safe-for-Landing configuration due*
26 *to interference with the PLB door envelope.*

27
28 **RAPID SAFING WITHOUT HST (PL OPS, CONTINGENCY OPERATIONS),**
29 **pg 5-25, step 6:**

30 Delete the following actions:

31 A6U PL RETEN LOGIC PWR SYS 1(2) – OFF

32 R13L PL BAY MECH PWR SYS 1(2) – OFF

33
34
35 *Rationale: Mech and Logic power need to remain on thru the completion of the step 6 FSS*
36 *downlock activities. Removal of these power sources are properly reflected in step 7.*

37
38
39
40
41
42
43
44
45
46
47
48
49
50
51

END OF PAGE 1 OF 1, MSG 004