



STS-129/ULF3

FD 04 Execute Package

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023A	15 - 16	FD04 Mission Summary
024	17	FD03 MMT Summary
025	18 - 19	FD04 Transfer Message
026	20	FD04 Crew Choice Downlink

Approved by FAO:

Gail Hansen



Another night in the White FCR

Last Updated: Nov 19 2009 8:15 AM GMT

JEDI (Joint Execute package Development and Integration), v3.0

MSG 022A - FD04 FLIGHT PLAN REVISION

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MSG INDEX

<u>MSG NO.</u>	<u>TITLE</u>
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027	FD05 PAO Look Ahead

1. Post-Sleep Cryo Config

For today's Post-Sleep cryo config, O2 Tanks 2, 3, and 4 and H2 Tanks 2 and 5 will be active.

**R1 O2,H2 MANF VLV TK2 (two) - OP (tb-OP)
O2 TK3 HTRS A,B (two) - AUTO**

**A11 CRYO TK4 HTRS O2 A,B (two) - AUTO
H2 A,B (two) - OFF**

**A15 CRYO TK5 HTRS O2 A,B (two) - OFF
H2 A,B (two) - AUTO**

Pre-Sleep Cryo Config

√MCC for deltas prior to configuring for Pre-Sleep.

For tonight's Pre-Sleep cryo config, Manifold 1 will be closed with O2 and H2 Tanks 1 and 5 active.

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

A11 CRYO TK4 HTRS O2 A,B (two) - OFF

**R1 O2 TK3 HTRS A,B (two) - OFF
O2,H2 TK2 HTRS A,B (four) - OFF
TK1 HTRS A,B (four) - AUTO
MANF VLV TK1 (two) - CL (tb-CL)**

2. NLP GAP Activation/Termination

Call-down Reminder for Leland:

For NLP GAP Activation and Termination please call down MET Start time for the first GAP in the group and MET Stop time for the last GAP in the group. Start and stop times for individual GAPs are not necessary.

MSG 022A - FD04 FLIGHT PLAN REVISION

1 Condensation Possibility:

2 There is a potential for some condensation to develop on the surfaces of the
3 FPAs and/or GAPs. When CGBA is run at 10C or lower, it will be below the
4 dewpoint of the shuttle. Because of this, when removing GAPs from CGBA,
5 condensation may form, due to cabin humidity levels. The amount of moisture
6 formed depends on humidity levels in the cabin, and over time, the inside top and
7 bottom surfaces of CGBA could condense water leading to something more like
8 free drops of water.
9

10 It is important to distinguish between condensation and a leak. Moisture due to
11 condensation will be uniform on the outside of the surface of the GAP and not
12 associated with the o-ring seals. Also, there will be no damage or breach of the
13 1st level of containment, (made up of the glass barrel and upper and lower
14 seals), which is probably the most important confirmation.
15

16 Pen and Ink ASSY OPS with the following (2 locations):

17
18 NLP ACTIVATION, pg. 128, step 6
19 NLP TERMINATION, pg. 134, step 6
20

21 Location callout was:

22 CGBA or
23 MF71K

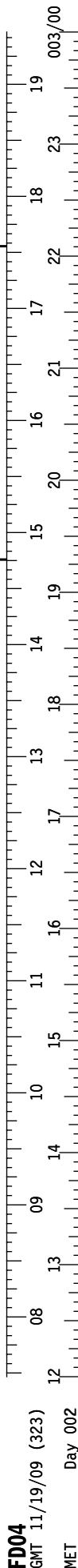
24 Location callout is:

25 MF71E
26 (CGBA)
27 MA16D
28

29 3. REPLACE PAGES 2-10 AND 2-12, 3-32 THROUGH 3-41.
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NO UNISOLATED EXERCISE
[During SASA Install]

REPLANNED



FD04
GMT 11/19/09 (323)

MET	Day_002	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	19	003/00		
CDR HOBBAUGH	SLEEP	SLEEP	SLEEP	POST SLEEP	PMC A/G	POST SLEEP	XFER OPS	MEAL	P/TV07 EVA	P/TV07 EVA	C I W C M N C T E R M	C I W C M N C T E R M	C I W C M N C T E R M	C I W C M N C T E R M	C I W C M N C T E R M	C I W C M N C T E R M	C I W C M N C T E R M	C I W C M N C T E R M	C I W C M N C T E R M	C I W C M N C T E R M	
																					IP IN A M H D U I B
M2 PLT WILMORE	SLEEP	SLEEP	SLEEP	POST SLEEP	HYG BRK/ HATCH CLS	EVA PREP	EMU PREBREATHE	C L K D P R S	P - D S	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE
M1 MS1 MELVIN	SLEEP	SLEEP	SLEEP	POST SLEEP	POST SLEEP	EXERCISE	EXERCISE	EXERCISE	EXERCISE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	
																					EXERCISE
IV MS2 BRESNIK	SLEEP	SLEEP	SLEEP	POST SLEEP	POST SLEEP	EXERCISE	EXERCISE	EXERCISE	EXERCISE	EVA IVA SUPPORT	EVA IVA SUPPORT	EVA IVA SUPPORT	EVA IVA SUPPORT	EVA IVA SUPPORT	EVA IVA SUPPORT	EVA IVA SUPPORT	EVA IVA SUPPORT	EVA IVA SUPPORT	EVA IVA SUPPORT	EVA IVA SUPPORT	
																					EXERCISE
EV1 MS3 FOREMAN	SLEEP	SLEEP	SLEEP	POST SLEEP	HYG BRK/PREBREATHE	EVA PREP	EMU PREBREATHE	C L K D P R S	P - D S	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	
																					HYG BRK/PREBREATHE
EV2 MS4 SATCER	SLEEP	SLEEP	SLEEP	POST SLEEP	HYG BRK/PREBREATHE	EVA PREP	EMU PREBREATHE	C L K D P R S	P - D S	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	SPARE SASA INSTL	
																					HYG BRK/PREBREATHE
DAY/NIGHT	ORBIT	41	42	43	44	45	46	47	48	49											
TDRS	W																				
ORB ATT	MT/SSRMS POS																				
NOTES																					

FD04

GMT 11/19/09 (323)

MET Day_003

003/00 20 01 21 22 23 04 05 06 07 08 09 10 11 12

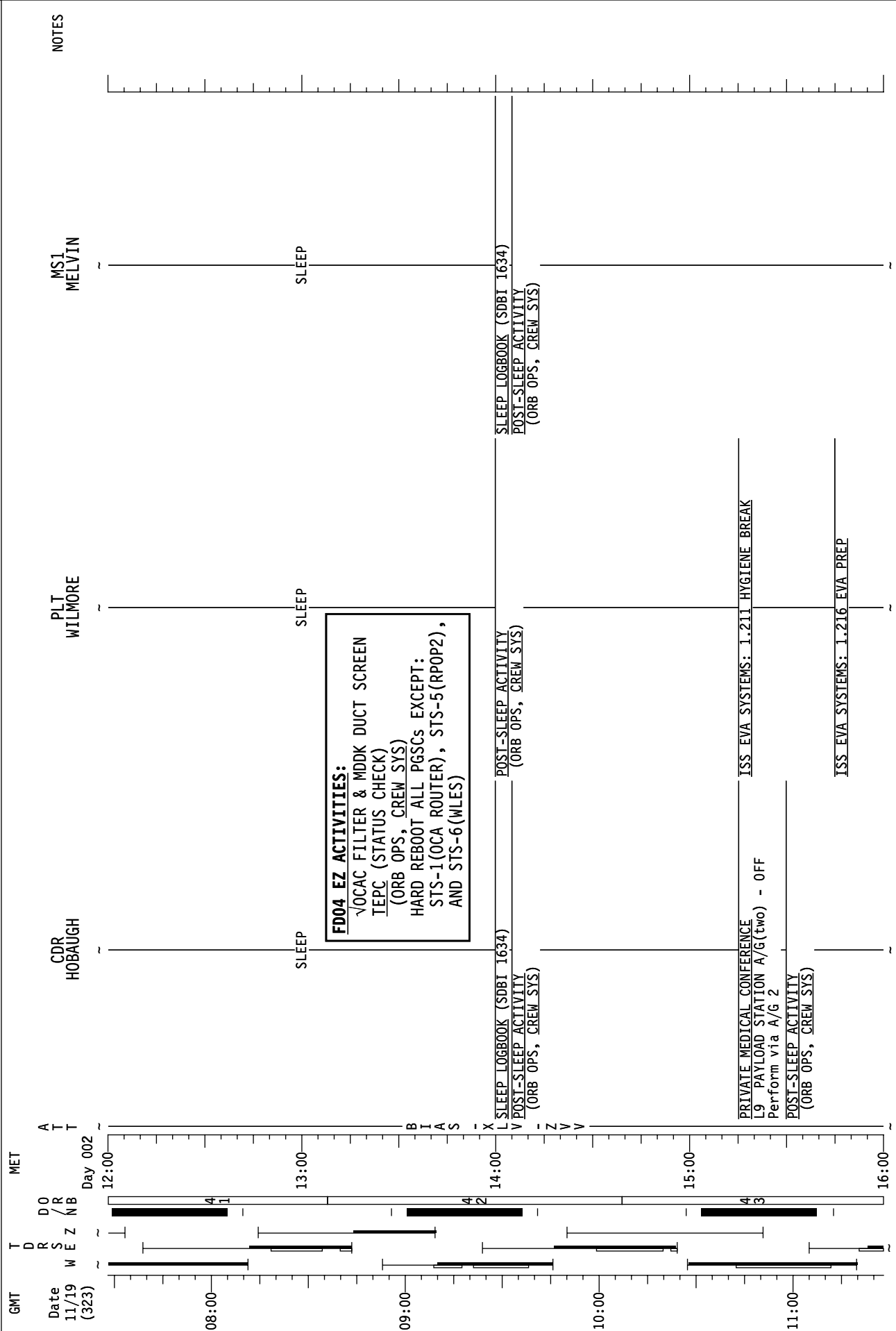
Day	00	01	02	03	04	05	06	07	08	09	10	11	12
CDR HOBBAUGH	*P/TVO7 EVA	EVA 1 TO MT XLATE	EXERCISE	COND CMC C/O	PRE SLEEP	PMC A/G	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	POST EVA W/H2O	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
M2 PLT WILMORE	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	POST EVA W/H2O	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	POST EVA W/H2O	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
M1 MS1 MELVIN	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	POST EVA W/H2O	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	POST EVA W/H2O	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
IV MS2 BRESNIK	EVA IVA SUPPORT	EVA IVA SUPPORT	POST EVA W/H2O	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
	EVA IVA SUPPORT	EVA IVA SUPPORT	POST EVA W/H2O	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
EV1 MS3 FOREMAN	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	POST EVA W/H2O	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	POST EVA W/H2O	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
EV2 MS4 SATCER	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	POST EVA W/H2O	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
	SSRMS SASA XFR/LEE	SSRMS SASA XFR/LEE	POST EVA W/H2O	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
DAY/NIGHT	ORBIT	ORBIT	ORBIT	ORBIT	ORBIT	ORBIT	ORBIT	ORBIT	ORBIT	ORBIT	ORBIT	ORBIT	ORBIT
TDRS	W	E	Z										
ORB ATT													
MT/SSRMS POS													
NOTES	*CMC XFER (3)												

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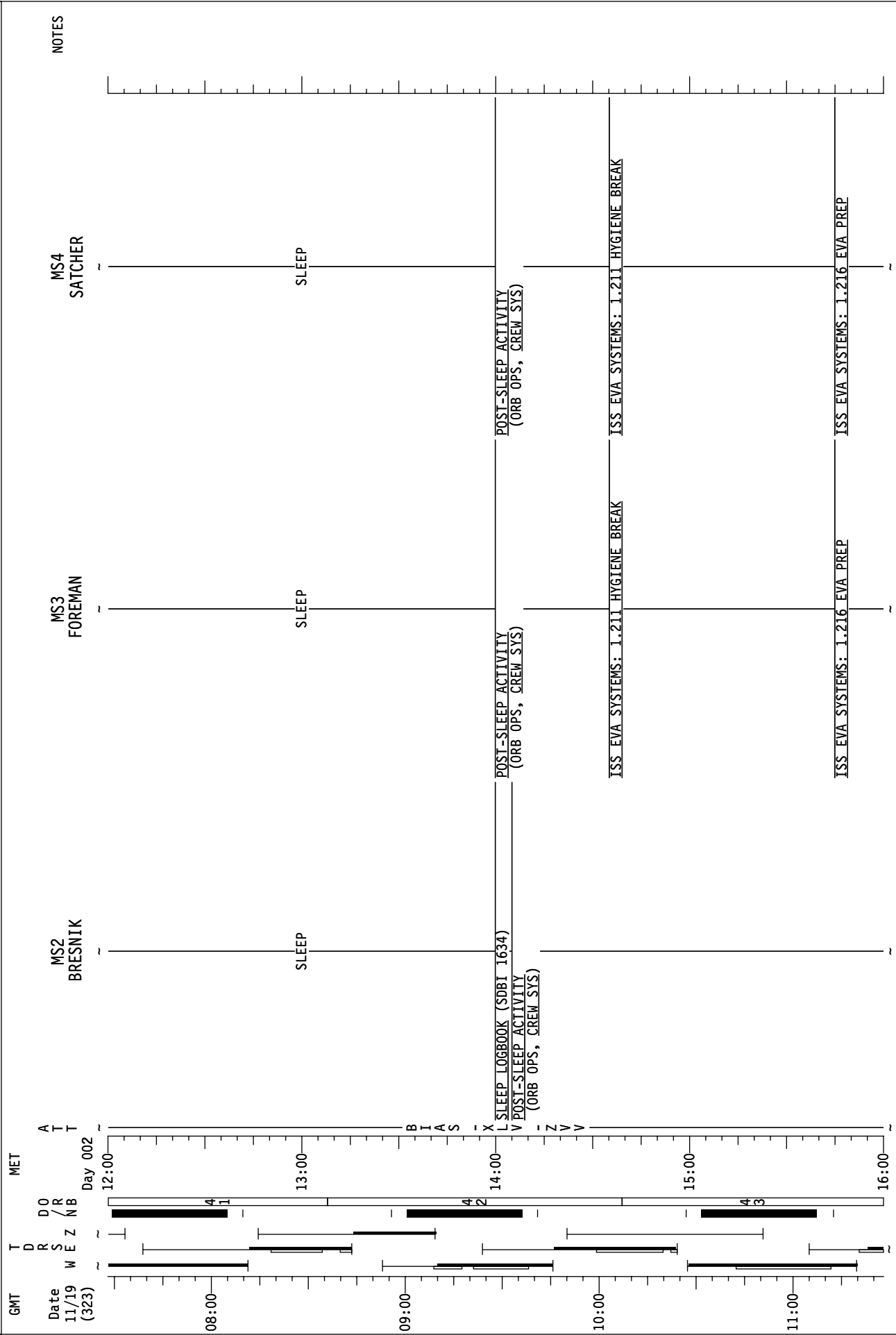
STS-129/ULF3 FD04

REPLANNED



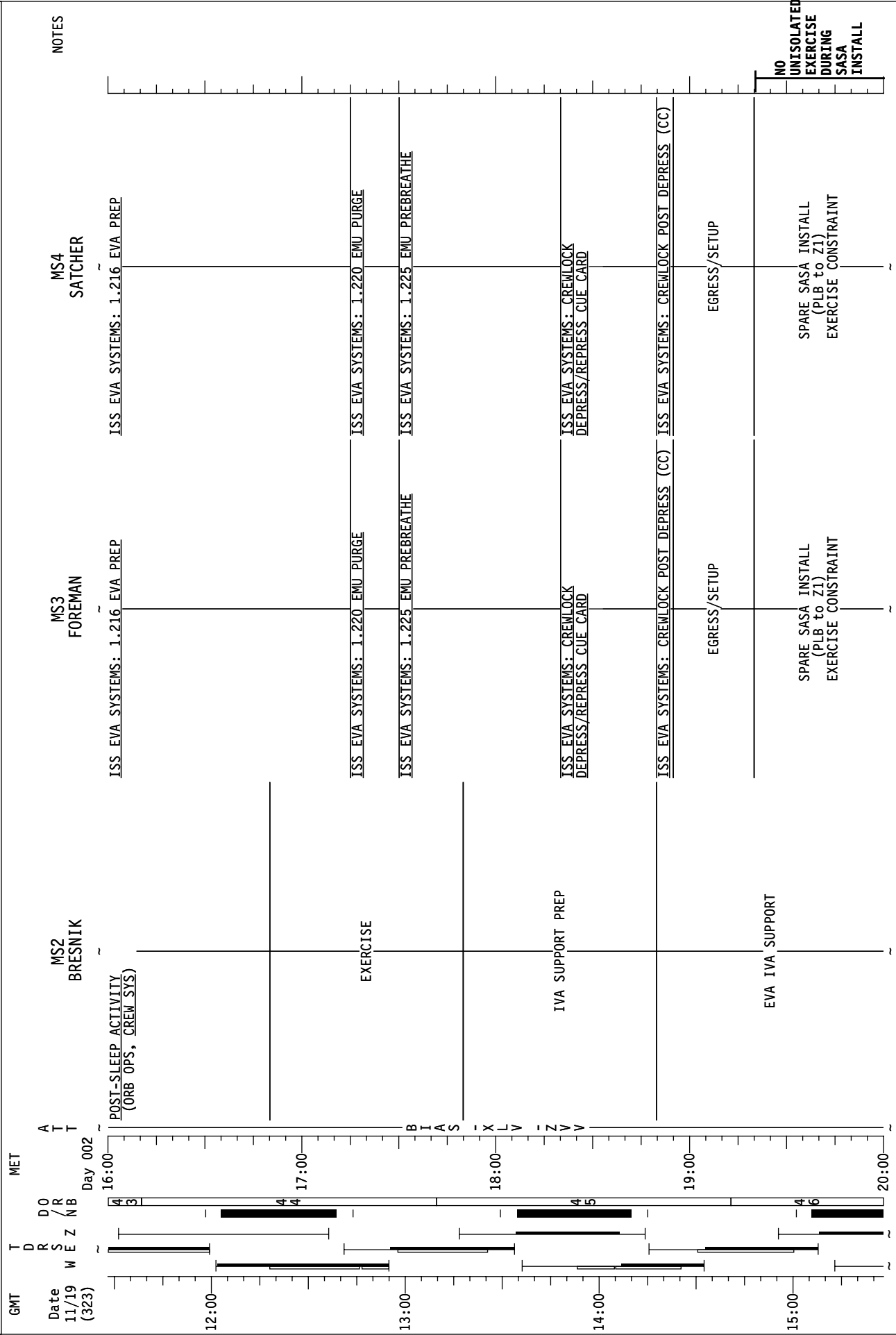
STS-129/U/LF3 FD04

REPLANNED



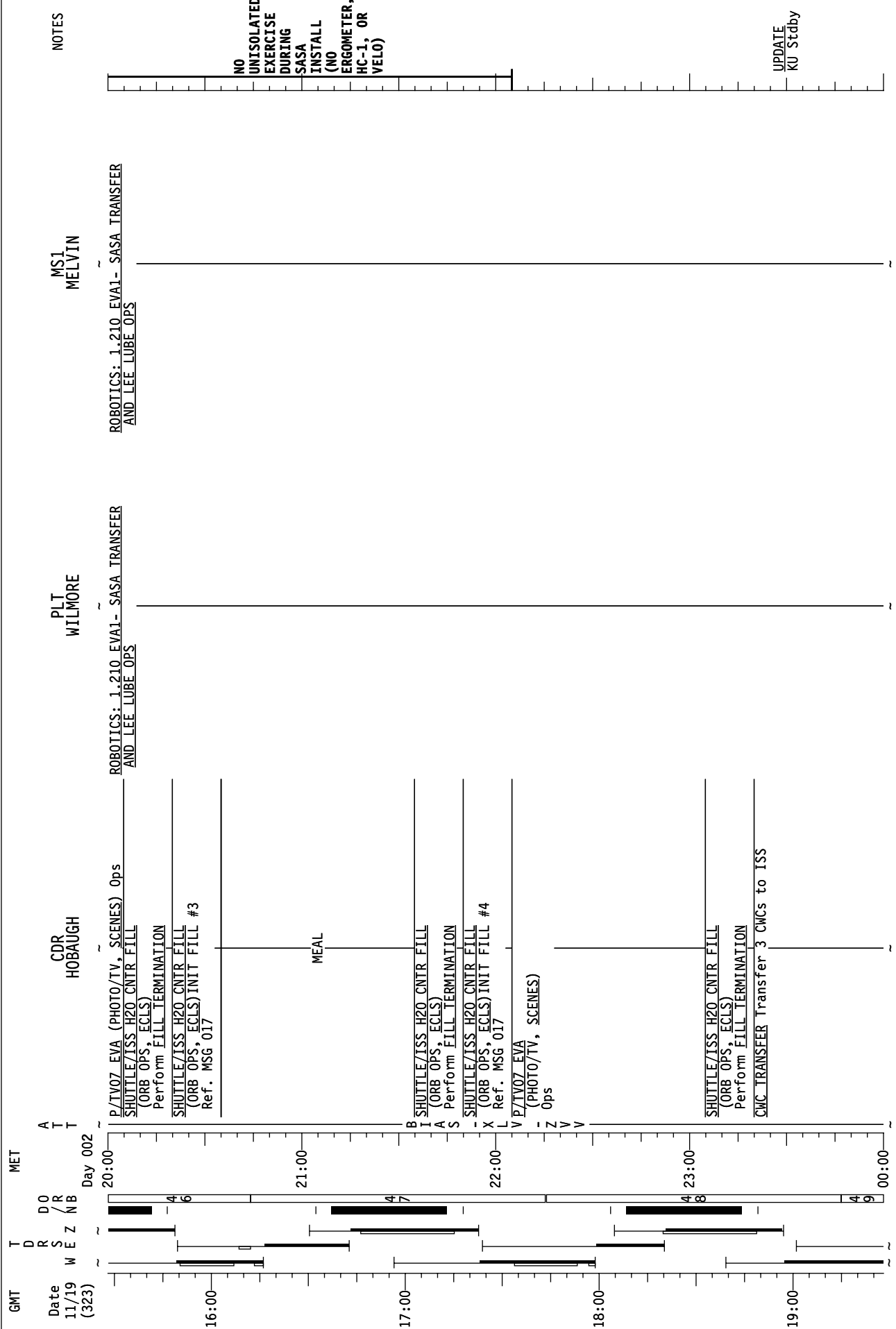
STS-129/U/LF3 FD04

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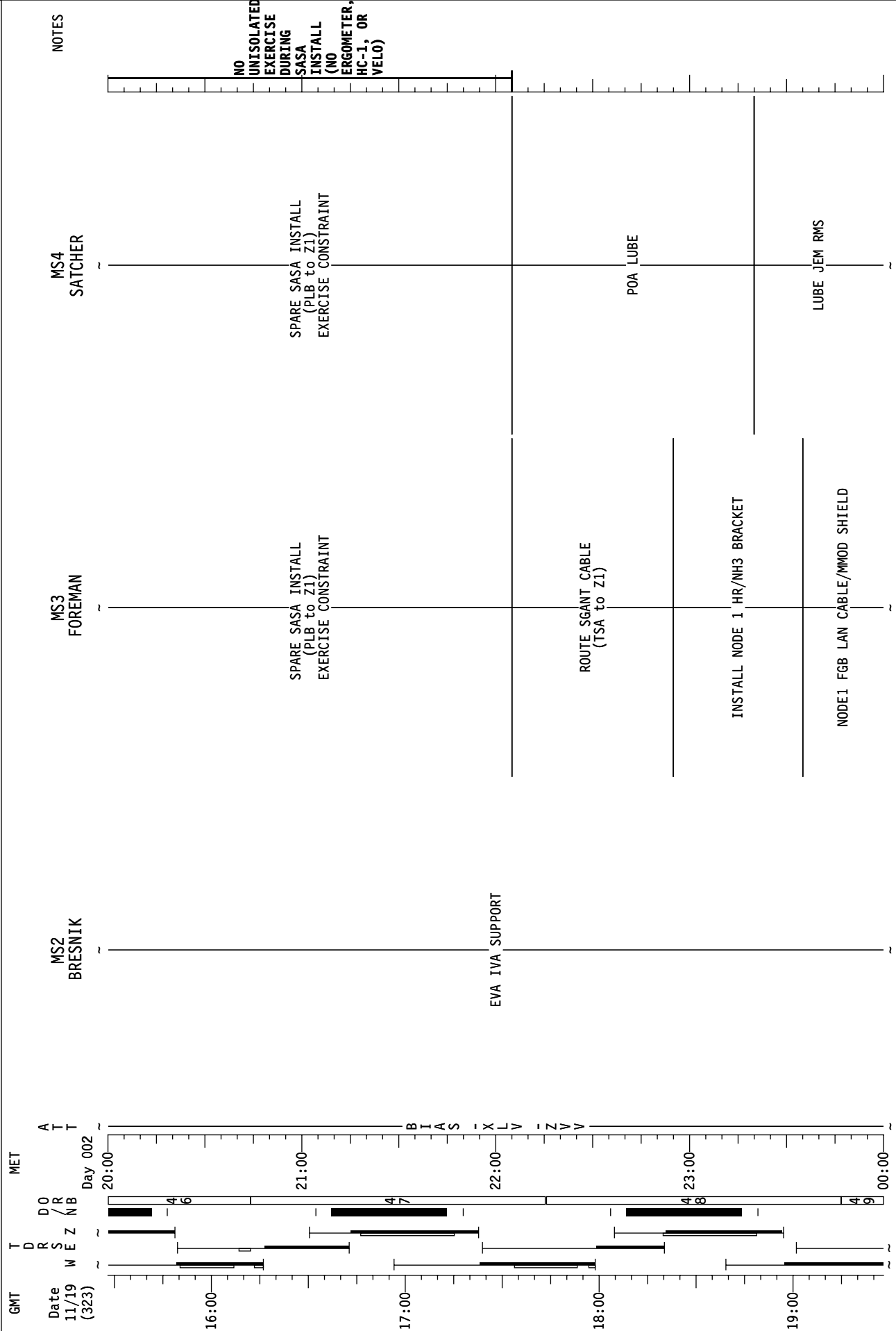
STS-129/ULF3 FD04

REPLANNED



STS-129/ULF3 FD04

REPLANNED



FLT PLN/129/FLT

3-37

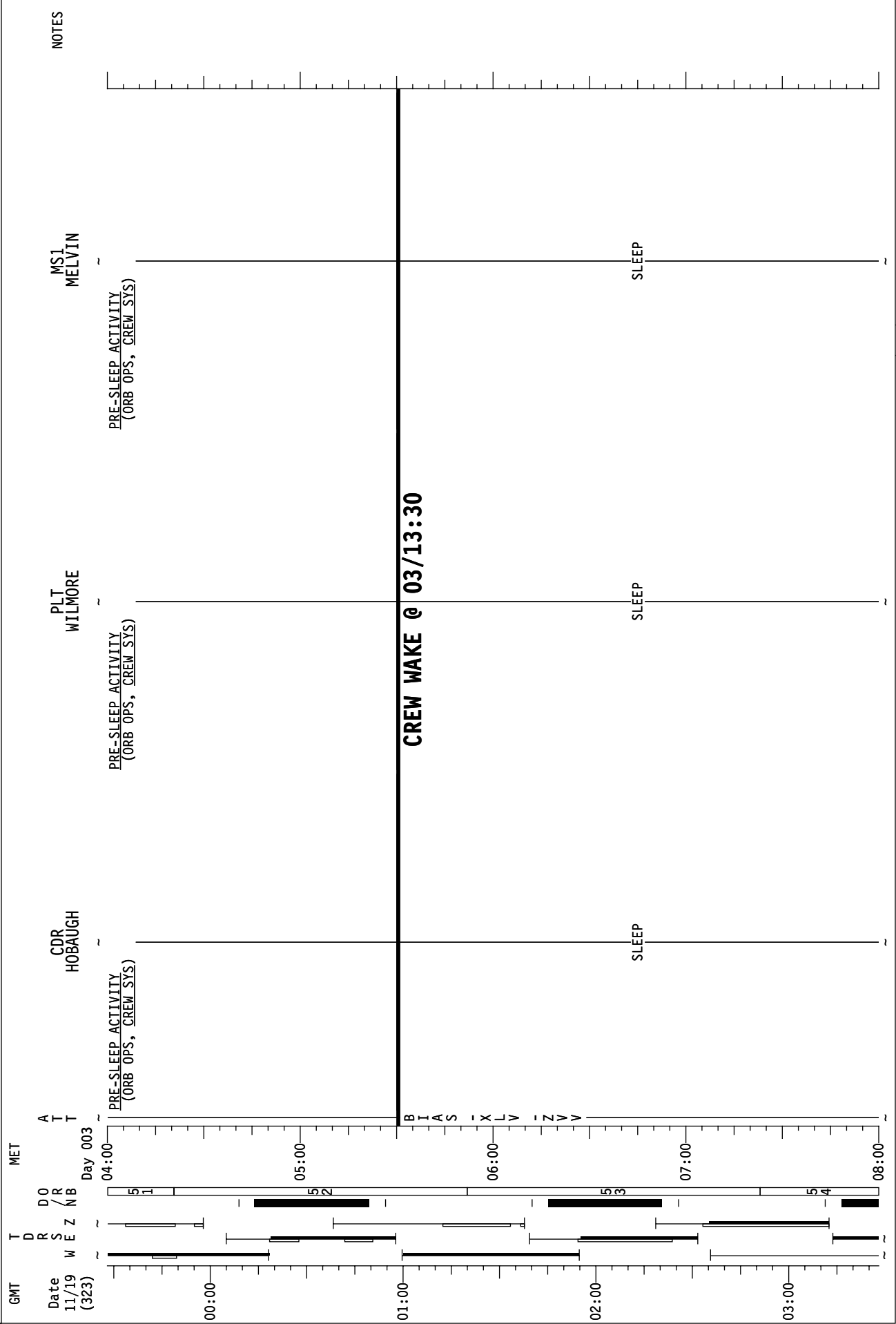
STS-129/ULF3 FD04

REPLANNED

GMT	MET	Date 11/19 (323)	DRS W E Z	CDR HOBGAUGH	PLT WILMORE	MS1 MELVIN	NOTES
20:00	00:00			CMC TRANSFER Transfer 3 CMCs to ISS (PHOTO/TV, SCENES) Ops	ROBOTICS: 1.210 EVAL- SASA TRANSFER AND LEE LUBE OPS	ROBOTICS: 1.210 EVAL- SASA TRANSFER AND LEE LUBE OPS	UPDATE 821+MASK Box 20, 21 23, 24
20:00	01:00			ROBOTICS: 1.220 EVA 1 TO MT XLATE CONFIG (NO FI)	TRANSFER OPS Ref. Transfer List & MSG 025	ROBOTICS: 1.220 EVA 1 TO MT XLATE CONFIG (NO FI)	UPDATE 821+MASK Box 20, 21, 23
21:00	02:00			ISS EVA SYSTEMS: PRE REPRESS (CC) ISS EVA SYSTEMS: CREWLOCK DEPRESS/REPRESS CUE CARD	ISS EVA SYSTEMS: 1.240 POST EVA With H20	TRANSFER OPS Ref. Transfer List & MSG 025	
21:00	02:00			EXERCISE	Ref: SIS-129 CONSUMABLES TRACKING_CC (EVA)		
22:00	03:00			Z SHUTTLE CONDENSATE COLLECTION (ORB OPS, ECLS) Perform CHANGEOUT: Use ISS CMC S/N 1062 pre-gathered at NOD202. Stow CMC S/N 6008 in JPM1F7. Notify MCC when complete.	NLP ACTIVATION (ASSY OPS, PAYLOADS) Ref. MSG 022, Item 2 Complete GAP swaps prior to closing up CGBA Activate GAPS 5-8 in MF71E (CGBA) NLP TERMINATION (ASSY OPS, PAYLOADS) Terminate GAPS A-H in MA16D; Steps 2, 6, 11 Perform Block (A) CGBA and ABRSTATUS CK (Cue Card) CGBA, ABRSTATUS TRANSFER TAGUP Coordinate with transfer counterparts		
22:00	03:00			PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	TRANSFER BRIEF Call down status to MCC	
23:00	04:00			PRIVATE MEDICAL CONFERENCE L9 PAYLOAD STATION A/G(two) - OFF Perform via A/G 2	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	

STS-129/U/LF3 FD04

REPLANNED

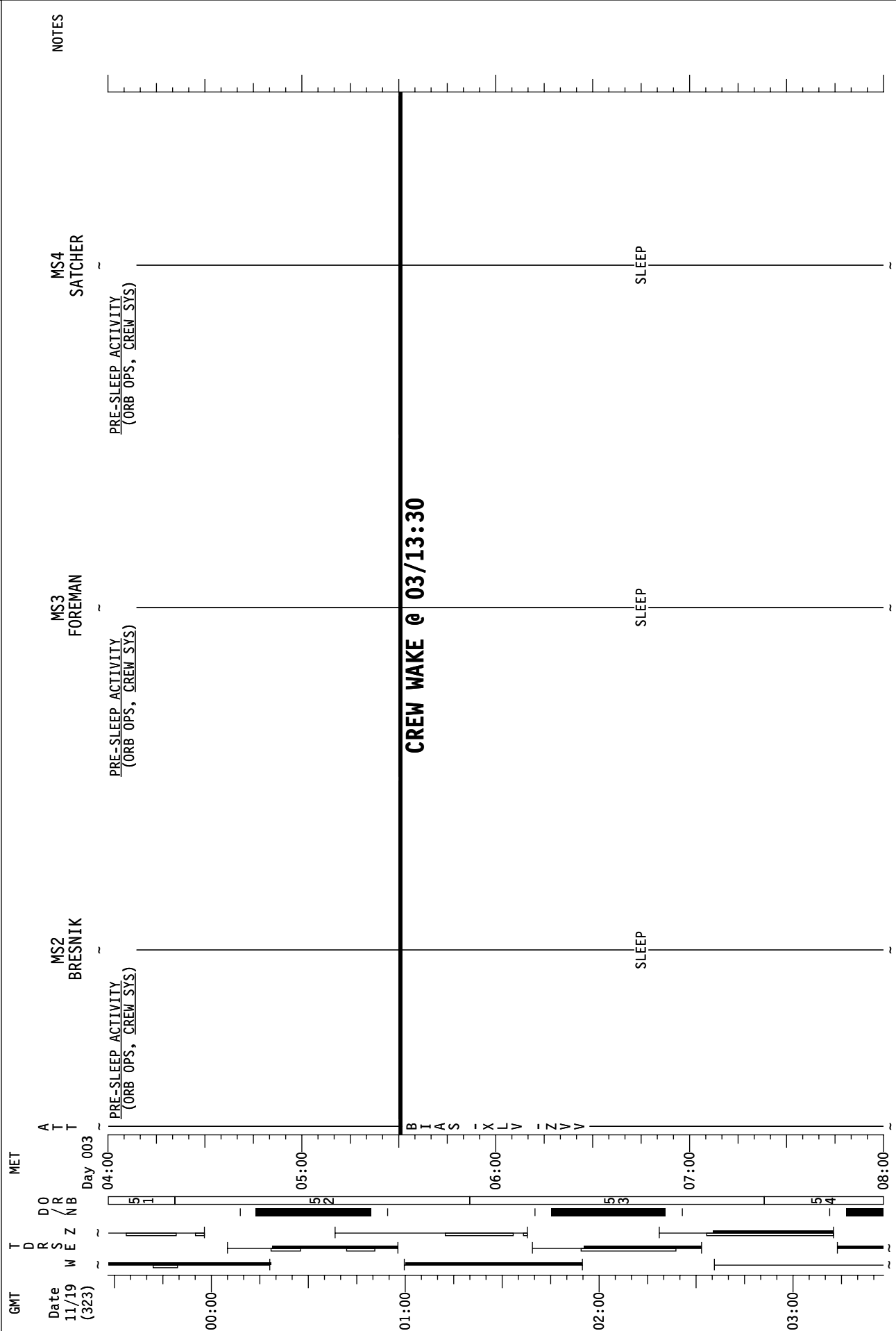


FLT PLN/129/FLT

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STS-129/ULF3 FD04

REPLANNED



FLT PLN/129/FLT

3-41

MSG 023A - FD04 MISSION SUMMARY

1
2 Good morning Atlantis – congrats on a beautiful rendezvous and docking!
3 We all look forward to the first EVA of the mission today.
4 And, NO FOCUSED INSPECTION is required!

5
6 YOUR CURRENT ORBIT IS: 187 X 180 NM
7

8 **NOTAMS: ONE CHANGE (NTU RWY 14L/32R OPEN)**

9
10 EDW - LAKEBED RWY 15/33 GREEN - ELS ONLY. RWY 18L - UNUSABLE.
11 NOR - LAKEBED RUNWAYS GREEN.
12 **NTU** - RWY 05R/23L CLOSED.
13 YQX - TACAN YQX CH74 OTS.
14 LAJ - TACAN LAJ45 OTS.
15 PTN - AIRFIELD CLOSED.
16 GUA - RWY 06R/24L CLOSED. RWY 06L REIL OTS.
17 IKF - NOT USABLE. NO AGREEMENT.
18 BEN - NOT RECOMMENDED/NOT SUPPORTED
19 .

20 **NEXT 2 PLS OPPORTUNITIES:**

21
22 EDW04 ORB 49 – 3/00:39 FEW250 7 060/05P08
23 EDW22 ORB 64 – 3/23:26 SCT250 7 230/09P14
24

25 **OMS TANK FAIL CAPABILITY:**

26
27 L OMS FAILS: NO
28 R OMS FAILS: NO
29

30 **LEAKING OMS PRPLT BURN:**

31
32 L OMS LEAK: ALWAYS BURN RETROGRADE
33 R OMS LEAK: ALWAYS BURN RETROGRADE
34

35 **OMS QUANTITIES(%)**

36
37 L OMS OX = 38.5 R OMS OX = 38.8
38 FU = 38.5 FU = 38.4
39

40 Subtract interconnect counter for current OMS quantities.
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MSG 023A - FD04 MISSION SUMMARY

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DELTA V AVAILABLE:

OMS	380 FPS
<u>ARCS (TOTAL ABOVE QTY1)</u>	<u>35 FPS</u>

TOTAL IN THE AFT 415 FPS

ARCS (TOTAL ABOVE QTY2)	65 FPS
FRCS (ABOVE QTY 1)	38 FPS

AFT QTY 1 85 %

AFT QTY 2 47 %

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

MSG 024 (21-0442) - FD03 MMT SUMMARY

Page 1 of 1

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Congratulations on an excellent rendezvous and docking!!! The MMT met just after hatch opening to review mission progress and orbiter systems.

Atlantis is in great shape. The following minor systems items were mentioned: ODS temporary loss of ring alignment on FD2, missing Starboard MRL 2 latch indication, high rate OCA downlink problem, and the TCS undervolt message. If the high rate OCA is not resolved with further troubleshooting, the late inspection data downlink will take a couple extra hours. Otherwise, these issues are explained and have no mission impact. The team received a quick-look summary of the integrated ascent systems performance and all parameters were nominal.

The Damage Assessment Team data review is on schedule, and they should have their final assessments soon. The RCC team is well into their review of the FD2 inspection data and no issues have been noted so far. The TPS team is reviewing the RPM photos as they are downlinked. The Focused Inspection meeting is tonight and we will get you results as soon as we have them.

Page 1 of 1, MSG 024 (21-0442)

MSG 025 (21-0443) - FD04 TRANSFER MESSAGE

Page 1 of 8

1 Good Morning Leland and Mike,

2
3 You did a great job on transfer yesterday! You are 6% complete with transfer. Today you
4 have CTBs and NOD1 Outfitting Hardware that needs to be transferred before the timelined
5 ISS activity as well as some items that are transferred during a timelined activity.
6

7
8 The Transfer List Excel file, FD04_Transfer_List_STS129.xls, locations are:

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

11 12 13 **FD04 Choreography**

- 14 • **Items 60, 60.1, & 60.2:** Transfer Double Coldbag per DCB APEX UNPACK activity
- 15 • **Item 29.6:** Transfer CHeCS CTB for CSA-CP ACT & C/O activity
- 16 • **Item 39.5:** Transfer CHeCS CTB for HMS IMAK Unpack and HMS MED Kit Resupply
17 activities
- 18 • **Items 38.1, 38.1.1, & 733:** Swap Dashpots per CMS-ARED DASHPOT-PACK activity
- 19 • **Items 31, 32, 33, 34, 35, 36, & 37:** Transfer MIDBAY items for FD04 & FD05
20 OUTFITTING activities
- 21 • **Item 59:** Transfer MISC 1 bag for Ultrasound Board R&R activities

22
23
24 **Please incorporate uplink pages as follows (we've listed the updates in the order they
25 printed out for you):**

26
27 In the Transfer List **LAYOUT** tab

28 Add the following page:
29 Resupply L-2

30
31
32 In the Transfer List **RESUPPLY** tab

33 Replace the following pages:
34 Resupply 7, 13, and 14

35
36
37 In the Transfer List **RETURN** tab

38 Replace the following pages:
39 Return 2 and 8

40
41
42 **Changes to the Transfer List are detailed below:**

43 44 **MIDDECK RESUPPLY**

- 45 Item 30.9 - updated initial location
- 46 Item 54 - updated final location
- 47 Item 59 - updated notes
- 48 Item 59.1 - deleted

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Page 1 of 8, MSG 025 (21-0443)

MSG 025 (21-0443) - FD04 TRANSFER MESSAGE

Page 2 of 8

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MIDDECK RETURN

Item 409 - updated notes

Item 731 - updated initial location

FD05 Choreography

- **Items 51 & 52.1:** Transfer ABRS locker and a CTB per ABRS TRANSFER activity
- **Items 9, 10, 17, 18, 729, & 729A:** Transfer LiOH per LIOH SWAP activity
- **Item 25:** Transfer KFTs per ABRS SAMPLE RETRIEVE activity

Have a wonderful day and let us know if you have any questions!

- The STS-129 Transfer Team

MSG 026 - FD04 CREW CHOICE DOWNLINK

1

TDRS	AOS	LOS	Delta (min)	Notes
W	03/02:39	03/03:07	28	
W	03/04:15	03/04:21	6	
E	03/04:51	03/04:59	8	
E	03/05:15	03/05:22	7	

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Note: Please notify MCC-H 10 minutes prior to the event to allow for ground network configuration.

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