

STS-128/17A

FD 05 Execute Package



| MSG | Page(s) | Title |
|-----|---------|--|
| - | - | FD05 Summary Timeline |
| 027 | 1 - 11 | FD05 Flight Plan Revision |
| 028 | 12 - 13 | FD05 Mission Summary |
| 029 | 14 - 16 | FD05 Transfer Message |
| 030 | 17 | SRMS/OBSS Maneuver Back to MPLM Viewing Position |
| 031 | 18 | FD05 Crew Choice Downlink |

Approved by FAO:

Tobin Melroy

A handwritten signature in black ink that reads "Tobin Melroy".

Last Updated: Sep 1 2009 3:20 PM GMT

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

REPLANNED

09/01/09 09:42:40

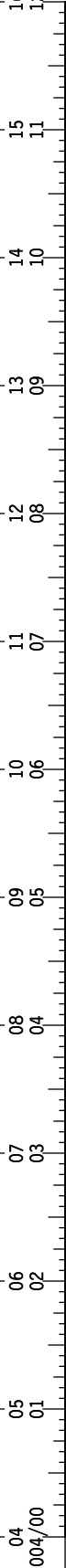
GMT 09/01/09 (244) MET Day_003 16 17 18 19 20 21 22 23 23 02 03 04
 12 13 14 15 16 17 18 19 20 21 22 23 19 20 21 22 23 02 23 004/00

| | | | | | | | | | | |
|----------------------|--|----------------|-------------------|---------------|-------------------|---------------------|------|---|----------------|------------|
| FD05 CDR STURCKOW | SLEEP | POST SLEEP PMC | POST SLEEP | MPLM XFER | EXERCISE | P/TV07 EVA | MEAL | CF WI CL -L I # 4 CF WI CL -L I # 5 CF WI CL -L I # 6 | CMC-I XFER (3) | P/TV07 EVA |
| | SLEEP | POST SLEEP | POST SLEEP | MPLM XFER | EXERCISE | P/TV07 EVA | MEAL | | | |
| PLT FORD | SLEEP | POST SLEEP | POST SLEEP | EXERCISE | EXERCISE | EVA 1 SSRMS SUPPORT | | | | MPLM XFER |
| MS1 FORRESTER | SLEEP | POST SLEEP | POST SLEEP | EXERCISE | I VA PREP | EVA IVA SUPPORT | | | | |
| MS2 HERNANDEZ | SLEEP | POST SLEEP | HYG BRK/HATCH CLS | EMU PREBREATH | C LK DPRS | MPLM XFER | MEAL | | | EXERCISE |
| | SLEEP | POST SLEEP | CAMPOUT EVA PREP | EMU PREBREATH | C LK DPRS | MPLM XFER | MEAL | | | |
| MS3 OLIVAS | SLEEP | POST SLEEP | HYG BRK/PREBREATH | EMU PREBREATH | C LK DPRS | P1 ATA RELEASE | | | | |
| | SLEEP | POST SLEEP | CAMPOUT EVA PREP | EMU PREBREATH | C LK DPRS | P1 ATA RELEASE | | | | |
| MS4 FUGLESANG | SLEEP | POST SLEEP | POST SLEEP | MPLM XFER | COLBERT RACK XFER | CQ RACK XFER | MEAL | | | EXERCISE |
| | SLEEP | POST SLEEP | POST SLEEP | MPLM XFER | COLBERT RACK XFER | CQ RACK XFER | MEAL | | | |
| DAY/NIGHT ORBIT | 56 | 57 | 58 | 59 | 60 | 61 | 62 | 63 | 64 | |
| TDRS | | | | | | | | | | |
| ISS TDRS AVAIL | | | | | | | | | | |
| ORB ATT | | | | | | | | | | |
| NOTES | *FILTER CK *MNVR TO MPLM VIEW BIAS -XLV -ZVV NO UNISOLATED (P1 ATA RELEASE) FLT PLAN/128/FLIGHT | | | | | | | | | |

09/01/09 09:42:40

REPLANNED

GMT 09/02/09 (245)
MET Day_004



| FD05 | 04:00 | 05:01 | 06:02 | 07:03 | 08:04 | 09:05 | 10:06 | 11:07 | 12:08 | 13:09 | 14:10 | 15:11 | 16:12 |
|------------------------|-----------------------------------|----------------|---------------------------|-----------|-----------|-------|-------|-------|-------|-------|-------|-------|-------|
| CDR STURCKOW | PE / VTA / V07 | MPLM XFER | PRE SLEEP | PRE SLEEP | PRE SLEEP | | | | | | | | |
| PLT FORD | | MPLM XFER | PRE SLEEP | PRE SLEEP | PRE SLEEP | | | | | | | | |
| MS1 FORRESTER | ES VUP / AP IOP / VVR AT | MPLM XFER | PRE SLEEP | PRE SLEEP | PRE SLEEP | | | | | | | | |
| MS2 HERNANDEZ | EX PCR / RPLR / CS | POST EVA W/H2O | BSA INIT | PRE SLEEP | PRE SLEEP | | | | | | | | |
| MS3 OLIVAS | IN PCR / RPLR / ESS | POST EVA W/H2O | PRE SLEEP | PRE SLEEP | PRE SLEEP | | | | | | | | |
| MS4 FUGLESANG | MPLM XFER | LIOH GATHER | XTPS FAIRL / EGEE / BRIEF | PRE SLEEP | PRE SLEEP | | | | | | | | |
| DAY/NIGHT ORBIT | 64 | 65 | 66 | 67 | 68 | 69 | 70 | 71 | 72 | | | | |
| TDRS W E Z | | | | | | | | | | | | | |
| ISS TDRS AVAIL ORB ATT | | | | | | | | | | | | | |
| NOTES | *A POD HTR RECONFIG #STATUS CHECK | | | | | | | | | | | | |

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MSG 027 - FD05 FLIGHT PLAN REVISION

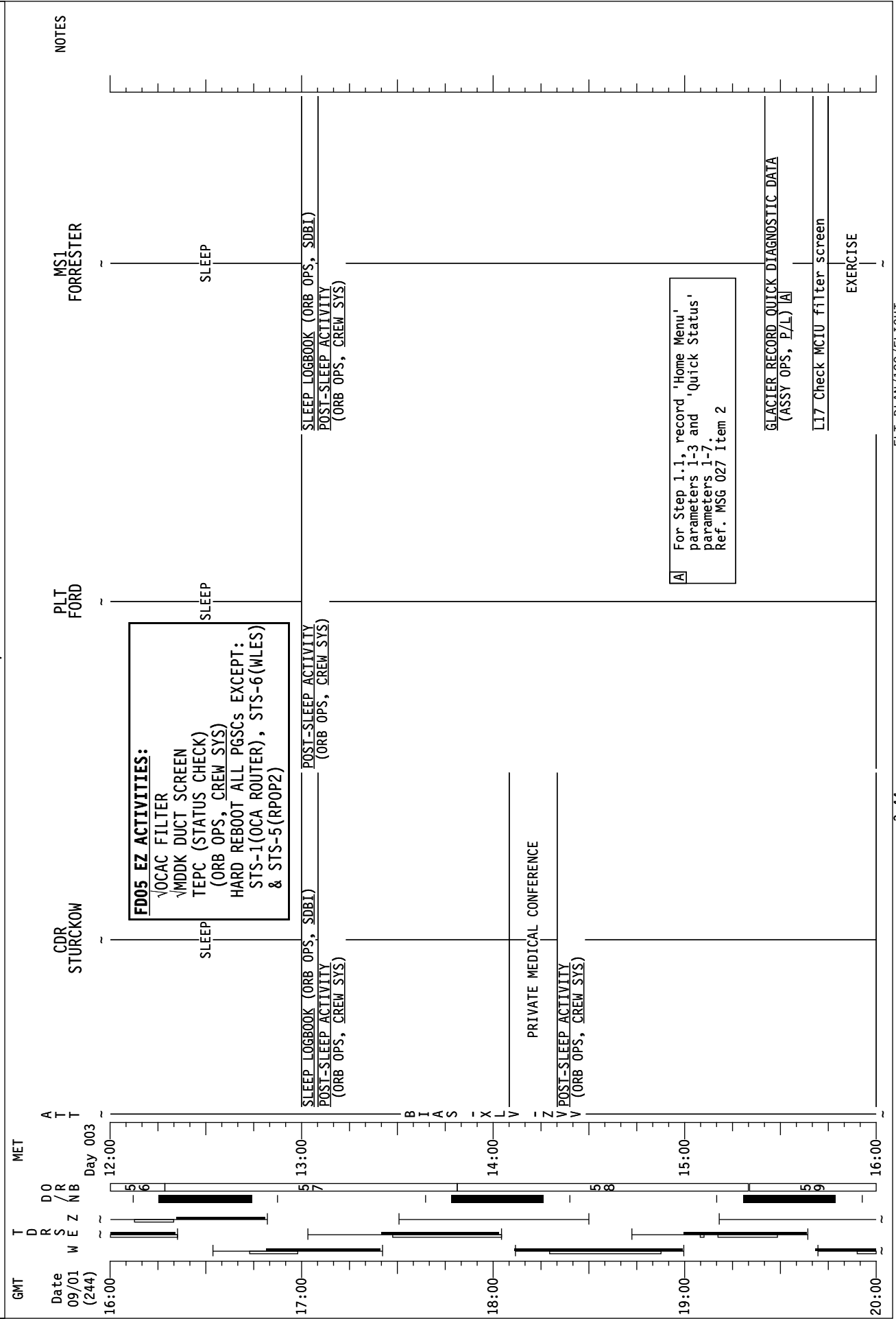
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MSG INDEX

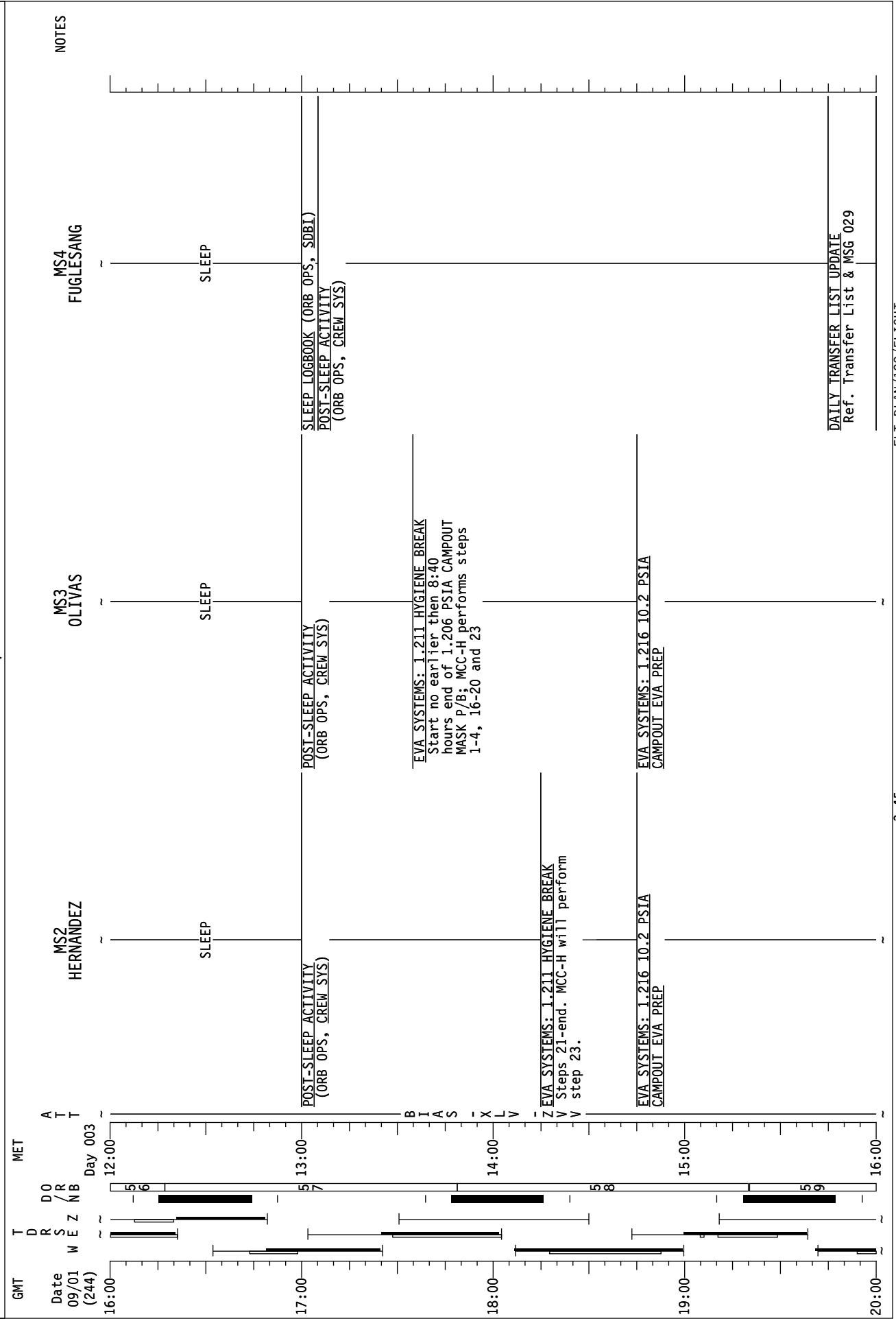
| <u>MSG NO.</u> | <u>TITLE</u> |
|----------------|--|
| 027 | FD05 Flight Plan Revision |
| 028 | FD05 Mission Summary |
| 029 | FD05 Transfer Message |
| 030 | SRMS/OBSS Maneuver Back to MPLM Viewing Position |
| 031 | FD05 Crew Choice Downlink |

- CWC-I Sampling** - If you feel an excessive amount of force is still required to obtain a sample, the Technical (green handle) sample adapter from Sample/Purge Kit s/n 1006 may be substituted for the Potable (blue handle) adapter to rule out a hardware issue. Report to MCC if alternate adapter is used.
- Glacier Status Checks** - We've changed the morning Glacier status check to a diagnostic check in order to log some additional internal temperature data on the unit. Troubleshooting on the unit swapped out pre-launch due to temperature fluctuations appear to be due to cryo-cooler heat exchange icing. The diagnostic check will ensure that there are no latent issues on the current unit and sample transfers can proceed as planned. If the diagnostic indicates an issue, we'll have deltas to the FD6 sample transfer activities.
- Replace pages 3-44 through 3-53.

STS-128/17A FD05

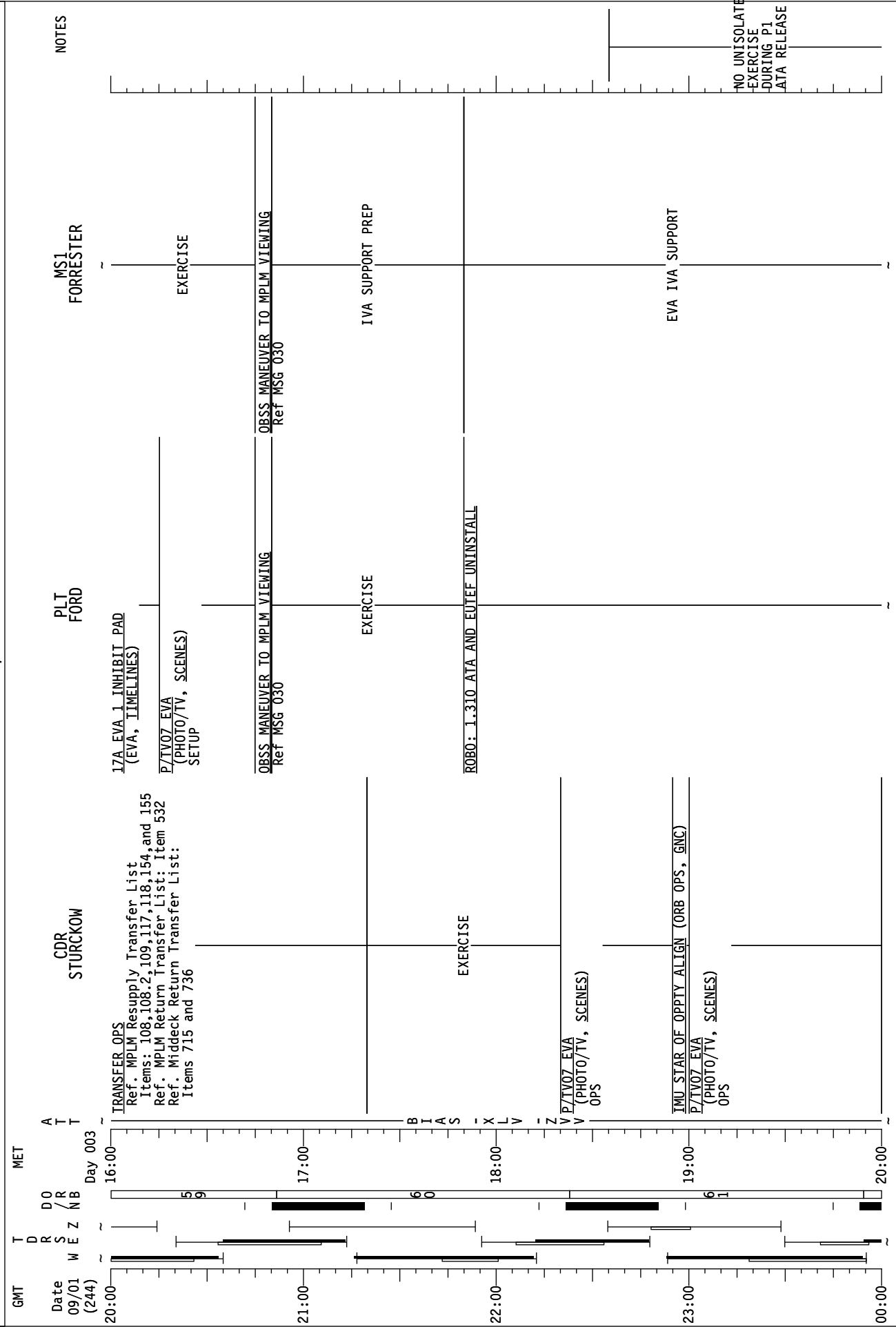


STS-128/17A FD05

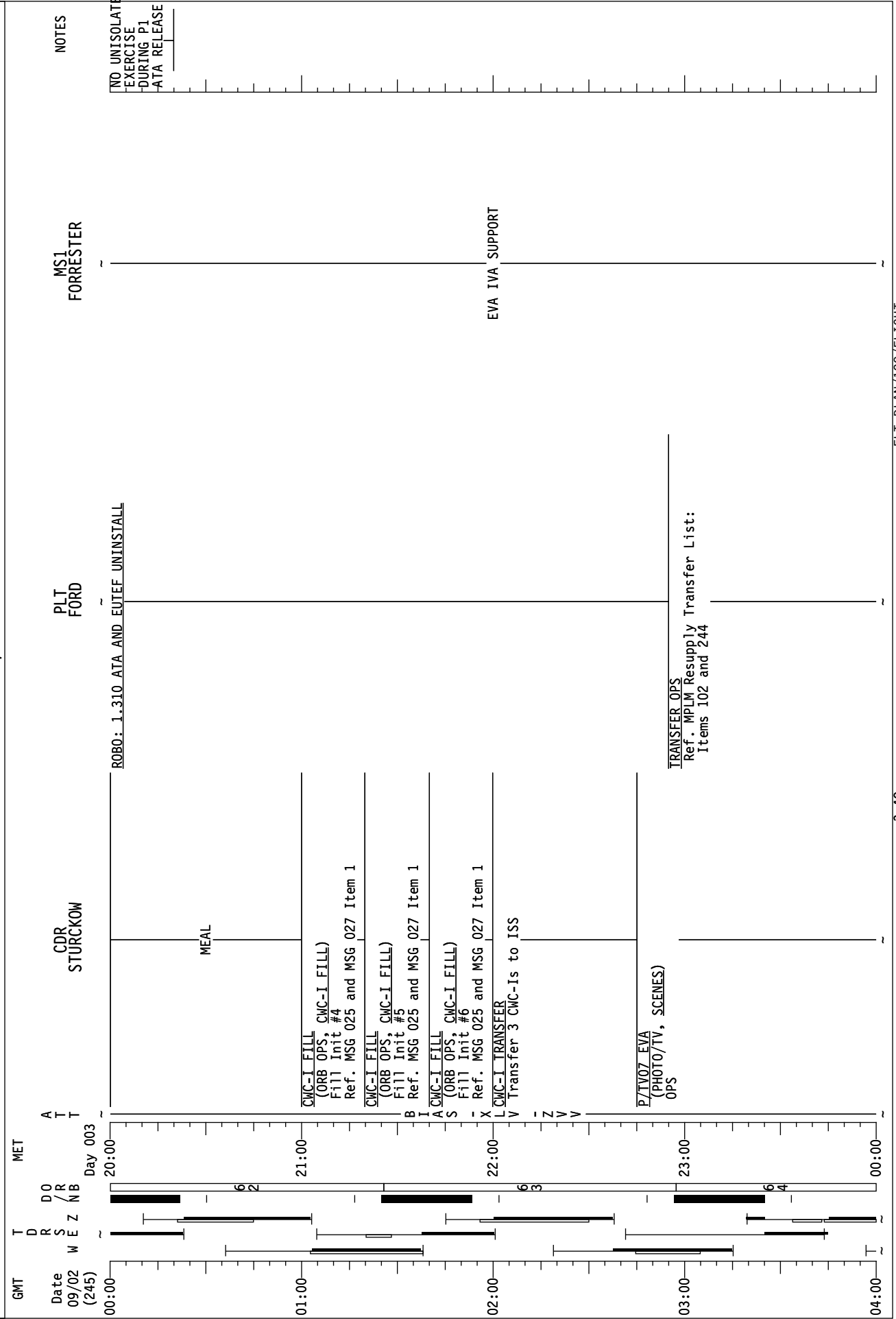


09/01/09 10:09:45

STS-128/17A FD05

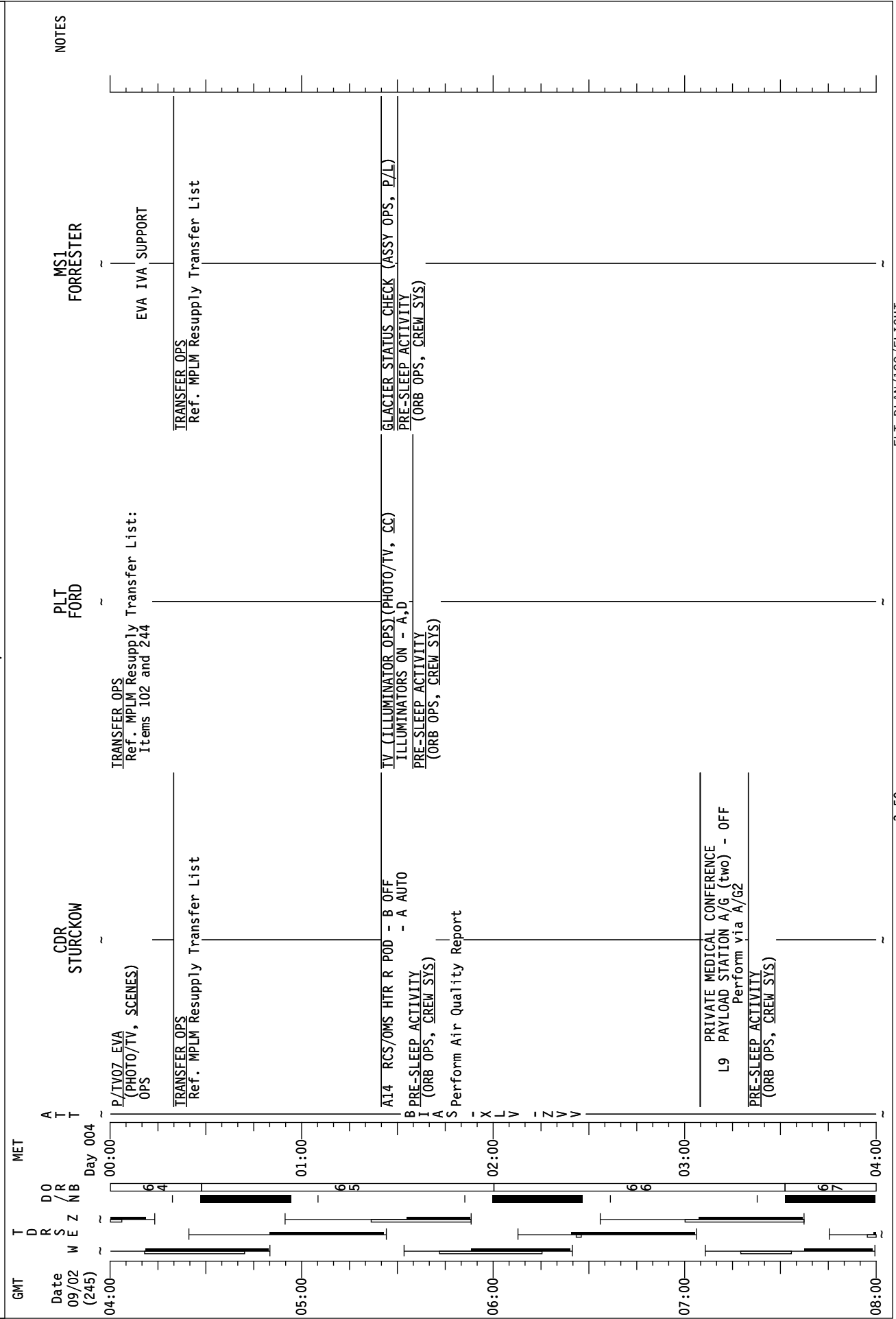


STS-128/17A FD05

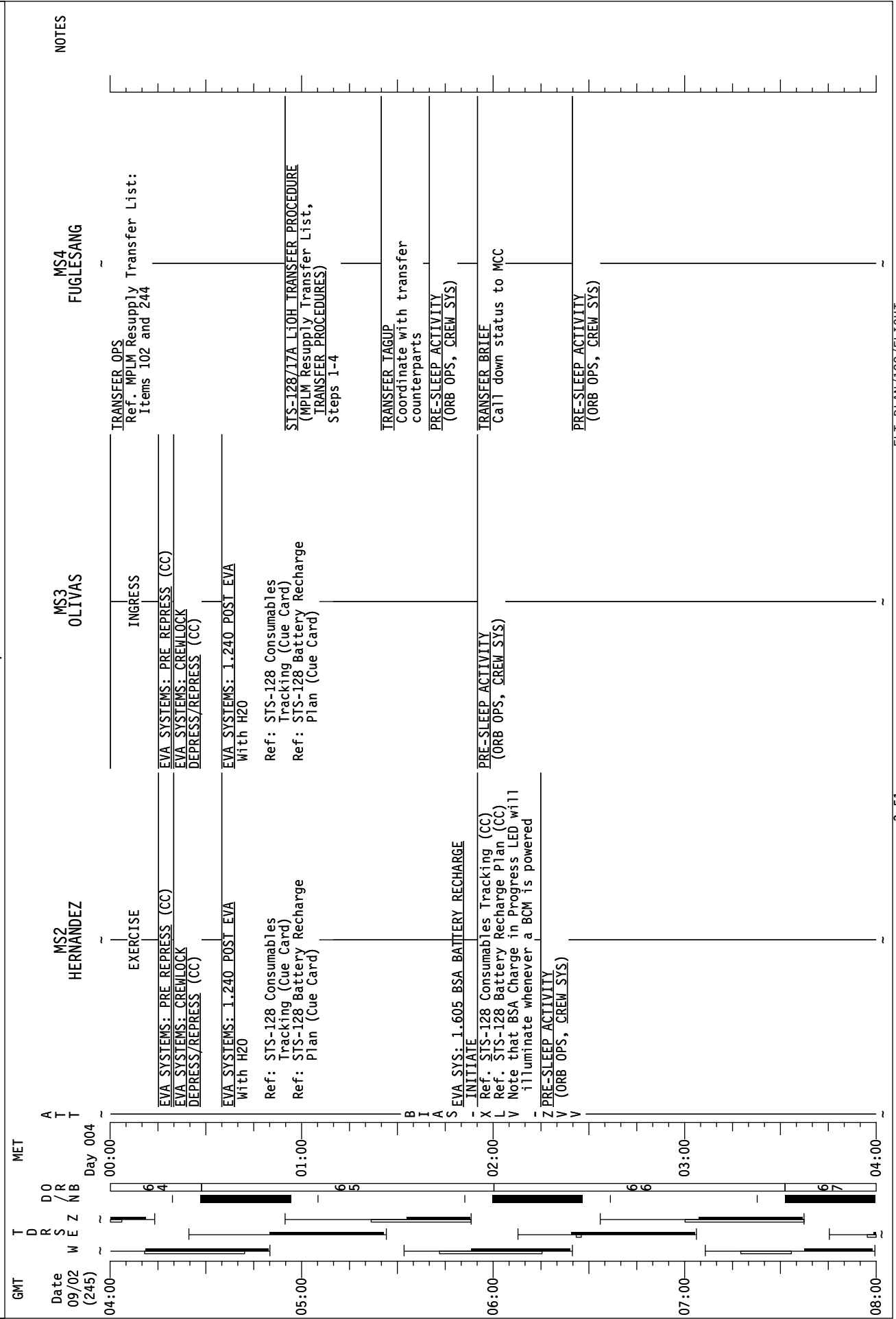


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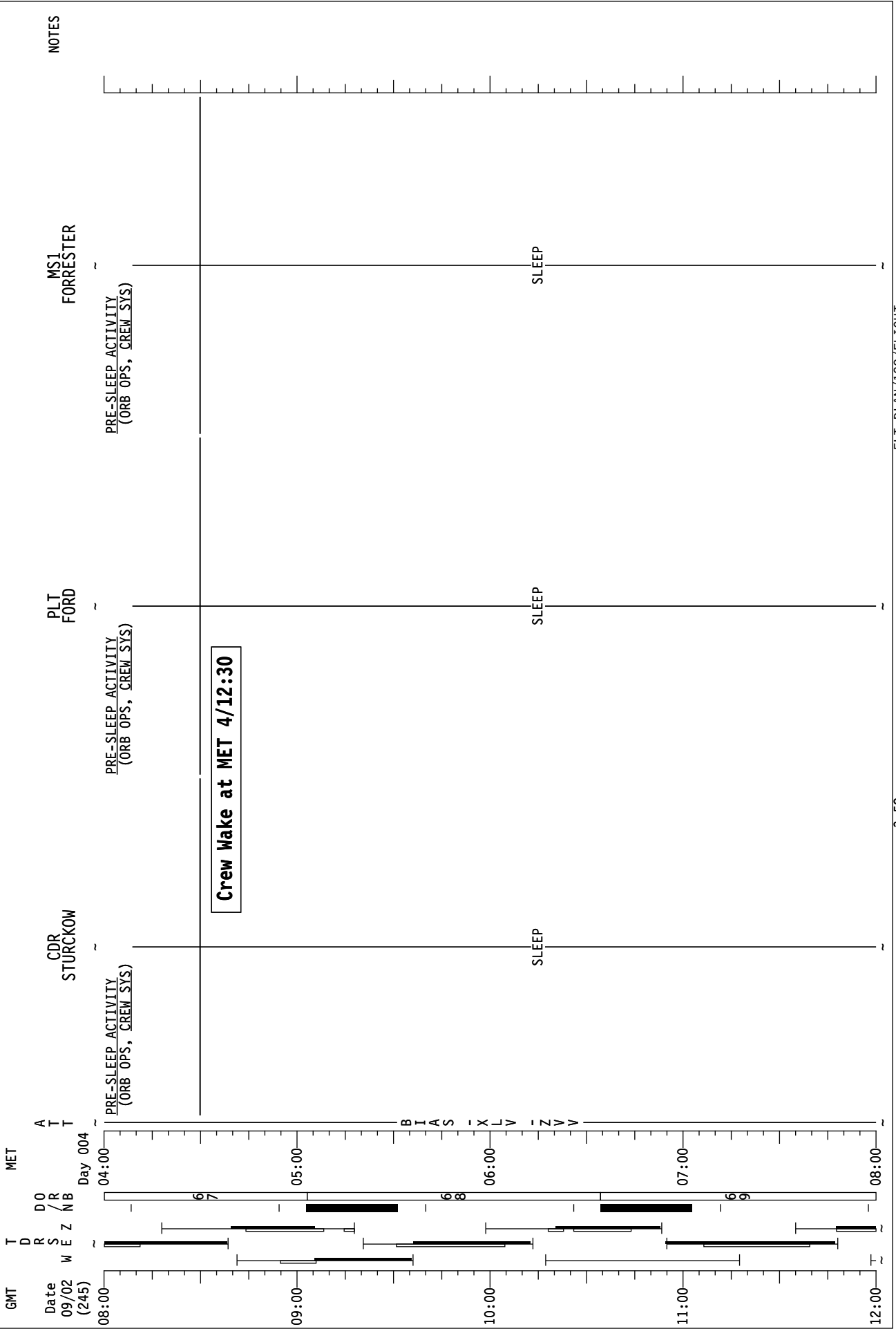
STS-128/17A FD05



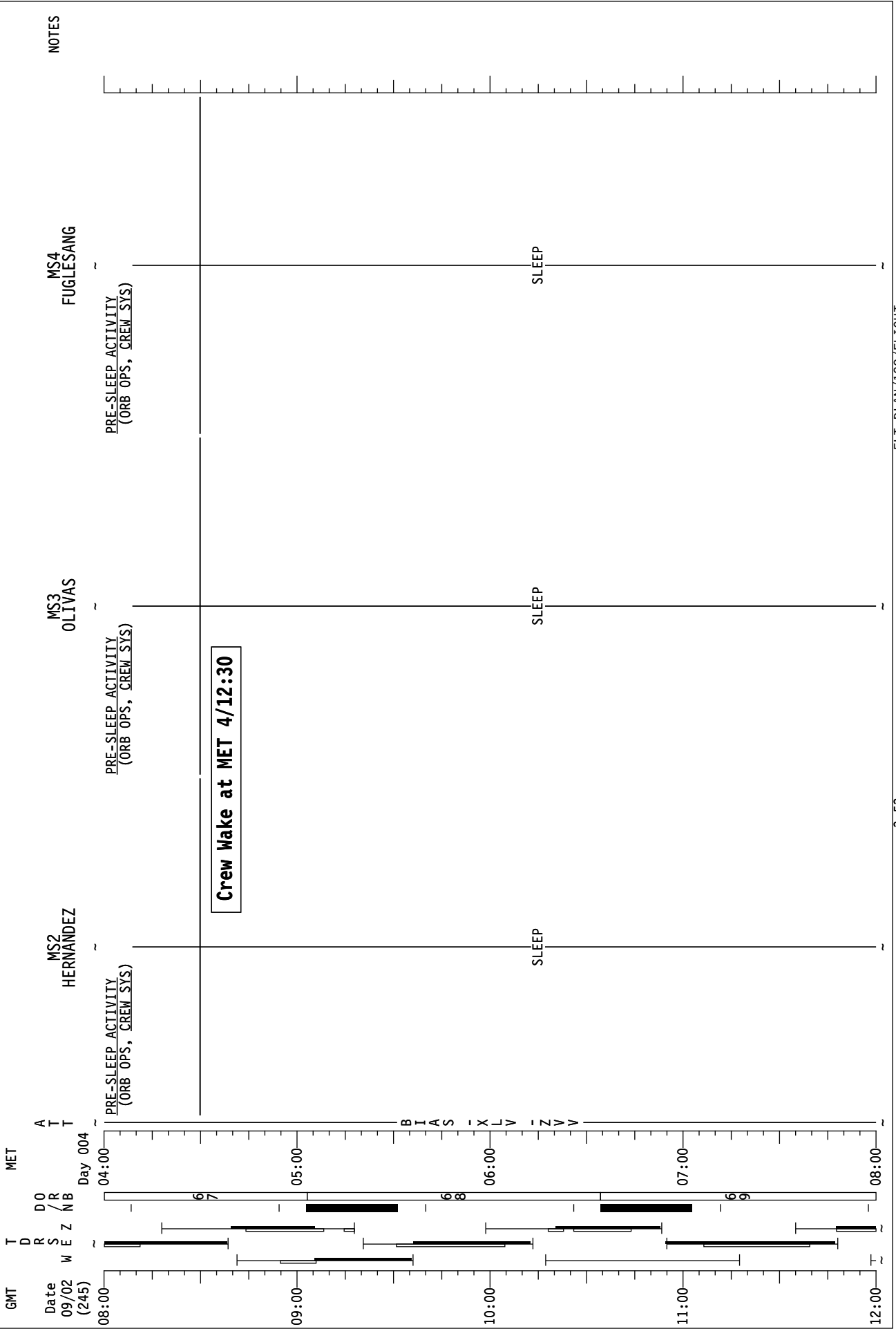
STS-128/17A FD05



STS-128/17A FD05



STS-128/17A FD05



MSG 028 - FD05 MISSION SUMMARY

1 Good Morning Discovery!!!!

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3 Yesterday, not only did you get to all of your luggage, but you did it in record time!
4 Outstanding work!!!

5

6 Have a great EVA day!!!!

7

8

9

10 YOUR CURRENT ORBIT IS: 193 X 181 NM

11

12 **NOTAMS: THREE CHANGES (ADDED FMH AND GUA, DELETED ACY)**

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14 EDW - EDW IN USE. EDT DAY ELS ONLY.
15 EDW - LAKEBED RWY 15/33 GREEN - ELS ONLY. RWY 18L - UNUSABLE.
16 NOR - LAKEBED RUNWAYS GREEN.
17 FMH - RWY 32 SEQUENCED FLASHING LIGHTS OTS.
18 YJT - TACAN YJT78 OTS.
19 YYR - TACAN UYR40 OTS.
20 LAJ - TACAN LAJ45 OTS.
21 HAW - RWY 31 LDA = 9024 FT.
22 GUA - RWY 24R END LIGHTS OTS.
23 GUA - TACAN UAM54 OTS.
24 IKF - NOT USABLE. NO AGREEMENT.
25 BEN - NOT RECOMMENDED/NOT SUPPORTED

26

27 **NEXT 2 PLS OPPORTUNITIES:**

28

29 NOR17 ORB 64 – 3/23:50 SCT120 7 160/5P08
30 NOR17 ORB 79 – 4/22:39 SCT120 SCT 250 7 150/6P08

31

32 **OMS TANK FAIL CAPABILITY:**

33

34 L OMS FAILS: NO
35 R OMS FAILS: NO

36

37 **LEAKING OMS PRPLT BURN:**

38

39 L OMS LEAK: ALWAYS BURN RETROGRADE
40 R OMS LEAK: ALWAYS BURN RETROGRADE

41

42 **OMS QUANTITIES(%)**

43

44 L OMS OX = 34.44 R OMS OX = 33.48
45 FU = 33.97 FU = 33.42

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END OF PAGE 1 OF 2, MSG 028

MSG 028 - FD05 MISSION SUMMARY

1 DELTA V AVAILABLE:

2

3 OMS 357 FPS

4 ARCS (TOTAL ABOVE QTY1) 23 FPS

5

6 TOTAL IN THE AFT 380 FPS

7

8 ARCS (TOTAL ABOVE QTY2) 55 FPS

9 FRCS (ABOVE QTY 1) 33 FPS

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11 AFT QTY 1 83 %

12 AFT QTY 2 45 %

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

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END OF PAGE 2 OF 2, MSG 028

MSG 029 (20-1043) - FD05 TRANSFER MESSAGE

Page 1 of 15

1 Good morning Danny, Christer, CJ & Jose

2
3 Welcome to your most challenging day of transfer! Your hard work yesterday paid off and
4 has made today's choreography a little easier. You are 63 percent complete on Middeck, 3
5 percent complete on MPLM, and 11 percent complete overall. Today you will be transferring
6 3 racks and relocating all of the pre-pack bags!

7
8
9 The Transfer List Excel file, FD05_Transfer_List_STS128.xls, locations are:

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

12 13 14 Transfer Notes

- 15 • **LiOH:** We have uplinked a new version of the LiOH procedure to replace the one that
16 flew in the MPLM Resupply Transfer Book. The only change is that on FD10 you'll be
17 transferring 7 LiOH cans from Middeck to MPLM instead of 8. There was an extra can
18 pregathered for return so it is taking the place of one of the Middeck used cans in the
19 MPLM.
- 20 • **Pre-pack Relocate:** As you relocate the Pre-pack bags from the Lab to the MPLM
21 Endcone, we need for you to open pre-pack bag #532. Inside this bag is STS-126 LiOH
22 can #22. Please confirm that this can is marked as used. If this can is not used then
23 remove it from the CTB and stow it at NOD1S4_C2/D2/E2/F2 with the other ISS LiOH.
24 This CTB has been added to Christer & CJ's choreography.
- 25 • **Pressure Probe:** The pressure probe (item 617) that you reported as stowed at MF14K
26 needs to be double bagged because it contains a TOX 2 battery. Retrieve 2 ziplock
27 bags already in that location and stow the pressure probe inside.
- 28 • **Choreography:** Since the choreography for today is so complex, we have assigned
29 transfer items to specific transfer blocks of time. The item numbers will be reflected in
30 the detail pages for each block of transfer time. Complete the items listed in your detail
31 pages for each block and then work on pre-pack relocation once the items are complete.

32 33 34 FD05 Choreography

- 35 • **CJ & Christer**
 - 36 ○ **Items 108, 109, 117, 118, 154, & 155:** Temp stow all front M-Bags from
 - 37 MPL1A2, MPL1A3, & MPL1F3 in bay 4 and fold the fences
 - 38 ○ **Item 108.2:** Transfer KBARS to support rack transfer activities
 - 39 ○ **Item 715:** Transfer BCM
 - 40 ○ **Item 736:** Transfer returning 5 MLE bag
 - 41 ○ **Item 532:** Check STS-126 LiOH can #22 and temp stow the CTB in the
 - 42 MPLM Endcone
- 43 • **Jose & ISS Crew**
 - 44 ○ **Item 4.1:** Install bungees at MPL1S3
 - 45 ○ **Items 137, 138, 150, & 151:** Temp stow all front M-Bags from MPL1F1 &
 - 46 MPL1F2 at MPL1S3 and fold fences
 - 47 ○ **Item 159:** Transfer Treadmill and stow inside T2 pit
 - 48 ○ **Items 205, 213, & 252:** Transfer cables for CQ Outfitting activities

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Page 1 of 15, MSG 029 (20-1043)

MSG 029 (20-1043) - FD05 TRANSFER MESSAGE

Page 2 of 15

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- **Christer & Frank**
 - **Item 226:** Transfer T2 Rack per T2 XFER activity
 - **Item 168:** Transfer CQ Rack per CQ XFER activity
 - **Items 172, 173, 174, 175, & 176:** Transfer ARS Rack, Knee Brace, and handrails per ARS XFER activity
- **Kevin & Christer**
 - **Items 102 & 244:** Transfer/install pivot pins at MPL1F1, MPL1A3, & MPL1F3
- **Christer**
 - LiOH GATHER activity
- **ALL** (work in throughout the day as time is available)
 - Transfer ALL Pre-pack from LAB1S2 and LAB1O3 to Endcone bungee jail

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

In the Middeck Transfer List **RETURN** tab
Replace the following pages:
Return 1

In the MPLM Resupply Transfer List **A4 RSP** tab
Replace the following page:
Resupply 14

In the MPLM Resupply Transfer List **S1 RSR** tab
Replace the following page:
Resupply 28

In the MPLM Resupply Transfer List **TRANSFER PROCEDURES** tab
Replace the following pages:
P-2 thru P-7

In the MPLM Return Transfer List **RETURN** tab
Replace the following pages:
Return 12, 13, and 19

Changes to the Transfer List are detailed below:

MIDDECK RETURN
Item 715 – updated final location and notes

MPLM RESUPPLY
Item 132 – updated final location
Item 185 – updated final location and notes

MPLM RETURN
Item 532 – updated notes
Item 561.1 – new item
Item 817 – updated item name

MSG 029 (20-1043) - FD05 TRANSFER MESSAGE

Page 3 of 15

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FD06 Choreography

- **Item 153.1:** Transfer RGA for EVA 2 TOOL CONFIG activity
- **Item 153.3:** Transfer Double Coldbag for GLACIER SAMPLE XFER activity
- **Items 7, 8, 9, & 10:** Transfer Glacier samples to ISS per GLACIER SAMPLE XFER activity
- **Item 206:** Transfer EVA SLEEVES for EVA 2 TOOL CONFIG activity
- **Item 242:** Transfer WIRE TIES for EVA 2 TOOL CONFIG activity
- **Item 108.1:** Transfer S0-TO-NOD3 CABLE BAG CHANNEL 1/4 for EVA 2 TOOL CONFIG activity
- **Items 222, 223, 224, & 225:** Transfer FIR and temp stow handrails in MPLM
- **Items 169, 170, & 171:** Transfer MSRR and temp stow handrails in MPLM
- **Items 104, 105, 106, & 107:** Transfer MELFI-2 Rack and handrails to ISS
- **Items 111, 164, 184, 184.1, 184.2, 258, 260, 260.1, 261, 267, 267.1, 268, 269, 269.1, 804, 805, 806, 807, 808, & 809:** LiOH Transfer Part 1
- **Items 115, 116, 156, 157, 177.1, 180, 181, 182, 183, 200, 202, 216, 217, 218, 219, 220, 221, 228, 229, 240, 241, 254, 255, 256, & 265:** Thirsk: Transfer Food Containers per FOOD XFER / CONSOLIDATE activity
- **Item 6:** Transfer CTB for FD07 IMAK UNPACK activity
- **Item 11:** Transfer CTB for FD07 GSC OPS activity
- Transfer backside bags on aft side

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

- The STS-128 Transfer Team

MSG 030 - SRMS/OBSS MANEUVER BACK TO MPLM VIEWING POSITION

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1. SETUP

SM 94 PDRS CONTROL

√PL ID, ITEM 3: 1

√INIT ID, ITEM 24: 1

Verify at ATA VENT CLEAR posn:

| X | Y | Z | PITCH | YAW | ROLL | PL ID |
|-------|-------|-------|-------|-------|-------|-------|
| -968 | -643 | -387 | 50 | 341 | 280 | 1 |
| SY | SP | EP | WP | WY | WR | |
| +62.5 | +25.0 | -23.0 | 0.0 | -13.2 | -34.6 | |

| | |
|------|-------|
| DNLK | ELBOW |
| DTV | A |

2. MNVR TO MPLM VIEWING

RHC

RATE – as reqd (VERN within 10 ft)

BRAKES – OFF (tb-OFF)

MODE – SINGLE, ENTER

Mnvr to MPLM VIEWING posn:

ATA Clear
1: WR +
MPLM Viewing

| SY | SP | EP | WP | WY | WR | |
|-------|-------|-------|-------|-------|-------|-------|
| +62.5 | +25.0 | -23.0 | 0.0 | -13.2 | -34.6 | |
| | | | | | -21.9 | |
| +62.5 | +25.0 | -23.0 | 0.0 | -13.2 | -21.9 | |
| X | Y | Z | PITCH | YAW | ROLL | PL ID |
| -967 | -643 | -386 | 60 | 349 | 282 | 1 |

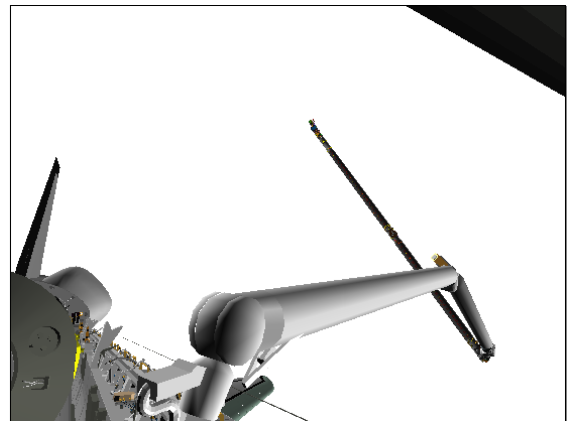
BRAKES – ON (tb-ON)

PARAM – PORT TEMP

JOINT – CRIT TEMP



ELBOW (-165,20)



CCTV A (30,15)

END OF PAGE 1 OF 1, MSG 030

MSG 031 - FD05 CREW CHOICE DOWNLINK

1 Below are your crew choice downlink opportunities based on Ku availability:

2

| TDRS | AOS | LOS | Delta (min) | Notes |
|------|---------|---------|-------------|-----------------------------------|
| Z | 4/01:35 | 4/01:53 | 18 | Analog Only, Alpha Stop @ 4/01:39 |
| W | 4/01:55 | 4/02:15 | 20 | |
| Z | 4/03:05 | 4/03:37 | 22 | Analog Only, Alpha Stop @ 4/03:14 |
| E | 4/04:00 | 4/04:11 | 11 | |

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END OF PAGE 1 OF 1, MSG 031