STS-116 / 12A.1

FD 07 Execute Package

MSG	Page(s)	Title
058A	1 - 13	FD07 Flight Plan Revision **(pdf)**
059	14 - 15	FD07 Mission Summary **(pdf)**
060	16 - 17	FD07 Transfer Message **(pdf)**
062	18 - 19	FD07 Water Summary Message **(pdf)**
063A	20	EVA Questions and Deltas to FD7 EMU Resize **(pdf)**
064	21 - 24	2.3.402 N14B Y-Jumper Installation/Removal **(pdf)**
061	---	FD06 MMT Summary **(pdf - Electronic Only)**
066	---	Crew News Conference Event **(pdf - Electronic Only)**
065	---	FD07 ESA PAO EVENT **(pdf - Electronic Only)**

Approved by FAO: *Terry Clancy*

Last Updated: Dec 15 2006 1:31PM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*

MSG INDEX

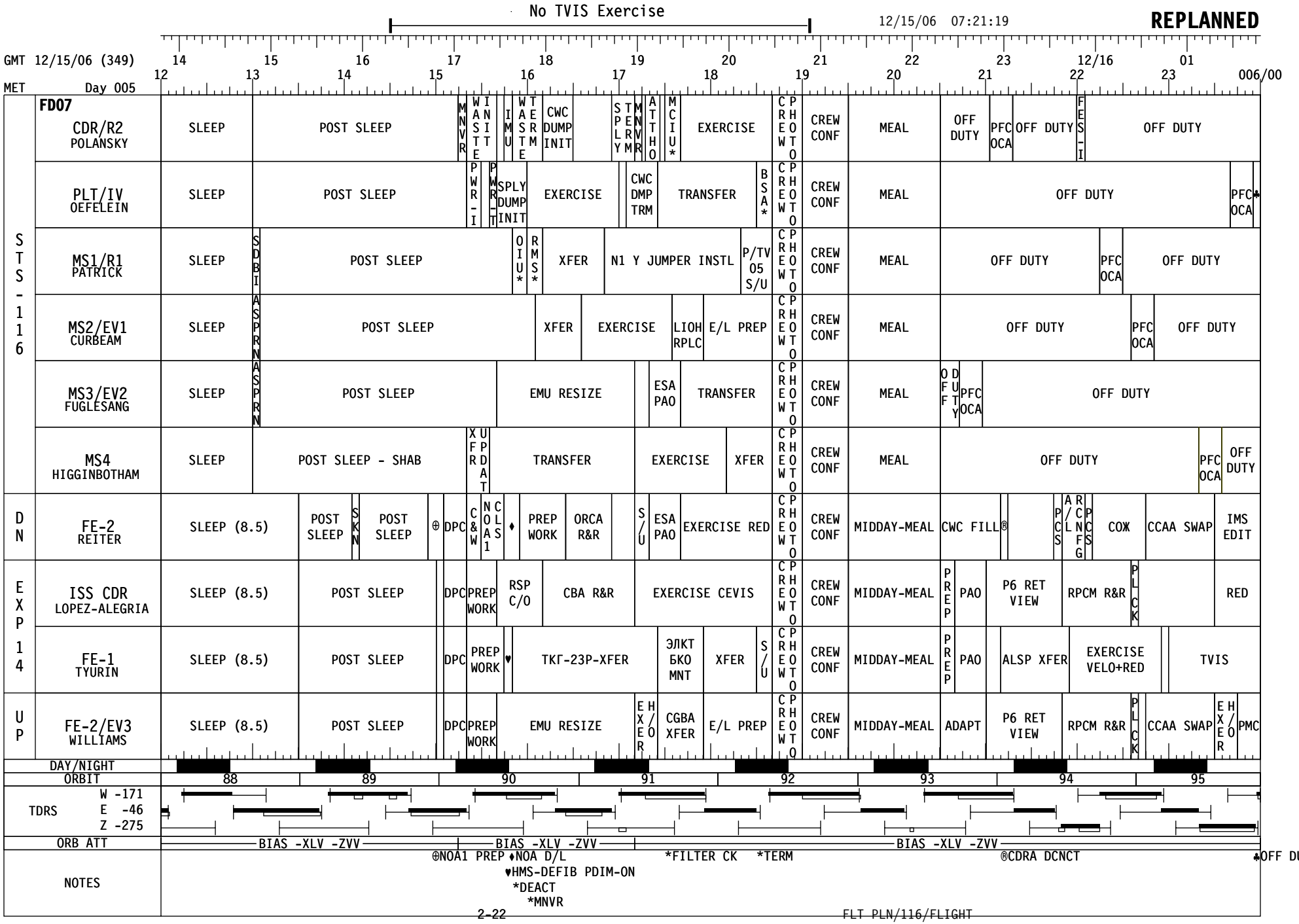
1. FD07 SPACEHAB VIEWPORT VIOLATIONS

   There are no viewport violations for FD07.

2. OUTLOOK OST REMINDER

   Some of the crew mail OST files are getting too large. Please remember to clean out your Sent Items and Work Related folders in addition to your Inbox.

3. REPLACE PAGES 2-22, 2-24 AND 3-68 THROUGH 3-77.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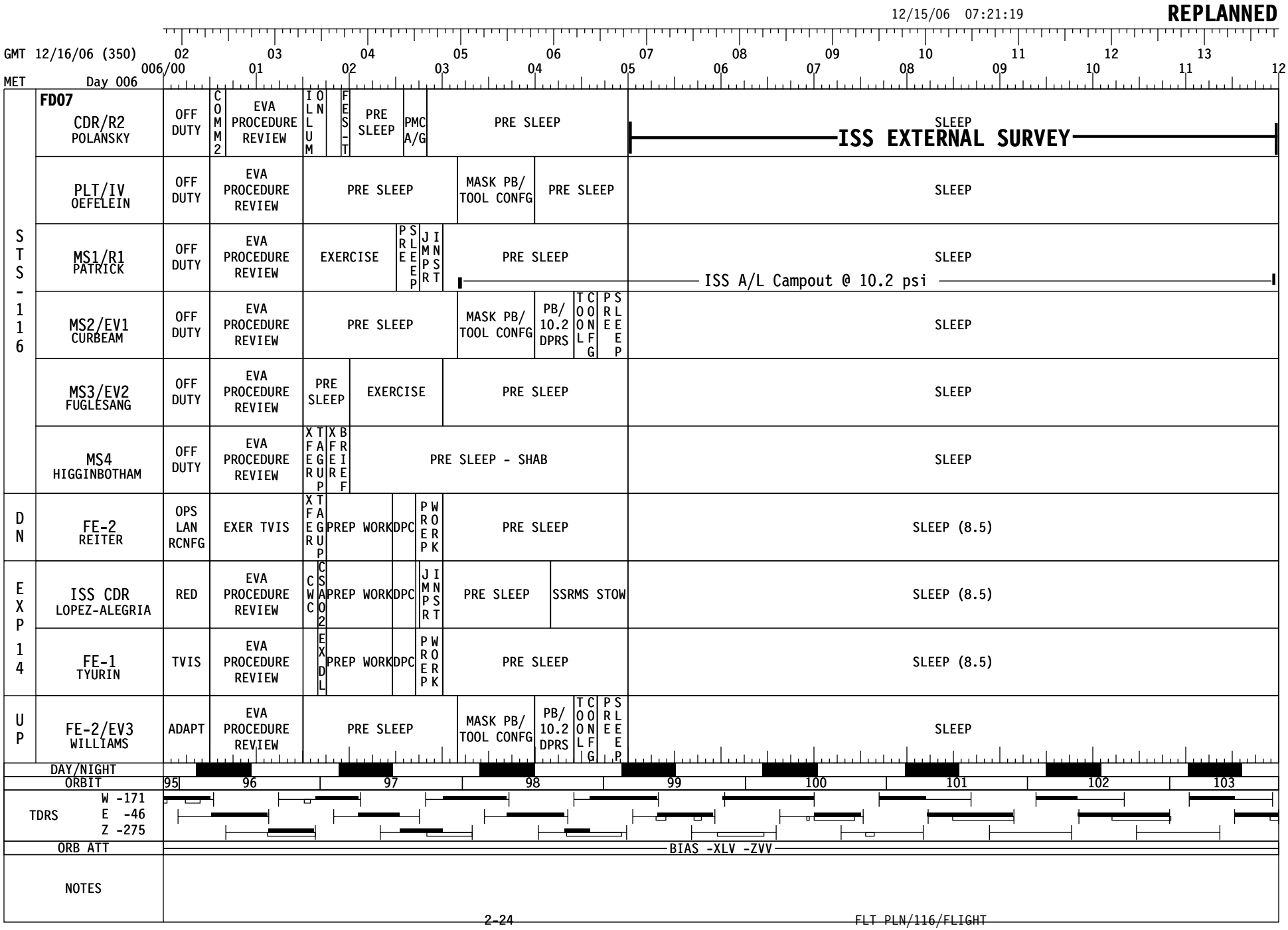
GMT 12/15/06 (349)
MET Day 005
14 15 16 17 18 19 20 21 22 23 12/16 01
12 13 14 15 16 17 18 19 20 21 22 23 006/00
STS-116
DN
EXP 14
UP
FD07
CDR/R2 POLANSKY
PLT/IV OEFELEIN
MS1/R1 PATRICK
MS2/EV1 CURBEAM
MS3/EV2 FUGLESANG
MS4 HIGGINBOTHAM
FE-2 REITER
ISS CDR LOPEZ-ALEGRIA
FE-1 TYURIN
FE-2/EV3 WILLIAMS
SLEEP
POST SLEEP
EXERCISE
MEAL
CREW CONF
OFF DUTY
TRANSFER
XFER
PREP WORK
EXERCISE RED
EXERCISE CEVIS
MIDDAY-MEAL
RPCM R&R
P6 RET VIEW
ALSP XFER
EXERCISE VELO+RED
TVIS
RED
EMU RESIZE
CGBA XFER
E/L PREP
ADAPT
CCAA SWAP
IMS EDIT
PMC
DAY/NIGHT
ORBIT 88 89 90 91 92 93 94 95
TDRS W -171 E -46 Z -275
ORB ATT BIAS -XLV -ZVV
NOTES
⊕NOA1 PREP ♦NOA D/L
♥HMS-DEFIB PDIM-ON
*DEACT
*MNVR
*FILTER CK *TERM
®CDRA DCNCT
♣OFF DUTY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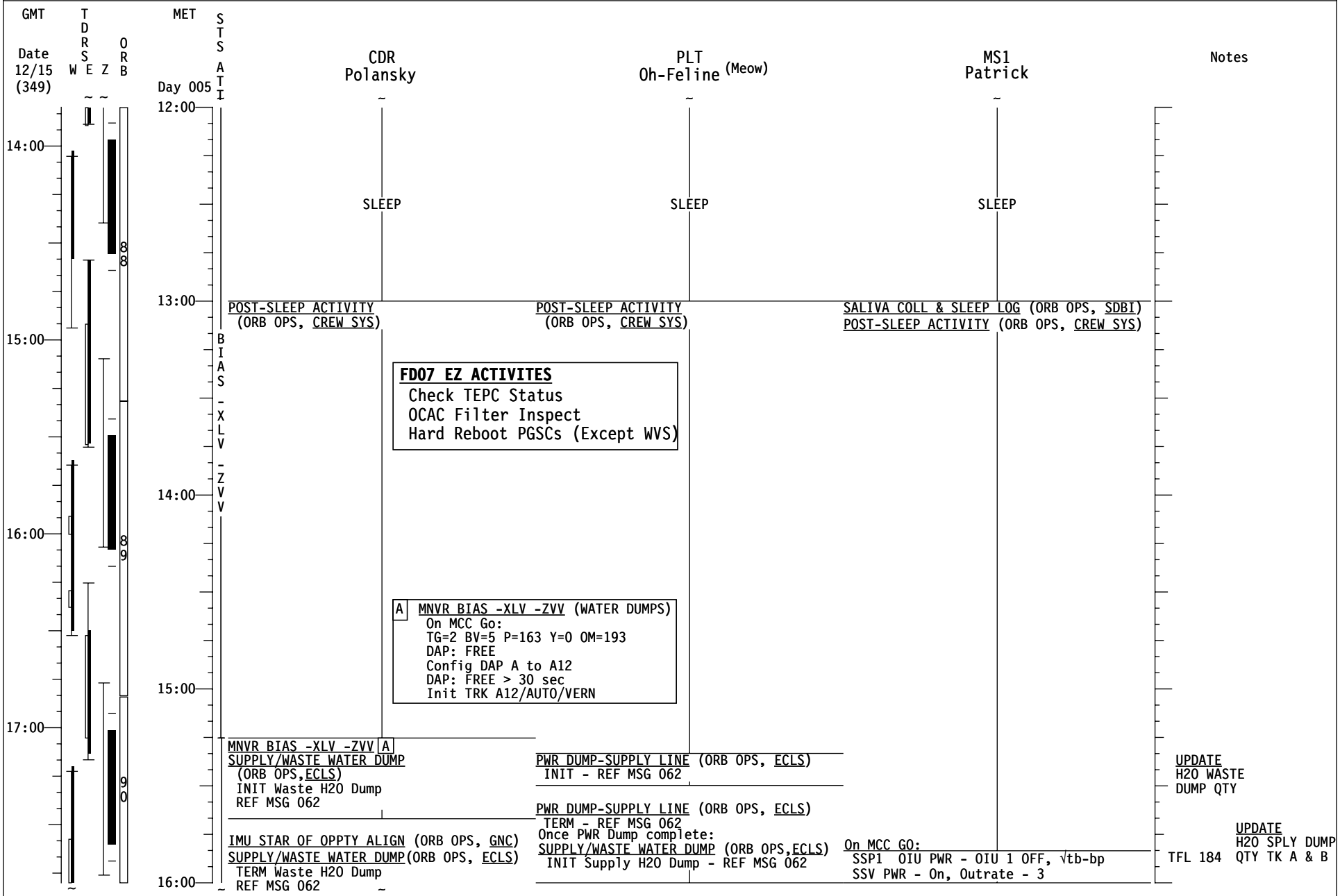
MET Day 006
006/00
02 03 04 05 06 07 08 09 10 11 12 13
01 02 03 04 05 06 07 08 09 10 11 12
STS-116
FD07
CDR/R2
POLANSKY
OFF DUTY
COMM2
EVA PROCEDURE REVIEW
ILUM ON
FEST-T
PRE SLEEP
PMC A/G
PRE SLEEP
SLEEP
ISS EXTERNAL SURVEY
PLT/IV
OEFELEIN
OFF DUTY
EVA PROCEDURE REVIEW
PRE SLEEP
MASK PB/ TOOL CONFG
PRE SLEEP
SLEEP
MS1/R1
PATRICK
OFF DUTY
EVA PROCEDURE REVIEW
EXERCISE
PRE SLEEP
JMP INSRT
PRE SLEEP
SLEEP
ISS A/L Campout @ 10.2 psi
MS2/EV1
CURBEAM
OFF DUTY
EVA PROCEDURE REVIEW
PRE SLEEP
MASK PB/ TOOL CONFG
PB/ 10.2 DPRS
TOOL CONFG
PRE SLEEP
SLEEP
SLEEP
MS3/EV2
FUGLESANG
OFF DUTY
EVA PROCEDURE REVIEW
PRE SLEEP
EXERCISE
PRE SLEEP
SLEEP
MS4
HIGGINBOTHAM
OFF DUTY
EVA PROCEDURE REVIEW
XFER TAG UP
XFER BRIEF
PRE SLEEP - SHAB
SLEEP
DN
FE-2
REITER
OPS LAN RCNFG
EXER TVIS
XFER TAG UP
PREP WORK
DPC
PRE PWORK
PRE SLEEP
SLEEP (8.5)
EXP 14
ISS CDR
LOPEZ-ALEGRIA
RED
EVA PROCEDURE REVIEW
CWC
CSA O2 EXDL
PREP WORK
DPC
JMP INSRT
PRE SLEEP
SSRMS STOW
SLEEP (8.5)
FE-1
TYURIN
TVIS
EVA PROCEDURE REVIEW
PREP WORK
DPC
PRE PWORK
PRE SLEEP
SLEEP (8.5)
UP
FE-2/EV3
WILLIAMS
ADAPT
EVA PROCEDURE REVIEW
PRE SLEEP
MASK PB/ TOOL CONFG
PB/ 10.2 DPRS
TOOL CONFG
PRE SLEEP
SLEEP
DAY/NIGHT
ORBIT
95 96 97 98 99 100 101 102 103
TDRS
W -171
E -46
Z -275
ORB ATT
BIAS -XLV -ZVV
NOTES

STS-116 FD07

REPLANNED



STS-116 FD07

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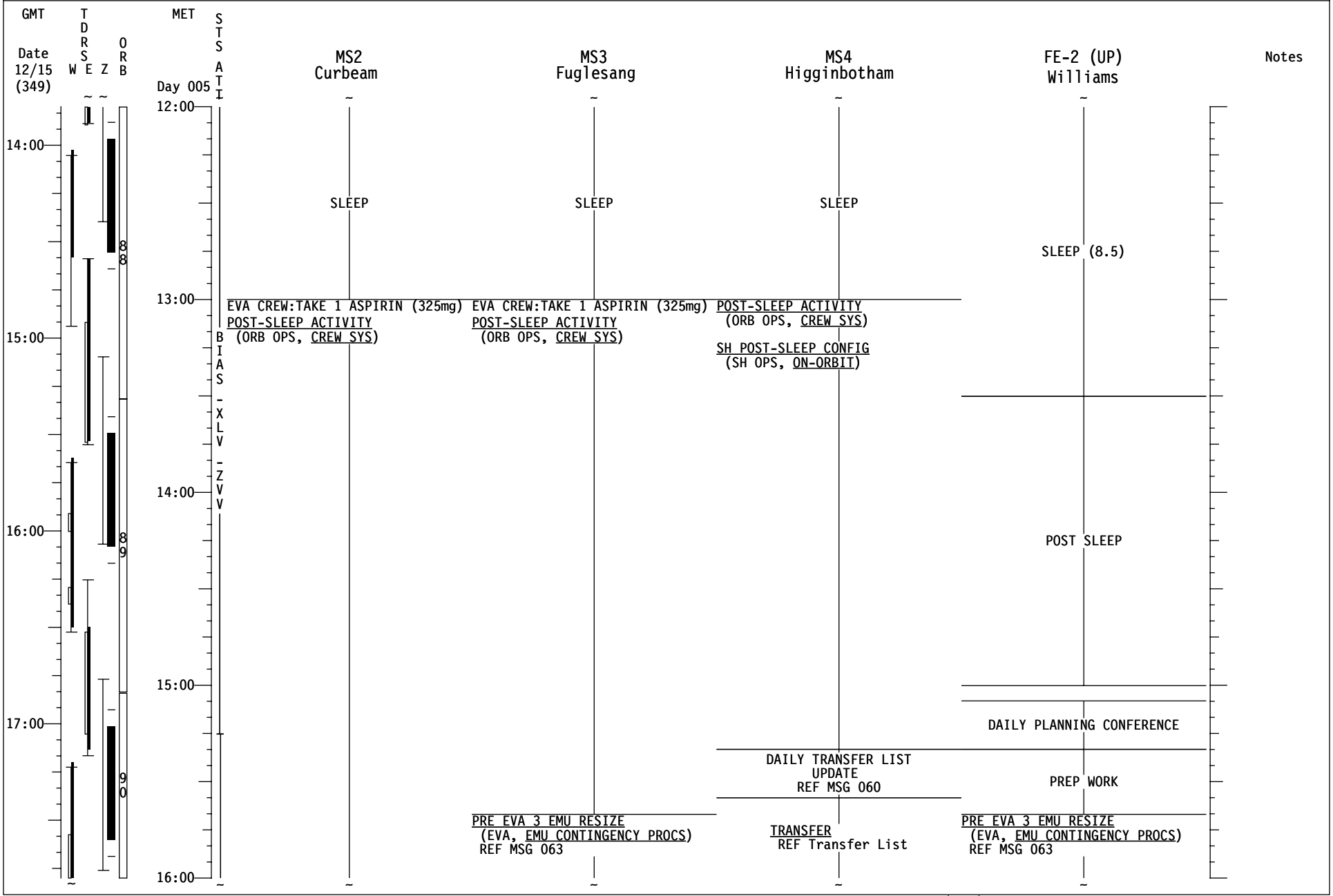

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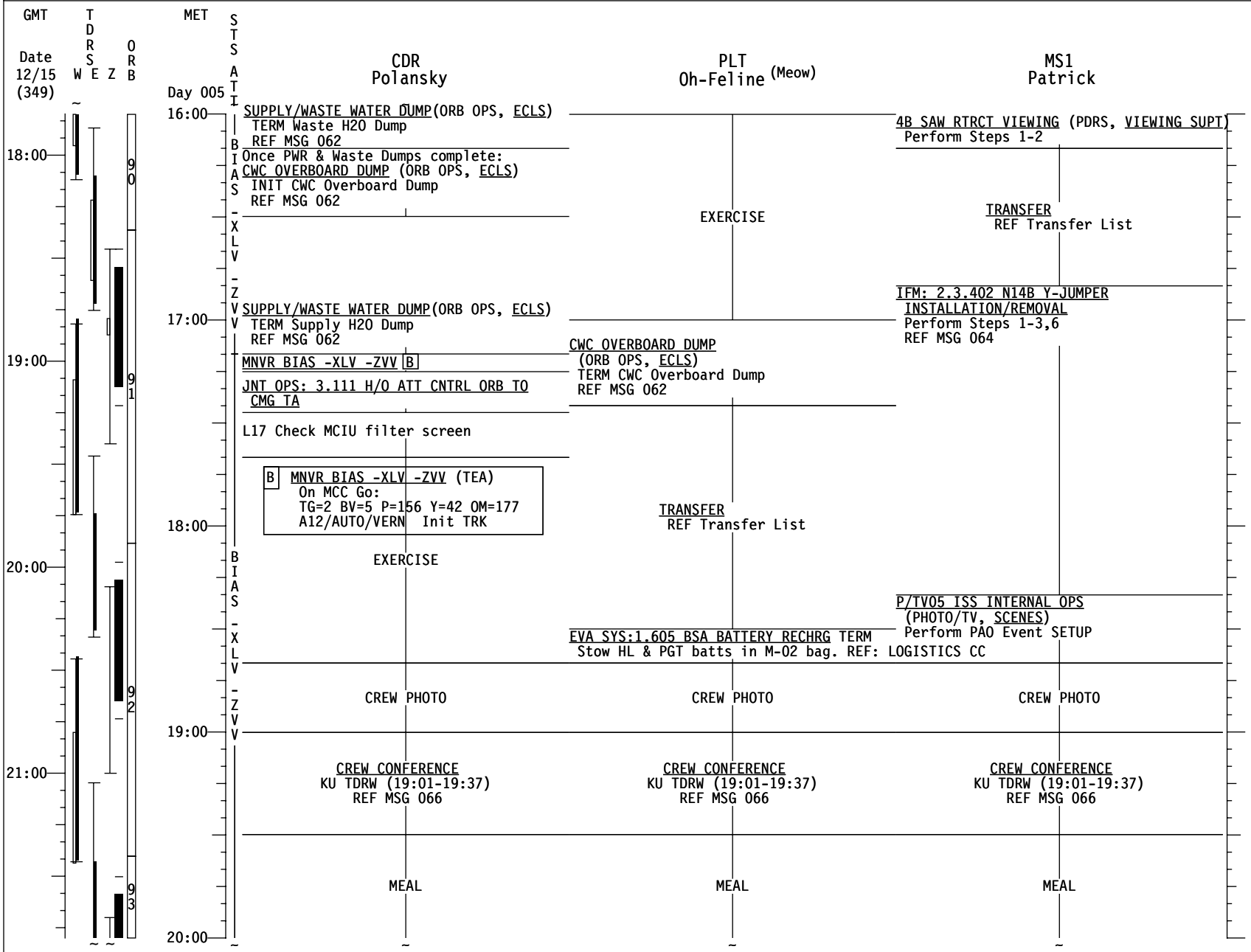

STS-116 FD07

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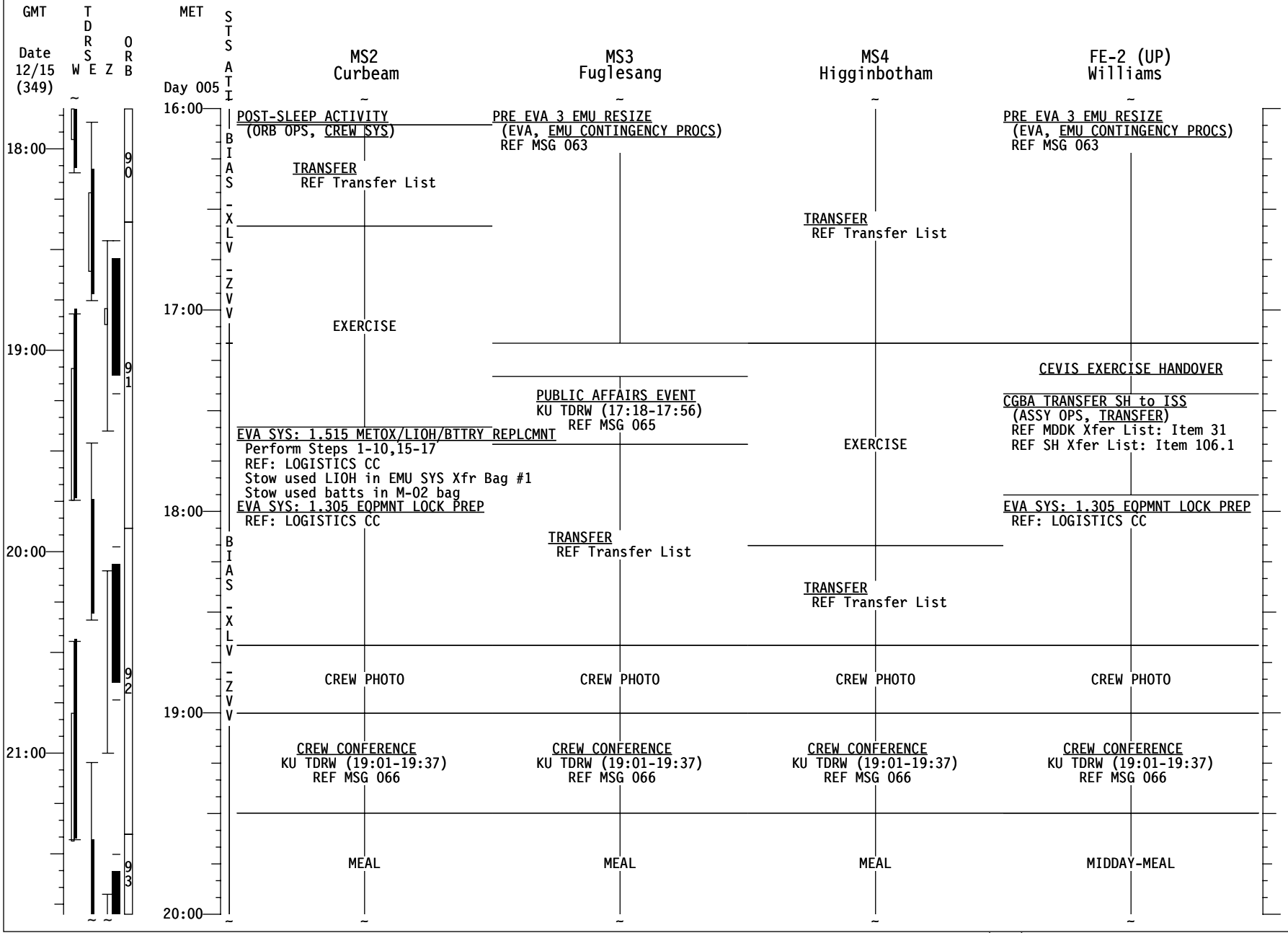

STS-116 FD07

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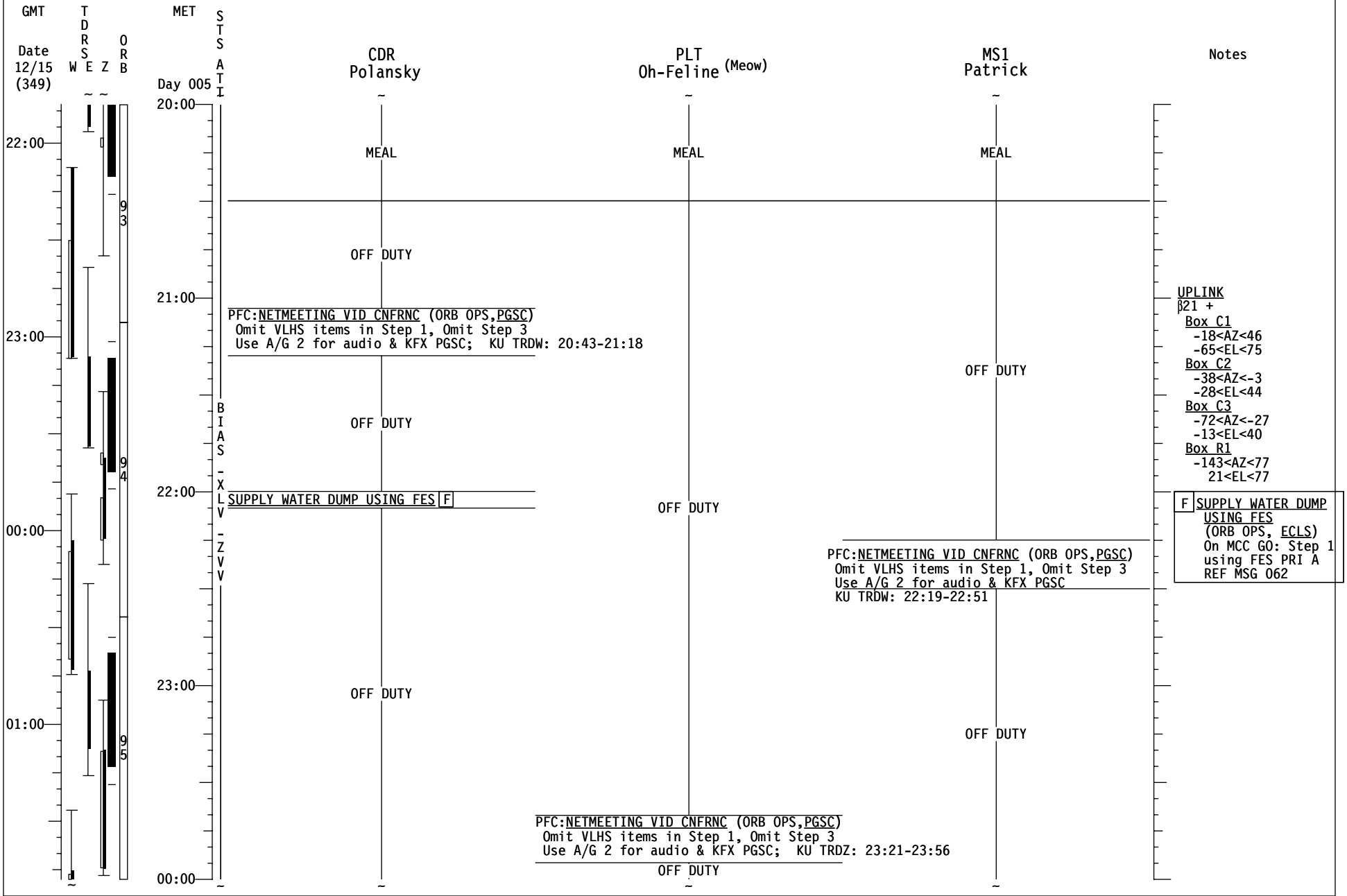
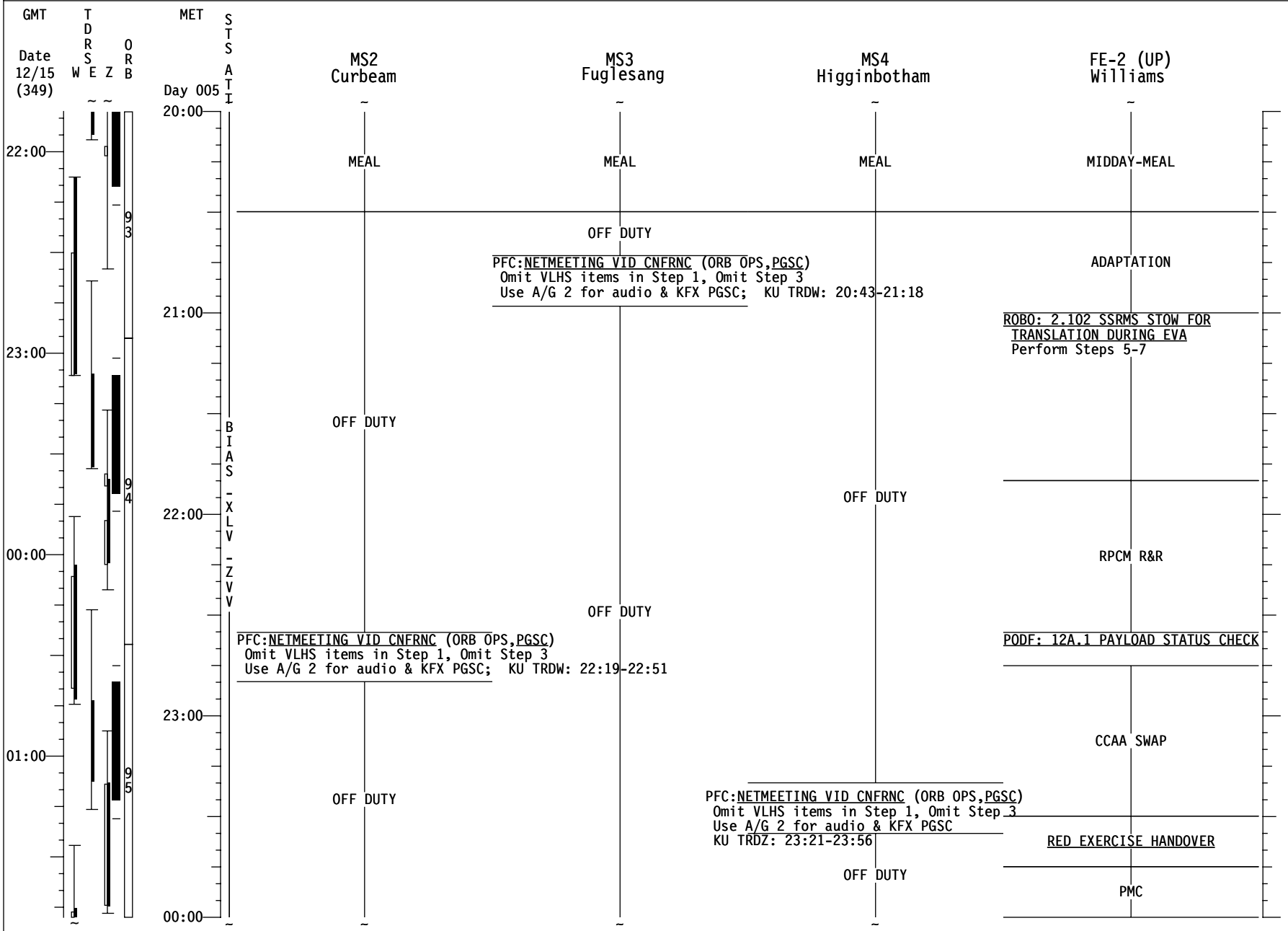


STS-116 FD07

REPLANNED



STS-116 FD07

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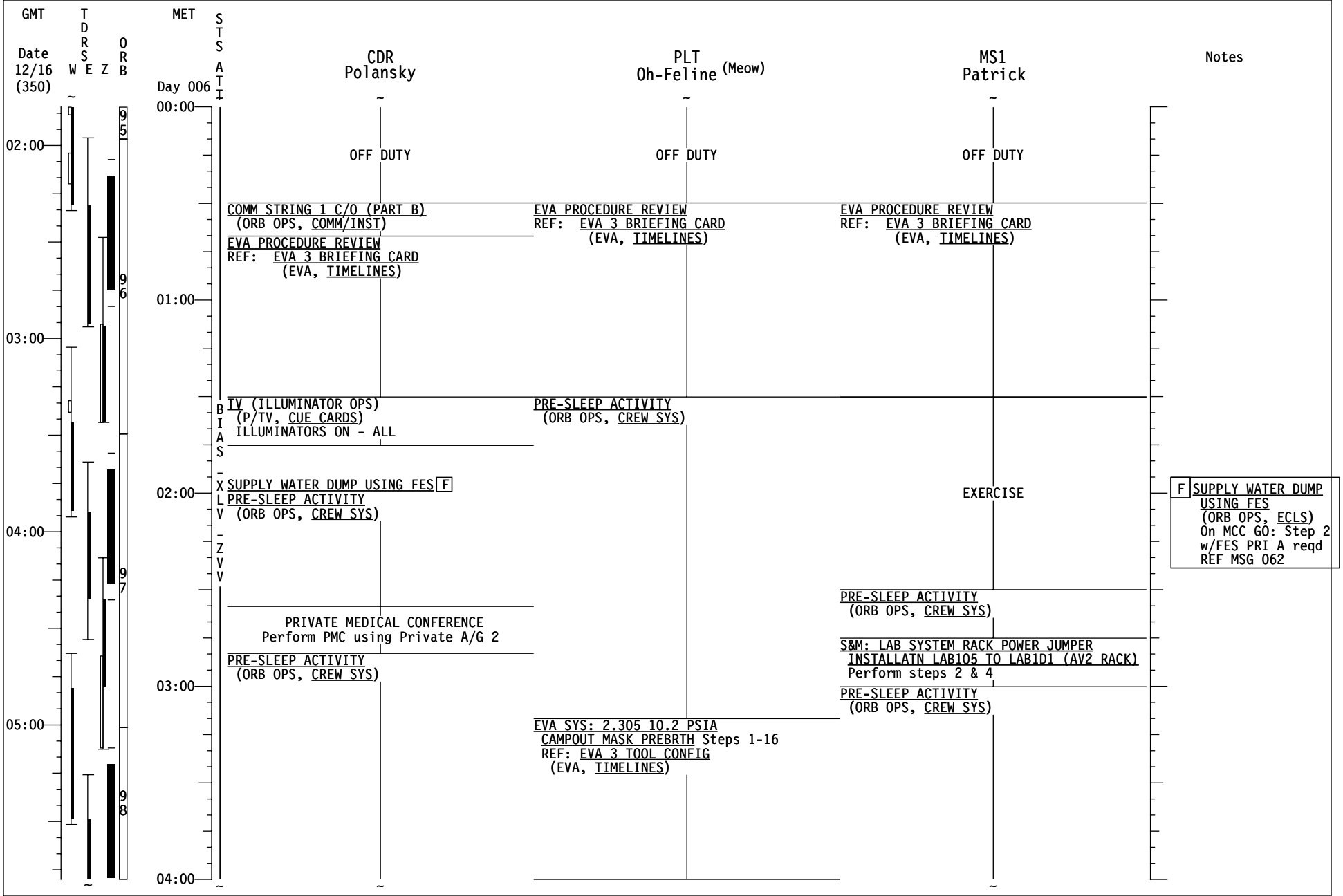

STS-116 FD07

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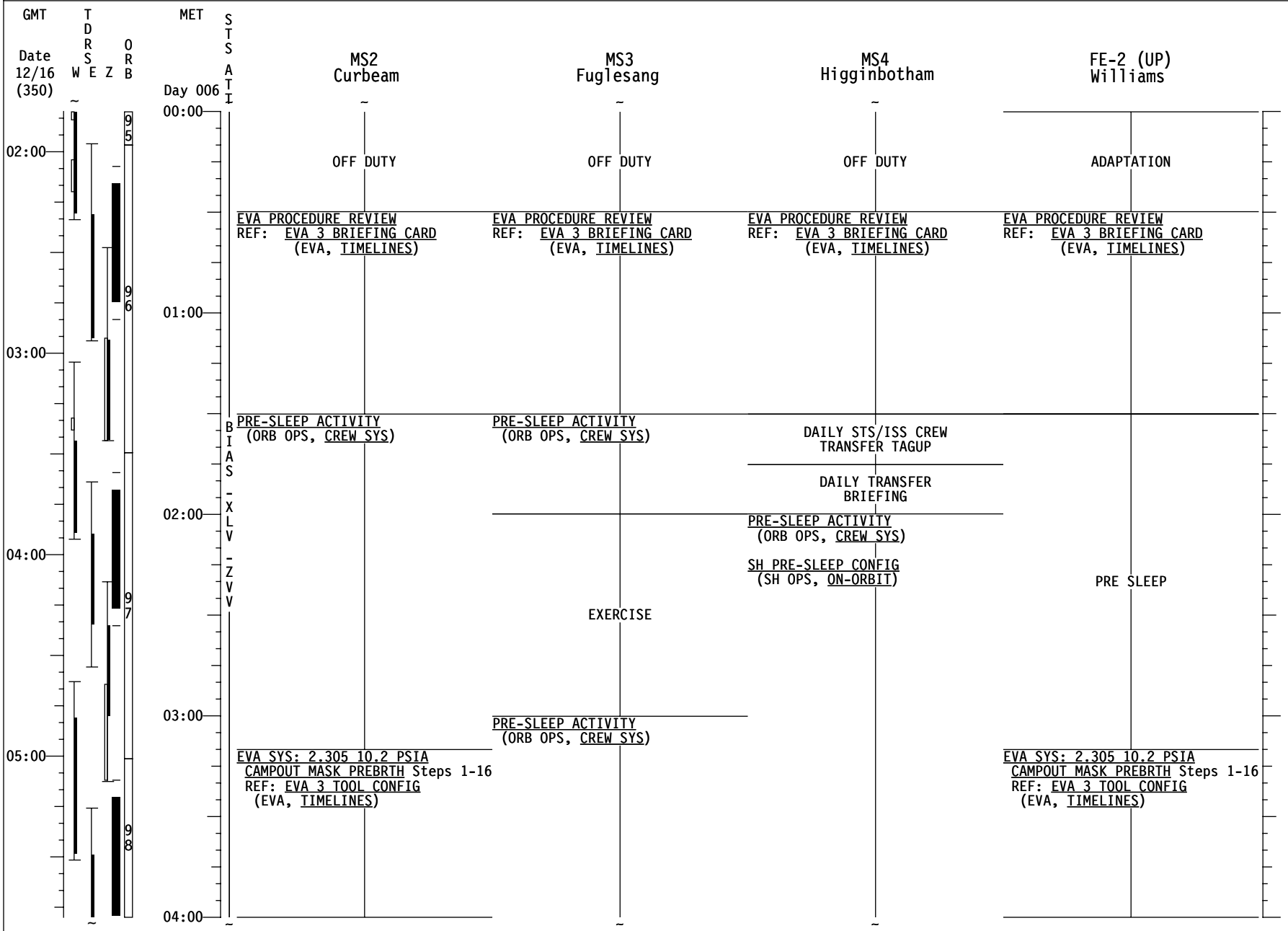

STS-116 FD07

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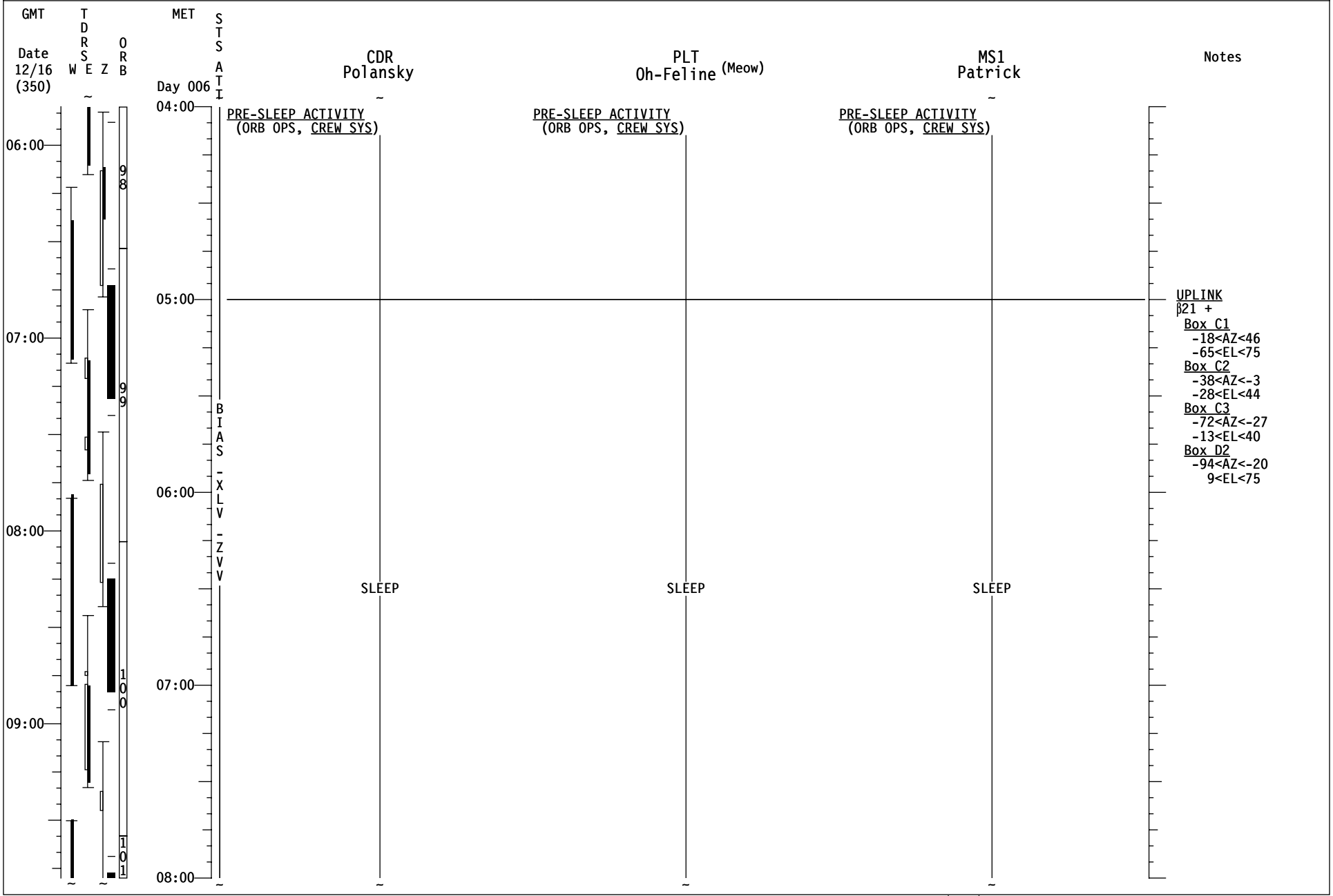

STS-116 FD07

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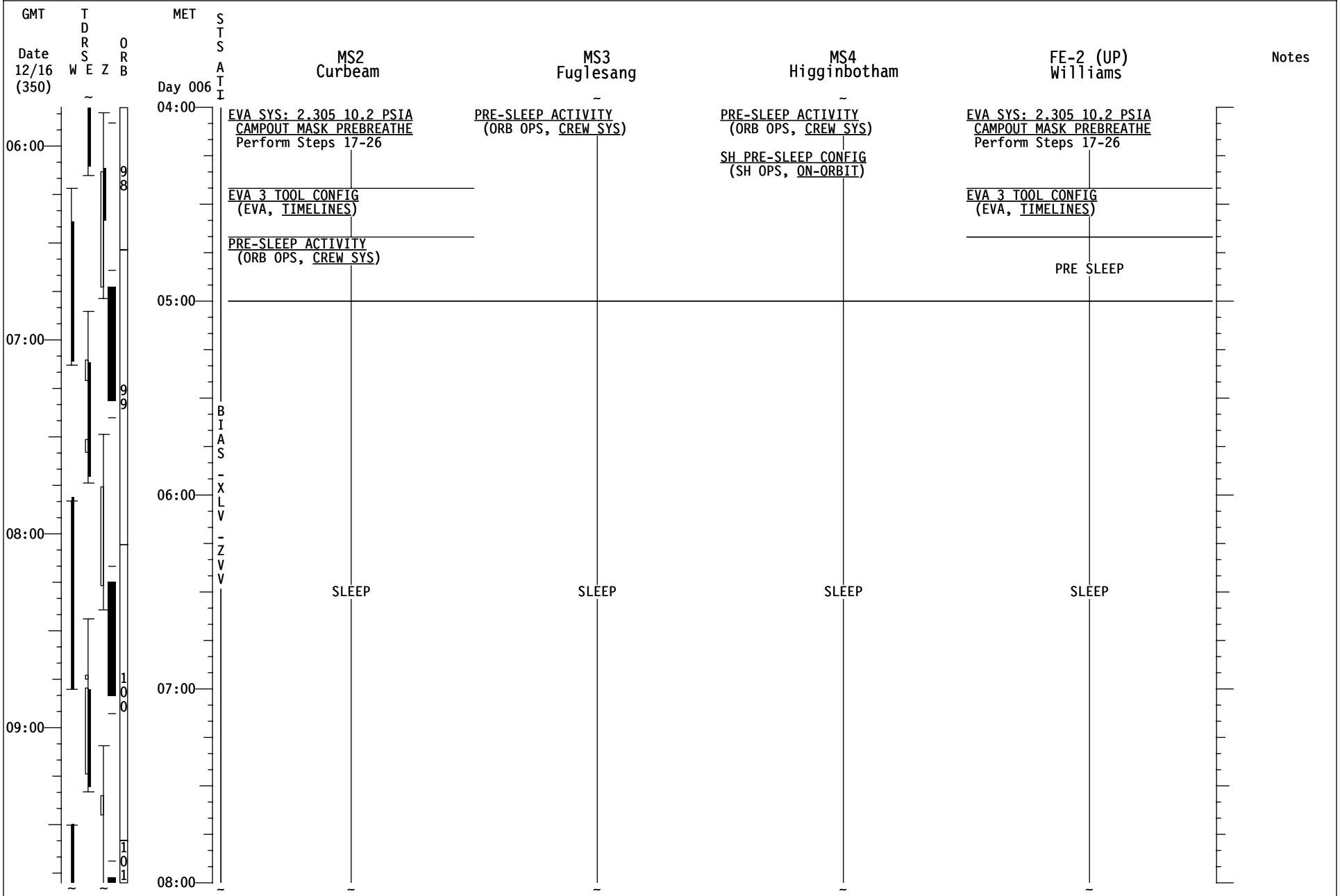

MSG 059 (14-0578) - FD07 MISSION SUMMARY

Good Morning Discovery!!!!

Thanks for your delivery of such a tremendously “powerful” day yesterday!

A heads up on today’s flight plan- while you were asleep, it was decided that ISS would do a BGA wiggle test to try to fix the solar array. The time for doing it was determined by the desire to have data from this test for this morning’s IMMT so the results could be used to make decisions. Obviously we did not have the results back before we needed to uplink the flight plan. Therefore, we added an SRMS maneuver to the P6 4B SAW retract viewing position anticipating positive results from the wiggle test. If the wiggle test is successful we may request another attempt to retract the SAW this afternoon. If the wiggle test is not successful, the SRMS maneuver will be aborted real time. If PFCs are impacted, they will be rescheduled for FD 9.

It appears that the reason for shuttle having to take attitude control last night before you went to sleep is solar weather. Isn’t it interesting that solar winds appear to be affecting your flight!

We hope that all of you take a little time today to catch your breath and to look out the window in order to store future memories.

YOUR CURRENT ORBIT IS: 193 X 177 NM

<u>NOTAMS:</u>

EDWARDS (EDW) - LAKEBEDS RED DUE TO RAIN
- NEW TACAN 1.0 KW
WHITE SANDS (NOR) – 17/23 GREEN (TOW WAYS WET)
AMBERLY (AMB) -CLOSED
ANDERSEN (GUA) -06L/24R CLOSED, ALTERNATE 06R/24L
GANDER TACAN (YQX74) - AZIMUTH OUT OF SERVICE DME AVAILABLE
KEFLAVIK (IKF) – UNUSABLE
ORMOND BEACH TACAN (OMN73) - AZIMUTH OUT OF SERVICE
OCEANA (NTU) – 32R/14L CLOSED
RIO GALLEGOS (AWG) – UNUSABLE
SALSBURY TACAN (SBY49) - AZIMUTH OUT OF SERVICE
WAKE ISLAND (WAK) - CLOSED

<u>NEXT 2 PLS OPPORTUNITIES:</u>

EDW22 ORB 95 – 5/23:32 (FEW060 SCT100 BKN200, 260/14P21)
KSC33 ORB 108 – 6/19:14 (FEW030 BKN120 OVC200, 050/6P10)

<u>OMS TANK FAIL CAPABILITY:</u>

L OMS FAIL: NO
R OMS FAIL: NO

LEAKING OMS PRPLT BURN:

L OMS LEAK: ALWAYS RETROGRADE
R OMS LEAK: ALWAYS RETROGRADE

OMS QUANTITIES(%)

L OMS OX = 44.1 R OMS OX = 45.3
FU = 44.1 FU = 45.8

SUBTRACT I'CNCT COUNTER FOR CURRENT OMS QUANTITIES

DELTA V AVAILABLE:

OMS	424 FPS
ARCS (TOTAL ABOVE QTY1)	50 FPS
TOTAL IN THE AFT	474 FPS
ARCS (TOTAL ABOVE QTY2)	80 FPS
FRCS (ABOVE QTY 1)	38 FPS
AFT QTY 1	86 %
AFT QTY 2	48 %

SYSTEM	FAILURE	IMPACT	WORK AROUND
GNC	-Z Star Tracker enunciated Pressure Fail and Tracker Fail BITES at star tracker powerup on FD05.	No impact. May enunciate BITES on SPEC 22 at Group B Pwrup.	None. Star Tracker performance not affected.

Good morning Joanie, Nick, and STS-116 & Increment 14 crews!

Welcome to your off-duty day! Your continued hard work is paying off since you're still ahead. Thanks again!

Today you'll transfer the ORCA and Charcoal Bed Assembly in support of R&R activities. In addition, CGBA will be installed in the LAB, and the ALSP and RSP will be swapped.

The Transfer List Excel file, FD07_Transfer_List_STS116.xls, is located on the KFX machine in **C:\OCA-up\transfer.**

For ISS, the Transfer List Excel file, FD07_Transfer_List_STS116.xls, is located in **K:\OCA-up\transfer.**

Transfer Notes

- We received the photo and audio file of the broken AP04 strap buckle. These have been forwarded to the Spacehab team for further assessment. We'll send you a forward plan as soon as possible.

- The CHeCS community will be reviewing the TVIS Gyro activation and checkout data this morning, so please continue to stand by on transferring the returning TVIS Gyro (item 759) to Spacehab.

- Today you'll dump the full Shuttle condensate CWC (item 416.2). This bag may be re-used to collect any additional shuttle condensate during the remainder of the flight; therefore it'll remain temporarily stowed in the Middeck. At the end of the flight, it'll be stowed in Spacehab for return.

FD07 Choreography

Item 412.1: Transfer old RSP to SH after RSP C/O.
Items 155 and 155.1: Transfer new Charcoal Bed and O-rings for R&R.
Item 778: Transfer old Charcoal Bed Assembly after R&R.
Item 153: Transfer new ORCA for R&R.
Item 768: Transfer old ORCA to SH after R&R.
Replace bottom 2 rack-front stowage trays on MESS Rack (in front of ORCA).
Item 31: Transfer CGBA to ISS per procedure.
Items 17 and 700: Swap ALSPs per timelined transfer procedure.

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

No updates to Resupply today!!

In the Spacehab Transfer List **LAYOUTS** tab
Replace the following page:
L-5

In the Middeck Transfer List **RETURN** tab
Replace the following page:
Page Return 4

In the Spacehab Transfer List **RETURN** tab
Replace the following pages:
Page Return 11
Page Return 16
Page Return 19
Page Return 20

In the Spacehab Transfer List **SWAP** tab
Replace the following page:
Page Swap 13

Changes to the Transfer List are detailed below:

MIDDECK RETURN
Item 637 – updated quantity

SPACEHAB RETURN
Item 416.2 – item moved from AP07 to FP08
Item 769 – updated location
Item 769.1 – updated location
Item 775.1 – updated quantity

SPACEHAB SWAP
Item 769 – updated location
Item 769.1 – updated location

Have a great off-duty day!

- The Transfer Team

Today, the Waste H2O Tank will be dumped followed by a Condensate CWC (S/N 6008) through the waste dump line. At the same time, PWR S/N 1013 will be dumped through the supply dump line, followed by a Supply H2O Tank Dump. Note that these dumps will be performed concurrently. Ensure that the PWR and CWC dumps do not occur at the same time.

Dumps from the supply and waste lines are time constrained due to limited time in the water dump attitude. To facilitate completing the dumps in the available time, please have the following equipment pregathered and ready: PWR S/N 1013 (used post EVA2), Condensate CWC S/N 6008, SPLY H2O Dumpline Purge Device, B-B hose, R-Y QD adapter (CHCK), 8' Y-Y hose (connected to Condensate QD) and WWD filter (BOB).

Later in the day, you will also perform a Supply Water Dump using the FES.

WASTE H2O LINE DUMPS:

Waste H2O Dump Details

At MET 05/15:20 perform a Waste Water Dump with the following details:

Perform SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) p. 5-2, steps C, E, G, and I.

The waste tank will be dumped to 5%. Waste dump valve open duration will be 27 minutes.

MCC will TMBU all limits.

Following the Waste Water Dump, verify that the PWR Dump is complete and then immediately initiate the CWC Overboard dump.

CWC Overboard Dump Details

When the Waste Water Dump is complete (~ 05/16:10 MET), perform a CWC overboard dump of Condensate CWC S/N 6008 with the following details:

Perform CWC OVERBOARD DUMP (ORB OPS, ECLS) p. 5-32 steps A, and C through G1 (temp stowing hardware).

CWC S/N 6008 will take approximately 60 minutes to dump.

MCC will TMBU all limits.

Post dump, temp stow CWC S/N 6008 and report location and approximation of quantity remaining in CWC to MCC.

SUPPLY H2O LINE DUMPS:

PWR Supply Line Dump Details

At MET 05/15:20 perform a dump of PWR S/N 1013 through the Supply Line with the following details:

NOTE: Have towel ready in case free fluid present.

Perform PWR DUMP-SUPPLY LINE (ORB OPS, ECLS) p. 5-40, steps 1, and 3 through 6. In step 5, leave the SPLY H2O Purge Device installed for the upcoming Supply H2O Dump.

The PWR will take approximately 10 minutes to dump.

MCC will TMBU all limits.

Post dump, stow the B-B hose and R-Y QD adapter in the Contingency Hose and Cable Kit (CHCK). Use gray tape to mark the hose "used" prior to stowing. Temp stow the PWR in the Middeck for subsequent refill on FD09.

Following the PWR Dump, initiate a Supply H2O Dump.

Supply H2O Dump Details

Upon completion of the PWR Dump (~ 05/15:40 MET), perform a Supply Water Dump with the following details:

Prior to initiating the dump, verify SPLY H2O Dumpine Purge Device is still installed in CONT H2O X-TIE POT QD.

Perform SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) p. 5-2, steps D, F, H, and J.

Dump Supply Water for 55 minutes.

MCC will TMBU all limits.

FES DUMP:

FES Dump Details

The FES Dump duration will be approximately 4 hours. Due to constraints with ISS momentum management, it is important that the dump initiation and termination occur at the prescribed times. Check MCC prior to initiating and terminating the FES Dump. The following details are required for the dump:

At MET 5/22:00, initiate SUPPLY WATER DUMP USING FES (ORB OPS, ECLS), p. 5-9, Step 1 DUMP INITIATION, using FES PRI A.

At MET 6/02:00, terminate the FES dump on MCC call using Step 2, DUMP TERMINATION; FES PRI A is req'd.

EVA CREW QUESTIONS/COMMENTS FOR FD7 EXEC PKG

1. Please provide clarification on EV1's 85 foot safety tether retraction problems on EVA 1. Specifically, was the binding happening inside the tether reel, or was the deployed cable balling up outside the reel and jamming at the inlet slot?

2. Depending on how difficult Beamer believes that the EMU scissor retrieval was, Suni might consider pulling the EMU scissors out of the LTA prior to the EVA and stowing them in her trash bag. In order to minimize a possible snag hazard, evaluate tethering the scissors to her MWS.

3. Please stow the extra gap spanner you brought inside after EVA 2 in the Tether Staging Area.

4. Please let us know where you have temp stowed the extra NZGL cap (sz 33) brought in after EVA 2. We believe we will later ask you to place it in the "Return to Shuttle 2" jettison stowage bag for return but discussions are still ongoing. We will inform you prior to the POST EVA RECONFIGURATION AND TRANSFER (EVA, AIRLOCK CONFIG) procedure.

DELTAS TO FD7 EMU RESIZE

As a possible efficiency, and as time permits only, we would like you to add the following steps in procedure PRE EVA 3 EMU RESIZE (EVA, EMU CONT PROCS), page FS 12-29.

Add steps:

9a. Disconnect lower arm power cable from upper arm power harness (both arms) on EMU 3015.

9b. Remove arm sizing rings (0.5” – s/n 138/139) from EMU 3015, then re-install lower arms.

9c. Reconnect lower arm power cable to upper arm power harness (both arms).

9d. Connect arm sizing ring (0.5” – s/n 138) to sizing ring (0.5” – s/n 139).

9e. Wrap arm sizing ring assembly (0.5” – s/n 138/139) in used TCU shirts or towels and stow in EMU SYS TRANSFER BAG #1.

Pen and Ink: On Figure 2 - Final EMU 3015 (Fg) CONFIG, should now read "None".

2.3.402 N14B Y-JUMPER INSTALLATION/REMOVAL

(ISS IFM/E14 - ALL/FIN 5) Page 1 of 4 pages

OBJECTIVE:
Install or remove Node 1 Y-Jumper to power N14B SPDA using RACU 6 power.

LOCATION:
Installed: NOD1P1
Stowed: √Inventory Management System (IMS)

DURATION:
45 minutes
- 15 minutes to powerdown
- 15 minutes to access area
- 15 minutes to install (remove) Node 1 Y-Jumper

CREW:
One

PARTS:
Node 1 Y-Jumper Wire Harness (W0155) P/N 1F89961

MATERIALS:
Kapton Tape

TOOLS:
DCS 760 Camera
ISS IVA Toolbox:
Drawer 2:
- 5/32" Hex Head, 1/4" Drive
- Ratchet, 1/4" Drive

Drawer 4:
- Connector Pliers (if required)

REFERENCED PROCEDURE(S):
NONE

WARNING

Failure to remove power can result in electrical shock hazard.

NOTE

For N14B Y-Jumper Installation, complete steps 1, 2, 3, and 6.
For N14B Y-Jumper Removal, complete steps 1, 4, 5, and 6

1. VERIFYING FGB RACU 6 AND DDCU Z14B OFF

1.1 Verify FGB RACU 6 Safed

PCS FGB: EPS: RACU

FGB RACUs

Verify RACU 6 Converter – Off
Verify Input Current < 2.0 A
Verify Output Voltage ~90 V

2.3.402 N14B Y-JUMPER INSTALLATION/REMOVAL

(ISS IFM/E14 - ALL/FIN 5) Page 2 of 4 pages

NOTE

1. DDCU Z14B with a Loss of Comm failure will require inhibiting output power by DCSU 4B RBI 6 commanded Open, and Close Inhibited, powering down the entire 4B channel, OR by SAFETY concurrence required for use of Loss of Comm DDCU(s) as verifiable upstream inhibit.

2. If communication is available with DDCU Z14B, the Converter should be commanded off regardless of previous state. The Converter in the OFF position can be used as a verifiable upstream inhibit when output voltage telemetry is available.

1.2 √**MCC-H** to verify the following config

If DDCU Z14B Integration Counter incrementing
- Converter – Off
- Output Voltage < 12.8 V

Otherwise
- DCSU 4B RBI 6 – Op, Cl Cmd Inh

MCC-H 1.3 **MCC-H** ⇑ ISS, "Go for N14B Y-Jumper installation (removal)."

2. REMOVING CLOSEOUT PANEL

NOD1P1-01 2.1 Remove Closeout Panel NOD1P1-01 fasteners (ten) (Ratchet, 1/4" Drive; 5/32" Hex Head).

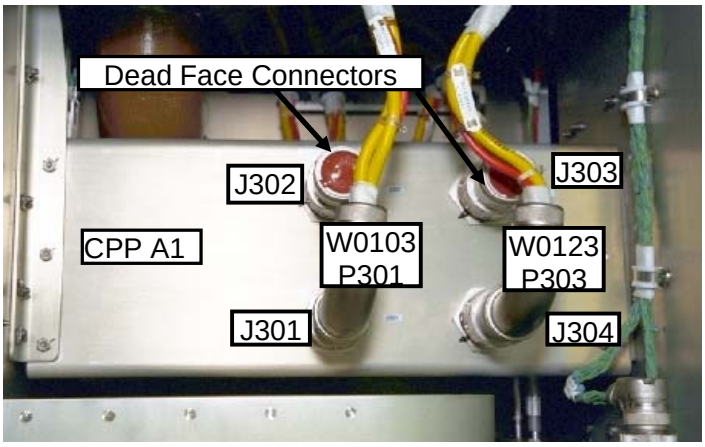

Figure 1.- Node 1 Connector Patch Panel (CPP) A1.

2.3.402 N14B Y-JUMPER INSTALLATION/REMOVAL

(ISS IFM/E14 - ALL/FIN 5) Page 3 of 4 pages

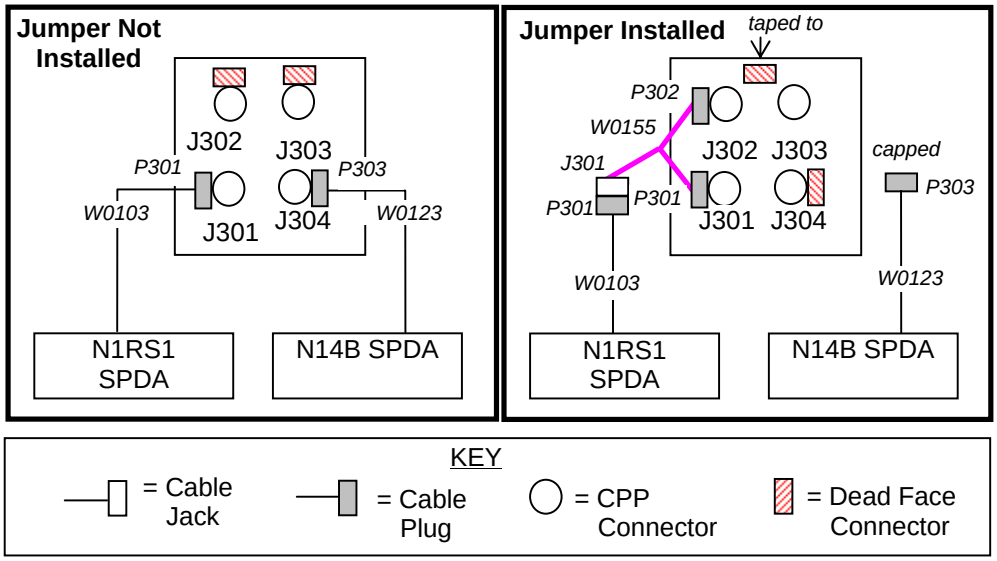

Figure 2.-Node 1 Y-Jumper Not Installed/Installed Configurations.

3. INSTALLING Y-JUMPER AT CONNECTOR PATCH PANEL (CPP) A1

Refer to Figures 1, 2

WARNING

Jumpers must be mated in sequence to ensure adequate inhibits are in place. Failure to comply may result in electric shock.

3.1 W0123P303 ←|→ J304
Dead-Face Connector ←|→ J303
Dead-Face Connector →|← J304

3.2 Cover J303 on CPP (Kapton Tape).

3.3 W0103P301 ←|→ J301
Dead-Face Connector ←|→ J302

3.4 Secure Dead-Face Connector removed from J302 to surface of CPP A1 (Kapton Tape).

3.5 Tethered caps ←|→ Node 1 Y-Jumper

3.6 W0155P302 →|← J302
W0155J301 →|← W0103P301
W0155P301 tethered cap →|← W0123P303
W0155P301 →|← J301

2.3.402 N14B Y-JUMPER INSTALLATION/REMOVAL

(ISS IFM/E14 - ALL/FIN 5) Page 4 of 4 pages

3.7 Photo document configuration (DCS 760 Camera).

NOTE
Due to the stiffness of the Node 1 Y-Jumper, the Closeout Panel will not be able to be replaced with the jumper installed.

3.8 ISS ⇓ **MCC-H**: "N14B Y-Jumper installation complete. Go for RACU 6 activation."

4. REMOVING Y-JUMPER AT CONNECTOR PATCH PANEL (CPP) A1

Refer to Figures 1, 2.

WARNING
Jumpers must be demated in sequence to ensure adequate inhibits are in place. Failure to comply may result in electric shock.

4.1 Verify step 1 has been completed.

4.2 W0155P301 ←|→ J301
W0155J301 ←|→ W0103P301
W0155P302 ←|→ J302

4.3 W0155J301 tethered cap ←|→ W0123P303
Tethered caps →|←Node 1 Y-Jumper
Temporarily stow Node 1 Y-Jumper.

4.4 W0103P301 →|← J301
Dead-Face Connector (taped to CPP A1) →|← J302

4.5 Dead-Face Connector ←|→ J304
Remove Kapton Tape from J303 on CPP.
Dead-Face Connector →|← J303
W0123P303 →|← J304

4.6 Photo document configuration (DCS 760 Camera).

4.7 ISS ⇓ **MCC-H**, "Go for DDCU Z14B and RACU 6 activation."

5. CLOSE OUT

NOD1 P1-01

5.1 Check for FOD around work area within 1 meter.

5.2 Install Closeout Panel NOD1P1-01, tighten fasteners (ten) (Ratchet, 1/4" Drive; 5/32" Hex Head).

6. POST MAINTENANCE

6.1 Stow tools, materials.
Update IMS with stowage locations.

The main topic of discussion at today's MMT was the P6 solar array retract problems, a review of the SSME, SRB, and ET performance, and several minor orbiter issues.

First, the rest of the STS-116 mission including shuttle undocking can be completed with the current solar array configuration. Additionally, Progress docking/undocking, ISS reboost, and orbiter dockings are not believed to be an issue. The primary concern at this time is docking loads with the April Soyuz on the FGB nadir port which have not been fully cleared as of the MMT. Teams are working around the clock to develop the EVA options required to retract and/or latch the anomalous array as well as any IV options which may alleviate some of the friction within the array to allow the tension mechanism to work more effectively. A team is also working to determine if the P6 array can remain in this configuration or a slightly different configuration to allow deferring an EVA to the Stage or subsequent Shuttle mission. These options will be briefed to the Shuttle and Station MMT's at which time the appropriate timeline and risk trades will be discussed.

The great news is that the SARJ is tracking the sun as expected. The Ammonia loop that was filled after EVA 1 and activated during FD 6 is performing very well.

-Z StarTracker - The –Z Star Tracker indicated a loss of internal pressure during Star Tracker Door opening on FD 5. The pressure loss will not affect the star tracker on-orbit performance, has been seen on other missions, and is only a post flight turnaround issue. You can expect two BITE messages to annunciate when the tracker is powered on.

Cryo Margins - Cryo margins are improving slightly with ~ 2 hours of O2 margin for a 12+2 mission.

N2 Transfer- N2 transfer will terminate on FD 9 and approximately 60 lbs of N2 will be transferred.

Solar Activity - As of the MMT, weather conditions for the past 24 hours have been at low levels and no significant flare activity has been observed. Space weather conditions are expected to remain at moderate levels for the immediate future, however, instability still exists in region 930.

Middeck and Spacehab Transfer Status - As of FD5, Middeck and Spacehab transfers are approximately 39% complete, which is slightly ahead of schedule for this point in the mission.

SRB/RSM - There were no hardware issues to report during SRB open assessments based on engineering evaluation criteria and previous flight experience. All squawk areas are below the ETA rings and consistent with those noted on previous missions during splashdown.

ET - All systems performed nominally. The video review is still on going. The -Z LH2/IT flange closeout foam loss between stringers 13-15 that was mentioned yesterday is consistent with cryo-ingestion through the flange bolts and not considered an issue since it is outside the critical debris zone. The preliminary TPS loss assessment indicate that all foam loss events were within the ET allowables.

SSME - The performance on all three of the main engines was characterized as nominal. The preliminary Isp reconstruction of 453.2 seconds correlates well with the ground-based performance predictions. The Right Engine with the AHMS controller looked great and all accelerometer data appears healthy. The AHMS did not detect any LCC or redline violations. There were no indications of noisy HPFTP speed sensors or fuel flowmeter shifts.

Wave Aircraft view of SRB Sep