



STS-128/17A

FD 11 Execute Package

MSG	Page(s)	Title
-	-	FD11 Summary Timeline
092B	1 - 11	FD11 Flight Plan Revision
093	12 - 13	FD11 Mission Summary
094	14 - 15	FD11 Transfer Message
095	16	FD11 Crew Choice Downlink
096A	17 - 19	Post EVA EMU Reconfig and Transfer
097	20 - 21	Updated STS 128 LiOH Cue Card
098	22	Updated PGSC Usage Chart Post RPOP2 Transfer

Approved by FAO:

Gail Hansen

Last Updated: Sep 7 2009 1:01 PM GMT

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

**COMEDY
INSIDE**

SPINAL ELONGATION OPERATING PROCEDURE (CC) (ASSY OPS/17A/FIN 2)



**Figure 1: Spinal Elongation Experiment-
(Test article and Training Hardware)**

1. OPERATOR PROCEDURE

- 1.1 Unstow SPINAL ELONGATION H/W
 - Relax And Confess Kit (RACK)
 - Restraining Orthopedic Puller Equipment (ROPE)
 - Cervical Re-alignment Assembly Negotiator Kit (CRANK)
- 1.2 Debrief subject on options (confess or stretch).

CAUTION

Do not perform nominal Spinal Elongation recreation within one hour of compression exercise or countermeasures (Penguin Suit, Koala Suit, PJ Bunny suit, EVA, weight exercises, ARED, IRED, AB Lounge, Stair Master, etc.) as exercise would adversely affect the measurements being taken in this activity.

- 1.3 Before proceeding with this step, subject should wear light-weight clothing.
- 1.4 Operator straps subject into the RACK with a smile.
- 1.5 Operator prepares CRANK for CW rotation which will shorten ROPE extenders.
- 1.6 Ask subject if they worked through their OFF-DUTY period.
 - **CRANK: A1/CW2/30.5** (5 turns) - until truth is acquired.
 - **CRANK: B1/CW2/12.0** additional (2 turns) for good measure.
- 1.7 Allow subject to scream. In space no one will hear.

09/07/09 08:54:43

REPLANNED

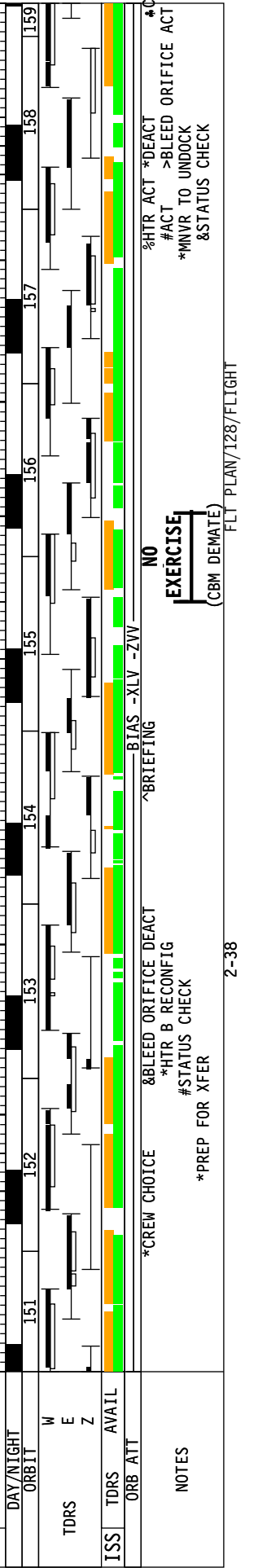
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MET	Day_009	009/00	01	02	03	04	05	06	07	08	09	10	11	12
S T S 1 2 8	FD10 CDR STURCKOW	OFF DUTY	OFF DUTY	PRE SLEEP PMCA/G	PRE SLEEP	OFF DUTY	OFF DUTY	OFF DUTY	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	FD11 L POST SLEEP
	PLT FORD	OFF DUTY	OFF DUTY	PRE SLEEP	PRE SLEEP	OFF DUTY	OFF DUTY	OFF DUTY	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	POST SLEEP
	MS1 FORRESTER	OFF DUTY	OFF DUTY	PRE SLEEP	PRE SLEEP	OFF DUTY	OFF DUTY	OFF DUTY	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	L POST SLEEP
	MS2 HERNANDEZ	OFF DUTY	OFF DUTY	PRE SLEEP	PRE SLEEP	OFF DUTY	OFF DUTY	OFF DUTY	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	L POST SLEEP
	MS3 OLIVAS	OFF DUTY	OFF DUTY	PRE SLEEP	PRE SLEEP	OFF DUTY	OFF DUTY	OFF DUTY	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	POST SLEEP
	MS4 FUGLESANG	OFF DUTY	OFF DUTY	PRE SLEEP	PRE SLEEP	OFF DUTY	OFF DUTY	OFF DUTY	SLEEP	SLEEP	SLEEP	SLEEP	SLEEP	L POST SLEEP
DAY/NIGHT ORBIT	143	144	145	146	147	148	149	150	151					
TDRS	W	E	Z											
ISS	TDRS	AVAIL												
ORB ATT														
NOTES	#STATUS CHECK													

09/07/09 08:54:43

REPLANNED

GMT 09/07/09 (Z50) 16 17 18 19 20 21 22 23 01 02 03 04
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 09/08 20 19 18 21 20 19 21 22 23 01 02 03 04
 010/00

FD11 CDR STURCKOW	POST SLEEP	MDDK XFER	MEAL	COND CWC C/O	STS O2 P/B T/D	EXERCISE	EGRS HATCH CLOSE	HATCH LEAK CHECK
	POST SLEEP	MDDK XFER	MEAL	SSRMS GRAPL	MPLM UNINSTL	MPLM UNGRPL	EXERCISE	EXERCISE
MS1 FORRESTER	POST SLEEP	MDDK XFER	MEAL	MEAL	MDDK XFER	MDDK XFER	EXERCISE	HATCH LEAK CHECK
	POST SLEEP	POST EVA XFER/RCNFG	MEAL	SSRMS GRAPL	MPLM UNINSTL	MPLM UNGRPL	EXERCISE	RNDZ TOOLS C/O
MS2 HERNANDEZ	POST SLEEP	POST EVA XFER/RCNFG	EXERCISE	MEAL	MDDK XFER	MDDK XFER	EXERCISE	RNDZ TOOLS C/O
	POST SLEEP	POST EVA XFER/RCNFG	EXERCISE	MEAL	MDDK XFER	MDDK XFER	EXERCISE	EXERCISE
MS3 OLIVAS	POST SLEEP	MPLM VEST DEMATE	MPLM VEST DEPRESS	N2 CBM DEMATE	MEAL	MDDK XFER	EXERCISE	EXERCISE
	POST SLEEP	MPLM VEST DEMATE	MPLM VEST DEPRESS	N2 CBM DEMATE	MEAL	MDDK XFER	EXERCISE	EXERCISE
MS4 FUGLESANG	POST SLEEP	MPLM VEST DEMATE	MPLM VEST DEPRESS	N2 CBM DEMATE	MEAL	MDDK XFER	EXERCISE	EXERCISE
	POST SLEEP	MPLM VEST DEMATE	MPLM VEST DEPRESS	N2 CBM DEMATE	MEAL	MDDK XFER	EXERCISE	EXERCISE



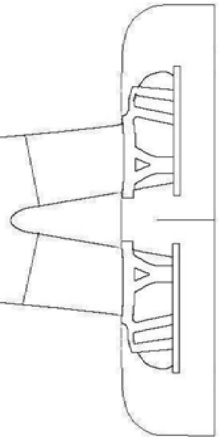
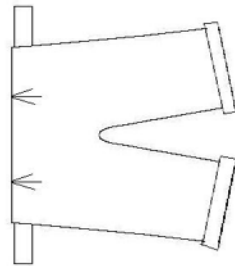
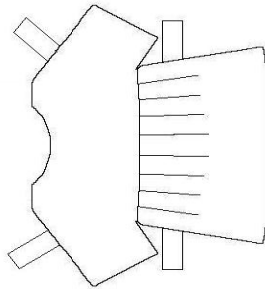
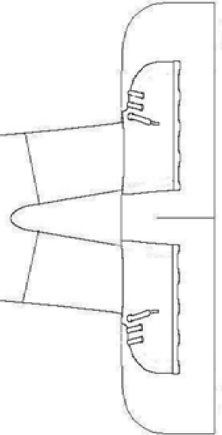
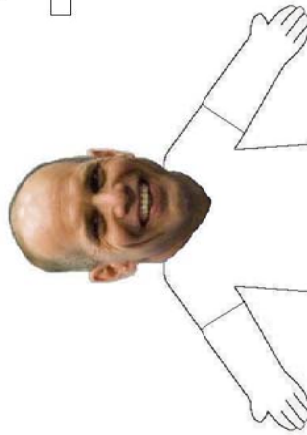
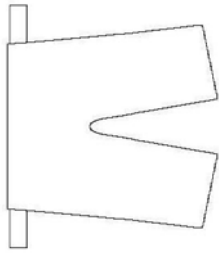
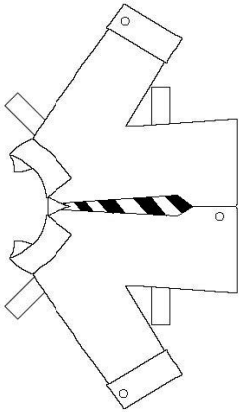
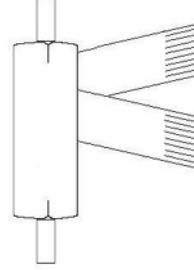
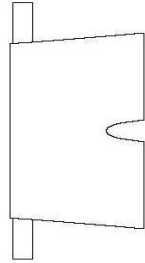
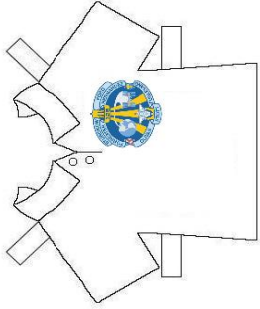
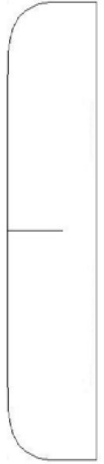
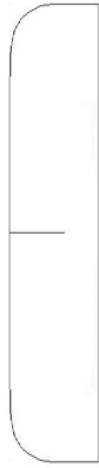
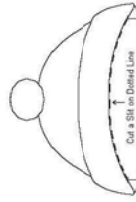
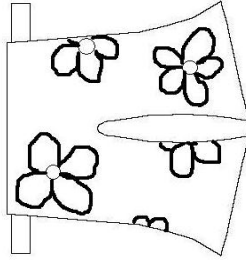
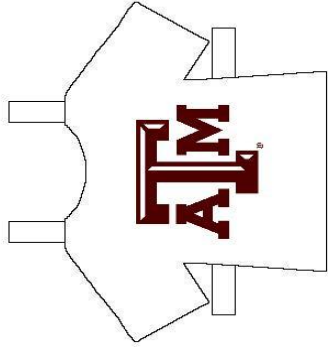
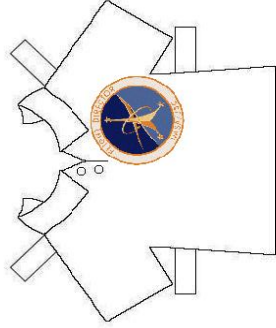
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REPLANNED

GMT 09/08/09 (251) 04 05 06 07 08 09 10 11 12 13 14 15 16
 MET Day_010 010/00 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16

FD11 CDR STURCKOW	PRE SLEEP	PRE SLEEP	SLEEP	FD12 POST SLEEP				
	PMC A/G	PRE SLEEP	SLEEP					
PLT FORD	EXERCISE	PRE SLEEP	SLEEP	POST SLEEP				
		PRE SLEEP	SLEEP	POST SLEEP				
MS1 FORRESTER		PRE SLEEP	SLEEP	POST SLEEP				
		PRE SLEEP	SLEEP	POST SLEEP				
MS2 HERNANDEZ		PRE SLEEP	SLEEP	POST SLEEP				
		PRE SLEEP	SLEEP	POST SLEEP				
MS3 OLIVAS	*	PRE SLEEP	SLEEP	POST SLEEP				
		PRE SLEEP	SLEEP	POST SLEEP				
MS4 FUGLESANG		PRE SLEEP	SLEEP	POST SLEEP				
		PRE SLEEP	SLEEP	POST SLEEP				
MS5 KOPRA		PRE SLEEP	SLEEP	POST SLEEP				
		PRE SLEEP	SLEEP	POST SLEEP				
DAY/NIGHT ORBIT	159	160	161	162	163	164	165	166
TDRS W E Z								
ATTITUDE	BIAS -XLV -ZVV							
NOTES	*C/L CAMERA INST-UNDK *ACT							

S T S 1 2 8



MSG 092B - FD11 FLIGHT PLAN REVISION

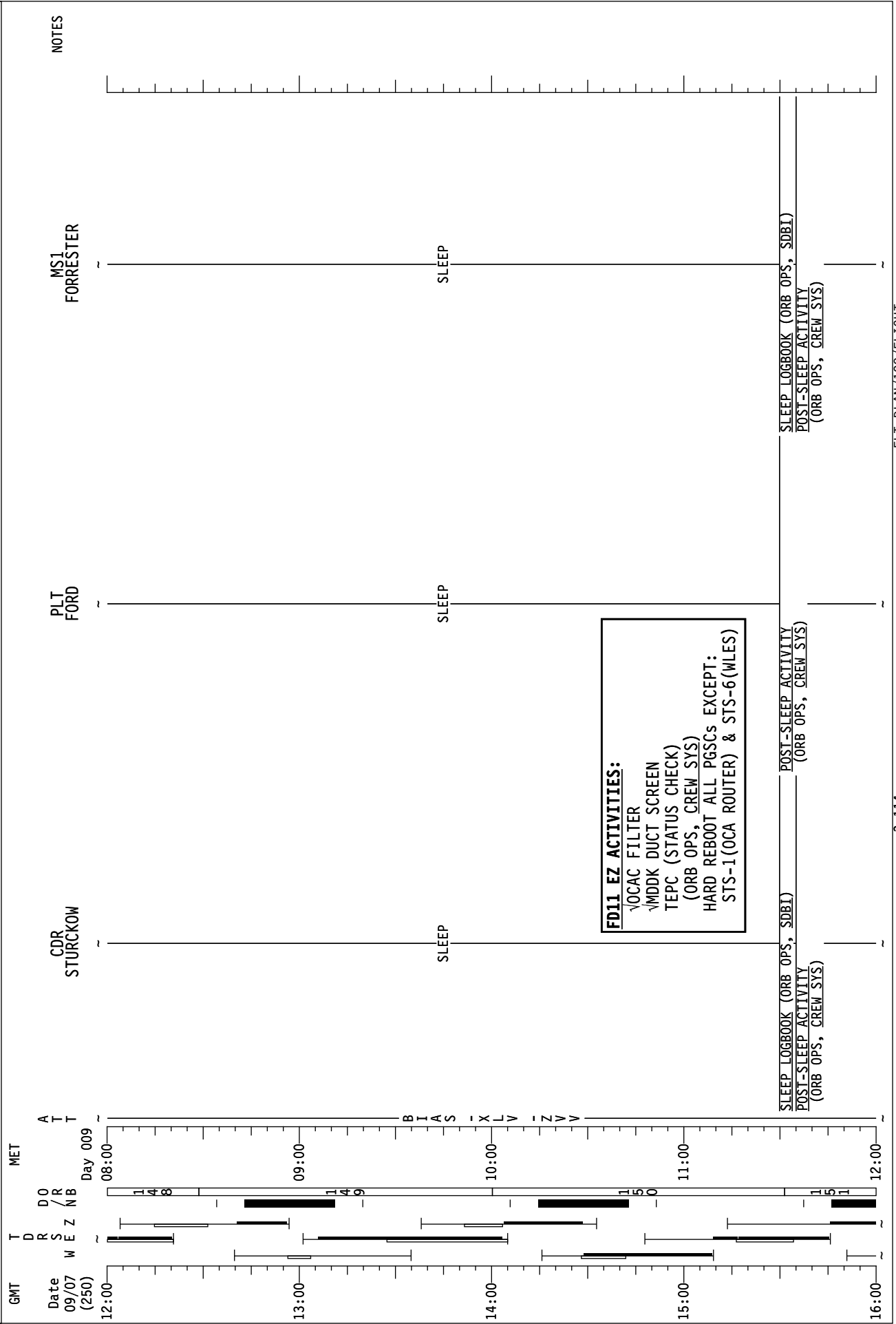
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MSG INDEX

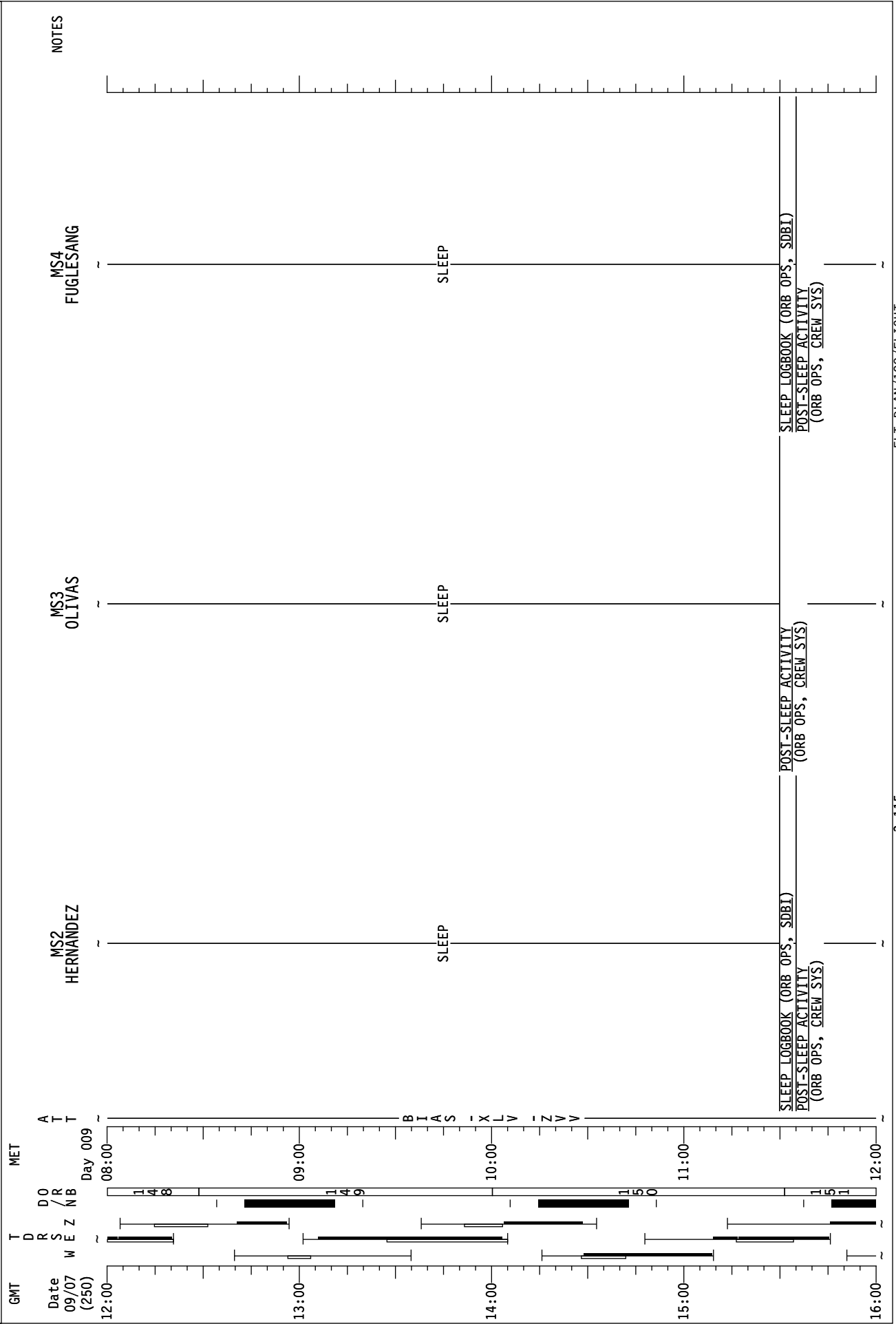
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092	FD11 Flight Plan Revision
093	FD11 Mission Summary
094	FD11 Transfer Message (20-1149)
095	FD11 Crew Choice Downlink
096	Post EVA EMU Reconfig and Transfer (20-1147)
097	Updated STS 128 LiOH Cue Card
098	Updated PGSC Usage Chart Post RPOP2 Transfer

- MPC Status** - Due to the problems we had with the High Definition playbacks during last night's crew choice downlinks, we would like to perform the Digital Playback scheduled at MET 13:00 in Standard Definition. Following the ISS PAO event scheduled at MET 14:11, we will test the Shuttle MPC to ensure it is working properly before transfer to Station. Thus, pending the outcome of the troubleshooting, please hold off on transferring the MPC.
- Shuttle Condensate Changeout** - You will be changing out condensate CWC s/n 1070 with CWC s/n 5085 before hatch closure, but no earlier than 9/18:15. CWC s/n 5085 was previously used for EVA activities and should be transferred to the Middeck today during POST EVA XFER/RCNFG activities under MS2 and MS3. Stow the full CWC s/n 1070 at JPM1F7, on the rack front.
- LiOH Changeout Cue Card** - MSG 097 is your new LiOH Changeout Cue Card. Use this card starting on FD11. A new cue card is required due to changes made from the preflight plan.
- CBM Status** - Last night the CBM Prep for Demate was performed and everything checked out healthy and nominal. Since Bolt 4-1 is fully retracted from the interface after the R&R, we have Masked that bolt. Therefore, you will only need to perform your commanding verifications for only 15 of 16 bolts. Also, at the completion of the MPLM Demate, you may see a small amount of load (0.45kN) on Bolt 2-1. This is a known result of a drift in the load cell and is of no impact.
- Replace Pages 3-114 Through 3-123.

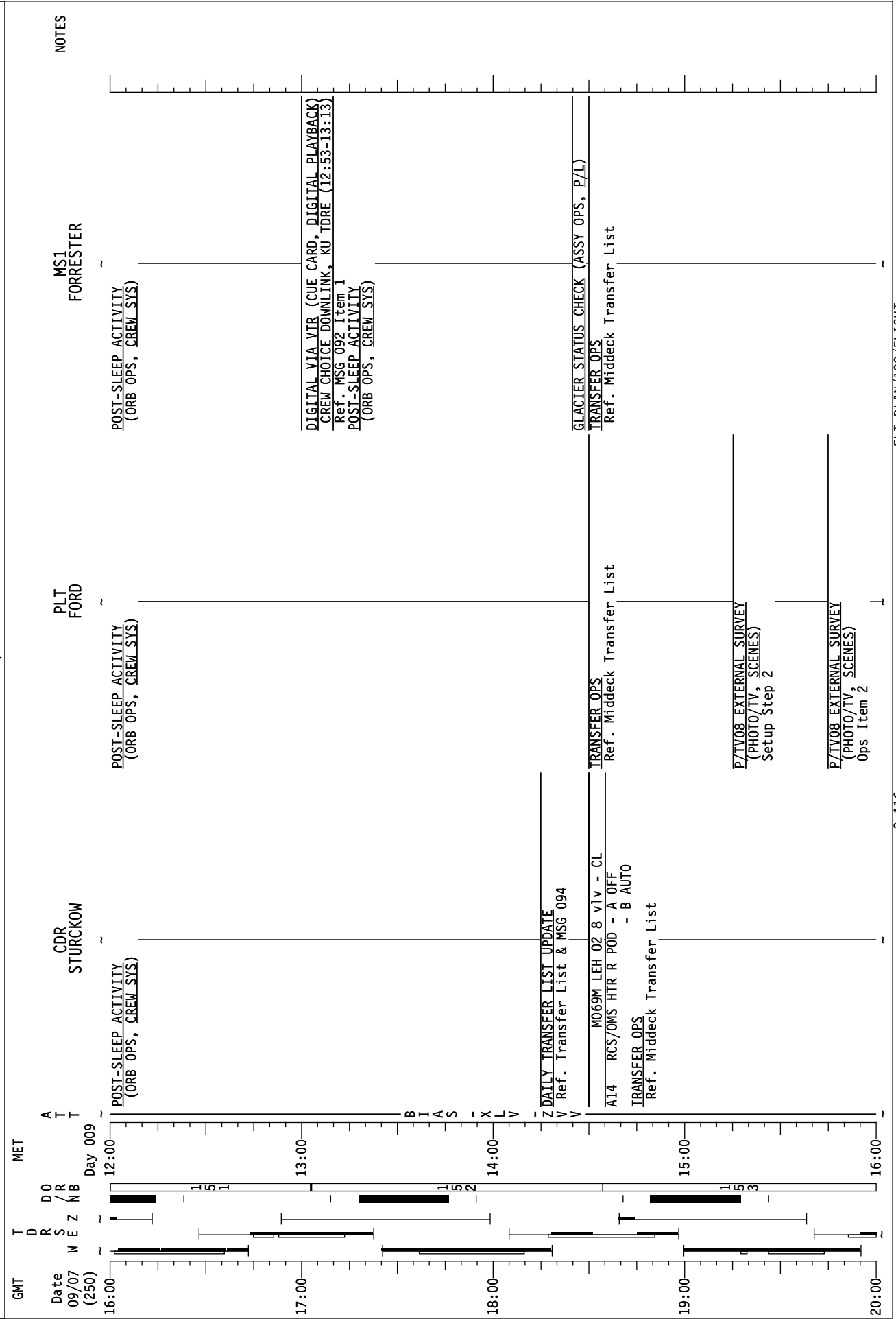
STS-128/17A FD11



STS-128/17A FD11

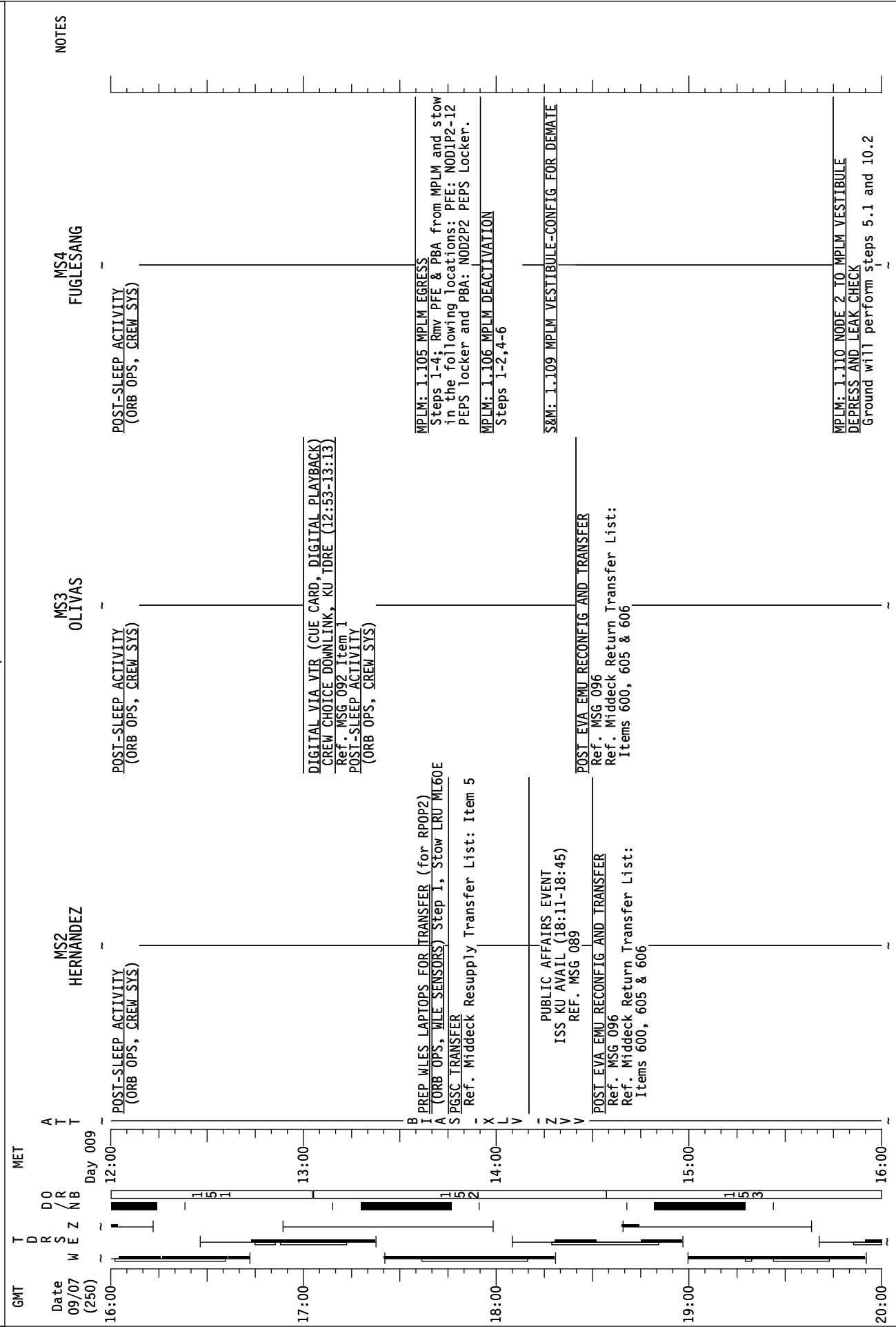


STS-128/17A FD11



09/07/09 08:55:01

STS-128/17A FD11

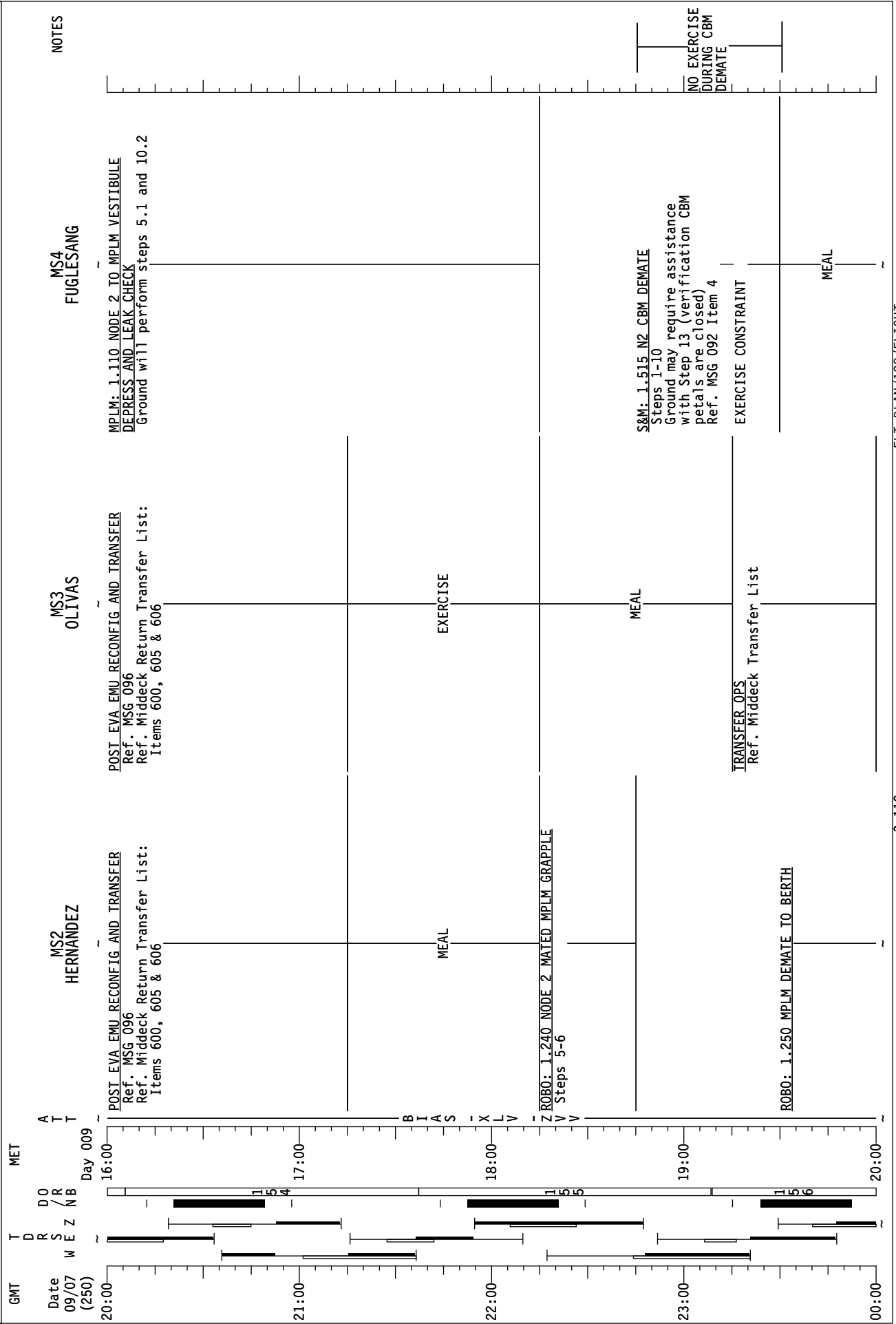


09/07/09 08:55:01

STS-128/17A FD11

GMT	Date 09/07 (250)	TDRS W E Z	Day 009	CDR STURCKOW	PLT FORD	MS1 FORRESTER	NOTES
16:00				TRANSFER OPS Ref. Middeck Transfer List	P/TV08 EXTERNAL SURVEY (PHOTO/TV, SCENES) Ops Item 2	TRANSFER OPS Ref. Middeck Transfer List	
16:00				<u>IMU STAR OF OPPTY ALIGN (ORB OPS, GNC)</u>	<u>FILTER CLEANING (IFM, SCHEDULED MAINTENANCE)</u>		
17:00				UNDocking BRIEFING L9 PAYLOAD STATION A/G (two) - OFF Perform via A/G2	UNDocking BRIEFING L9 PAYLOAD STATION A/G (two) - OFF Perform via A/G2		
18:00				MEAL	MEAL		
18:00				Z SHUTTLE CONDENSATE COLLECTION (ORB OPS, ECLS) Perform CHANGEOUT Use CMC S/N 5085 Ref. MSG 092 Item 2	ROBO: 1.240 NODE 2 MATED MPLM GRAPPLE Steps 5-6	TRANSFER OPS Ref. Middeck Transfer List	
19:00							
20:00				JOINT OPS: 3.122 PREBREATHE USING SHUTTLE O2 TEARDOWN; steps 2-7; MCC-H will perform steps 2.4 and 5.5	ROBO: 1.250 MPLM DEMATE TO BERTH		NO EXERCISE DURING CBM DEMATE

STS-128/17A FD11



09/07/09 08:55:01

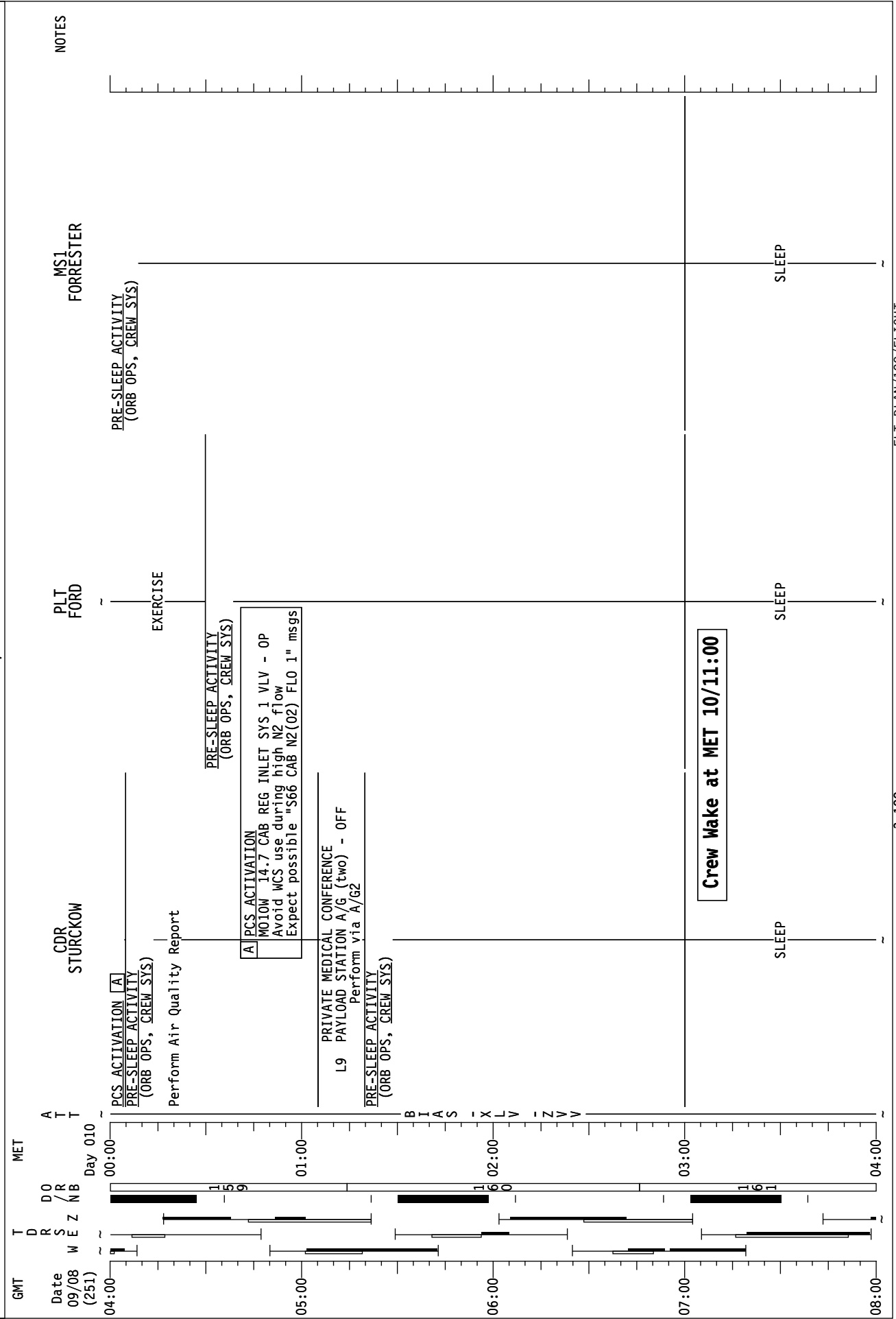
STS-128/17A FD11

GMT	Date 09/08 (251)	DRS W E Z	MET Day 009	CDR STURCKOW	PLT FORD	MS1 FORRESTER	NOTES
00:00			20:00	JOINT OPS: 3.122 PREBREATHE USING SHUTTLE O2 TEARDOWN: steps 2-7; MCC-H will perform steps 2.4 and 5.5	ROBO: 1.250 MPLM DEMATE TO BERTH	TRANSFER OPS Ref. Middeck Transfer List	
01:00			21:00	EXERCISE	ROBO: 1.260 BERTHED MPLM RELEASE	TRANSFER OPS Ref. Middeck Transfer List	
02:00			22:00	AR1 PL PRI MNC - ON (tb-ON) S L12 MPLM CH 1 HTR PWR - ON (tb-gray) MPLM CH 2 HTR PWR - ON (tb-gray) X ON MCC GO: A15 APCU 1 OUTPUT - ON	OBSS MNVR TO UNDOCK (PDRS, OBSS NOMINAL) NOMINAL H2O CONFIG (ORB OPS, ECLS) FES PRI A req'd P71V05 ISS INTERNAL OPS (PHOTO/TV, SCENES) Perform DEACTIVATION, Steps 2 and 3	UPDATE TFL 199	
03:00			23:00	V ON MCC GO: A15 APCU 1 OUTPUT - OFF	FAREWELL	FAREWELL	MPLM PRESSURE CHECK UPDATE TFL 192
04:00			00:00	JOINT OPS: 4.102 SHUTTLE/ISS DUCT REMOVAL & HATCH CLOSING (MCC-H can perform Steps 2 & 3 on crew request)	JOINT OPS: 4.104 ODS VEST/PMA DPRS & HATCH LEAK CHECK	JOINT OPS: 4.102 SHUTTLE/ISS DUCT REMOVAL & HATCH CLOSING (MCC-H can perform Steps 2 & 3 on crew request)	UPDATE TFL 184

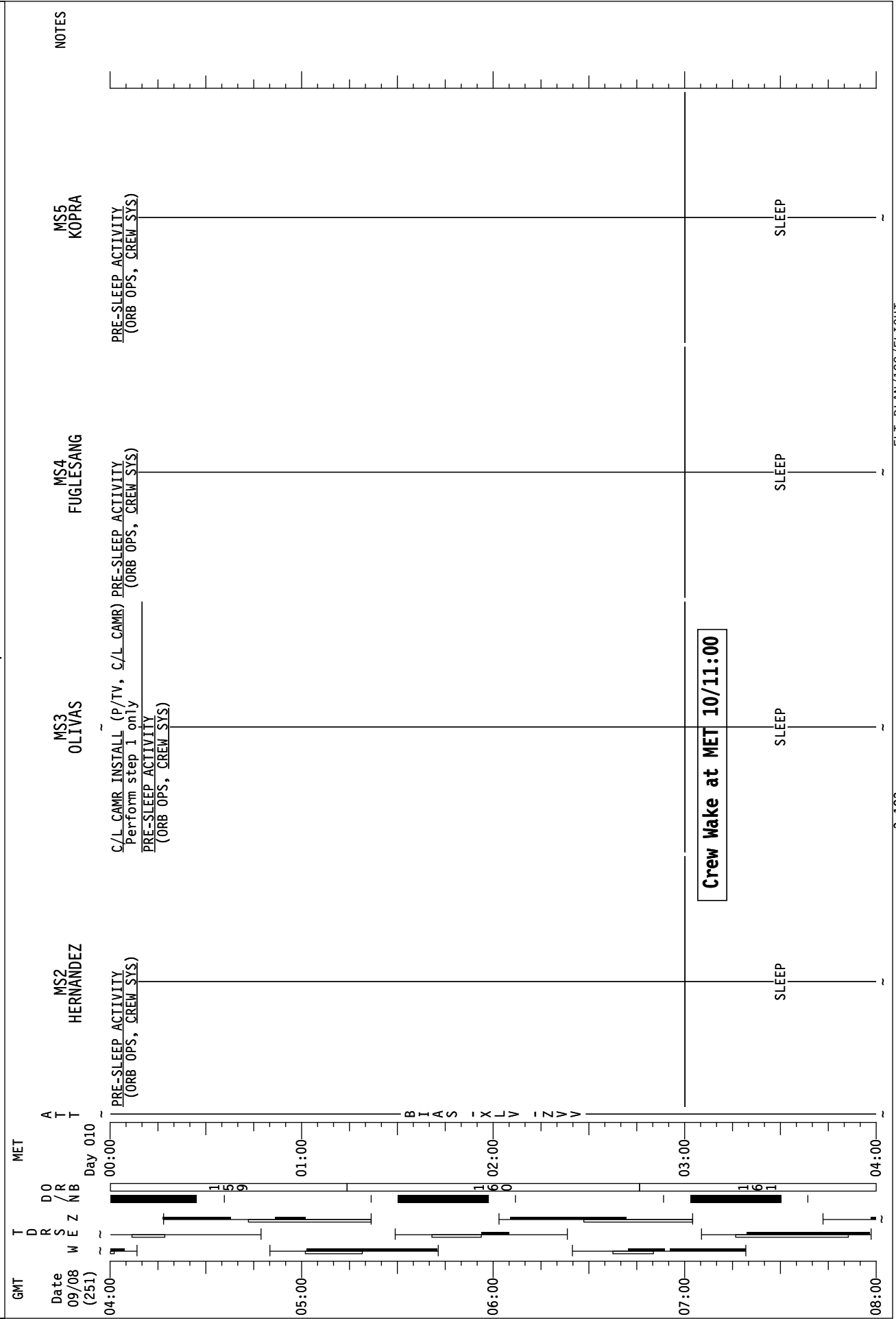
STS-128/17A FD11

GMT	Date 09/08 (251)	MS2 HERNANDEZ	MS3 OLIVAS	MS4 FUGLESANG	NOTES
00:00					
00:00		ROBO: 1.250 MPLM DEMATE TO BERTH	P/TV06 ROBOTICS OPERATIONS (PHOTO/TV, SCENES)		
01:00		ROBO: 1.260 BERTHED MPLM RELEASE			
02:00		EXERCISE			
03:00					
04:00					

STS-128/17A FD11



STS-128/17A FD11



MSG 093 - FD11 MISSION SUMMARY

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Good Morning Discovery!!!!

This is your last docked mission day!

Thanks for all the outstanding effort on your part to get us to this point!

Have a great MPLM stow day!!!!

YOUR CURRENT ORBIT IS: 194X181 NM

NOTAMS: NO CHANGE

- EDW - EDW IN USE. EDT DAY ELS ONLY.
- EDW - LAKEBED RWY 15/33 GREEN - ELS ONLY. RWY 18L - UNUSABLE.
- NOR - LAKEBED RUNWAYS GREEN.
- NKT - AERODROME CLOSED.
- FMH - RWY 32 SEQUENCED FLASHING LIGHTS OTS.
- YJT - TACAN YJT78 OTS.
- EDF - RWY 06/24 CLOSED.
- LAJ - TACAN LAJ45 OTS.
- HAW - RWY 31 LDA = 9024 FT.
- GUA - RWY 24R END LIGHTS OTS.
- IKF - NOT USABLE. NO AGREEMENT.
- BEN - NOT RECOMMENDED/NOT SUPPORTED.

NEXT 2 PLS OPPORTUNITIES:

- EDW22 ORB 157 – 9/21:31 FEW250 7 230/16P22
- EDW22 ORB 173 – 10/21:56 SCT250 7 220/14P19

OMS TANK FAIL CAPABILITY:

- L OMS FAILS: NO
- R OMS FAILS: NO

LEAKING OMS PRPLT BURN:

- L OMS LEAK: ALWAYS BURN RETROGRADE
- R OMS LEAK: ALWAYS BURN RETROGRADE

OMS QUANTITIES(%)

- L OMS OX = 34.4 R OMS OX = 33.4
- FU = 33.9 FU = 33.4

END OF PAGE 1 OF 2, MSG 093

MSG 093 - FD11 MISSION SUMMARY

1 DELTA V AVAILABLE:

2

3 OMS 334 FPS

4 ARCS (TOTAL ABOVE QTY1) 15 FPS

5

6 TOTAL IN THE AFT 349 FPS

7

8 ARCS (TOTAL ABOVE QTY2) 45 FPS

9 FRCS (ABOVE QTY 1) 28 FPS

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11 AFT QTY 1 81 %

12 AFT QTY 2 43 %

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

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END OF PAGE 2 OF 2, MSG 093

MSG 094 (20-1149) - FD11 TRANSFER MESSAGE

Page 1 of 7

1 Good morning Danny, Christer, CJ & Jose

2
3 All of you did a fantastic job in the MPLM and now it's time to finish up transfer in the
4 Middeck! You are 78 percent complete on MDDK, 100 percent complete on MPLM, and 96
5 percent complete overall. For today we have listed all open items in the choreography. We
6 have also added the 2 most important transfer items of the flight to the list as item 306 &
7 914. You will find their transfer labels at the end of the message.

8
9 The Transfer List Excel file, FD11_Transfer_List_STS128.xls, locations are:

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

12 13 Transfer Notes

- 14 • **LiOH:** Two unused LiOH cans (30 & 31) have been added to the Middeck resupply list.
15 Since the mission currently does not require an additional docked day, these cans will be
16 transferred to the ISS stockpile. Should you need the additional docked day these cans
17 will be taken back to the shuttle.
- 18 • **Ear Plugs:** We checked on Danny's question about Item 604. The two sets of
19 Prophonics ear plugs you found are GO to return on the shuttle, and there is no need to
20 look for the Etymotics. You can call item 604 complete.
- 21 • **Samples:** This is a general reminder that it is very important to stow samples at the
22 location listed in the transfer list. If you would like an alternate location for any of the
23 samples please let us know so we can make sure the new location is available for early
24 destow. This will prevent the potential loss of science.
- 25 • **MPLM Final Status:** Reminder that we need your final confirmation that the Middeck 5
26 MLE Bag A is out of the MPLM.
- 27 • **Buzz Lightyear:** With all of Buzz's important PAO events throughout the docked
28 timeframe, we would like you to do a final check that he is stowed in MF43G and ready
29 for his return to Earth.

30 31 FD11 Choreography

- 32 • **Item 612:** Transfer Saliva samples per SALIVA STOW activity
- 33 • **Item 5:** Transfer RPOP2 per PGSC XFER activity
- 34 • **Items 600, 605, & 606:** Transfer EVA Hardware per EVA procedure
- 35 • **Item 603:** Transfer Double Coldbag per DCB XFER activity
- 36 • **Item 305:** Transfer 2 additional LiOH cans to ISS
- 37 • **Remaining Middeck Open Items**
 - 38 ○ **Items 24, 303, 304, 305, 306, 736, 900, 903, 903.1, 903.2, 903.2.1, 908, 909,**
 - 39 **910, 911, 912, 913 & 914:** Transfer remaining Middeck items

40
41 **Please incorporate uplink pages as follows (we've listed the updates in the order they**
42 **printed out for you):**

43
44 In the Middeck Transfer List **RESUPPLY** tab

45 Replace the following pages:

46 Resupply 1, 4 & 6

47
48 In the Middeck Transfer List **RETURN** tab

49 Replace the following page:

50 Return 5 & 6

Page 1 of 7, MSG 094 (20-1149)

MSG 094 (20-1149) - FD11 TRANSFER MESSAGE

Page 2 of 7

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Changes to the Transfer List are detailed below:

MIDDECK RESUPPLY

Item 5 – updated notes

Item 24 – updated notes

Item 303 thru 306 – new items

MIDDECK RETURN

Item 903.2 and 903.2.1 – new items

Item 908 thru 914 – new items

Enjoy your last day of transfer and let us know if you have any questions!

- The STS-128 Transfer Team

STS-128/17A
#306: Nicole

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STS-128/17A
#914: Tim

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MSG 095 – FD11 CREW CHOICE DOWNLINK

1 Below are your crew choice downlink opportunities based on Ku availability:
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TDRS	AOS	LOS	Delta (min)	Notes
Z	10/00:52	10/01:01	9	Analog Only
W	10/01:03	10/01:19	16	
Z	10/02:29	10/02:42	13	Analog Only
W	10/02:43	10/02:50	7	

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END OF PAGE 1 OF 1, MSG 095

POST EVA EMU RECONFIG AND TRANSFER (150 min)

NOTE

Figures in the Nominal Sizing Matrix FS 12-29 may be used for reference.
This procedure assumes the following procedure has been completed following EVA 3:
{1.240 POST EVA} (SODF: ISS EVA SYS: EVA PREP/POST)

- EMU 3015
 - 1. Reconnect gloves
 - 2. Remove Helmet Lights and EMU TV
Install on EMU 3006
 - 3. √Helmet installed, sun shades down, cover installed
 - 4. Insert OI LCVG into EMU 3015
 - 5. Connect LTA to EMU
 - 6. Remove all waist tethers, adjustable tethers, and D-ring Extenders and
stow in Tether Staging Area.
 - 7. Disconnect Boots s/n 230; temp stow
 - 8. Disconnect Legs s/n 233/234 and Leg Sizing Rings s/n 121/122 from LTA
 - 9. Retrieve Legs s/n 185/186 and Leg Sizing Rings s/n 141/142 from
EVA Return mesh bag
Install on EMU
Stow Legs s/n 233/234 and Leg Sizing Rings s/n 121/122 in MO-2 1010
using covers just removed
 - 10. Install Boots s/n 230 on EMU
 - 11. Remove EMU 3015 from aft EDDA and temp stow for transfer to shuttle
- EMU 3009
 - 12. Remove the following and stow in MO-2 s/n 1038:
 - Metox Canister
 - EMU battery (s/n 2080)
 - 13. Install Vent Port plugs
- EMU 3005
 - 14. Install in aft EDDA
 - 15. Remove all waist tethers, adjustable tethers, and D-ring Extenders and
stow in Tether Staging Area.
 - 16. Install EMU battery s/n 2079
- EMU 3009
 - 17. Remove helmet and disconnect Comm Cap s/n 1170 (Fg)
Reinstall helmet
- EMUs 3005,
3009
 - 18. Remove helmet from EMU 3005 and install Comm Cap s/n 1170 (Fg)
Reinstall helmet
 - 19. Remove Fg LTA from EMU 3009 and St LTA from EMU 3005
 - 20. Place Fg LCVG in EMU 3005

21. Install Fg LTA on EMU 3005 and St LTA on EMU 3009
22. Remove Arm Rings s/n 142/158, Lower Arms s/n 351/352, and EMU gloves s/n 6283 (St 1), all connected to each other, from EMU 3005; temp stow
23. Remove EMU gloves s/n 6197 (Fg 1) from EMU 3009; temp stow
24. Remove Lower Arms s/n 377/378 from EMU 3009. Take covers from Lower Arms s/n 309/310 (in EVA Return mesh bag), install on Lower Arms s/n 377/378, and stow in MO-2 1010. Temp stow Lower Arms s/n 309/310
25. Remove Arm Rings s/n 122/123 from EMU 3009 and install on EMU 3005
26. Install Lower Arms s/n 309/310 on EMU 3005 and then EMU gloves s/n 6197 (Fg 1)
27. Install arm assemblies (arm ring, lower arm, gloves) for St on EMU 3009
28. On EMU 3005 Helmet, put sun shades down, install cover
29. Remove EMU 3005 from aft EDDA and temp stow for transfer to shuttle
30. Attempt to locate ziplock bag labeled 'WL Orlan Fresnel Lenses'. It is believed to be in St ECOK, but was reported missing on FD6. Report results to **MCC-H**.
31. Transfer CWC 5085 to shuttle middeck and temp stow for future orbiter condensate collection.
32. Transfer the clean (No Stripe) version of the ISS EVA Systems Checklist from shuttle to ISS Airlock
33. Gather items listed below into specified bags. Transfer bags and EMUs to shuttle. Report transfer complete to **MCC-H**

<u>EVA Return Mesh Bag(s)</u>	
<input type="checkbox"/>	EVA Task CTB
<input type="checkbox"/>	EMU Battery s/n 2076
<input type="checkbox"/>	EMU LiOH Canister (2)
<input type="checkbox"/>	BMRRM Tool (s/n 1003)
<input type="checkbox"/>	Fastener Retention Tool (s/n 1002)
<input type="checkbox"/>	NH3 DTED Protective Containers (2)
<input type="checkbox"/>	EMU Servicing Kit s/n 5005
<input type="checkbox"/>	EMU LiOH Canister
<input type="checkbox"/>	Helmet Light Assemblies (2) (s/n 1004, 1006)
<input type="checkbox"/>	ISS EVA Systems Checklist (Green stripe)
<input type="checkbox"/>	FDF: EVA Checklist (Orange stripe)
<input type="checkbox"/>	Consumables Tracking Cue Card/Battery Recharge Graphic
<input type="checkbox"/>	Expedited Suit Doffing/Emergency Transfer Cue Card
<input type="checkbox"/>	Old Ammonia Contamination Cue Card

<u>EMU 3015 (OI)</u>	<u>EMU 3005 (Fg)</u>
<input type="checkbox"/> DIDB Restraint Bag <input type="checkbox"/> Comm Cap (OI 1) <input type="checkbox"/> Helmet (√sun shade down, cover installed) <input type="checkbox"/> Valsalva <input type="checkbox"/> EMU Gloves (OI 1) <input type="checkbox"/> Cuff C/L <input type="checkbox"/> Wrist Mirror (2) <input type="checkbox"/> EMU Battery <input type="checkbox"/> CCC <input type="checkbox"/> LTA <input type="checkbox"/> LCVG Verify no Tools, Tethers, Helmet Lights, REBA or WVS	<input type="checkbox"/> DIDB Restraint Bag <input type="checkbox"/> Comm Cap (Fg 1) <input type="checkbox"/> Helmet s/n 1078 (√sun shade down, cover installed) <input type="checkbox"/> Valsalva <input type="checkbox"/> Fresnel Lense <input type="checkbox"/> EMU Gloves (Fg 1) <input type="checkbox"/> Cuff C/L <input type="checkbox"/> Wrist Mirror (2) <input type="checkbox"/> EMU Battery <input type="checkbox"/> CCC <input type="checkbox"/> LTA <input type="checkbox"/> LCVG Verify no Tools, Tethers, Helmet Lights, REBA or WVS

<u>Bag D</u>	
<u>Items Returning in Bag D</u>	<u>From EVA Return Mesh Bag</u>
<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> EMU Gloves – 3 pair (OI 2, Fg 2, Fr) <input type="checkbox"/> ECOK (OI) – Mesh Bag <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> OI EVA 1, 2 & 3 Ziplock Bags <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> TCUs (top, bottom) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Socks <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Wristlets <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Comfort Gloves EVA 2 bag only: <input type="checkbox"/> EV identifier stripes (EV1) <input type="checkbox"/> Mission patch (STS-128) <input type="checkbox"/> US flag <input type="checkbox"/> ECOK (Fg) – Mesh Bag <input type="checkbox"/> <input type="checkbox"/> Fg EVA 2 & 3 Ziplock Bags <input type="checkbox"/> <input type="checkbox"/> TCUs (top, bottom) <input type="checkbox"/> <input type="checkbox"/> Socks <input type="checkbox"/> <input type="checkbox"/> Wristlets <input type="checkbox"/> <input type="checkbox"/> Comfort Gloves <input type="checkbox"/> <input type="checkbox"/> Moleskin EVA 3 bag only: <input type="checkbox"/> EV identifier stripes (EV2) <input type="checkbox"/> Mission patch (STS-128) <input type="checkbox"/> Swedish flag <input type="checkbox"/> CTB 1488 (St) <input type="checkbox"/> S0 RPCM s/n C024088 (brought in EVA3) <input type="checkbox"/> IV cap installed <input type="checkbox"/> 1/2 CTB 1490 (St) <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> GPS Cable Connector Caps (4) From EVA Return mesh bag <input type="checkbox"/> Waist Tether s/n 1060 <input type="checkbox"/> <input type="checkbox"/> Comm Caps – 2 (s/n 1179 (Mk 2), s/n 1208 (Wk 1))	<input type="checkbox"/> <input type="checkbox"/> LCVGs – (s/n 3203 (Ko 1), s/n 3216 (Wf 2))

MSG 097 - UPDATED STS 128 LIOH CUE CARD

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LiOH CHANGEOUT
(7 Crewmembers/Single Shift/ FD 1-14)

FLIGHT DAY	POS A	POS B	CK CMLPT
LAUNCH	1	2	
PRE FD01	"	"	
POST FD02	3	4	
PRE FD02	5	6*	
POST FD03	"	7	Docking
PRE FD03	8	"	
POST FD04	"	9	
PRE FD04	10	"	
POST FD05	"	11	EVA 1
PRE FD05	12	"	
POST FD06	"	13	
PRE FD06	14	"	
POST FD07	"	15	EVA 2
PRE FD07	16	"	
POST FD08	"	17	
PRE FD08	18	"	
POST FD09	"	19	EVA 3
PRE FD09	20	"	
POST FD10	"	21	
PRE FD10	22	"	
POST FD11	"	23	
MID FD11	24	25	Hatch Close
PRE FD11	"	"	
POST FD12	26	27	
PRE FD12	28*	29*	
POST FD13	32	33	
PRE FD13	"	34	
POST FD14	35	36	EOM
PRE FD14	37*	38*	
POST FD15	39	40	EOM+1
PRE FD15	"	41	
POST FD16	42	43	EOM+2
PRE FD16	44*	45*	
POST FD17	46	47	EOM+3

* Re-bag and seal LiOH cans w/ Gray Tape and stow
(Location of canisters on back)

NOTE: This card is specifically used for the STS-128 mission with the Orbiter conducting Single shift operations with a crew size of 7. This changeout scheme reflects FD3 docking with ISS, Vozdukh, and dual bed CDRA operation.

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LiOH CANISTER STOWAGE LOCATIONS

Ascent Stowage Locations

Orbiter:

MD52M (LiOH Box): Cans 1-31*

MPLM: Cans 32-52, 70-72

Entry (EOM) Stowage Locations

Orbiter:

MD52M (LiOH Box): Cans 19-29, 32-47*

MPLM: Cans 1-18

ISS:

Cans 30,31, 48-52, 70-72

*2 LiOH cans installed in LiOH slots A and B

STS-128 PGSC Usage Chart-Post Transfer

PGSC Engineer: Sandra C. Bartlett
281-244-1194

Non - PGSC Hardware

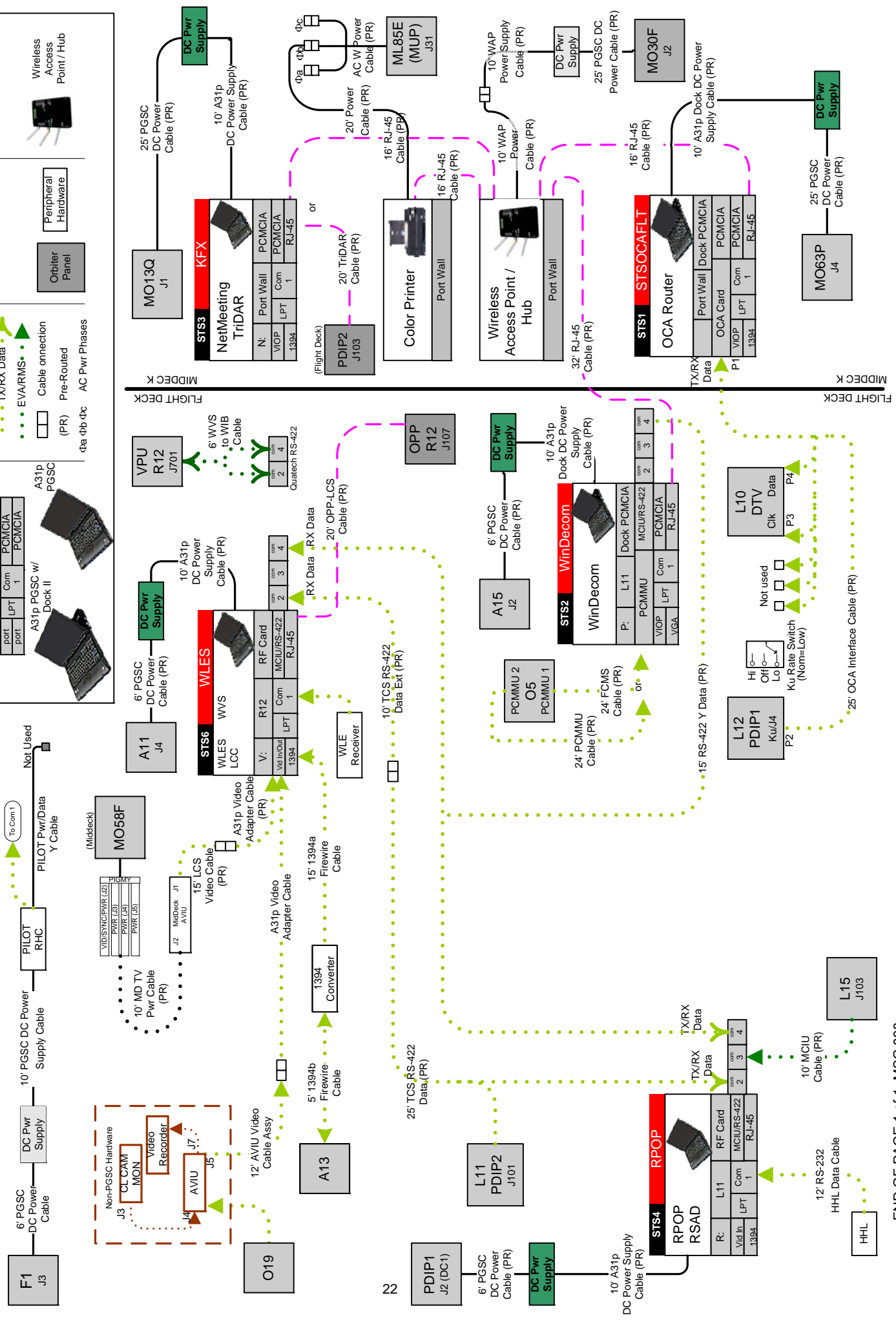
PCs
•Power (PR) – PDIP2 (J3)
•Data (PR) – PDIP1 (J103)

LEGEND

STSXX Network Name

Usage	drive location	Expansion card	port	Com	LPT	Com	1	PCMCIA	PCMCIA
Power Cable	PCMCIA	PCMCIA	Com	LPT	Com	1	PCMCIA	PCMCIA	PCMCIA

Cable Info
 - Power Cable
 - Ethernet Cable
 - RX Data
 - TX/RX Data
 - EVARMS
 - Cable connection
 - Pre-Routed
 - AC Pwr Phases



ICONS

DC power supplies: WAP/PILOT, DC Pwr Supply, DC Pwr Supply

ICONS: Color Printer, Wireless Access Point / Hub, Peripheral Hardware, Orbiter Panel

STS3X Network Name

Usage	drive location	Expansion card	port	Com	LPT	Com	1	PCMCIA	PCMCIA
Power Cable	PCMCIA	PCMCIA	Com	LPT	Com	1	PCMCIA	PCMCIA	PCMCIA

Cable Info
 - Power Cable
 - Ethernet Cable
 - RX Data
 - TX/RX Data
 - EVARMS
 - Cable connection
 - Pre-Routed
 - AC Pwr Phases

STS6X Network Name

Usage	drive location	Expansion card	port	Com	LPT	Com	1	PCMCIA	PCMCIA
Power Cable	PCMCIA	PCMCIA	Com	LPT	Com	1	PCMCIA	PCMCIA	PCMCIA

Cable Info
 - Power Cable
 - Ethernet Cable
 - RX Data
 - TX/RX Data
 - EVARMS
 - Cable connection
 - Pre-Routed
 - AC Pwr Phases

STS4X Network Name

Usage	drive location	Expansion card	port	Com	LPT	Com	1	PCMCIA	PCMCIA
Power Cable	PCMCIA	PCMCIA	Com	LPT	Com	1	PCMCIA	PCMCIA	PCMCIA

Cable Info
 - Power Cable
 - Ethernet Cable
 - RX Data
 - TX/RX Data
 - EVARMS
 - Cable connection
 - Pre-Routed
 - AC Pwr Phases