



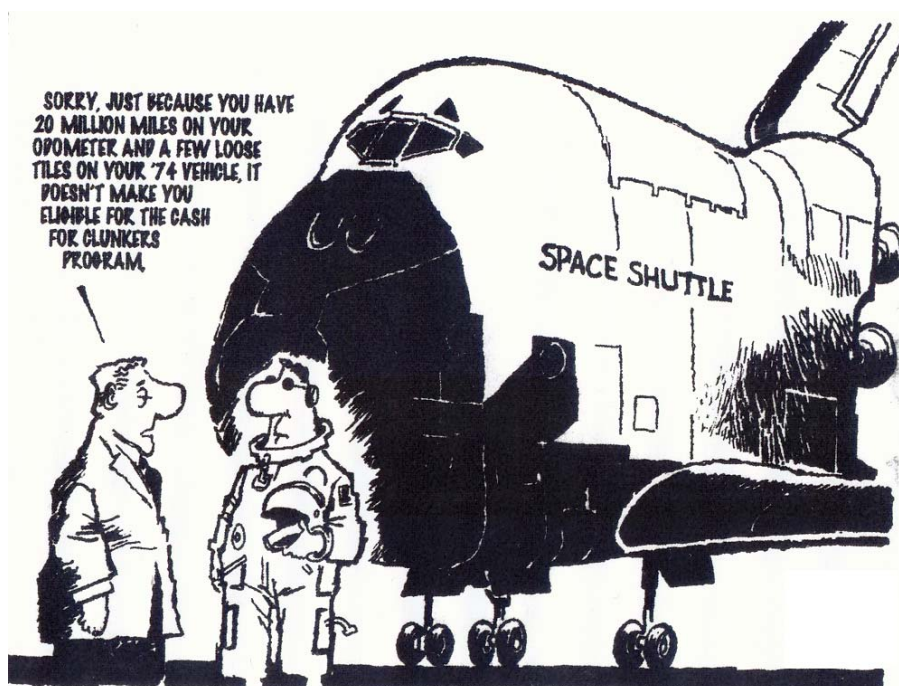
STS-129/ULF3

FD 03 Execute Package

MSG	Page(s)	Title
009A	1 - 14	FD03 Flight Plan Revision
010	15 - 16	FD03 Mission Summary
011	17	FD02 MMT Summary
012	18 - 35	FD03 Transfer Message
013	36 - 39	SSRMS LEE CARRIAGE STALL RECOVERY
014	40 - 57	ULF3 DOUG Big Picture Words
015	58	FD03 Crew Choice Downlink
016	59 - 63	FD03 Rendezvous Package
017A	64	H2O OPS CUE CARD
018	65 - 67	ISS/STS Joint Scenarios Agreements - STS-129 (ULF3)
019	68	ULF3 FD3 SODF Transfer

Approved by FAO:

Gail Hansen



MSG 009A - FD03 FLIGHT PLAN REVISION

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MSG INDEX

<u>MSG NO.</u>	<u>TITLE</u>
009	FD09 FLIGHT PLAN REVISION
010	FD09 MISSION SUMMARY
011	FD02 MMT SUMMARY
012	FD03 TRANSFER MESSAGE
013	SSRMS LEE CARRIAGE STALL RECOVERY
014	ULF3 DOUG BIG PICTURE WORDS
015	FD03 CREW CHOICE DOWNLINK
016	FD03 RENDEZVOUS PACKAGE
017	H20 OPS CUE CARD
018	ISS/STS JOINT SCENARIOS AGREEMENTS - STS-129 (ULF3)
019	ULF3 FD03 SODF TRANSFER

1. Post-Sleep Cryo Config

For today's Post-Sleep cryo config, O2 Tanks 1 and 2 and H2 Tanks 2 and 4 will be active.

**R1 O2,H2 MANF VLV TK2 (two) - OP (tb-OP)
O2 TK1 HTRS A,B (two) - AUTO**

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

Pre-Sleep Cryo Config

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

For tonight's Pre-Sleep cryo config, Manifold 2 will be closed with O2 Tanks 2 and 5 and H2 Tanks 2 and 4 active.

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

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

2. Simo Dump Details

Perform a simo dump using SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) p. 5-2. Perform Steps A through I only. Do not perform step J. MCC will TMBU FDA in steps B and K.

Supply dump valve open time will be 40 minutes.

Dump the waste tank to 5%. Waste dump valve open time will be ~15 minutes.

MSG 009A - FD03 FLIGHT PLAN REVISION

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3. Approach and Lighting Information Summary Update (MSG007):

Item 9 modification :

The TDRS schedule was updated to provide an additional 9 minutes of Ku coverage during the Vbar approach. Ku coverage will be available on TDRS 275 from approximately 1/20:41 - 1/21:11 (midway through the TORVA until ~50 ft on the Vbar). If you are happy with TCS and HHL data at that time, you are free to configure Ku for comm earlier than the 110 ft callout.

4. MSG013 (21-0396): SSRMS LEE CARRIAGE STALL RECOVERY is available if you happen to run into a SSRMS LEE carriage motor stall during grapple operations. And MSG014 (21-0426): ULF3 DOUG Big Picture Words which contains day by day references to DOUG targets is available as well.

5. REPLACE PAGES 2-6 AND 2-8, 3-20 THROUGH 3-29.

REPLANNED

FD03
GMT 11/18/09 (322)

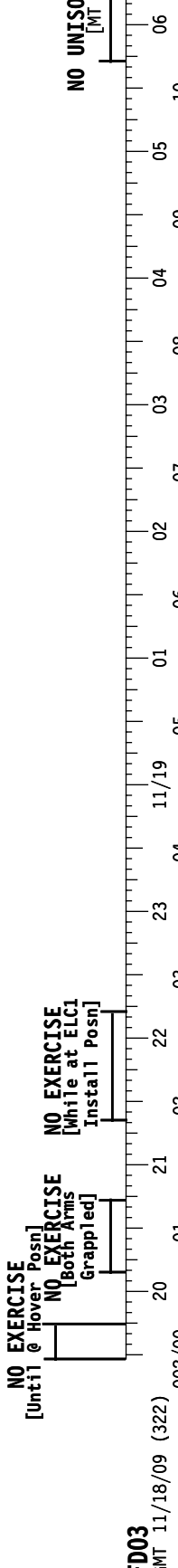
MET Day_001 12 08 13 09 14 15 16 17 18 19 20 21 22 23 18 19 002/00

CDR HOBGAUGH	SLEEP	ISS RNDZ OPS	APPROACH T/L	MNVR TEA	GPI RW PR DB N	HATCH OPEN	HE LL LO	SFTY BRIEF
	POST SLEEP	ISS RNDZ OPS	ISS RNDZ OPS		GPS RWS PRV DNZ	H /	HE LL LO	SFTY BRIEF
PLT WILMORE	SLEEP	ISS RNDZ OPS	APPROACH T/L				HE LL LO	SFTY BRIEF
MS1 MELVIN	SLEEP	ISS RNDZ OPS	APPROACH T/L		PCS SETUP		HE LL LO	SFTY BRIEF
MS2 BRESNIK	SLEEP	EXERCISE	APPROACH T/L	HATCH LEAK CK - STS	HATCH ODS PREPC FOR INGRM		HE LL LO	SFTY BRIEF
MS3 FOREMAN	SLEEP	POST SLEEP	PTV02 S/U	HATCH LEAK CK - STS	ODS PREP FOR INGR	HATCH OPEN	HE LL LO	SFTY BRIEF
MS4 SATCER	SLEEP	POST SLEEP	EXERCISE	POST RNDZ PGSC CONF	POST RNDZ PGSC CONF	P/TV04 INGR/EGR OPS	HE LL LO	SFTY BRIEF

DAY/NIGHT	25	26	27	28	29	30	31	32	33
ORBIT									
TDRS									
ORB ATT									
MT/SSRMS POS									

WS7/PDGF1
BIAS -XLV -ZVV
*DOCKING 1/21:25

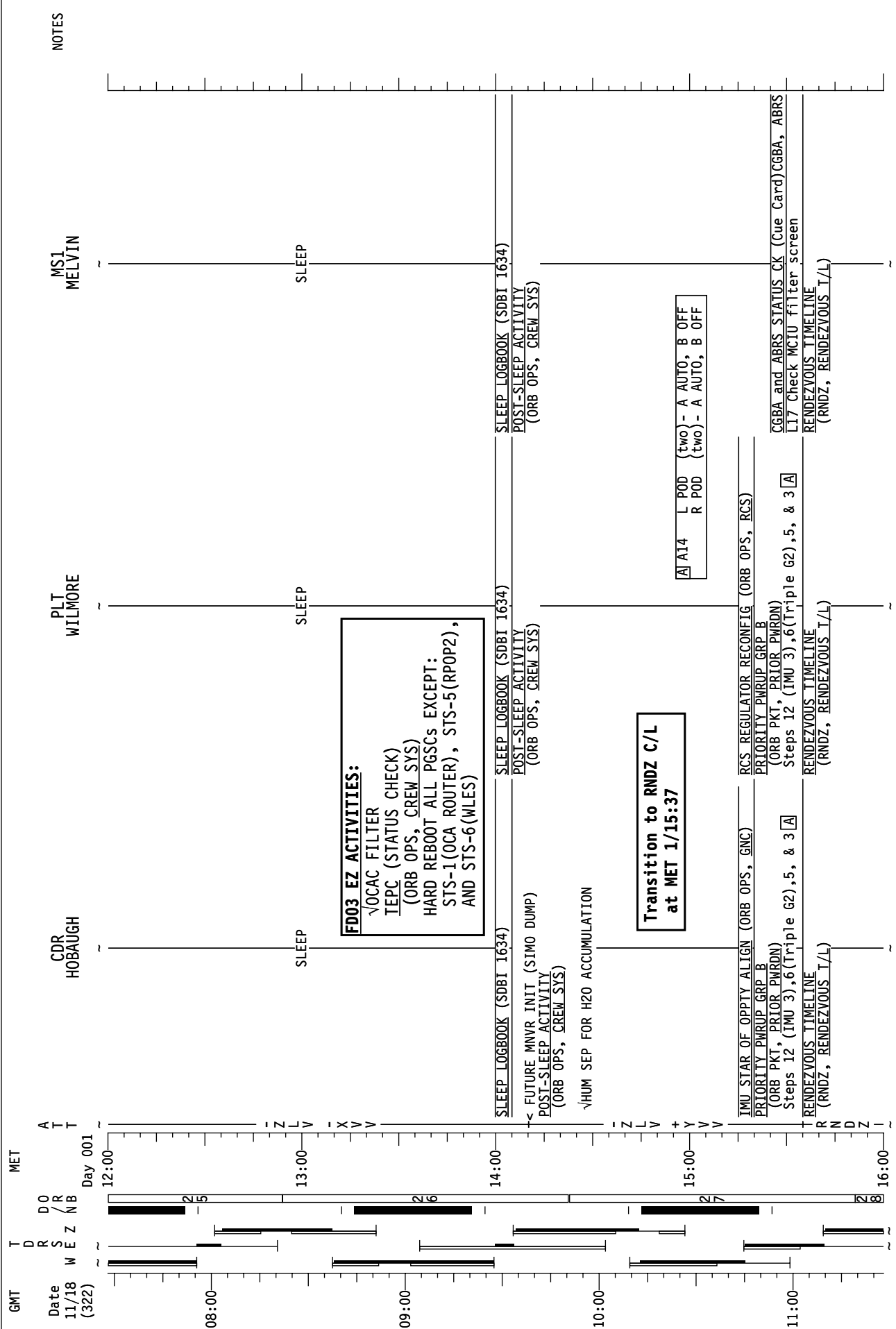
NO EXERCISE [Both Arms Grappled]
 NO EXERCISE [While at ELC1 Install Posn]
 NO EXERCISE [MT Translate]



MET	Day	00	01	02	03	04	05	06	07	08	09	10	11	12
CDR HOBBAUGH	EMU XFER TO ISS	N2 XFER CNFG	STS 02 P/B CNFG	C I W N C I EVA PROC # T REVIEW	PS RL E E P	C W C X T X F F E R M	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
		SSRMS GRPL ELC1	SSRMS MNVR INSTL	ELC1 INSTL	D A P U D	EXERCISE	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP
R1 MS1 MELVIN	ELC1 UNBRTH	U N G R P L	S O D F R X F E R P S	EVA PROC REVIEW	M C X T P F R D I R E F F A S E I K I R R U P L R E F C S K E	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
		U N G R P L	T C O O N G O N L F I G	EVA PROC REVIEW	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
M3 FOREMAN	TOOL CONFIG	U N G R P L	E P R T E K P	EVA PROC REVIEW	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
		U N G R P L	E P R T E K P	EVA PROC REVIEW	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
MS4 SATCER	TOOL CONFIG	U N G R P L	E P R T E K P	EVA PROC REVIEW	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
		U N G R P L	E P R T E K P	EVA PROC REVIEW	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	PRE SLEEP	SLEEP	SLEEP	SLEEP	SLEEP
DAY/NIGHT	ORB	33	34	35	36	37	38	39	40	41				
TDRS	W E Z													
ORB ATT	MT/SSRMS POS													
NOTES														

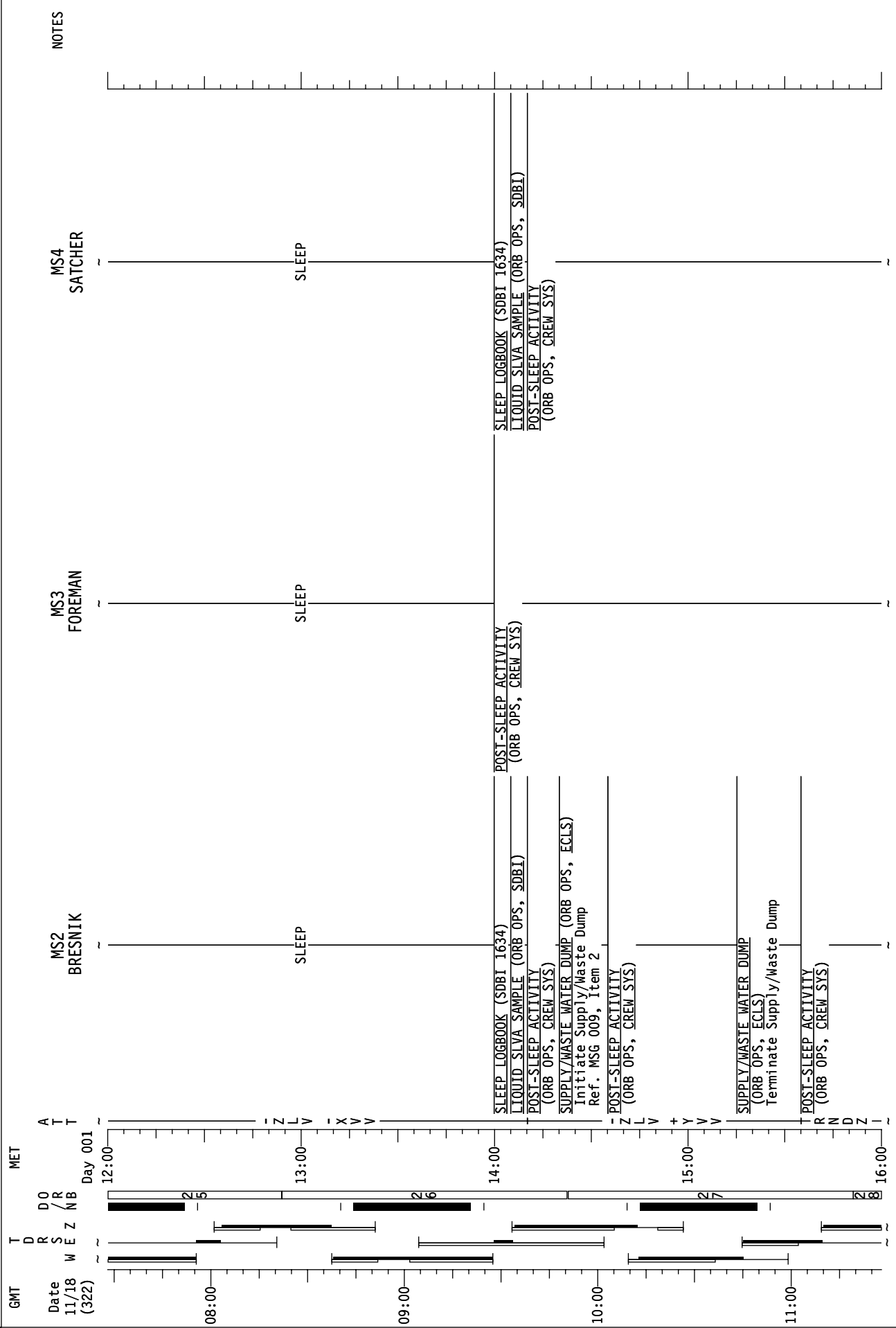
STS-129/ULF3 FD03

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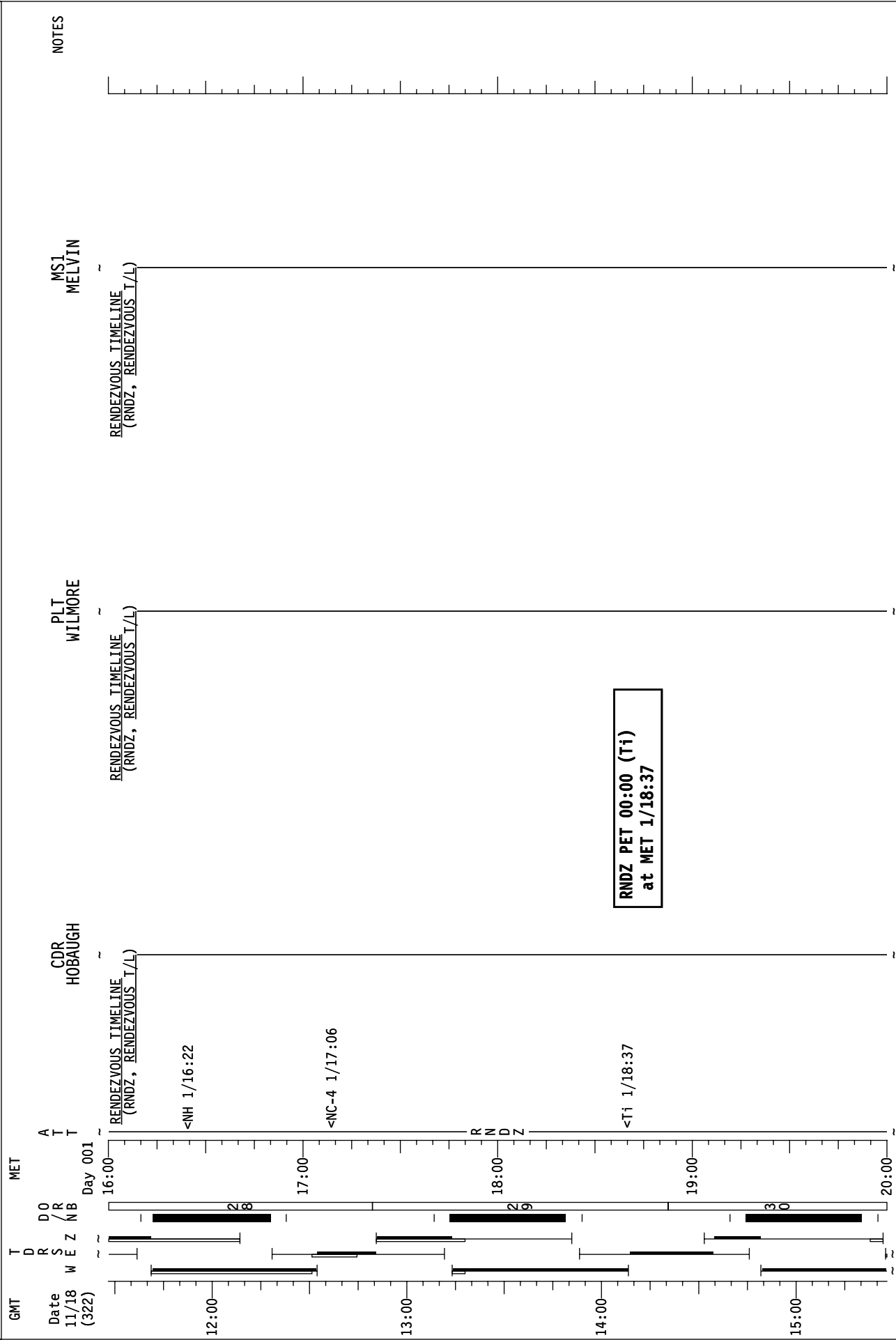
STS-129/ULF3 FD03

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STS-129/U/LF3 FD03

REPLANNED



STS-129/ULF3 FD03

REPLANNED

GMT	Date 11/18 (322)	T R S W E Z	D O R N B	MET Day 001	MS2 BRESNIK	MS3 FOREMAN	MS4 SATCHER	NOTES
12:00					POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
13:00					DAILY TRANSFER LIST UPDATE Ref. Transfer List & MSG 012			
14:00					RENDZVOUS TIMELINE (RNDZ, RENDEZVOUS T/L)			
15:00					P/TVO2 DOCK (PHOTO/TV, SCENES) Ops	P/TVO2 DOCK (PHOTO/TV, SCENES) Setup	EXERCISE	
16:00					EXERCISE			
17:00					EMU REMOVAL Disconnect EMUs from AAPs & Stow in Middeck	EMU REMOVAL Disconnect EMUs from AAPs & Stow in Middeck		
18:00					EXERCISE			
19:00					DIDB FILL Fill 2 DIDBs, Degass, Dispose of fill tool in wet trash. Stowage location: MD Bag D (gather 6 total, Temp stow 4)			
20:00								

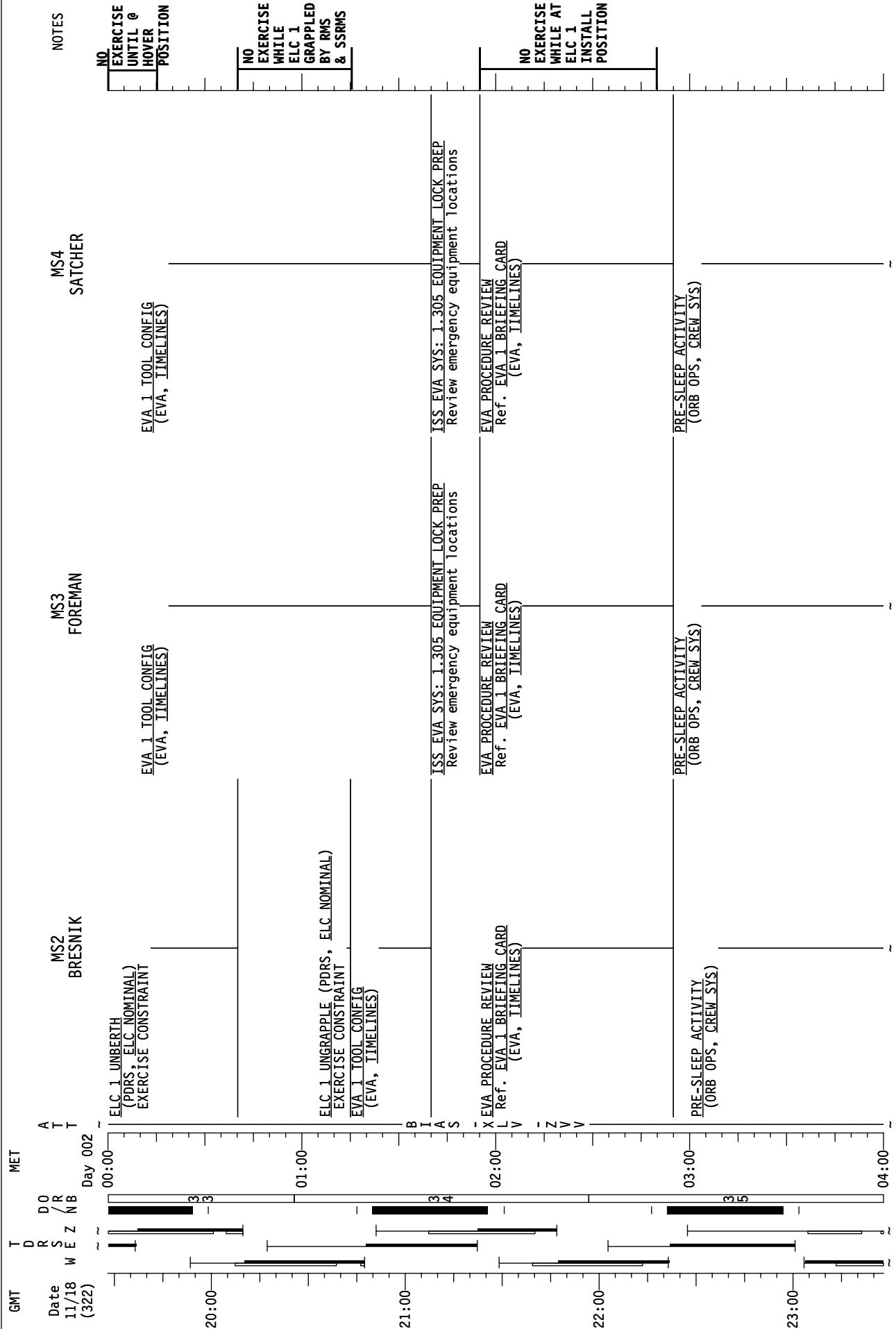
STS-129/ULF3 FD03

REPLANNED

GMT	Date 11/18 (322)	DRS W E Z NB	CDR HOBAUGH	PLT WILMORE	MS1 MELVIN	NOTES
20:00						
20:00			POST DOCKING EVA TRANSFER & RECONFIG (EVA, AIRLOCK CONFIG) Ref. Transfer List: Items 1-4, 63-65	P/TV05 ISS INTERNAL OPS (HC) (PHOTO/TV, SCENES) Setup	ELC 1 UNBERTH (PDRS, ELC NOMINAL) EXERCISE CONSTRAINT	NO EXERCISE UNTIL @ HOVER POSITION
21:00			JOINT OPS: 3.102 NITROGEN TRANSFER INITIATION Setup and Initiate Verify MCC-H complete with Step 2, Then perform 3-4.3	ROBOTICS: 1.110 ELC1 HANDOFF AND INSTALL Steps 1-3 EXERCISE CONSTRAINT		NO EXERCISE WHILE ELC 1 GRAPPLED BY RMS & SSRMS
21:00			JOINT OPS: 3.120 PREBREATHE USING SHUTTLE O2 SETUP Steps 4-6; Ground will perform 6.14	ROBOTICS: 1.110 ELC1 HANDOFF AND INSTALL Steps 4-8 EXERCISE CONSTRAINT	ELC 1 UNGRAPPLE (PDRS, ELC NOMINAL) EXERCISE CONSTRAINT	
22:00			L SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS) INIT FILL #1 Ref. MSG 017	S&M: 1.902 UCCAS NORMAL MATE Steps 6-17 EXERCISE CONSTRAINT	TRANSFER OPS XFR CTB prior to CERISE XFR Ref. Transfer List: Item 58 & MSG 012	NO EXERCISE WHILE AT ELC 1 INSTALL POSITION
22:00			Z EVA PROCEDURE REVIEW Ref. EVA 1 BRIEFING CARD (EVA, TIMELINES)		EVA PROCEDURE REVIEW Ref. EVA 1 BRIEFING CARD (EVA, TIMELINES)	
22:00				After ELC1 Install, perform Block C		
23:00			PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)		CGBA and ABRSS STATUS CK (Cue Card)CGBA, ABRSS CERISE TRANSFER Ref. Transfer List: Item 58 & MSG 012	
23:00			SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS) Perform FILL TERMINATION	EXERCISE	TRANSFER TAGUP Coordinate with transfer counterparts	
23:00			CMC TRANSFER Transfer 1 CMC to ISS		PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
23:00			PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)		TRANSFER BRIEF Call down status to MCC	
23:00			PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)			

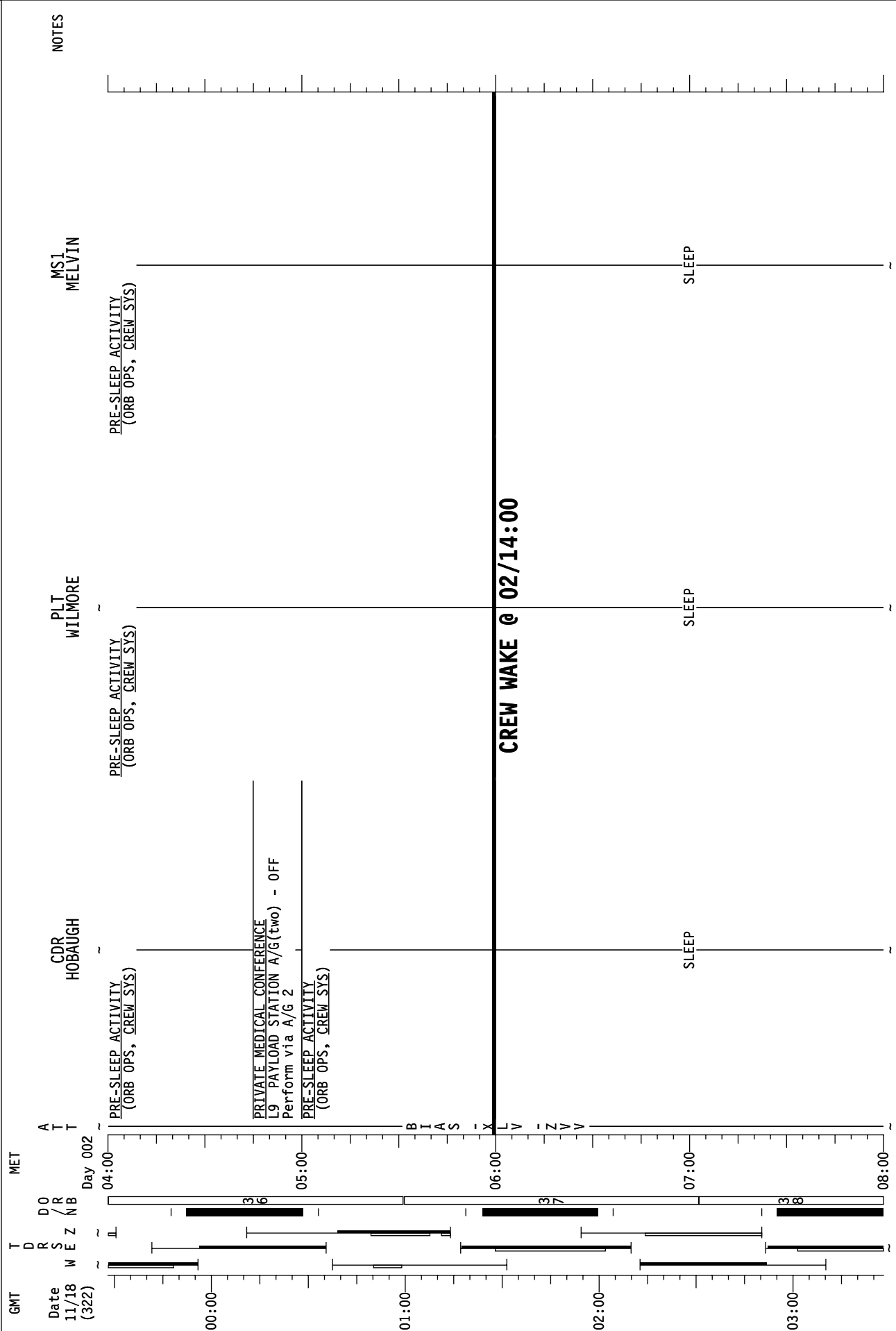
STS-129/U/LF3 FD03

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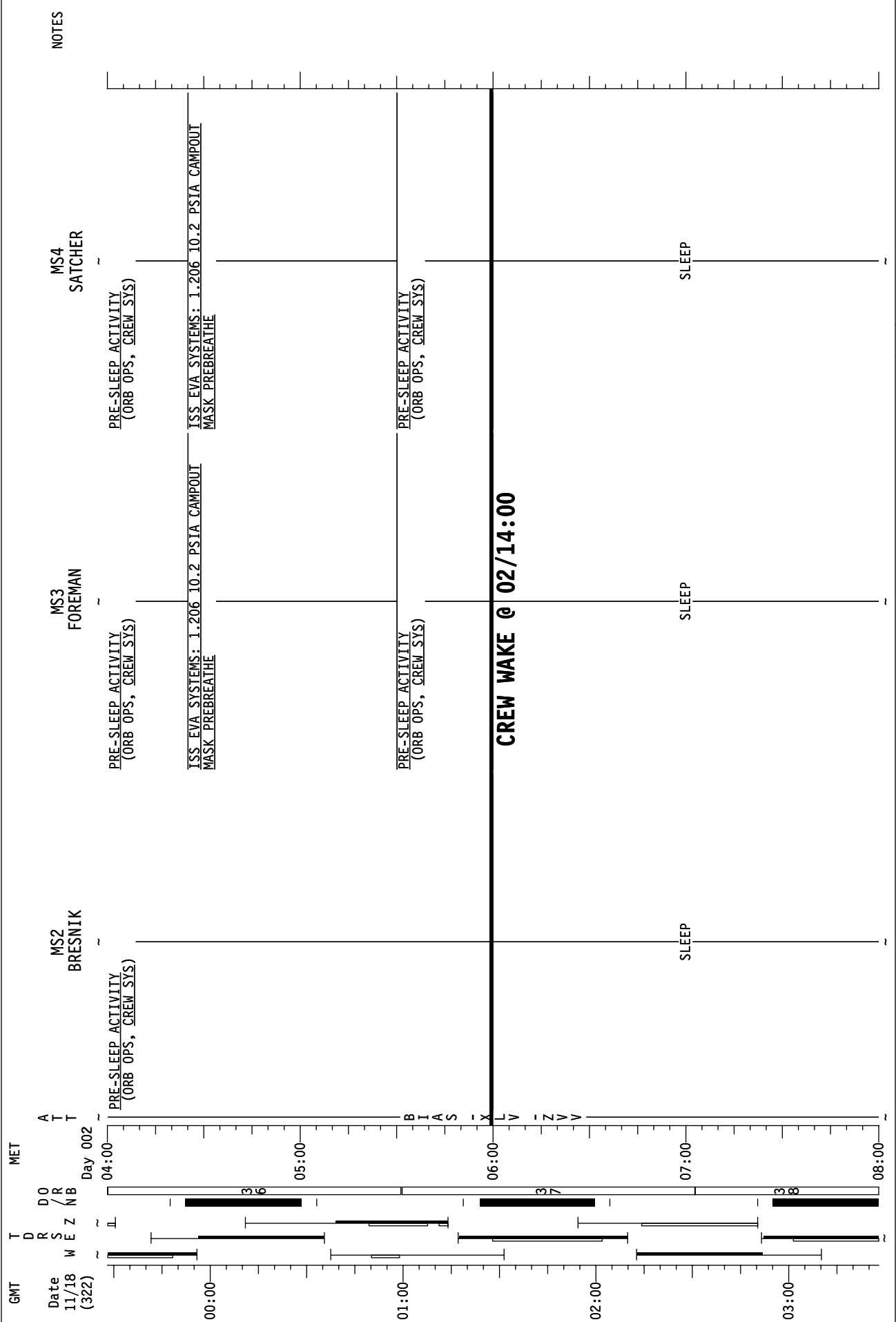
STS-129/U/LF3 FD03

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STS-129/ULF3 FD03

REPLANNED



MSG 010 - FD03 MISSION SUMMARY

1
2 Good morning Atlantis! Your 7th crew member awaits you on station!
3
4

5 YOUR CURRENT ORBIT IS: 131 X 104 NM
6

7 NOTAMS: NO CHANGES
8

9 EDW - LAKEBED RWY 15/33 GREEN - ELS ONLY. RWY 18L - UNUSABLE.
10 NOR - LAKEBED RUNWAYS GREEN.
11 NTU - RWYS 05R/23L & 14L/32R CLOSED.
12 YQX - TACAN YQX CH74 OTS.
13 LAJ - TACAN LAJ45 OTS.
14 PTN - AIRFIELD CLOSED.
15 GUA - RWY 06R/24L CLOSED. RWY 06L REIL OTS.
16 IKF - NOT USABLE. NO AGREEMENT.
17 BEN - NOT RECOMMENDED/NOT SUPPORTED
18

19 NEXT 2 PLS OPPORTUNITIES:
20

21 EDW22 ORB 33 – 2/00:17 FEW110 FEW250 7 230/17P24
22 EDW04 ORB 49 – 3/00:39 FEW250 7 060/05P08
23

24
25 (NOTE: THE FOLLOWING APPLIES POST DOCK. PRE-NH, USE FD2 MESSAGE)
26

27 OMS TANK FAIL CAPABILITY :
28

29 L OMS FAILS: NO
30 R OMS FAILS: NO
31

32 LEAKING OMS PRPLT BURN:
33

34 L OMS LEAK: ALWAYS BURN RETROGRADE
35 R OMS LEAK: ALWAYS BURN RETROGRADE
36

37 OMS QUANTITIES(%)
38

39 L OMS OX = 38.4 R OMS OX = 38.7
40 FU = 38.4 FU = 38.3
41

42 Subtract interconnect counter for current OMS quantities
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END OF PAGE 1 OF 2, MSG 010

MSG 010 - FD03 MISSION SUMMARY

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DELTA V AVAILABLE:

OMS	357 FPS
<u>ARCS (TOTAL ABOVE QTY1)</u>	<u>32 FPS</u>
TOTAL IN THE AFT	389 FPS
ARCS (TOTAL ABOVE QTY2)	61 FPS
FRCS (ABOVE QTY 1)	37 FPS
AFT QTY 1	86 %
AFT QTY 2	48 %

<u>SYSTEM</u>	<u>FAILURE</u>	<u>IMPACT</u>	<u>WORK AROUND</u>
APDS	Briefly lost Ring Align at ~6% and ~23% during ring extension	Potential increased chance of loss of Ring Align during retraction	Docking Sequence CC accounts for loss of alignment during retraction

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END OF PAGE 2 OF 2, MSG 010

MSG 011 (21-0439) - FD02 MMT SUMMARY

Page 1 of 1

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The MMT met briefly to review orbiter systems and mission progress. The FD2 inspection was just wrapping up as the MMT was meeting. The ascent imagery and FD2 inspection data is being reviewed per the nominal timeline. No significant items have been reported so far. In addition, a status of ISS water and waste processing was provided to the MMT.

Atlantis performed flawlessly during yesterday's launch and continues to perform flawlessly. The following minor systems items were mentioned, but none have any impact to the mission: HD video cable R&R, PLB Camera A yellowish hue, MADS bite, and a single, universal I/O error on Launch Data Bus 2 right at liftoff.

Page 1 of 1, MSG 011 (21-0439)

MSG 012 (21-0432) - FD03 TRANSFER MESSAGE

Page 1 of 18

1 Good morning Mike, Leland and Bob,

2
3 Welcome to your first day of transfer! Today we are sending you the entire Return list and
4 some Resupply list updates. This makes the transfer list update much larger than what you
5 will see during the following day's updates. You have limited generic transfer ops today, but
6 you will be transferring SODF, CERISE and EVA items per the timeline.

7 8 9 Transfer Notes

- 10
11 • **Distillation Assembly (DA) update:** The uninstall and packing activities are
12 currently scheduled on FD08. You won't see it on the transfer list in this uplink, but it
13 will be added prior to FD08. More big picture words pertaining to the DA activities
14 will be uplinked in the next couple days. Packing this item for return will be detailed,
15 so make sure to follow the wonderful and complicated instructions provided by Tracy.
16 • **Return List deletions:** With the addition of the DA, the following items have been
17 deleted from Return: Items 605-610, 700-704, 710-714 and an RFTA. There are
18 blank place holders for 700-704 and 710-714, so that you don't wonder later why the
19 Return list starts at 705 and later jumps from 709 to 715.
20 • **Deleted RFTA:** The RFTA (S/N 5), that is remaining on ISS, is currently stowed in
21 the 5 MLE bag (Return Item 409) in JLP1S1. Notes for item 409 have been updated
22 to reflect the removal of RFTA S/N 5 and the addition of pregathered RFTA S/N 6
23 (Return Item 601) inside the prepacked 5 MLE bag.
24 • **Visitor on the Middeck:** Immediately after the Safety Brief, Bob will be coming to
25 the Middeck to collect Butterfly Habitat items (19, 20 and 21) from MA16D. Make
26 sure to confirm with him that those items made it to their final location.
27 • **Notes Column:** Remember that when an item has no notes then it is fair game to
28 transfer when you want.
29
30

31 The Transfer List Excel file, FD03_Transfer_List_STS129.xls, locations are:

- 32 • Shuttle: **C:\OCA-up\transfer** (KFX machine)
33 • Station: **K:\OCA-up\transfer**
34 • **Electronic Transfer List:** If you choose to use the electronic transfer list, please
35 remember that upon launching the file you'll receive a Security Warning prompt
36 asking you to enable or disable macros. Please select 'Enable Macros' in order to
37 use the search and sort features built into the list.
38
39

40 FD03 Choreography

- 41 • **Items 19, 20, & 21:** Transfer per CSI-03 INSTALL activity
42 • **Items 1, 2, 3, 4, 63, 64, & 65:** Transfer EVA items per EMU XFER TO ISS activity
43 • **Items 56 & 57:** Transfer SODF per SODF XFER activity
44 • **Item 58:** Transfer CTB per CERISE TRANSFER activity
45 • **Items 29, 30, 39 and 45:** 5 MLE Bags E, F, A and D.
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MSG 012 (21-0432) - FD03 TRANSFER MESSAGE

Page 2 of 18

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

In the Transfer List **RESUPPLY** tab

Replace the following pages:
Resupply 5, 7, 9, 10, 14

Add the following page:
Resupply 17

In the Transfer List **RETURN** tab

Add the following pages:
Return 1 thru 10

Changes to the Transfer List are detailed below:

MIDDECK RESUPPLY

- Item 22 – updated final location and notes
- Item 28.1 - updated final location
- Item 30.9 - updated item number and initial location
- Item 38.1 - updated item name
- Item 43 - moved item
- Item 59.1 - updated notes
- Item 800 - new item
- Item 801 - new item
- Item 802 - new item

MIDDECK RETURN

All items new

FD04 Choreography

- **Items 60, 60.1, & 60.2:** Transfer Double Coldbag per DCB APEX UNPACK activity
- **Item 29.6:** Transfer CHeCS CTB for CSA-CP ACT & C/O activity
- **Item 39.5:** Transfer CHeCS CTB for HMS IMAK Unpack and HMS MED Kit Resupply activities
- **Items 38.1, 38.1.1, & 733:** Swap Dashpots per CMS-ARED DASHPOT-PACK activity
- **Items 31, 32, 33, 34, 35, 36, & 37:** Transfer MIDBAY items for FD04 & FD05 OUTFITTING activities

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

- The STS-129 Transfer Team

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				21	CAMERA MODULE	1 Ziplock	MA16D (inside locker foam)		LAB101_B2 (in CGBA-5)	1.19	Transfer on FD03 per CGBA5-CSI3- INSTL&ACT activity.
X				22	COMPACT FLASH CARD	1 Ziplock	MA16D (inside locker foam)		JPM1F1_L1 LAB104_B2 (in CGBA-5)	0.04	Transfer on FD03 per CGBA5-CSI3- INSTL&ACT activity.
				23	ACTEX CARTRIDGE	1	MA16D (inside locker foam)		JLP1P2_A1	3.24	
				24	SCOPEMETER PRESSURE PROBE	1 Bubble- Wrap Ziplock	MA16D (inside locker foam)		NOD1D4_G1 (in 0.5 CTB S/N 1202)	0.57	
20				25	KFT	17	MA16F/G (in GLACIER)		LAB101 Rack Front (in 1.0 CTB: CSA-APEX)	5.40	Transfer per FD05 ABR5 SAMPLE RETRIEVE activity.
				26	Integrated Immune Blood Collection Kit [S/N 1022]	1	MA16L		COL104_E2	2.99	
				27	Integrated Immune Saliva Collection Kit [S/N 1025]	1	MA16L		COL104_E2	2.99	
				28	Double Coldbag	1	MA16N	ISS Temp Stow		18.08	
X				28.1	Bluebell Ice Cream	36 cups	MA16N (in Double Coldbag)		LAB1S2 (in MELFI 2, Dewar 3) Williams-Crew Pref	6.75	**Transfer if they have not been eaten by Shuttle crew.

STS-129/ULF3 Resupply Transfer List

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				30	Bag F	5 MLE	MD CEIL PORT 2	COL1D4		18.23	**Bag F will only be stowed on ISS for the docked mission, and will return in the Middeck per Return Item 708.
				30.1	KUBAND COAX DATA CABLE 8" WIRE TIE	1 Bubble- Wrap Ziplock	MD CEIL PORT 2 (in Bag F)		LAB1P5_C1	3.50	
				30.2	CVB KIT	1 Foam Box	MD CEIL PORT 2 (in Bag F)		COL1O4_A2	11.51	**Transfer and stow in foam box
				30.3	CVB KIT	1 Foam Box	MD CEIL PORT 2 (in Bag F)		COL1O4_A2	11.51	**Transfer and stow in foam box
21				30.4	ANTIMICROBIAL APPLICATOR [AMiA]	1 Foam Box	MD CEIL PORT 2 (in Bag F)		JLP1P1_D	16.73	**Transfer and stow in foam box
				30.5	CVB SURVEILLANCE CAMERA - 1 MDCA FUEL RESERVOIR - 4	1 Foam Box	MD CEIL PORT 2 (in Bag F)		COL1O4_F1	6.79	**Transfer and stow in foam box
				30.6	MSL SAMPLE CARTRIDGE MECHANICAL PROTECTION CONTAINER	1 Bundle of 4 Bubble- Wrap Ziplocks	MD CEIL PORT 2 (in Bag F)		LAB1O3 inside rack	22.04	
				30.7	MSL SAMPLE CARTRIDGE MECHANICAL PROTECTION CONTAINER	1 Bundle of 2 Bubble- Wrap Ziplocks	MD CEIL PORT 2 (in Bag F)		LAB1O3 inside rack	11.02	
				30.8	MSL SAMPLE CARTRIDGE MECHANICAL PROTECTION CONTAINER	1 Bubble- Wrap Ziplock	MD CEIL PORT 2 (in Bag F)		LAB1O3 inside rack	5.51	
X				30.9	MDCA SUPPLY HOSE	1 Ziplock	MD FLOOR PORT 2 (in Bag B)		COL1O4_D1 (in 3.0 CTB S/N 1111)	1.32	

[] - notes included by transfer team, - not on actual label

Resupply - 7

11/17/2009

STS-129/ULF3 Resupply Transfer List

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				38	Bag H	5 MLE	MD CEIL STBD 1		JLP1S1 Rack Front	106.39	Swap with 5 MLE on ISS (Ref. Return Item 409).
X				38.1	Foam Box [ARED Dashpot] [P/N 528-38692-1]	1	MD CEIL STBD 1 (in Bag H)	LAB105 Rack Front		0.50	**Will be used to protect returning dashpot (Ref. Return Item 733).
				38.1.1	X-Rotation Dashpot	1 Bubble- Wrapped Dashpot	MD CEIL STBD 1 (in Bag H)		LAB105_K1 (in 0.5 CTB S/N 1079)	0.60	Stow per FD04 CMS-ARED DASHPOT-PACK activity. Remove from foam before stowing.
				39	Bag A	5 MLE	MD FLOOR PORT 1	COL1D4		22.64	**Bag A will only be stowed on ISS for the docked mission, and will return in the Middeck per Return Item 705.
22				39.1	WRS RECYCLE FILTER TANK ASSEMBLY [RFTA]	1	MD FLOOR PORT 1 (in Bag A)		JLP1P2_C1	42.00	**Foam cap transfers with RFTA
				39.2	ISS PHOTO/TV RESUPPLY KIT	0.5 CTB	MD FLOOR PORT 1 (in Bag A)		COL1O2_D1	18.46	
				39.3	CWC-IODINE - 6 S/N 2049, 2056, 2060, 2061, 2062, 2066	1 Ziplock	MD FLOOR PORT 1 (in Bag A)		NOD202 (in M-02 bag S/N 1026)	15.00	
				39.4	CWC-IODINE - 6 S/N 2050, 2057, 2059, 2063, 2064, 2065	1 Ziplock	MD FLOOR PORT 1 (in Bag A)		NOD202 (in M-02 bag S/N 1026)	15.00	

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				39.5	CHeCS	1.0 CTB	MD FLOOR PORT 1 (in Bag A)		NOD2P1	21.75	Transfer prior to HMS IMAK Unpack and HMS MED Kit Resupply activities on FD04.
				39.6	Glenn Harness HRF ADAS Flash Card Kit (Creamer)	1 Harness Bag	MD FLOOR PORT 1 (in Bag A)		NOD2P1	4.49	
				40	FEEDTHROUGH LEAK CHECK KIT	1	MD FLOOR PORT 2 (in Bag B)		JLP1P2_A2	20.99	
23				41	ALCOVE	1 Ziplock	MD FLOOR PORT 2 (in Bag B)	NOD1 Deployed		39.03	Transfer for NOD1 ALCOVE OUTFITTING activities on FD06 and FD08. **Place all cables and hoses inside ziplock prior to transferring.
				42	NOD1D1 TO NOD1P1 IMV DUCT	1	MD FLOOR PORT 2 (in Bag B)	NOD1 Deployed		1.23	Transfer for NOD1 ALCOVE OUTFITTING activities on FD06 and FD08.
X				43	MDCA SUPPLY HOSE <u>Now item 30.9</u>	1 Ziplock	MD FLOOR- PORT 2 (in Bag B)		GOL104-D1- (in-3-0-CTB- SAN-1111)		
				44	UPA HOSES	1 Ziplock	MD FLOOR PORT 2 (in Bag B)		JLP1P2_B1	7.00	

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				58	MEASUREMENT EXP/DOSIS	1.0 CTB	MF57H		JPM1O3_A	36.71	Transfer on FD03 per CERISE TRANSFER activity.
				59	MISC 1	1.0 CTB	MF57O		NOD2P1	31.90	
X				59.1	BEVERAGE ADAPTER ASSEMBLY	1	MF57O (in 1.0 CTB)		LAB1O4_B2 installed	1.20	Swap with ISS Beverage Adapter- (Ref. Return Item 740).
				60	Double Coldbag	1	MF71K	ISS Temp Stow		18.08	Transfer on FD04 per DCB APEX UNPACK activity.
				60.1	Cambium Replant Kit	1	MF71K (in Double Coldbag)		LAB1S2 (in MELFI 2)	2.20	Transfer on FD04 per DCB APEX UNPACK activity.
24				60.2	TAGES Science Spares Kit	1	MF71K (in Double Coldbag)		LAB1S2 (in MELFI 2)	2.05	Transfer on FD04 per DCB APEX UNPACK activity.
				61	IMV O-RING KIT	1 Ziplock	MF71M		COL1O2_D2 (in 1.0 CTB S/N 1267)	0.34	
				62	Work Light [S/N 1003, 1005, 1020 and 1021]	4	MF71O	Middeck Deployed	ISS Deployed	3.00	Swap with ISS work lights (Ref. Return Item 738).

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
			Resupply Realtime Additions								
X				800	1/4" QD Plug [QTY: 4]	1 Ziplock	MD FLOOR PORT 2 (in Bag B)		JLP1P2_B1 (in 0.5 CTB S/N 1014)	0.80	
X				801	WHC COVERS [QTY: 4]	1 Ziplock	MD FLOOR PORT 2 (in Bag B)		JLP1P2_B1 (in 0.5 CTB S/N 1014)	6.50	**Unpeel the piece of ziplock - each cover is sandwiched between a fold.
X				802	Crew Care Package	0.5 CTB	MF71H		ISS Crew Pref	33.07	

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
					Middeck Return						
					Prepacked Bags/Items						
				400	ULF3 Return Bag 400	1.0 CTB	NOD2D2		MF57H	6.56	
				400.1	FOOD ENVELOPE ASSEMBLY [FEV, QTY: 23]	1 Ziplock	JPM1F6_E2		MF57H (in Bag 400)		Transfer after MDS TRANSFER activity on FD09.
				400.2	FOOD ENVELOPE ASSEMBLY [FEV, QTY: 7]	1 Ziplock	JPM1F6_E2 (in 1.0 CTB S/N 1192)		MF57H (in Bag 400)		Transfer after MDS TRANSFER activity on FD09.
				401	ULF3 Return Bag 401	0.5 CTB	NOD2D2		MF71H	19.24	
26				401.1	Return to Houston Imagery [Digital Cassettes and HI 8 Video Tapes]	1 Ziplock	NOD2P4 (in 0.5 CTB S/N 1360)		MF71H (in Bag 401)	1.61	REPORT total number of tapes packed to MCC-H.
				401.2	MPC [P/N U020 00 000, S/N 006]	1	JPM1AD5 (Installed)		MF71H (in Bag 401)	1.61	Disconnect cables from MPC if connected. Keep the other connections as is.
				401.3	D2Xs Camera [S/N 1109]	1	ISS Deployed		MF71H (in Bag 401)	2.76	
				401.4	G1 Camcorder [S/N 1013]	1	ISS Deployed		MF71H (in Bag 401)	4.60	
				402	ULF3 Return Bag 402	1.0 CTB	NOD2D2		Bag I	21.29	
				403	ULF3 Return Bag 403	1.0 CTB	NOD2D2		Bag C	21.29	
				404	ULF3 Return Bag 404	1.0 CTB	NOD2D2		Bag I	21.29	

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				405	ULF3 Return Bag 405	1.0 CTB	NOD2D2		Bag D	24.65	
				406	ULF3 Return Bag 406	1.0 CTB	NOD2D2		Bag I	8.45	
				407	ULF3 Return Bag 407	1.0 CTB	NOD2D2		MD FLOOR PORT 1 (in Bag 409)	20.50	
				408	ULF3 Return Bag 408	1.0 CTB	NOD2D2		Bag B	21.26	
				408.1	PCMCIA Card [S/N 1039]	1	TVIS Installed		Bag B (in Bag 408)	0.07	Transfer after Stott's final TVIS session.
27				409	ULF3 Return Bag 409	5 MLE	JLP1S1 Rack Front		MD FLOOR PORT 1	154.60	Prior to transfer, remove RFTA S/N 5 and temp stow on JPM1A4 Rack Front. Swap with 5 MLE on STS (Ref. Resupply Item 38). Verify Return Items 407 and 601 are packed prior to transfer.
				410	ULF3 Return Bag 410	1.0 CTB	NOD2D2		Bag B	43.67	Transfer after MDS TRANSFER on FD09.

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				411	ULF3 Return Bag 411	1.0 CTB	NOD2D2		Bag A	33.21	
				412	ULF3 Return Bag 412	0.5 CTB	NOD2D2		Bag I	32.53	
				413	ULF3 Return Bag 413	1.0 CTB	NOD2D2		Bag A	25.60	
				414	ULF3 Return Bag 414	1.0 CTB	NOD2D2		Bag G or E	12.00	Report 5 MLE bag where used. **Can separate CTBs as needed.
				415	ULF3 Return Bag 415	0.5 CTB	NOD2D2		Bag G or E	12.00	Report 5 MLE bag where used. **Can separate CTBs as needed.
				416	ULF3 Return Bag 416	0.5 CTB	NOD2D2		Bag G or E	6.60	Report 5 MLE bag where used. **Can separate CTBs as needed.
28				417	ULF3 Return Bag 417	0.5 CTB	NOD2D2		Bag G or E	6.60	Report 5 MLE bag where used. **Can separate CTBs as needed.

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				418	ULF3 Return Item 418	1 Bundle	NOD2D2		Any Empty Food Locker	9.24	Report locker location used.
				419	ULF3 Return Item 419	1 Bundle	NOD2D2		Any Empty Food Locker	9.24	Report locker location used.
				420	ULF3 Return Item 420	1 Bundle	NOD2D2		Any Empty Food Locker	9.24	Report locker location used.
				421	ULF3 Return Item 421	1.0 CTB	NOD2D2		MF57O	38.40	
				600	ULF3 Return Item 600 [CDRA Bed]	1	NOD2D2		Bag G	105.84	
				601	ULF3 Return Item 601 [RFTA, S/N 6]	1	NOD2D0		MD FLOOR PORT 1 (in Bag 409)	148.00	Transfer and pack with foam cap.
29				602	ULF3 Return Item 602 [Stott Crew Preference]	0.5 CTB	NOD2D2		Bag D	38 E	
				603	ULF3 Return Item 603 [DeWinne Crew Preference]	0.5 CTB	NOD2D2		Bag E	38 E	
				604	ULF3 Return Item 604 [Barratt for Return]	0.5 CTB	NOD2D2		Bag I	38 E	
				605-610	Deleted						

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				Non-Prepacked Bags/Items							
				700-704	Deleted						
				705	Bag A	5 MLE		COL1D4	Middeck Deployed	7.60	Transfer after the following items have been stowed in Bag A for return: 411 & 413. **Location will be finalized during cabin stow.
				706	Bag D	5 MLE		NOD1	Middeck Deployed	7.60	Transfer after the following items have been stowed in Bag A for return: 405 & 602. **Location will be finalized during cabin stow.
30				707	Bag E	5 MLE		COL1O2	Middeck Deployed	7.60	**Location will be finalized during cabin stow.
				708	Bag F	5 MLE		COL1D4	Middeck Deployed	7.60	**Location will be finalized during cabin stow.

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				709	Battery Charger [BCM]	1	A/L1F1 Installed		Bag 1	13.00	Transfer on FD09 after BCM R&R activity. Grab two 24x24 ziplocks from ISS (NOD202 in 1.0 CTB S/N 1104), verify there are no holes then double bag the BCM. Label ziplock "TOX 4".
				710-714	Deleted						
				715	Double Coldbag [S/N 1003]	1		ISS Temp Stow	MF71K	18.08	Transfer on FD09 per DCB XFR activity.
31				715.1	Ice Brick	12	JPM1D4 (in MELFI)		MF71K (in Double Coldbag)	18.72	Packed per DCB PACK activity on FD09.
				715.2	RAD SILK ZIPLOCK BAG	4	JPM1D4 (in MELFI)		MF71K (in Double Coldbag)	4.39	Packed per DCB PACK activity on FD09.
				716	Double Coldbag [S/N 1015]	1		ISS Temp Stow	MA16N	18.08	Transfer on FD09 per DCB XFR activity.
				716.1	Ice Brick	14	JPM1D4 (in MELFI)		MA16N (in Double Coldbag)	24.64	Packed per DCB PACK activity on FD09.
				716.2	Urine Tubes	132	JPM1D4 (in MELFI)		MA16N (in Double Coldbag)	5.28	Packed per DCB PACK activity on FD09.

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				717	ECOK [Foreman]	1 Mesh Bag		NOD1 Deployed	Middeck Deployed	15.09	**Transferred on FD09 per EVA XFER TO STS activity.
				718	ECOK [Satcher]	1 Mesh Bag		ISS AVL Deployed	Middeck Deployed	15.05	**Transferred on FD09 per EVA XFER TO STS activity.
				719	ECOK [Bresnik]	1 Mesh Bag		ISS AVL Deployed	Middeck Deployed	24.95	**Transferred on FD09 per EVA XFER TO STS activity.
				720	EDTA S-MONOVETTE	10	JPM1D4 (in MELFI)		MA16F/G (in GLACIER)	0.40	Transfer on FD09 per MELFI/GLACIER TRANSFER activity.
				721	EDTA VACUTAINER	12	JPM1D4 (in MELFI)		MA16F/G (in GLACIER)	0.36	Transfer on FD09 per MELFI/GLACIER TRANSFER activity.
32				722	EMU [S/N 3011]	1		ISS AVL Deployed	Middeck Deployed	307.00	**Transferred on FD09 per EVA XFER TO STS activity.
				723	EMU [S/N 3006]	1		ISS AVL Deployed	Middeck Deployed	307.00	**Transferred on FD09 per EVA XFER TO STS activity.
				724	EVA Systems Transfer Bag	1 Mesh Bag		ISS AVL Deployed	Middeck Deployed	55.73	**Transferred on FD09 per EVA XFER TO STS activity.
				725	EVA Tools Transfer Bag	1 Mesh Bag		ISS AVL Deployed	Middeck Deployed	29.24	**Transferred on FD09 per EVA XFER TO STS activity.

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				726	HEPARIN VACUTAINER	10	JPM1D4 (in MELFI)		MA16F/G (in GLACIER)	0.30	Transfer on FD09 per MELFI/GLACIER TRANSFER activity.
				727	LADA-VPU P3R PLANT SAMPLE 3A	1 Ziplock	JPM1D4 (in MELFI)		MA16F/G (in GLACIER)	0.30	Transfer on FD09 per MELFI/GLACIER TRANSFER activity.
				728	LADA-VPU P3R PLANT SAMPLE 3B	1 Ziplock	JPM1D4 (in MELFI)		MA16F/G (in GLACIER)	0.30	Transfer on FD09 per MELFI/GLACIER TRANSFER activity.
				729	LIQH - 8 [STS-126 cans -18 thru -23] [STS-119 cans -35 thru -36]	1 Mesh Bag	NOD2D2 (in Mesh Bag)		LIQH Box	72.00	Transfer on FD05 during LIQH SWAP activity.
33				729	LIQH - 8 [STS-119 cans -37 thru -39] [STS-127 cans -27 thru -31]	1 Mesh Bag	NOD2D2 (in Mesh Bag)		LIQH Box	72.00	Transfer on FD05 during LIQH SWAP activity.
				730	Mice Drawer System [MDS]	1 Double Locker	JPM1F5_G1		MF28E/G Installed	139.71	Transfer on FD09 per MDS TRANSFER activity.
				731	Multimeter [Doc]	1	LAB1P6 Deployed		MF28K (in Multimeter Kit)	1.35	Transfer the multimeter only; leave the kit and leads on ISS. **Swap with Resupply Item 54.
				732	PASSIVE DETECTOR POUCH	1	COL1A3 (in DOSIS Main Box)		MA16D (in locker foam)	1.84	Transfer after DOSIS activity on FD06.

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				733	Right Damaged VIS Dashpot GMT 2009/283 [Broken ARED Dashpot]	1 Ziplock	LAB105_K1 (in 0.5 CTB S/N 1079)		MA16D (in foam box in locker foam)	0.65	Pack per FD04 CMS-ARED DASHPOT-PACK activity. Stow in foam that was used for launching dashpot (Ref. Resupply Item 38.1). Remove foam plug in MA16D and stow dashpot in empty location. Relocate foam plug into any available slot in the locker. **Ziplock contains the dashpot and a small piece of the Rod End wrapped in Kapton Tape. It is vital that both pieces return. Do not crush.
34				734	S-MONOVETTES 4:9 ML	9	JPM1D4 (in MELFI)		MA16F/G (in GLACIER)	0.18	Transfer on FD09 per MELFI/GLACIER TRANSFER activity.
				735	SERUM S-MONOVETTE	4	JPM1D4 (in MELFI)		MA16F/G (in GLACIER)	0.16	Transfer on FD09 per MELFI/GLACIER TRANSFER activity.

CHNG	<input checked="" type="checkbox"/>	FD	Initials	Item #	Item Name	Qty	Initial Stowage	Temp Stowage	Stowage at Undock	Wt (lbs)	ACTIVITY / Constraints / **Comments
				736	SERUM VACUTAINER	58	JPM1D4 (in MELFI)		MA16F/G (in GLACIER)	1.74	Transfer on FD09 per MELFI/GLACIER TRANSFER activity.
				737	URINE SYRINGE ASSY (FROZEN)	39	JPM1D4 (in MELFI)		MA16F/G (in GLACIER)	1.56	Transfer on FD09 per MELFI/GLACIER TRANSFER activity.
				738	Work Light [S/N 1001 and 1002]	2	ISS Deployed		MF710 (inside stowage tray)	3.00	Prior to transfer inspect light for cracks. If cracks exist cover them with Kapton Tape, otherwise transfer as is. Swap with STS work lights (Ref. Resupply Item 62).

21-0396 (MSG 013) SSRMS LEE CARRIAGE STALL RECOVERY

Page 1 of 4 pages

NOTE

1. The procedure is intended to recover from erroneous SSRMS carriage motor stall detection. Signature is:

- a. 'R3S SSRMS LEE LEU Motor Stalled' annunciated
- b. 'R3N – SSRMS LEE Rigidize Brake Slip' may also be annunciated.
- c. Carriage Tension > 4003 N
- d. SSRMS LEE - Safed
- e. SSRMS Joints – Not Safed
- f. Payload_Status - Captive

2. Items in gray are for **MCC-H** info only.

3. The following commands are Safing Type A:

Lab_RWS_SSRMS_Brakes_Off, CMRM96IM0854K

Cup_RWS_SSRMS_Brakes_Off, CMRM96IM0883K

Lab_RWS_RHC_Trigger_Up_Manual_Latch, CMRM96IM0851K:004

Cup_RWS_RHC_Trigger_Up_Manual_Latch, CMRM96IM0880K:004

Lab_RWS_RHC_Trigger_Up_Auto, CMRM96IM0851K:1

Cup_RWS_RHC_Trigger_Up_Auto, CMRM96IM0880K:1

1. CYCLING SAFING

DCP SAFING → SAFE (Verify ON)

Ops Name	CIPUI
SSRMS_Safing	CMRM96IM0454K

PCS MSS: SSRMS: MSS Safing:

cmd 'SSRMS' Remove (Verify SSRMS Safing – Not Safed)

Ops Name	CIPUI
SSRMS_Cancel_Safing	CMRM96IM0801K

MSS: SSRMS: TIP LEE:

Verify LEE Mechanisms, Load Cell (two) – Calibrated

2. REMOVING BRAKES

NOTE

SSRMS Brakes will not be disengaged until after the override command is sent.

DCP BRAKES SSRMS → OFF

21-0396 (MSG 013) SSRMS LEE CARRIAGE STALL RECOVERY

Page 2 of 4 pages

Ops Name	CIPUI
Lab_RWS_SSRMS_Brakes_Off	CMRM96IM0854K
Cup_RWS_SSRMS_Brakes_Off	CMRM96IM0883K

PCS

MSS: SSRMS:

Verify Brake Override – Override or limp or Cancel

MSS: SSRMS: Brake Override

If capturing FRGF

NOTE

After completing this procedure, the brake override command will have to be sent each time brake removal is required, until the FRGF is released.

cmd Remove Brakes (Verify OFF) >>

Ops Name	CIPUI
SSRMS_Override_Brakes_Or_Limping	CMRM96IM0040K

If capturing PDGF or PVGF

cmd Remove Brakes And Limping

Ops Name	CIPUI
SSRMS_Limp_Override	CMRM96IM0037K

MSS: SSRMS:

Verify Limp – blue

Verify All Joints – Limp

Verify 'Carriage' Tension > 4003 N

3. COMPLETING LATCHING

NOTE

'R3Q - SSRMS LEE Uncommanded Derigidize' may annunciate during latching.

MSS: SSRMS: TIP LEE:

cmd 'Latch' Latch ► Slow, Soft Stops

Verify Speed – Slow

Verify Stops – Soft

21-0396 (MSG 013) SSRMS LEE CARRIAGE STALL RECOVERY

Page 3 of 4 pages

Ops Name	CIPUI
SSRMS_Tip_LEE_Latch_Manual_Latch_Slow_Soft_Stop	CMRM96IM0110K

Verify 'Confirm or Terminate' prompt.

Verify 4 minutes of S-Band comm coverage remaining in this pass.

cmd Confirm (Verify RHC Trigger Hot icon)

Ops Name	CIPUI
SSRMS_Tip_LEE_Confirm_Effector	CMRM96IM0729K

Verify LEE Mode – Latch

RHC TRIGGER → Press (Hold until 'Latch' Brakes – On)

Ops Name	CIPUI
Lab_RWS_RHC_Trigger_Up_Manual_Latch	CMRM96IM0851K:004
Cup_RWS_RHC_Trigger_Up_Manual_Latch	CMRM96IM0880K:004

PCS Verify 'Latch' Latch – blue

4 RE-RIGIDIZATION

If Carriage Tension < 4003 N and rigidization required

cmd Carriage Rigidize ► Slow (Verify Speed – Slow)

Ops Name	CIPUI
SSRMS_Tip_LEE_Carriage_Manual_Rigidize_Slow	CMRM95SM0000K

Verify Confirm or Terminate prompt.

Verify 3 minutes of S-Band comm coverage remaining in this pass.

cmd Confirm (Verify RHC Trigger Hot icon)

Ops Name	CIPUI
SSRMS_Tip_LEE_Confirm_Effector	CMRM96IM0729K

Verify LEE Mode – Rigidize

RHC TRIGGER → press (momentarily) (SCR 19064)

21-0396 (MSG 013) SSRMS LEE CARRIAGE STALL RECOVERY

Page 4 of 4 pages

Ops Name	CIPUI
Lab_RWS_RHC_Trigger_Up_Auto	CMRM96IM0851K:1
Cup_RWS_RHC_Trigger_Up_Auto	CMRM96IM0880K:1

Verify Carriage Tension > 4003 N
Verify Carriage Retract – blue

5. DELIMP SSRMS

MSS: SSRMS: Limp SSRMS Limp

cmd None Limp (Verify Standby – blue)

Ops Name	CIPUI
SSRMS_Limp_Joints_None	CMRM96IM0122K

DOUG Setup for 1.110 - ELC 1 Handoff and Install

1. For **stand-alone** procedure review,
perform {2.7.501 DOUG Startup Procedure},
step 2 (SODF: POC: Activation and Checkout: DOUG)
2. For **SSRMS real-time support**,
 - 2.1 Perform {2.7.501 DOUG Startup Procedure},
step 1 (SODF: POC: Activation and Checkout: DOUG)
 - 2.2 Set SSC volume such that tones are audible.
3. Configure for current ISS configuration (**STS129->ISSULF3**).
 - 3.1 Reconfig ► STS129_ROBO_Config
 - 3.1.1 STS129_ROBO_Config: select ‘1.110_ELC1_Handoff’
 - 3.1.2 Options ► SSRMS Targets
 - 3.1.2.1. SSRMS Target Dialog: **Select 1.110 Stage Park Position**

4. If config does not match 1.110 Step 1 settings, configure manually.

4.1 Reconfig ►

4.1.1 In SSRMS Reconfig Dialog box, select ‘**SSRMS_BASE_A**’

4.1.2 In SSRMS Reconfig Dialog box, select ‘**SSRMS >MBS_PDGF1**’

4.1.3 In SSRMS Reconfig Dialog box, select ‘**MT_to_WORKSITE_7**’

4.1.4 In SPDM Reconfig Dialog box, select ‘**SPDM_to_LAB_PDGF**’

4.1.5 In ELC 1 Reconfig Dialog box, select ‘**ELC1_FRGF_to_RMS**’

4.1.6 In ELC 2 Reconfig Dialog box, select ‘**ELC2_back_to_Orbiter_PLB**’

4.1.7 In SASA Reconfig Dialog box, select ‘**SASA_to_PLB**’

4.1.8 In HPGT Reconfig Dialog box, select ‘**HPGT_to_ELC2**’

4.1.9 In Orbiter_Inspection Reconfig Dialog box, select ‘**OBSS_to_STBD_MPMs**’

4.2 Jntsystems ►
SSRMS>>

SR	SY	SP	EP	WP	WY	WR
58.1	67.9	-42.7	-105.2	15.0	2.0	89.5

SRMS>>

SY	SP	EP	WP	WY	WR
42.7	58.2	-36.2	-0.2	65.0	20.3

SPDM >>

	SR	SP	SY	EP	WP	WY	WR
Arm1	-90.6	-45.1	+80.0	+45.3	-44.9	-90.1	0.0
Arm2	-90.0	-44.9	-110.0	-45.36	+44.8	-89.7	0.0
Body Roll	-49.0						

JEMRMS	SY	SP	EP	WP	WY	WR
	0.0	+80.0	+63.0	-5.0	-70.0	-5.0

21-0426 (MSG 014) – ULF3 DOUG Big Picture Words

Page 2 of 18

5. Configure Displays

5.1 Display ► Puddle Plot Shoulder/Wrist

5.2 For real-time support, Display ► Show SSRMS Target

5.3 For real-time support, Options ► SSRMS Proximity, set all distances to 24 (inches)

5.4 For real-time support, 'Shift'+ 'V' will display the VPP (Vegas)

DOUG Setup for 1.110 - ELC 1 Handoff and Install (cont.)

Notes:

1. Use the Home Key to cycle through the SSRMS, RMS, JEMRMS, and Camera Targets.
2. Use Page Up and Page Down keys to scroll through Target selections.
3. To move the RMS via the RMS Targets Dialog box, ensure that checkbox RMS is checked

Procedure	Step	SSRMS	Notes
1.110 ELC1 Handoff	1	Stage Park	
	2	ELC 1 Pre-Grapple JOCAS	
	3	ELC 1 Grapple at Handoff	Reconfig>>ELC1 ELC_1_PDGF_to_SSRMS Press 'Home' to cycle targets to RMS Targets>ELC 1 Backoff RMS Targets>ELC1 Singularity Avoidance
	4	Handoff Cleanup Setup	Skip to Step 6 if joint angles are within 3 degrees
	5	Handoff Cleanup	If needed
	6	JOCAS to Intermediate	
	7	FOROCAS to Pre-Install	
	8.3	Expected RTL Pos'n	

21-0426 (MSG 014) – ULF3 DOUG Big Picture Words

Page 3 of 18

DOUG Setup for 1.210 - EVA 1 SASA Transfer and Lee Lube Ops

1. For **stand-alone** procedure review, perform {2.7.501 DOUG Startup Procedure}, step 2 (SODF: POC: Activation and Checkout: DOUG)
2. For **SSRMS real-time support**,
 - 2.1 Perform {2.7.501 DOUG Startup Procedure}, step 1 (SODF: POC: Activation and Checkout: DOUG)
 - 2.2 Set SSC volume such that tones are audible.
3. Configure for current ISS configuration (**STS129->ISSULF3**).
 - 3.1 Reconfig ► STS129_ROBO_Config
 - 3.1.1 STS129_ROBO_Config: select '1.210_EVA1_(SASA)'
 - 3.1.2 Options ► SSRMS Targets
 - 3.1.2.1. SSRMS Target Dialog: **Select 1.210 Xlate Config**
 - 3.1.3 Perform Step 4.3 for **JEMRMS** reconfig below.
4. If config does not match **1.210 Step 1** settings, configure manually.
 - 4.1 Reconfig ►
 - 4.1.1 In SSRMS Reconfig Dialog box, select '**SSRMS_BASE_A**'
 - 4.1.2 In SSRMS Reconfig Dialog box, select '**SSRMS >MBS_PDGF1**'
 - 4.1.3 In SSRMS Reconfig Dialog box, select '**MT_to_WORKSITE_4**'
 - 4.1.4 In SPDM Reconfig Dialog box, select '**SPDM_to_LAB_PDGF**'
 - 4.1.5 In ELC 1 Reconfig Dialog box, select '**ELC1_to_P3_Nadir**'
 - 4.1.6 In ELC 2 Reconfig Dialog box, select '**ELC2_back_to_Orbiter_PLB**'
 - 4.1.7 In SASA Reconfig Dialog box, select '**SASA_to_PLB**'
 - 4.1.8 In HPGT Reconfig Dialog box, select '**HPGT_to_ELC2**'
 - 4.1.9 In Orbiter_Inspection Reconfig Dialog box, select '**OBSS_to_STBD_MPMs**'
 - 4.2 Toggles ►
 - 4.2.1 Select '**APFR_SSRMS**'
 - 4.3 Jntsystems ►

SSRMS>>	SR	SY	SP	EP	WP	WY	WR
	-100.0	110.0	-8.0	-156.0	-72.0	-180.0	157.4

SRMS>>	SY	SP	EP	WP	WY	WR
	26.0	68.7	-57.2	42.1	74.0	-12.9

SPDM>>	SR	SP	SY	EP	WP	WY	WR
	Arm1	-90.6	-45.1	+80.0	+45.3	-44.9	-90.1
	Arm2	-90	-44.9	-110.0	-45.36	+44.8	-89.7
	Body Roll	-49.0					

JEMRMS	SY	SP	EP	WP	WY	WR
	0.0	+80.0	+63.0	-5.0	-70.0	-5.0

5. Configure Displays

- 5.1 Display ► Puddle Plot Shoulder/Wrist

DOUG Setup for 1.210 - EVA 1 SASA Transfer and Lee Lube Ops (cont.)

- 5.2 For real-time support, Display ► Show SSRMS Target
- 5.3 For real-time support, Options ► SSRMS Proximity, set all distances to 24 (inches)
- 5.4 For real-time support, 'Shift'+ 'V' will display the VPP (Vegas)

21-0426 (MSG 014) – ULF3 DOUG Big Picture Words

Page 4 of 18

Notes:

1. Use the Home Key to cycle through the SSRMS, RMS, JEMRMS, and Camera Targets.
2. Use Page Up and Page Down keys to scroll through Target selections.
3. To move the RMS via the RMS Targets Dialog box, ensure that checkbox RMS is checked

Procedure	Step	SSRMS	Notes
1.210 EVA	1	SSRMS at Translate Config	
	2	EVA1 Truss Ingress JOCAS	
	3	APFR Install & Ingress	1.) Toggles► APFR_SSRMS. 2.) JntSystems► APFR_SSRMS 12/PP/F/6
	4	Truss Backoff	
	5	Columbus Clearance	
	6	SASA Alignment	
	7	SASA Pick up	Reconfig► STS_129_ROBO_Config► SASA_to_EV1
	8	SASA Backout Manual	
	9	Payload Bay Clearance	
	10	Truss Clearance Single Joint Maneuver	
	11	SASA Install Setup	
	12	SASA Install Manual	Reconfig► STS_129_ROBO_Config► Install_SASA_on_Z1
	13	Z1 Backout Manual	
	14	POA Lube Intermediate JOCAS	
	15	POA Lube Setup JOCAS	
	16	POA Lube Manual	
	17	POA Backout Manual	
	18	JEMRMS Lube Setup JOCAS	
	19	JEMRMS Lube Manual	
	20	JEM Lube Backoff	
	21	Truss Egress Setup JOCAS	
	22	Truss Egress Manual	
	23	Truss Egress Backoff	

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DOUG Setup for 1.220 - EVA1 to MT Translation Config (NO FI)

1. For **stand-alone** procedure review,
 perform {2.7.501 DOUG Startup Procedure},
 step 2 (SODF: POC: Activation and Checkout: DOUG)
2. For **SSRMS real-time support**,
 - 2.1 Perform {2.7.501 DOUG Startup Procedure},
 step 1 (SODF: POC: Activation and Checkout: DOUG)
 - 2.2 Set SSC volume such that tones are audible.
3. Configure for current ISS configuration (**STS129->ISSULF3**).
 - 3.1 File ► Load State
 - 3.1.1 Load State Dialog Box: select '1.220_EVA1_to_MT_Xlate'
 - 3.1.2 Options ► SSRMS Targets
 - 3.1.2.1. SSRMS Target Dialog: Select **1.220 (NO FI) Truss Egress Backoff**
4. **If config does not match 1.220 Step 1 settings, configure manually.**
 - 4.1 Reconfig ►
 - 4.1.1 In SSRMS Reconfig Dialog box, select '**SSRMS_BASE_A**'.
 - 4.1.2 In SSRMS Reconfig Dialog box, select '**SSRMS >MBS_PDGF1**'.
 - 4.1.3 In SSRMS Reconfig Dialog box, select '**MT_to_WORKSITE_4**'.
 - 4.1.4 In SPDM Reconfig Dialog box, select '**SPDM_to_LAB_PDGF**'
 - 4.1.5 In ELC 1 Reconfig Dialog box, select '**ELC1_to_P3_NADIR**'
 - 4.1.6 In ELC 2 Reconfig Dialog box, select '**ELC2_back_to_Orbiter_PLB**'
 - 4.1.7 In SASA Reconfig Dialog box, select '**SASA_to_Z1**'
 - 4.1.8 In HPGT Reconfig Dialog box, select '**HPGT_to_ELC2**'
 - 4.1.9 In Orbiter_Inspection Reconfig Dialog box, select '**OBSS_to_STBD_MPMs**'
 - 4.2 Jntsystems ►

SSRMS>>

SR	SY	SP	EP	WP	WY	WR
-100.0	128.0	-126.0	-61.6	-51.7	-189.0	95.0

SRMS>>

SY	SP	EP	WP	WY	WR
26.0	68.7	-57.2	42.1	74.0	-12.9

SPDM >>

	SR	SP	SY	EP	WP	WY	WR
Arm1	-90.6	-45.1	+80.0	+45.3	-44.9	-90.1	0.0
Arm2	-90.0	-44.9	-110.0	-45.36	+44.8	-89.7	0.0
Body Roll	-49.0						

JEMRMS	SY	SP	EP	WP	WY	WR
	0.0	+80.0	+63.0	-5.0	-70.0	-5.0

21-0426 (MSG 014) – ULF3 DOUG Big Picture Words

Page 6 of 18

5. Configure Displays

5.1 Display ► Puddle Plot Shoulder/Wrist

5.2 For real-time support, Display ► Show SSRMS Target

5.3 For real-time support, Options ► SSRMS Proximity, set all distances to 24 (inches)

DOUG Setup for 1.220 - EVA1 to MT Translation Config (NO FI) (cont.)

5.4 For real-time support, 'Shift'+ 'V' will display the VPP (Vegas)

Notes:

1. Use the Home Key to cycle through the SSRMS and Camera Targets.
2. Use Page Up and Page Down keys to scroll through Target selections.
3. To move the RMS via the RMS Targets Dialog box, ensure that checkbox RMS is checked

Procedure	Step	SSRMS	Notes
1.220 EVA 1 to MT Translate Config	1	SSRMS at Truss Egress Backoff Position	
	2	EVA1 Truss Egress to MT Translate JOCAS	

DOUG Setup for 2.110 - Walkoff to Node 2 PDGF

1. For **stand-alone** procedure review, perform {2.7.501 DOUG Startup Procedure}, step 2 (SODF: POC: Activation and Checkout: DOUG)
2. For **SSRMS real-time support**,
 - 2.1 Perform {2.7.501 DOUG Startup Procedure}, step 1 (SODF: POC: Activation and Checkout: DOUG)
 - 2.2 Set SSC volume such that tones are audible.
3. Configure for current ISS configuration (**STS129->ISSULF3**).
 - 3.1 Reconfig ► STS129_ROBO_Config
 - 3.1.1 STS129_ROBO_Config Dialog Box: select **'2.110_Walkoff_to_Node2_PDGF'**
 - 3.1.2 Options ► SSRMS Targets
 - 3.1.2.1. SSRMS Target Dialog: Select **2.110 Truss Clearance Position**
4. **If config does not match 2.110 Step 1 settings, configure manually.**
 - 4.1 Reconfig ►
 - 4.1.1 In SSRMS Reconfig Dialog box, select **'SSRMS_BASE_A'**.
 - 4.1.2 In SSRMS Reconfig Dialog box, select **'SSRMS >MBS_PDGF1'**.
 - 4.1.3 In SSRMS Reconfig Dialog box, select **'MT_to_WORKSITE_4'**.
 - 4.1.4 In SPDM Reconfig Dialog box, select **'SPDM_to_LAB_PDGF'**
 - 4.1.5 In ELC 1 Reconfig Dialog box, select **'ELC1_to_P3_NADIR'**
 - 4.1.6 In ELC 2 Reconfig Dialog box, select **'ELC2_back_to_Orbiter_PLB'**
 - 4.1.7 In SASA Reconfig Dialog box, select **'SASA_to_Z1'**
 - 4.1.8 In HPGT Reconfig Dialog box, select **'HPGT_to_ELC2'**
 - 4.1.9 In Orbiter_Inspection Reconfig Dialog box, select **'OBSS_to_STBD_MPMs'**
 - 4.2 Jntsystems ►

SSRMS>>

SR	SY	SP	EP	WP	WY	WR
-100.0	128.0	-126.0	-61.6	-51.7	-189.0	95.0

SRMS>>

SY	SP	EP	WP	WY	WR
26.0	68.7	-57.2	42.1	74.0	-12.9

SPDM >>

	SR	SP	SY	EP	WP	WY	WR
Arm1	-90.6	-45.1	+80.0	+45.3	-44.9	-90.1	0.0
Arm2	-90.0	-44.9	-110.0	-45.36	+44.8	-89.7	0.0
Body Roll	-49.0						

JEMRMS	SY	SP	EP	WP	WY	WR
	0.0	+80.0	+63.0	-5.0	-70.0	-5.0

21-0426 (MSG 014) – ULF3 DOUG Big Picture Words

Page 8 of 18

5. Configure Displays

5.1 Display ► Puddle Plot Shoulder/Wrist

5.2 For real-time support, Display ► Show SSRMS Target

5.3 For real-time support, Options ► SSRMS Proximity, set all distances to 24 (inches)

DOUG Setup for 2.110 - Walkoff to Node 2 PDGF (cont.)

5.4 For real-time support, 'Shift'+ 'V' will display the VPP (Vegas)

Notes:

1. Use the Home Key to cycle through the SSRMS and Camera Targets.
2. Use Page Up and Page Down keys to scroll through Target selections.
3. To move the RMS via the RMS Targets Dialog box, ensure that checkbox RMS is checked

Procedure	Step	SSRMS	Notes
2.110 Walkoff to Node 2 PDGF	1	SSRMS at Truss Clearance	
	2	JOCAS to Intermediate	
	3	JOCAS to Node 2 Pre-Grapple	
	4	Node 2 Grapple	

DOUG Setup for 2.120 – OBSS Unberth and Handoff

1. For **stand-alone** procedure review, perform {2.7.501 DOUG Startup Procedure}, step 2 (SODF: POC: Activation and Checkout: DOUG)
2. For **SSRMS real-time support**,
 - 2.1 Perform {2.7.501 DOUG Startup Procedure}, step 1 (SODF: POC: Activation and Checkout: DOUG)
 - 2.2 Set SSC volume such that tones are audible.
3. Configure for current ISS configuration (**STS129->ISSULF3**).
 - 3.1 Reconfig ► STS129_ROBO_Config
 - 3.1.1 STS129_ROBO_Config Dialog Box: select **'2.120 OBSS Unberth and Handoff'**
 - 3.1.2 Options ► SSRMS Targets
 - 3.1.2.1. SSRMS Target Dialog: Select **2.120 Overnight Park**
 - 3.1.3 Options ► RMS Targets
 - 3.1.3.1. RMS Target Dialog: Select **OBSS Pre-Grapple at Handoff**
 - 3.1.4 Reconfig ► SASA
 - 3.1.4.1. SASA_to_Z1
4. **If config does not match 2.120 Step 1 settings, configure manually.**
 - 4.1 Reconfig ►
 - 4.1.1 In SSRMS Reconfig Dialog box, select **'SSRMS_BASE_B'**
 - 4.1.2 In SSRMS Reconfig Dialog box, select **'SSRMS >NODE2_PDGF'**
 - 4.1.3 In SSRMS Reconfig Dialog box, select **'MT_to_WORKSITE_4'**
 - 4.1.4 In SPDM Reconfig Dialog box, select **'SPDM_to_LAB_PDGF'**
 - 4.1.5 In ELC 1 Reconfig Dialog box, select **'ELC1_to_P3_NADIR'**
 - 4.1.6 In ELC 2 Reconfig Dialog box, select **'ELC2_back_to_Orbiter_PLB'**
 - 4.1.7 In SASA Reconfig Dialog box, select **'SASA_to_Z1'**
 - 4.1.8 In HPGT Reconfig Dialog box, select **'HPGT_to_ELC2'**
 - 4.1.9 In Orbiter_Inspection Reconfig Dialog box, select **'OBSS_to_STBD_MPMs'**
 - 4.2 Jntsystems ►

SSRMS>>

SR	SY	SP	EP	WP	WY	WR
-19.6	34.8	-40.0	-107.5	-41.1	35.0	82.7

SRMS>>

SY	SP	EP	WP	WY	WR
23.5	63.5	-29.6	-102.9	11.5	-98.6

SPDM >>

	SR	SP	SY	EP	WP	WY	WR
Arm1	-90.6	-45.1	+80.0	+45.3	-44.9	-90.1	0.0
Arm2	-90.0	-44.9	-110.0	-45.36	+44.8	-89.7	0.0
Body Roll	-49.0						

JEMRMS	SY	SP	EP	WP	WY	WR
	0.0	+90.0	-149.0	-31.0	0.0	0.0

21-0426 (MSG 014) – ULF3 DOUG Big Picture Words

Page 10 of 18

DOUG Setup for 2.120 –OBSS Unberth and Handoff (cont.)

5. Configure Displays

5.1 Display ► Puddle Plot Shoulder/Wrist

5.2 For real-time support, Display ► Show SSRMS Target

5.3 For real-time support, Options ► SSRMS Proximity, set all distances to 24 (inches)

5.4 For real-time support, 'Shift'+ 'V' will display the VPP (Vegas)

Notes:

1. Use the Home Key to cycle through the SSRMS and Camera Targets.
2. Use Page Up and Page Down keys to scroll through Target selections.
3. To move the RMS via the RMS Targets Dialog box, ensure that checkbox RMS is checked

Procedure	Step	SSRMS	Notes
2.120 OBSS Unberth and Handoff	1	SSRMS at Overnight Park	
	2	JOCAS to OBSS Pre-Grapple	
	3	OBSS Grapple	STS129_ROBO_Configs>>SSRMS_Grapple_OBSS
	4	OBSS Unberth	DOUG will draw prox lines between orbiter and OBSS. Disregard prox alarms here.
	5	OBSS Low Hover	
	6	JOCAS to Intermediate	
	7	JOCAS to OBSS Handoff	1.) RMS Targets>>OBSS Grapple at Handoff 2.) STS129_ROBO_Configs>>RMS_Grapple_OBSS
	8	OBSS Release and Backoff	
	9	JOCAS to Clearance Position	
	10	SJ to FI Viewing Position	
	11	Focused inspection viewing	No DOUG targets for these positions

DOUG Setup for 2.130 – OBSS Handoff, Reberth, and MBS PDGF1 Grapple (WS4)

1. For **stand-alone** procedure review, perform {2.7.501 DOUG Startup Procedure}, step 2 (SODF: POC: Activation and Checkout: DOUG)
2. For **SSRMS real-time support**,
 - 2.1 Perform {2.7.501 DOUG Startup Procedure}, step 1 (SODF: POC: Activation and Checkout: DOUG)
 - 2.2 Set SSC volume such that tones are audible.
3. Configure for current ISS configuration (**STS129->ISSULF3**).
 - 3.1 Reconfig ► STS129_ROBO_Config
 - 3.1.1 STS129_ROBO_Config Dialog Box: select ‘**2.130_OBSS_Handoff_Reberth_and_MBS_PDGF1_Grapple**’
 - 3.1.2 Options ► SSRMS Targets
 - 3.1.2.1. SSRMS Target Dialog: Select **2.130 FI Viewing Position**
 - 3.1.3 Options ► RMS Targets
 - 3.1.3.1. RMS Target Dialog: Select **OBSS Grapple at Handoff**
4. If config does not match **2.130 Step 1** settings, configure manually.
 - 4.1 Reconfig ►
 - 4.1.1 In SSRMS Reconfig Dialog box, select ‘**SSRMS_BASE_B**’
 - 4.1.2 In SSRMS Reconfig Dialog box, select ‘**SSRMS >NODE2_PDGF**’
 - 4.1.3 In SSRMS Reconfig Dialog box, select ‘**MT_to_WORKSITE_4**’
 - 4.1.4 In SPDM Reconfig Dialog box, select ‘**SPDM_to_LAB_PDGF**’
 - 4.1.5 In ELC 1 Reconfig Dialog box, select ‘**ELC1_to_P3_NADIR**’
 - 4.1.6 In ELC 2 Reconfig Dialog box, select ‘**ELC2_back_to_Orbiter_PLB**’
 - 4.1.7 In SASA Reconfig Dialog box, select ‘**SASA_to_Z1**’
 - 4.1.8 In HPGT Reconfig Dialog box, select ‘**HPGT_to_ELC2**’
 - 4.1.9 In Orbiter_Inspection Reconfig Dialog box, select ‘**OBSS_GF1_to_SRMS**’
 - 4.2 Jntsystems ►

SSRMS>>

SR	SY	SP	EP	WP	WY	WR
-82.2	-76.9	-51.3	-22.8	-117.9	31.0	2.4

SRMS>>

SY	SP	EP	WP	WY	WR
25.8	66.3	-49.0	-85.9	10.7	-70.0

SPDM >>

	SR	SP	SY	EP	WP	WY	WR
Arm1	-90.6	-45.1	+80.0	+45.3	-44.9	-90.1	0.0
Arm2	-90.0	-44.9	-110.0	-45.36	+44.8	-89.7	0.0
Body Roll	-49.0						

JEMRMS	SY	SP	EP	WP	WY	WR
	0.0	+90.0	-149.0	-31.0	0.0	0.0

21-0426 (MSG 014) – ULF3 DOUG Big Picture Words

Page 12 of 18

1 **DOUG Setup for 2.130 – OBSS Handoff, Reberth, and MBS PDGF1 Grapple (WS4)**
 2 **(cont.)**

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5. Configure Displays

- 5.1 Display ► Puddle Plot Shoulder/Wrist
- 5.2 For real-time support, Display ► Show SSRMS Target
- 5.3 For real-time support, Options ► SSRMS Proximity, set all distances to 24 (inches)
- 5.4 For real-time support, 'Shift'+ 'V' will display the VPP (Vegas)

Notes:

- 1. Use the Home Key to cycle through the SSRMS and Camera Targets.
- 2. Use Page Up and Page Down keys to scroll through Target selections.
- 3. To move the RMS via the RMS Targets Dialog box, ensure that checkbox RMS is checked

Procedure	Step	SSRMS	Notes
2.130 OBSS Handoff, Reberth and MBS PDGF1 Grapple(WS4)	1	SSRMS at FI Viewing Position	1.) RMS Targets>>OBSS Grapple at Handoff 2.) STS129_ROBO_Configs >>RMS_Grapple_OBSS
	2	SJ to Clearance Position	
	3	JOCAS to OBSS Pre-Grapple at Handoff	
	5	OBSS Grapple	1.) RMS Targets>> OBSS Pre-Grapple at Handoff 2.) STS129_ROBO_Configs >>SSRMS_Grapple_OBSS
	6	JOCAS To Intermediate	
	7	OBSS Low Hover JOCAS	
	8	OBSS Berth	STS129_ROBO_Configs >>OBSS_to_Orbiter_PL B
	11	OBSS Release and Backoff	
	12	JOCAS to Intermediate	
	13	JOCAS to MBS PDGF1 Pre-Grapple	
	14	MBS PDGF1 Grapple	

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21-0426 (MSG 014) – ULF3 DOUG Big Picture Words

Page 13 of 18

DOUG Setup for 1.310 - ELC 2 Handoff and Install

1. For **stand-alone** procedure review, perform {2.7.501 DOUG Startup Procedure}, step 2 (SODF: POC: Activation and Checkout: DOUG)
2. For **SSRMS real-time support**,
 - 2.1 Perform {2.7.501 DOUG Startup Procedure}, step 1 (SODF: POC: Activation and Checkout: DOUG)
 - 2.2 Set SSC volume such that tones are audible.
3. Configure for current ISS configuration (**STS129->ISSULF3**).
 - 3.1 Reconfig ► STS129_ROBO_Config
 - 3.1.1 STS129_ROBO_Config: select '**1.310_ELC2_Handoff_and_Install**
 - 3.1.2 Options ► SSRMS Targets
 - 3.1.2.1. SSRMS Target Dialog: Select **1.310 Park Position**
4. **If config does not match 1.310 Step 1 settings, configure manually.**
 - 4.1 Reconfig ►
 - 4.1.1 In SSRMS Reconfig Dialog box, select '**SSRMS_BASE_B**'
 - 4.1.2 In SSRMS Reconfig Dialog box, select '**SSRMS >MBS_PDGF2**'
 - 4.1.3 In SSRMS Reconfig Dialog box, select '**MT_to_WORKSITE_2**'
 - 4.1.4 In SPDM Reconfig Dialog box, select '**SPDM_to_LAB_PDGF**'
 - 4.1.5 In ELC 1 Reconfig Dialog box, select '**ELC1_to_P3_NADIR**'
 - 4.1.6 In ELC 2 Reconfig Dialog box, select '**ELC2_FRGF_to_RMS**'
 - 4.1.7 In SASA Reconfig Dialog box, select '**SASA_to_Z1**'
 - 4.1.8 In HPGT Reconfig Dialog box, select '**HPGT_to_ELC2**'
 - 4.1.9 In Orbiter_Inspection Reconfig Dialog box, select '**OBSS_to_STBD_MPMs**'

4.2 Jntsystems ►

SSRMS>>

SR	SY	SP	EP	WP	WY	WR
234.0	62.4	198.5	-70.6	12.4	-2.6	53.4

SRMS>>

SY	SP	EP	WP	WY	WR
-59.5	29.3	-35.0	54.0	-15.0	-91.8

SPDM >>

	SR	SP	SY	EP	WP	WY	WR
Arm1	-90.6	-45.1	+80.0	+45.3	-44.9	-90.1	0.0
Arm2	-90.0	-44.9	-110.0	-45.36	+44.8	-89.7	0.0
Body Roll	-49.0						

JEMRMS

	SY	SP	EP	WP	WY	WR
	0.0	+90.0	-149.0	-31.0	0.0	0.0

21-0426 (MSG 014) – ULF3 DOUG Big Picture Words

Page 14 of 18

5. Configure Displays

5.1 Display ► Puddle Plot Shoulder/Wrist

5.2 For real-time support, Display ► Show SSRMS Target

5.3 For real-time support, Options ► SSRMS Proximity, set all distances to 24 (inches)

5.4 For real-time support, 'Shift'+ 'V' will display the VPP (Vegas)

DOUG Setup for 1.310 - ELC 2 Handoff and Install (cont.)

Notes:

1. Use the Home Key to cycle through the SSRMS and Camera Targets.
2. Use Page Up and Page Down keys to scroll through Target selections.
3. To move the RMS via the RMS Targets Dialog box, ensure that checkbox **RMS** is checked

Procedure	Step	SSRMS	Notes
1.310 ELC2 Handoff and Install	1	SSRMS at Park Pos'n	
	2	ELC 2 Grapple at Handoff	1.) STS129_ROBO_Configs> > ELC2_to_SSRMS 2.) RMS Targets>> ELC2 Backoff Pos'n
	4	ELC Handoff Pos'n Cleanup	If needed.
	5	JOCAS to Intermediate	RMS Targets>> ELC 2 Viewing Pos'n
	6	JOCAS to Clearance	
	7	Manual to ELC2 Install	
	7.3	Expected RTL Pos'n	STS129_ROBO_Configs> > Install_ELC2_on_S3_Zenith_OUTBD

DOUG Setup for 1.320 - ELC 2 Release, Walkoff to MBS PDGF1 and Mnvr to MT Translate

1. For **stand-alone** procedure review, perform {2.7.501 DOUG Startup Procedure}, step 2 (SODF: POC: Activation and Checkout: DOUG)
2. For **SSRMS real-time support**,
 - 2.1 Perform {2.7.501 DOUG Startup Procedure}, step 1 (SODF: POC: Activation and Checkout: DOUG)
 - 2.2 Set SSC volume such that tones are audible.
3. Configure for current ISS configuration (**STS129->ISSULF3**).
 - 3.1 File ► Load
 - 3.1.1 Load File Dialog Box: select '**1.320 ELC2 Release Walkoff and Mnvr to Xlate**'
 - 3.1.2 Options ► SSRMS Targets
 - 3.1.2.1. SSRMS Target Dialog: Select **1.320 Install Pos'n**
4. **If config does not match 1.320 Step 1 settings, configure manually.**
 - 4.1 Reconfig ►
 - 4.1.1 In SSRMS Reconfig Dialog box, select '**SSRMS_BASE_B**'
 - 4.1.2 In SSRMS Reconfig Dialog box, select '**SSRMS >MBS_PDGF2**'
 - 4.1.3 In SSRMS Reconfig Dialog box, select '**MT_to_WORKSITE_2**'
 - 4.1.4 In SPDM Reconfig Dialog box, select '**SPDM_to_LAB_PDGF**'
 - 4.1.5 In ELC 1 Reconfig Dialog box, select '**ELC1_to_P3_NADIR**'
 - 4.1.6 In ELC 2 Reconfig Dialog box, select '**ELC2_to_S3_Zenith_OUTBD**'
 - 4.1.7 In SASA Reconfig Dialog box, select '**SASA_to_Z1**'
 - 4.1.8 In HPGT Reconfig Dialog box, select '**HPGT_to_ELC2**'
 - 4.1.9 In Orbiter_Inspection Reconfig Dialog box, select '**OBSS_to_STBD_MPMs**'

4.2 Jntsystems ►
SSRMS>>

SR	SY	SP	EP	WP	WY	WR
175.7	29.9	-38.9	-85.7	-109.1	1.3	-67.1

SRMS>>

SY	SP	EP	WP	WY	WR
174.5	25.0	-25.0	-27.9	106.0	0.0

SPDM >>

	SR	SP	SY	EP	WP	WY	WR
Arm1	-90.6	-45.1	+80.0	+45.3	-44.9	-90.1	0.0
Arm2	-90.0	-44.9	-110.0	-45.36	+44.8	-89.7	0.0
Body Roll	-49.0						

JEMRMS	SY	SP	EP	WP	WY	WR
	0.0	+90.0	-149.0	-31.0	0.0	0.0

21-0426 (MSG 014) – ULF3 DOUG Big Picture Words

Page 16 of 18

5. Configure Displays

5.1 Display ► Puddle Plot Shoulder/Wrist

5.2 For real-time support, Display ► Show SSRMS Target

5.3 For real-time support, Options ► SSRMS Proximity, set all distances to 24 (inches)

5.4 For real-time support, 'Shift'+ 'V' will display the VPP (Vegas)

DOUG Setup for 1.320 - ELC 2 Release, Walkoff to MBS PDGF1 and Mnvr to MT Translate (cont.)

Notes:

1. Use the Home Key to cycle through the SSRMS and Camera Targets.
2. Use Page Up and Page Down keys to scroll through Target selections.
3. To move the RMS via the RMS Targets Dialog box, ensure that checkbox **RMS** is checked

Procedure	Step	SSRMS	Notes
1.320 ELC 2 Release, Walkoff to MBS PDGF1 and Mnvr to Xlate	1	SSRMS at ELC 2 Install Position	
	2	ELC 2 Release and Backoff	
	3	JOCAS to MBS PDGF 1 Pre-Grapple	
	4	MBS PDGF 1 Grapple	
	5	Base Change	1.) SSRMS Targets>> Base Change 2.) Reconfig>>SSRMS>>SSRMS->MBS_PDGF1
	6	MBS PDGF 2 Release and Backoff	
	7	JOCAS to ELC 2 Clearance	
	8	JOCAS to MT Translate	Note: The arm "scissors" to get to this config. Expect DOUG prox alarms here.

21-0426 (MSG 014) – ULF3 DOUG Big Picture Words

Page 17 of 18

DOUG Setup for 1.410 EVA 3 – HPGT Transfer

1. For **stand-alone** procedure review, perform {2.7.501 DOUG Startup Procedure}, step 2 (SODF: POC: Activation and Checkout: DOUG)
2. For **SSRMS real-time support**,
 - 2.1 Perform {2.7.501 DOUG Startup Procedure}, step 1 (SODF: POC: Activation and Checkout: DOUG)
 - 2.2 Set SSC volume such that tones are audible.
3. Configure for current ISS configuration (**STS129->ISSULF3**).
 - 3.1 Reconfig ► STS129_ROBO_Configs
 - 3.1.1 STS129_ROBO_Configs Dialog Box: select ‘1.410_EVA_3_(HPGT)’
 - 3.1.2 Reconfig ► SSRMS Reconfig Dialog box, select ‘MT_to_WORKSITE_3’
 - 3.1.3 Options ► SSRMS Targets
 - 3.1.3.1. SSRMS Target Dialog: Select **1.410 MT @ Xlate Pos’n**
4. **If config does not match 1.410 Step 1 settings, configure manually.**
 - 4.1 Reconfig ►
 - 4.1.1 In SSRMS Reconfig Dialog box, select ‘SSRMS_BASE_A’
 - 4.1.2 In SSRMS Reconfig Dialog box, select ‘SSRMS >MBS_PDGF1’
 - 4.1.3 In SSRMS Reconfig Dialog box, select ‘MT_to_WORKSITE_3’
 - 4.1.4 In SPDM Reconfig Dialog box, select ‘SPDM_to_LAB_PDGF’
 - 4.1.5 In ELC 1 Reconfig Dialog box, select ‘ELC1_to_P3_NADIR’
 - 4.1.6 In ELC 2 Reconfig Dialog box, select ‘ELC2_to_S3_Zenith_OUTBD’
 - 4.1.7 In SASA Reconfig Dialog box, select ‘SASA_to_Z1’
 - 4.1.8 In HPGT Reconfig Dialog box, select ‘HPGT_to_ELC2’
 - 4.1.9 In Orbiter_Inspection Reconfig Dialog box, select ‘OBSS_to_STBD_MPMs’

4.2 Jntsystems ►
SSRMS>>

SR	SY	SP	EP	WP	WY	WR
-100.0	110.0	-8.0	-156.0	-72.0	-180.0	157.4

SRMS>>

SY	SP	EP	WP	WY	WR
0.0	25.0	-25.0	5.0	0.0	0.0

SPDM >>

	SR	SP	SY	EP	WP	WY	WR
Arm1	-90.6	-45.1	+80.0	+45.3	-44.9	-90.1	0.0
Arm2	-90.0	-44.9	-110.0	-45.36	+44.8	-89.7	0.0
Body Roll	-49.0						

JEMRMS	SY	SP	EP	WP	WY	WR
	0.0	+90.0	-149.0	-31.0	0.0	0.0

21-0426 (MSG 014) – ULF3 DOUG Big Picture Words

Page 18 of 18

5. Configure Displays

5.1 Display ► Puddle Plot Shoulder/Wrist

5.2 For real-time support, Display ► Show SSRMS Target

5.3 For real-time support, Options ► SSRMS Proximity, set all distances to 24 (inches)

5.4 For real-time support, 'Shift'+ 'V' will display the VPP (Vegas)

DOUG Setup for 1.410 EVA 3 – HPGT Transfer (cont).

Notes:

1. Use the Home Key to cycle through the SSRMS and Camera Targets.
2. Use Page Up and Page Down keys to scroll through Target selections.
3. To move the RMS via the RMS Targets Dialog box, ensure that checkbox **RMS** is checked

Procedure	Step	SSRMS	Notes
1.410 EVA 3 – HPGT Transfer	1	SSRMS at MT Translate	
	2	HPGT Pre-Grapple JOCAS	
	3	HPGT Grapple	STS129_ROBO_Confgs> > SSRMS_Grapple_HPGT
	4	HPGT Backoff	
	5	Truss Clearance FOROCAS	
	6	JOCAS to Intermediate 1	
	7	Airlock Alignment FOR OCAS	
	8	Manual to HPGT Low Hover	
	9	Manual to HPGT Release	
	10	HPGT Release and Backoff	
	11	JOCAS to Intermediate 2	
	12	JOCAS to MT Translate	

MSG 015 - FD03 CREW CHOICE DOWNLINK

TDRS	AOS	LOS	Delta (min)	Notes
W	02/03:46	02/04:20	34	
Z	02/05:22	02/05:39	17	Analog Only

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

MSG 016 - FD03 RENDEZVOUS PACKAGE

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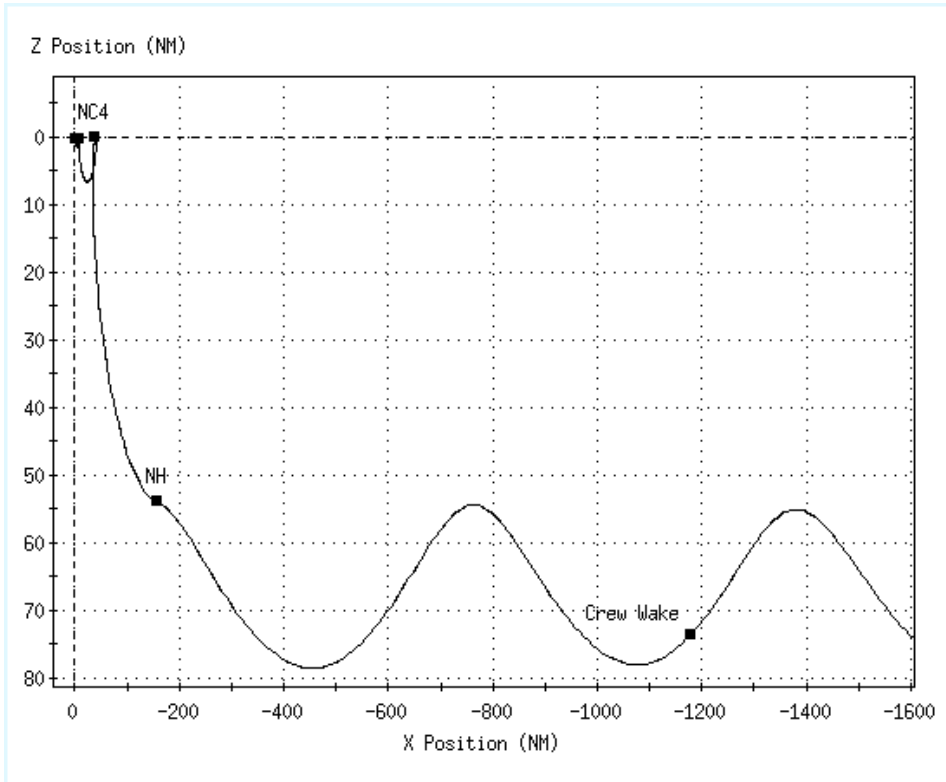
Preliminary Burn TIGs

	MET	
NH	001:16:21:26.000	
NC-4	001:17:05:12.000	
NCC	001:17:40:05.000	
TI	001:18:37:47.000	PET = 0:0 ; SS - 38.5 MIN
MC1	001:18:57:47.000	
MC2	001:19:27:41.000	ET = 0:0
MC3	001:19:44:41.000	MC2 + 17 MIN
MC4	001:19:54:41.000	MC2 + 27 MIN
DOCK	001:21:25:00.000	

END OF PAGE 1 OF 5, MSG 016

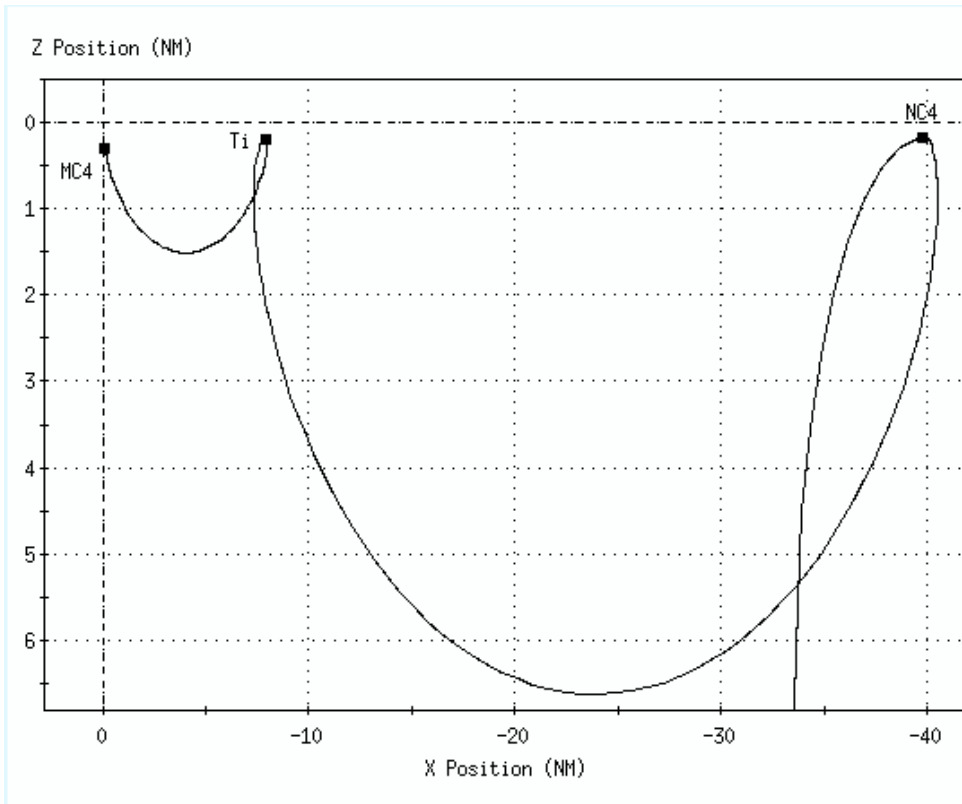
MSG 016 - FD03 RENDEZVOUS PACKAGE

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END OF PAGE 2 OF 5, MSG 016

ΔVTOT	0	0	9	.	2
TGO	0	0	:	1	2

VGO	X	(+)	0	0	8	.	7
VGO	Y	(+)	0	0	1	.	8
VGO	Z	(+)	0	0	2	.	3

HA	1	8	6	(+)	1	8	0
HP							

BURN ATT							
R 24	1	7	2				
P 25	2	1	2				
Y 26	3	1	1				

TV ROLL	5	0	0	0
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TRIM LOAD	P 6	(+)	0	.	8
	LY 7	(+)	4	.	9
	RY 8	(-)	4	.	9

WT	9	2	4	7	6	8	0
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TIG	10	0	1	/	1	8	:	3	7	:	4	7	.	0
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TGT PEG 7 ΔVX	19	(+)	0	0	9	.	1
ΔVY	20	(-)	0	0	0	.	2
ΔVZ	21	(+)	0	0	0	.	0

TGT PEG 7 ΔVX	19	(-)					
ΔVY	20	(-)					
ΔVZ	21	(-)					

NEW Ti (BASETIME)	0	1	/	2	0	:	0	9	:	0	8	.	0
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OMSGMBLCK:	PRE	POST-BURN
L PRI		
L SEC		
R PRI		
R SEC		
NONE		X

OMSGHE REG TEST:		NONE	R
L			
GPC OP CL	X	A	
A			
B	X	B	

RCS I'CNCT:			X
L OMS → RCS			
R OMS → RCS			
NONE			

DOWN MODE OPTIONS:		2 OMS → 1 OMS
	X	1 OMS → RCS
		NONE

OMSGHE REG TEST:		NONE	R
L			
GPC OP CL	X	A	
A			
B	X	B	

-X RCS BURNS:	BURN ATT	LVLH ATT
P 15	N / A	N / A
Y 16	N / A	N / A
OM 17	N / A	N / A

ORBIT BURN MONITOR:	GPC FILL-INS	1	(3)
	X		

TIG SLIP:	If Ti not started by nominal TIG + ___ min go to Ti DELAY, 5-27
DO NOT UPDATE TIG	
UPDATE TIG AFTER ___ MIN.	

NOTES	
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MSG 017A: H2O OPS CUE CARD

CWC FILLS		CWC Launch Location					
CWC No.	Record S/N Used	Mineralization Kit Ref: Kit Table	Ag Biocide Kit Ref: Kit Table	Sample/Purge Kit Ref: Kit Table	Record/MET on Sample Bag Label	CWC Launch Location	
<input type="checkbox"/>	1	1082	S/N 1003	S/N 1003	S/N 1004	<input type="checkbox"/>	In M-02 Bag S/N 1026 (Note D)
<input type="checkbox"/>	2		Not Req'd	S/N 1003	S/N 1004	<input type="checkbox"/>	
<input type="checkbox"/>	3		Not Req'd	S/N 1003	Not Req'd	<input type="checkbox"/>	
<input type="checkbox"/>	4		Not Req'd	S/N 1003	Not Req'd	<input type="checkbox"/>	
<input type="checkbox"/>	5		Not Req'd	S/N 1003	Not Req'd	<input type="checkbox"/>	
<input type="checkbox"/>	6		Not Req'd	S/N 1003	S/N 1004	<input type="checkbox"/>	
<input type="checkbox"/>	7		Not Req'd	S/N 1003	Not Req'd	<input type="checkbox"/>	
<input type="checkbox"/>	8		Not Req'd	S/N 1003	Not Req'd	<input type="checkbox"/>	
<input type="checkbox"/>	9		Not Req'd	S/N 1003	Not Req'd	<input type="checkbox"/>	
<input type="checkbox"/>	10		Not Req'd	S/N 1003	S/N 1004	<input type="checkbox"/>	
<input type="checkbox"/>	11		Not Req'd	S/N 1001	Not Req'd	<input type="checkbox"/>	
<input type="checkbox"/>	12		Not Req'd	S/N 1001	Not Req'd	<input type="checkbox"/>	
<input type="checkbox"/>	13		Not Req'd	S/N 1001	Not Req'd	<input type="checkbox"/>	
<input type="checkbox"/>	14		Not Req'd	S/N 1001	Not Req'd	<input type="checkbox"/>	
<input type="checkbox"/>	15		Not Req'd	S/N 1001	S/N 1004	<input type="checkbox"/>	

In M-02 Bag S/N 1026 or pregathered Mesh Bag (Note D) Available Technical S/Ns:
 1004 1008
 1030 1035
 1065 1066
 1068 1072
 1074 1077
 1083 1086
 1089 1094

Pre-Fill Checklist:

- Disinfect CWC OD and Water Transfer Hose QD
 1 2 3 4 5 6 7 8
 9 10 11 12 13 14 15

Post-Fill Checklist:

- Verify correct label is in CWC window
 1 2 3 4 5 6 7 8
 9 10 11 12 13 14 15
- Verify correct decal on CWC end
 1 2 3 4 5 6 7 8
 9 10 11 12 13 14 15
- Verify correct CWC S/N on end decal
 1 2 3 4 5 6 7 8
 9 10 11 12 13 14 15
- Report CWC S/N to MCC
 1 2 3 4 5 6 7 8
 9 10 11 12 13 14 15
- Transfer CWC to:
 JLP1F7 panel front
 1 2 3 4
 JLP1P1 panel front
 5 6
 JLP1P2 panel front
 7 8 9 10 11
 12 13 14 15

- Cap Water Transfer Hose QD between each fill

CWC Fill Notes:

- A. Slow filled sample bags in either MF14E or MF14G.
- B. Rough handling may cause leakage.
- C. Fill each CWC for 52 min or Term CWC Fill on MCC call.
- D. Pregathered M-02 & Mesh Bags originally located in NOD202. Some CWCs may still contain residual water (~ 10 lb/bag) and will be located outside of bags. Prior to filling, report if bag has a significant amount of residual water.

Kit Table

Kit	S/N	Stowage Location	Undock Location
Mineralization Kit	1003	MDDK FLOOR (PORT1, BAG A)	MDDK CEIL (PORT2, BAG A)
Ag Biocide Kit	1003	M-02 Bag S/N 1026 (Note D)	MDDK CEIL (PORT2, BAG A)
	1001	MDDK FLOOR (PORT1, BAG A)	M-02 Bag S/N 1026 (Note D)
Sample/Purge Kit	1004	MDDK FLOOR (PORT1, BAG A)	MDDK CEIL (PORT2, BAG A)

PWR No.	PWR S/N	Stowage Location	Actions
1	1005	AL1D1_A1	Vent, fill, and return to AL1D1_A1
2	1023	AL1D1_A1	Vent, fill, and return to AL1D1_A1
3	1007	AL1D1_B1	Post EVA2, vent, fill, and return to AL1D1_B1

PWR Fill Notes: Do not detach PWR (EMU H2O Recharge Bag) QD restraint during PWR ops.

FINAL

MSG 018 (21-0438) - ISS/STS JOINT SCENARIOS AGREEMENTS - STS-129 (ULF3)

Page 1 of 3

ISS/STS Joint Scenarios Agreements - STS-129 (ULF3)

General Items

- Will specific Shuttle crewmembers be assigned to carry Shuttle crew EMUs back to the Orbiter?

Mike Foreman and Randy Bresnik will be responsible for bringing the EMUs back to the Orbiter or at least ensuring that the EMUs are carried back by others.

- If those crewmembers are NOT onboard ISS when an emergency occurs, will they ingress ISS in order to retrieve the suits?

Yes, except for the ammonia leak scenario. In that case the EMU retrieval will not be attempted.

- Where would you like the Joint Emergency Egress (JEE) cue cards posted?

- Node 2 fwd and Airlock are preferred
Both commanders fine with Node 2 Fwd and A/L.

- Will there be specified gas masks for the shuttle crew to use or will they grab the most convenient ones? *Take into account the fact that there will be 13 crewmembers onboard and only 13 PBAs on ISS.*

US PBAs will remain in their typical locations on station. No "pre-staging" will occur, simply use the most convenient mask available. In general, the Shuttle crew will try not to use Russian masks. If they have to, specifically for ammonia, they will.

- If an emergency occurs while a mixed ISS/STS EV crew is outside, how could that alter your Joint Emergency Egress response, based on:

- Type of emergency
- Severity of the emergency
- Location of the emergency

This question should also be discussed with your lead flight director and ECLSS. Not applicable for this mission.

There might be a scenario (either NH3 or fire) where EVA crew would be re-ingressed to the Orbiter but this is very much a real-time call.

Depress case

- If Shuttle crew feels pressure changes in their ears, can they annunciate a Rapid Depress or should they first inform an ISS crewmember?

- Does this change for a campout scenario?

ISS crew is ok with Shuttle crew doing this but, in general, Shuttle crew will defer annunciations to the ISS crew, if at all possible.

The same is true if in Campout.

MSG 018 (21-0438) - ISS/STS JOINT SCENARIOS AGREEMENTS - STS-129 (ULF3)

Page 2 of 3

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Fire case

- Can Shuttle crew announce an ISS fire if they see smoke or flame, or should they first inform a station crewmember?
Yes, they can announce the emergency.
- Can Shuttle crew announce an ISS fire if they smell a burning odor, or should they first inform a station crewmember?
No. Check with an ISS crewmember and defer to them.
- Can Shuttle crew use fire extinguishers on ISS, in general?
 - If no, does this philosophy change if the fire is blocking their route back to the Orbiter?
In general, Shuttle crewmembers will NOT use ISS fire extinguishers but they are allowed to use one if the fire is visible and no ISS crewmember is present to take care of the situation.
- Can Shuttle crew flip the Rack Power Switch to a rack with smoke coming out?
No. Defer to ISS crewmembers.
- For a Shuttle fire, should a fire alarm be announced on station in order to stop ventilation between the two vehicles?
Yes
- Can Shuttle crew take one of the Extension Hose Tee Kits from station if they need it to perform Joint Emergency Egress actions in PMA2 while on masks?
Shouldn't be applicable for this mission due to the fact that the Orbiter will be bringing up their own O2 hose and deploying it during the mission. However, if the need arises, they can take the hose extension kit located in the Port/Fwd Node 2 EMER locker.

Ammonia case

- Can Shuttle crew announce an ISS Tox Atmosphere emergency if they smell ammonia?
Yes

Toxic case

- Can Shuttle crew announce an ISS Tox Atmosphere emergency if they see a leaking payload or other toxic spill on ISS, or should they inform an ISS crewmember first?
No. Defer to ISS crewmembers.
- Are there any non-ammonia toxic leak scenarios in which the Shuttle crew is not expected to perform Joint Emergency Egress but simply would need to stay out of the way and allow ISS crew to clean up the spill
Case dependent. Consult with ISS crew and MCC.

MSG 018 (21-0438) - ISS/STS JOINT SCENARIOS AGREEMENTS - STS-129 (ULF3)

Page 3 of 3

Other issues discussed:

- Summary of Nicole's IELK: It will be removed from her Soyuz after STS129 docks on FD3. Once STS-129 docks, Nicole will be classified as a STS-129 crewmember and in the event of any emergency on ISS/STS and the JEE is performed she will depart to the Shuttle.
 - After the training session, this was discussed in detail during the STS129 JOP on 7/2/2009.
- UPDATE: Per the 11/13/09 IMMT, Nicole's IELK will be uninstalled on FD3 so that 20S cargo balancing can be configured for two vs. three crew return. MOD and Crew are aware of the change.

1 **DURATION: 45 Minutes**

2
3 **INSTRUCTIONS:**

- 4
5 1. Transfer and temp stow the following items in the CTB S/N 1029 P/N
6 003493J from MF57K to LAB1P6 rack front, these will be deployed at a later
7 time.
8 ○ SODF Cue Card Kit (ziplock)
9 ○ Emergency I & II PCNs (ISS Emergency ULF3 ziplock)
10 ○ Warning Books [QTY 3]
11 ○ Ammonia Leak Detection Kit ziplock
12
13 2. Verify cue cards required for Joint Mission located in ziplock bag titled “Joint
14 Ops Cue Card Kit” have been deployed.
15

16 All items on this list were stowed in MF57K.

17
18 Cue Card Contents of Joint Ops Cue Card Kit:

19 10.103 Joint Emergency Ingress (can be placed in STS or ISS common
20 trash at undock)

21 [QTY:2]

- 22 ○ 1 on Shuttle side of hatch
23 ○ 1 on ISS side of hatch

24 10.102 Joint Emergency Egress (can be placed in STS or ISS common
25 trash at undock) [QTY:2]

- 26 ○ 1 on Shuttle side of hatch
27 ○ 1 in Node 2 FWD

28 Assembly Ops Ziplock (within Joint Ops Cue Card Kit)

29 CGBA and ABRS Status Check

- 30 ○ Front of locker MF71E

31 Glacier Status Check

- 32 ○ Front of locker MA16F/G

33 Assembly Ops Book

34 Spinal Elongation Standing Height Log

- 35 ○ Located in manila envelope in the back of Assy Ops to be used on
36 locker front MF57E

37
38 **Report completion to MCC-H.**

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