

# STS-133/ULF5

## FD 04 Execute Package



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023	26	Unidentified Bolt from EMU Equipment Bag

**Approved by FAO:**  
Greg Whitney

Last Updated: Feb 27 2011 10:02 AM GMT  
JEDI (Joint Execute package Development and Integration), v3.0



1. Meet the newest members of the DA8 support staff,
2. Glad my wife never comes to see me at work.
3. When did Sweden become an International Partner?
4. Do I look like I care that we slipped five times?
5. Mission... what mission?
6. I need to sign up for public outreach more often.
7. Which one of these is not like the other...
8. Wanna see my ride ladies?
9. No, they're not propping me up.
10. I don't care if they're not Aggies.

**MSG 017 (26-0877) - FD04 FLIGHT PLAN REVISION**

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MSG INDEX

<u>MSG NO.</u>	<u>TITLE</u>
017	FD04 Flight Plan Revision (26-0877)
018	FD04 Mission Summary
019	2.030 ULF-5 Double Coldbag Pack with NLP Vaccine-11 (26-0876)
020	FD04 PAO Event Summary - The Weather Channel/WBZ Radio/WSB-TV/WTVT-TV (26-0882)
021	FD04 Transfer Message (26-0878)
022	Tonometer Verification (26-0528)
023	Unidentified Bolt from EMU Equipment Bag (26-0880)

1. **STS-133/ULF5 FD03 - MMT Summary** - Congratulations on excellent Rendezvous and Docking. The ISS team is very happy that you have arrived. The MMT met briefly today to review the orbiter systems and mission progress. Discovery continues to perform flawlessly and the teams are working no issues. The DAT continues to review the inspection data and preliminary assessment indicates no issues (of course we'll let the process work and have the data for the next MMT).

2. **Comm Loop Overview**

**FD4 GENERAL COMMUNICATION LOOP OVERVIEW**

<b>S/G 1 &amp; A/G 1</b>	<b>S/G 2</b>	<b>A/G 2</b>
<ul style="list-style-type: none"> <li>• OBSS Handoff</li> <li>• SSRMS Walkoff</li> <li>• EVA Prep, Campout</li> </ul>	<ul style="list-style-type: none"> <li>• WOOV8 Remove</li> <li>• Russian Ops</li> <li>• DPC</li> <li>• All other ISS Comm</li> <li>• Joint PAO Event</li> </ul>	<ul style="list-style-type: none"> <li>• Transfer</li> <li>• All other STS Comm</li> </ul>

3. **Ratty Comm** - Due to the fact that Shuttle S-Band is configured for High Freq we are experiencing more than expected ratty comm. This could affect A/G2 comm, so move to the big loop if needed.

4. **H2O Ops Cue Card Pen and Ink Updates** - There are two pen and ink updates to MSG 013, the H2O Ops Cue Card:

- On page 1, under the CWC-I "Transfer To" location, the location should now be **JLP1A1.**
- On page 2, the "CWC Initial Location" for CWC Fill No. 1 should now be **NOD2D2.**

## MSG 017 (26-0877) - FD04 FLIGHT PLAN REVISION

Page 2 of 16

1  
2 **5. GLACIER Proc Delta** - GLACIER Unpack and Power Up Proc Changes to AOP p. 177  
3

4 **WAS:**

5  
6 JPM1D4 3.2 Transfer 0.5 CTB containing only the JAXA CsPINs KFTs  
7 (MELFI-1) (ten) and temp stow near MELFI-1.  
8

9 MELFI-1 4. MELFI-1 INSERTION

10  
11 4.2 Insert JAXA CsPINs KFTs (ten) into Dewar 4, Tray D, Section 3 and 4.  
12

13 **IS:**

14  
15 LAB1S1 3.2 Transfer 0.5 CTB containing only the JAXA CsPINs KFTs  
16 (MELFI-3) (ten) and temp stow near MELFI-3.  
17

18 MELFI-3 4. MELFI-3 INSERTION

19  
20 4.2 Insert JAXA CsPINs KFTs (ten) into MELFI-3 Dewar 4, Tray D, Section  
21 3 and 4.  
22

23 **6. NLP-Vaccine Termination** - Mike, During today's NLP-Vaccine Termination, you will  
24 temp stow 2 of the GAPS (N&O) after termination rather than restowing in CGBA. Cady  
25 will help you pack those GAPS (N&O) in a Double Coldbag to preserve science. The  
26 other 14 GAPS will be restowed in CGBA for ambient return. The CGBA unit will be re-  
27 cabled for landing but not powered up.  
28

29 **7.** Replace pages 2-10 through 2-13 and 3-32 through 3-41.  
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NO T2 NO EXERCISE  
WITH OBSS ON SSRMS WHILE DOUBLE GRAPPLED

REPLANNED

GMT 02/27/11 (058)

10 11 12 13 14 15 16 17 18 19 20 21 22 23 003/00

MET Day 002

STS-133	FD04	SLEEP	POST SLEEP	P/TV 06 S/U	P/TV 6	P/TV 6	RMS GRPL OBSS	P/TV 6	PMM%	XFER OPS	MEAL	PAO EVNT	XFER OPS	EXERCISE	XFER OPS		
	PLT BOE	SLEEP	POST SLEEP	W4 D/L	POST SLEEP	MICR MIL%*	RMS GRPL OBSS	PMM%	CWNCT #1	XFER OPS	MEAL	PAO EVNT	PWR FILL #1	PWR FILL #2	PWR FILL #3	P#4 FILL	
	MS1 DREW	SLEEP	POST SLEEP	APCUG*	PSOL SECTP	APCUG	PCS SETUP - STS	PCS SWAP	XFER OPS	EXERCISE	REBA #	PLS STAB	REBA C/O	MEAL	PAO EVNT	E_LK PREP	TOOL CONFG
	MS2 BOWEN	SLEEP	POST SLEEP				POST SLEEP		XFER OPS	CREAT-012VE	REBA #	PLS STAB	REBA C/O	MEAL	PAO EVNT	E_LK PREP	TOOL CONFG
	MS3 BARRATT	SLEEP	POST SLEEP			OBSS MNVR TO H/O			OBSS RLS	TONO VERIF TEST 1		EXERCISE	MEAL	PAO EVNT	VTEACR C/M INE	DCB GAP PACK	XFER OPS
	MS4 STOTT	SLEEP	POST SLEEP		XFPRD AKT#	UMDMS^	OBSS MNVR TO H/O		OBSS RLS	SSRMS TO PDGF1	BASE CHANGE	SSRMS MNVR XLATE	MEAL	PAO EVNT	GPLAWCEIR EUP		XFER OPS
STS	DAY/NIGHT ORBIT	[Timeline bars for Day/Night and Orbit]															
STS	TDRS WEZ	[Timeline bars for TDRS WEZ]															
ISS	TDRS AVAIL ORB ATT	[Timeline bars for ISS TDRS AVAIL ORB ATT]															
NOTES	BIAS -XLV -ZVV *ACT @DEACT *RELEASE %INSTALL #INSTALL %FILTER CK %INSTALL VIEWING ^STATUS CHECK #STATUS CHECK																



**NO UNISOLATED EXERCISE  
DURING MT TRANSLATE**

**REPLANNED**

GMT 02/27/11 (058)

003/00

MET Day 003

		22	23	02/28	01	02	03	04	05	06	07	08	09	12
STS-133	<b>FD04</b>													
	<b>CDR LINDSEY</b>	XFER OPS	STS 02 P/B CONFIG	EVA 1 PROC RVW	PRE SLEEP	DPC	PRE SLEEP	PMC A/G	PRE SLEEP					SLEEP
	<b>PLT BOE</b>	P#4 R F I L L	EXERCISE	EVA 1 PROC RVW	P W R X F E R	C C H O N G D / O			PRE SLEEP					SLEEP
	<b>MS1 DREW</b>	TOOL CONFG		EVA 1 PROC RVW					PRE SLEEP	MASK PREBREATHE	PRE SLEEP			SLEEP
	<b>MS2 BOWEN</b>	TOOL CONFG		EVA 1 PROC RVW					PRE SLEEP	MASK PREBREATHE	PRE SLEEP			SLEEP
	<b>MS3 BARRATT</b>	XFER OPS	X F E R T A G	X B F R I E R E F	EVA 1 PROC RVW				PRE SLEEP	MASK PRE BREATHE	PRE SLEEP			SLEEP
<b>MS4 STOTT</b>	EXERCISE	TOOL AUDIT	EVA 1 PROC RVW	M D I K %				PRE SLEEP					SLEEP	
	DAY/NIGHT ORBIT													
	TDRS W E Z													
ISS	TDRS AVAIL ORB ATT													
	NOTES	%STATUS CHECK <span style="float: right;">BIAS -XLV -ZVV</span>												

NO UNISOLATED EXERCISE  
DURING MT TRANSLATE

REPLANNED

GMT 02/27/11 (058)

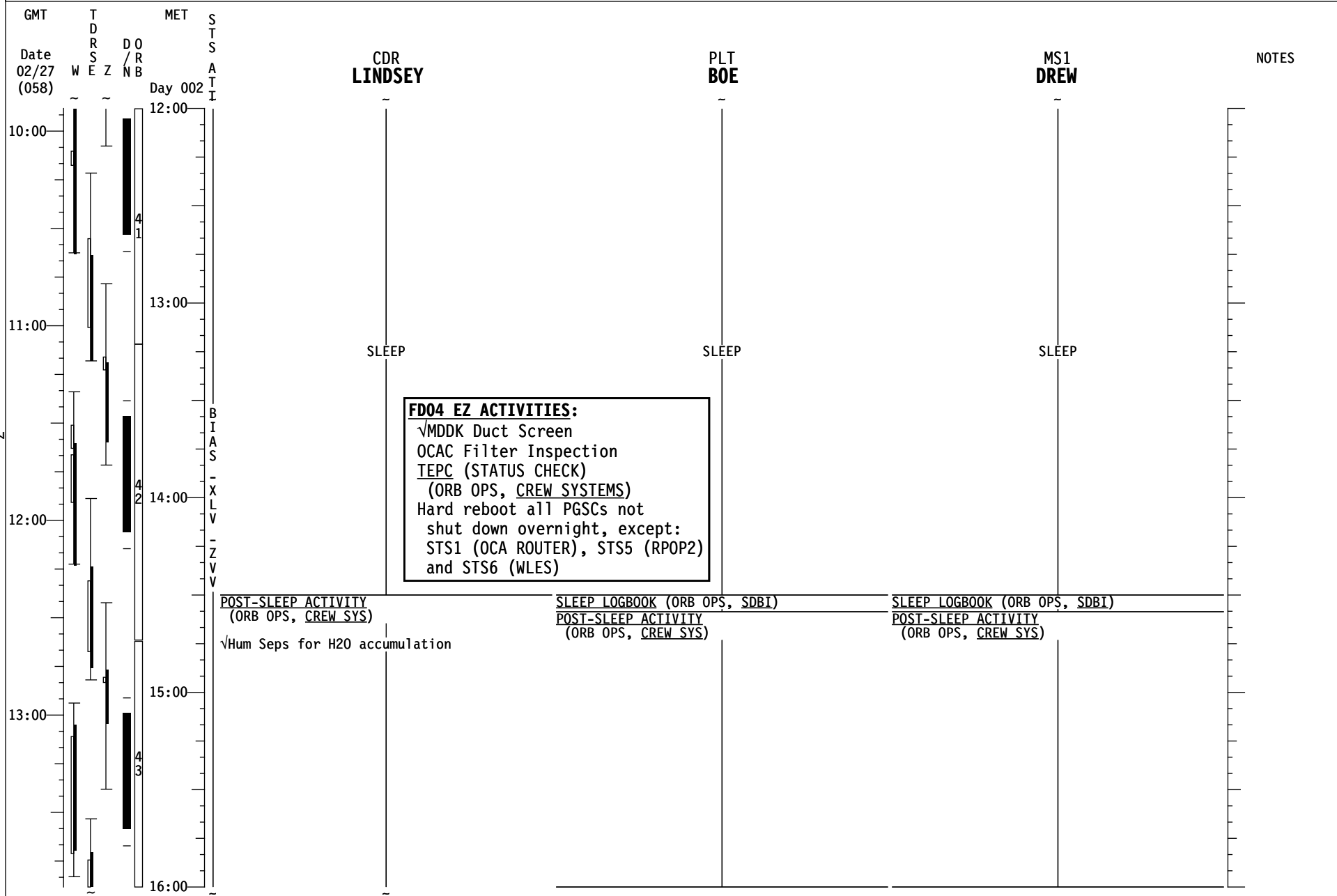
003/00

MET Day 003

ISS		TDRS	AVAIL	01 02 03 04 05 06 07 08 09 10 11 12																	
ISS	<b>FD04</b> ISS CDR <b>S. KELLY</b>	TVIS 2	EVA CAM	STS 02 P/B CONFIG	EVA PROC RVW	PW	DPC	PRE SLEEP-ISS	REACT	SLEEP											
	<b>FE-1</b> <b>KALERI</b>				TVIS	PW	DPC	PRE SLEEP-ISS		SLEEP											
	<b>FE-2</b> <b>SKRIPCHKA</b>	TEX 19 PHOTO PANEL				PW	DPC	PRE SLEEP-ISS		SLEEP											
	<b>FE-4</b> <b>KONDRATYEV</b>		TVIS		ARED		DPC	PRE SLEEP-ISS		SLEEP											
	<b>FE-5</b> <b>NESPOLI</b>		ARED		EVA PROC RVW	PW	DPC	PRE SLEEP-ISS	REACT	SLEEP											
	<b>FE-6</b> <b>COLEMAN</b>	DOSI S/U	TVIS2			PW	MP C DPC O N	PRE SLEEP-ISS	MP P E C A C C N T	SLEEP											
DAY/NIGHT		49 50 51 52 53 54 55 56																			
ORBIT																					
ALL VHF																					
NOTES		*COGC-ЭЛКТ-АФ-БЖ-MON ⊕VDS-N2 VID-CAP																			

STS-133 FD (04)

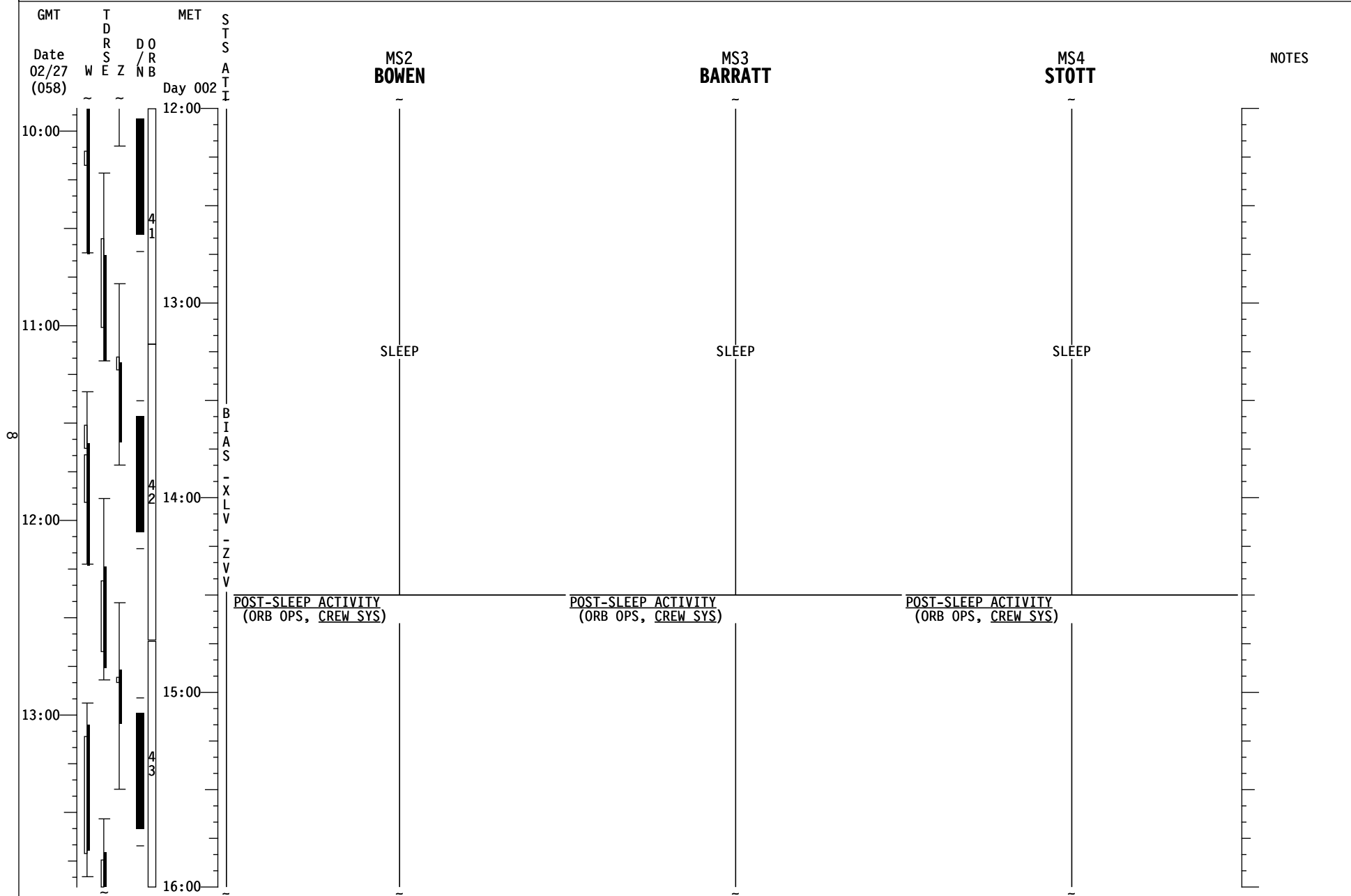
REPLANNED





STS-133 FD (04)

REPLANNED



# STS-133 FD (04)

**REPLANNED**

GMT	T D R S E Z W E Z	MET D O R B / N B Day 002	S T S A T I	CDR <b>LINDSEY</b>	PLT <b>BOE</b>	MS1 <b>DREW</b>	NOTES
14:00				POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	Window 4 Minicam Playback [A]	ON MCC GO: A15 APCU 1 OUTPUT - ON POST-SLEEP ACTIVITY CONV - ON (ORB OPS, CREW SYS)	UPDATE TFL 199
				P/TV06 ROBOTICS OPERATIONS (P/TV, SCENES) Setup		On MCC Go: A15 APCU 1 CONV - OFF POST-SLEEP ACTIVITY OUTPUT - OFF (ORB OPS, CREW SYS)	PMM PRESSURE CHECK UPDATE TFL 184
				P/TV06 ROBOTICS OPERATIONS (P/TV, SCENES) Ops	[A] DIGITAL VIA VTR (CUE CARD, DIGITAL PLAYBACK) Window 4 Minicam KU TDRE 15:51-16:25		
15:00				OBSS HANDOFF FROM SSRMS (PDRS, OBSS NOMINAL) Steps 1-3	IMU STAR OF OPPTY ALIGN (ORB OPS, GNC) L17 Check MCIU filter screen		
				P/TV06 ROBOTICS OPERATIONS (P/TV, SCENES) Ops	OBSS HANDOFF FROM SSRMS (PDRS, OBSS NOMINAL) Steps 1-3		
						PCS LAPTOP SWAP Ref Transfer List, Items 56 & 740	NO T2 WHILE OBSS IS ON SSRMS
16:00				OBSS HANDOFF FROM SSRMS (PDRS,OBSS NOMINAL) Steps 4-5 EXERCISE CONSTRAINT	OBSS HANDOFF FROM SSRMS (PDRS,OBSS NOMINAL) Steps 4-5 EXERCISE CONSTRAINT	JOINT OPS: 6.107 PCS SETUP-SHUTTLE	
				P/TV06 ROBOTICS OPERATIONS (P/TV, SCENES) Ops		TRANSFER OPS Ref. Transfer List and MSG 021	NO EXERCISE WHILE OBSS IS DOUBLE GRAPPLD
				OBSS MNVR TO PMM INSTALL VIEWING (PDRS, OBSS NOMINAL)	OBSS MNVR TO PMM INSTALL VIEWING (PDRS, OBSS NOMINAL)		
				TRANSFER OPS Ref. Transfer List and MSG 021	SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS) Init Fill #1 Ref MSG 013		
17:00					TRANSFER OPS Ref. Transfer List and MSG 021		
						EXERCISE	
20:00							

# STS-133 FD (04)

**REPLANNED**

GMT	TDRSEZ	MET	SATS	MS2 <b>BOWEN</b>	MS3 <b>BARRATT</b>	MS4 <b>STOTT</b>	NOTES
Date 02/27 (058)	W E Z	DO R NB Day 002	S A T S				
14:00							
				<u>POST-SLEEP ACTIVITY</u> (ORB OPS, CREW SYS)	<u>POST-SLEEP ACTIVITY</u> (ORB OPS, CREW SYS)	<u>POST-SLEEP ACTIVITY</u> (ORB OPS, CREW SYS)	
						<u>TRANSFER LIST UPDATE</u> Ref. Transfer List & MSG 021	
						<u>GLACIER STATUS CK</u> (Cue Card)-MA16F/G <u>AEM CHECK</u> (CUE CARD)	
15:00					<u>ROBO: 1.210 SSRMS OBSS UNBERTH AND HANDOFF</u> Steps 1-3.1	<u>ROBO: 1.210 SSRMS OBSS UNBERTH AND HANDOFF</u> Steps 1-3.1	
				EXERCISE	<u>ROBO: 1.210 SSRMS OBSS UNBERTH AND HANDOFF</u> Step 3.2 EXERCISE CONSTRAINT	<u>ROBO: 1.210 SSRMS OBSS UNBERTH AND HANDOFF</u> Step 3.2 EXERCISE CONSTRAINT	NO T2 WHILE OBSS IS ON SSRMS
					<u>ROBO: 1.210 SSRMS OBSS UNBERTH AND HANDOFF</u> Steps 4-6 EXERCISE CONSTRAINT	<u>ROBO: 1.210 SSRMS OBSS UNBERTH AND HANDOFF</u> Steps 4-6 EXERCISE CONSTRAINT	
16:00				<u>POST-SLEEP ACTIVITY</u> (ORB OPS, CREW SYS)			NO EXERCISE WHILE OBSS IS DOUBLE GRAPPLLED
				<u>TRANSFER OPS</u> Ref. Transfer List & MSG 021	<u>ROBO: 1.210 SSRMS OBSS UNBERTH AND HANDOFF</u> Step 7 EXERCISE CONSTRAINT	<u>ROBO: 1.210 SSRMS OBSS UNBERTH AND HANDOFF</u> Step 7 EXERCISE CONSTRAINT	
					<u>TONOMETER VERIFICATION</u> Ref MSG 022 Ref Transfer List, Item 800 This activity should be performed in as quiet a location as possible. Click 'Record' after entering each reading and 'Save' in header bar after completion of testing, but prior to closing the procedure. Label Shuttle Eye Simulator as "STS" and REPORT if Shuttle Simulator was used during the activity.	<u>ROBO: 1.220 WALKOFF TO MBS &amp; MNVR TO TRANSLATE CONFIG</u> Steps 1-5	
17:00							
				<u>CSA-02 RETRIEVE</u> Transfer CSA-02s (2) from 24S to ISS A/L	EXERCISE		
20:00							

# STS-133 FD (04)

**REPLANNED**

GMT	T D R S E Z	MET	S T S A T I	CDR LINDSEY	PLT BOE	MS1 DREW	NOTES
Date 02/27 (058)	W E Z	Day 002	I				
18:00				<u>TRANSFER OPS</u> Ref. Transfer List and MSG 021	<u>TRANSFER OPS</u> Ref. Transfer List and MSG 021 <u>SHUTTLE/ISS H2O CNTR FILL</u> (ORB OPS, ECLS) Perform FILL TERMINATION	<u>EVA SYSTEMS: 1.307 REBA INSTALLATION</u> Ref: STS-133 CTCC, verify LiOH	
					<u>CWC TRANSFER</u> Transfer 1 CWC to ISS	<u>EMU PLSS TAB INSTALL</u> (EVA, AIRLOCK CONFIG)	
						<u>EVA SYSTEMS: 1.403 REBA POWERED HARDWARE CHECK</u> Ref STS-133 CTCC	
19:00				MEAL	MEAL	MEAL	
20:00				<u>PUBLIC AFFAIRS EVENT</u> ISS KU AVAIL: 21:42-22:16 Ref. MSG 020	<u>PUBLIC AFFAIRS EVENT</u> ISS KU AVAIL: 21:42-22:16 Ref. MSG 020	<u>PUBLIC AFFAIRS EVENT</u> ISS KU AVAIL: 21:42-22:16 Ref. MSG 020	
				<u>Z JNT OPS: 3.128 O2 XFER HI P &amp; LO P O2 TANKS</u> V Step 3. MCC-H can perform step 3.5 V Report ORCA cycle counter to MCC	<u>PWR FILL</u> (ORB OPS, ECLS) Init Fill #1 Ref MSG 013 Fill dur ~30 min	<u>EVA SYSTEMS: 1.305 EQUIPMENT LOCK PREP</u> Steps 1-3, not required; For Step 28, use VM s/n 13; Ref: STS-133 CTCC	
				<u>TRANSFER OPS</u> Ref. Transfer List & MSG 021	<u>PWR FILL</u> (ORB OPS, ECLS) Init Fill #2 Ref MSG 013 Fill dur ~30 min		
21:00				EXERCISE	<u>PWR FILL</u> (ORB OPS, ECLS) Init Fill #3 Ref MSG 013 Fill dur ~30 min	<u>133 EVA 1 TOOL CONFIG</u> (EVA, TIMELINES)	
00:00				<u>TRANSFER OPS</u> Ref. Transfer List & MSG 021	<u>PWR FILL (ORB OPS, ECLS)</u> Init Fill #4. Ref MSG 013 Fill dur ~30 min		

# STS-133 FD (04)

**REPLANNED**

GMT	T D R S E Z	MET	S T S A T I	MS2 <b>BOWEN</b>	MS3 <b>BARRATT</b>	MS4 <b>STOTT</b>	NOTES
Date 02/27 (058)	W E Z	Day 002	I				
18:00				<u>EVA SYSTEMS: 1.307 REBA INSTALLATION</u> Ref: STS-133 CTCC, verify LiOH <u>EMU PLSS TAB INSTALL</u> (EVA, AIRLOCK CONFIG) <u>EVA SYSTEMS: 1.403 REBA POWERED HARDWARE CHECK</u> Ref STS-133 CTCC	EXERCISE	<u>ROBO: 1.220 WALKOFF TO MBS &amp; MNVR TO TRANSLATE CONFIG</u> Steps 6-End	
19:00				MEAL	MEAL	MEAL	
20:00				<u>PUBLIC AFFAIRS EVENT</u> ISS KU AVAIL: 21:42-22:16 Ref. MSG 020	<u>PUBLIC AFFAIRS EVENT</u> ISS KU AVAIL: 21:42-22:16 Ref. MSG 020	<u>PUBLIC AFFAIRS EVENT</u> ISS KU AVAIL: 21:42-22:16 Ref. MSG 020	
21:00				<u>EVA SYSTEMS: 1.305 EQUIPMENT LOCK PREP</u> Steps 1-3, not required; For Step 28, use VM s/n 13; Ref: STS-133 CTCC	<u>NLP TERMINATION (ASSY OPS, PAYLOADS)</u> Do not perform steps 2,3,2,3,3,8,9. Step 3.1 VERIF only. In step 5.8, temp stow GAPs N,O outside CGBA for packing in DCB In step 10, only call down METs in Table 1. Ref MSG 017, Item 6 <u>DOUBLE COLDBAG PACK WITH NLP VACCINE-11</u> Ref. MSG 019, assist with steps 5-9 Ref. Transfer List, Item 713	<u>GLACIER UNPACK AND POWER UP (ASSY OPS, PAYLOADS)</u> FWD Unit in MF28E/G Ref MS 017, Item 5 Ref Transfer List, Item 36 & 37	
22:00				<u>133 EVA 1 TOOL CONFIG (EVA, TIMELINES)</u>	<u>TRANSFER OPS</u> Ref. Transfer List & MSG 021	<u>TRANSFER OPS</u> Ref. Transfer List & MSG 021	
23:00							
00:00						EXERCISE	

# STS-133 FD (04)

**REPLANNED**

GMT	T D R S E Z	MET	S T S	CDR LINDSEY	PLT BOE	MS1 DREW	NOTES
Date 02/27 (058)	W E Z	Day 003	A T I				
22:00				<u>TRANSFER OPS</u> Ref. Transfer List & MSG 021	<u>PWR FILL (ORB OPS, ECLS)</u> Init Fill #4. Ref MSG 013 Fill dur ~30 min	<u>133 EVA 1 TOOL CONFIG</u> (EVA, <u>TIMELINES</u> )	
23:00				<u>JOINT OPS: 3.121 PREBREATHE USING SHUTTLE O2 SETUP (POST O2 XFER)</u> Steps 1-4, MCC-H can perform steps 1.7 and 4.15	EXERCISE		
00:00				<u>EVA PROCEDURE REVIEW</u> Ref. <u>EVA 1 BRIEFING CARD</u> (EVA, <u>TIMELINES</u> )	<u>EVA PROCEDURE REVIEW</u> Ref. <u>EVA 1 BRIEFING CARD</u> (EVA, <u>TIMELINES</u> )	<u>EVA PROCEDURE REVIEW</u> Ref. <u>EVA 1 BRIEFING CARD</u> (EVA, <u>TIMELINES</u> )	
01:00				<u>PRE-SLEEP ACTIVITY</u> (ORB OPS, <u>CREW SYS</u> )	<u>PWR TRANSFER</u> Transfer 4 PWRs to ISS	<u>PRE-SLEEP ACTIVITY</u> (ORB OPS, <u>CREW SYS</u> )	
02:00				<u>DAILY PLANNING CONFERENCE (DPC)</u>	<u>SHUTTLE CONDENSATE COLLECTION</u> (ORB OPS, <u>ECLS</u> ) Perform <u>CHANGEOUT</u> [C]		
03:00				<u>PRE-SLEEP ACTIVITY</u> (ORB OPS, <u>CREW SYS</u> )	<u>PRE-SLEEP ACTIVITY</u> (ORB OPS, <u>CREW SYS</u> )		
04:00				L9 PAYLOAD STATION A/G (two) - OFF PRIVATE MEDICAL CONFERENCE via A/G2	[C] Use ISS CWC S/N 1035 located at NOD2D2. After changeout, transfer Orbiter CWC S/N 5105 to NOD2D2 for processing. Notify ISS CDR of Orbiter CWC location. Notify MCC when complete.		NO UN-ISOLATED EXERCISE DURING MT TRANSLATE
				<u>PRE-SLEEP ACTIVITY</u> (ORB OPS, <u>CREW SYS</u> )			
						<u>EVA SYS: 1.206 10.2 PSIA CMPQUT MASK PRBRTH</u> Ref: STS-133 CTCC MCC performs steps 1,19	

# STS-133 FD (04)

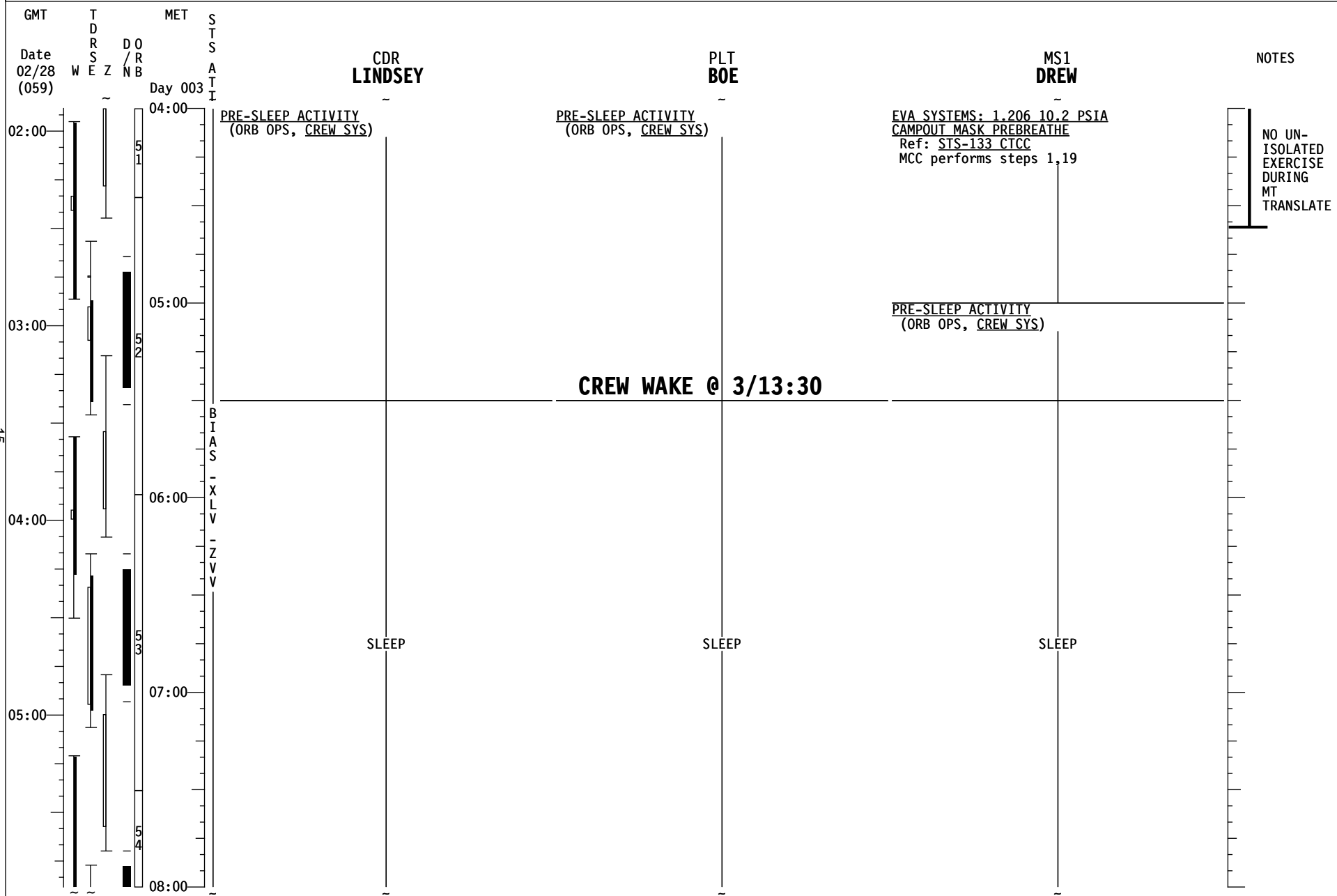
**REPLANNED**

GMT	TDRSEZ	MET	SSTS	MS2 <b>BOWEN</b>	MS3 <b>BARRATT</b>	MS4 <b>STOTT</b>	NOTES
Date 02/27 (058)	W E Z	DO R NB Day 003	S A T I				
22:00				<u>133 EVA 1 TOOL CONFIG</u> (EVA, TIMELINES)	<u>TRANSFER OPS</u> Ref. Transfer List & MSG 021		
						EXERCISE	
23:00					<u>TRANSFER TAGUP</u> Coordinate with transfer counterpart	<u>133 EVA 1 TOOL CONFIG</u> (EVA, TIMELINES) Audit	
					<u>TRANSFER BRIEF</u> Call down status to MCC		
00:00				<u>EVA PROCEDURE REVIEW</u> Ref. <u>EVA 1 BRIEFING CARD</u> (EVA, TIMELINES)	<u>EVA PROCEDURE REVIEW</u> Ref. <u>EVA 1 BRIEFING CARD</u> (EVA, TIMELINES)	<u>EVA PROCEDURE REVIEW</u> Ref. <u>EVA 1 BRIEFING CARD</u> (EVA, TIMELINES)	
01:00				<u>PRE-SLEEP ACTIVITY</u> (ORB OPS, CREW SYS)	<u>PRE-SLEEP ACTIVITY</u> (ORB OPS, CREW SYS)	<u>GLACIER STATUS CK (Cue Card)</u> <input type="checkbox"/> <u>PRE-SLEEP ACTIVITY</u> (ORB OPS, CREW SYS)	
					<input type="checkbox"/> Perform status checks of both Glacier units. In step 1.4 for FWD Glacier unit in MF28E/G, temp will be at ambient.		
04:00				<u>EVA SYS:1.206 10.2 PSIA CMPOUT MASK PRBRTH</u> Ref: STS-133 CTCC MCC performs steps 1,19	<u>EVA SYS: 1.206 10.2 PSIA CAMPOUT MASK PREBREATHE</u> Ref: STS-133 CTCC MCC performs steps 1,19		

NO UN-ISOLATED EXERCISE DURING MT TRANSLATE

STS-133 FD (04)

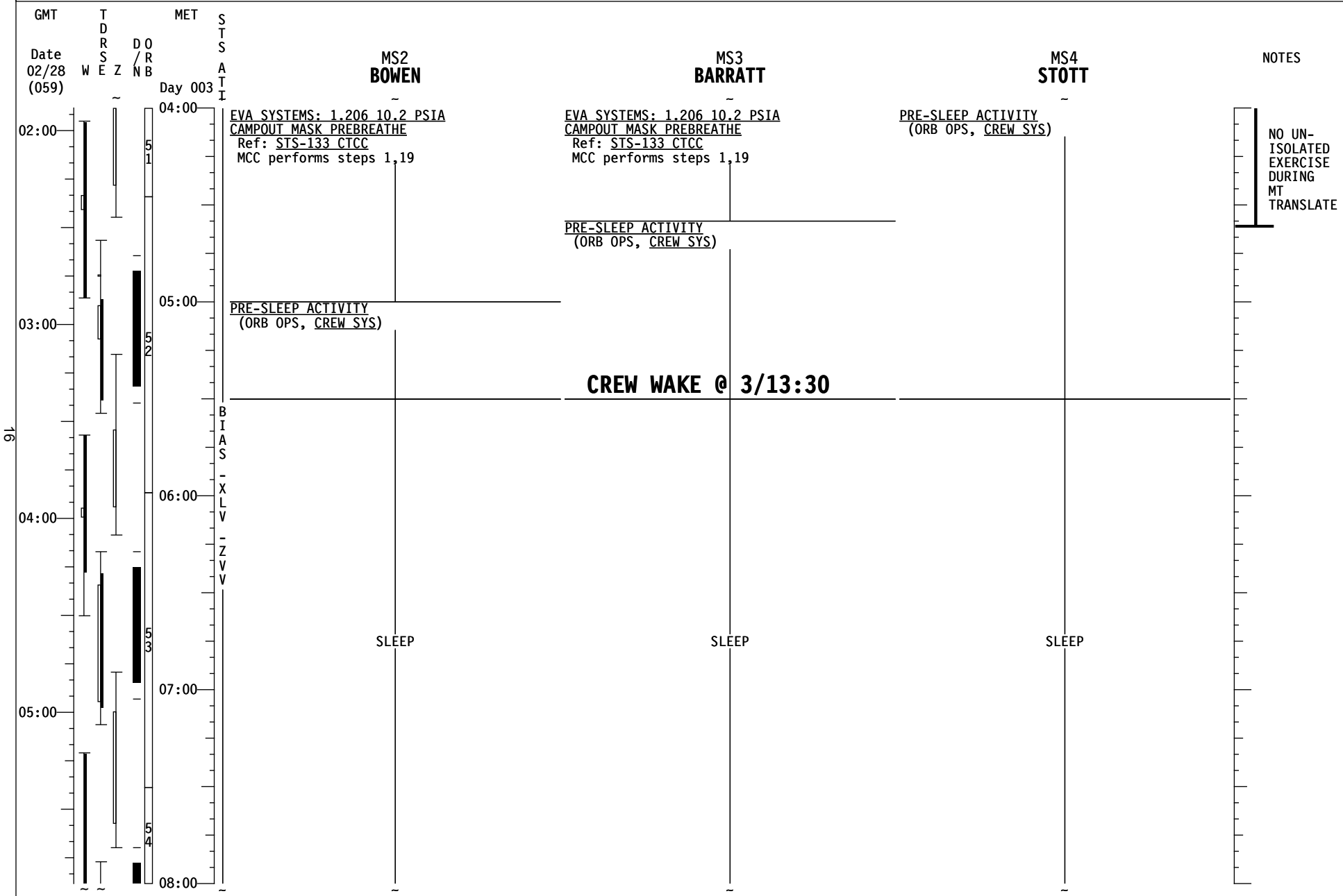
REPLANNED





# STS-133 FD (04)

REPLANNED



MSG 018 - FD04 MISSION SUMMARY

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Good Morning Discovery! Your mission has been renamed "The Infestation of ISS" since you bugs have successfully landed on ISS - nice work on the rendezvous and docking.

YOUR CURRENT ORBIT IS: 194 X 186 NM

NOTAMS - (NO CHANGES)

- EDW - EDW 22L/04R IN USE. EDT 22R/04L EMERGENCY DAY USE ONLY.
- EDW - LAKEBED RWYS RED.
- NOR - LAKEBED RWYS GREEN.
- ZZA - NOT USABLE. UNDER CONSTRUCTION.
- MRN - MRN20 ALS OTS.
- BEN - NOT USABLE. NOT SUPPORTED.
- NTU - RWY 05R/23L CLSD.
- WAL - TACAN SBY49 DME ONLY.
- YYT - TACAN UYT23 DME ONLY.
- YQX - TACAN YQX74 DME ONLY.
- FFA - NOT USABLE. IN CARETAKER STATUS.
- ESN - DME BAG78 OTS.
- IKF - NOT USABLE. NO AGREEMENT.

NEXT 2 PLS OPPORTUNITIES:

EDW22	ORB 49 – 3/00:45	SKC	7	230/7P12
EDW22	ORB 64 – 3/23:35	SCT250	7	220/8P14

END OF PAGE 1 OF 2, MSG 018

MSG 018 - FD04 MISSION SUMMARY

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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 = 35.15 R OMS OX = 34.46  
FU = 34.77 FU = 34.48

FOR CURRENT QTYS, SUBTRACT INCN'T COUNTER

DELTA V AVAILABLE:

OMS	324 FPS
<u>ARCS (TOTAL ABOVE QTY1)</u>	<u>38 FPS</u>
TOTAL IN THE AFT	362 FPS
ARCS (TOTAL ABOVE QTY2)	68 FPS
FRCS (ABOVE QTY 1)	24 FPS
AFT QTY 1	80 %
AFT QTY 2	42 %

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

END OF PAGE 2 OF 2, MSG 018

OBJECTIVE:

Retrieve two Double Coldbags and fill one with +4°C Ice Bricks (eighteen) from MELFI-3. Transfer both Double Coldbags to the Shuttle Middeck and pack Double Coldbag S/N 1005 with NLP-Vaccine-11 (two GAPs) and +4°C Ice Bricks (eighteen) in preparation for ULF-5 Shuttle descent. The empty Double Coldbag S/N 1015 will be transferred and stowed on ISS.

PARTS:

- Double Coldbag S/N 1015
- Double Coldbag S/N 1005
- LtWt Cryo Gloves (a.k.a. Mechanix Wear)

TOOLS:

Coldplate/Wireway Cover

ITEMS TO UNSTOW WITHIN PROCEDURE:

- NLP Vaccine-11 GAP N S/N 32 (unstow step 5.1)
- NLP Vaccine-11 GAP O S/N 33 (unstow step 5.1)

1. ✓LtWt Cryo Gloves donned

CAUTION
1. Samples must be packed in the correct orientation shown for all items to fit properly for return.
2. Minimize exposure of MELFI trays, cooled Ice Bricks, and samples to ambient air to prevent increased sample temperatures.
3. Double Coldbag lid should remain closed when the internal volume is not being accessed.

<u>NOTE</u>
1. The Double Coldbag top interior seam is a useful guideline for lid to close properly.
2. 60 seconds & 45 minute Dewar opening rules do not apply during packing of the Coldbag.

- MELFI-3      2. DOUBLE COLDBAG S/N 1015 PACK WITH ICE BRICKS  
 Remove +4°C Ice Bricks from MELFI-3 per Figure 1, below, and place into Double Coldbag S/N 1015 (no particular order required).

```

*****
*
* If MELFI tray is stuck,
*
* |
* |   Insert Coldplate/Wireway Cover completely between Tray and
* |   Dewar wall.
* |
* |   Firmly holding both Coldplate/Wireway Cover and Tray Handle,
* |   remove Tray from Dewar.
*
*****
    
```

Step	From MELFI Location*	Description
1	MELFI-3 4-A-1	Remove two +4C ice bricks
2	MELFI-3 4-A-2	Remove two +4C ice bricks
3	MELFI-3 4-B-1	Remove two +4C ice bricks
4	MELFI-3 4-B-2	Remove two +4C ice bricks
5	MELFI-3 4-C-1	Remove two +4C ice bricks
6	MELFI-3 4-C-2	Remove two +4C ice bricks
7	MELFI-3 4-D-1	Remove two +4C ice bricks
8	MELFI-3 4-D-2	Remove two +4C ice bricks
9	MELFI-3 3-D-1	Remove two +4C ice bricks

\* Dewar-Tray-Tray Section (3-A-1 = Dewar 3, Tray A, Tray Section 1)

Figure 1. +4°C Ice Brick Locations in MELFI-3 to Double Coldbag S/N 1015

- MELFI-3
3. ✓ All MELFI-3 Dewar doors are closed and locked.
 

```

*****
*
* If any Dewar Open Door LED - On
* |
* |   Unlock Dewar door handle
* |   Dewar door handle → OPEN
* |   Close, lock Dewar door handle.
* |   Verify Dewar Open Door LED - Off
* |   Notify POIC of results of malfunction.
*
*****
            
```

- Shuttle Middeck
4. Transfer Double Coldbag S/N 1015 and Double Coldbag S/N 1005 to Shuttle Middeck.
  5. DOUBLE COLDBAG S/N 1005 PACK WITH NLP VACCINE-11 GAPS
    - 5.1 Retrieve NLP Vaccine-11 GAP N and GAP O.
    - 5.2 Pack +4°C Ice Brick (eighteen) and NLP Vaccine-11 GAP (two) into Double Coldbag S/N 1005 per Figure 2, below. See Figure 3, below, for internal packing view.

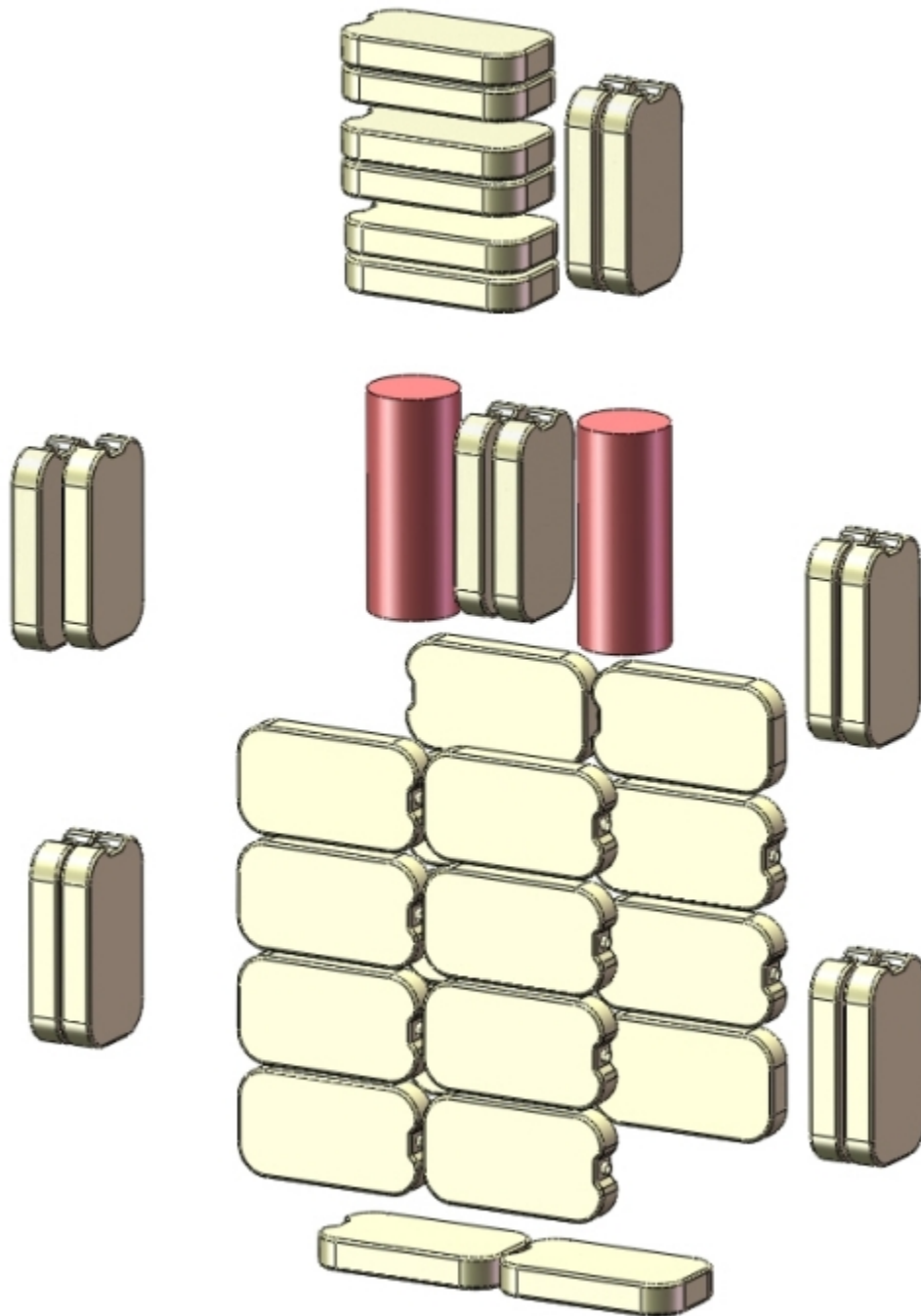


Figure 2. Double Coldbag S/N 1005 Packing Configuration

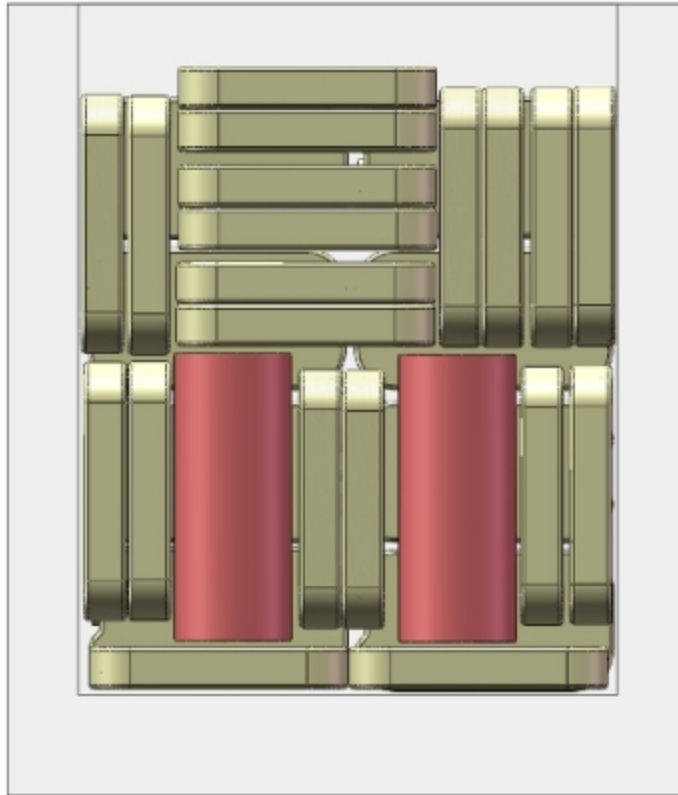


Figure 3. Cut out side view of packed Double Coldbag S/N 1005 (front Ice Brick layer not shown)

6. Close Double Coldbag S/N 1005 lid, ensuring the Velcro is sealed around the entire perimeter.
7. Notify **MCC-H** that Double Coldbag S/N 1005 sample packing is complete and provide the current GMT Time.
8. Reach into the card pouch on Double Coldbag, remove the green Return Card from the back, and place it in the front.
9. Stow:  
Double Coldbag S/N 1005 (per Transfer List)  
Double Coldbag S/N 1015 (per Stowage Note)  
LtWt Cryo Gloves (per Stowage Note)  
Coldplate/Wireway Cover (per Stowage Note)

GROUND updates IMS for following parts:

Double Coldbag S/N 1005 TO: Transfer List (step 9)

Ice Brick +4°C (eighteen) TO: Double Coldbag S/N 1005 (step 5.2)

NLP Vaccine-11 GAP N TO: Double Coldbag S/N 1005 (step 5.2)

NLP Vaccine-11 GAP O TO: Double Coldbag S/N 1005 (step 5.2)

Double Coldbag S/N 1015 TO: Stow (step 9)

## MSG 021 (26-0878) - FD04 TRANSFER MESSAGE

Page 1 of 8

1 Good morning Mike & Nicole!

2  
3 Today is one of the biggest days for transfer time, and we expect you will make a significant  
4 dent in resupply. There are a few CTBs that need to be done today, which are listed in the  
5 XFER OPS portion of your choreography.

- 6 • Please transfer Resupply Item 48 first, as the ISS crew needs it early in the day.
- 7 • In addition, we ask you to do the multimeter swap today, since we know it won't be  
8 needed for other activities.
- 9 • There are several timelined events today for transfer, and your ISS counterparts may  
10 look to you for help in locating or stowing their items.
- 11 • Note that during Paolo's WOOV activities today, Express Rack #3 in COL1A1 will be  
12 rotated down, partially impeding the Columbus translation path. Recommend  
13 considering this to appropriately time the Transfer of Items 9, 10, 16.5, 26, 713, 34.4,  
14 34.5, & 34.6. If the FUNGI Resupply Items 9 & 10 cannot be stowed in their final COL  
15 locations, we will add this to the FD05 Choreography.

16 Enjoy the day, and we look forward to the first formal Transfer Brief this evening!

17  
18  
19 The Transfer List Excel file, FD04\_Transfer\_List\_STS133.xls, is located on the KFX  
20 machine in **C:\OCA-up\transfer** (and available via the **PGSC homepage**).

21  
22 For ISS, the Transfer List Excel file, FD04\_Transfer\_List\_STS133.xls, is located in **K:\OCA-**  
23 **up\transfer**.

### 24 25 26 **FD04 Choreography**

- 27 • Drew: Swap PCS laptops per PCS SWAP (Items 56 & 740)
- 28 • Barratt: Transfer the Eye Simulator per TONO VERIF TEST 1 activity (Item 800)
- 29 • Nespoli: Transfer WOOV hardware per COL-WOOV8 activities (Items 16.5, 26 & 751)
- 30 • Stott: Unpack middeck GLACIER per GLACIER POWER UP (Items 36 & 37)
- 31 • Barratt/Coleman: Transfer DCB per DCB-GAP-PACK activity (Item 713)
- 32 • Coleman: Transfer PMM outfitting h/w per PMM VEST EQUIP S/U (Items 34.4, 34.5 &  
33 34.6)
- 34 • Coleman: Transfer JAXA Dosimeters per DOSIMETER-STOW and S/U (Items 43 & 708)
- 35 • XFER OPS:
  - 36 ○ Transfer CHeCS CTB prior to EHS-CSA CP-ACO (Item 48)
  - 37 ○ Transfer FUNGI payload items to ISS (Items 9 & 10)
  - 38 ○ Transfer ISS HARDWARE CTB to ISS (Item 51)
  - 39 ○ Swap Multimeters (Items 40 & 738)
  - 40 ○ Transfer crew pref items (Items 13, 41, 42 & 53)
  - 41 ○ Continue unconstrained resupply transfer items to ISS



**MSG 021 (26-0878) - FD04 TRANSFER MESSAGE**

Page 2 of 8

**Change Pages**

**Please incorporate changes as follows:**

In the Transfer List **RESUPPLY** tab  
Replace the following pages:  
Resupply – 10, 17

In the Transfer List **RETURN** tab  
Replace the following pages:  
Return – 8, 14  
Add the following page:  
Return – 16

**Change Page Details (FYI)**

- Items 801 & 900 – The Ammonia Kit swap is now approved and back in your list.
- Item 713 – One of the DCBs will be used for the GAPs and done today.
- Item 746 – We've updated the info for the returning RPCM.

Have a great day!

- The ULF5 Transfer Team

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**ULF5 Transfer Choreography**

**FD05 (EVA 1)**

- Coleman: Transfer returning RAMs to shuttle per EHS-RAM-DEPLOY (Item 742)
- Coleman: Transfer RPCM to shuttle per N14B C-RPCM-R&R (Item 746)
- XFER OPS:
  - RS crewmembers will be prepping RS items for return per ULF5-CARGO-PREP activity (Items 620 through 628)
  - Complete unconstrained resupply transfers to shuttle & swaps
  - Start unconstrained return transfers to shuttle if time permits

**FD06 (PMM Install)**

- Kelly: Transfer Message in a Bottle per SPACE-BOTTLE-STOW (Item 748)
- Nespoli: Transfer returning EDB samples per RS-EDB URINE-SMPL (Item 717)
- XFER OPS:
  - Continue unconstrained return transfers to shuttle

## MSG 021 (26-0878) - FD04 TRANSFER MESSAGE

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### **FD07 (EVA 2 / PMM Ingress)**

- Boe/Coleman: Transfer PFE and GSC per PMM INGRESS (Items 34.3 & 403.1)
- XFER OPS:
  - Work on food and clothing locker consolidations to determine space available
  - Continue unconstrained return transfers to shuttle
  - Transfer Robonaut patch to shuttle (Item 745)

### **FD08 (XFER / Off-duty)**

- Stott & Kelly: Swap GLACIERs per GLACIER XFER (Items 12 & 723)
- Stott & Kelly: Transfer cold samples to shuttle per GLACIER SAMPLE XFER (Item 724)
- Stott: Swap NLP CELLS per CELLS SWAP activity (Items 11 & 739)
- XFER OPS:
  - Transfer returning FUNGI payload items to shuttle (Item 722)
  - Retrieve Hydrogen Dome foam and 10 MLE bag from PMM and pack Dome for return (Items 604, 700, 725, 726, 727 & 728)
  - Continue unconstrained return transfers to shuttle, including items returning in available food and clothing lockers
  - Begin transfer of 5 MLE bags A, D, E, F, & H to shuttle (Items 702, 703, 704, 705 & 706)

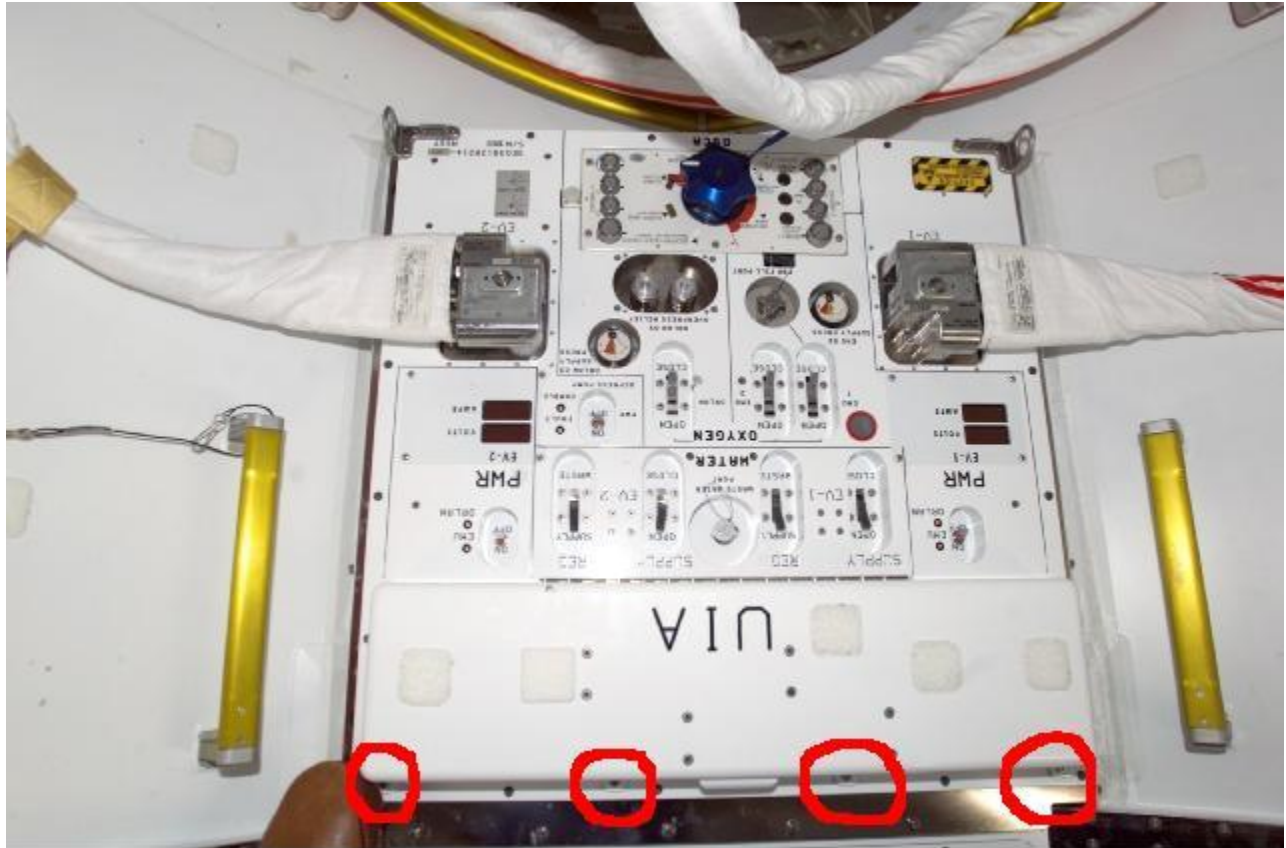
### **FD09 (ISS Hatch Close)**

- Drew & Bowen: Transfer EVA h/w per EVA RECONFIG & XFER (Items 701, 718, 719 & 720)
- Nespoli: Transfer samples per IMMUN-SALIVA & BLOOD-STOW (Items 729 & 730)
- Drew: Transfer SSC back to ISS per SSC TEARDOWN (Item 58)
- Lindsey: Transfer PCS and power supply to ISS per PCS DEACT (Items 57 & 57.1)
- Barratt: Transfer PMM Flag after PMM FLAG activity (Item 726.1)
- Kelly & Coleman: Transfer Coldbags per DCB-BAG-TRANSFER (Items 712, 714, 715 & 716)
- XFER OPS:
  - Transfer Return to Houston P/TV tapes (Item 744)
  - Complete transfer of 5 MLE bags to shuttle (Items 702, 703, 704, 705 & 706)
  - Complete all transfer

**26-0880 (MSG 023) – Unidentified Bolt from EMU Equipment Bag**

Page 1 of 1

- 1 Yesterday you reported finding a bolt in the EMU Equipment Bag. We reviewed the photos you took,
- 2 and believe it may be one of the bolts that hold the UIA Biocide Filter door closed. There are four
- 3 bolts total, as marked in the figure below. Please inspect and report if any of them are missing.



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