STS-133/ULF5

FD 09 Execute Package

MSG	Page(s)	Title
061A	1 - 18	FD09 Flight Plan Revision
062	19 - 20	FD09 Mission Summary
063	21 - 23	FD09 Transfer Message
064	24	EVA Questions and Inspections for LiOH and EHIP
065	25	Table for ULF5 Descent Sample Transfer from MELFI to Glacier
066	---	9.5.101 PMM Standoff Bracket Installation ***– Electronic Only***
067	---	9.5.107 ZSR Transfer From PMM1S3 To PMM1P2 ***– Electronic Only***
068	---	9.5.113 ZSR Rack Transfer LAB1P4 to LAB1O5 ***– Electronic Only***
069	---	2.100 Express Rack 8 Transfer from PMM to LAB ***– Electronic Only***
070	---	9.5.108 ZSR Transfer from PMM1S4 to PMM1S3 ***– Electronic Only***
071	---	1.248 Integrated Stowage Platform (ISP) Removal ***– Electronic Only***
072	26 - 36	PMM Reconfig Activities for FD9
073	37	Water Ops Cue Card
074	---	1.262 - RSP/RSR Rotate Up ***– Electronic Only***
075	---	FD09 PAO Event Summary - NASA Education Technology Services Education Event ***– Electronic Only***
076	---	FD09 PAO Event Summary - Joint Crew News Conference ***– Electronic Only***

Approved by FAO:
Greg Whitney

Last Updated: Mar 4 2011 8:40 AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v3.0*

MSG INDEX

MSG NO.	TITLE
061	FD09 Flight Plan Revision (26-0943)
062	FD09 Mission Summary
063	FD09 Transfer Message (26-0944)
064	EVA Questions and Inspections for LiOH and EHIP (26-0929)
065	Table for ULF5 Descent Sample Transfer from MELFI to Glacier (26-0946)
066	9.5.101 PMM Standoff Bracket Installation (26-0770)
067	9.5.107 ZSR Transfer From PMM1S3 To PMM1P2 (26-0774)
068	9.5.113 ZSR Rack Transfer LAB1P4 to LAB1O5 (26-0608)
069	2.100 Express Rack 8 Transfer from PMM to LAB (26-0777)
070	9.5.108 ZSR Transfer from PMM1S4 to PMM1S3 (26-0775)
071	1.248 Integrated Stowage Platform (ISP) Removal
072	PMM Reconfig Activities for FD9 (26-0941)
073	Water Ops Cue Card
074	1.262 - RSP/RSR Rotate Up
075	FD09 PAO Event Summary - NASA Education Technology Services Education Event
076	FD09 PAO Event Summary - Joint Crew News Conference

1. **STS-133/ULF5 FD08 - MMT Summary -** The MMT met today to review the orbiter systems and mission progress. Congrats on a successful EVA 2. The teams are so happy with your performance that the MMT has agreed to add an additional docked day so you guys can lend an additional helping hand. Undock is now FD12 (Mon) with EOM on FD14 (Wed) with a KSC landing ~ Noon EST. Discovery continues to perform flawlessly and the teams are working no issues. The Propulsion projects provided a quick assessment and the SRBs, ET, and SSMEs all performed nominally. Enjoy your extra time on-orbit.

2. **Comm Loop Overview**

FD9 GENERAL COMMUNICATION LOOP OVERVIEW

S/G 1 & A/G 1	S/G 2	A/G 2
• PAO Event • Crew Conference	• PMM outfitting • ISS Payloads • Russian Ops • DPC • Post EVA tool stow • All other ISS Comm	• Mid-deck Transfer • All other STS Comm

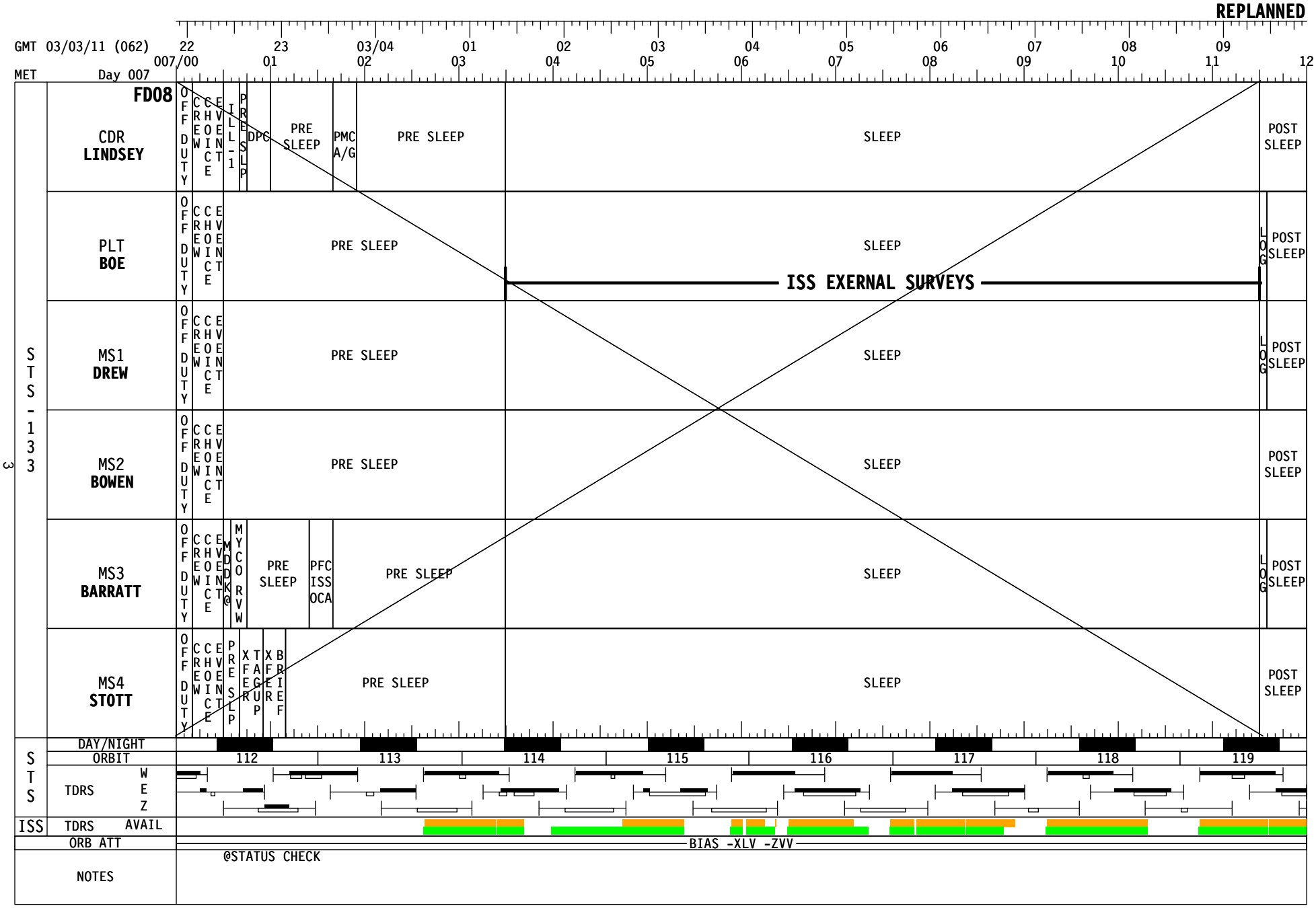
3. **PMM Banner Signing -** We would like you to take some still pictures and video of the PMM Banner Signing on a best effort basis without interfering with the PAO event immediately afterward. The PMM banner is being flown as an expression of gratitude to the Italian and US teams who built the three MPLM modules, supported the past 10 MPLM missions, and converted Leonardo to the PMM configuration now on ISS. The PMM banner will be sent to Italy for exhibition postflight.

4. **New H2O Ops Cue Card -** Due to the increase in mission duration, you will be filling additional CWC-Is. Reference the new Water Ops Cue Card in MSG 073 for the remaining fills.

5. **WCS/WHC Usage Status -** Current waste water generation is continuing to remain on target with predicts.

6. **EMU Gloves -** The EVA glove team has reviewed the photos of Steve and Al's gloves taken Post EVA 2; all gloves are GO for EVA if required.

7. Replace pages 2-28 through 2-33 and 3-90 through 3-99.


REPLANNED
GMT 03/03/11 (062)
MET Day 007
22 23 03/04 01 02 03 04 05 06 07 08 09
007/00 01 02 03 04 05 06 07 08 09 10 11 12
FD08
STS-133
CDR LINDSEY
PLT BOE
MS1 DREW
MS2 BOWEN
MS3 BARRATT
MS4 STOTT
OFF DUTY
CREW CHOICE
EVENT CHOICE
ILL-1
PRESLP
DPC
PRE SLEEP
PMC A/G
SLEEP
POST SLEEP
LOG
ISS EXERNAL SURVEYS
MDK@
MYCO RVW
PFC ISS OCA
XFER TAGUP
XFER BRIEF
DAY/NIGHT
ORBIT
112 113 114 115 116 117 118 119
STS
TDRS W E Z
ISS
TDRS AVAIL
ORB ATT
BIAS -XLV -ZVV
NOTES
@STATUS CHECK

REPLANNED

GMT 03/03/11 (062) 22 23 03/04 01 02 03 04 05 06 07 08 09

MET Day 007 007/00 01 02 03 04 05 06 07 08 09 10 11 12

ISS TDRS AVAIL

ISS	**FD08** ISS CDR **S. KELLY**	CEVIS	CREW	CHOICE	EVENT	PW	DPC	PRE SLEEP-ISS	REACT	SLEEP				POST SLEEP
ISS	FE-1 **KALERI**	♣	CREW	CHOICE	EVENT	PW	DPC	PRE SLEEP-ISS		SLEEP			⊕	POST SLEEP
ISS	FE-2 **SKRIPOCHKA**	EXERCISE	TVIS FE2			PW	DPC	PRE SLEEP-ISS		SLEEP			⊕	POST SLEEP
ISS	FE-4 **KONDRATYEV**	МБИ-16	CREW	CHOICE	EVENT	PW♦	DPC	PRE SLEEP-ISS		SLEEP			®	POST SLEEP
ISS	FE-5 **NESPOLI**	METOX	CREW	CHOICE	EVENT	PW	DPC	PRE SLEEP-ISS	REACT	SLEEP				POST SLEEP
ISS	FE-6 **COLEMAN**		CREW	CHOICE	EVENT	PW	DPC	PRE SLEEP ISS / HAMPRP / ISS HAM / PRE SLEEP-ISS	PFC / REACT	SLEEP				POST SLEEP

DAY/NIGHT								
ORBIT	112	113	114	115	116	117	118	119
ALL VHF								

NOTES

♣ПЗЭ-МО-10-PREP

♦СОГС-ЭЛКТ-АФ-БЖ-MON

⊕ПЗЭ-МО-10

®СОГС-ЭЛКТ-АФ-Б

4

REPLANNED

GMT 03/04/11 (063): 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21

MET Day 007: 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 008/00

FD09

STS-133

CDR LINDSEY: POST SLEEP | N2-I | LAB105 RLCT | PAO EVENT | POST SLEEP | ILL-0 | IMU | GLCR | P/TV | EXERCISE | P/TV 05 S/U | PMM FLAG | CREW CONF | THANKS | CREW PHOTO | NO2-T | NO2-I | MEAL | O2-T | F3 UNPACK FROM ISP | F3 ISP REMOVAL | P3 UNPACK FROM ISP | P3 ISP REMOVAL | ILL-1 | PRE SLP

PLT BOE: POST SLEEP | PAO EVENT | MCIU% | EXERCISE | SA1 BRCKT INSTL | GLCR | P/TV | CWC-I | FILL #9 | CWC-I | FILL #10 | PMM FLAG | CREW CONF | THANKS | CREW PHOTO | MEAL | F3 UNPACK FROM ISP | F3 ISP REMOVAL | P3 UNPACK FROM ISP | P3 ISP | REMOVAL | CWC-I | FILL #11 | CWC-I | XFER | ♣

MS1 DREW: POST SLEEP | PAO EVENT | LAB1P4 ZSR XFER | ER8 XFER TO LAB1P4 | FS3 BRCKT INSTL | S3 PVT FIT | S4 ZSR | PMM FLAG | CREW CONF | THANKS | CREW PHOTO | MEAL | BSA-T | POST EVA TOOL STOW | EXERCISE | PRE SLEEP

MS2 BOWEN: POST SLEEP | PAO EVENT | AS4 BRCKT | ZSR RLCT | A4 PVT FIT | LLR RMVL | P2 ZIP TIE | A4 RACK | ROTATE | A4 TMP RMV | M-01 RMV | A4 FNC | A4 TREAD MILL RLCT | PMM FLAG | CREW CONF | THANKS | CREW PHOTO | MEAL | A4 RACK | ROTUP | POST EVA TOOL STOW | EXERCISE | PRE SLEEP

MS3 BARRATT: POST SLEEP | AEM^ | MDDK# | PAO EVENT | LAB1P4 ZSR XFER | ER8 XFER TO LAB1P4 | SA3 | BRCKT | SA3 KBAR | INSTL | S4 ZSR | PMM FLAG | CREW CONF | THANKS | CREW PHOTO | MEAL | XFER OPS | EXERCISE | XFER OPS | LIOH EHIP INSPCT | XFER | TAGUP | PRE | SLEEP | MYCO RVW

MS4 STOTT: POST SLEEP | XFR | UPDAT | PAO EVENT | GLACIER STS XFER | GLCR CK | GLCR SMP | XFR RVW | GLACIER | SAMPLE | XFER | EXERCISE | GLCR CK | PMM FLAG | CREW CONF | THANKS | CREW PHOTO | MEAL | A1 PIVOT | FIT | MELFI STW RCNFG | FS1 BRCKT INSTL | F3 STW RESTOW | PMM1S3 | S3 ZSR DEPLOY | MDDK# | PRE SLEEP

STS: DAY/NIGHT | ORBIT: 120, 121, 122, 123, 124, 125, 126, 127 | TDRS W, E, Z

ISS: TDRS AVAIL | ORB ATT: BIAS -XLV -ZVV

NOTES:
%FILTER CK
#STATUS CHECK
^STATUS CHECK
*TERM
♣PRE SLEEP
#STATUS CHECK

REPLANNED

GMT 03/04/11 (063) — 10 11 12 13 14 15 16 17 18 19 20 21

MET Day 007 — 12 13 14 15 16 17 18 19 20 21 22 23 008/00

ISS TDRS AVAIL

ISS	**FD09** ISS CDR **S. KELLY**	POST SLEEP; PW; S/U; DPC; LAB105 RLCT; PAO EVENT; GLACIER ISS XFER; GLCR SMP; XFR RVW; GLACIER; SAFER; WHC MAN FILL; CWC AUD; PMM FLAG; CREW CONF; THANKS; CREW; PHOTO; MIDDAY-MEAL; PAO; ♣; FUNGI PHOTO; CLNUP; ARED; T2; DPC; T2 SNUB
	FE-1 **KALERI**	⊕; ♦; POST SLEEP; DPC; ®; Φ-CB-BT7-MNT; EXERCISE-TVIS-БИ-1; ♥; PMM FLAG; CREW CONF; THANKS; CREW; PHOTO; MIDDAY-MEAL; КПТ-2-EXP; TVIS; Δ; DPC; PW
	FE-2 **SKRIPOCHKA**	POST SLEEP; DPC; ®; ♠; EXERCISE-TVIS-FE2; ϕ; R-PAO-REC; ♥; PMM FLAG; CREW CONF; THANKS; CREW; PHOTO; MIDDAY-MEAL; КПТ-2-EXP; IMS-EDIT; TVIS-FE-2; DPC; PW
	FE-4 **KONDRATYEV**	•; POST SLEEP; DPC; ∇; ◊; МБИ 21 FE4 EXE; R-PAO-REC; ♥; *; PMM FLAG; CREW CONF; THANKS; CREW; PHOTO; MIDDAY-MEAL; ♣; СОЖ-MNT; EXERCISE-TVIS-БИ-4; ⊕; ARED-FE-4; DPC; PW
	FE-5 **NESPOLI**	•; POST SLEEP; DPC; ARED; T2; CSA CAL; S3 KNEE; A1 RMV RSTNT; A1 RACK; ROTATE; A1 STW SHFL; PMM FLAG; CREW CONF; THANKS; CREW; PHOTO; MIDDAY-MEAL; A1 UP RACK; A2 PIVOT; A2 RMV RSTRT; A2 DOWN RACK; MO1/MO2 RMV ENDCONE; A2 UP RACK; AED; LIOH EHIP INSPCT; MYCO PREP; DPC; MYCO RVW
	FE-6 **COLEMAN**	POST SLEEP; PW; DPC; LAB105 RLCT; PAO EVENT; PF2 BRCKT; PVT FIT; ZSR RLCT; ZSR P2 DPLY; P2 ZIP TIE; A1 FIT PIVOT; ARED; PMM FLAG; CREW CONF; THANKS; CREW; PHOTO; MIDDAY-MEAL; ♦; POST EVA TOOL STOW; T2; CWCI PT1; URINE SMPL; CWCI PT2; DPC; MYCO RVW

DAY/NIGHT

ORBIT: 120 121 122 123 124 125 126 127

ALL VHF

NOTES

⊕POST SLEEP
♦ПЗЭ-МО-10-STOW2
•ПЗЭ-МО-10
®DESCENT-CONF
♠TEX-15-DAK-DNLD_FE2
∇ПЗЭ-МО-2-2-CDM-8-INT
◊СОГС-ЭЛКТРН-TEST-ON
ϕМБИ-21-FE2-PHOTO
♥TEX-43-PHOTO
*СОГС-ВОЗДУХ-MODE
♣FUNGI A-PHOTO2-PREP
♣СЭМ-ЛЮЛИН-PLCMNT
♦DOSIMETER-PHOTO
ΔСОГС-ИП-1-MNT
⊕СОГС-ЭЛКТ-АФ-БЖ-MON

REPLANNED

GMT 03/04/11 (063) 22 23 03/05 01 02 03 04 05 06 07 08 09

MET Day 008 008/00 01 02 03 04 05 06 07 08 09 10 11 12

FD09

STS-133

CDR **LINDSEY**	PRE SLP	PMC A/G	PRE SLEEP	SLEEP			POST SLEEP
PLT **BOE**	PRE SLEEP			SLEEP		LOG	POST SLEEP
MS1 **DREW**	PRE SLEEP			SLEEP		LOG	POST SLEEP
MS2 **BOWEN**	PRE SLEEP			SLEEP			POST SLEEP
MS3 **BARRATT**	PRE SLEEP	XFER	BREF PRE SLEEP	SLEEP		MYCO	CLCT POST SLEEP
MS4 **STOTT**	PRE SLEEP			SLEEP			POST SLEEP

ISS EXERNAL SURVEYS

STS

DAY/NIGHT

ORBIT 127 128 129 130 131 132 133 134 135

TDRS W E Z

ISS TDRS AVAIL

ORB ATT BIAS -XLV -ZVV

NOTES

REPLANNED

GMT 03/04/11 (063) 22 23 03/05 01 02 03 04 05 06 07 08 09

MET Day 008 008/00 01 02 03 04 05 06 07 08 09 10 11 12

ISS TDRS AVAIL

ISS

FD09 ISS CDR **S. KELLY**	PRE SLEEP-ISS	SLEEP	POST SLEEP	DPC
FE-1 **KALERI**	PRE SLEEP-ISS	SLEEP	POST SLEEP	DPC
FE-2 **SKRIPOCHKA**	PRE SLEEP-ISS	SLEEP	♣ POST SLEEP	DPC
FE-4 **KONDRATYEV**	PRE SLEEP-ISS	SLEEP	POST SLEEP	DPC
FE-5 **NESPOLI**	PRE SLEEP-ISS	SLEEP	MYCO ⊕ MELF* POST SLEEP	DPC
FE-6 **COLEMAN**	PRE SLEEP-ISS	SLEEP	DRY MYCO POST SLEEP	DPC

DAY/NIGHT

ORBIT 127 128 129 130 131 132 133 134 135

ALL VHF

NOTES

♣СОГС-ЭЛКТ-АФ-БЖ-MON
⊕POST SLEEP
*MYCO INSERT

STS-133 FD (09)

REPLANNED

GMT Date 03/04 (063) | W | TDRSE | Z | D/N | ORB | MET Day 007 | STS ATI

CDR **LINDSEY** | PLT **BOE** | MS1 **DREW** | NOTES

06:00 07:00 08:00 09:00

08:00 09:00 10:00 11:00 12:00

117 118 119

BIAS-XLV-ZVV

SLEEP | SLEEP | SLEEP

FD09 EZ ACTIVITIES:
√MDDK Duct Screen
OCAC Filter Inspection
TEPC (STATUS CHECK)
(ORB OPS, CREW SYSTEMS)
Hard reboot all PGSCs not shut down overnight, except: STS1 (OCA ROUTER), STS5 (RPOP2) and STS6 (WLES)

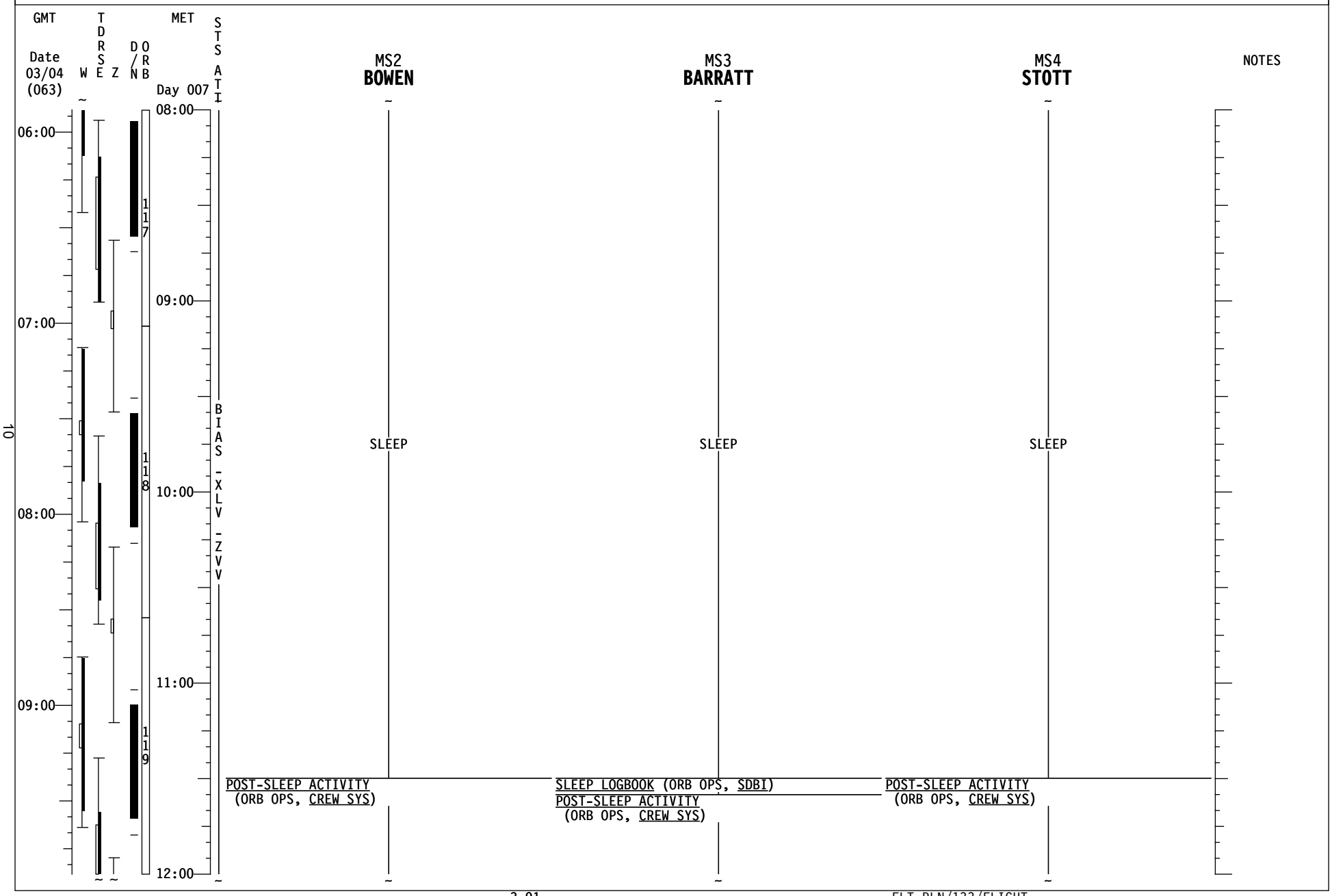
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

SLEEP LOGBOOK (ORB OPS, SDBI)
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

SLEEP LOGBOOK (ORB OPS, SDBI)
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

STS-133 FD (09)

REPLANNED



STS-133 FD (09)

REPLANNED

GMT Date 03/04 (063) | W | TDRS E | Z | D/N | ORB | MET Day 007 | STS ATI

CDR **LINDSEY** | PLT **BOE** | MS1 **DREW** | NOTES

10:00 / 11:00 / 12:00 / 13:00

12:00 — POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

13:00 — A N2 REPRESS USING P/L N2 VLVS (ORB OPS, ECLS) Steps 1,3-7; MCC will TMBU S/W FDA

BIAS-XLV-ZVV

N2 REPRESS INIT A

LAB1O5 CLEANOUT Ref. MSG 072, Step 1

14:00 — PUBLIC AFFAIRS EVENT Ref. MSG 075 ISS KU AVAIL: 14:04-14:43

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

L17 Check MCIU filter screen

LAB1P4 ZSR TRANSFER Ref. MSG 072, Step 5

15:00 — ILLUMINATOR OPS (CUE CARD, TV) ILLUMINATORS OFF - A,D

IMU STAR OF OPPTY ALIGN (ORB OPS, GNC)

P/TV09 MIDDECK PAYLOADS (PHOTO/TV, SCENES) Ops Item 1 (Hardware)

EXERCISE

ER8 RACK TRANSFER Ref. MSG 072, Step 6

PMM1SA1 BRACKET INSTALL Ref. MSG 072, Step 3a

16:00 — EXERCISE

120 / 121 / 122

11

STS-133 FD (09)

REPLANNED

GMT Date 03/04 (063) | W | TDRS E | Z | D/N | ORB | MET Day 007 | STS ATI

10:00 11:00 12:00 13:00

ORB: 120 121 122

MET: 12:00 13:00 14:00 15:00 16:00

STS ATI: BIAS-XLV-ZVV

MS2 BOWEN

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

PUBLIC AFFAIRS EVENT
Ref. MSG 075
ISS KU AVAIL: 14:04-14:43

PMM1AS4 BRACKET INSTALL
Ref. MSG 072, Step 4a

PMM1P2 ZSR TRANSFER
Ref. MSG 072, Step 2c

PMM1A4 PIVOT INSTALL
Ref. MSG 072, Step 4b

PMM1A4 LAUNCH RESTRAINT REMOVAL
Ref. MSG 072, Step 4c

PMM1P2 ZSR ZIP TIE
Ref. MSG 072, Step 2e

MS3 BARRATT

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

AEM CHECK (CUE CARD)

GLACIER STATUS CK (Cue Card) - Both Units

PUBLIC AFFAIRS EVENT
Ref. MSG 075
ISS KU AVAIL: 14:04-14:43

LAB1P4 ZSR TRANSFER
Ref. MSG 072, Step 5

ER8 RACK TRANSFER
Ref. MSG 072, Step 6

MS4 STOTT

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

TRANSFER LIST UPDATE
Ref. Transfer List & MSG 063

PUBLIC AFFAIRS EVENT
Ref. MSG 075
ISS KU AVAIL: 14:04-14:43

GLACIER SWAP - SHUTTLE
(ASSY OPS, PAYLOADS)
Ref. Transfer List Items 12 & 723

GLACIER COLD HEAD CHECK (ASSY OPS, PAYLOADS)
Check FWD Unit in MF28E/G

REVIEW ONLY: ULF-5 DESCENT SAMPLE TRANSFER
FROM MELFI TO GLACIER (ASSY OPS, PAYLOADS)
At Step 2.2 Ref MSG 065

NOTES

STS-133 FD (09)

REPLANNED

GMT Date 03/04 (063) | W | T D R S E | Z | D/N | O R B | MET Day 007 | STS ATI

CDR **LINDSEY** | PLT **BOE** | MS1 **DREW** | NOTES

14:00 — 15:00 — 16:00 — 17:00

16:00 — 17:00 — 18:00 — 19:00 — 20:00

ORB: 1 2 2 — 1 2 3 — 1 2 4

BIAS-XLV-ZVV

CDR LINDSEY

EXERCISE

P/TV05 ISS INTERNAL OPS (HC)
(PHOTO/TV, SCENES)
Setup for Crew Photo

PMM FLAG SIGNING
Ref. MSG 061, Item 3

CREW CONFERENCE
Ref. MSG 076
ISS KU AVAIL: 17:56-18:44

PAO EVENT ISS KU AVAIL:17:56-18:44

CREW PHOTO

N2 REPRESS TERM (On MCC GO) B
O2 REPRESS INIT C

B N2 REPRESS USING P/L N2 VLVS
(ORB OPS, ECLS) On MCC Go,
Perform Steps 8-13. MCC will TMBU S/W FDA
M069 LEH O2 8 vlv - OP

MEAL

C OCAC PWR - OFF
C5 DIRECT O2 vlv - OP
Perform the following H/W C&W actions:
R13U H/W C&W CH 034,044 (two) - INH
MCC will TMBU all S/W limits

PLT BOE

PMM1SA1 BRACKET INSTALL
Ref. MSG 072, Step 3a

P/TV09 MIDDECK PAYLOADS
(PHOTO/TV, SCENES)
Ops Item 1 (Hardware)

CWC-I FILL (ORB OPS, ECLS)
Fill CWC-I #9,
Perform Parts D & E
Ref. MSG 073

CWC-I FILL (ORB OPS, ECLS)
Fill CWC-I #10,
Perform Parts D & E
Ref. MSG 073

PMM FLAG SIGNING
Ref. MSG 061, Item 3

CREW CONFERENCE
Ref. MSG 076
ISS KU AVAIL: 17:56-18:44

PAO EVENT ISS KU AVAIL:17:56-18:44

CREW PHOTO

MEAL

MS1 DREW

ER8 RACK TRANSFER
Ref. MSG 072, Step 6

PMM1FS3 BRACKET INSTALL
Ref. MSG 072, Step 7b

PMM1S3 PIVOT FITTING INSTALL
Ref. MSG 072, Step 7d

PMM1S4 TO S3 ZSR TRANSFER
Ref. MSG 072, Step 7f

PMM FLAG SIGNING
Ref. MSG 061, Item 3

CREW CONFERENCE
Ref. MSG 076
ISS KU AVAIL: 17:56-18:44

PAO EVENT ISS KU AVAIL:17:56-18:44

CREW PHOTO

MEAL

STS-133 FD (09)

REPLANNED

GMT Date 03/04 (063) | W | T D R S E | Z | D/N | O R B | MET Day 007 | STS ATI

14:00 15:00 16:00 17:00

122 123 124

BIAS-XLV-ZVV

MET	MS2 BOWEN	MS3 BARRATT	MS4 STOTT	NOTES
16:00	PMM1P2 ZSR ZIP TIE Ref. MSG 072, Step 2e	ER8 RACK TRANSFER Ref. MSG 072, Step 6	GLACIER SAMPLE XFER REVIEW (See pg 3-93) ULF-5 DESCENT SAMPLE TRANSFER FROM MELFI TO GLACIER (ASSY OPS, PAYLOADS) Insert into FWD Unit in MF28E/G At Step 2.2 Ref MSG 065 Ref. Transfer List Item 724	
	PMM1A4 RACK ROTATE Ref. MSG 072, Step 4d			
	PMM1A4 STRUT REMOVAL Ref. MSG 072, Step 4f			
	RELOCATE M-01 (RFTA) TO PMM ENDCONE Ref. MSG 072, Step 4e	PMM1SA3 BRACKET INSTALL Ref. MSG 072, Step 7a		
17:00	PMM1A4 FENCE FOLDING Ref. MSG 072, Step 4g RELOCATE M-03 (TREADMILL) Ref. MSG 072, Step 4h	PMM1SA3 K-BAR INSTALL Ref. MSG 072, Step 7c	EXERCISE	
		PMM1S4 TO S3 ZSR TRANSFER Ref. MSG 072, Step 7f		
			GLACIER COLD HEAD CHECK (ASSY OPS, PAYLOADS) Check FWD Unit in MF28E/G	
	PMM FLAG SIGNING Ref. MSG 061, Item 3	PMM FLAG SIGNING Ref. Xfer List Item 726.1 Ref. MSG 061, Item 3	PMM FLAG SIGNING Ref. MSG 061, Item 3	
18:00	CREW CONFERENCE Ref. MSG 076 ISS KU AVAIL: 17:56-18:44	CREW CONFERENCE Ref. MSG 076 ISS KU AVAIL: 17:56-18:44	CREW CONFERENCE Ref. MSG 076 ISS KU AVAIL: 17:56-18:44	
	PAO EVENT ISS KU AVAIL:17:56-18:44	PAO EVENT ISS KU AVAIL:17:56-18:44	PAO EVENT ISS KU AVAIL:17:56-18:44	
	CREW PHOTO	CREW PHOTO	CREW PHOTO	
19:00	MEAL	MEAL	MEAL	
20:00				

STS-133 FD (09)

REPLANNED

GMT Date 03/04 (063) | W | TDRS E | Z | D/N | ORB | MET Day 007 | STS ATI

CDR LINDSEY

MEAL

O2 REPRESS TERM (On MCC GO) D

F3 UNPACK FROM ISP
Ref. MSG 072, Step 10a

PMM1F3 ISP REMOVAL
Ref. MSG 072, Step 10b

P3 UNPACK FROM ISP
Ref. MSG 072, Step 11a

PMM1P3 ISP REMOVAL
Ref. MSG 072, Step 11b

ILLUMINATOR OPS (CUE CARD, TV)
ILLUMINATORS ON - A,D

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

PLT BOE

F3 UNPACK FROM ISP
Ref. MSG 072, Step 10a

D C5 DIRECT O2 vlv - CL
OCAC PWR - ON
On MCC GO, perform the following H/W C&W actions:
R13U H/W C7W Ch 034,044 (two) - ENA
MCC will TMBU all S/W limits

PMM1F3 ISP REMOVAL
Ref. MSG 072, Step 10b

P3 UNPACK FROM ISP
Ref. MSG 072, Step 11a

PMM1P3 ISP REMOVAL
Ref. MSG 072, Step 11b

CWC-I FILL (ORB OPS, ECLS)
Fill CWC-I #11,
Perform Parts D-F
Ref. MSG 073

CWC-I TRANSFER
Transfer 3 CWC-Is to ISS

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

MS1 DREW

EVA SYSTEMS: 1.605 BSA BATTERY RECHARGE
TERMINATE. Install EMU Batt 2089 in EV1 EMU

POST ULF5 EVA TOOL STOW
Ref MSG 051

EXERCISE

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

NOTES

BIAS-XLV-ZVV

STS-133 FD (09)

REPLANNED

GMT Date 03/04 (063) | W | TDRS E | Z | D/N | ORB | MET Day 007 | STS ATI

MS2 BOWEN

20:00 — PMM1A4 RACK ROTATE UP
Ref. MSG 072, Step 4j

POST ULF5 EVA TOOL STOW
Ref MSG 051

21:00

EXERCISE

22:00

23:00

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

00:00

MS3 BARRATT

TRANSFER OPS
Ref. Transfer List & MSG 063

EXERCISE

TRANSFER OPS
Ref. Transfer List & MSG 063

EVA QUESTIONS AND INSPECTIONS FOR LiOH AND EHIP
Ref MSG 064

TRANSFER TAGUP
Coordinate with transfer counterpart

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

MYCO BODY SAMPLE COLLECT(ASSY OPS, PAYLOADS)
REVIEW ONLY. Using sharpie, cross out "GJ" on Myco Kit and write down "MB"

MS4 STOTT

PMM1SA3 PIVOT FITTING INSTALL
Ref. MSG 072, Step 7h

MELFI STOWAGE SHUFFLE
Ref. MSG 072, Step 10d

PMM1FS1 BRACKET INSTALL
Ref. MSG 072, Step 8

PMM1F3 STOWAGE RECONFIG
Ref. MSG 072, Step 10e

E 9.5.103 RESUPPLY STOWAGE PLATFORM (RSP) DISMANTLE
Ref. MSG 043, Steps 3.7 & 3.8

PMM1S3 RACK ROTATE DOWN E

PMM1S3 ZSR DEPLOY
Ref. MSG 072, Step 7g

GLACIER STATUS CK (Cue Card) - Both Units

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

NOTES

STS-133 FD (09)

REPLANNED

GMT Date 03/04 (063) | W | TDRS E | TDRS Z | D/N | ORB | MET Day 008 | STS ATI

CDR **LINDSEY** | PLT **BOE** | MS1 **DREW** | NOTES

22:00 — 23:00 — 00:00 — 01:00

127 — 128 — 129 — 130

00:00 — 01:00 — 02:00 — 03:00 — 04:00

BIAS-XLV-ZVV

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

L9 PAYLOAD STATION A/G (two) - OFF
PRIVATE MEDICAL CONFERENCE via A/G2

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

CREW WAKE @ 8/10:30

SLEEP

SLEEP

SLEEP

STS-133 FD (09)

REPLANNED

GMT Date 03/04 (063) | W | T D R S E | Z | D/N | O R B | MET Day 008 | STS ATI

MS2 **BOWEN** | MS3 **BARRATT** | MS4 **STOTT** | NOTES

22:00 | 23:00 | 00:00 | 01:00

00:00 | 01:00 | 02:00 | 03:00 | 04:00

127 | 128 | 129 | 130

BIAS-XLV-ZVV

MS2 BOWEN

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

MS3 BARRATT

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

TRANSFER BRIEF
Call down status to MCC

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

MS4 STOTT

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

CREW WAKE @ 8/10:30

Good Morning Discovery. Nice job on the Presidential call yesterday, you made us all proud. Also, some special treats arrived in MCC for all shifts and the card said from "Drew & Crew" - thanks so much, they are much appreciated!!!!

YOUR CURRENT ORBIT: 195 X 186 NM

NOTAMS - (NO CHANGE)

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.
LAJ -	RWY 15/33 CLSD 2200-0900 GMT DAILY.
FFA -	NOT USABLE. IN CARETAKER STATUS.
ESN -	DME BAG78 OTS.
IKF -	NOT USABLE. NO AGREEMENT.

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

EDW04	ORB126 – 7/22:11	BKN200	7	060/07P12
NOR17	ORB141 – 8/21:03	SCT200	7	150/05P06

OMS TANK FAIL CAPABILITY:

L or R OMS FAILS: NO

LEAKING OMS PRPLT BURN:

L or 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	359 FPS
ARCS (TOTAL ABOVE QTY1)	38 FPS
TOTAL IN THE AFT	397 FPS
ARCS (TOTAL ABOVE QTY2)	71 FPS
FRCS (ABOVE QTY 1)	13 FPS
AFT QTY 1	75 %
AFT QTY 2	37 %

There are no Failure/Impact/Work Arounds for Today.

Good morning Mike & Nicole!

You have been running right on track for transfer, and are still ahead – 85 percent complete overall. Today Mike has a little time to continue working on transfer, and while there are only a couple unconstrained items he can do, there are several items transferring per activities today that ISS crew may need assistance with. We also have a few questions and notes provided below.

If all continues as planned today, we do not expect you will need transfer time on FD10, and you will have enough time on FD11 to do the big 5 MLE bags and the last-minute items. It is hard to believe that the end is so near!

FD09 (PMM Outfitting) Choreography

- Stott & Kelly: Swap Glaciers per GLACIER XFER (Items 12 & 723)
- Stott & Kelly: Transfer cold samples to shuttle per GLACIER SAMPLE XFER (Item 724)
- Coleman: Transfer RSR/ZSR brackets per ZSR-DEPLOY-PMM1P2 (Item 907)
- Kelly: Transfer returning ЕДВ samples per RS-ЕДВ URINE-SMPL (Item 717)
- Barratt: Transfer PMM Flag after PMM FLAG activity (Item 726.1)
- Kelly: Transfer returning FUNGI payload items per FUNGI A-P/V2-CLNUP (Item 722)
- XFER OPS:
    - Transfer returning CSA-CPs if new CSA-CPs check out successfully during EHS-CSA ZERO-CAL activity (Items 710 & 711)
    - Continue unconstrained transfers

Questions & Answers

1. As listed in the choreography above, Scott is scheduled for FUNGI activities on ISS in the afternoon. These were reported transferred last night, so he may need your help in finding them. This is Item 722, currently in MA16D, and it will need to go back to MA16D after his activity is complete.

2. Yesterday there was some confusion about Item 905.1, the Orlan gloves. Coordination has been ironed out, and you are go to return this item on shuttle.

3. The ISS team would like to get the S/N of the GSC with the PMM ingress sample. This was item 403.1 on the Transfer List. Could you take a look inside Bag 403 (currently in Bag D) and check for us?

4. If you create space from consolidation of food or clothing, below is a list of priorities. You have a go to pack this list based on the amount of space you have available. Once you have used all available space, the remaining items should be left on ISS.

   Food Lockers:
   a. Three food lockers have launched empty and already have items designated to return there (MF14K, MF14M, and MF14O).
   b. If one additional Food Locker is available, please stow Item 408 there (you reported that this item is currently in MF14M based on a previous Transfer Brief).

Clothing Trays:

c. Verify item 413 contents fit inside the fresh food trays (MF14E/G). If not, they should be stowed in the first available Clothing Tray before stowing candidate items below.
d. Clothing Trays #1 & #2: Item 733
e. Clothing Tray #3: Item 743
f. Clothing Trays #4 & #5: Item 734

The Transfer List Excel file, FD09_Transfer_List_STS133.xls, is located on the KFX machine in **C:\OCA-up\transfer** (and available via the **PGSC homepage**).

For ISS, the Transfer List Excel file, FD09_Transfer_List_STS133.xls, is located in **K:\OCA-up\transfer**.

Change Pages
Please incorporate changes as follows:

In the Transfer List **RETURN** tab
Replace the following pages:
Return – 14, 17

Change Page Details (FYI)

- Item 744.1 – We have identified one additional tape for return.
- Item 907 – Four brackets need to return on ULF5 to use for the ULF7 MPLM.
- Item 908 – Though not needed to pad the MELFI EU, these CTBs are needed for launch on future missions.

Have a great day & please call us if you have questions!

- The ULF5 Transfer Team

ULF5 Transfer Choreography

FD10 (PMM Outfitting)

- Transfer returning RSP fences per Fence Removal activities (Items 903 & 904)

FD11 (ISS Hatch Close)

- Drew & Bowen: Transfer EVA h/w per EVA RECONFIG & XFER (Items 701, 718, 719 & 720)
- 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)
- Nespoli: Transfer samples per IMMN-SALIVA & BLOOD-STOW (Items 729 & 730)
- Kelly & Coleman: Transfer Coldbags per DCB-BAG-TRANSFER (Items 712, 714, 715 & 716)

- XFER OPS:
    - Transfer D3s camera (Item 59)
    - Transfer Return to Houston P/TV tapes (Items 744 & 744.1)
    - Transfer 5 MLE bags to shuttle (Items 702, 703, 704, 705 & 706)
    - Complete all transfer!

LiOH O-ring:

Thanks for all the great work and words on the LiOH O-ring. We know you have bagged and tagged it but would like to make sure it is stowed in EMU Servicing Kit 5004. This is the one that is coming home and should be in the EVA Systems Transfer Bag.

EHIP/ERCA Disconnection on Al's Suit:

1. Please verify that Al had EHIP s/n 1006 with ERCA 20.

2. Please inspect and photograph the following:

- EHIP latch assembly to ensure latch buttons are functioning properly
- MLI around EHIP latch area for potential damage or fraying
- Helmet bracket for potential damage
- Power connectors for damage due to loading
    - ERCA 20
    - SEMU 3008 REBA Power Harness (end that connects to ERCA)
    - SEMU 3008 REBA Power Harness (end that connects to REBA)
    - REBA 1012

3. Please report answers and anything off nominal to **MCC**. Depending on your words from the inspection, we may want to bring this EHIP home instead of EHIP s/n 1011.

MSG 065 (26-0946) - TABLE FOR ULF5 DESCENT SAMPLE TRANSFER FROM MELFI TO GLACIER

Step	***From MELFI Location****		***Description***
1	MELFI-1	3-B-1	Install Icepac belt -32˚C on bottom
2	MELFI-1	1-D-3,4	Insert JAXA Myco Kits (all) and JAXA Microbe-II (all)
3	MELFI-1	2-B-3,4	Insert HRP Blood/Urine mesh bags (all)
4	MELFI-1	2-D-3,4	Insert HRP Blood mesh bag (all), and ESA SOLO (all)
5	MELFI-1	3-A-3	Insert HRP Blood/Urine mesh bags (all)
6	MELFI-1	3-C-2,3	Insert only the JAXA Myco Kits (2). ***Leave HRP mesh bags in this location***
7	MELFI-1	3-B-2	Install Icepac belt -32˚C on top
* Dewar-Tray-Tray Section (3-A-1 = Dewar 3, Tray A, Tray Section 1)			

PMM Reconfig Activities for FD9

Scott, Cady, Paolo, Steve L, Eric, Al, Steve B, Mike & Nicole,
Welcome to PMM Reconfig Day Two!! Cady, Steve and Eric got the reconfig off to a great start. This will be a very busy day with back to back activities. This message gives you the list of today's activities. This message provides all the information that you need to execute stowage moves. In some cases, they are simple one line steps...in other cases we have provided a table for multiple cargo moves. The message also references the OSO procedures that you will execute in conjunction with the stowage moves for a complete view of the PMM reconfig plan for today. Don't forget, there are also stow notes that accompany the OSO procedures. In general we tried to schedule the tasks so that one rack bay is dealt with in its entirety. However, due to tool constraints and worksites, there is some mixing of tasks and people going on. To help with any confusion we made two updates to this message format.

1) We grouped the tasks by rack bay location so that you see the complete order of tasks associated with one rack bay.
2) We added the names of the crewmembers timelined for the individual activities.
3) OSTPV and the Shuttle Timeline have the choreography for when to perform these tasks so you don't step on each other's toes. Please refer to them for the tasks throughout the day.

Some foam trash can be stowed directly in HTV. The restow notes will direct you to the final locations. However, we don't expect the Shuttle guys to be familiar with the HTV2 location coding. Please ask Cady, Scott or Paolo for help when restowing in HTV2. ISS crew – you can reference message 26-0831A: HTV2 Trash Maps for the newest color coded maps and message 26-0908: HTV2 Trash Loading for RSP Piece Parts (Part 8) for the list detailing which pieces can be trashed directly in HTV2 at this time.

For some activities you will be removing knee braces and FSE brackets. Some FSE brackets are going to be returned, the rest can be collected in a JSB which you can stage at PMM1F4. Please label that JSB "Trash #16". We'll deal with the JSB after all RSPs are dismantled. The restow notes will give you all the needed details.

Cady: For many of the PMM activities, two crew will be using the same tools at the same time for different tasks. In order to prevent a tool conflict, we have found at least two sets of each tool for those activities. Therefore, you will need to watch the stowage notes early in the day to find the duplicate sets. We did not want the Shuttle crew looking for the alternate tools, so we made sure that the shuttle crew can just work out of the ISS Toolbox all day. We think the best approach is to gather your tools for the tasks and keep them all together in the PMM for the day. Keep in mind that FD10 may be more of the same, so you can leave all of those tools together in the PMM.

Please report as major activities are complete so we can gauge how good our time estimates were. This will help with planning future days. If you run into any issues, please let us know and try to move on to another task if possible. We've tried to build some gray space into the plan to account for unplanned issues.

Your ISO and OSO teams

Today's activities:

1) **LAB1O5 Cleanout (Scott, Cady & Steve L)**
   a. This is just a major relocation of a rack bays worth of cargo. Nothing special here except the notes about how to stage in the endcone so that it's easier to retrieve the bags later for restow. Relocate cargo per Table A.

Table A: LAB1O5 cargo

✓	Ref #	Current Location	Item	S/N	B/C	Qty	Notes	New Location
	1a	LAB1O5	1.0 CTB: TEPC Hardware	1064	003866J	1	Unpack per 1b.	NOD3A2
	1b		CUSHION, TEPC ASSY	N/A	N/A	1		HTV2 endcone
	2		1.0 CTB: PCS Hardware	1144	004138J	1	Add purple label with "Restow in TBD later". Put in back layer.	PMM Endcone
	3		3.0 CTB: Mixed Stuff Bag	1046	004231J	1	Add purple label with "Restow in PMM1A3". Put in front layer.	PMM Endcone
	4		3.0 CTB: LHA/WIF Extender	1057	004242J	1	Add purple label with "Unpack in PMM later". Put in back layer.	PMM Endcone
	5		3.0 CTB: 1/2 Box #1	1078	006735J	1	Add purple label with "Restow in PMM1F3". Put in front layer.	PMM Endcone
	6		3.0 CTB: LiOH #32 - #40	1082	006739J	1	Add purple label with "Unpack in PMM later". Put in back layer.	PMM Endcone

✓	Ref #	Current Location	Item	S/N	B/C	Qty	Notes	New Location
	7		3.0 CTB: 1/2 Box #2	1083	006740J	1	Add purple label with "Restow in PMM1F3". Put in front layer.	PMM Endcone
	8		M-02 Bag: VTR/OOR/Food	1013	004380J	1	Add purple label with "Restow in PMM1A3". Put in front layer.	PMM Endcone
	9		M-02 Bag: Bacteria Filter/Gas Separator ORU/EVA ORU Bag	1020	004401J	1	Add purple label with "Unpack in PMM later". Put in back layer.	PMM Endcone
	10		M-02 Bag: Particulate Filter ORU	1027	004393J	1	Add purple label with "Restow in PMM1A2". Put in front layer.	PMM Endcone
	11		M-02 Bag: Crew Provisions/Gas Separator ORU/Bonus Food	1041	003026J	1	Add purple label with "Unpack in PMM later". Put in back layer.	PMM Endcone
	12		Foam Pack for NCPS & 2 Flex Hoses	01	00127881K	1	Add purple label with "Restow in PMM1F3". Put in front layer.	PMM Endcone
	13		MELFI Extractor Bag	01	MEFEB001J	1	Add purple label with "Restow in PMM1F3". Put in front layer.	PMM Endcone

2) **PMM1P2 ZSR Tasks (Cady w/ some help from Steve B for the ZSR move)**
   a. **PMM1PF2 Bracket Install:** Perform Uplinked Procedures; US SODF: IFM; 26-0770 (MSG 066) 9.5.101 PMM Standoff Bracket Installation; Steps 4-5 Install Type C Bracket at PMM1PF2. Reference Stow Note.
   b. **PMM1PF2 Pivot Fitting Install:** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Step 1. Install Pivot Fittings at PMM1PF2 at base of P2 rack. Reference Stow Note.
   c. **PMM1P2 ZSR Transfer:** Perform Uplinked Procedures; US SODF: IFM; 26-0774 (MSG 067) 9.5.107 ZSR Transfer From PMM1S3 To PMM1P2, steps 1-2, 4. Reference Stow Note.
   d. **PMM1P2 ZSR Deploy:** Perform Uplinked Procedures; US SODF: IFM; 26-0774 (MSG 067) 9.5.107 ZSR Transfer from PMM1S3 to PMM1P2, step 8, then step 5
   e. **PMM1P2 ZSR Zip Tie:** Perform Uplinked Procedures; US SODF: IFM; 26-0774 (MSG 067) 9.5.107 ZSR Transfer From PMM1S3 To PMM1P2, steps 6-7, 9.

3) **PMM1A1 Tasks (Eric, Cady, Paolo)**
   a. **PMM1SA1 Bracket Install (Eric):** Perform Uplinked Procedures; US SODF: IFM; 26-0770 (MSG 066) 9.5.101 PMM Standoff Bracket Installation; Steps 2, 3, 5 Install Type A, B Brackets at PMM1SA1. Reference Stow Note.
   b. **PMM1SA1 Pivot Fitting Install (Cady):** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Step 1. Install Pivot Fittings at PMM1SA1 at base of A1 rack. Reference Stow Note.
   c. **PMM1A1 Restraint Removal (Paolo):** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Step 4. Reference Stow Note.
   d. **PMM1A1 Rack Rotate Down (Paolo):** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Steps 5-6. In Step 6.2 rotate PMM1A1 RSP down to a controlled stop.
   e. **PMM1A1 Stwg Relocate (Paolo):** Perform stowage moves per Table B.

Table B: PMM1A1 Cargo

Current Location	Item	Final Location	Notes
PMM1A1_AFT	M-01 Bag (MELFI)	PMM Endcone	Add purple label with “Restow in PMM1F3”. Put in front layer.
	M-02 Bag (Particulate Filter)	PMM Endcone	Add purple label with “Restow in PMM1A2”. Put in front layer.

f. **PMM1A1 Rack Rotate Up (Paolo):** Perform US SODF; Struc and Mech - Structures and Mechanisms: 1. Nominal: 1.2 Rack; (MSG 074) 1.262 RSP/RSR Rotate Up, steps 1.2-1.3, 3

4) **PMM1A4 Rack Activities (Steve B)**
   a. **PMM1AS4 Bracket Install:** Perform Uplinked Procedures; US SODF: IFM; 26-0770 (MSG 066) 9.5.101 PMM Standoff Bracket Installation; Steps 2-3, 5. Install Type A and Type B Bracket at PMM1AS4. Reference Stow Note.
   b. **PMM1A4 Pivot Install:** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Step 1. Install Pivot Fittings at PMM1AS4 at base of A4 rack. Reference Stow Note.
   c. **PMM1A4 Launch Restraint Removal:** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Step 4. Reference Stow Note.
   d. **PMM1A4 Rack Rotate Down:** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Steps 3, 5-6. Start after ER8 is XFER out of PMM
   e. **Relocate M-01 (RFTA) to PMM Endcone**. Add a purple label with “Consolidate later and restow in PMM1A3”.
   f. **PMM1A4 Strut Removal:** Perform Uplinked Procedures; US SODF: IFM; 26-0772 (MSG 043) 9.5.103 Resupply Stowage Platform (RSP) Dismantle; Steps 4.2, 5.2. Temporarily remove RSP Side Struts and Rear Tube Struts Reference Stow Note.
   g. **PMM1A4 Fence Folding:** Fold PMM1A4 Rack MO1, MO2 Rear Fences down.
   h. **Relocate M-03 (Treadmill)** with M-03 fence around the M-bag to PMM1A4. Relocate CCAA Heat exchanger (with FSE) to PMM1A4. You may need to turn the CCAA heat exchanger sideways when stowing.
   i. **Tape Struts to RSP**…these will be reinstalled when the RSP is disposed in HTV2 later.
   j. **PMM1A4 Rack Rotate Up:** Perform US SODF; Struc and Mech - Structures and Mechanisms: 1. Nominal: 1.2 Rack; (MSG 074) 1.262 RSP/RSR Rotate Up, steps 1.2-1.3, 3

5) **LAB1P4 ZSR Transfer (Al and Mike)**
   a. There are CTBs currently located behind the LAB1P4 ZSR. Those CTBs may be in the back pocket or loose behind the rack. Regardless, those CTBs need to transfer with the ZSR and be restowed behind the ZSR in the LAB1O5 location.
   b. Perform Uplinked Procedures; US SODF: IFM; 26-0608 (MSG 068) 9.5.113 ZSR Rack Transfer LAB1P4 to LAB1O5. Reference Stow Note.

6) **ER8 Rack Transfer (Al and Mike):** Perform Uplinked Procedures; US SODF: Assembly Ops; 26-0777 (MSG 069) 2.100 EXPRESS RACK 8 TRANSFER FROM PMM TO LAB. Reference Stow Note.

7) **PMM1S3 Rack Activities (Al, Mike, Paolo & Nicole)**
   a. **PMM1SA3 Bracket Install (Mike):** Perform Uplinked Procedures; US SODF: IFM; 26-0770 (MSG 066) 9.5.101 PMM Standoff Bracket Installation; Steps 4-5. Install Type C Bracket at PMM1SA3. Reference Stow Note.
   b. **PMM1FS3 Bracket Install (Al):** Uplinked Procedures; US SODF: IFM; 26-0770 (MSG 066) 9.5.101 PMM Standoff Bracket Installation; Steps 3-5. Install Type B and Type C Brackets at PMM1FS3. Reference Stow Note.
   c. **PMM1SA3 K-bar Install (Mike):** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Step 2, 10. Install K-BAR Capture Fitting at PMM1SA3 at top of S3 rack.
   d. **PMM1S3 Pivot Fitting Install (Al):** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Step 1. Install Pivot Fittings at PMM1FS3 at base of S3 Rack. Reference Stow Note.
   e. **PMM1S3 Knee Brace Removal (Paolo):** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Step 8.
   f. **PMM1S4 to S3 ZSR Transfer (Al & Mike):** Perform Uplinked Procedures; US SODF: IFM; 26-0775 (MSG 070) 9.5.108 ZSR Transfer from PMM1S4 to PMM1S3; Steps 1-4, 6.
   g. **PMM1S3 ZSR Deploy (Nicole):** Perform Uplinked Procedures; US SODF: IFM; 26-0775 (MSG 070) 9.5.108 ZSR Transfer From PMM1S4 To PMM1S3, step 5-end.
   h. **PMM1SA3 Pivot Fitting Install (Nicole):** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Step 1. Install Pivot Fittings at PMM1SA3 at base of A3 Rack.

8) **PMM1FS1 Bracket Install (Nicole):** Perform Uplinked Procedures; US SODF: IFM; 26-0770 (MSG 066) 9.5.101 PMM Standoff Bracket Installation; Steps 2,3,5. Install Type A, B Brackets at PMM1FS1.

9) **PMM1A2 Rack activities (Paolo)**
   a. **PMM1SA2 Pivot Install:** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Step 1. Install Pivot Fittings at PMM1SA2 at base of A2 Rack. Reference Stow Note.
   b. **PMM1A2 Lower Restraint Removal:** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Step 4. Reference Stow Note.
   c. **PMM1A2 Rack Rotate Down:** Perform Uplinked Procedures; US SODF: IFM; 26-0771 (MSG 044) 9.5.102 PMM Rack Hardware Installation; Steps 5-6. In Step 6.2 rotate PMM1A2 RSP down to a controlled stop.
   d. **Perform stowage moves per Table C.**

Table C: PMM1A2 cargo

Current Location	Item	Final Location	Notes
PMM1A2_AFT	M-01 Bag (RFTA)	PMM Endcone	Add purple label with “Restow in PMM1A3”. Put in front layer.
	M-02 Bag (FPMU)	PMM Endcone	Add purple label with “Restow in PMM1A2”. Put in front layer.

   e. **PMM1A2 Rack Rotate Up:** Perform US SODF; Struc and Mech - Structures and Mechanisms: 1. Nominal: 1.2 Rack; (MSG 074) 1.262 RSP/RSR Rotate Up, steps 1.2-1.3, 3

10) **PMM1F3 Activities (Steve L, Eric and Nicole)**

a. Perform stowage moves per Table D. (Steve L & Eric)

Table D: PMM1F3 ISP Contents

✓	Ref #	Current Location	Item	S/N	B/C	Qty	Notes	New Location
	1a	PMM1F3	3.0 CTB: MSL Gas Supply	1076	004261J	1	Unpack gas supply only. Leave all foam cushions in the 3.0 CTB.	HTV Endcone, in front of Beta Cloth
	1b		MSL Gas Supply	001	00084589M	1		PMM1P2_C1
	2a	PMM1F3	Water Storage ORU foam clamshell	N/A	N/A	1	Two piece foam clamshell. Add brown label with "HTV2 Trash Item #1303.2". This foam will be disposed on the RSPs in HTV2.	PMM endcone
	2b		Water Storage ORU	00002	00130085J	1		PMM1P2_D
	3a	PMM1F3	WRS Wastewater Storage Tank Assembly Foam (Clamshell)	N/A	N/A	1	Two piece foam clamshell. Add brown label with "HTV2 Trash Item #1304.2". This foam will be disposed on the RSPs in HTV2.	PMM endcone
	3b		WRS Wastewater Storage Tank Assembly	004	WRMWSTA4M	1		PMM1P2_D
	4	PMM1F3	ISP Filler foam	N/A	N/A			HTV Endcone, in front of Beta Cloth

b. PMM1F3 ISP Removal (Steve L and Eric): Perform US SODF; Struc and Mech: 1. Nominal: 1.2 Rack; (MSG 071) 1.248 INTEGRATED STOWAGE PLATFORM (ISP) REMOVAL; Steps 2-end.

c. Temp stow ISP in PMM Endcone. Add a brown label with "HTV2 Trash Item #1202".

d. MELFI Stwg Shuffle (Nicole): Perform stowage moves per Table E to get MELFI items ready for restow in the empty rack bay (after ISP removal).

Table E: M-01 bag MELFI Stwg Shuffle

✓	Ref #	Current Location	Item	S/N	B/C	Qty	Notes	New Location
	1a	**PMM Endcone**	M-01 Bag (MELFI)	1009	004363J	1	Leave MELFI items in the M-01 bag.	PMM1F3
	1b		0.5 CTB: FCF IPSU	1095	006544J	1		COL1O4_E2
	1c		Foam Cushions	N/A	N/A	5		PMM endcone
	1d		VO2max Resupply Kit	1002	HRF10904J	1		LAB1O5_G
	2	**PMM Endcone**	Foam Pack for NCPS & 2 Flex Hoses	01	00127881K	1	Remove purple label.	M-01 Bag S/N 1009 at PMM1F3
	3		MELFI Extractor Bag	01	MEFEB001J	1	Remove purple label.	

34

e. PMM1F3 Stwg Reconfig (Nicole): Perform stowage moves per Table F to finish packing the PMM1F3 rack bay (after ISP removal).

Table F: PMM1F3 Stowage Config

✓	Ref #	Current Location	Item	S/N	B/C	Qty	Notes	New Location
	1	**PMM Endcone**	3.0 CTB: 1/2 Box #1	1078	006735J	**1**		PMM1F3
	2		3.0 CTB: 1/2 Box #2	1083	006740J	**1**		
	3	**JPM1A5_E2**	MSL Furnace Launch Support Structure	01	00084490M	**1**		

11) **PMM1P3 Activities (Steve L & Eric)**

a. Perform stowage moves per Table G to clear the ISP before ISP removal.

Table G: PMM1P3 ISP Contents

✓	Ref #	Current Location	Item	S/N	B/C	Qty	Notes	New Location
	1a	**PMM1P3**	3.0 CTB: PDGF/IPU/RET	1054	004239J	1	Unpack hardware only. Leave all foam cushions in the 3.0 CTB.	HTV Endcone, in front of Beta Cloth
	1b		PDGF Adapter	201	00131102J	1	For ULF6 EVA	A/L in mesh bag for pre-ULF6
	1c		IPU Power Supply	1002	IPUIPSM2N	1		JPM1O2_A1 3.0 CTB S/N 0004
	1d		Eq Hk RET w/Pip Pin	4392 4393 4394 4395 4396	N/A	5		A/L tether staging area
	1e		Lg-Eq RET	4414 4415 4416 4417 4418 4419 4420 4421	N/A	8		
	1f		Eq Hk RET	4408 4409 4410 4411 4412	N/A	5		
	1g		J601/602 Grounding Cap	201 202	N/A	2	For ULF6 EVA	A/L in mesh bag for pre-ULF6

✓	Ref #	Current Location	Item	S/N	B/C	Qty	Notes	New Location
	2	**PMM1P3**	V-GUIDE Clamshell	N/A	N/A	1	Add brown label to cushion with "HTV2 Trash Item #1702". Temp stow in endcone…after ISP is removed, V-guides in clamshell will be restowed in this rack bay.	PMM Endcone

b. **PMM1P3 ISP Removal (Steve L and Eric):** Perform US SODF; Struc and Mech: 1. Nominal: 1.2 Rack; (MSG 071) 1.248 INTEGRATED STOWAGE PLATFORM (ISP) REMOVAL; Steps 2-end.
c. **Temp stow ISP in PMM Endcone**. Add a brown label with "HTV2 Trash Item #1203."
d. **Restow V-guides in clamshell at PMM1P3.**

MSG 073 - WATER OPS CUE CARD

CWC-I FILLS

INIT ← Fill Duration ~10 minutes → TERM

	CWC-I Fill No.	CWC Initial Location	Record S/N Used	Disinfect QDs	Report CWC-I S/N To MCC	TERM at MET:	Cap R-Y Hose	Verify Label In Windows	Sample Ref: Kit Table	Transfer To:
☐	9	NOD2D2 2.0 CTB S/N 1126 ☐ 2064 ☐ 2081 ☐ 2085 ☐ 2087 ☐ 2089 ☐ 2092 ☐ 2093 ☐ 2094		☐	☐		☐	☐ Purple		☐	JLP1A1 3.0 CTBs Report serial number of CTB used to MCC
☐	10			☐	☐		☐	☐ Purple		☐	
☐	11			☐	☐		☐	☐ Purple		☐	
☐	12			☐	☐		☐	☐ Purple		☐	
☐	13			☐	☐		☐	☐ Purple		☐	
☐	14			☐	☐		☐	☐ Purple		☐	
☐	15			☐	☐		☐	☐ Purple	☐ S/N 1004 (Notes A & D)	☐	
☐	16 (Note D)			☐	☐		☐	☐ Purple		☐	

CWC-I Fill Notes:

A. Stow filled purge and sample bags in MF14E.

B. Rough handling may cause leakage.

C. CWC-Is pregathered at NOD2D2. Some CWC-Is may still contain residual water.
Prior to filling, report if CWC-I has a significant amount of residuals.

D. CWC-I Fill 16 will only be completed if water available.
Only the last CWC-I Fill (#15 or 16) will be sampled. MCC will provide this information.

Hardware Table

Item	S/N	Initial Location	Undock Location
Sample/Purge Kit	1004	Middeck Floor (Port 2, Bag B)	NOD2D2 M-02 Bag S/N 1026
Iondinated Sample Adapter (black handle)	1019	MF71M (Ziploc labled "CWC-I Sample Adapter")	MF71M (Ziploc labled "CWC-I Sample Adapter")

STS-133/ULF5

END OF PAGE 1 OF 1, MSG 073