



STS-133/ULF5

FD 13 Execute Package

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105	17 - 18	Entry Day Fluid Loading and Anti-G Suit Ops
106	---	FD13 PAO Event Summary - ABC News / CBS News / Associated Press - Electronic Only
107	---	Landing Weather Forecast - Electronic Only

Approved by FAO:

Crystal Hyde *Crystal H Hyde*

Last Updated: Mar 8 2011 7:02 AM GMT

JEDI (Joint **E**xecute package **D**evelopment and **I**ntegration), v3.0



As the Orbit 3 FAO completes his first flight as a certified FAO, he ascends his mighty mount, Princess Mystic Buttercup, to prance off for some well deserved relaxation and pampering.

MSG 103A - FD13 FLIGHT PLAN REVISION

1 MSG INDEX

2

3 <u>MSG NO.</u>	<u>TITLE</u>
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5 104	FD13 Mission Summary
6 105	Entry Day Fluid Loading and Anti-G Suit Ops
7 106	FD13 PAO Event Summary - ABC News / CBS News / Associated Press
8 107	Landing Weather Forecast

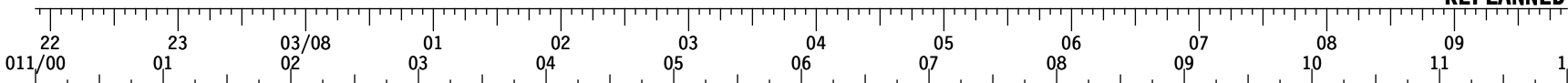
9

- 10 1. **STS-133/ULF5 FD12- MMT Summary** - The MMT met briefly during the Port Wing
11 survey to review the orbiter systems and mission progress. Congrats to Eric on the
12 flyaround. It produced some awesome views. Discovery continues to perform flawlessly
13 and the teams are working no issues. The Late Inspection evaluation is scheduled to be
14 completed ~ 14:30 CST (MET ~ 11/22:30). We will get the info to you guys as soon as
15 we hear it. Enjoy EOM-1.
16
- 17 2. **Last Mail Sync** - Prior to Ku Stow this afternoon, we will downlink your Outlook Personal
18 Folders so that you may have them when you return to Houston. Please move any
19 messages that you would like to keep from your INBOX, SENT ITEMS, and UPLINKED
20 BY CAPCOM folders to your Personal Folder before MET 11/22:00. We will also perform
21 one final mail sync at that time to deliver any last minute messages you want to send.
22 We will not lock you out of your e-mail after this final mail sync so that you can still read
23 your e-mail, but anything you change or write will be lost.
24
- 25 3. **WLES Deactivation** - You are GO for WLES DEACTIVATION AND TEARDOWN (ORB
26 OPS, WLE SENSORS) at anytime.
27
- 28 4. **Combo Dump Details** - Today you will be performing a waste water dump followed by a
29 condensate CWC dump. It will be crew choice to perform the dump procedures through
30 to completion or to dovetail the dump procedures together per the instructions below. In
31 either case, perform the equipment pregather prior to executing the dump procedures.
32
- 33 a. Pregather Equipment - Prior to starting the dumps, pregather the following
34 equipment for use during the CWC dump:
35 i. Middeck: Condensate CWC s/n 5105 and 8' Y-Y hose, which were temp
36 stowed FD12.
37 ii. Waste Water Dump (WWD) Filter from the BOB locker (MF28H).
38
- 39 b. Waste Water Dump - Perform a waste water dump using SUPPLY/WASTE
40 WATER DUMP (ORB OPS, ECLS) pg. 5-3 steps B, E, G and I. MCC will TMBU
41 FDA in step B. In step I, work steps 1 and 2 only, then proceed to the CWC
42 dump.
43 Waste dump valve open time will be ~25 minutes. Dump the waste tank to 5%.
44
- 45 c. CWC Dump - After performing waste water dump step I-2, perform CWC
46 OVERBOARD DUMP (ORB OPS, ECLS) pg. 5-39. Perform steps A and D
47 through H. MCC-H will TMBU FDA in step H.
48 Waste dump valve open time for CWC s/n 5105 will be ~15 minutes.
49 Stow CWC s/n 5105 in MF71M.
50 Stow the WWD Filter in a ziplock bag and return it to the BOB locker (MF28H).
51 Stow the 8' Y-Y hose in a separate ziplock bag and return it to the CHCK.
52
- 53 5. Replace pages 2-44 through 2-46 and 3-138 through 3-147.

REPLANNED

GMT 03/07/11 (066)

MET Day 011



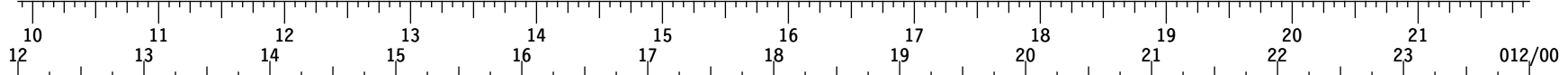
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		22	23	03/08	01	02	03	04	05	06	07	08	09	10	11	12
STS-133	FD12 CDR LINDSEY	PRE SLEEP	PMC A/G	PRE SLEEP	SLEEP										POST SLEEP	
	PLT BOE	PRE SLEEP			SLEEP										LOG POST SLEEP	
	MS1 DREW	PRE SLEEP			SLEEP										LOG POST SLEEP	
	MS2 BOWEN	LDRI DOWNLINK	PRE SLEEP			SLEEP										POST SLEEP
	MS3 BARRATT	PRE SLEEP	O C A @	PRE SLEEP		SLEEP										LOG POST SLEEP
	MS4 STOTT	PRE SLEEP			SLEEP										POST SLEEP	
STS	DAY/NIGHT ORBIT	[Night/Orbit Cycle]														
	TDRS W E Z	[TDRS Activity]														
ISS	TDRS AVAIL	[TDRS Availability]														
	ORB ATT	@RATE RECONFIG -ZLV -XVV														
NOTES																

REPLANNED

GMT 03/08/11 (067)

MET Day 011



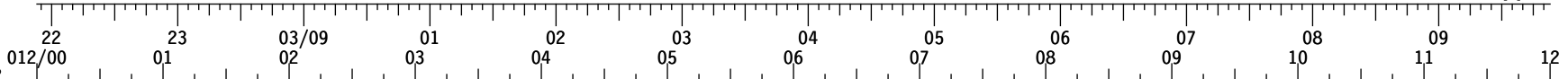
STS-133	CDR LINDSEY	FD13	POST SLEEP	FCS C/O	RFI SRC HOT	RAMBO RCS BURN	-ZLV -XVV	PILOT OPS	CABIN STOW	D/O BRIEF	MEAL	PAO EVENT	CABIN STOW	MLA L-1 COMM CK	EXERCISE	DFR L-1 COMM CK	OA OMS BURN	-ZLV -XVV	COMM 2	SD SE VACT	ENTR V%#	KU STOW	PRE SLEEP	
	PLT BOE		POST SLEEP	FCS C/O	RFI SRC HOT	RAMBO RCS BURN		PILOT OPS	EXERCISE	D/O BRIEF	MEAL	PAO EVENT	MD NUM V R P	W I A N S I T T E	W T A S R T M E	C I O N I N D T	C T O E N R D M	-ZLV -XVV	OA OMS BURN			CABIN STOW	KU STOW	PRE SLEEP
	MS1 DREW		POST SLEEP		FELT STOW			EXERCISE	CABIN STOW	D/O BRIEF	MEAL	PAO EVENT	FELT STOW		CABIN STOW	FELT STOW		CABIN STOW	FELT STOW			CABIN STOW		PRE SLEEP
	MS2 BOWEN		POST SLEEP	FCS C/O P/TV	POST SLEEP			CABIN STOW		D/O BRIEF	MEAL	PAO EVENT		EXERCISE				CABIN STOW						PRE SLEEP
	MS3 BARRATT		FILTER CLEANING	POST SLEEP		M D K K #	A E M @	CABIN STOW	EXERCISE	CABIN STOW	D/O BRIEF	MEAL	PAO EVENT	T D R / I L B U T E			CABIN STOW	ERG STOW				CABIN STOW	W D L E A S C T	M P S D R L E E P
	MS4 STOTT		POST SLEEP	FCS C/O	RFI SRC HOT			CABIN STOW	PILOT OPS	CABIN STOW	P S A E O T U P	D/O BRIEF	MEAL	PAO EVENT	CABIN STOW	E V S N I E T D R E U Y O P	EXERCISE	CABIN STOW	ERG STOW				CABIN STOW	PRE SLEEP

DAY/NIGHT																							
ORBIT	182	183	184	185	186	187	188	189	190														
TDRS	W																						
ORB ATT		-ZLV -XVV	RAMBO		-ZLV -XVV		-MLA	BIAS -ZLV -YVV									OA					-ZLV -XVV	
GND																							
NOTES	*HEATER ACT \$RATE DECONFIG		@STATUS CHECK #STATUS CHECK ^RAMBO WINDOW OPEN			*HTR RECONFIG			@RATE RECONFIG			%COOLING CNFG @POWER ON #STATUS CHECK											

REPLANNED

GMT 03/08/11 (067)

MET Day 012

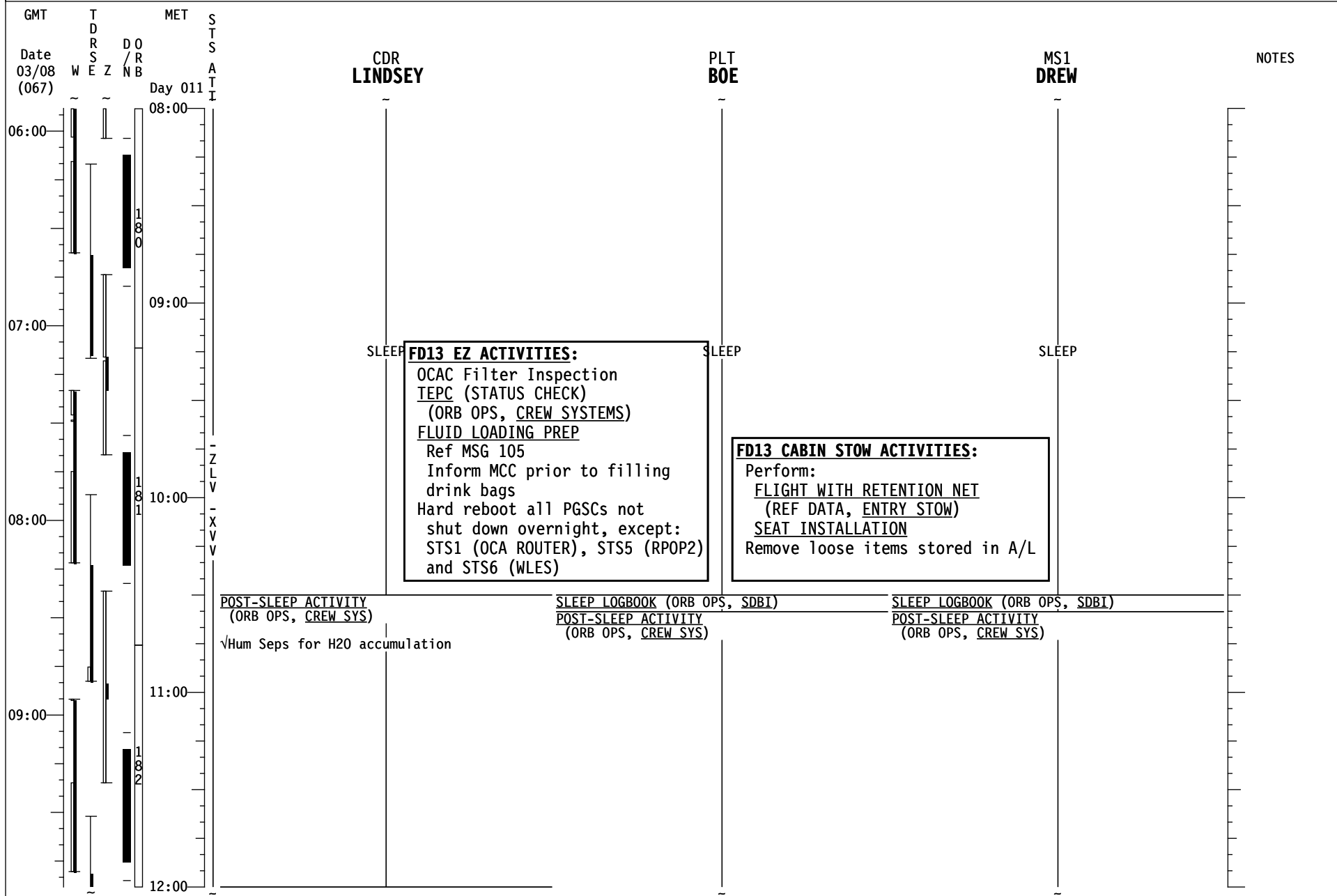


S T S - 1 3 3	FD13	P S R L E E P P M C A / G	PRE SLEEP	SLEEP	POST SLEEP
	CDR LINDSEY		PRE SLEEP	SLEEP	POST SLEEP
	PLT BOE		PRE SLEEP	SLEEP	LOG POST SLEEP
	MS1 DREW		PRE SLEEP	SLEEP	LOG POST SLEEP
	MS2 BOWEN		PRE SLEEP	SLEEP	POST SLEEP
	MS3 BARRATT		PRE SLEEP	SLEEP	LOG POST SLEEP
MS4 STOTT	PRE SLEEP	SLEEP	POST SLEEP		
DAY/NIGHT			[Shaded bars indicating day/night cycle]		
ORBIT			[Timeline from 190 to 198]		
TDRS		W E Z	[Horizontal bars representing TDRS events]		
ORB ATT			[Timeline from 190 to 198]		
GND			-DFR -DFR -DFR -DFR -DFR -MLA -MLA -MLA -WSS -WSS		
NOTES					

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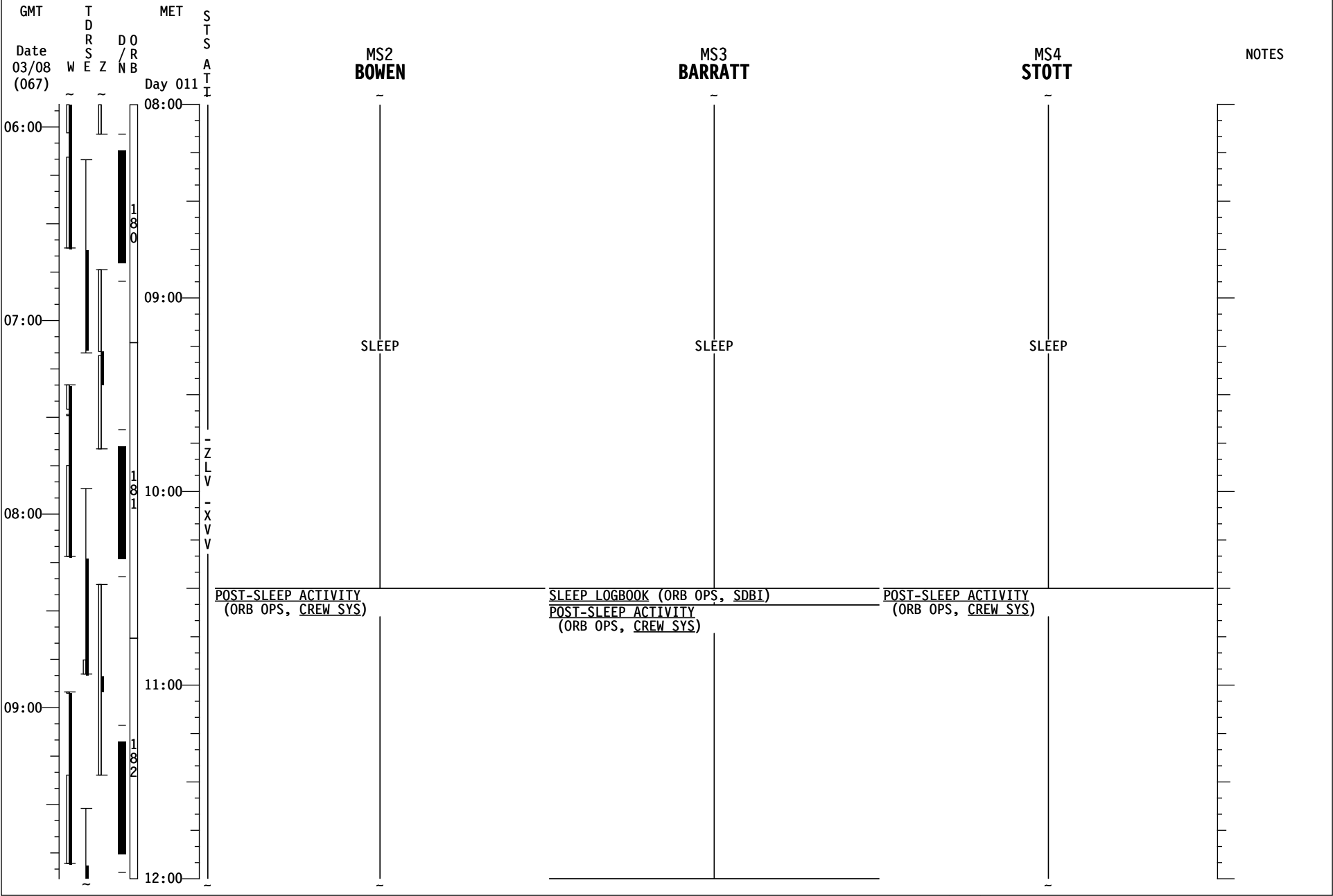
STS-133 FD (13)

REPLANNED



STS-133 FD (13)

REPLANNED



STS-133 FD (13)

REPLANNED

GMT	TDRSEZ	MET	SATS	CDR LINDSEY	PLT BOE	MS1 DREW	NOTES
Date 03/08 (067)	W E Z	Day 011	AT I				
10:00				W/B STEAM VENT HTR ACT R2 ✓BLR CNTLR/HTR(three) -B PWR (three) -ON POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
				FCS CHECKOUT (ORB OPS, GNC)	FCS CHECKOUT (ORB OPS, GNC)		
11:00			ZLV				
			XVV				
							L1 FLASH EVAP CNTLR PRI A - OFF
				RCS HOT FIRE TEST (ORB OPS, RCS) In Step 6, do not reconfig to Flight Plan DAP	RCS HOT FIRE TEST (ORB OPS, RCS) In Step 6, do not reconfig to Flight Plan DAP		
12:00				I'CNCT TK SWITCH [A] STS-133 RAMBO-2 PROCEDURE Ref. MSG 101	STS-133 RAMBO-2 PROCEDURE Ref. MSG 101		
				[A] From R to L OMS FEED (OPCL, RCS)			CABIN CONFIG/STOW
				< RAMBO WINDOW OPEN (14:30)			
				MNVR (TRK) -ZLV -XVV TG=2 BV=3 OM=0 A1/AUTO/VERN Init TRK			On MCC GO: L1 FLASH EVAP CNTLR PRI A - ON
13:00				PILOT WITH RHC (FOR A31p PGSC) (ORB OPS, PGSC)	PILOT WITH RHC (FOR A31p PGSC) (ORB OPS, PGSC)		
			ZLV				EXERCISE
			XVV				
16:00				CABIN CONFIG/STOW			CABIN CONFIG/STOW

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STS-133 FD (13)

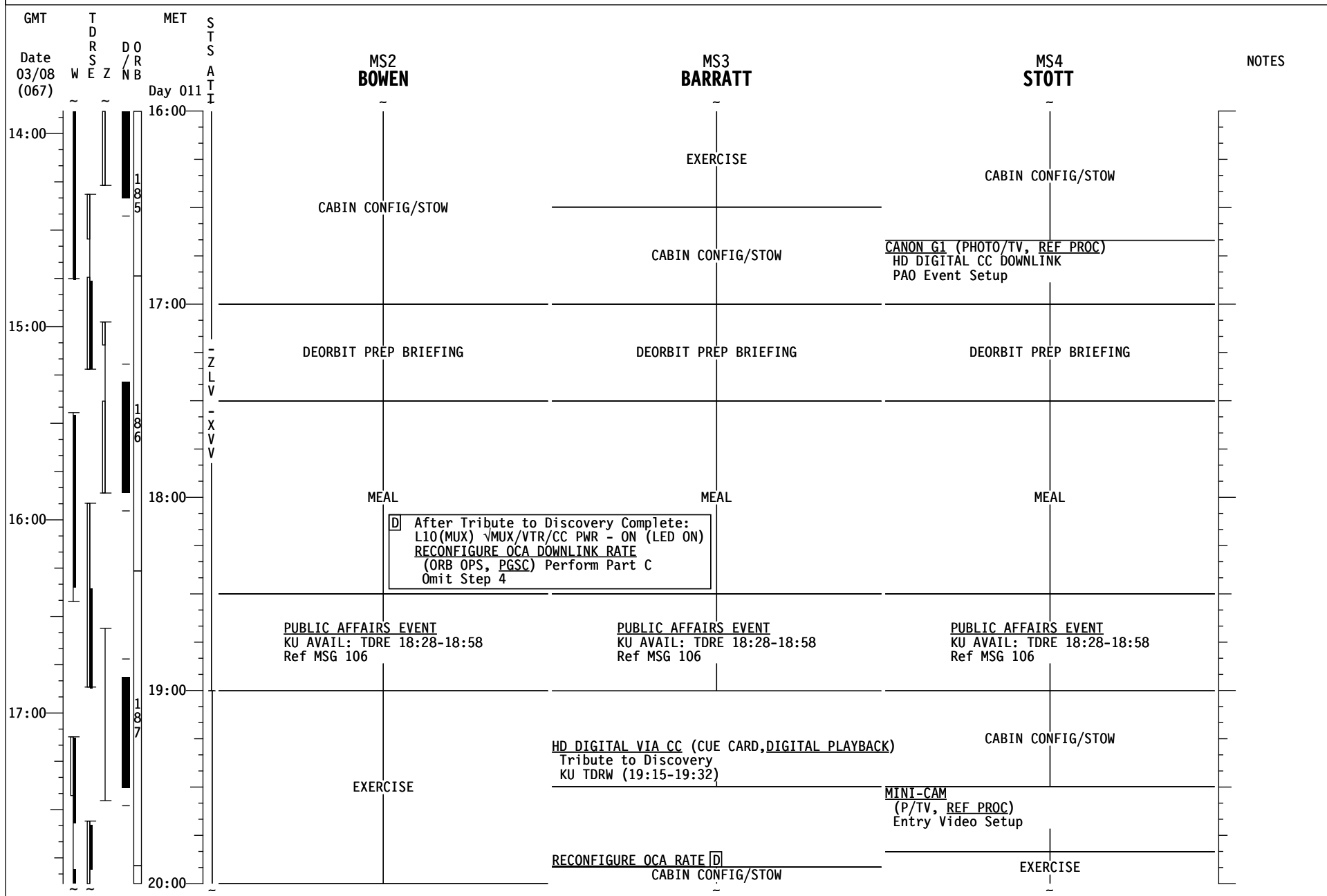
REPLANNED

GMT	T D R S W E Z	MET	S T S A T I	CDR LINDSEY	PLT BOE	MS1 DREW	NOTES
Date 03/08 (067)	DO R B / N B	Day 011					
14:00				CABIN CONFIG/STOW	EXERCISE	CABIN CONFIG/STOW	
				<div style="border: 1px solid black; padding: 2px;"> C A14 RCS/OMS HTR L POD - B OFF - A AUTO R POD - B OFF - A AUTO </div>			
15:00				<u>RCS/OMS POD HTR RECONFIG IC</u>			
				DEORBIT PREP BRIEFING	DEORBIT PREP BRIEFING	DEORBIT PREP BRIEFING	
16:00				MEAL	MEAL	MEAL	
				<u>PUBLIC AFFAIRS EVENT</u> KU AVAIL: TDRE 18:28-18:58 Ref MSG 106	<u>PUBLIC AFFAIRS EVENT</u> KU AVAIL: TDRE 18:28-18:58 Ref MSG 106	<u>PUBLIC AFFAIRS EVENT</u> KU AVAIL: TDRE 18:28-18:58 Ref MSG 106	
17:00				CABIN CONFIG/STOW	<u>MNVR (TRK) BIAS -ZLV -YVV (Dump)</u> TG=2 BV=3 OM=270 A1/AUTO/VERN, Init TRK <u>IMU STAR OF OPPTY ALIGN (ORB OPS, GNC)</u> <u>SUPPLY/WASTE WATER DUMP</u> (ORB OPS, ECLS) Init Waste Dump Ref. MSG 103, Item 4	<u>SUPPLY WATER DUMP USING FES (ORB OPS, ECLS)</u> Perform step 1 using FES Pri B	
						CABIN CONFIG/STOW	UPDATE H2O WASTE DUMP QTY
20:00							

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STS-133 FD (13)

REPLANNED



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STS-133 FD (13)

REPLANNED

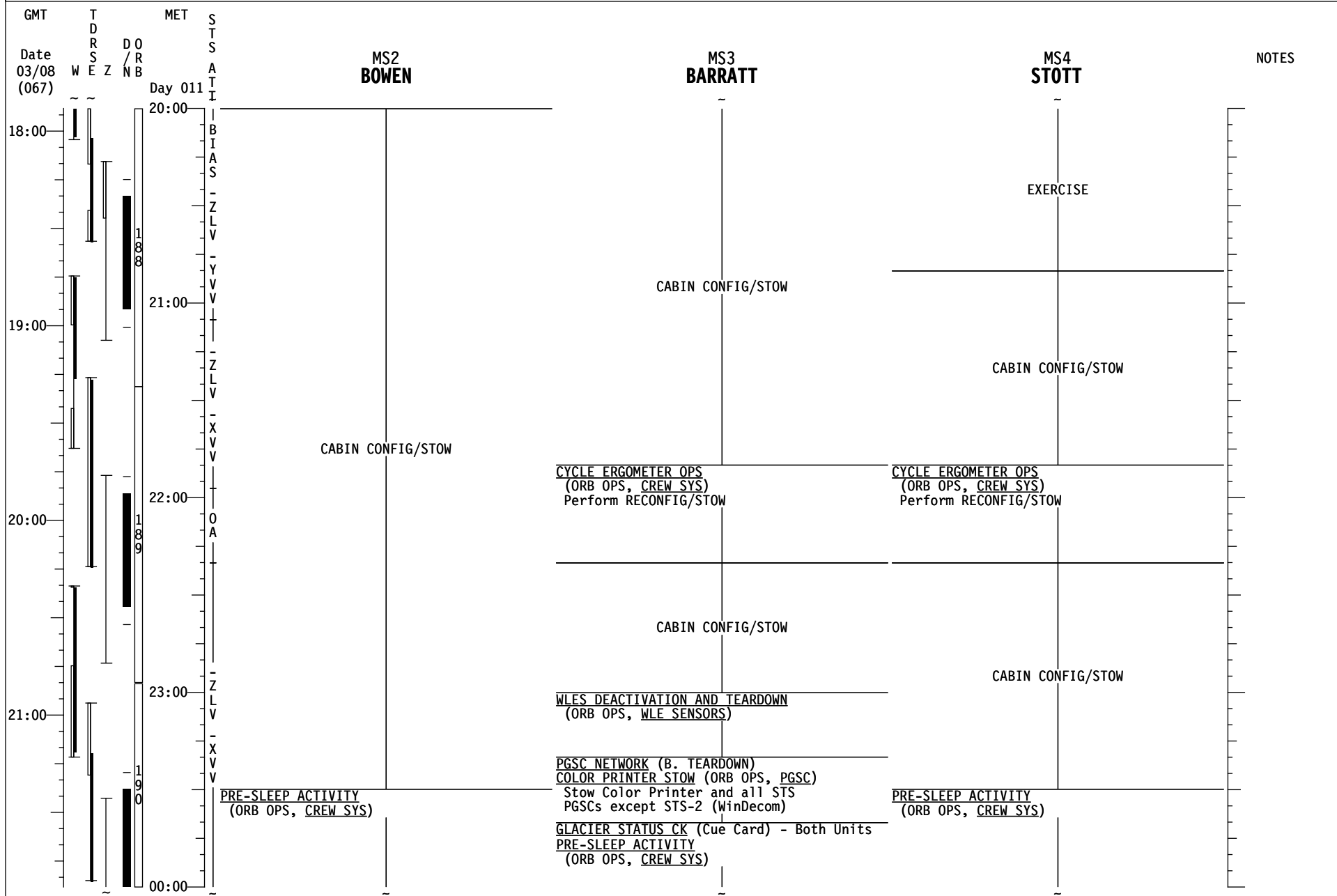
GMT	TDRS W E Z	MET DO RNB	S T S A T I	CDR LINDSEY	PLT BOE	MS1 DREW	NOTES
Date 03/08 (067)		Day 011					
18:00			I	LANDING-1 COMM C/O (ORB OPS, COMM/INST)	SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) Terminate Waste Dump		
			B	MLA (20:02-20:09)			
			A		CWC OVERBOARD DUMP (ORB OPS, ECLS) Init, Ref. MSG 103, Item 4		
			S			CABIN CONFIG/STOW	
			Z				
			L	EXERCISE			
			V		CWC OVERBOARD DUMP (ORB OPS, ECLS) Term		
19:00			V				
			V		MNVR (TRK) -ZLV -XVV TG=2 BV=3 OM=0 A1/AUTO/VERN Init TRK		
			Z				
			L	LANDING-1 COMM C/O (ORB OPS, COMM/INST)			SUPPLY WATER DUMP USING FES (ORB OPS, ECLS) On MCC GO: Perform step 2. FES not reqd
			L	DFR (21:32-21:40)			
			X				
			V	ON-ORBIT OMS BURN (ORB OPS, OMS)	ON-ORBIT OMS BURN (ORB OPS, OMS)		UPDATE ORBITAL MNVR PAD
			V			CABIN CONFIG/STOW	
20:00			O				
			A	< OA TIG (22:06)			
			A	MNVR (TRK) -ZLV -XVV TG=2 BV=3 OM=0 A1/AUTO/VERN Init TRK			On MCC GO: L1 FLASH EVAP CNTLR PRI A - ON
			Z				
			L	COMM STRING 1 C/O (PART B) (ORB OPS, COMM/INST)			
			Z		CABIN CONFIG/STOW		
			L	SSV DEACTIVATION (PHOTO/TV, SSV)			
			L			CABIN CONFIG/STOW	
21:00			V				
			V				
			X	ENTRY COOLING CONFIG [E]	A6L MADS STRAIN GAGE - ON		
			V	KU-BD ANT STOW (ORB OPS, COMM/INST)	KU-BD ANT STOW (ORB OPS, COMM/INST)		UPDATE TFL 161
			V	Deactivate CCTV	Deactivate CCTV		
			V	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
00:00							

[E] R12 √VPU PWR - OFF(LED-off)
Minimize use of P/TV equipment
Dim cabin lighting to 25%

11

STS-133 FD (13)

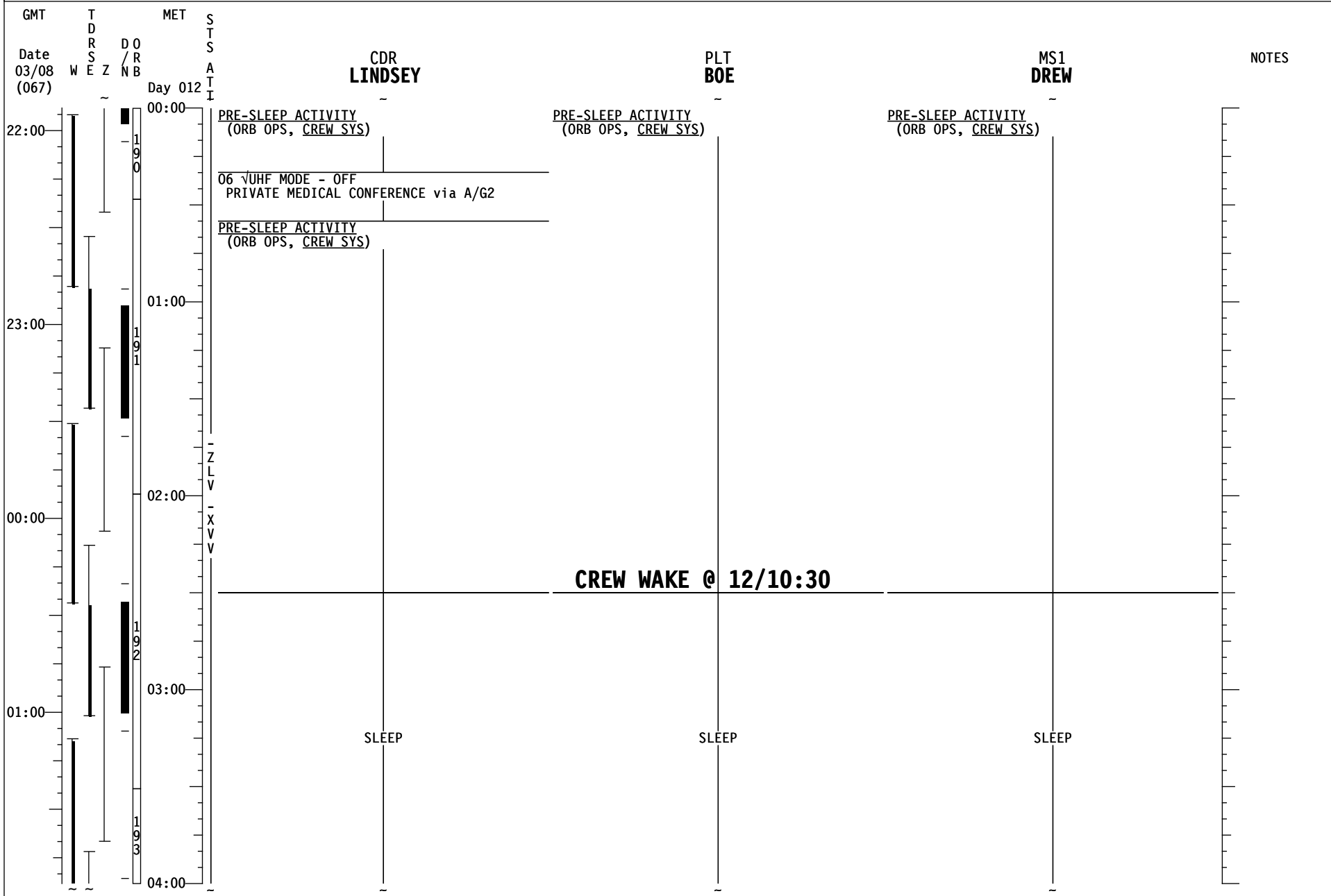
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STS-133 FD (13)

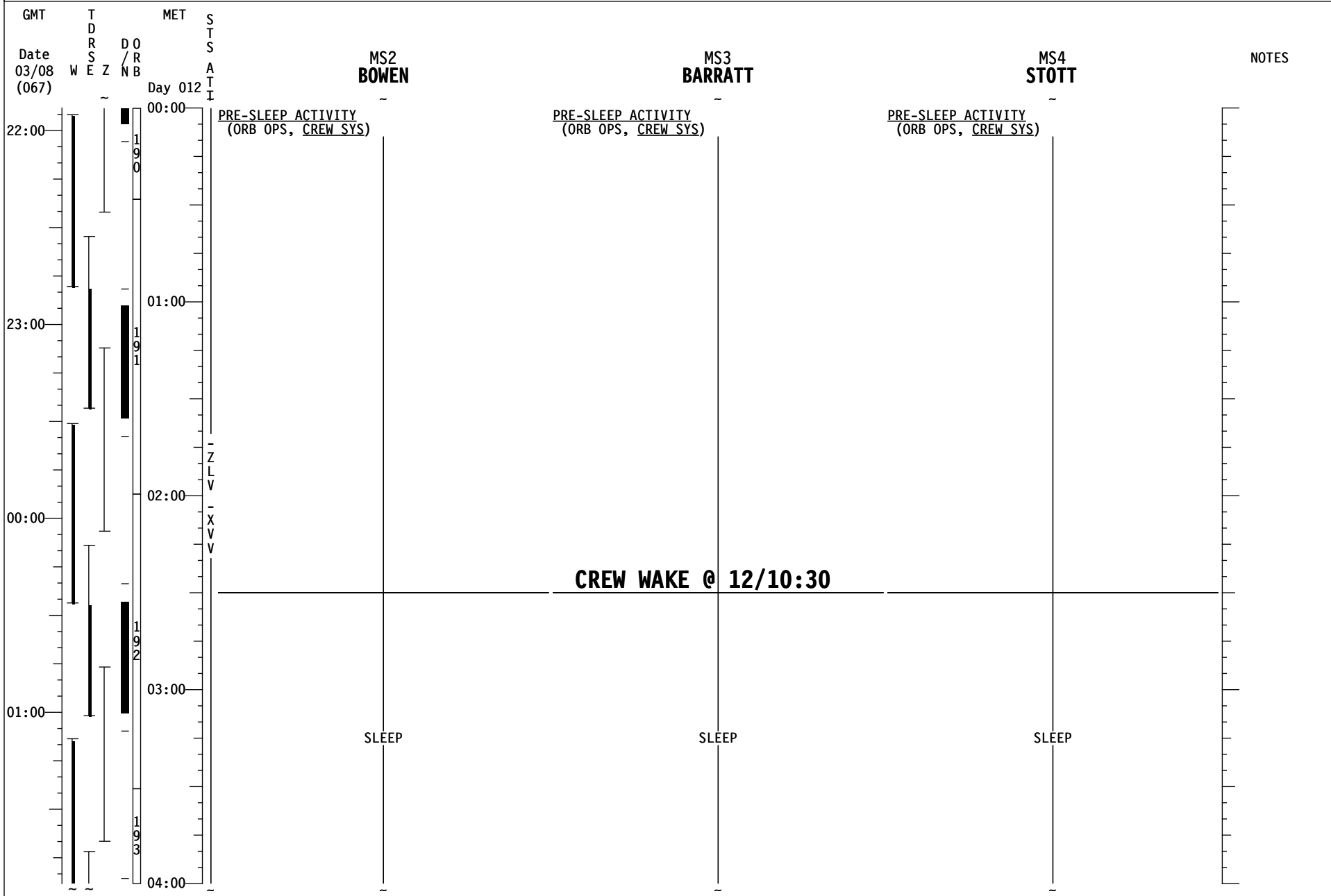
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STS-133 FD (13)

REPLANNED



MSG 104 - FD13 MISSION SUMMARY

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Good Morning Discovery!!!

Yesterday's fly-around was spectacular!!!!

You have accomplished absolutely everything on orbit that you launched to do and then some! (Can you believe the amazing performance of "Discovery"???? What a vehicle!!!!)

Now it is time to think about heading earthward!!!

Have a happy "packing up" and entry prep day!!!

YOUR CURRENT ORBIT IS: 194 X 184 NM

NOTAMS - (THREE CHANGES - ADDED LAJ, BEJ, PTN)

- 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.
- BEJ - AIRFIELD CLSD 0830-1715 GMT.
- FFA - NOT USABLE. IN CARETAKER STATUS.
- ESN - DME BAG78 OTS.
- PTN - RWY 14/32 CLSD 2230-0030 GMT.
- IKF - NOT USABLE. NO AGREEMENT

NEXT 2 PLS OPPORTUNITIES:

EDW04	ORB188	- 11/20:45	SCT250	7	040/09P13
KSC15	ORB202	- 12/18:02	SCT030 SCT200	7	120/15P21 (EOM)

MSG 104 - FD13 MISSION SUMMARY

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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	338 FPS
<u>ARCS (TOTAL ABOVE QTY1)</u>	<u>41 FPS</u>
TOTAL IN THE AFT	379 FPS

ARCS (TOTAL ABOVE QTY2)	75 FPS
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FRCS (ABOVE QTY 1)	0 FPS
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AFT QTY 1	66 %
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AFT QTY 2	28 %
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There are no Failure/Impact/Work Arouns for Today.

MSG 105 - ENTRY DAY FLUID LOADING AND ANTI-G SUIT OPS

1 **Fluid Loading:**

2
3 Fluid loading water for both landing opportunities on Entry Day should be pulled on EOM-1.
4 This will help maximize Supply Water quantities to support maximum De-orbit landing
5 opportunities. Report to MCC when complete.

6
7 The following is the prescription for fluid loading on Entry Day:

8
9 Initiate fluid loading at 1 hour before TIG. Consume 8 ounces of water or artificially
10 sweetened (A/S) drink with two salt tablets, every 15 minutes. Fluid loading must be
11 completed by Entry Interface (EI).

12
13
14 **Nominal Fluid Load**

CREWMEMBER	FLUID	TOTAL # OF SALT TABLETS
CDR (Lindsey)	40 oz Water	10 Salt Tablets
PLT (Boe)	40 oz Tropical Punch w/ A/S	10 Salt Tablets
MS1 (Drew)	40 oz True Lemon Water (stowed in fresh food locker)	10 Salt Tablets
MS2 (Bowen)	24 oz Water 24 oz Lemonade w/ A/S	12 Salt Tablets
MS3 (Barratt)	48 oz Orange Ade	No Salt Tablets
MS4 (Stott)	32 oz True Lemon Water (stowed in fresh food locker)	8 Salt Tablets

15 Note: Pre-packaged volume may exceed prescribed quantity. Fluid loading bags may be
16 filled the night before and consumed within 30 hours of filling. Fluid loading bags not
17 consumed within this time should be discarded and new bags filled for use.

18
19
20 If there is a one orbit wave-off and fluid loading was completed on the previous de-orbit
21 attempt, then the following prescription should be completed by EI:
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33

1 **Wave-Off Fluid Load**

CREWMEMBER	FLUID	TOTAL # OF SALT TABLETS
CDR (Lindsey)	24 oz Water	6 Salt Tablets
PLT (Boe)	24 oz Tropical Punch w/ A/S	6 Salt Tablets
MS1 (Drew)	24 oz True Lemon Water (stowed in fresh food locker)	6 Salt Tablets
MS2 (Bowen)	16 oz Water 8 oz Lemonade w/ A/S	6 Salt Tablets
MS3 (Barratt)	24 oz Orange Ade	No Salt Tablets
MS4 (Stott)	16 oz True Lemon Water (stowed in fresh food locker)	4 Salt Tablets

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If there is a greater than one orbit wave-off or a partial fluid load was performed on the previous de-orbit attempt then the entire Nominal Fluid Load protocol should be repeated.

Anti-G Suit Operations:

Anti-G suits must be inflated to 0.5 psi (one click) at or near entry interface and to at least 1.0 psi (two clicks) at one G.

Dosimeter Reminder:

Ensure that all dosimeters are stowed in your ACES suits.