

STS-115/12A

FD 11 Execute Package



MSG	Page(s)	Title
118A	1 - 3	FD11 Summary Timeline (pdf)
116A	4 - 14	FD11 Flight Plan Revision (pdf)
117	15 - 16	FD11 Mission Summary (pdf)
119	17	Deltas to FCS Checkout Procedure (pdf)
121	20	FD11 Water Summary Message (pdf)
122	---	FD10 MMT Summary (pdf - Electronic Only)

Approved by FAO: *M. Scheib*

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JEDI (Joint Execute package Development and Integration), v2.04.0003

FD10

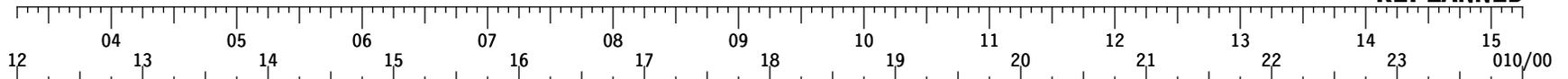
GMT 09/18/06 (261)

MET Day 009

		16	17	18	19	20	21	22	23	09/19 09	01	02	03
STS-115	CDR JETT	NC7 MULT AXIS RCS BURN	M- NZ V L R V	RMC A/G	PRE SLEEP			SLEEP			POST SLEEP		
	PLT FERGUSON	MULT AXIS RCS BURN	PRE SLEEP			SLEEP			POST SLEEP				
	MS1 TANNER	PRE SLEEP			SLEEP			POST SLEEP					
	MS2 BURBANK	EXERCISE	FEEL	PRE SLEEP			SLEEP			POST SLEEP			
	MS3 PIPER	LDRI DNLK	PRE SLEEP			SLEEP			POST SLEEP				
	MS4 MACLEAN	EXER CISE	PRE SLEEP			SLEEP			POST SLEEP				
DAY/NIGHT		[Day/Night Cycle Bar]											
ORBIT		143	144	145	146	147	148	149	150				
DAILY ORBIT		8	9	10	11	12	13	14	15				
TDRS		W -171.0	[TDRS W Bar]										
		E -46.0	[TDRS E Bar]										
		Z -275.0	[TDRS Z Bar]										
ORB ATT		NC7	-ZLV -XVV										
GND		-DFR	-DFR	-DFR -MLA	-DFR -MLA	-DFR	-DFR						
NOTES		*TERM	*DUMP TERM										

FD11

GMT 09/19/06 (262)



S T S - 1 1 5	CDR JETT	POST SLEEP	IMU	POST SLEEP	CABIN STOW	FCS C/O	RCS HOT	3 CONWAY	PILOT SETUP	PILOT OPS	D/O BRIEF	PEAVOENT	MEAL	OFF DUTY	EXERCISE	PRE SLEEP	MAUI*			
	PLT FERGUSON	POST SLEEP	W/BHTR	EXERCISE	FCS C/O	RCS HOT	3 CONWAY	PILOT OPS	CABIN STOW	PILOT OPS	D/O BRIEF	PEAVOENT	MEAL	OFF DUTY	CABIN STOW	PRE SLEEP	MAUI*			
	MS1 TANNER	POST SLEEP		EXERCISE	CABIN STOW		3 CONWAY	CABIN STOW	PAO S/U	D/O BRIEF	PEAVOENT	MEAL	OFF DUTY	ENTRY VIDEO SETUP	COMM 1	SEVACT	FILTER CLEANING	PRE SLEEP		
	MS2 BURBANK	POST SLEEP		CABIN STOW	FCS C/O	RCS HOT	3 CONWAY	CABIN STOW	PILOT OPS	D/O BRIEF	PEAVOENT	MEAL	OFF DUTY	CABIN STOW	EXERCISE	PGSC STOW PART I	PRE SLEEP			
	MS3 PIPER	POST SLEEP		EXERCISE	CABIN STOW		3 CONWAY	CABIN STOW	YEARSMT	MICROBE TERM	D/O BRIEF	PEAVOENT	MEAL	LCOMM	OFF DUTY	CABIN STOW	LCOMM	CSATBOWIN	ERG STOW	PSLEEPEP
	MS4 MACLEAN	POST SLEEP		CABIN STOW			3 CONWAY	CABIN STOW	EXERCISE	D/O BRIEF	PEAVOENT	MEAL	OFF DUTY	CABIN STOW		WDL EASCT	ERG STOW	FSMTKOW		
DAY/NIGHT		[Day/Night Cycle]																		
ORBIT		[Orbit Cycle]																		
DAILY ORBIT		[Daily Orbit Cycle]																		
TDRS		[TDRS Cycle]																		
ORB ATT		[Orbit Attitude]																		
GND		[Ground Operations]																		
NOTES		[Notes]																		

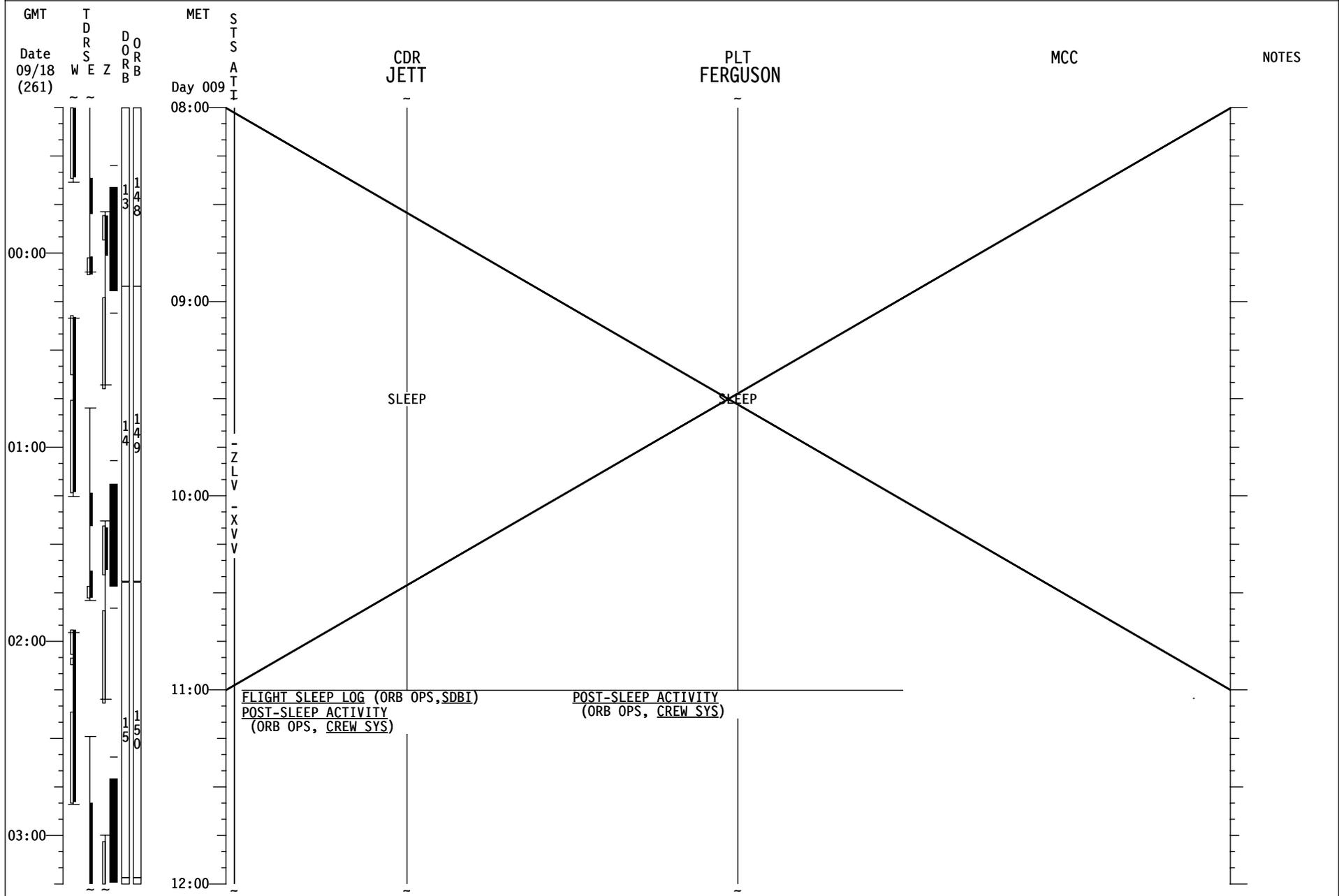
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GMT 09/19/06 (262)

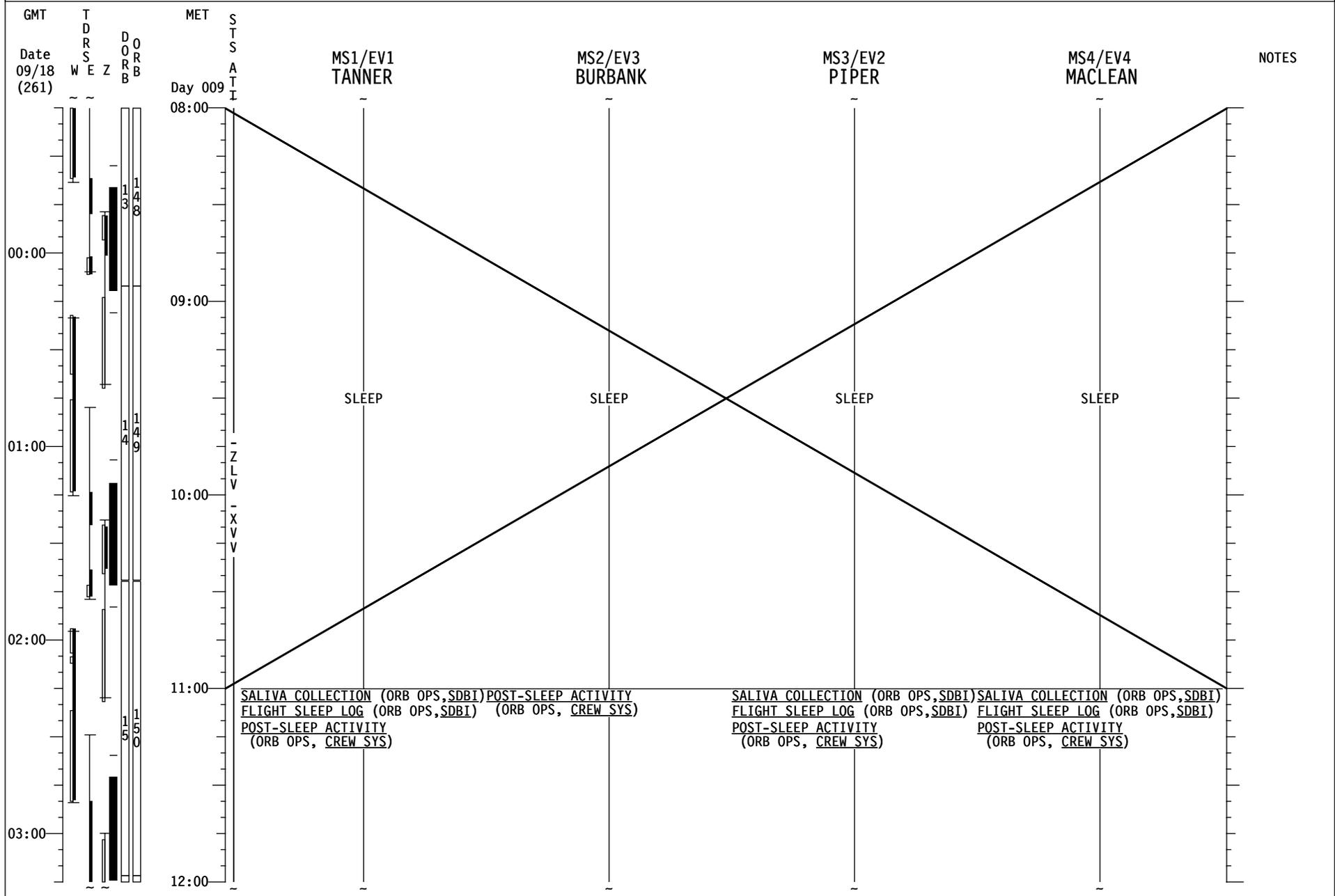
MET Day 010

		010/00 16 01 17 02 18 03 19 04 20 05 21 06 22 07 23 08 09/20 09 10 11 02 11 03 12															
STS-115	CDR JETT	MAUI* MNVLRV PSRL EELP PMC A/G	PRE SLEEP										SLEEP		LOG	POST SLEEP	
	PLT FERGUSON	MAUI* EELP RNO	PRE SLEEP										SLEEP		LOG	POST SLEEP	
	MS1 TANNER		PRE SLEEP										SLEEP		SLVA LOG	POST SLEEP	
	MS2 BURBANK		PRE SLEEP										SLEEP		LOG	POST SLEEP	
	MS3 PIPER	PRE SLEEP KUT- BWD	PRE SLEEP										SLEEP		SLVA	POST SLEEP	
	MS4 MACLEAN		PRE SLEEP										SLEEP		LOG	POST SLEEP	
DAY/NIGHT		[Day/Night Cycle]															
ORBIT		[Orbit Data]															
DAILY ORBIT		8	9	10	11	12	13	14	15	16							
TDRS		[TDRS Data]															
ORB ATT		[Orbit Att Data]												-ZLV -XVV			
GND		[Ground Data]												-DFR		-DFR	
NOTES		*BURN *COOLING CONFIG															

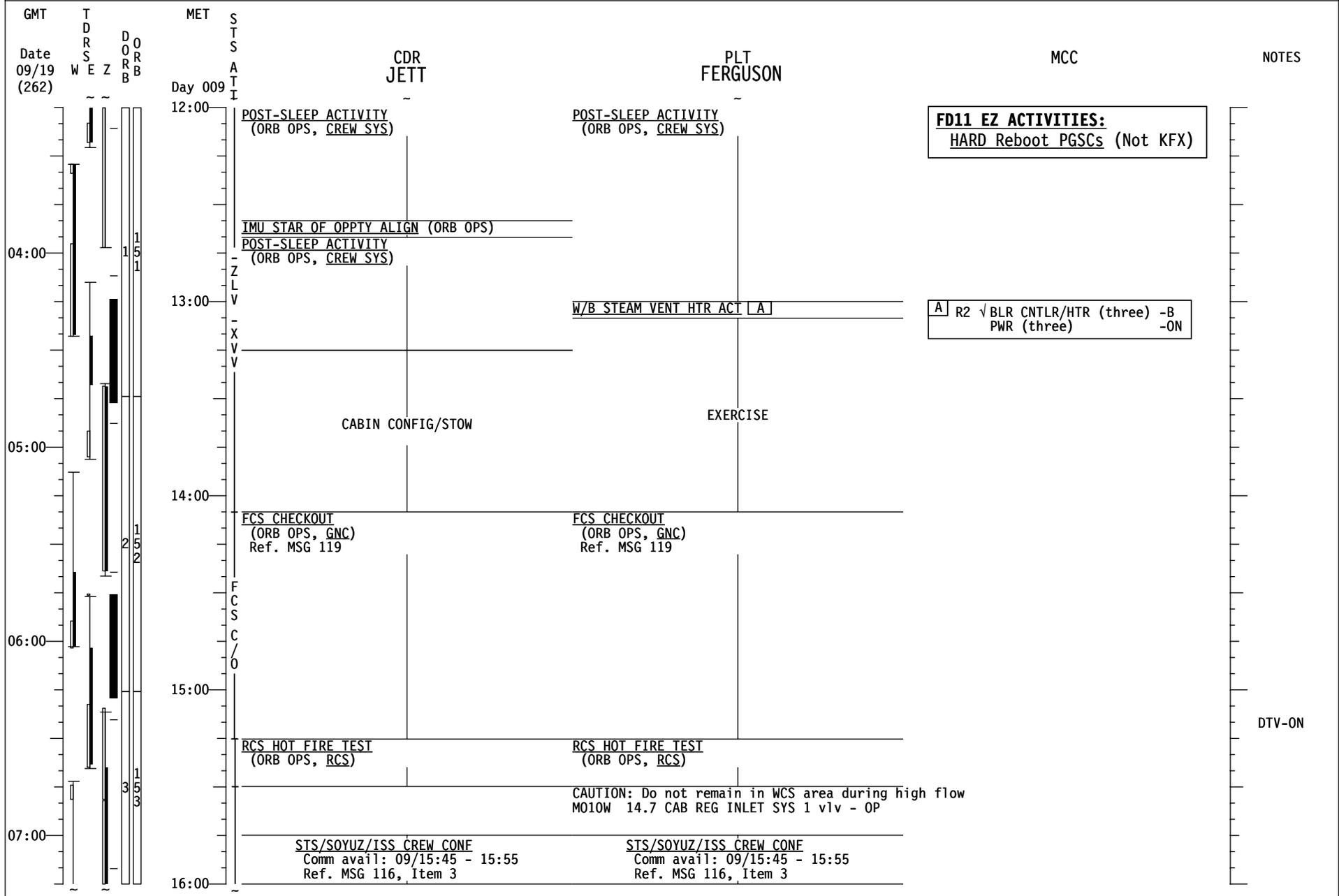
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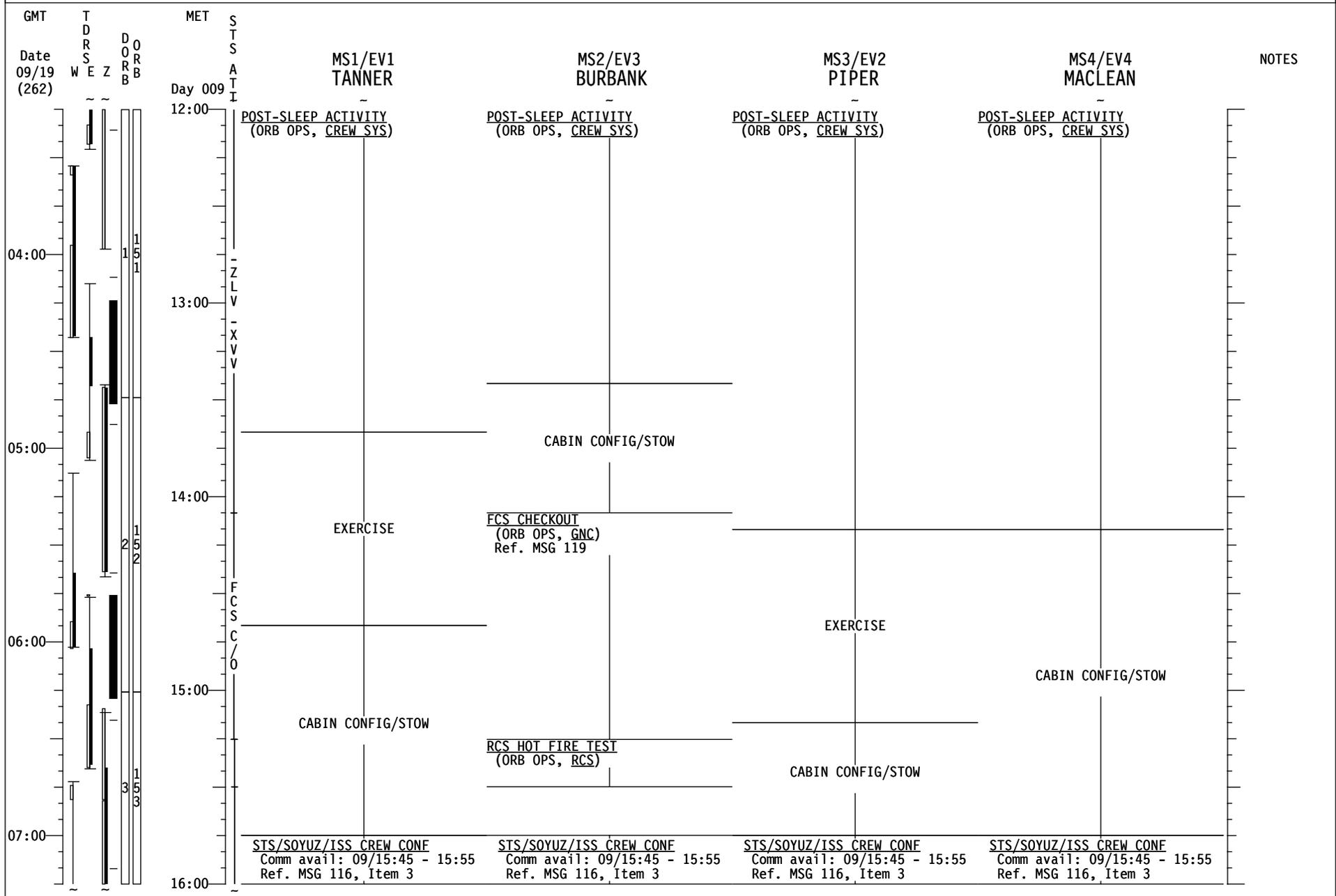
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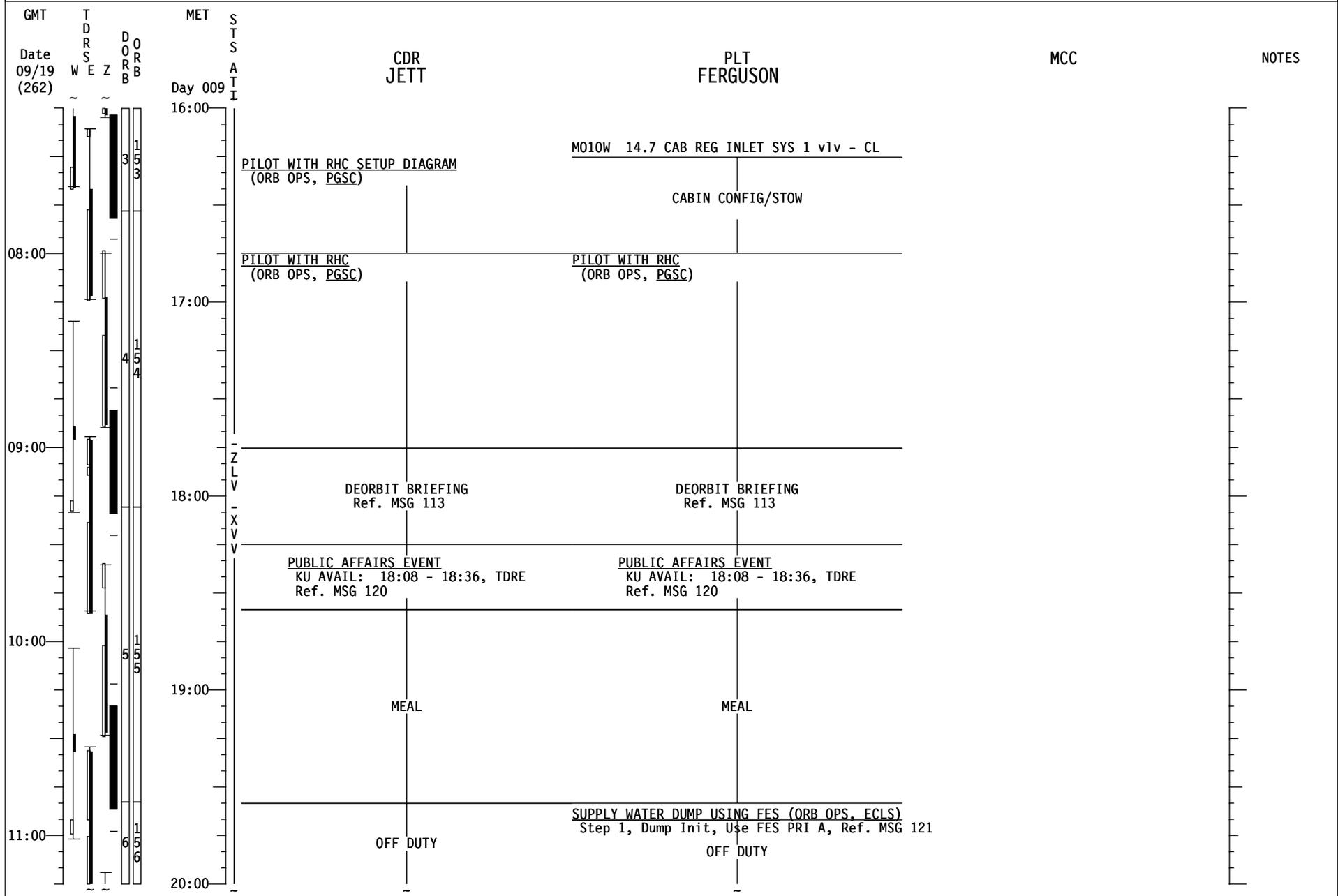
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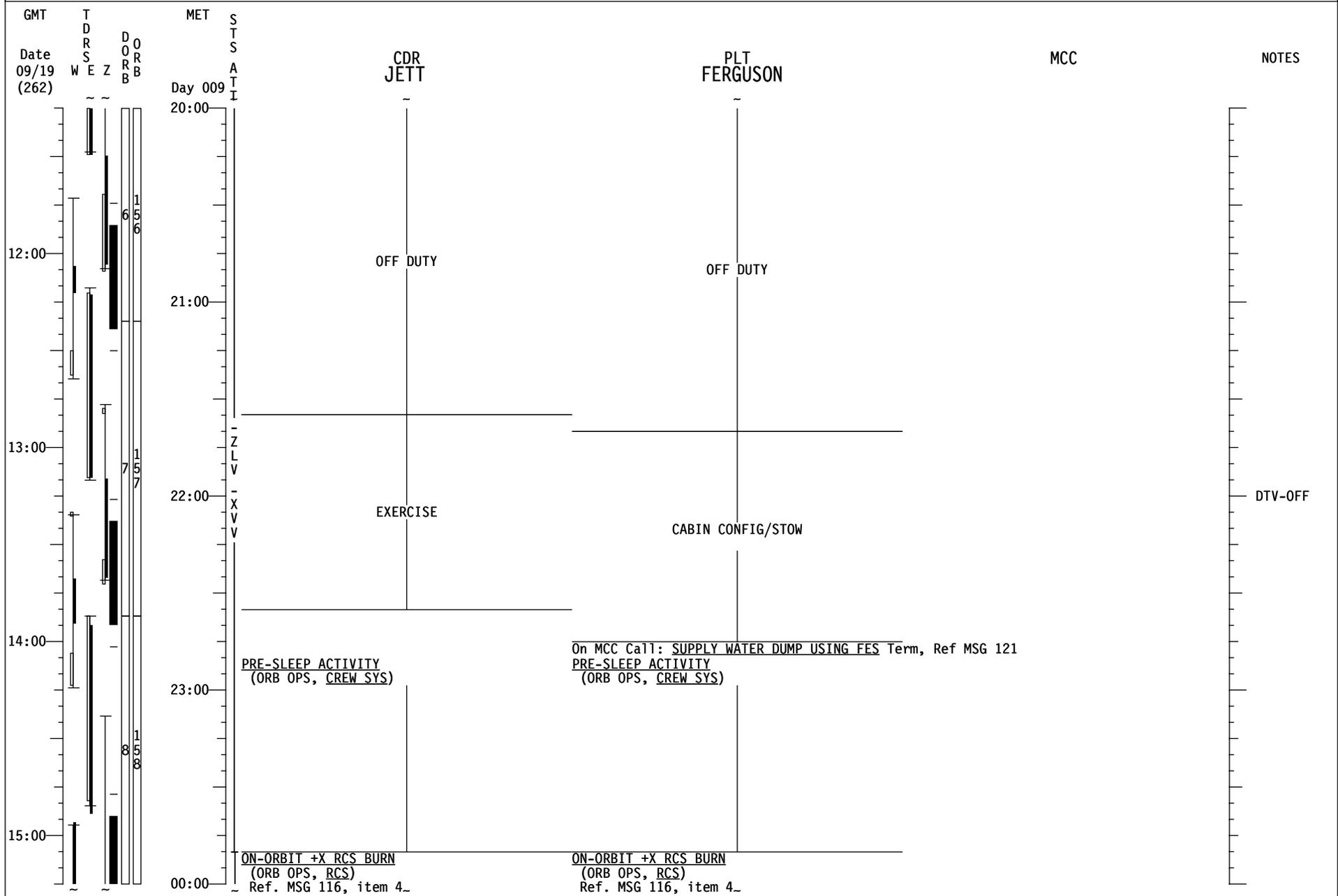
STS-115 (FD11)



STS-115 (FD11)

GMT	T D R S E Z	D O R R B	MET	S T S	MS1/EV1	MS2/EV3	MS3/EV2	MS4/EV4	NOTES
Date 09/19 (262)	W	E	Day 009	A T I	TANNER	BURBANK	PIPER	MACLEAN	
16:00						CABIN CONFIG/STOW	CABIN CONFIG/STOW	CABIN CONFIG/STOW	
08:00					CABIN CONFIG/STOW	<u>PILOT WITH RHC</u> (ORB OPS, PGSC)	<u>YEAST GAP TERMINATION</u> (ASSY OPS, PAYLOAD) Ref. MSG 112 Do not begin earlier than 15:25		
17:00							<u>MICROBE TERMINATION</u> (ASSY OPS, PAYLOAD) Ref. MSG 112 Terminate and Photograph all GAPS Do not begin earlier than 15:45	EXERCISE	
09:00					<u>ANALOG PAO CC</u> (PHOTO/TV, SONY PD100) Setup				
18:00					DEORBIT BRIEFING Ref. MSG 113	DEORBIT BRIEFING Ref. MSG 113	DEORBIT BRIEFING Ref. MSG 113	DEORBIT BRIEFING Ref. MSG 113	
10:00					<u>PUBLIC AFFAIRS EVENT</u> KU AVAIL: 18:08 - 18:36, TDRE Ref. MSG 120	<u>PUBLIC AFFAIRS EVENT</u> KU AVAIL: 18:08 - 18:36, TDRE Ref. MSG 120	<u>PUBLIC AFFAIRS EVENT</u> KU AVAIL: 18:08 - 18:36, TDRE Ref. MSG 120	<u>PUBLIC AFFAIRS EVENT</u> KU AVAIL: 18:08 - 18:36, TDRE Ref. MSG 120	
19:00					MEAL	MEAL	MEAL	MEAL	
11:00					OFF DUTY	OFF DUTY	<u>LANDING-1 COMM C/O</u> (ORB OPS, COMM/INST) MILA AOS: 19:39:06-19:47:48	OFF DUTY	
20:00							OFF DUTY		

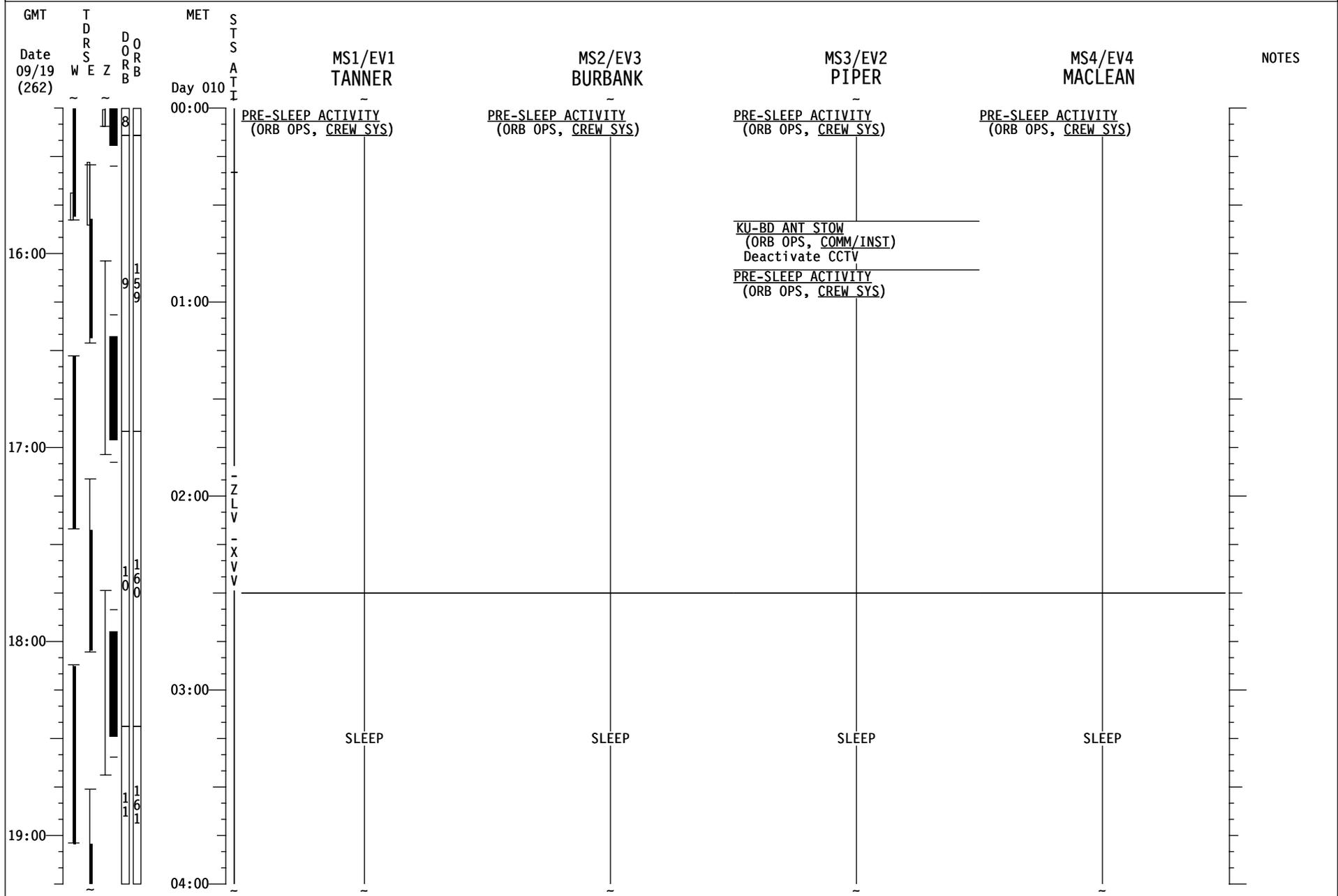
STS-115 (FD11)



STS-115 (FD11)

GMT	T D R S E Z	D O R R B	MET	S T S	CDR	PLT	MCC	NOTES
Date	W	W	Day	A T I	JETT	FERGUSON		
09/19 (262)			010					
00:00		8			ON-ORBIT +X RCS BURN (ORB OPS, RCS) Ref. MSG 116, item 4 < MAUI BURN (10/00:15)	ON-ORBIT +X RCS BURN (ORB OPS, RCS) Ref. MSG 116, item 4		
					MNVR (TRK) -ZLV, -XVV TG=2 BV=3 OM=0 A/AUTO/VERN Init TRK	ENTRY COOLING CONFIG A	A R12	√VPU PWR - OFF (LED-off) Minimize use of P/TV equipment Dim cabin lighting to 25% L1 CAB TEMP Sel - 10 O'Clock
16:00		9 5 9			PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)		
					06 √UHF MODE - OFF PRIVATE MEDICAL CONFERENCE			
					PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS) In step 3, leave MMU2 ON after SM Checkpoints.			
17:00		1 0 6 0						
18:00		1 1 6 1						
19:00								
04:00					SLEEP	SLEEP		

STS-115 (FD11)



MSG 117 - FD11 MISSION SUMMARY

1 Good morning Atlantis!

2

3 Thanks for one more day of your excellent work in micro-g yesterday! Today is supposed to
4 be your last full day in Orbit on this mission - enjoy!

5

6 YOUR CURRENT ORBIT IS: 191 X 179 NM

7

8 NOTAMS:

9

10 EDWARDS (EDW) – 15/33 ELS ONLY – 18L CLOSED

11 WHITE SANDS (NOR) – RED

12 AMBERLY (AMB) - CLOSED

13 ANDERSEN (GUA) - 06L/24R CLOSED, ALTERNATE 06R/24L

14 ANDERSON BACKUP (UNZ CH 100) VORTAC FREQUENCY CHANGED TO CH 105

15 ISTRES (FMI) - RUNWAY 33 DISTANCE MARKERS @ 300, 600, 900M

16 LAJES (LAJ) RWY 33 EXTREME CAUTION DUE TO LOOSE ASPHALT 210 AND 400

17 FT FROM THRESHOLD

18 LAJES (LAJ CH 45) OUT OF SERVICE

19 ORMOND BEACH (OMN CH 73) AZIMUTH OUT OF SERVICE

20 RIO GALLEGOS (AWG) - NOT APPROVED

21 SALISBURY (SBY CH 49) OUT OF SERVICE (PRIME TACAN FOR WALLOPS)

22 WAKE ISLAND (WAK) - CLOSED

23 WAKE ISLAND (AWK CH 82) OUT OF SERVICE

24 WILMINGTON (ILM) - CLOSED

25

26 NEXT 2 PLS OPPORTUNITIES:

27

28 EDW22 ORB 157 - 9/21:59 (SKC, 220@06P09)

29 EDW22 ORB 172 – 10/20:46 (FEW250, 230@12P18)

30

31 OMS TANK FAIL CAPABILITY:

32

33 L OMS FAILS: NO

34 R OMS FAILS: NO

35

36 LEAKING OMS PRPLT BURN:

37

38 L OMS LEAK: ALWAYS BURN RETRO

39 R OMS LEAK: ALWAYS BURN RETRO

40

41 OMS QUANTITIES(%)

42

43 L OMS OX = 33.5 R OMS OX = 33.0

44 FU = 34.5 FU = 33.7

45

46 SUBTRACT I'CNCT COUNTER FOR CURRENT OMS QUANTITIES

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MSG 117 - FD11 MISSION SUMMARY

DELTA V AVAILABLE:

OMS	336 FPS
ARCS (TOTAL ABOVE QTY1)	32 FPS
TOTAL IN THE AFT	368 FPS
ARCS (TOTAL ABOVE QTY2)	66 FPS
FRCS (ABOVE QTY 1)	45 FPS
AFT QTY 1	86 %
AFT QTY 2	48 %

<u>SYSTEM</u>	<u>FAILURE</u>	<u>IMPACT</u>	<u>WORK AROUND</u>
PLBD 1	Stbd Dr Aft Close microsw failed on	None – Microsw is now indicating correctly	N/A
PLBD 2	Port Dr Fwd Close microsw went off prematurely	PBD CONFIG msg received during PLBD opening	MSG 113 will be used if microsw does not function as expected during PLBD closing
ECLS	Supply H2O Dump Valve leakage observed after the FD10 supply water nozzle dump.	None.	The Supply H2O Dump Isol Valve will remain closed and the Supply Dump Line will be purged with air following any future supply water nozzle dumps.

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MSG 119 - DELTAS TO FCS CHECKOUT PROCEDURE

1 Note the following changes to the FCS CHECKOUT (ORB OPS, GNC):

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3 1. SECONDARY ACTUATOR CHECK (APU), page 7-17, step 5, apply positive stimulus to
4 Channel 3 first, then manually bypass speedbrake Channel 3 prior to proceeding with
5 positive stimuli on Channels 1, 2, and 4. The negative stimulus check will be in the nominal
6 order. Therefore, Step 5 should be performed as follows:

7

8 CRT 1 a. √POS STIM ENA, ITEM 20 - (*)

9 C3 b. √FCS CH 1, 2, 3, 4 - AUTO

10 CRT 1 c. SEC ACT CK, CH 3 - ITEM 17 EXEC (*)

11 d. √All CH 3 ports bypass ('↓')

12 STOP - ITEM 19 EXEC (*)

13 [On first pass - manually bypass SB CH 3: ITEM 21+63 EXEC]

14 C3 e. FCS CH 3 - ORIDE

15 CRT1 √All CH 3 ports (except SB 3) reset (no '↓') -

16 C3 FCS CH 3 - AUTO

17 CRT1 f. Repeat steps c thru e for CH 1, 2, 4

18 CRT 1 g. NEG STIM - ITEM 20 EXEC (no *)

19 h. Repeat steps b thru e for CH 1, 2, 3, 4, in that order.

20

21

22 2. SENSOR TEST - GPS, page 7-23, step 3, will not be performed.

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24 3. On Page 7-31, GPS PWRDN is not required.

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MSG 121 - FD11 WATER SUMMARY MESSAGE

1 Today there will be a supply water dump using the FES.

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3 **Supply Water Dump using FES Details**

4 Perform a supply water dump using the FES at MET 009/19:35. Dump duration will be
5 approximately 3 hours. The following details will be required for the dump:

6

7 SUPPLY WATER DUMP USING FES (ORB OPS, ECLS) p 5-9 step 1, DUMP INITIATION,
8 using FES Pri A.

9

10 Terminate dump on MCC call.

11

12 SUPPLY WATER DUMP USING FES (ORB OPS, ECLS) p 5-9 step 2, DUMP
13 TERMINATION, FES is not req'd.

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15 The FES will be reactivated on MCC call post MAUI burn.

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2 **FD10 MMT Crew Summary**
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4 The MMT Chairman opened today's MMT with some words concerning the toxic spill that
5 was experienced earlier in the day by the ISS crew. He characterized it as a wake-up call
6 and not to let our guard down as we prepared for end-of-mission after a tremendously
7 successful assembly sequence. There are still some tough decisions to be made in the
8 ensuing days and it is of the utmost importance to remain vigilant. After these opening
9 remarks, the remainder of the MMT was spent on briefings that laid out the remaining tasks
10 in the mission and the preparations that were in work for entry on FD12.
11

12 **ISS Status** - The ISS flight control team declared a Spacecraft Emergency after the ISS
13 crew detected/smelled smoke earlier in the crew day. The problem was traced to the
14 Elektron, which was leaking Potassium Hydroxide. This event was deemed to be a class 2
15 toxic event. The crew and the ground team handled this problem in an expedient and
16 exceptional fashion. The 21P undock and the subsequent arrival of the Expedition 14 crew
17 arrival with the Soyuz docking remains on schedule.
18

19 **Late Inspection** - All of the late inspection data has been downlinked and being analyzed.
20 Data analyzed up to the time of the MMT indicated zero concerns. IDC data was taken
21 during a night-time pass.
22

23 **On-orbit Trajectory** - The NC-6 through NC-9 burns are planned to be "no-burns". The
24 preliminary Maui Burn plan has the crew performing a Plus-X, out-of-plane burn in free drift
25 at the end of FD11. The Maui burn investigators requested no other jets to fire during the
26 test, hence the requirement for free drift. Based on this overall plan, the orbiter is expected
27 to trail the ISS by ~140 nm at the TIG for the first KSC opportunity on orbit 170.
28

29 **FCS Checkout** - The GNC community has considered the ramifications of performing FCS
30 checkout with an intermittent FCS channel 3 on the speedbrake. The positive stimulus
31 portion on channel 3 will be performed first and then bypassed for the remainder of the
32 secondary actuator checks. This action will prevent a potential 2-on-2 force fight condition
33 during the remainder of the stimulus tests for channels 1, 2, and 4. The speedbrake
34 channel 3 will remain bypassed through the remainder of the mission regardless of its
35 performance during FCS checkout. It is planned to use APU-1 during FCS checkout.
36

37 **Consumables Planning** - The consumables margin outlook is very good. LiOH is the
38 limiting consumable with EOM+3 capabilities. Cryo margins and Propellant margins support
39 3 deorbit opportunities on each day through EOM+3. Supply water will support 6 deorbit
40 opportunities over the first 3 days, with 8 opportunities total over 4 days.
41

42 **Weather Forecast** - There is a cold front approaching Florida that is expected to be just
43 north of KSC on End-of-mission. Both opportunities have a chance of thundershowers
44 within 30 and chance of broken deck at 5000. The winds are forecast to be from the
45 southwest at 240/10p15, which resolves into a 15 knot peak crosswind. This crosswind
46 forecast is a No-Go condition for the first opportunity on KSC 170 (night-time landing). The
47 crosswind forecast is Go for the second opportunity, which is 23 minutes after sunrise.
48 Based on a solid Go forecast for EOM+1, which forecasts the cold front to be well south of
49 KSC, EDW is not planned to be called up for EOM.
50

1 **Payload Bay Door Closure Plan** - The plan for the payload bay door closure is to perform it
2 using the Deorbit Prep auto sequence. A procedure has been uplinked that will verify that
3 the forward bulkhead latches are in a good position if the Port Close A microswitch anomaly
4 returns.

5
6 **GPS Ramp-up Plan** - On FD11, GPS will be taken to Auto in OPS-2 for several hours in
7 preparation for its use the next day in OPS-3. During Deorbit Prep, the GPS will be taken to
8 AUTO in the PASS in block 12 and will remain in that configuration until it is inhibited for the
9 deorbit burn. During the entry, after taking TACAN data and high-speed ground C-band
10 tracking confirms the onboard navigation state, GPS will be taken to AUTO in the PASS.
11 Throughout OPS-3, the GPS navigation state will not be sent to the BFS to maintain an
12 independent navigation source. This plan is another step towards the first 3-string flight on
13 STS-118.

14
15 **Lower Right S-band Antenna** - The Orbiter Project Office is planning to track the Lower
16 Right antenna issue as an In-Flight Anomaly. The flight control team is planning to avoid
17 using the lower right antenna when operationally feasible.

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