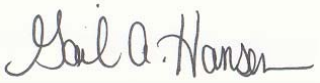
STS-129 / ULF3

FD 11 Execute Package

MSG	Page(s)	Title
100A	1 - 16	FD11 Flight Plan Revision
101A	17 - 18	FD11 Mission Summary
102	19	FD10 MMT Summary
103	20 - 21	Entry Day Fluid Loading and Anti-G Suit Operations
105	22 - 29	FD11 EOM Wx Charts
106	30 - 31	Urine Solids Filter Bypass
107	32 - 33	FD11 Entry Stowage Note
108	34 - 35	Waste H20 Tank Collection via CWC

Approved by FAO:
Gail Hansen



Entry Team Post Landing Checklist – Run in Parallel with Crew on p. 5-3 of the Entry C/L:

1. TURN TELEVISION OFF
   REMOTE TV POWER – OFF

2. PREPARE FOR BLACK FRIDAY SHOPPING
   CAR — IGNITION – ON

   GAS PEDAL — Depress with foot – Brake as required
   * If desired location advertisement not available *
   * stop and get newspaper with appropriate info. *

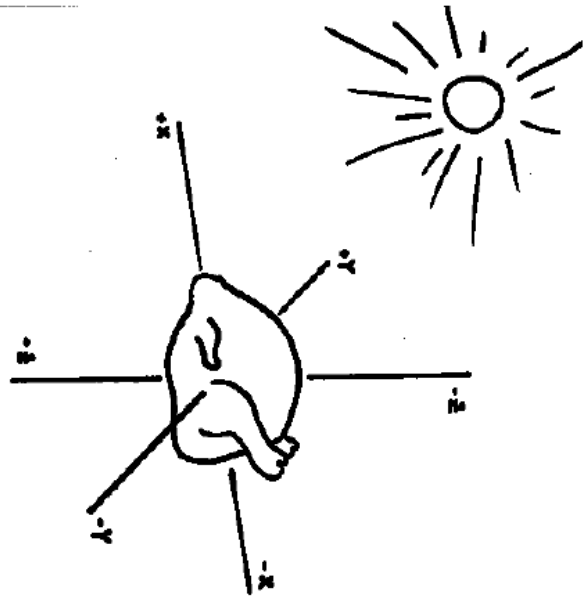
3. SHOPPING
   STORE — Perform CHECK/CREDIT CARD ACTIVATION (NOM OPS, SHOPPING)
   Gather desired items.
   If there are too many people in your way
   | Perform PUSH PEOPLE OUT OF WAY (CONTINGENCY OPS, SHOPPING)
   Perform STANDING IN LINE (NOM OPS, SHOPPING)

   Repeat steps 2 and 3 as necessary to complete objectives.

4. RETURN HOME
   CAR — IGNITION – ON

   GAS PEDAL — Depress with foot – Brake as required
   HOME — Pre-sleep
   BED — Sleep

FD11 TURKEY PTC - VRCS, Config 3



VRC PLUMP TURKEY COOKING (PTC)

1. MNVR TO PLUMP TURKEY COOKING (PTC) ATTITUDE
   DAP: A1/AUTO/VERN

   GNC UNIV PTG
   CRT TIG ID - ITEM 8 + 4 EXEC
   BASTING VECT - ITEM 14 + 5 EXEC
   P - ITEM 15 + 2 7 0 EXEC
   Y - ITEM 16 + 0 EXEC
   OM - ITEM 17 + 2 7 0 EXEC
   TRK - ITEM 19 EXEC (CUR - *)

2. INITIATE PLUMP TURKEY COOKING (PTC) ROTICERY
   When in attitude:
   GNC UNIV PTG
   BASTING VECT - ITEM 14 + 1 EXEC
   ROT - ITEM 20 EXEC (CUR - *)
   When rates have stabilized (~60 sec):
   GNC 20 DAP CONFIG
   Change DAP A TO A2

   On MCC-H GO when Turkey is golden brown
3. TERMINATE PTC ROTICERY
   GNC 20 DAP CONFIG
   Change DAP A to A1
   When rates have stabilized (~60 sec):
   GNC UNIV PTG
   CNCL - ITEM 21 EXEC
   When rates have damped:
   Have a Happy Thanksgiving!

MSG INDEX

MSG NO.	TITLE
MSG100	FD11 Flight Plan Revision
MSG101	FD11 Mission Summary
MSG102	FD10 MMT Summary
MSG103	Entry Day Fluid Loading and Anti-G Suit Operations
MSG104	FD11 PAO Event Summary
MSG105	FD11 EOM Wx Charts
MSG106	Urine Solids Filter Bypass
MSG107	FD11 Entry Stowage Note
MSG108	Waste H2O Tank Collection via CWC
MSG109	Heritage Panel Stow

1. Post-Sleep Cryo Config

For today's Post-Sleep cryo config, O2 Tanks 1 and 5 and H2 Tanks 1 and 3 will be active. We are expecting that O2 Tank 5 will be depleted in approximately 4 hours, at which time we will be asking for steps below to reconfigure to O2 Tank 4.

R1 O2,H2 MANF VLV TK1 (two) - OP (tb-OP)
A11 CRYO TK4 HTR O2 A - OFF
A15 CRYO TK5 HTR O2 A – AUTO

O2 TK5 Depletion Cryo Config

On MCC GO, please perform the following steps for depletion of O2 TK5:

A15 CRYO TK5 HTR O2 A - OFF
A11 CRYO TK4 HTR O2 A – AUTO

Pre-Sleep Cryo Config

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

The pressure of O2 Tank 3 is below the critical pressure but above the two-phase saturation pressure. We will use dual heaters in Tank 3 to raise the pressure above the critical pressure and then go to a single heater for sleep.

For tonight's Pre-Sleep cryo config, Manifold 1 will be closed with O2 and H2 Tanks 1 and 3 active. O2 Tanks will have a single heater active.

A11 CRYO TK4 HTR O2 A - OFF
R1 O2 TK3 HTRS A,B (two) - AUTO

On MCC go,

R1 O2 TK3 HTR B - OFF
O2,H2 MANF VLV TK1 (two) - CL (tb-CL)

2. SIMPLEX Photo/TV
Since we have waived your requirement for photo ops, INCO will be controlling the payload bay cameras to support the event.

3. CONDENSATE AND WASTE WATER DUMP ACTIVITIES

Shuttle Condensate Collection

Perform TEARDOWN in SHUTTLE CONDENSATE COLLECTION (ORB OPS, ECLS), p. 5-40. You will be dumping the condensate bag and subsequently reconnecting condensate collection.

After the Waste Water dump has been terminated and on MCC Go, perform SETUP in SHUTTLE CONDENSATE COLLECTION (ORB OPS, ECLS), p. 5-40. Reconnect CWC s/n 6008.

Pre Gather Dump Equipment

In preparation for the CWC condensate dump, pregather Condensate CWC S/N 6008, Y-Y condensate hose, and retrieve the WWD filter from locker MF43O in the BOB.

Waste Water Dump

At 9/21:30 MET, we will reattempt a waste water dump using SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS), p. 5-2. Perform steps E, G, and I. MCC will TMBU limits in steps B and K.

Dump the waste tank to 5%.

Nozzle open time will be ~30 minutes, assuming a successful dump.

4. Possible Waste IFMs
Today we are uplinking two IFM procedures related to the waste dump blockage. If landing occurs on NEOM, neither of these procedures will be required. If a waveoff is required, one of these procedures will be performed after Deorbit Prep Backout. The dump attempts today will provide data on which IFM will be performed in the event of a waveoff.

The URINE SOLIDS FILTER BYPASS procedure (MSG 106) assumes the blockage is in the urine solids filter and will allow the waste tank to be dumped through an alternate path. The WASTE H2O COLLECTION VIA CWC procedure (MSG 108) assumes the blockage is at the waste nozzle and provides a method to collect urine in a CWC.

5. You have 2 payload of opportunity burns in the timeline today.

   The SEITE burn is an 18 foot per second dual OMS burn. The burn will be radial down (nose to the Earth) such that the burn plume will be observed by the orbiting C/NOFS satellite.

   The SIMPLEX burn is an 18 foot per second dual OMS burn. The burn will be radial up (tail to the Earth) such that the burn plume will be observed by the Arecibo ground station.

   We will have PADS available for you prior to each burn.

6. **Last Outlook Mail Sync** - Prior to Ku Stow this afternoon, we will downlink your Outlook Personal Folders so that you may have them when you return to Houston. Please move any messages that you would like to keep from your INBOX, SENT ITEMS and UPLINKED BY CAPCOM folders to your Personal Folder before MET 9/21:30. We will also perform one final mail sync at that time to deliver any last-minute messages you have to send. We will not lock you out of your e-mail during this time so that you can still read your e-mail, but anything you change or write will be lost.

7. REPLACE PAGES 2-36 THROUGH 2-38, 3-114 THROUGH 3-123.

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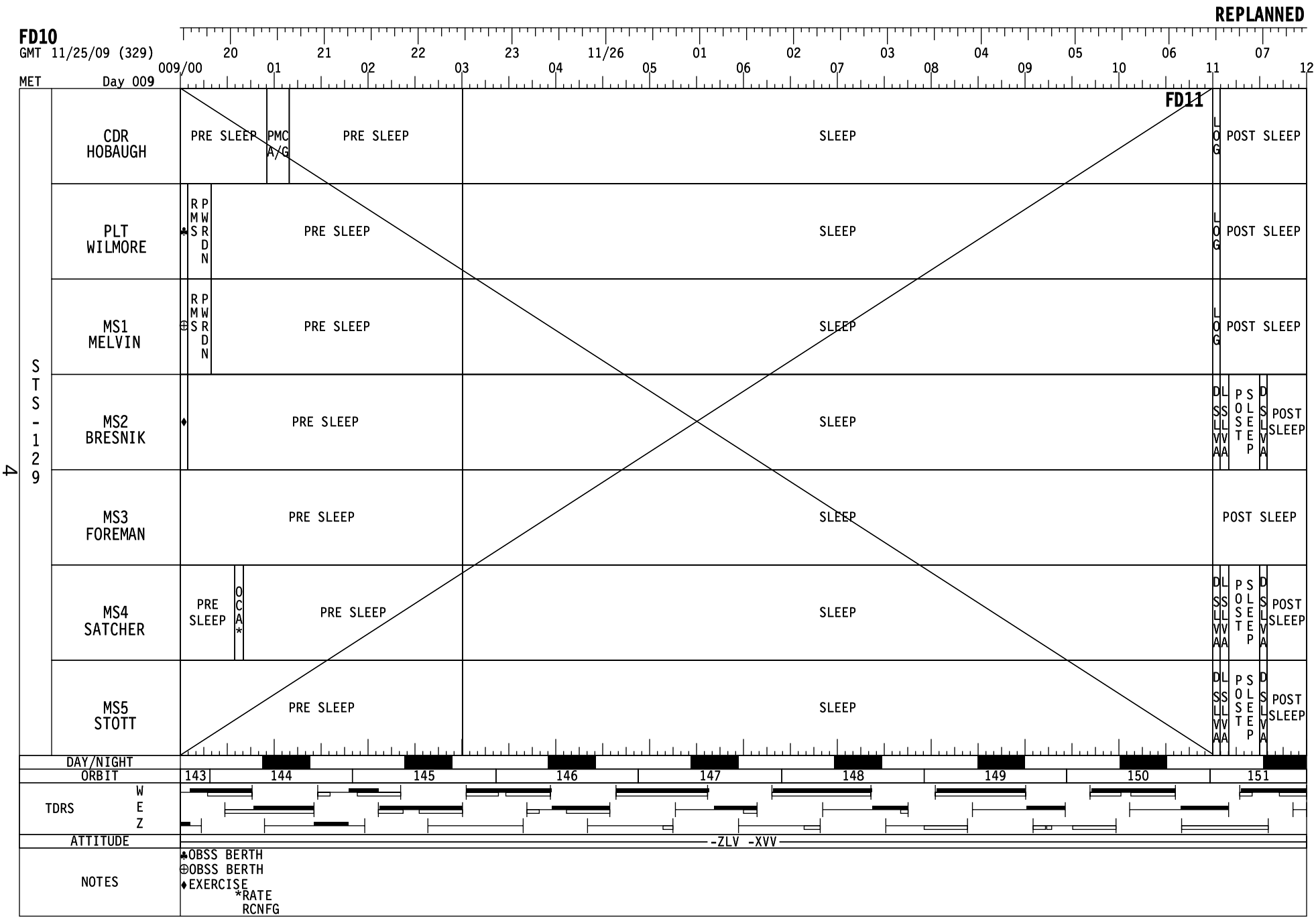

REPLANNED
FD10
GMT 11/25/09 (329)
20 21 22 23 11/26 01 02 03 04 05 06 07
009/00 01 02 03 04 05 06 07 08 09 10 11 12
MET Day 009
FD11
STS-129
CDR HOBAUGH
PRE SLEEP
PMC A/G
PRE SLEEP
SLEEP
LOG
POST SLEEP
PLT WILMORE
RMS PWRDN
PRE SLEEP
SLEEP
LOG
POST SLEEP
MS1 MELVIN
RMS PWRDN
PRE SLEEP
SLEEP
LOG
POST SLEEP
MS2 BRESNIK
PRE SLEEP
SLEEP
DSLVA
LSLVA
POST SLEEP
DSLVA
POST SLEEP
MS3 FOREMAN
PRE SLEEP
SLEEP
POST SLEEP
MS4 SATCHER
PRE SLEEP
OCA*
PRE SLEEP
SLEEP
DSLVA
LSLVA
POST SLEEP
DSLVA
POST SLEEP
MS5 STOTT
PRE SLEEP
SLEEP
DSLVA
LSLVA
POST SLEEP
DSLVA
POST SLEEP
DAY/NIGHT
ORBIT
143 144 145 146 147 148 149 150 151
TDRS
W
E
Z
ATTITUDE
-ZLV -XVV
NOTES
♣OBSS BERTH
⊕OBSS BERTH
♦EXERCISE
*RATE RCNFG

4

REPLANNED

FD11
GMT 11/26/09 (330)
MET Day 009

08 09 10 11 12 13 14 15 16 17 18 19
12 13 14 15 16 17 18 19 20 21 22 23 010/00

STS 129

CDR HOBAUGH	POST SLEEP; SEITE^ OMS BURN; -ZLV; EXERCISE; POD A^; FCS C/O; RCS HOT FIRE; D/O BRIEF; THANKSGIVING FEAST; SIMPLEX^ OMS BURN; PAO EVENT; -ZLV; PILOT OPS; COND T/D; DUMP#; MNVR DUMP; COND-I; COND-T; WASTE INIT; CABIN STOW; WASTE TERM; MNVR -ZLV; CABIN STOW
PLT WILMORE	POST SLEEP; FES OFF; OMS BURN; POST SLEEP; FES ON; WSB HTR; IMU; FILTER CLEANING; FCS C/O; RCS HOT FIRE; D/O BRIEF; THANKSGIVING FEAST; OMS BURN; PAO EVENT; FES-I; PILOT OPS; EXERCISE; CABIN STOW; COND CWC S/U; CABIN STOW; FES-T; MADS ON; ENTRY%
MS1 MELVIN	POST SLEEP; P/TV10 S/U; P/TV10; BLOOD SETUP; BLOOD COLL OPR; FCS C/O; RCS HOT FIRE; D/O BRIEF; THANKSGIVING FEAST; CABIN STOW; PAO EVENT; PILOT OPS; L-1 COMM CHK; EXERCISE; CABIN STOW; L-1 COMM CHK; MDDK CK
MS2 BRESNIK	POST SLEEP; PANEL@; BLOOD COLL SUBJ; FCS C/O P/TV; PAO S/U; CABIN STOW; DSLVA; D/O BRIEF; THANKSGIVING FEAST; FES OFF; CABIN STOW; PAO EVENT; COMM 2; EXERCISE; CABIN STOW; DSLVA; CABIN STOW
MS3 FOREMAN	POST SLEEP; EXERCISE; MDDK CK; SSV DEACT; CABIN STOW; D/O BRIEF; THANKSGIVING FEAST; CABIN STOW; PAO EVENT; ENTRY VIDEO SETUP; CABIN STOW; ERG STOW; RCMBNT SEAT S/U; LAUNCH ENTRY SUIT CK
MS4 SATCHER	POST SLEEP; OCA*; POST SLEEP; CABIN STOW; BLOOD COLL SUBJ; STOW; CABIN STOW; DSLVA; D/O BRIEF; THANKSGIVING FEAST; CABIN STOW; PAO EVENT; WLES; WLES DEACT; EXERCISE; DSLVA; CABIN STOW; NLP TERM 2; MINICAM
MS5 STOTT	POST SLEEP; BLOOD COLL SUBJ; EXERCISE; DSLVA; D/O BRIEF; THANKSGIVING FEAST; CABIN STOW; PAO EVENT; CABIN STOW; DSLVA; CABIN STOW; MDS CK; ERG STOW; RCMBNT SEAT S/U; LAUNCH ENTRY SUIT CK

DAY/NIGHT

ORBIT: 151 152 153 154 155 156 157 158 159

TDRS: W E Z

GND: -MLA; —MLA; —DFR —MLA —WSS; —DFR —WSS

ATTITUDE: -ZLV -XVV; OMS; -ZLV -XVV; FCS C/O-H/F; -ZLV -XVV; SIMPLEX; -ZLV -XVV; -ZLV -YVV; -ZLV -XVV

NOTES: *DECNFG; ^HTR RCNFG; @HERITAGE PANEL STOW; #GATHER EQUIP; %COOLING CNFG

5

REPLANNED

FD11

GMT 11/26/09 (330) 20 21 22 23 11/27 01 02 03 04 05 06 07

MET Day 010 010/00 01 02 03 04 05 06 07 08 09 10 11 12

FD12

STS 129						
CDR HOBAUGH	PRE SLEEP	PMC A/G	PRE SLEEP	SLEEP	LOG	POST SLEEP
PLT WILMORE	PRE SLEEP			SLEEP	LOG	POST SLEEP
MS1 MELVIN	KU STOW	PGSC STOW PART I	PRE SLEEP	SLEEP	LOG	POST SLEEP
MS2 BRESNIK	KU STOW	PRE SLEEP	DSLVA	SLEEP	LOG	POST SLEEP
MS3 FOREMAN	PRE SLEEP			SLEEP		POST SLEEP
MS4 SATCHER	PRE SLEEP		DSLVA	SLEEP	LOG	POST SLEEP
MS5 STOTT	PRE SLEEP		DSLVA	SLEEP	LOG	POST SLEEP

DAY/NIGHT

ORBIT 159 160 161 162 163 164 165 166 167

TDRS W E Z

GND — DFR -WSS — DFR — MLA -WSS — DFR — MLA — WSS — DFR -MLA — WSS — DFR -WSS

ATTITUDE -ZLV -XVV

NOTES

6

STS-129/ULF3 FD11

REPLANNED

GMT Date 11/26 (330) | W | TDRSE | Z | D/N | ORB | MET Day 009 | ATT | CDR HOBAUGH | PLT WILMORE | MS1 MELVIN | NOTES

08:00 – 09:00 – 10:00 – 11:00 – 12:00

04:00 – 05:00 – 06:00 – 07:00

149 – 150 – 151

-ZLV -XVV

SLEEP

SLEEP

SLEEP

FD11 EZ ACTIVITIES:
- TEPC (STATUS CHECK)
  - (ORB OPS, CREW SYS)
- FLUID LOADING PREP
  - Fill Drink Containers per MSG 103
- PCS 1(2) Config (ORB OPS, ECLS)
  - Configure to PCS System 2
- HARD REBOOT ALL PGSCs EXCEPT:
  - STS-1(OCA ROUTER), STS-5(RPOP2), AND STS-6(WLES)

FD11 CABIN STOW ACTIVITIES
- Remove loose items stored in A/L
- Perform SEAT INSTALLATION
- Perform FLIGHTS WITH RETENTION NET (REF DATA, ENTRY STOW)

SLEEP LOGBOOK (SDBI 1634)
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP LOGBOOK (SDBI 1634)
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP LOGBOOK (SDBI 1634)
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

STS-129/ULF3 FD11

REPLANNED

GMT Date 11/26 (330) | W | TDRSE | Z | D/N | ORB | MET Day 009 | ATT | MS2 BRESNIK | MS3 FOREMAN | MS4 SATCHER | MS5 STOTT | NOTES

08:00
04:00
09:00
05:00
10:00
06:00
11:00
07:00
12:00

149
150
151

-ZLV
-XVV

SLEEP

DRY SALIVA CLCT (ORB OPS, SDBI)
LIQUID SLVA SAMPLE (ORB OPS, SDBI)
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

DRY SALIVA CLCT (ORB OPS, SDBI)
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

STS-129/ULF3 FD11

REPLANNED

GMT Date 11/26 (330) | W | TDRSE | Z | D/N | ORB | MET Day 009 | ATT

CDR HOBAUGH	PLT WILMORE	MS1 MELVIN	NOTES
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
	L1 FLASH EVAP CNTLR PRI A-OFF		
ON-ORBIT OMS BURN (ORB OPS, OMS)	ON-ORBIT OMS BURN (ORB OPS, OMS)	P/TV10 SEITE,SIMPLEX PAYLOADS (PHOTO/TV, SCENES) Perform SETUP	UPDATE ORBITAL MNVR PAD
< SEITE TIG (14:01)		P/TV10 SEITE,SIMPLEX PAYLOADS (PHOTO/TV, SCENES) OPS, ITEM 1	
MNVR (TRK) -ZLV -XVV TG=2 BV=3 OM=0 A/AUTO/VERN Init TRK	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	SDBI 1900, INTEGRATED IMMUNE BLOOD CLCT (ORB OPS, SDBI) Perform SETUP FOR BLOOD SAMPLE CLCT	
	On MCC Go: L1 FLASH EVAP CNTLR PRI A-ON	SDBI 1900, INTEGRATED IMMUNE BLOOD CLCT (ORB OPS, SDBI) Perform BLOOD SAMPLE COLLECTION (OPR)	
	W/B STEAM VENT HTR ACT A		
	IMU STAR OF OPPTY ALIGN (ORB OPS, GNC)		
EXERCISE	FILTER CLEANING (IFM, SCHEDULED MAINTENANCE)	A R2 √BLR CNTLR/HTR(three) -B PWR (three) -ON	
B A14 RCS/OMS HTR L POD - B OFF - A AUTO R POD - B OFF - A AUTO			
RCS/OMS POD HTR RECONFIG B			UPDATE TFL 161
FCS CHECKOUT (ORB OPS, GNC)	FCS CHECKOUT (ORB OPS, GNC)	FCS CHECKOUT (ORB OPS, GNC)	

Time scale: 08:00, 09:00, 10:00, 11:00; 12:00, 13:00, 14:00, 15:00, 16:00

Attitude: -ZLV -XVV; OMS; -ZLV -XVV

Sleep: 151, 152, 153, 154

STS-129/ULF3 FD11

REPLANNED

GMT — Date 11/26 (330) — W — TDRSE — Z — D/N — ORB — MET — Day 009 — ATT

MS2 BRESNIK	MS3 FOREMAN	MS4 SATCHER	MS5 STOTT	NOTES
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
			C √MCC prior to configuring; RECONFIGURE OCA D/L RATE(Ch.2) (ORB OPS, PGSC) Part D then A, omit Step 4 Notify MCC when complete.	
		RECONFIGURE OCA DOWNLINK RATE C POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)		
	EXERCISE			
HERITAGE PANEL STOW Ref. MSG 109			SDBI 1900, INTEGRATED IMMUNE BLOOD CLCT (ORB OPS, SDBI) Perform BLOOD SAMPLE CLCT (SUBJ)	
SDBI 1900, INTEGRATED IMMUNE BLOOD CLCT (ORB OPS, SDBI) Perform BLOOD SAMPLE CLCT (SUBJ)	CGBA & ABRS STATUS CK(CUE CARD) CGBA only GLACIER STATUS CHECK (CUE CARD) SSV DEACTIVATION (PHOTO/TV, SSV)	CABIN CONFIG/STOW		
FCS CHECKOUT CAMR SETUP (PHOTO/TV, REF PROC) Perform Setup		SDBI 1900, INTEGRATED IMMUNE BLOOD CLCT (ORB OPS, SDBI) Perform BLOOD SAMPLE CLCT (SUBJ)		
		SDBI 1900, INTEGRATED IMMUNE BLOOD CLCT (ORB OPS, SDBI) Perform STOW HARDWARE	EXERCISE	
HD CC DNLK (PHOTO/TV, CANON G1)	CABIN CONFIG/STOW			
		CABIN CONFIG/STOW		
CABIN CONFIG/STOW				

Time scale: 08:00, 09:00, 10:00, 11:00 — 12:00, 13:00, 14:00, 15:00, 16:00

ATT: -ZLV -XVV OMS -ZLV -XVV

ORB: 151, 152, 153, 154

STS-129/ULF3 FD11

REPLANNED

GMT Date 11/26 (330) | W | TDRSE | Z | D/N | ORB | MET Day 009 | ATT

CDR HOBAUGH	PLT WILMORE	MS1 MELVIN	NOTES
FCS CHECKOUT (ORB OPS, GNC)	FCS CHECKOUT (ORB OPS, GNC)	FCS CHECKOUT (ORB OPS, GNC)	
RCS HOT FIRE TEST (ORB OPS, RCS) In Step 6, DAP: A1/AUTO/VERN	RCS HOT FIRE TEST (ORB OPS, RCS) In Step 6, DAP: A1/AUTO/VERN	RCS HOT FIRE TEST (ORB OPS, RCS) In Step 6, DAP: A1/AUTO/VERN	
DEORBIT BRIEFING	DEORBIT BRIEFING	DEORBIT BRIEFING	
MEAL	MEAL	MEAL	
ON-ORBIT OMS BURN (ORB OPS, OMS)	ON-ORBIT OMS BURN (ORB OPS, OMS)	CABIN CONFIG/STOW	UPDATE ORBITAL MNVR PAD
< SIMPLEX TIG (18:40)			
PUBLIC AFFAIRS EVENT KU AVAIL: 18:28 - 19:08	PUBLIC AFFAIRS EVENT KU AVAIL: 18:28 - 19:08	PUBLIC AFFAIRS EVENT KU AVAIL: 18:28 - 19:08	
MNVR (TRK) -ZLV -XVV TG=2 BV=3 OM=0 A1/AUTO/VERN Init TRK	SUPPLY H2O DUMP USING FES (ORB OPS, ECLS) Step 1 using FES Pri A	PILOT WITH RHC (ORB OPS, PGSC)	
PILOT WITH RHC (ORB OPS, PGSC)	PILOT WITH RHC (ORB OPS, PGSC)		

ATT: -ZLV -XVV; SIMPLEX; -ZLV -XVV

Time scale: 12:00, 13:00, 14:00, 15:00; 16:00, 17:00, 18:00, 19:00, 20:00

Orbits: 154, 155, 156

STS-129/ULF3 FD11

REPLANNED

GMT Date 11/26 (330) | W | TDRSE | Z | D/N | ORB | MET Day 009 | ATT

MS2 BRESNIK	MS3 FOREMAN	MS4 SATCHER	MS5 STOTT	NOTES
CABIN CONFIG/STOW	CABIN CONFIG/STOW	CABIN CONFIG/STOW	EXERCISE	
DRY SALIVA CLCT (ORB OPS, SDBI)		DRY SALIVA CLCT (ORB OPS, SDBI)	DRY SALIVA CLCT (ORB OPS, SDBI)	
DEORBIT BRIEFING	DEORBIT BRIEFING	DEORBIT BRIEFING	DEORBIT BRIEFING	
MEAL	MEAL	MEAL	MEAL	
L1 FLASH EVAP CNTLR PRI A-OFF				
CABIN CONFIG/STOW	CABIN CONFIG/STOW	CABIN CONFIG/STOW	CABIN CONFIG/STOW	
PUBLIC AFFAIRS EVENT KU AVAIL: 18:28 - 19:08	PUBLIC AFFAIRS EVENT KU AVAIL: 18:28 - 19:08	PUBLIC AFFAIRS EVENT KU AVAIL: 18:28 - 19:08	PUBLIC AFFAIRS EVENT KU AVAIL: 18:28 - 19:08	
COMM STRING 1 C/O (PART B) (ORB OPS, COMM/INST)	ENTRY VIDEO SETUP (PHOTO/TV, REF PROC)	WLES RNDZ TOOLS C/O PREP (ORB OPS,WLE SENSORS) WLES DEACTIVATION AND TEARDOWN (ORB OPS, WLE SENSORS)		
EXERCISE	CABIN CONFIG/STOW	EXERCISE	CABIN CONFIG/STOW	

Time scale: 12:00, 13:00, 14:00, 15:00; 16:00, 17:00, 18:00, 19:00, 20:00

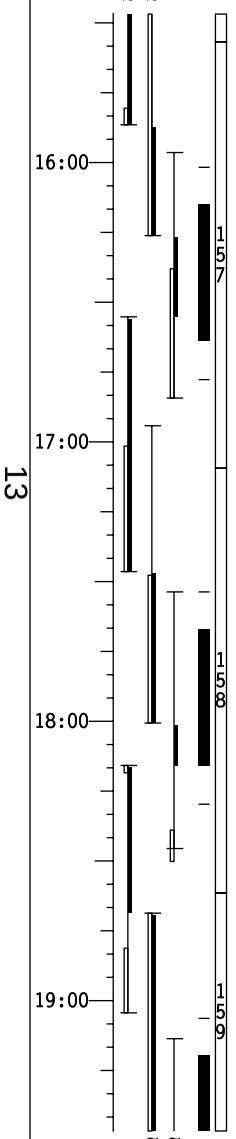
154, 155, 156

-ZLV -XVV SIMPLEX -ZLV -XVV

STS-129/ULF3 FD11

REPLANNED

GMT Date 11/26 (330) | W | TDRSE | Z | D/N | ORB | MET Day 009 | ATT



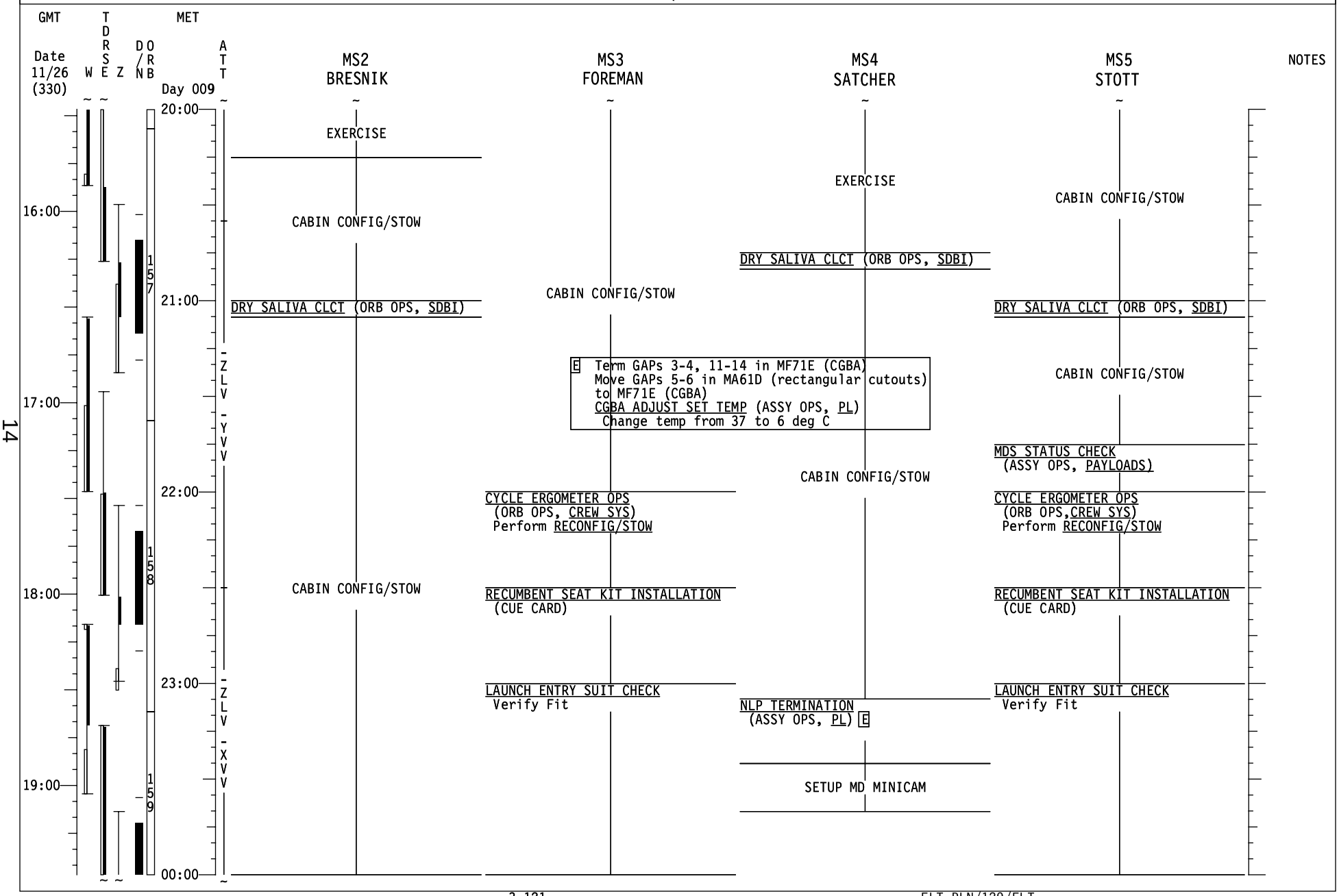
MET	CDR HOBAUGH	PLT WILMORE	MS1 MELVIN	NOTES
20:00	PILOT WITH RHC (ORB OPS, PGSC)	PILOT WITH RHC (ORB OPS, PGSC)	PILOT WITH RHC (ORB OPS, PGSC)	
	SHUTTLE CONDENSATE COLLECTION (ORB OPS, ECLS) Perform TEARDOWN Ref. MSG 100, Item 3		LANDING-1 COMM C/O (ORB OPS, COMM/INST) MLA AOS 20:12 - 20:20	
	PRE GATHER DUMP EQUIPMENT Ref. MSG 100, Item 3			
	MNVR (TRK) BIAS -ZLV -YVV (DUMP) TG=2 BV=3 OM=70 A1/AUTO/VERN Init TRK	EXERCISE		
	CWC OVERBOARD DUMP (ORB OPS, ECLS) √MCC before procedure init Initiate Condensate Dump			
21:00			EXERCISE	
	CWC OVERBOARD DUMP (ORB OPS, ECLS) Perform DUMP TERMINATION Ref. MSG 100, Item 3			
	SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) Initiate Waste Dump Ref. MSG 100, Item 3			UPDATE H2O WASTE DUMP QTY
	CABIN CONFIG/STOW	CABIN CONFIG/STOW		
22:00				
	SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) Terminate Waste Dump		CABIN CONFIG/STOW	
	MNVR (TRK) -ZLV -XVV TG=2 BV=3 OM=0 A1/AUTO/VERN Init TRK	SHUTTLE CONDENSATE COLLECTION (ORB OPS, ECLS) Perform SETUP Ref. MSG 100, Item 3		
23:00		CABIN CONFIG/STOW		
	CABIN CONFIG/STOW		LANDING-1 COMM C/O (ORB OPS, COMM/INST) DFR AOS 23:17 - 23:26	
		SUPPLY WATER DUMP USING FES (ORB OPS, ECLS) On MCC GO: Step 2, FES Pri A Req'd		
		A6L MADS STRAIN GAGE - ON		
00:00		ENTRY COOLING CONFIG [D]	CGBA and ABRS STATUS CK(CUE CARD) CGBA only	
			GLACIER STATUS CHECK (CUE CARD)	

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

FLT PLN/129/FLT

STS-129/ULF3 FD11

REPLANNED



E Term GAPs 3-4, 11-14 in MF71E (CGBA)
Move GAPs 5-6 in MA61D (rectangular cutouts) to MF71E (CGBA)
CGBA ADJUST SET TEMP (ASSY OPS, PL)
Change temp from 37 to 6 deg C

STS-129/ULF3 FD11

REPLANNED

GMT Date 11/26 (330) | W | TDRSE | Z | D/N | ORB | MET Day 010 | ATT

CDR HOBAUGH	PLT WILMORE	MS1 MELVIN	NOTES
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	KU-BD ANT STOW (ORB OPS, COMM/INST)	
		PGSC NETWORK (B. TEARDOWN)	
		COLOR PRINTER STOW (ORB OPS, PGSC) Stow color printer and all STS PGSCs except STS2 (WINDECOM)	
06 √UHF MODE - OFF L9 PAYLOAD STATION A/G (two) - OFF PRIVATE MEDICAL CONFERENCE VIA A/G 2		PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)			
SLEEP	SLEEP	SLEEP	

Time scale: 20:00, 21:00, 22:00, 23:00; 00:00, 01:00, 02:00, 03:00, 04:00

ORB: 159, 160, 161, 162

ATT: -ZLV -XVV

CREW WAKE @ 10/11:00

STS-129/ULF3 FD11

REPLANNED

GMT Date 11/26 (330) | W | T D R S E | Z | D/N | O R B | MET Day 010 | ATT

MS2 BRESNIK | MS3 FOREMAN | MS4 SATCHER | MS5 STOTT | NOTES

20:00 | 21:00 | 22:00 | 23:00

159 | 160 | 161 | 162

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

-ZLV -XVV

MS2 BRESNIK

- KU-BD ANT STOW (ORB OPS, COMM/INST)
- PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)
- DRY SALIVA CLCT (ORB OPS, SDBI)
- SLEEP

MS3 FOREMAN

- PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)
- SLEEP

MS4 SATCHER

- PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)
- DRY SALIVA CLCT (ORB OPS, SDBI)
- SLEEP

MS5 STOTT

- PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)
- DRY SALIVA CLCT (ORB OPS, SDBI)
- SLEEP

CREW WAKE @ 10/11:00

MSG 101A - FD11 MISSION SUMMARY

Happy Thanksgiving Atlantis! Enjoy your dinner with your family on orbit!

YOUR CURRENT ORBIT IS: 189 X 180 NM

NOTAMS: NO CHANGE

EDW - LAKEBED RWY 15/33 GREEN - ELS ONLY. RWY 18L - UNUSABLE.
NOR - LAKEBED RUNWAYS GREEN.
NTU - AERODROME CLOSED.
NKT- AERODROME CLOSED.
YQX - TACAN YQX CH74 OTS.
LAJ - TACAN LAJ45 OTS.
PTN - AIRFIELD CLOSED.
GUA - AERODROME CLOSED.
JTY- AERODROME CLOSED.
KKI- RWY 15R/33L CLOSED. 15L/33R USABLE.
IKF - NOT USABLE. NO AGREEMENT.
BEN - NOT RECOMMENDED/NOT SUPPORTED.

NEXT 2 PLS OPPORTUNITIES:

EDW04 ORB157 – 09/20:56 SKC 7 040/08P12
KSC33 ORB171 – 10/18:09 FEW020 FEW200 7 320/14P21 (EOM)
EDW22 ORB173 – 10/21:19 FEW250 7 240/09P16

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 = 35.5 R OMS OX = 35.8
FU = 35.6 FU = 35.4

Subtract interconnect counter for current OMS quantities.

END OF PAGE 1 OF 2, MSG 101A

DELTA V AVAILABLE:

OMS	334 FPS
ARCS (TOTAL ABOVE QTY1)	55 FPS
TOTAL IN THE AFT	389 FPS
ARCS (TOTAL ABOVE QTY2)	88 FPS
FRCS (ABOVE QTY 1)	11 FPS
AFT QTY 1	75 %
AFT QTY 2	37 %

SYSTEM	FAILURE	IMPACT	WORK AROUND
ECLS	Near complete blockage of the waste dump line.	Inability to dump waste tank via nominal waste dump path.	Two IFM options will be uplinked. One of these IFM options may be utilized if landing does not occur on FD12.
RCS	Left RCS Fuel Tank Temperature* (V42T2300C*) suspected to have biased low for several minutes during ascent.	Left and Right BFS PVT OX and FU quantities biased high to 110% and 107% respectively.	V42T2300C* has indicated expected values since post-ascent. This should be no issue for entry.

END OF PAGE 2 OF 2, MSG 101A

The MMT met to review mission progress, orbiter systems and entry readiness. The mission is progressing extremely well, and Atlantis is in great shape for entry. The waste tank dump problem was briefed, and the team is working on options to perform an IFM to restore that capability.

All of the ground systems are ready for Friday's landing opportunity. Atlantis's consumables will support EOM+3 with LiOH being the limiting consumable. Only KSC will be called up for support on EOM and EOM+1. If a deorbit wave-off occurs on EOM, an orbit adjust will be performed to bring in the second KSC opportunity on EOM+1. If a deorbit wave-off occurs on EOM+1, the alternate landing sites will be called up on EOM+2.

The following is the prescription for fluid loading on entry day:

Fluid loading water for one Entry opportunity should be pulled today. Fluid loading for a one orbit wave-off is not required to be pulled until wave-off is declared. Pulling water for fluid loading on EOM-1 will help maximize Supply Water quantities to support maximum Deorbit landing opportunities.

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

CREWMEMBER	FLUID	TOTAL # OF SALT TABLETS
CDR (Hobaugh)	16 oz Water 24 oz Grape Drink w/ A/S	10
PLT (Wilmore)	48 oz Water	12
MS1 (Melvin)	48 oz Orange Ade	N/A
MS2 (Bresnik)	40 oz Lemonade w/ A/S	10
MS3 (Foreman)	48 oz Water	12
MS4 (Satcher)	24 oz Water 24 oz Tropical Punch w/ A/S	12
MS5 (Stott)	32 oz Water	8

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

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

CREWMEMBER	FLUID	TOTAL # OF SALT TABLETS
CDR (Hobaugh)	8 oz Water 16 oz Grape Drink w/ A/S	6
PLT (Wilmore)	24 oz Water	6
MS1 (Melvin)	24 oz Orange Ade	N/A
MS2 (Bresnik)	24 oz Lemonade w/ A/S	6
MS3 (Foreman)	24 oz Water	6
MS4 (Satcher)	8 oz Water 16 oz Tropical Punch w/ A/S	6
MS5 (Stott)	16 oz Water	4

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 protocol above should be repeated.

END OF PAGE 1 OF 2, MSG 103

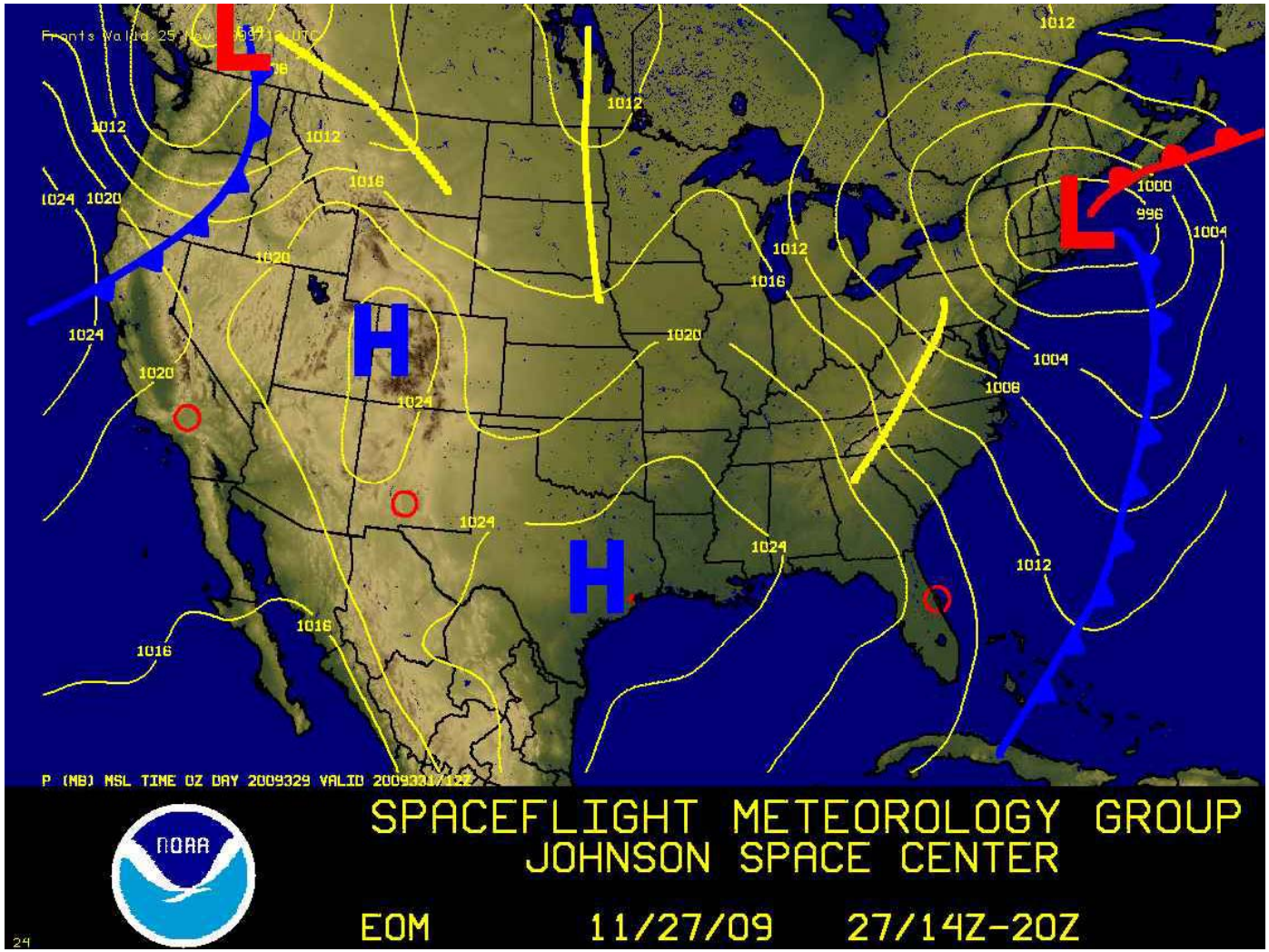
Anti-G Suit Operations:

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.

MSG 105 - FD11 WX Charts



Page 1 of 8, MSG 105

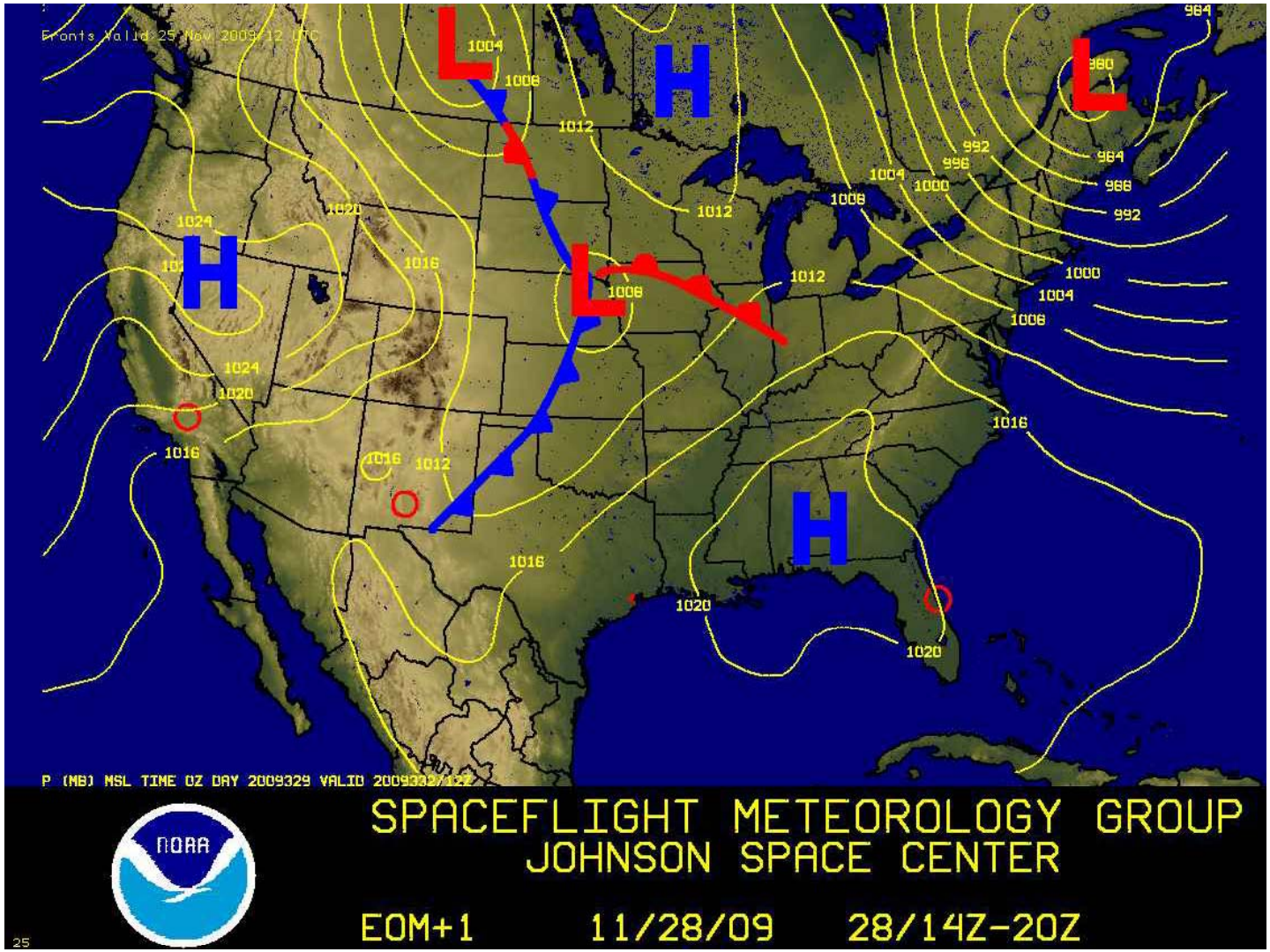
EOM FORECASTS

CONUS DAY 2 LANDING FORECASTS

STS-129

ISSUED: Wednesday Nov. 25, 2009 1400Z
Wednesday Nov. 25, 2009 0800CST

KSC	Valid: Friday 1444 UTC - 1619 UTC		
	Friday Nov 27 0844 CST - 1019 CST		
	FEW020 FEW200	7 SM	32014P21 KT
			RWY 15/33 X=5 T/H=20
EDW	Valid: Friday 1749 UTC - 1925 UTC		
	Friday Nov 27 1149 CST - 1325 CST		
	FEW250	7 SM	24009P16 KT
			RWY 22/04 X=4 H/T=15
NOR	Valid: Friday 1616 UTC - 1751 UTC		
	Friday Nov 27 1016 CST - 1151 CST		
	FEW250	7 SM	16007P11 KT
			RWY 17/35 X=3 H/T=11


Fronts Valid:25 Nov 2009 12 UTC
P (MB) MSL TIME OZ DAY 2009329 VALID 2009332/12Z
SPACEFLIGHT METEOROLOGY GROUP
JOHNSON SPACE CENTER
EOM+1
11/28/09
28/14Z-20Z
NOAA
25

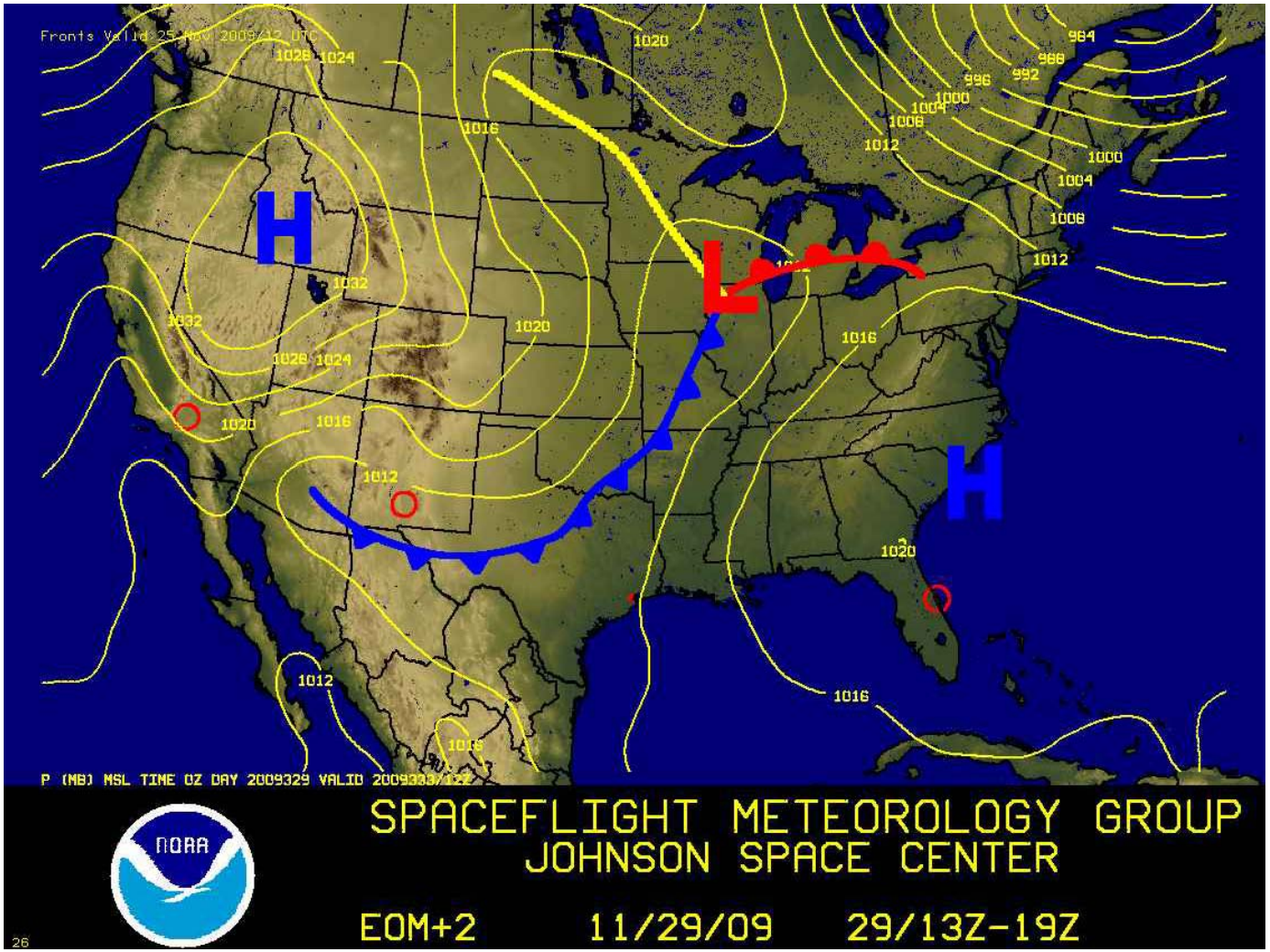
EOM+1 FORECASTS

CONUS DAY 3 LANDING FORECASTS

STS-129

ISSUED: Wednesday Nov. 25, 2009 1400Z
Wednesday Nov. 25, 2009 0800CST

KSC	Valid: Saturday 1459 UTC - 1634 UTC		
	Saturday Nov 28 0859 CST - 1034 CST		
	FEW020	7 SM	33009P15 KT
			RWY 15/33 X=1 T/H=15
EDW	Valid: Saturday 1629 UTC - 1938 UTC		
	Saturday Nov 28 1029 CST - 1338 CST		
	SCT250	7 SM	04009P14 KT
			RWY 22/04 X=1 T/H=14
NOR	Valid: Saturday 1630 UTC - 1805 UTC		
	Saturday Nov 28 1030 CST - 1205 CST		
	SCT250	7 SM	21010P16 KT
			RWY 17/35 X=9 H/T=13


Fronts Valid 25 Nov 2009/12 UTC
P (MB) MSL TIME OZ DAY 2009329 VALID 2009333/12Z
SPACEFLIGHT METEOROLOGY GROUP
JOHNSON SPACE CENTER
EOM+2
11/29/09
29/13Z-19Z
NOAA
26

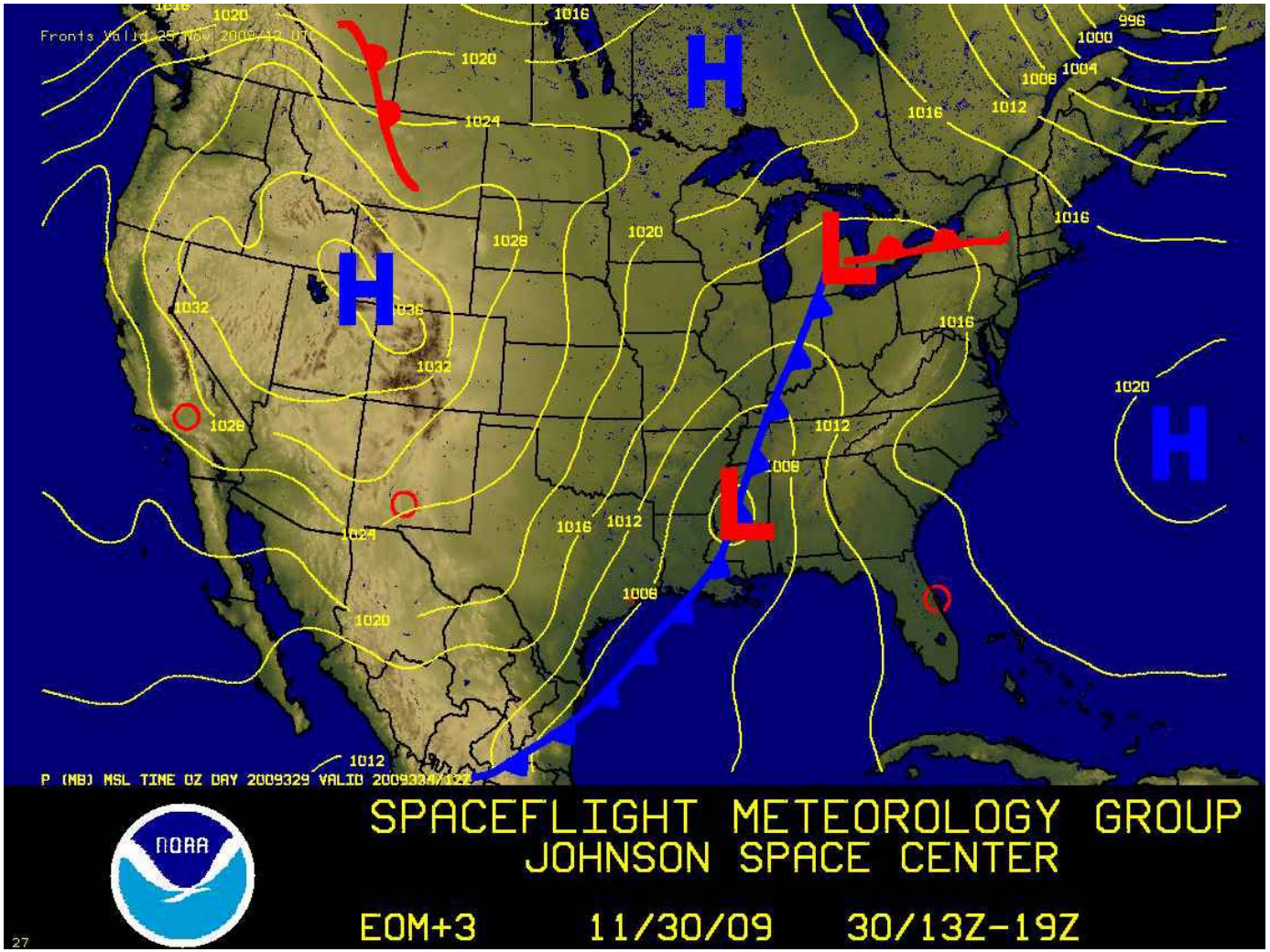
EOM+2 FORECASTS

CONUS DAY 4 LANDING FORECASTS

STS-129

ISSUED: Wednesday Nov. 25, 2009 1400Z
Wednesday Nov. 25, 2009 0800CST

KSC	Valid: Sunday 1338 UTC - 1512 UTC		
	Sunday Nov 29 0738 CST - 0912 CST		
	SCT030	7 SM	02007P11 KT
			RWY 15/33 X=8 T/H=8
EDW	Valid: Sunday 1642 UTC - 1816 UTC		
	Sunday Nov 29 1042 CST - 1216 CST		
	SKC	7 SM	06007P11 KT
			RWY 22/04 X=3 T/H=11
NOR	Valid: Sunday 1643 UTC - 1818 UTC		
	Sunday Nov 29 1043 CST - 1218 CST		
	SCT060 BKN120 OVC250	7 SM	04007P11 KT
	CHC SHRA WI 30NM		RWY 17/35 X=8 T/H=8


P (MB) MSL TIME OZ DAY 2009329 VALID
SPACEFLIGHT METEOROLOGY GROUP
JOHNSON SPACE CENTER
NOAA
EOM+3
11/30/09
30/13Z-19Z

EOM+3 FORECASTS

CONUS DAY 5 LANDING FORECASTS

STS-129

ISSUED: Wednesday Nov. 25, 2009 1400Z
Wednesday Nov. 25, 2009 0800CST

KSC	Valid: Monday 1351 UTC - 1526 UTC		
	Monday Nov 30 0751 CST - 0926 CST		
	SCT030 SCT250	7 SM	15008P14 KT
	CHC BKN030		RWY 15/33 X=1 H/T=14
EDW	Valid: Monday 1655 UTC - 1830 UTC		
	Monday Nov 30 1055 CST - 1230 CST		
	SKC	7 SM	04006P09 KT
			RWY 22/04 X=1 T/H=9
NOR	Valid: Monday 1522 UTC - 1656 UTC		
	Monday Nov 30 0922 CST - 1056 CST		
	SCT050 SCT250	7 SM	35007P11 KT
			RWY 17/35 X=1 T/H=11

URINE SOLIDS FILTER BYPASS REV E (45 min)

OBJECTIVE: Bypass failed (clogged) urine solids filter to dump waste tank.

LOCATION: WCS (Urine QD on floor QD panel and CONT H2O X-TIE WASTE QD located on outboard WCS wall) IFM C/L COMPONENT LOCATIONS, pg 3-7

TOOLS REQD:

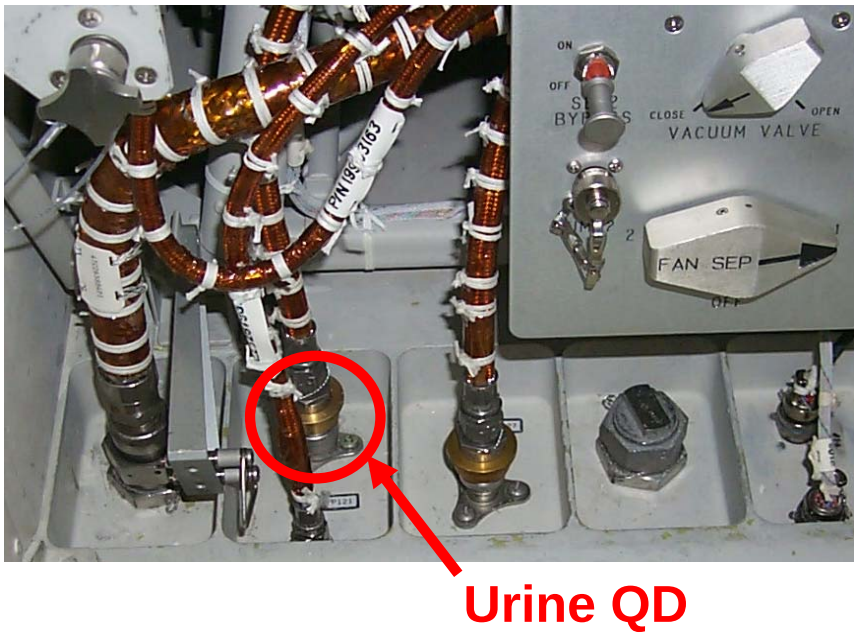
TOOL	Large Screwdriver
MDDK	8 ft Y-Y Condensate Hose
BOB	Waste Water Dump Filter (WWDF)
WCS	Dry Wipes
MISC	PPE (gloves and goggles)
	Large Ziploc Bag

NOTE

Discontinue WCS ops until procedure complete.
Don PPE.
Use Dry Wipes to absorb any fluid released during QD mate/demate

IFM SET UP

WCS
1. Remove WCS kickplate (nine fasteners, Large Screwdriver), temp stow
2. Locate Urine QD, demate (see photo below)



WASTE WATER DUMP

ML31C 3. WASTE H2O DUMP ISOL VLV – CL (tb-CL)
WCS 4. Connect one end of Y-Y Condensate Hose to the WWDF. Connect WWDF to CONT H2O X-TIE WASTE QD, connect free end of Y-Y Condensate Hose to the floor Urine QD (male).

SM 66 ENVIRONMENT

CAUTION
Tile debonding may occur if nozzle temps exceed 350 degF

ML31C 5. WASTE H2O DUMP VLV ENA/NOZ HTR – ON
√VLV - CL (tb – CL)
CRT 6. When WASTE H2O DUMP NOZ T A,B (two) > 250, continue
ML31C 7. WASTE H2O DUMP VLV – OP (tb-OP)
CRT If 'S66 WASTE H2O TEMP' msg, WASTE H2O NOZ T A(B) '↓' then:
8. WASTE H2O DUMP VLV –CL (tb – CL)
9. When'S66 WASTE H2O TEMP' msg WASTE H2O NOZ T A,B (two) exceed 250 (~10 min reheat time), continue
ML31C 10. WASTE H2O DUMP VLV – OP (tb – OP)
11. On MCC call or 'S66 WASTE H2O QTY' msg: WASTE H2O DUMP VLV – CL (tb – CL)
CRT 12. When WASTE H2O DUMP NOZ T A,B (two) > 250, continue
ML31C 13. WASTE H2O DUMP VLV ENA/NOZ HTR – OFF

IFM RECONFIG

WCS 14. Disconnect Y-Y Condensate Hose from floor Urine QD (male), disconnect WWDF from CONT H2O X-TIE WASTE QD
15. Place Y-Y Condensate Hose with attached WWDF in Ziploc bag, seal and temp stow
ML31C 16. WASTE H2O DUMP ISOL VLV – OP (tb – op)
WCS 17. Remate Urine QD
18. Reinstall WCS kickplate (nine fasteners, Large Screwdriver)
19. Stow tools

END OF PAGE 2 OF 2, MSG 106

MSG 107 - FD11 ENTRY SOTWAGE NOTE

Good morning STS-129 Flight Crew,

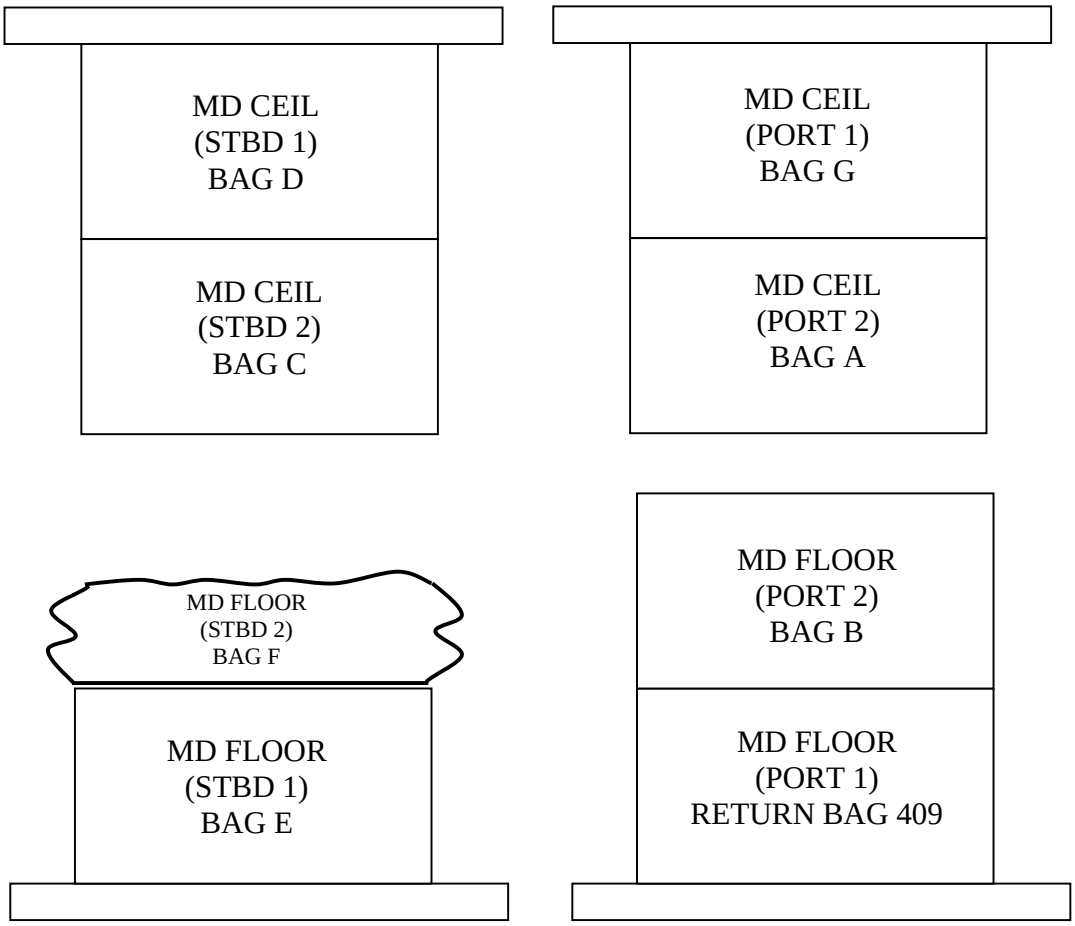
The following pages contain the latest Locker Layout along with some last-minute verification of Middeck Return locations.
Please confirm the Return location of these four (4) items:

1. ULF3 Return Item 418 (Food Containers bundle)
2. ULF3 Return Item 419 (Food Containers bundle)
3. ULF3 Return Item 420 (Food Containers bundle)
4. Failed OCA Data Cable

Important Reminder: Please be sure not to stow any items other than the three pieces of foam in MD FLOOR (STBD 2) – BAG F

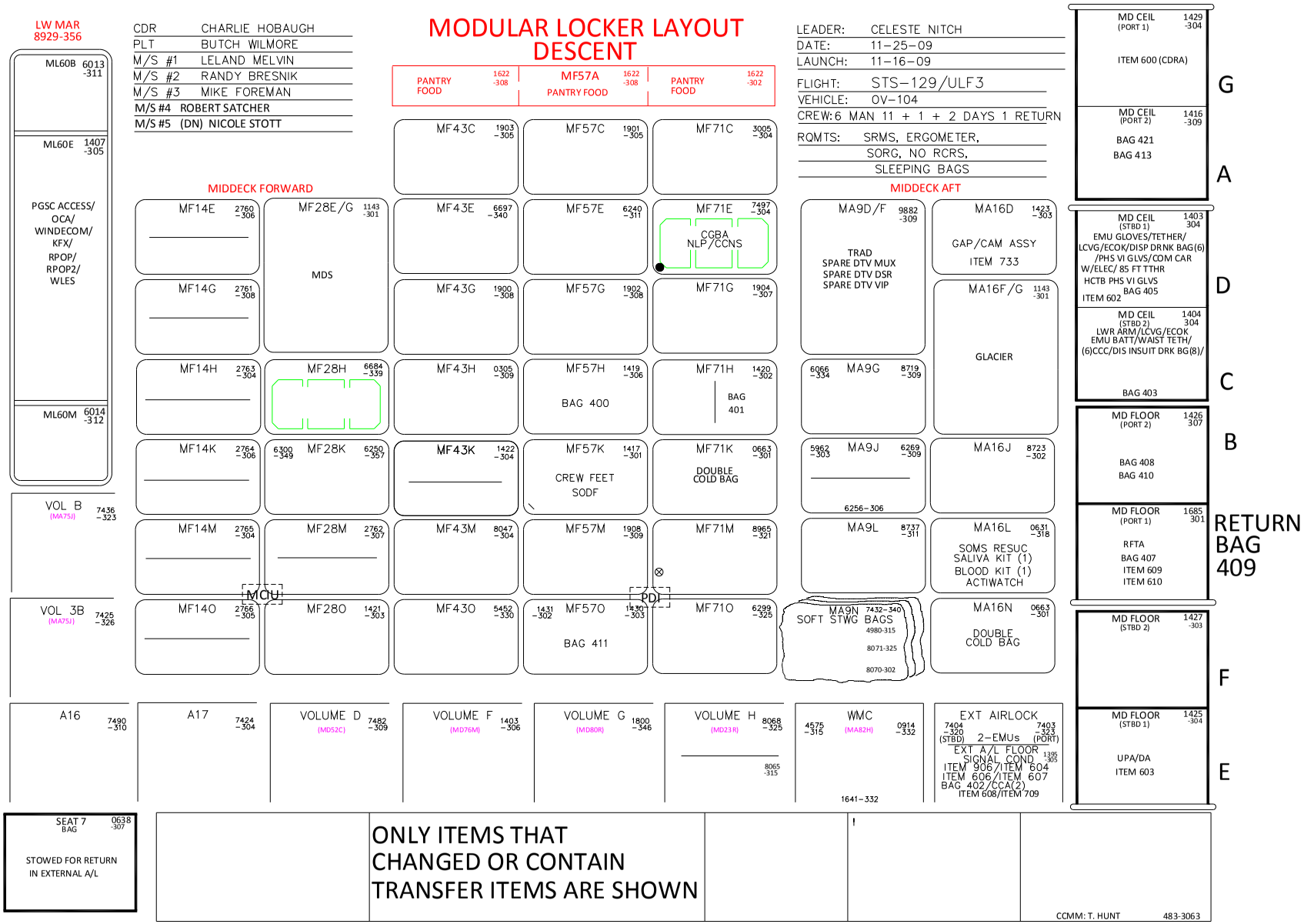
-The STS-129 Middeck Stowage Team

NOTE: NO CHANGE FROM PREVIOUS MSG 06A (21-0486A)



VIEW: DITCH LOOKING AFT

END OF PAGE 1 OF 2, MSG 107


MODULAR LOCKER LAYOUT
DESCENT
LW MAR
8929-356
CDR CHARLIE HOBAUGH
PLT BUTCH WILMORE
M/S #1 LELAND MELVIN
M/S #2 RANDY BRESNIK
M/S #3 MIKE FOREMAN
M/S #4 ROBERT SATCHER
M/S #5 (DN) NICOLE STOTT
LEADER: CELESTE NITCH
DATE: 11-25-09
LAUNCH: 11-16-09
FLIGHT: STS-129/ULF3
VEHICLE: OV-104
CREW: 6 MAN 11 + 1 + 2 DAYS 1 RETURN
RQMTS: SRMS, ERGOMETER,
SORG, NO RCRS,
SLEEPING BAGS
MIDDECK FORWARD
MIDDECK AFT
PANTRY FOOD 1622 -308
MF57A PANTRY FOOD 1622 -308
PANTRY FOOD 1622 -302
ML60B 6013 -311
ML60E 1407 -305
PGSC ACCESS/ OCA/ WINDECOM/ KFX/ RPOP/ RPOP2/ WLES
ML60M 6014 -312
VOL B (MA75J) 7436 -323
VOL 3B (MA75J) 7425 -326
MF14E 2760 -306
MF28E/G 1143 -301
MDS
MF14G 2761 -308
MF14H 2763 -304
MF28H 6684 -339
MF14K 2764 -306
6300 -349
MF28K 6250 -357
MF14M 2765 -304
MF28M 2762 -307
MCU
MF14O 2766 -305
MF28O 1421 -303
MF43C 1903 -305
MF43E 6697 -340
MF43G 1900 -308
MF43H 0305 -309
MF43K 1422 -304
MF43M 8047 -304
MF43O 5452 -330
MF57C 1901 -305
MF57E 6240 -311
MF57G 1902 -308
MF57H 1419 -306
BAG 400
MF57K 1417 -301
CREW FEET
SODF
MF57M 1908 -309
PDI
MF57O 1430 -303
BAG 411
MF71C 3005 -304
MF71E 7497 -304
CGBA
NLP/CCNS
MF71G 1904 -307
MF71H 1420 -302
BAG
401
MF71K 0663 -301
DOUBLE
COLD BAG
MF71M 8965 -321
MF71O 6299 -325
MA9D/F 9882 -309
TRAD
SPARE DTV MUX
SPARE DTV DSR
SPARE DTV VIP
MA16D 1423 -303
GAP/CAM ASSY
ITEM 733
MA16F/G 1143 -301
GLACIER
6066 -334
MA9G 8719 -309
5962 -303
MA9J 6269 -309
6256-306
MA16J 8723 -302
MA9L 8737 -311
MA16L 0631 -318
SOMS RESUC
SALIVA KIT (1)
BLOOD KIT (1)
ACTIWATCH
MA9N 7432-340
SOFT STWG BAGS
4980-315
8071-325
8070-302
MA16N 0663 -301
DOUBLE
COLD BAG
MD CEIL (PORT 1) 1429 -304
ITEM 600 (CDRA)
G
MD CEIL (PORT 2) 1416 -309
BAG 421
BAG 413
A
MD CEIL (STBD 1) 1403 304
EMU GLOVES/TETHER/
LCVG/ECOK/DISP DRNK BAG(6)
/PHS VI GLVS/COM CAR
W/ELEC/ 85 FT TTHR
HCTB PHS VI GLVS
ITEM 602
BAG 405
D
MD CEIL (STBD 2) 1404 304
LWR ARM/LCVG/ECOK
EMU BATT/WAIST TETH/
(6)CCC/DIS INSUIT DRK BG(8)/
BAG 403
C
MD FLOOR (PORT 2) 1426 307
BAG 408
BAG 410
B
MD FLOOR (PORT 1) 1685 301
RFTA
BAG 407
ITEM 609
ITEM 610
RETURN
BAG
409
MD FLOOR (STBD 2) 1427 -303
F
MD FLOOR (STBD 1) 1425 -304
UPA/DA
ITEM 603
E
A16 7490 -310
A17 7424 -304
VOLUME D (MD52C) 7482 -309
VOLUME F (MD76M) 1403 -306
VOLUME G (MD80R) 1800 -346
VOLUME H (MD23R) 8068 -325
8065 -315
WMC (MA82H) 4575 -315 0914 -332
1641-332
EXT AIRLOCK
7404 -320 (STBD)
7403 -323 (PORT)
2-EMUs
EXT A/L FLOOR SIGNAL COND 1385 -303
ITEM 906/ITEM 604
ITEM 606/ITEM 607
BAG 402/CCA(2)
ITEM 608/ITEM 709
SEAT 7 BAG 0638 -307
STOWED FOR RETURN
IN EXTERNAL A/L
ONLY ITEMS THAT
CHANGED OR CONTAIN
TRANSFER ITEMS ARE SHOWN
CCMM: T. HUNT
483-3063

WASTE H2O COLLECTION VIA CWC

REV E
(30 MINUTES)

OBJECTIVE: Use CWC as alternate form of urine collection.

LOCATION: WCS (Urine QD on floor QD panel) IFM C/L COMPONENT LOCATIONS, pg 3-7

TOOLS REQD:

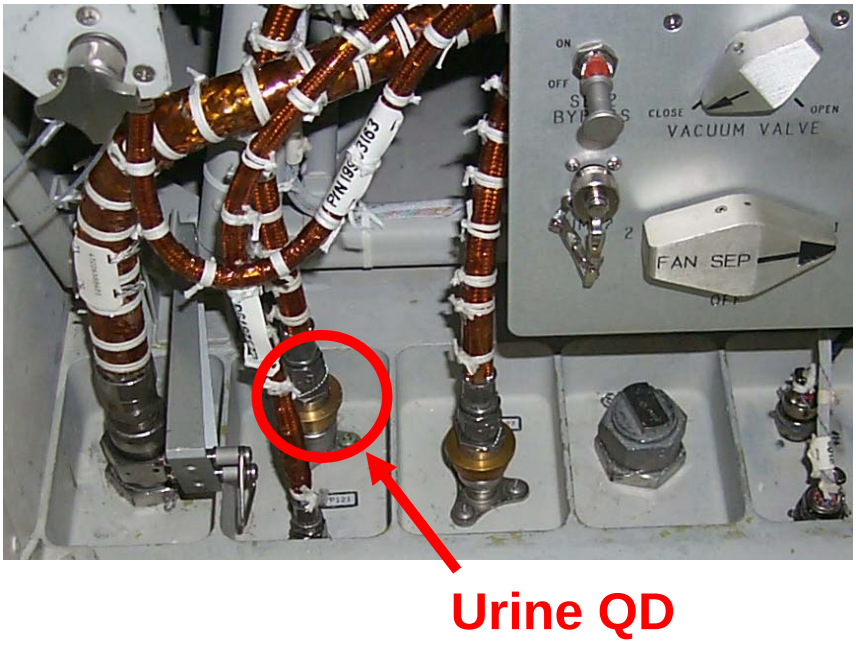
TOOL	Large Screwdriver
MDDK	8 ft Y-Y Condensate Hose
MA9L	-2 Adapter
MISC	CWC
	Dry Wipes
	PPE (gloves and goggles)

NOTE
Discontinue WCS ops until procedure complete. Don PPE.
Use Dry Wipes to absorb any fluid released during QD mate/demate.

ML31C 1. WASTE H2O TK 1 VLV - CL (tb-CL)

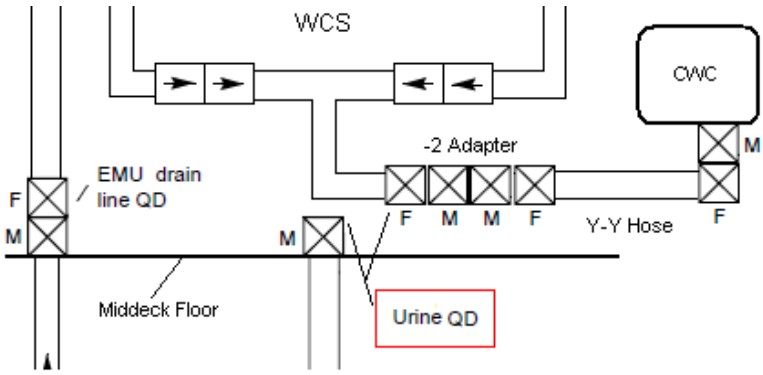
WCS 2. Remove WCS kickplate (nine fasteners, Large Screwdriver), temp stow

3. Locate Urine QD, demate (see photo below)



4. Connect -2 Adapter between one end of Y-Y Condensate Hose and the Hose side of the Urine QD (female) previously disconnected

5. Connect free end of Y-Y Condensate Hose to CWC (see diagram below for final configuration)



6. Stow tools

END OF PAGE 2 OF 2, MSG 108

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