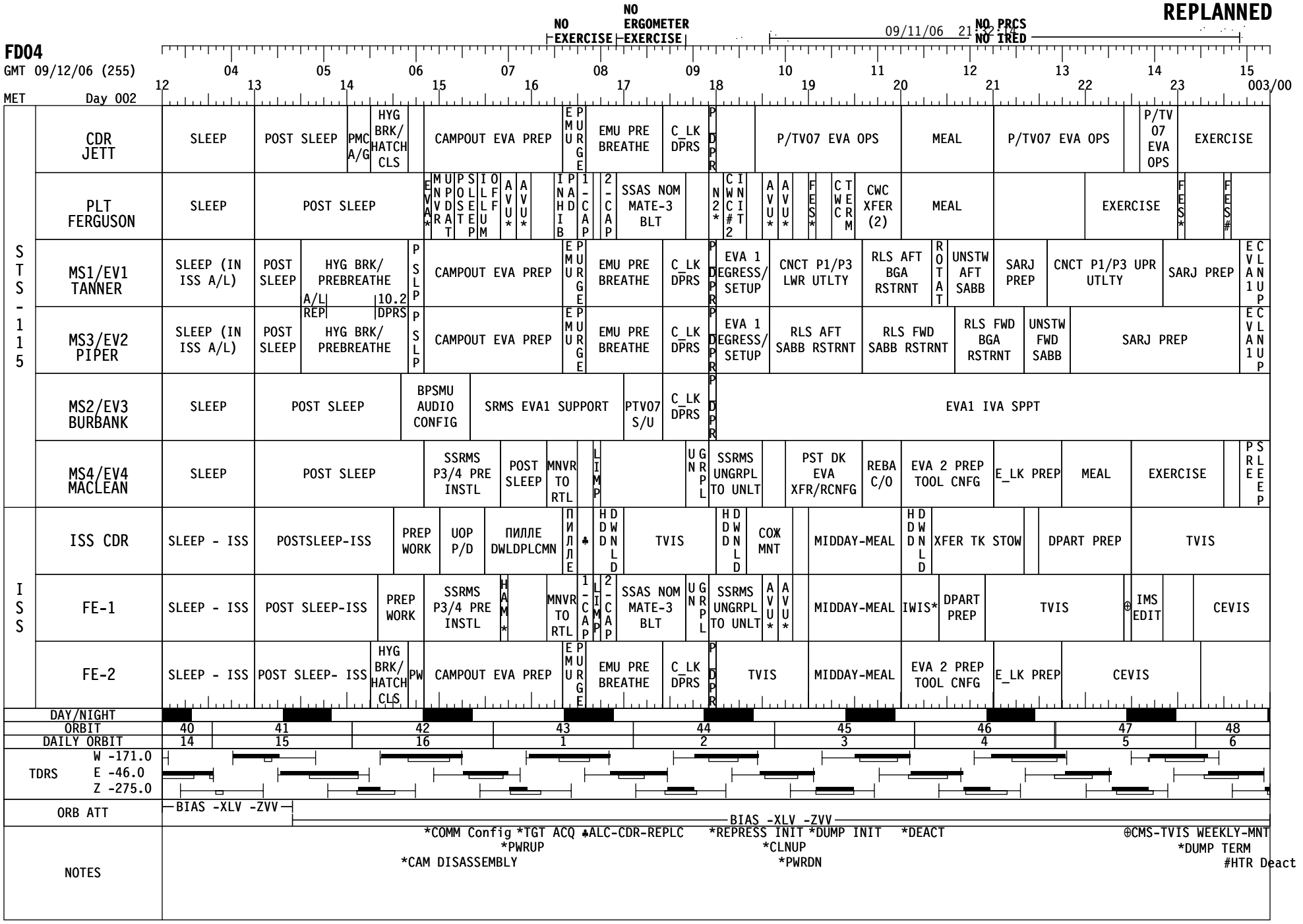
STS-115/12A

FD 04 Execute Package

MSG	Page(s)	Title
036	1 - 2	FD04 Summary Timeline **(pdf)**
034	3 - 13	FD04 Flight Plan Revision **(pdf)**
035	14 - 15	FD04 Mission Summary **(pdf)**
027	16 - 18	Contingency P3/4 Installation with Failed SSAS RTL **(pdf)**
028	19 - 20	Contingency RTL Loss After WR Limping **(pdf)**
032	21 - 23	1.301 AVU SPEE CAM P3 Truss Install **(pdf)**
037	24 - 25	Loose SARJ Thermal Blanket Troubleshooting **(pdf)**
038	26	FD04 Water Activity Summary **(pdf)**
039	27 - 30	P3 Activation Procedure Updates **(pdf)**
040	31	FD04 Monitor Ops **(pdf)**
041	32	FD4 Lighting Predicts for AVU Operations **(pdf)**
042	33	Robotics Procedure Update Rationale for FD04 **(pdf)**
043	34 - 35	BPSMU Audio Config **(pdf)**
044	---	FD03 MMT Summary **(pdf - Electronic Only)**

Approved by FAO: *M. Scheib*

Last Updated: Sep 12 2006 4:13AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*


REPLANNED
FD04
GMT 09/12/06 (255)
MET Day 002
NO EXERCISE
NO ERGOMETER EXERCISE
09/11/06 21:32:14
NO PRCS
NO TRED
12 13 14 15 16 17 18 19 20 21 22 23 003/00
04 05 06 07 08 09 10 11 12 13 14 15
STS-115
CDR JETT
SLEEP
POST SLEEP
PMC A/G
HYG BRK/ HATCH CLS
CAMPOUT EVA PREP
EMU PURGE
EMU PRE BREATHE
C_LK DPRS
DPR
P/TV07 EVA OPS
MEAL
P/TV07 EVA OPS
P/TV 07 EVA OPS
EXERCISE
PLT FERGUSON
SLEEP
POST SLEEP
EVA*
MNVR UPDAT
POSTSEP
IOLFUM
AVU*
AVU*
INHIB
PAD
1-CAP
2-CAP
SSAS NOM MATE-3 BLT
N2*
CINCI #2
AVU*
AVU*
FES*
CTW CRM
CWC XFER (2)
MEAL
EXERCISE
FES*
FES#
MS1/EV1 TANNER
SLEEP (IN ISS A/L)
POST SLEEP
HYG BRK/ PREBREATHE
A/L REP
10.2 DPRS
PSLP
CAMPOUT EVA PREP
EMU PURGE
EMU PRE BREATHE
C_LK DPRS
DPR
EVA 1 EGRESS/ SETUP
CNCT P1/P3 LWR UTLTY
RLS AFT BGA RSTRNT
ROTAT
UNSTW AFT SABB
SARJ PREP
CNCT P1/P3 UPR UTLTY
SARJ PREP
EVA1
CLNUP
MS3/EV2 PIPER
SLEEP (IN ISS A/L)
POST SLEEP
HYG BRK/ PREBREATHE
PSLP
CAMPOUT EVA PREP
EMU PURGE
EMU PRE BREATHE
C_LK DPRS
DPR
EVA 1 EGRESS/ SETUP
RLS AFT SABB RSTRNT
RLS FWD SABB RSTRNT
RLS FWD BGA RSTRNT
UNSTW FWD SABB
SARJ PREP
EVA1
CLNUP
MS2/EV3 BURBANK
SLEEP
POST SLEEP
BPSMU AUDIO CONFIG
SRMS EVA1 SUPPORT
PTV07 S/U
C_LK DPRS
DPR
EVA1 IVA SPPT
MS4/EV4 MACLEAN
SLEEP
POST SLEEP
SSRMS P3/4 PRE INSTL
POST SLEEP
MNVR TO RTL
LIMP
UNGRPL
SSRMS UNGRPL TO UNLT
PST DK EVA XFR/RCNFG
REBA C/O
EVA 2 PREP TOOL CNFG
E_LK PREP
MEAL
EXERCISE
PRE
SLEEP
ISS
ISS CDR
SLEEP - ISS
POSTSLEEP-ISS
PREP WORK
UOP P/D
ПИЛЛЕ DWLDPLCMN
ПИЛЛЕ
♣
HDDWNLD
TVIS
HDDWNLD
COMM
MIDDAY-MEAL
HDDWNLD
XFER TK STOW
DPART PREP
TVIS
FE-1
SLEEP - ISS
POST SLEEP-ISS
PREP WORK
SSRMS P3/4 PRE INSTL
HAM*
MNVR TO RTL
1-CAP
LIMP
2-CAP
SSAS NOM MATE-3 BLT
UNGRPL
SSRMS UNGRPL TO UNLT
AVU*
AVU*
MIDDAY-MEAL
IWIS*
DPART PREP
TVIS
⊕
IMS EDIT
CEVIS
FE-2
SLEEP - ISS
POST SLEEP- ISS
HYG BRK/ HATCH CLS
PW
CAMPOUT EVA PREP
EMU PURGE
EMU PRE BREATHE
C_LK DPRS
DPR
TVIS
MIDDAY-MEAL
EVA 2 PREP TOOL CNFG
E_LK PREP
CEVIS
DAY/NIGHT
ORBIT 40 41 42 43 44 45 46 47 48
DAILY ORBIT 14 15 16 1 2 3 4 5 6
TDRS W -171.0
E -46.0
Z -275.0
ORB ATT
BIAS -XLV -ZVV
BIAS -XLV -ZVV
NOTES
*COMM Config *TGT ACQ ♣ALC-CDR-REPLC *REPRESS INIT *DUMP INIT *DEACT ⊕CMS-TVIS WEEKLY-MNT
*PWRUP *CLNUP *DUMP TERM
*CAM DISASSEMBLY *PWRDN #HTR Deact

FD04

GMT 09/12/06 (255): 16, 17, 18, 19, 20, 21, 22, 23, 09/13, 01, 02, 03

MET Day 003: 003/00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12

	Crew	Activities
STS-115	CDR JETT	C T L K; R P R S; 12A POST EVA 1; PMC A/G; EVA 2 PROC REVIEW; PRE SLEEP; SLEEP
STS-115	PLT FERGUSON	N2*; RMS*; COMM*; ILLUM; ON; DCS; CHRG; PRE SLEEP; OSIU-D; SSV-4; PRE SLEEP; SLEEP
STS-115	MS1/EV1 TANNER	EVA1; CLNUP; C T L K; R P R S; 12A POST EVA 1; 760*; PRE; SLEEP; EVA 2 PROC REVIEW; 12A POST EVA 1; PRE SLEEP; SLEEP
STS-115	MS3/EV2 PIPER	EVA1; CLNUP; C T L K; R P R S; 12A POST EVA 1; PRE; SLEEP; EVA 2 PROC REVIEW; 12A POST EVA 1; PRE SLEEP; SLEEP
STS-115	MS2/EV3 BURBANK	EVA1 IVA SPPT; PRE SLEEP; 12A POST EVA 1; PRE; SLEEP; EVA 2 PROC REVIEW; PRE SLEEP; CAMPOUT MASK P/B; 10.2 DPRS; PRE SLEEP; SLEEP (IN ISS A/L)
STS-115	MS4/EV4 MACLEAN	PRE SLEEP; 12A POST EVA 1; PRE; SLEEP; EVA 2 PROC REVIEW; PRE SLEEP; CAMPOUT MASK P/B; PRE SLEEP; SLEEP (IN ISS A/L)
ISS	ISS CDR	UOP P/U; PREP WORK; PRE SLEEP ISS; EVA 2 PROC REVIEW; DPC; PRE SLEEP ISS; SLEEP - ISS
ISS	FE-1	CEVIS; JRNL; PREP WORK; DWNLD; PRE SLEEP ISS; EVA 2 PROC REVIEW; DPC; PRE SLEEP ISS; SLEEP - ISS
ISS	FE-2	C T L K; R P R S; 12A POST EVA 1; PRE SLEEP ISS; EVA 2 PROC REVIEW; DPC; PRE SLEEP ISS; SLEEP - ISS

DAY/NIGHT	
ORBIT	48, 49, 50, 51, 52, 53, 54, 55, 56
DAILY ORBIT	6, 7, 8, 9, 10, 11, 12, 13, 14
TDRS	W -171.0; E -46.0; Z -275.0
ORB ATT	BIAS -XLV -ZVV
NOTES	*REPRESS TERM *CAM DISASSEMBLY *Deconfig *PWRDN; **SVS**

MSG INDEX

MSG NO.	TITLE
27	Contingency P3/4 Installation with Failed SSAS RTL (13-1186)
28	Contingency RTL Loss After WR Limping (13-1187)
32	1.301 AVU SPEE CAM P3 Truss Install (13-1194)
34	FD04 Flight Plan Revision
35	FD04 Mission Summary (13-1195)
36	FD04 Summary Timeline
37	Loose SARJ Thermal Blanket Troubleshooting (13-1196)
38	FD04 Water Activity Summary
39	P3 Activation Procedure Updates
40	FD04 Monitor Ops
41	FD4 Lighting Predicts for AVU Operations (13-1199)
42	Robotics Procedure Update Rationale for FD04
43	BPSMU Audio Config
44	FD04 MMT Summary

1. We have made some minor changes to the P3/P4 Activation procedure. The updated pages are in message 39 and have revision marks so you can see the deltas. The four updated pages can be swapped one-for-one with the existing pages in the Assembly Ops book. On the ISS side, the entire procedure has been updated electronically in IPV.

2. Robotics procedure 1.301 AVU SPEE CAM P3 TRUSS INSTALL (MSG 032 /13-1194) has been updated and two Robotics procedures (MSG 027 /13-1186 & 028 /13-1187) have been created for use in the event of specific SSAS RTL failures during P3/P4 Install. Details regarding these updates and additions can be found in MSG 042.

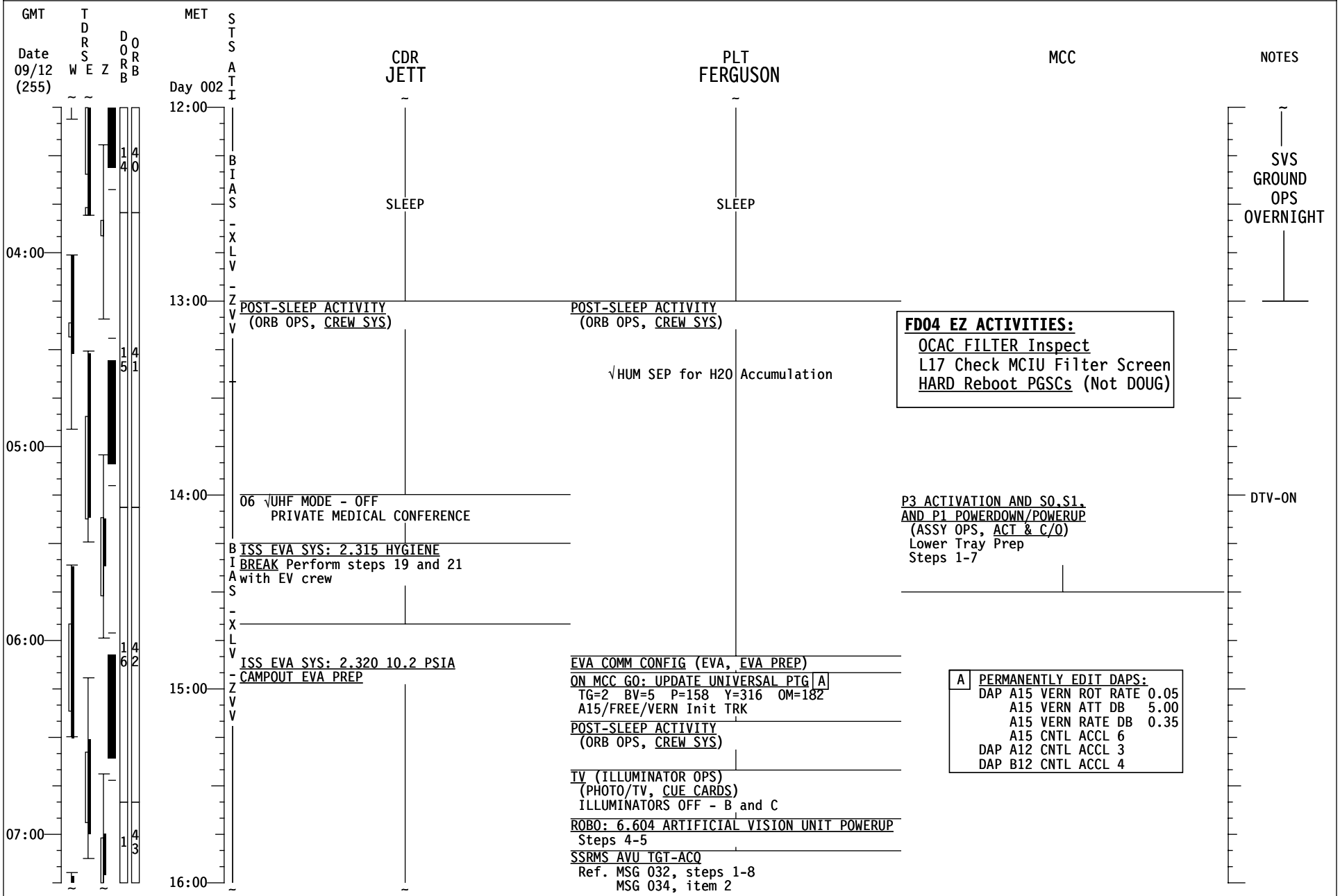
3. The MCC has remotely uplinked the latest HazMat data file to STS3 (KFX) and STS4 (DOUG). HAZMAT is currently only up to date on those laptops. The other laptops will be updated from the ground once they are back on the network.

4. A BPSMU Audio Workaround procedure has been uplinked as Msg 043. MS2 has been scheduled at MET 2/14:35 and is expected to take 45 min.

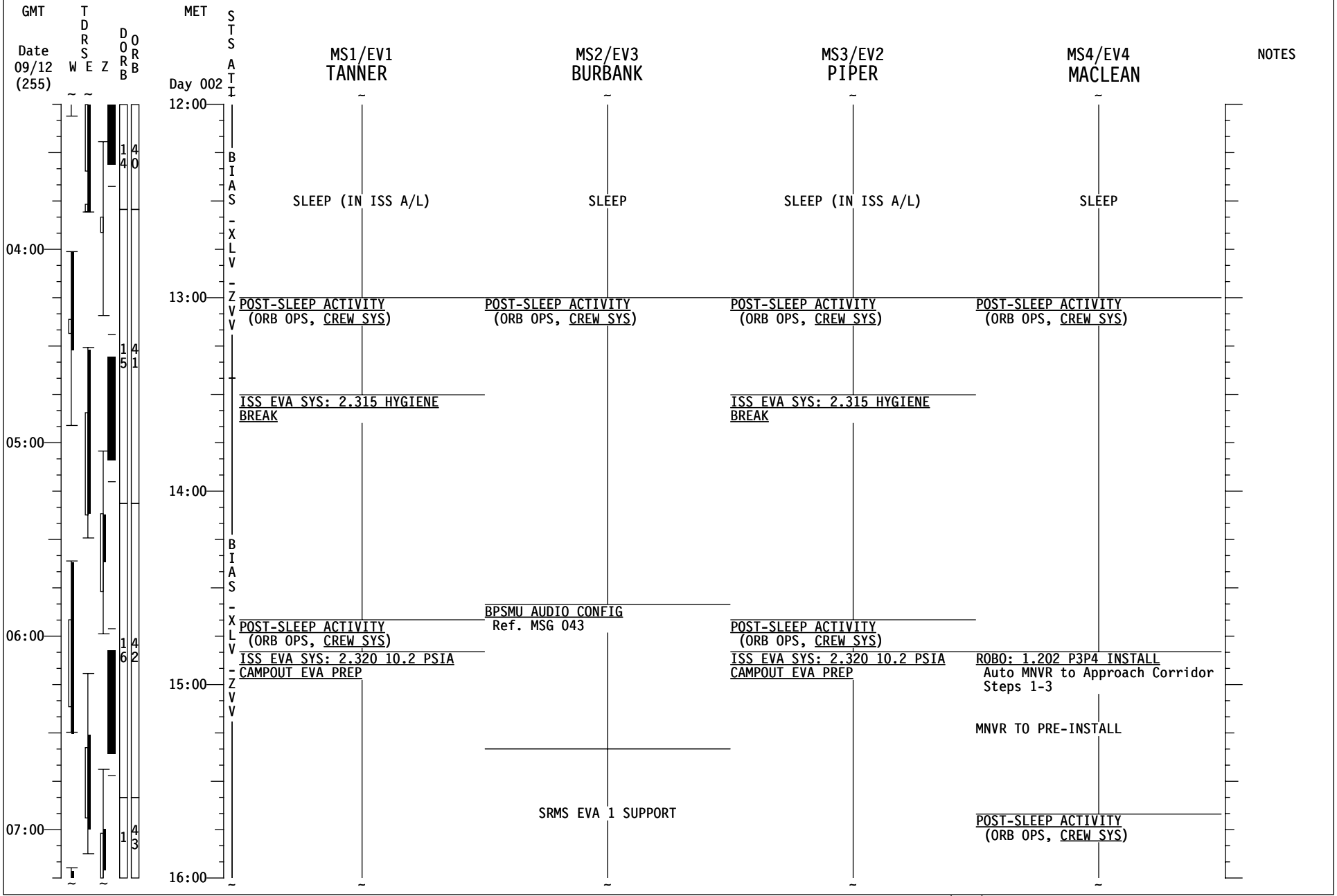
5. P1P3 SSAS: The P1P3 SSAS Prep for Mate was completed nominally by OSO overnight. Additionally, the P1P3 MBAs (1, 2, 3 and 4) have been pre-heated in the event they are needed for EVA Manual Override.

6. REPLACE PAGES 3-32 THROUGH 3-41.

STS-115 (FD04)


GMT
Date 09/12 (255)
TDRS W E Z
DOR B
ORB
MET
Day 002
STS ATT
BIAS -XLV -ZVV
12:00
13:00
14:00
15:00
16:00
04:00
05:00
06:00
07:00
140
141
142
143
CDR JETT
PLT FERGUSON
MCC
NOTES
SLEEP
SLEEP
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
√HUM SEP for H2O Accumulation
FD04 EZ ACTIVITIES:
OCAC FILTER Inspect
L17 Check MCIU Filter Screen
HARD Reboot PGSCs (Not DOUG)
SVS GROUND OPS OVERNIGHT
06 √UHF MODE - OFF
PRIVATE MEDICAL CONFERENCE
P3 ACTIVATION AND S0,S1, AND P1 POWERDOWN/POWERUP
(ASSY OPS, ACT & C/O)
Lower Tray Prep
Steps 1-7
DTV-ON
ISS EVA SYS: 2.315 HYGIENE
BREAK Perform steps 19 and 21 with EV crew
ISS EVA SYS: 2.320 10.2 PSIA
CAMPOUT EVA PREP
EVA COMM CONFIG (EVA, EVA PREP)
ON MCC GO: UPDATE UNIVERSAL PTG A
TG=2 BV=5 P=158 Y=316 OM=182
A15/FREE/VERN Init TRK
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
TV (ILLUMINATOR OPS)
(PHOTO/TV, CUE CARDS)
ILLUMINATORS OFF - B and C
ROBO: 6.604 ARTIFICIAL VISION UNIT POWERUP
Steps 4-5
SSRMS AVU TGT-ACQ
Ref. MSG 032, steps 1-8
MSG 034, item 2
A PERMANENTLY EDIT DAPS:
DAP A15 VERN ROT RATE 0.05
A15 VERN ATT DB 5.00
A15 VERN RATE DB 0.35
A15 CNTL ACCL 6
DAP A12 CNTL ACCL 3
DAP B12 CNTL ACCL 4

STS-115 (FD04)


GMT
Date
09/12
(255)
TDRS W
TDRS E
Z
DOB
ORB
140
141
142
143
MET
Day 002
STS ATT
BIAS -XLV -ZVV
BIAS -XLV -ZVV
12:00
13:00
14:00
15:00
16:00
04:00
05:00
06:00
07:00
MS1/EV1
TANNER
MS2/EV3
BURBANK
MS3/EV2
PIPER
MS4/EV4
MACLEAN
NOTES
SLEEP (IN ISS A/L)
SLEEP
SLEEP (IN ISS A/L)
SLEEP
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)
ISS EVA SYS: 2.315 HYGIENE BREAK
ISS EVA SYS: 2.315 HYGIENE BREAK
BPSMU AUDIO CONFIG
Ref. MSG 043
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
ISS EVA SYS: 2.320 10.2 PSIA CAMPOUT EVA PREP
ISS EVA SYS: 2.320 10.2 PSIA CAMPOUT EVA PREP
ROBO: 1.202 P3P4 INSTALL
Auto MNVR to Approach Corridor
Steps 1-3
MNVR TO PRE-INSTALL
SRMS EVA 1 SUPPORT
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

STS-115 (FD04)

GMT Date 09/12 (255) | TDRS W E Z | DORB | ORB | MET Day 002 | STS ATT

CDR JETT | PLT FERGUSON | MCC | NOTES

ORB 1: 4 3 — ORB 2: 4 4 — ORB 3: 4 5

GMT 08:00, 09:00, 10:00, 11:00

MET 16:00, 17:00, 18:00, 19:00, 20:00

STS ATT: BIAS -XLV -ZVV

16:00

ISS EVA SYS: 2.320 10.2 PSIA
CAMPOUT EVA PREP

EVA 1 INHIBIT PAD
(EVA, TIMELINES)

ISS EVA SYS: 1.220 EMU PURGE

P1P3 SSAS NOMINAL MATE (ASSY OPS)
Steps 6-10, 1st Stage Capture

ISS EVA SYS: 1.225 EMU
PREBREATHE

P1P3 SSAS NOMINAL MATE (ASSY OPS, ASSY)
Steps 11-15, 2nd Stage Capture. When
complete, give MCC "GO" for LOWER TRAY PREP Steps 9-10
DAP: A12/FREE/VERN

17:00

P1P3 SSAS NOMINAL MATE
(ASSY OPS, ASSY)
Steps 16-19, √ MCC prior
to performing step 19

MCC: P3 ACTIVATION AND S0,S1, AND
P1 POWERDOWN/POWERUP
(ASSY OPS, ACT & C/O)
Lower Tray Prep
Steps 9-10

After any 3 of 4 SSAS bolts
complete, Give EV "GO"
for Post Depress/Egress

ISS EVA SYS: CREWLOCK DPRS/RPRS
CUE CARD

18:00

ISS EVA SYS: POST DEPRESS

N2 REPRESS USING PL N2 (Init)
(ORB OPS, ECLS)Steps 2-5

SHUTTLE/ISS H2O CNTR FILL (Init #2)
(ORB OPS, ECLS)
Ref. MSG 038

P/TV07 EVA (Ops)
(PHOTO/TV, SCENES)
Perform during EVA
as time permits

SSRMS AVU CLNUP
Ref. MSG 032, steps 9-10
MSG 034, item 2

MCC: P3 ACTIVATION AND S0,S1, AND
P1 POWERDOWN/POWERUP
(ASSY OPS, ACT & C/O)
Lower Tray Prep
Steps 11-13

ROBO: 6.609 CUP(LAB) ARTIFICIAL
VISION UNIT (AVU) POWERDOWN)

19:00

SUPPLY WATER DUMP USING FES
(ORB OPS, ECLS) On MCC GO, perform step 1
Ref. MSG 038

SHUTTLE/ISS H2O CNTR FILL
(ORB OPS, ECLS)
Terminate CWC fill

CWC TRANSFER
Transfer 2 CWC bags to ISS.
Ref. MSG 038

MCC: P3 ACTIVATION AND S0,S1, AND
P1 POWERDOWN/POWERUP
(ASSY OPS, ACT & C/O)
Lower Tray Recovery
Steps 15-34
Upper Tray Prep
Steps 35-44

20:00

NOTES:

NO
EXERCISE

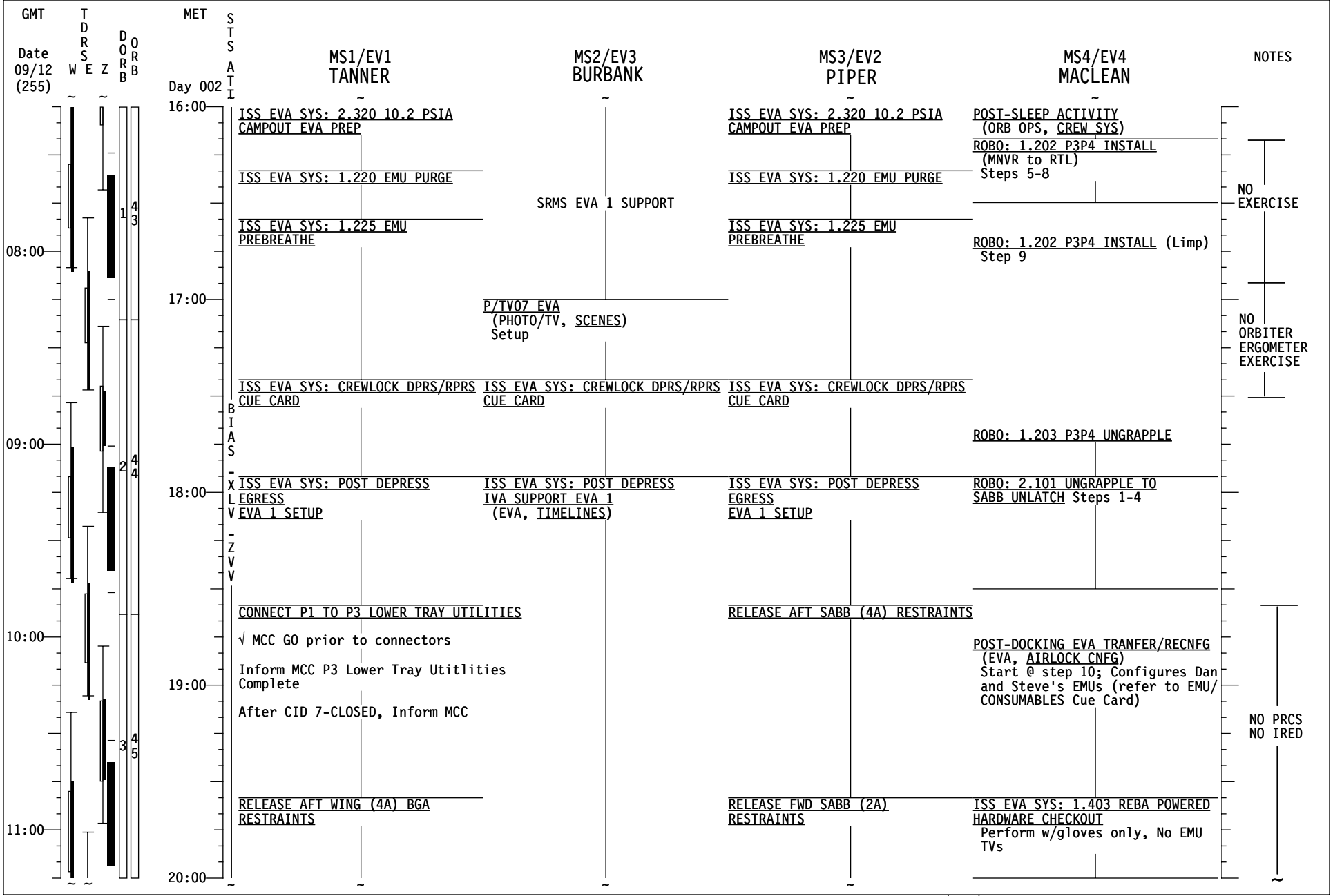
NO
ORBITER
ERGOMETER
EXERCISE [B]

[B] UPLINK
β0+Boxes
Box D1,
-18<AZ<70
-68<EL<75
Box C2,
-41<AZ<-10
-25<EL<39
Box C3
-72<AZ<-36
-4<EL<33

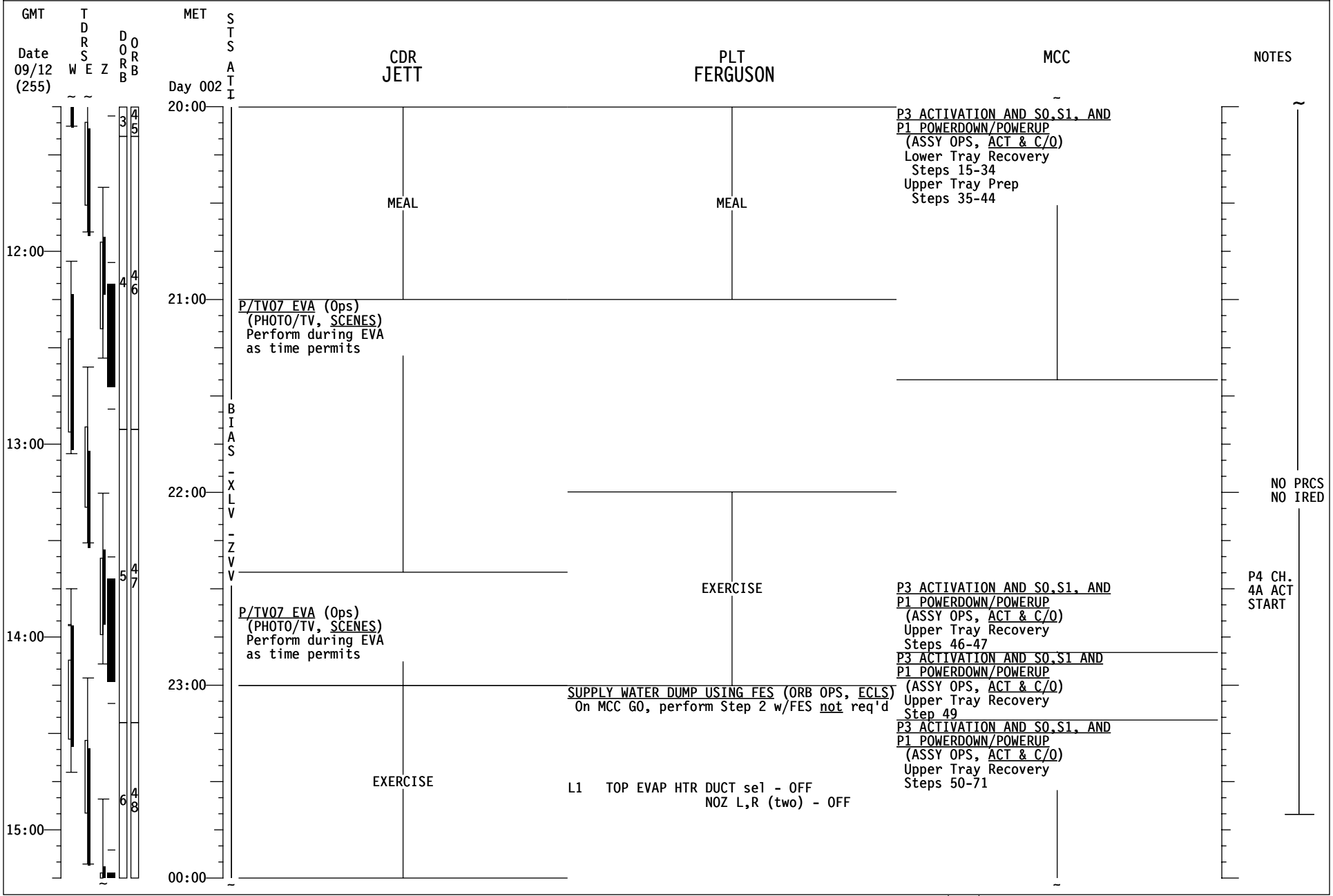
NO PRCS
NO IRED

P4 CH.
2A ACT
START

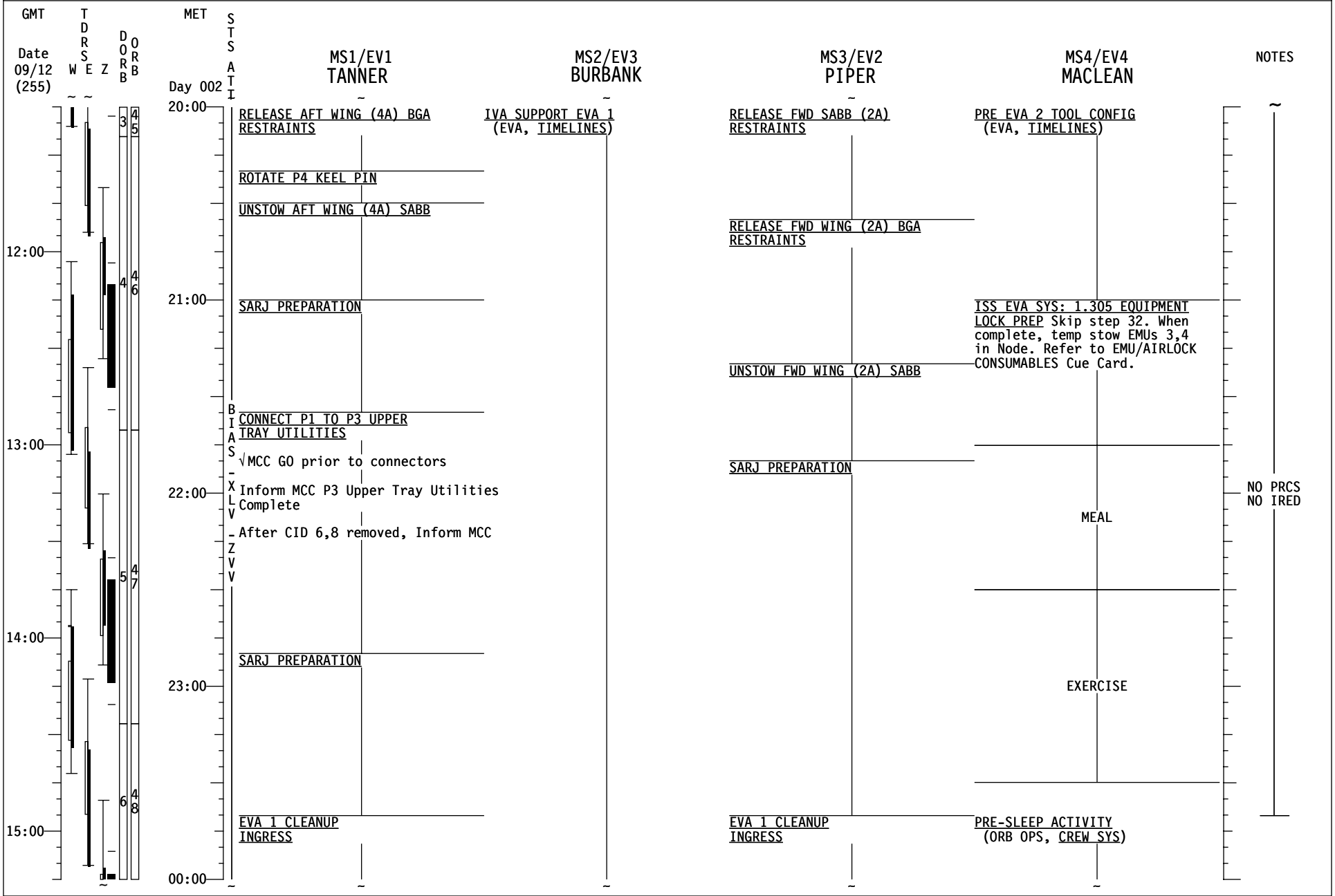
STS-115 (FD04)


GMT
Date 09/12 (255)
TDRS W E Z
DOR B
ORB
MET
Day 002
STS ATI
MS1/EV1 TANNER
MS2/EV3 BURBANK
MS3/EV2 PIPER
MS4/EV4 MACLEAN
NOTES
16:00
17:00
18:00
19:00
20:00
08:00
09:00
10:00
11:00
1 4 3
2 4 4
3 4 5
BIAS-XLV-ZVV
ISS EVA SYS: 2.320 10.2 PSIA CAMPOUT EVA PREP
ISS EVA SYS: 1.220 EMU PURGE
ISS EVA SYS: 1.225 EMU PREBREATHE
ISS EVA SYS: CREWLOCK DPRS/RPRS CUE CARD
ISS EVA SYS: POST DEPRESS EGRESS EVA 1 SETUP
CONNECT P1 TO P3 LOWER TRAY UTILITIES
√ MCC GO prior to connectors
Inform MCC P3 Lower Tray Utitlities Complete
After CID 7-CLOSED, Inform MCC
RELEASE AFT WING (4A) BGA RESTRAINTS
SRMS EVA 1 SUPPORT
P/TV07 EVA (PHOTO/TV, SCENES) Setup
ISS EVA SYS: CREWLOCK DPRS/RPRS CUE CARD
ISS EVA SYS: POST DEPRESS IVA SUPPORT EVA 1 (EVA, TIMELINES)
ISS EVA SYS: 2.320 10.2 PSIA CAMPOUT EVA PREP
ISS EVA SYS: 1.220 EMU PURGE
ISS EVA SYS: 1.225 EMU PREBREATHE
ISS EVA SYS: CREWLOCK DPRS/RPRS CUE CARD
ISS EVA SYS: POST DEPRESS EGRESS EVA 1 SETUP
RELEASE AFT SABB (4A) RESTRAINTS
RELEASE FWD SABB (2A) RESTRAINTS
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)
ROBO: 1.202 P3P4 INSTALL (MNVR to RTL) Steps 5-8
ROBO: 1.202 P3P4 INSTALL (Limp) Step 9
ROBO: 1.203 P3P4 UNGRAPPLE
ROBO: 2.101 UNGRAPPLE TO SABB UNLATCH Steps 1-4
POST-DOCKING EVA TRANFER/RECNFG (EVA, AIRLOCK CNFG) Start @ step 10; Configures Dan and Steve's EMUs (refer to EMU/CONSUMABLES Cue Card)
ISS EVA SYS: 1.403 REBA POWERED HARDWARE CHECKOUT Perform w/gloves only, No EMU TVs
NO EXERCISE
NO ORBITER ERGOMETER EXERCISE
NO PRCS NO IRED

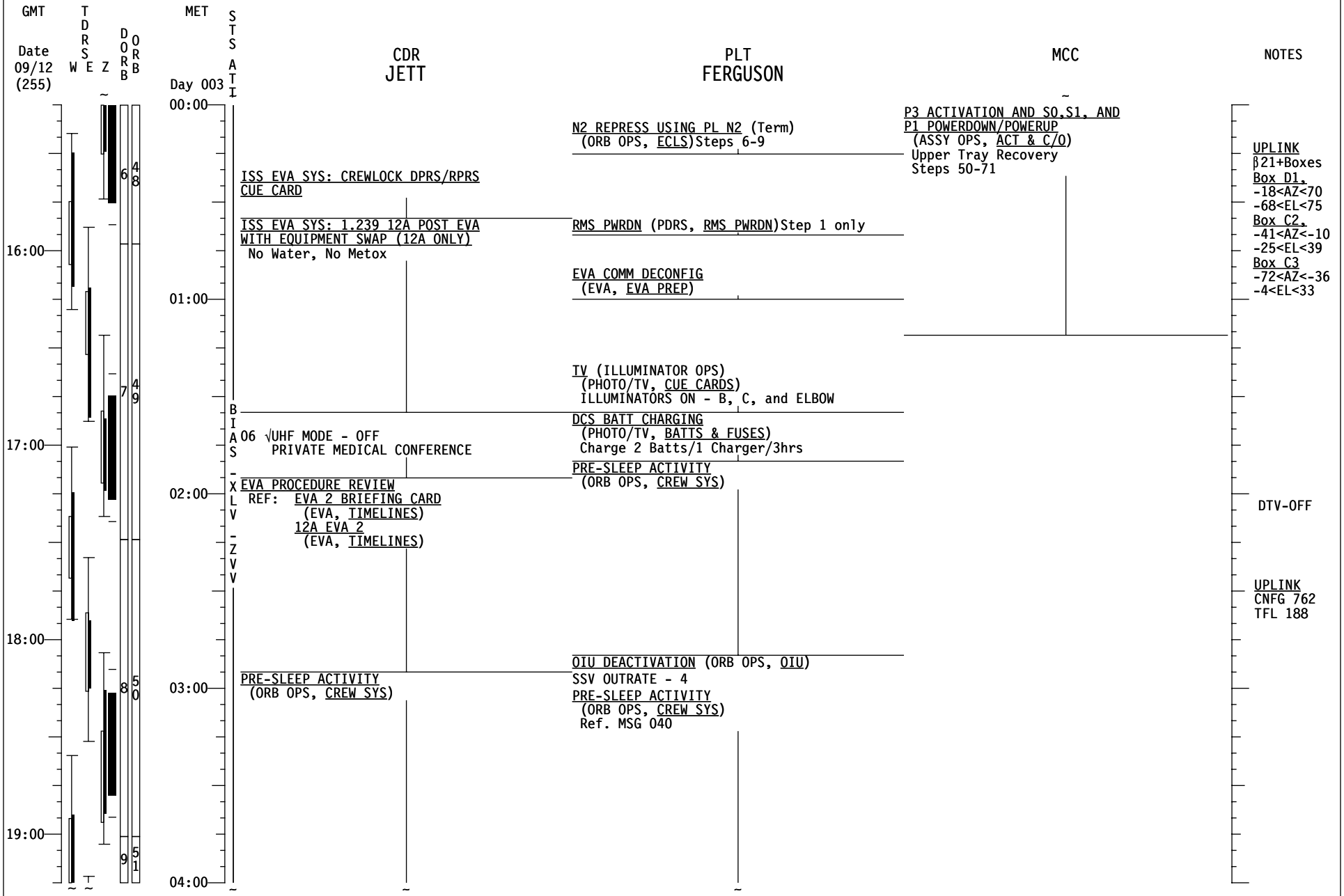
STS-115 (FD04)


GMT
Date 09/12 (255)
TDRS W E Z
DOR B
ORB
MET
Day 002
STS ATI
CDR JETT
PLT FERGUSON
MCC
NOTES
20:00
21:00
22:00
23:00
00:00
12:00
13:00
14:00
15:00
BIAS -XLV -ZVV
MEAL
MEAL
P/TV07 EVA (Ops)
(PHOTO/TV, SCENES)
Perform during EVA
as time permits
EXERCISE
P/TV07 EVA (Ops)
(PHOTO/TV, SCENES)
Perform during EVA
as time permits
EXERCISE
SUPPLY WATER DUMP USING FES (ORB OPS, ECLS)
On MCC GO, perform Step 2 w/FES not req'd
L1 TOP EVAP HTR DUCT sel - OFF
NOZ L,R (two) - OFF
P3 ACTIVATION AND SO,S1, AND
P1 POWERDOWN/POWERUP
(ASSY OPS, ACT & C/O)
Lower Tray Recovery
Steps 15-34
Upper Tray Prep
Steps 35-44
P3 ACTIVATION AND SO,S1, AND
P1 POWERDOWN/POWERUP
(ASSY OPS, ACT & C/O)
Upper Tray Recovery
Steps 46-47
P3 ACTIVATION AND SO,S1 AND
P1 POWERDOWN/POWERUP
(ASSY OPS, ACT & C/O)
Upper Tray Recovery
Step 49
P3 ACTIVATION AND SO,S1, AND
P1 POWERDOWN/POWERUP
(ASSY OPS, ACT & C/O)
Upper Tray Recovery
Steps 50-71
NO PRCS
NO IRED
P4 CH. 4A ACT START

STS-115 (FD04)


GMT
Date
09/12
(255)
TDRS W E Z
DOB
ORB
MET
STS ATI
Day 002
MS1/EV1
TANNER
MS2/EV3
BURBANK
MS3/EV2
PIPER
MS4/EV4
MACLEAN
NOTES
20:00
21:00
22:00
23:00
00:00
12:00
13:00
14:00
15:00
RELEASE AFT WING (4A) BGA RESTRAINTS
ROTATE P4 KEEL PIN
UNSTOW AFT WING (4A) SABB
SARJ PREPARATION
CONNECT P1 TO P3 UPPER TRAY UTILITIES
√MCC GO prior to connectors
Inform MCC P3 Upper Tray Utilities Complete
After CID 6,8 removed, Inform MCC
SARJ PREPARATION
EVA 1 CLEANUP INGRESS
IVA SUPPORT EVA 1 (EVA, TIMELINES)
RELEASE FWD SABB (2A) RESTRAINTS
RELEASE FWD WING (2A) BGA RESTRAINTS
UNSTOW FWD WING (2A) SABB
SARJ PREPARATION
EVA 1 CLEANUP INGRESS
PRE EVA 2 TOOL CONFIG (EVA, TIMELINES)
ISS EVA SYS: 1.305 EQUIPMENT LOCK PREP Skip step 32. When complete, temp stow EMUs 3,4 in Node. Refer to EMU/AIRLOCK CONSUMABLES Cue Card.
MEAL
EXERCISE
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)
NO PRCS
NO IRED
BIAS-XLV-ZVV

STS-115 (FD04)

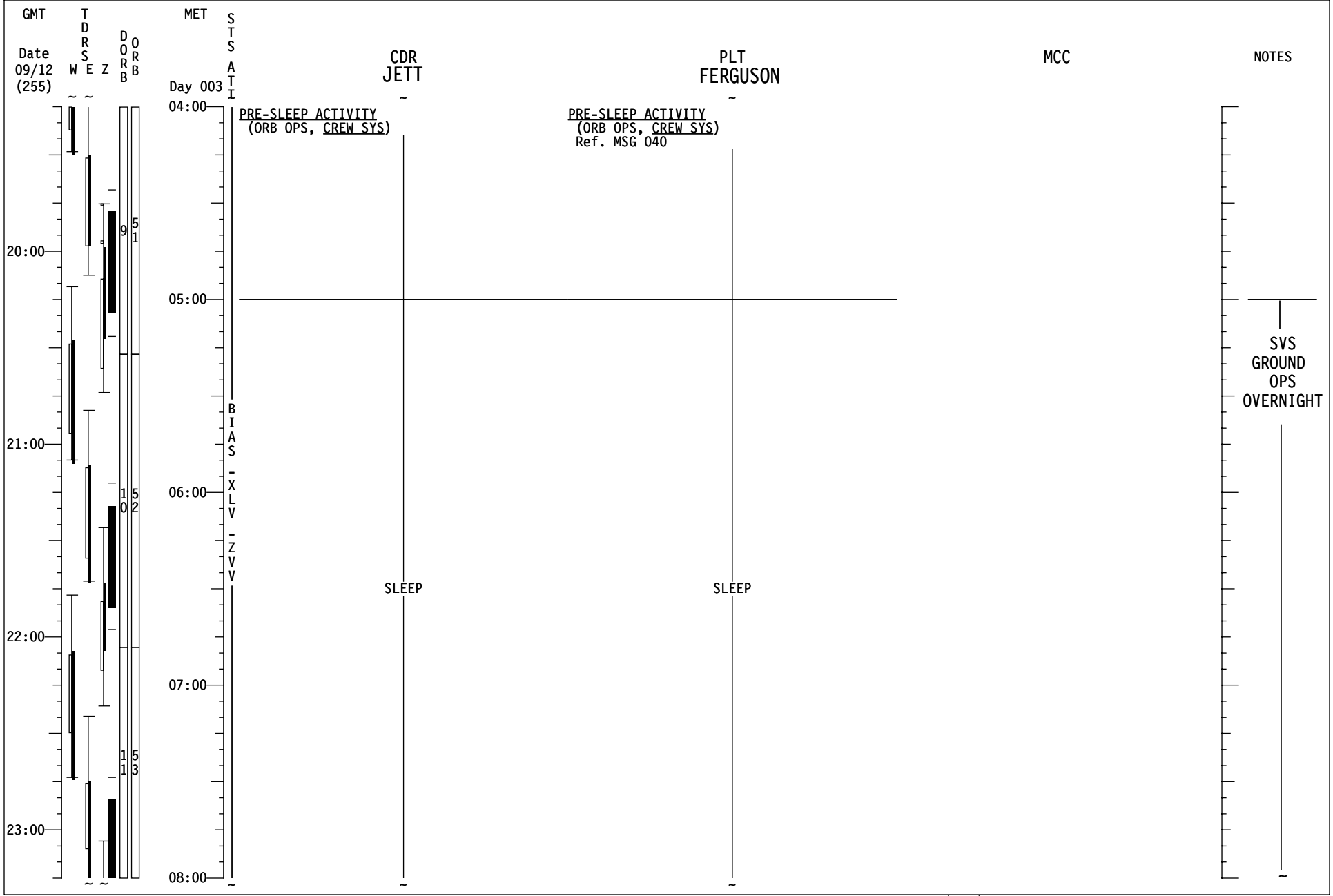

GMT
Date
09/12
(255)
TDRS W E Z
DOB
ORB
MET
Day 003
STS ATI
00:00
01:00
16:00
17:00
02:00
18:00
03:00
19:00
04:00
BIAS-XLV-ZVV
CDR
JETT
PLT
FERGUSON
MCC
NOTES
ISS EVA SYS: CREWLOCK DPRS/RPRS
CUE CARD
ISS EVA SYS: 1.239 12A POST EVA
WITH EQUIPMENT SWAP (12A ONLY)
No Water, No Metox
06 √UHF MODE - OFF
PRIVATE MEDICAL CONFERENCE
EVA PROCEDURE REVIEW
REF: EVA 2 BRIEFING CARD
(EVA, TIMELINES)
12A EVA 2
(EVA, TIMELINES)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
N2 REPRESS USING PL N2 (Term)
(ORB OPS, ECLS)Steps 6-9
RMS PWRDN (PDRS, RMS PWRDN)Step 1 only
EVA COMM DECONFIG
(EVA, EVA PREP)
TV (ILLUMINATOR OPS)
(PHOTO/TV, CUE CARDS)
ILLUMINATORS ON - B, C, and ELBOW
DCS BATT CHARGING
(PHOTO/TV, BATTS & FUSES)
Charge 2 Batts/1 Charger/3hrs
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
OIU DEACTIVATION (ORB OPS, OIU)
SSV OUTRATE - 4
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
Ref. MSG 040
P3 ACTIVATION AND S0,S1, AND
P1 POWERDOWN/POWERUP
(ASSY OPS, ACT & C/O)
Upper Tray Recovery
Steps 50-71
UPLINK
β21+Boxes
Box D1,
-18<AZ<70
-68<EL<75
Box C2,
-41<AZ<-10
-25<EL<39
Box C3
-72<AZ<-36
-4<EL<33
DTV-OFF
UPLINK
CNFG 762
TFL 188
6 48
7 49
8 50
9 51

STS-115 (FD04)

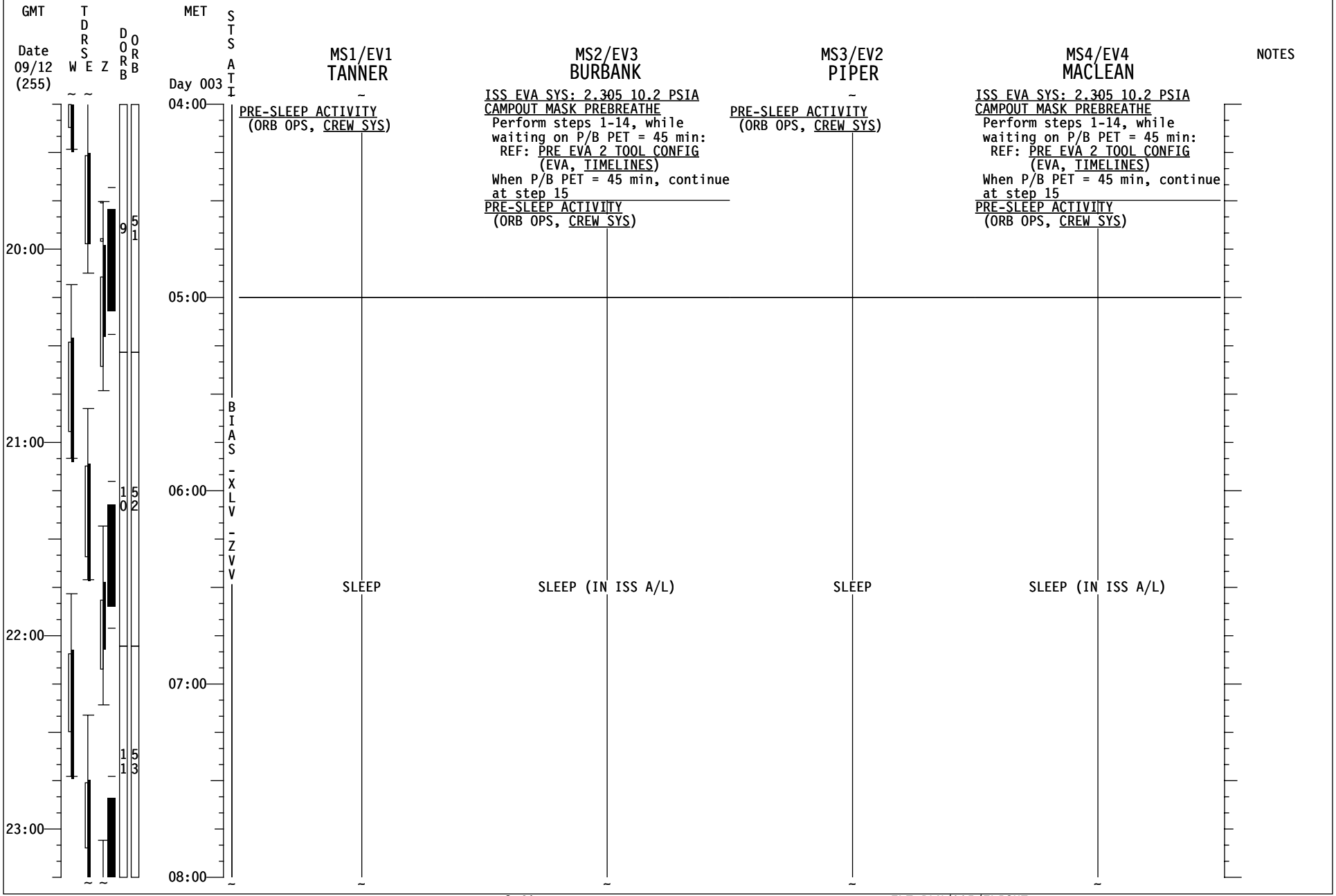
GMT Date 09/12 (255) | TDRS W E Z | DOB 6 7 8 9 | ORB 48 49 50 51 | MET Day 003 | STS ATI 00:00 01:00 02:00 03:00 04:00 | BIAS -XLV -ZVV

MS1/EV1 TANNER	MS2/EV3 BURBANK	MS3/EV2 PIPER	MS4/EV4 MACLEAN	NOTES
EVA 1 CLEANUP INGRESS	IVA SUPPORT EVA 1 (EVA, TIMELINES)	EVA 1 CLEANUP INGRESS	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
ISS EVA SYS: CREWLOCK DPRS/RPRS CUE CARD	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	ISS EVA SYS: CREWLOCK DPRS/RPRS CUE CARD		
ISS EVA SYS: 1.239 12A POST EVA WITH EQUIPMENT SWAP (12A ONLY) No Water, No Metox		ISS EVA SYS: 1.239 12A POST EVA WITH EQUIPMENT SWAP (12A ONLY) No Water, No Metox		
	ISS EVA SYS: 1.239 12A POST EVA WITH EQUIPMENT SWAP (12A ONLY) No Water, No Metox		ISS EVA SYS: 1.239 12A POST EVA WITH EQUIPMENT SWAP (12A ONLY) No Water, No Metox	
760 EVA-CAMR ONLY DISASSEMBLY (PHOTO/TV, DCS 760 EVA CAMR) BETWEEN EVAs				
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
EVA PROCEDURE REVIEW REF: EVA 2 BRIEFING CARD (EVA, TIMELINES) 12A EVA 2 (EVA, TIMELINES)	EVA PROCEDURE REVIEW REF: EVA 2 BRIEFING CARD (EVA, TIMELINES) 12A EVA 2 (EVA, TIMELINES)	EVA PROCEDURE REVIEW REF: EVA 2 BRIEFING CARD (EVA, TIMELINES) 12A EVA 2 (EVA, TIMELINES)	EVA PROCEDURE REVIEW REF: EVA 2 BRIEFING CARD (EVA, TIMELINES) 12A EVA 2 (EVA, TIMELINES)	
ISS EVA SYS: 1.239 12A POST EVA WITH EQUIPMENT SWAP (12A ONLY) No Water, No Metox	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	ISS EVA SYS: 1.239 12A POST EVA WITH EQUIPMENT SWAP (12A ONLY) No Water, No Metox	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	ISS EVA SYS: 2.305 10.2 PSIA CAMPOUT MASK PREBREATHE Perform steps 1-14, while waiting on P/B PET = 45 min: REF: PRE EVA 2 TOOL CONFIG (EVA, TIMELINES) When P/B PET = 45 min, continue at step 15	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	ISS EVA SYS: 2.305 10.2 PSIA CAMPOUT MASK PREBREATHE Perform steps 1-14, while waiting on P/B PET = 45 min: REF: PRE EVA 2 TOOL CONFIG (EVA, TIMELINES) When P/B PET = 45 min, continue at step 15	

STS-115 (FD04)


GMT
Date
09/12
(255)
TDRS W E Z
DOB 91 101 111
ORB 51 52 53
MET
Day 003
STS ATI
04:00
05:00
06:00
07:00
08:00
20:00
21:00
22:00
23:00
BIAS -XLV -ZVV
CDR
JETT
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
SLEEP
PLT
FERGUSON
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
Ref. MSG 040
SLEEP
MCC
NOTES
SVS
GROUND
OPS
OVERNIGHT

STS-115 (FD04)


GMT
Date
09/12
(255)
TDRS W E Z
DOR B
ORB
MET
Day 003
STS ATI
MS1/EV1
TANNER
MS2/EV3
BURBANK
MS3/EV2
PIPER
MS4/EV4
MACLEAN
NOTES
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
ISS EVA SYS: 2.3 05 10.2 PSIA
CAMPOUT MASK PREBREATHE
Perform steps 1-14, while
waiting on P/B PET = 45 min:
REF: PRE EVA 2 TOOL CONFIG
(EVA, TIMELINES)
When P/B PET = 45 min, continue
at step 15
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
SLEEP
SLEEP (IN ISS A/L)
SLEEP
SLEEP (IN ISS A/L)
20:00
21:00
22:00
23:00
04:00
05:00
06:00
07:00
08:00
BIAS -XLV -ZVV
091
102
113
151
152
153

MSG 035 (13-1195) - FD04 MISSION SUMMARY

Good morning Atlantis!

Thanks for one more day of superb work on orbit yesterday! Today is construction day and we will be happily following along! Good luck with powering up Station!

YOUR CURRENT ORBIT IS: 189 X 181 NM

NOTAMS:

EDWARDS (EDW) – 15/33 ELS ONLY – 18L CLOSED
WHITE SANDS (NOR) – RED
AMBERLY (AMB) - CLOSED
ANDERSEN (GUA) - 06L/24R CLOSED, ALTERNATE 06R/24L
ANDERSON BACKUP (UNZ CH 100) OUT OF SERVICE
ISTRES (FMI) - RUNWAY 33 DISTANCE MARKERS @ 300, 600, 900M
LAJES TACAN (LAJ) CH 45 OUT OF SERVICE
ORMOND BEACH (OMN) CH 73 AZIMUTH OUT OF SERVICE
RIO GALLEGOS (AWG) - NOT APPROVED
SALISBURY (SBY CH 49) OUT OF SERVICE (PRIME TACAN FOR WALLOPS)
WAKE ISLAND (WAK) - CLOSED
WAKE ISLAND (AWK) CH 82 OUT OF SERVICE
WILMINGTON (ILM) - CLOSED

NEXT 2 PLS OPPORTUNITIES:

EDW22 ORB 48 – 3/00:03 (FEW120, 030@04P08)
EDW22 ORB 64 – 4/00:26 (FEW120, VRB05)

OMS TANK FAIL CAPABILITY:

L OMS FAILS: YES (SHALLOW TARGETS)
R OMS FAILS: NO

LEAKING OMS PRPLT BURN:

L OMS LEAK: BURN OUT-OF-PLANE AN+66 <= TIG <= AN+33
OTHERWISE BURN RETROGRADE
R OMS LEAK: ALWAYS BURN RETRO

OMS QUANTITIES(%)

L OMS	OX = 33.5	R OMS OX = 33.0	
	FU = 34.5		FU = 33.7

SUBTRACT I'CNCT COUNTER FOR CURRENT OMS QUANTITIES

DELTA V AVAILABLE:

OMS	345 FPS
ARCS (TOTAL ABOVE QTY1)	35 FPS
TOTAL IN THE AFT	380 FPS
ARCS (TOTAL ABOVE QTY2)	68 FPS
FRCS (ABOVE QTY 1)	60 FPS
AFT QTY 1	91 %
AFT QTY 2	54 %

SYSTEM	FAILURE	IMPACT	WORK AROUND
DPS	CRT4 MDU Blank at Powerup - This was an occurrence of MEDS Hardware User Note 2 ("MDU DOES NOT POWER ON"). This is a random timing condition associated with the power on reset release logic.	None. MDU CRT 4 recovered after multiple power cycles at the bezel per User Note response.	If this occurs again, you are go to power cycle the MDU at the bezel 5 times (pause 5 seconds between cycles). Do not power cycle at the IDP without MCC go. To minimize the potential of hitting this timing window, continue to use this preferred sequence for powering IDPs/MDUs: IDP ON 1st, then MDU ON at bezel MDU OFF @ bezel 1st, then IDP OFF
ECLS	MNA Supply H2O Dump Line heater is deactivating on the overtemperature thermostat.	None	Use alternate heater string (MNB H2O LINE HTR B) for remainder of mission.

NOTE
This procedure should only be performed if 2 RTLs are present and all available cues (camera views, SVS, SSRMS digitals) indicate P3/4 is properly aligned such that the third RTL should be present.

1. RTL VISUAL VERIFICATION

   If either RTL-1 or RTL-3 is missing go to Step 2. Camera visual verification of Coarse Alignment Pin crossing entry plane of Coarse Alignment Cup is not possible.

   If RTL-2 is missing perform Step 1.1 only.

   1.1 RTL-2 VISUAL VERIFICATION

   Route the SSRMS Base Elbow camera to one of the RWS monitors and adjust zoom as required.

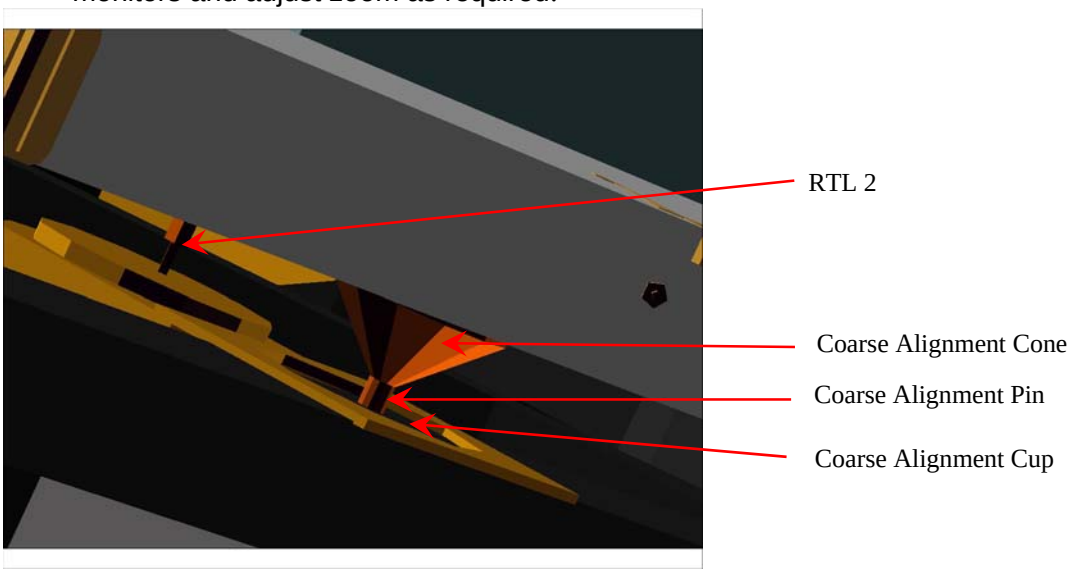


Figure 1.- 7cm Separation Reference View
(22: Base Elbow: -51, -10).

If Coarse Alignment Pin 2 has crossed the entry plane of the Coarse Alignment Cup:

Go to {1.202 P3P4 INSTALL}, step 8 (SODF: RBT FS: P3P4 INSTALL).

Else:

√**MCC-H**

2. SETUP

Route the SSRMS Base Elbow camera to one of the RWS monitors and adjust zoom as required.

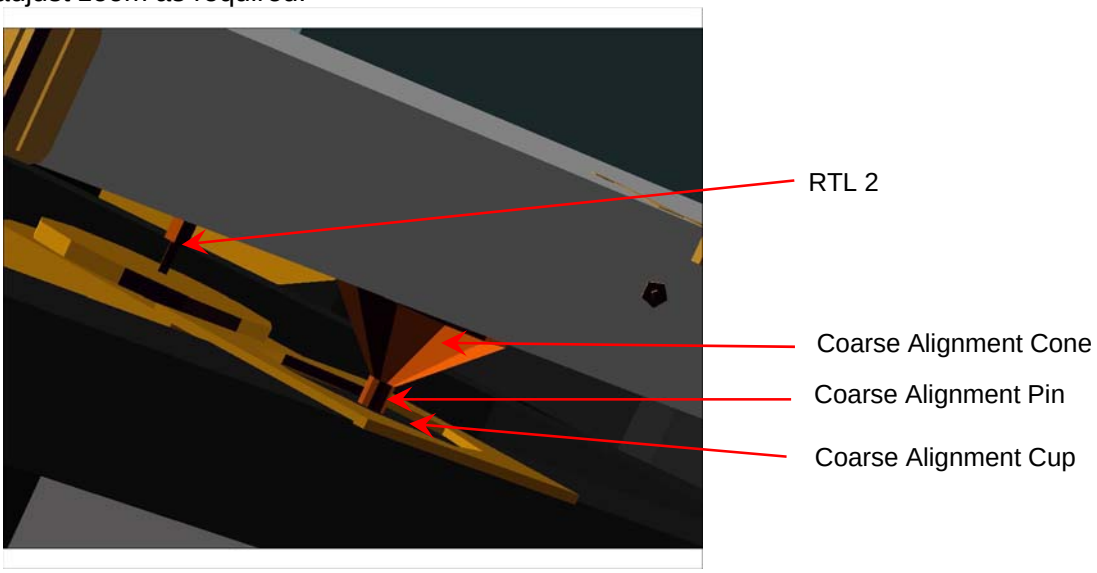


Figure 2.- RTL-2 7cm Separation Reference View
(22: Base Elbow: -51, -10).

Verify 'Loaded Parameters' (two) – P3P4 Mate, SY Held

√Display – W7>P3P4 Mate
√Command – SSRMS>Internal

√Mode – Manual (blue)
√SY - Locked

√Vernier

PCS MSS: SSRMS: Rate: SSRMS Rate

√'Scale' 'Vernier' Current: 0.5

3. VISUAL PAYLOAD ALIGNMENT

CAUTION
1. Operator should monitor Cmd vs. Actual FOR rate on RWS monitor, & stop motion if actual rate goes to zero. 2. Operator should ensure positive P1 to P3/4 interface clearance using available camera views. 3. The SVS wobble must be no greater than 0.5 degrees during the maneuver in step 3. A valid SVS solution must be available throughout the maneuver. 4. Step 3 should only be performed when S-band AOS so that MCC-H can monitor SSRMS joint motor currents.

On **MCC-H** Go:

Perform THC +X input until Coarse Alignment Pin 2 is no longer visible. (Reference figure 3)

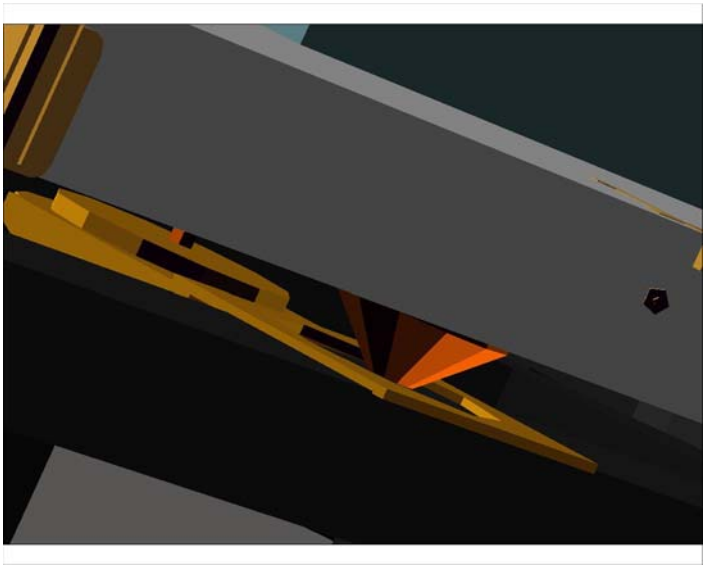


Figure 3.- RTL-2 4cm Separation
(22: Base Elbow: -51, -10).

4. ENTER STANDBY MODE (NO WR LIMPING)

PCS MSS: SSRMS: SSRMS

On **MCC-H** Go:

Enter Mode – Standby (Verify blue)

Notify SSAS Operator, “Maneuver to RTL complete – Go for Modified First Stage Capture.”

Go to {1.202 P3P4 INSTALL}, step 9 (SODF: RBT FS: P3P4 INSTALL).

NOTE
1. This procedure should be performed in the event that one or more RTLs are lost after the SSRMS WR joint was limped.
2. Crew & Ground should have recorded the SVS and/or SSRMS digital position after RTL acquisition prior to WR limping.

CAUTION
1. Operator should monitor Cmd vs. Actual FOR rate on RWS monitor, & stop motion if actual rate goes to zero.
2. Operator should ensure positive P1 to P3/4 interface clearance using available camera views.

1. RTL REACQUISITION ATTEMPT

1.1 SETUP

PCS

MSS: SSRMS [SSRMS]

Verify 'Loaded Parameters' (two) – P3P4 Mate, SY Held
√Display – W7>P3P4 Mate
√Command – SSRMS>Internal

√Vernier

MSS: SSRMS: Limp: [SSRMS Limp]

cmd None Limp (Verify Standby – blue)

MSS: SSRMS: [SSRMS]

Enter Mode – Manual (Verify blue)

MSS: SSRMS: SSRMS Manual: Joint Lock: [Joint Lock]

cmd Shoulder Yaw (Verify SY – Locked)

1.2 RTL REACQUISITION

RHC, THC

Perform required HC inputs to realign per recorded position data.

Verify RTLs (three) – green

THC

Perform THC +X input to 2 cm closer than recorded position data.

1.3 SSRMS WR LIMPING

PCS MSS: SSRMS: SSRMS

Enter Mode – Standby (Verify blue)

MSS: SSRMS: Limp: SSRMS Limp

sel WR

cmd Execute (Verify WR – Limped)

NOTE

Positive Ready to Latch (RTL) Indication is when you have at least one of two switches per RTL location showing green on the P1P3 SSAS Graphical Display, which indicates a positive RTL.

2. CONTINUE WITH P3/4 INSTALL

If 3 of 3 RTL indications are green

Notify SSAS Operator, "Maneuver to RTL complete – Go for Modified First Stage Capture."

If 2 of 3 RTL indications are green

Notify SSAS Operator, "Maneuver to RTL complete – Go for Modified First Stage Capture."

Monitor missing RTL indication during first stage capture.

After first stage capture is complete, √ **MCC-H** if missing RTL was not green at any point during first stage capture.

If less than 2 of 3 RTL indications are green

√ **MCC-H**

Go to {1.202 P3P4 INSTALL}, step 9 (SODF: RBT FS: P3P4 INSTALL).

1. CONFIGURING VIDEO

RWS Route video (if required)

Table 1. Camera Routing

MONITOR SELECT	CAMERA SELECT
MON 1	94
MON 3	94

Verify P3/P4 UNGRAPPLE, step 4 (PDRS, NOM P3/P4 HANDOFF) complete.

2. LOAD SCRIPT FILE

MON 1 **cmd** Browse [Alt-B]

sel /csvs/scripts/001_P3_Inst_SPEE.act

cmd Load [Alt-L] [script proceeds to '**14: READY (P)**']

Table 2. Required Operator Action

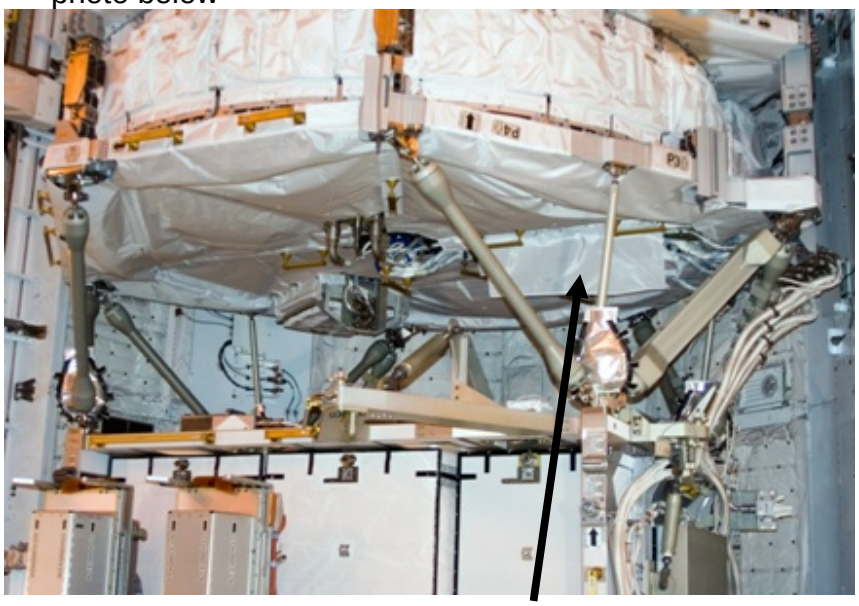
MON 1 MON 2	3	**cmd** Start [Alt-S] [script proceeds to '**24: AIM CAM AT P1 (P)**'] NOTE: Preset windows will not be aligned over targets due to FOV offset noted on FD3.
MON 1	3.1	'Task 1:' **sel** window status indicator '1' **cmd** Exclude √ 'Task 1:', window status indicator '1' – GREY
MON 1 MON 2	4	**cmd** Start [Alt-S] [script proceeds to '**70: VERIFY TRACKING P1 (P)**'] √Windows tracking targets correctly (except window #1) ********** * If windows not tracking correctly, or if script proceeds to * **'263: ACQUIRE P1 MANUALLY (P)'** * Go to {1.302 AVU SPEE CAM P1 MANUAL TARGET * ACQUISITION} (SODF: RBT FS: 12A: P3P4 INSTALL). **********
MON 1 MON 1 MON 2	5	**cmd** Start [Alt-S] [script proceeds to '**113: STORE SPEE CAM SCT? (P)**'] √'Task 1:' – Green √PSEC – Green
MON 1 MON 2	6	**NOTE:** Target #2 is most critical in array. Ensure good lighting on targets 2 and 6 prior to commanding Start. **cmd** Start [Alt-S] [script proceeds to '**142: MNVR P3 TO PRE-INST (P)**'] √P3 truss target backgrounds completely visible on MON 2 Do not adjust SRMS SPEE Camera position for remainder of SVS operations. NOTE: saved database: /csvs/sys/P1_Aim_SPEE_Complete.dat
MON 1 MON 2	7	**cmd** Start [Alt-S] [script proceeds to '**182: VERIFY TRACKING P3 (P)**'] √Windows tracking targets correctly ********** * If windows not tracking correctly, or if script proceeds to * **'274: ACQUIRE P3 MANUALLY (P)'** * Go to {1.303 AVU SPEE CAM P3 MANUAL TARGET * ACQUISITION} (SODF: RBT FS: 12A: P3P4 INSTALL). **********
MON 1	8	**cmd** Start [Alt-S] [script proceeds to '**201: INSTALL P3 – SPEE CAM (P)**'] √PSEC 2 < 0.004 throughout install ********** * If SVS in HOLD during step 8 due to loss of P3 tracking * Repeat step 8. **********

Verify {1.202 P3P4 INSTALL}, step 9 (SODF: RBT FS: 12A: P3P4 INSTALL) complete before performing steps 9 and 10

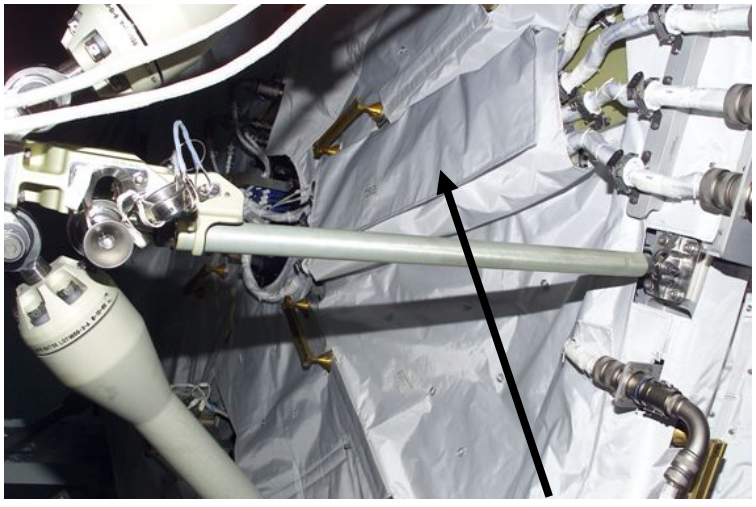
Table 3. Required Operator Action

MON 1	9	**cmd** Start [Alt-S] [script proceeds to '**218: SVS OPS COMPLETED? (P)**'] √SVS ops complete
	10	**cmd** Start [Alt-S] [script proceeds to '**227: --------END--------**']

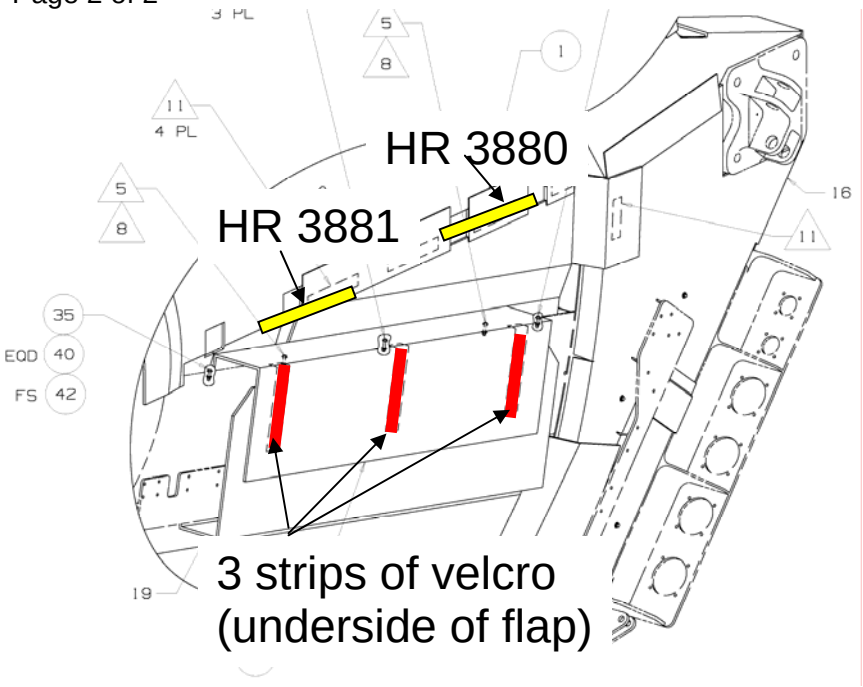
- During review of Flight Day 2 video, a thermal blanket on the P3 outboard bulkhead was observed to be loose. Review of payload bay walkdown photography revealed that this happened on the ground due to 1-G effects and the blanket was reattached.
- We will plan for you to reattach the thermal blanket during EVA 2 during SARJ Prep Tasks.
- Your best access to the protruding thermal blanket will be from face 1; this will avoid interference from struts and power cabling. Once inside the worksite, reattach the opened thermal blanket to the attached thermal blanket. There are three 1.5” wide Velcro strips on the open flap that must be mated to corresponding Velcro flaps on the attached thermal blanket. See the third photo below



MLI FLAP LOOSE



MLI FLAP SECURE


HR 3880
HR 3881
3 strips of velcro
(underside of flap)
5
8
11
4 PL
1
16
35
EQD 40
FS 42
19

Today there will be one CWC fill and a Supply Water Dump using the FES. Once the FES dump is complete, the FES will be deactivated to save cryo. For today's CWC fill, use any of the following CWCs: 1029, 1053, 1066, 1072, 1073, 1077 (on Middeck), or 1030, 1035, 1043 (pregathered from ISS).

FD4 Shuttle/ISS H2O Container Fill Details - Shuttle Crew

The Shuttle/ISS H2O Container Fill initiation scheduled for PLT at MET 002/18:05 should contain the following details:

SHUTTLE/ISS H2O CONT FILL INIT #2
(ORB OPS, ECLS)
Ag Biocide is req'd. (Use syringe from Ag biocide kit SN 1001)
Sample is req'd.
Fill Duration: ~52 minutes
Report Serial Number and Barcode to MCC.

After the fill is complete, insert green label in CWC window; apply decals to CWC ends; and mark CWC serial number on the end decals. Transfer the two filled CWCs to NOD1P3. If there is insufficient room for the bags at this ISS location, stow CWCs at NOD1P1 and report to MCC.

Supply Water Dump using FES Details – Shuttle Crew

Today you will perform a supply water dump using the FES. Dump duration will be approximately 4 hours. Due to constraints with ISS momentum management, check with MCC prior to the Init and the Term (as requested in the timeline). The following details will be required for the dump:

Initiate SUPPLY WATER DUMP USING FES (ORB OPS, ECLS) p 5-9 Step 1 DUMP INITIATION, using FES Pri B.

Terminate dump on MCC call using Step 2 DUMP TERMINATION, FES is not req'd.

cmd UB_SEPS_P3_23 – Ena **Execute** (Verify – Ena)

Wait 1 minute, 40 seconds.

CDH: P3 2 MDM
P3 2 MDM

Verify UB_SEPS_P3_23 – BC

23.7 Verifying P3 2B/3A RPCM Integration Counters

P3: EPS
P3: EPS

sel RPCM P32B A

RPCM P32B A

Verify Integ Cnt – incrementing

sel RPCM P33A [X] where [X] = C E F

RPCM P33A [X]

Verify Integ Cnt – incrementing

Repeat

23.8 Enabling PTCS Application in P3 2 MDM

NOTE
The SEPS_P3_23 application should be enabled in the P3 2 MDM before the PTCS application is enabled since PTCS is dependent on SEPS for closed loop mode control (default).

CDH: P3 2 MDM

sel Applications

P3 2 Applications

cmd PTCS – Ena **Execute** (Verify – Ena)

23.9 Inhibiting Utility Rail Survival Heaters

NOTE
Scan 44 identified multi-element heaters that are susceptible to heater burnthrough. These include the Utility Rail Heaters on P3. PPLs that would prevent this configuration have not been delivered. Therefore, user action is required to mitigate this risk of heater burnthrough.

P3: EPS: P3 Rail Heaters
P3 Rail Heaters
'P3 1A Survival (Htr 1)'

cmd Inhibit – Arm (Verify Avail Status – Inh Arm)
cmd Inhibit – Inhibit (Verify Avail Status – Inh)
√ RPC Position − Op

'P3 4B Survival (Htr 1)'

cmd Inhibit – Arm (Verify Avail Status – Inh Arm)
cmd Inhibit – Inhibit (Verify Avail Status – Inh)
√ RPC Position − Op

24. S0 2 MDM CHECKOUT

24.1 Enabling S0 2 MDM RT
Task: S0 Act-Deact
S0 Act Deact
'Primary EXT MDM'

sel LB SYS P2 RT Status

LB SYS P2 RT Status

cmd 27 S0 2 MDM RT Status – Enable **Execute** (Verify – Ena)

24.2 Verifying S0 2 MDM Status in Wait State
Task: S0 Act-Deact
S0 Act Deact
'S0 2 MDM'

Verify Frame Count – incrementing
Verify Processing State – Wait

sel S0 2 MDM

S0 2 MDM

√Sync Status – In Sync

```
**************************************************
*  If BST not blank
*  |   P3: CDH: P3 1 MDM: MDM Utilities
*  |   [P3 1 MDM Utilities]
*  |   'Clear Latched Data in BST A'
*  |
*  |   cmd Clear  Execute
**************************************************
```

55.3 Transitioning P3 1 MDM in Normal State

[P3 1 MDM]

sel Processing State

[P3 1 MDM Processing State Transitions]
'Current State'

cmd Transition to Normal State **Execute**

Wait 60 seconds.

√Current State – Normal

55.4 Verifying P3 1 MDM in Normal State
CDH: P3 1 MDM
[P3 1 MDM]

Verify Frame Count – incrementing
Verify Processing State – Normal

55.5 Checking P3 1 MDM RT FDIR Enabled
CDH: Primary EXT MDM
[Primary EXT MDM]

sel LB SYS P1
sel RT Status

[LB SYS P1 RT Status]

√16 P3 1 MDM RT FDIR Status – Enable

55.6 Enabling P3 1 MDM SEPS Control
CDH: P3 1 MDM
[P3 1 MDM]
'Software Control'

sel Applications

[P3 1 Applications]
cmd UB_SEPS_P3_14 – Ena **Execute** (Verify – Ena)

CDH: P3 1 MDM
P3 1 MDM

Wait 1 minute, 40 seconds.
Verify UB_SEPS_P3_14 – BC

55.7 Verifying P3 1A/4B RPCM Integration Counters

NOTE
Integration counters may take up to 2 minutes to increment after UB_SEPS_P3_14 – Ena.

P3: EPS
P3 EPS

sel RPCM P31A A

RPCM P31A A

Verify Integ Cnt – incrementing

sel RPCM P34B [X] where [X] = C E F

RPCM P34B [X]

Verify Integ Cnt – incrementing

Repeat

55.8 Inhibiting P3 Utility Rail Survival Heaters RPCs

NOTE
Scan 44 identified multi-element heaters that are susceptible to heater burn through. These include the Utility Rail Heaters on P3. PPLs that would prevent this configuration have not been delivered. Because these individual heaters can not be inhibited prior to enabling the P3-1 PTCS Logic Thread, these heaters RPCs are close inhibited.

P3: EPS: P3 Rail Heaters: RPCM P34B C RPC 02
RPCM P34B C RPC 02

cmd Close Command – Inhbit (Verify – Inh)
√ RPC Position − Op

P3: EPS: P3 Rail Heaters: RPCM P34B C RPC 01
RPCM P34B C RPC 01

cmd Close Command – Inhbit (Verify – Inh)
√ RPC Position − Op

Delta to Orbit Ops Checklist Pre-Sleep Activity. Add new Step 13 on Page 3-6

13. Shuttle Video Ch 92 Crew Sleep Configuration

> NOTE:
> This procedure will configure ISS Loopback capability from CVIU 6 to VTR 2 using the shuttle's Monitor 2 and VPU capability.

A3 TV MON 1,2
FILTER CLEANING CCTV MON
(IFM, SCHEDULED MAINTENANCE)
Page 4-9

A7 √TV DNLK-ENA
PWR CNTL - PNL
CONTR UNIT - MNA
CNTL - CMD (wait 10 sec for system initialization)

A3 TV MON 2
PWR - On

A7 VID OUT MON 2 pb - push
VID IN pb - PL2

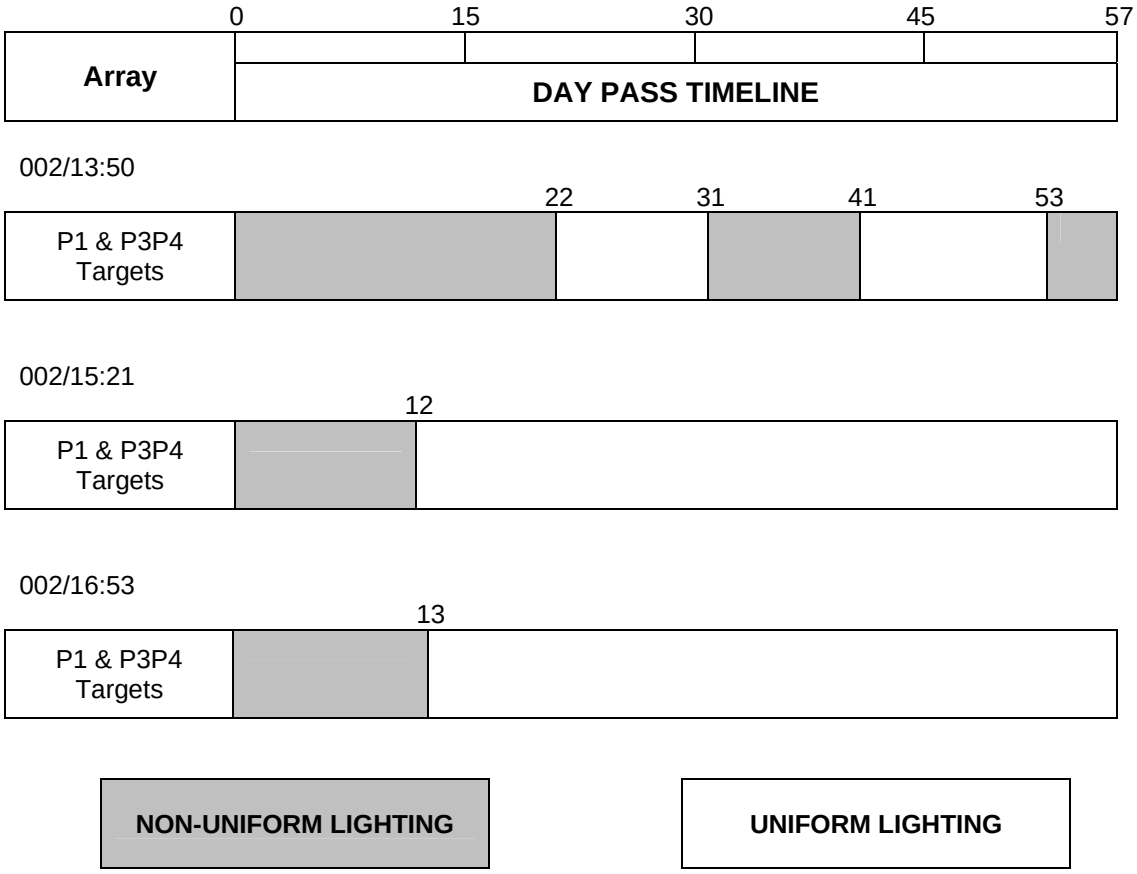
R12 (VPU) √ PWR - ON
Green Jumper - ISS

A3 TV MON 2 - Verify Good ISS Image
Brightness Knob - Turn Counter CW

The table below indicates the predicted lighting for SVS operations based on the consecutive day passes during the P3P4 Truss Install. In the lighting descriptions and the graphical DAY PASS TIMELINE below, 0 references dawn.

Dawn MET times for day passes in the neighborhood of the P3P4 Truss Install:

002/13:50
002/15:21
002/16:53



NIGHT PASS LIGHTING INFORMATION:

OBSS RSC and SRMS Elbow Camera

Adequate lighting for SVS without shadowing using MSS lower and upper elbow camera lights and (optional) P1 Outboard Nadir camera light. P1 Outboard Nadir camera light can cause SVS target washout, shadows, and camera glare if pointed directly at SVS targets or SVS camera. PLB floods may cause shadowing on SVS targets.

FLIGHT NIGHT 3 TESTING RESULTS:

OBSS RSC performance and SVS database parameters verified in daylight conditions with target P1_E4 manually excluded as per the updated install procedure. The sync telemetry status line causes changes in target centroid data as it scrolls through the tracking windows and it is recommended to perform SVS ops without the line present in the video.

We have updated procedure 1.301 AVU SPEE CAM P3 TRUSS INSTALL for the following reasons:

1. Video from the RSC camera will have to be routed through the SCU time-based correction capability in order to ensure that it contains good sync for the SVS. The procedure has been updated to call out camera ID 94 instead of camera ID 91 for the initial video routing.

2. Added a note for the crew to expect the P1 target windows to not be lined up with the P1 targets in step 3 due to the RSC camera field of view offset observed on FD3

3. Added step 3.1 to exclude P1 target 1 from the solution because we discovered that it is partially blocked by a cable while examining the RSC video from FD3.

The updates are in message msg 13-1194 (MSG 032). This new message was linked in OSTPV for the PLT activity to acquire AVU targets.

Additionally, two contingency procedures have been put onboard:

13-1186 (MSG 027) Contingency P3P4 Installation with Failed SSAS RTL should be used if 1 of 3 RTLs is missing after P3P4 has been maneuvered to the expected RTL position, and attempts to acquire the third RTL are not successful. This procedure will use visual verification of RTL 2 positioning in addition to your other cues, and maneuver P3P4 to the Topological Capture position while looking for stall indications (using video and telemetry). If P3P4 reaches the Topological capture position with good alignment and no stall indications, first stage capture will be initiated after a go from MCC.

13-1187 (MSG 028) Contingency RTL Loss After WR Limping should be used if 3 RTLs are acquired, then one or more RTLs are lost when the SSRMS Wrist Roll joint is limped. This procedure will have you re-acquire the lost RTL and drive 2 cm further in X than your original position, then limp the Wrist Roll joint again.

This configuration will provide BPSMU audio capabilities in the ISS lab in place of the planned BPSMU Audio Only string referenced in the P/TV05 ISS INTERNAL OPS scene in the Photo/TV Checklist. This configuration will not provide the same reach that the original configuration provided into ISS. It will provide at least 27ft of cable from the Airlock CCU. It will not utilize the Drag-through QD box. It will utilize one of two on-board BPSMU-CCU adapters that is currently deployed on the flight deck.

We recommend using the BPSMU that was borrowed from ISS.

The following hardware will be connected in series to the airlock CCU.

Hardware	Stowage Location
BPSMU (p/n: SED16102419-301)	Deployed on Flight Deck (PLT)
BPSMU-CCU Adapter (p/n: 528-21225-1)	Deployed on Flight Deck connected to BPSMU (PLT)
14ft Comm Cable Assy (p/n: 10108-10079-01/02)	MF28K (in cushion w/VLHS)
4ft Comm Cable Assy (p/n: MC409-0005-0240)	MF28K (in cushion w/VLHS)

For additional length, the pre-routed cable assemblies below may be utilized. It is expected that only one of the two 14 ft Comm Cables listed would be needed to reach the RWS. If only using one of the 2 cables below, the pre-routed cable to seat 5 should be easier to remove than the pre-routed cable to seat 6. To use these cables, the Comm Cable should be separated from the O2 lines **without disconnecting the O2 line QDs from MO32M.** This can be performed by disconnecting the Comm Cable from the MHA and pulling the Comm Cable through the O2 Comm Assy sleeving (refer to attached picture). For entry, the Comm Cables can be re-routed outside of the sleeving using the black velcro cable ties.

Hardware	Stowage Location
14ft CEE O2/Comm Assy (p/n: 528-20976-1)	Pre-routed from the MHA connected to MO39M to seat 5
14ft CEE O2/Comm Assy	Pre-routed from the MHA connected to MO39M to seat 6

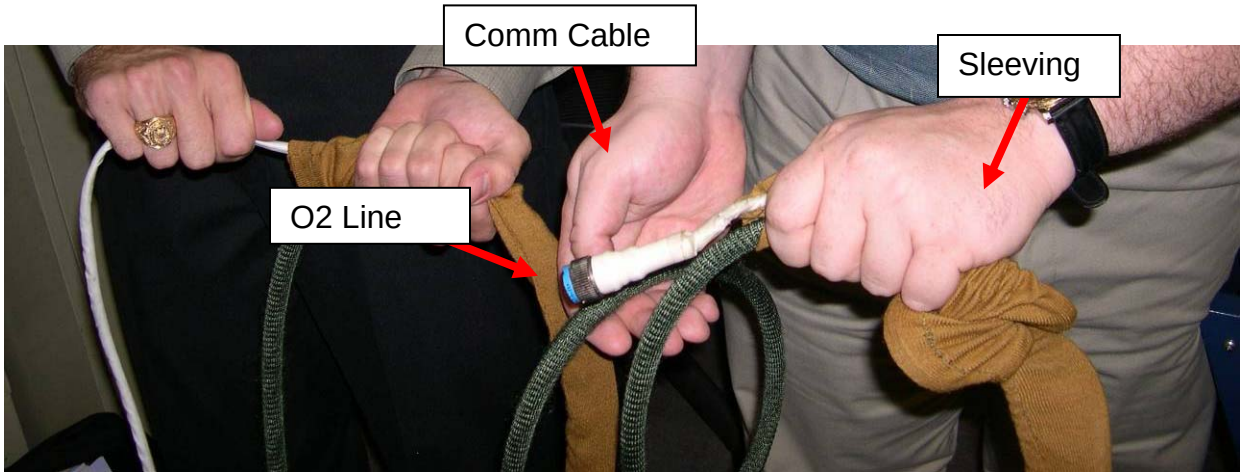
Operations Notes:

Overnight the above assembled cabling should be returned to the orbiter side of the interface and then redeployed for station use in the mornings.

Should a Joint Expedited Undock and Separation or a Joint Emergency Egress become required the above assembled BPSMU cabling should be pulled back over to the shuttle side prior to hatch closure.

1

2
3
4
5



There were only a few items of significant discussion at the FD 3 MMT which included a continued review of the ascent imagery and a very preliminary look at the FD 2 TPS inspection and FD3 RPM imagery. The MMT left the decision as to whether to perform a focused inspection with MOD, the Orbiter Project, and the Engineering debris/imagery teams.

Several orbiter systems items were discussed and brief summaries are provided in no particular order:

1) Cryo margins- No change-mission can be extended by two days if required.

2) Fuel Cell 1- The pumps continue to operate within limits on the remaining two phases (B&C). FDF pen and ink changes to the AC VOLTS, AC OVERLOAD, and THREE PHASE MOTOR STOP in the OPCL and EPCL were sent to you during FD 03 execute package.

3) Payload Bay Door Microswitches - No change in the status provided yesterday. The Starboard PLBD Closed B microswitch has remained in the failed ON status over the last 24 hours and will continue to be monitored. (Update: The microswitch toggled a few times and is now indicating correctly.)

4) Speedbrake FCS Channel 3- The MCC continues to monitor ASA 3 during the crew sleep periods. To date, the ASA 3 performance on all actuators has been nominal in these sleep periods with no re-occurrence of the intermittent driver outputs seen during ascent. The preliminary plan is to still bypass Speedbrake Channel 3 during FCS checkout.

5) H2O Dump Line Heater A Thermostat -At the end of the water dump, the MNA H2O LINE HTR A began cycling at the overtemp thermostat upper limit. There were 4 cycles to 106 deg Fahrenheit which is in the 90 –110 Fahrenheit overtemp control band. The thermostat normally operates in the 70 -90 deg Fahrenheit range. Since swapping to the B string (MNB H2O LINE HTR), the temperatures have returned to the nominal range. The plan is to continue using the B heaters. The A heaters are available using the overtemp logic should that be required.

6) Battery Powered Speaker Mike (BPSMU) Cable - This missing cable was returned inadvertently on STS-121. Of course the biggest impact is loss of A/G 2 and Orbiter caution and warning monitoring on the ISS. The MCC teams are reviewing alternate configurations and IFM options to provide a workable cable.

7) Starboard Manipulator Retention Latch (MRL) B microswitch- This microswitch failed to indicate CLOSED at OBSS stow on flight day 2. The software did not terminate latch motor drive due to missing indication but the A microswitch indicated correctly. This A microswitch drives the cockpit talkback. A similar phenomenon was seen on STS-114 and there is no impact to planned future operations.

8) Wing Leading Edge Sensors - There has been no significant change since yesterday's MMT. Video for the earliest event of interest at ~14 seconds MET (200 mph velocity) on the port wing Panels 6-7 has been reviewed and there is no evidence of impact at that time (See Figure 1).

Figure 1: High Definition Video of Port Wing indicates no impact

Ascent Data Review - The MMT reviewed the preliminary pad debris environment walkdowns and ascent vehicle propulsion and trajectory performance. Pad B is in very good shape after a slight sand blasting by the SRBs. No vehicle flight hardware has been found and the Pad environment was considered to be very nominal based on previous flight experience. The orbiter liftoff lateral acceleration data and visual inspections indicated no stud hang-ups. Additionally, the preliminary ascent data shows that powered flight and post MECO were very nominal with no issues. All four LH2 and LO2 ECO sensors worked nominally during ascent. The ET umbilical and handheld photography also showed that the tank performed very well and a summary of those pictures will be provided later in the mission for your review.

Focused Inspection CHIT Meeting

TPS Imagery Analysis - The imagery and TPS teams have reviewed all of the FD 2 TPS inspection data and the FD 3 RPM photography. Based on this review all of the RCC including both port and starboard wings and nosecap and all tile have been cleared for entry and **no OBSS focused inspections on FD 5 are required**.

In terms of RCC, the only items found in the surveys were blackspots from the SRB sep motor deposition. In term of tile, there are 2 tile damages on aft ET door structure side with the largest being 1.5 inches and the other is being 1.0 inches. These are only significant because they are in the cone of influence of two of three protruding gap fillers that are greater than the 0.25” criteria. The largest is on the left hand ET door, has a height of 1.2 inches and is shown Figure 2. The right hand ET Door contains a small piece of gap filler that protrudes about 0.8 inches and the port elevon has a protruding gap filler of about the same height.

Based on all of the inspection data to date there are only two items of interest remaining. These items are the protruding gap filler on the left hand ET door (See Figure 2) and the thermal blanket protrusion of the right hand OMS pod (See Figure 3). The overall plan is to collect additional non-OBSS based imagery data using ISS, RMS, or SSRMS assets. More details on this plan will be provided as it develops over the next 24 hours.

Additionally, thermal and structural analysis largely based on the conservative Mach 25 boundary layer trip work from STS-121 is underway in an attempt to clear the ET door gap filler. A debris liberation and transport analysis for this gap filler will also be performed. More details from this analysis will be provided as they become available.

Figure 2: Left Hand ET Door Protruding Gap Filler

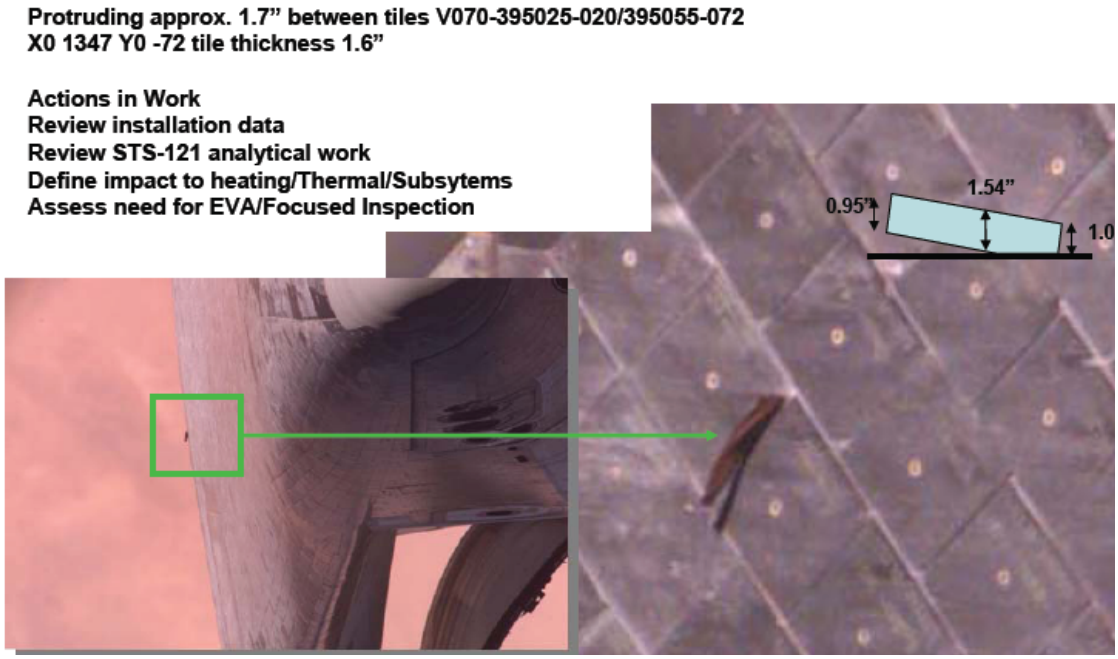


Figure 3: Starboard OMS Pod Protruding Blanket