STS-117 / 13A

FD 04 Execute Package

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018	13	FD04 Mission Summary **(pdf)**
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022	---	FD03 MMT Summary **(pdf - Electronic Only)**

Approved by FAO: *Linda Delapp*

Last Updated: Jun 11 2007 11:48AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*

MSG INDEX

MSG NO.	TITLE
018	FD04 Mission Summary
020	FD04 Flight Plan Revision
021	FD4 SVS S3S4 VIEWING LIGHTING PREDICTIONS
022	FD03 MMT Summary (Electronic Only)
023	Status of Regions of Interest

1. Message 15-0393 should be referenced by the ISS crew for EVA battery charging operations during the docked timeframe. This message is identical to the STS-117 Battery Recharge Plan Cue Card from the EVA FDF Flight Supplement.

2. During the payload N2 repress termination on FD3, only the O2 REG INLET SYS 1 valve should have been re-opened per step 8 of N2 REPRESS USING PAYLOAD N2 VALVES (ORB OPS, ECLS) p-5-56. O2 pressures indicate that both the System 1 and 2 valves were opened. Configure the O2 REG INLET SYS 2 valve at the earliest crew convenience:

   MO10W O2 REG INLET SYS 2 vlv - CL

   Report to MCC if valve is already in closed position.

3. The IWIS data take for the Russian Thruster Firing has been postponed until MCC-M successfully validates the cyclogram. For today, we will only be capturing the S3/S4 berthing. In preparation for getting the Russian Thruster Firing later in the mission, we're going to have MS2 go ahead with most of the IWIS Accelerometer installation in the Shuttle Airlock. He'll need to skip a couple of steps, since we're delaying the RSU setup activity until we have a plan for the thruster test. This will leave the IWIS Accelerometer extension cable positioned in the ODS but unconnected to the RSU.

4. ROBO requires camera C be routed to ISS on video channel 92 (Monitor 2) to monitor SAW deploy. CCTV monitor 2 and the DTV system will need to be left on overnight. Please make the following changes:

   In PRE-SLEEP ACTIVITY Perform step 7 with the following deltas

A3	TV MON 2 On	
A7	TV PWR CNTR UNIT	- ON
	VID OUT MON 2 pb	- push
	IN C pb	- push
L10(MUX)	MUX/VTR/CC PWR	- on (LED on)
	√ MUX BYPASS	- ACT
	√ CHANNEL 3 DATA LED	- on
	√ VIP PWR	- on

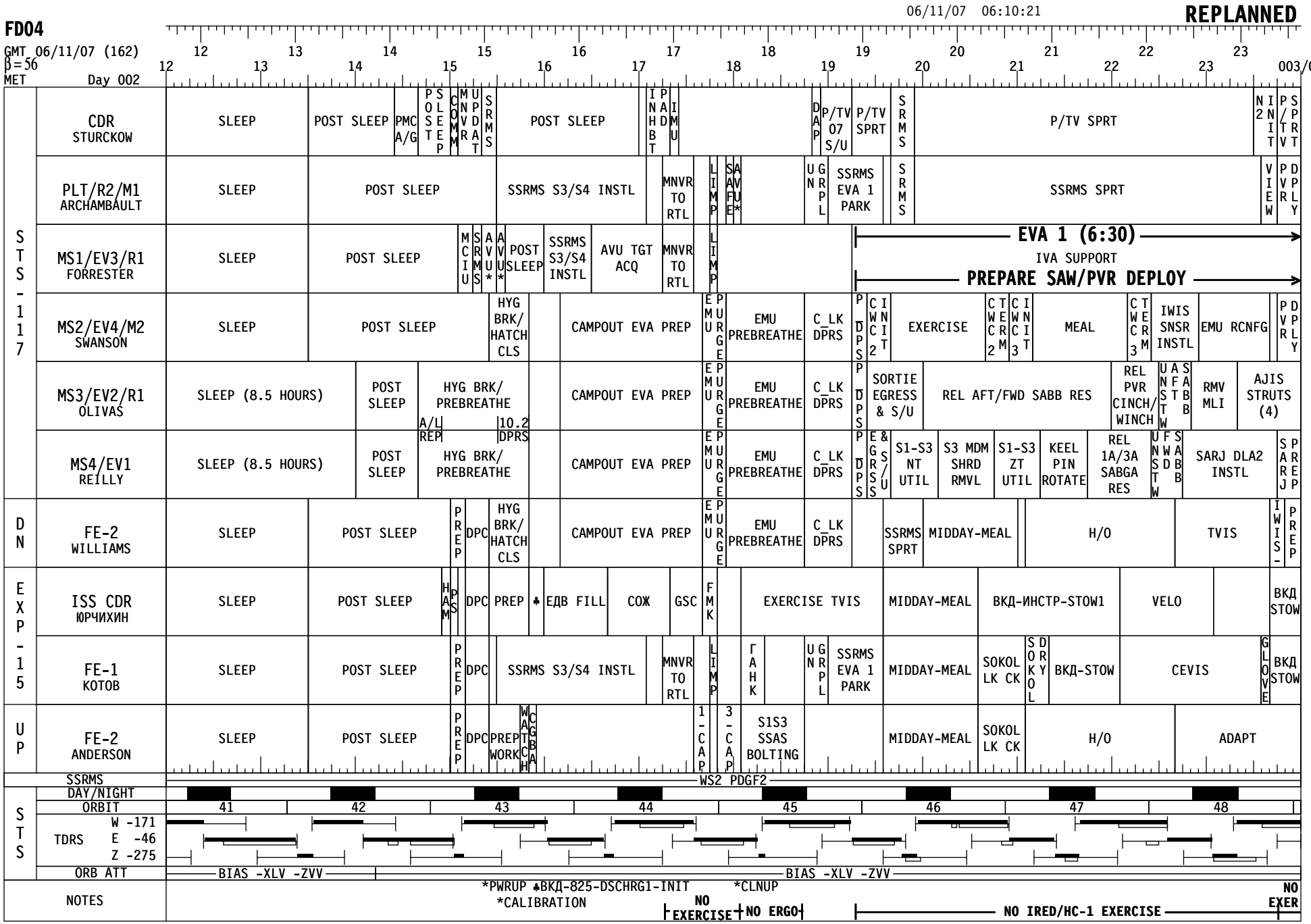
5. Flight Day 4 Exercise Constraints

The table below summarizes the Shuttle and ISS exercise constraints for today. Except as noted, these constraints are also denoted in your timelines for your reference.

Activity	Exercise Constraints	
	Shuttle	ISS
S3/S4 INSTALL (during USTO maneuver)*	Shuttle Ergometer limited to 65 RPM during ISS commanded maneuvers while SSRMS with S3/S4 grappled is in motion	None
S3/S4 INSTALL (mnvr to RTL)	No exercise while S3/S4 is in RTL position until any three SSAS bolts are tight	No exercise while S3/S4 is in RTL position until capture latch is fully closed
SSAS NOMINAL MATE (after capture latch closed)		None
EVA 1 (during APFR operations from a structure-mounted WIF)	None	No IRED or HC-1 exercise allowed during APFR operations from a structure-mounted WIF (umbilical connections, SABB restraint releases, and DLA install)
PVR DEPLOY	No exercise while PVR is being deployed	No exercise while PVR is being deployed
SARJ LAUNCH LOCK REMOVALS**	Unisolated exercise may prevent EVA removal of launch locks and launch restraints	Unisolated exercise may prevent EVA removal of launch locks and launch restraints

* The exercise constraints for this task are not reflected in your timelines since they only apply if the USTO maneuver slips to the S3/S4 Install timeframe.
** The exercise constraints for this task are not reflected in your timelines but may be imposed if EV crew has problem with task completion.

6. REPLACE PAGES 2-10, 2-12, AND 3-32 THROUGH 3-39.


FD04
06/11/07 06:10:21
REPLANNED
GMT 06/11/07 (162)
β=56
MET Day 002
003/00
STS-117
DN
EXP-15
UP
STS
CDR STURCKOW
PLT/R2/M1 ARCHAMBAULT
MS1/EV3/R1 FORRESTER
MS2/EV4/M2 SWANSON
MS3/EV2/R1 OLIVAS
MS4/EV1 REILLY
FE-2 WILLIAMS
ISS CDR ЮРЧИХИН
FE-1 КОТОВ
FE-2 ANDERSON
SSRMS
DAY/NIGHT
ORBIT
TDRS W -171 E -46 Z -275
ORB ATT
NOTES
SLEEP
POST SLEEP
SLEEP (8.5 HOURS)
PMC A/G
POST SLEEP
COMM
MNVR
UPDAT
SRMS
INHBT
IMU
DAP
P/TV 07 S/U
P/TV SPRT
P/TV SPRT
INIT
PS/TRVT
SSRMS S3/S4 INSTL
MNVR TO RTL
LIMP
SAFE*
UNGRPL
SSRMS EVA 1 PARK
SSRMS SPRT
VIEW
PVR DPLY
MCIU
AVU*
AVU TGT ACQ
EVA 1 (6:30)
IVA SUPPORT
PREPARE SAW/PVR DEPLOY
HYG BRK/ HATCH CLS
CAMPOUT EVA PREP
EMU PURGE
EMU PREBREATHE
C_LK DPRS
DPS
CINC2
EXERCISE
CTWCRM2
CINC3
CTWCRM3
MEAL
IWIS SNSR INSTL
EMU RCNFG
HYG BRK/ PREBREATHE
A/L REP
10.2 DPRS
SORTIE EGRESS & S/U
REL AFT/FWD SABB RES
REL PVR CINCH/ WINCH
UFNSTW
ASTB
SABB
RMV MLI
AJIS STRUTS (4)
E&GRS S/U
S1-S3 NT UTIL
S3 MDM SHRD RMVL
S1-S3 ZT UTIL
KEEL PIN ROTATE
REL 1A/3A SABGA RES
UFNSTW
SABB
SARJ DLA2 INSTL
SPREP
PREP
DPC
HAM
PS
♣ ЕДВ FILL
СОЖ
GSC
FMK
EXERCISE TVIS
SSRMS SPRT
MIDDAY-MEAL
ВКД-ИНСТР-STOW1
VELO
ВКД STOW
GRAPPLE
SSRMS EVA 1 PARK
SOKOL LK CK
SOKOL DRY
ВКД-STOW
CEVIS
GLOVE
1-CAP
3-CAP
S1S3 SSAS BOLTING
H/O
ADAPT
WATCH
CBBA
PREP WORK
WS2 PDGF2
41
42
43
44
45
46
47
48
BIAS -XLV -ZV
*PWRUP ♣ВКД-825-DSCHRG1-INIT *CLNUP
*CALIBRATION
NO EXERCISE
NO ERGO
NO IRED/HC-1 EXERCISE
NO EXER

06/11/07 06:10:21 **REPLANNED**

FD04

GMT 06/11/07 (162) — 06/12 01 02 03 04 05 06 07 08 09 10 11

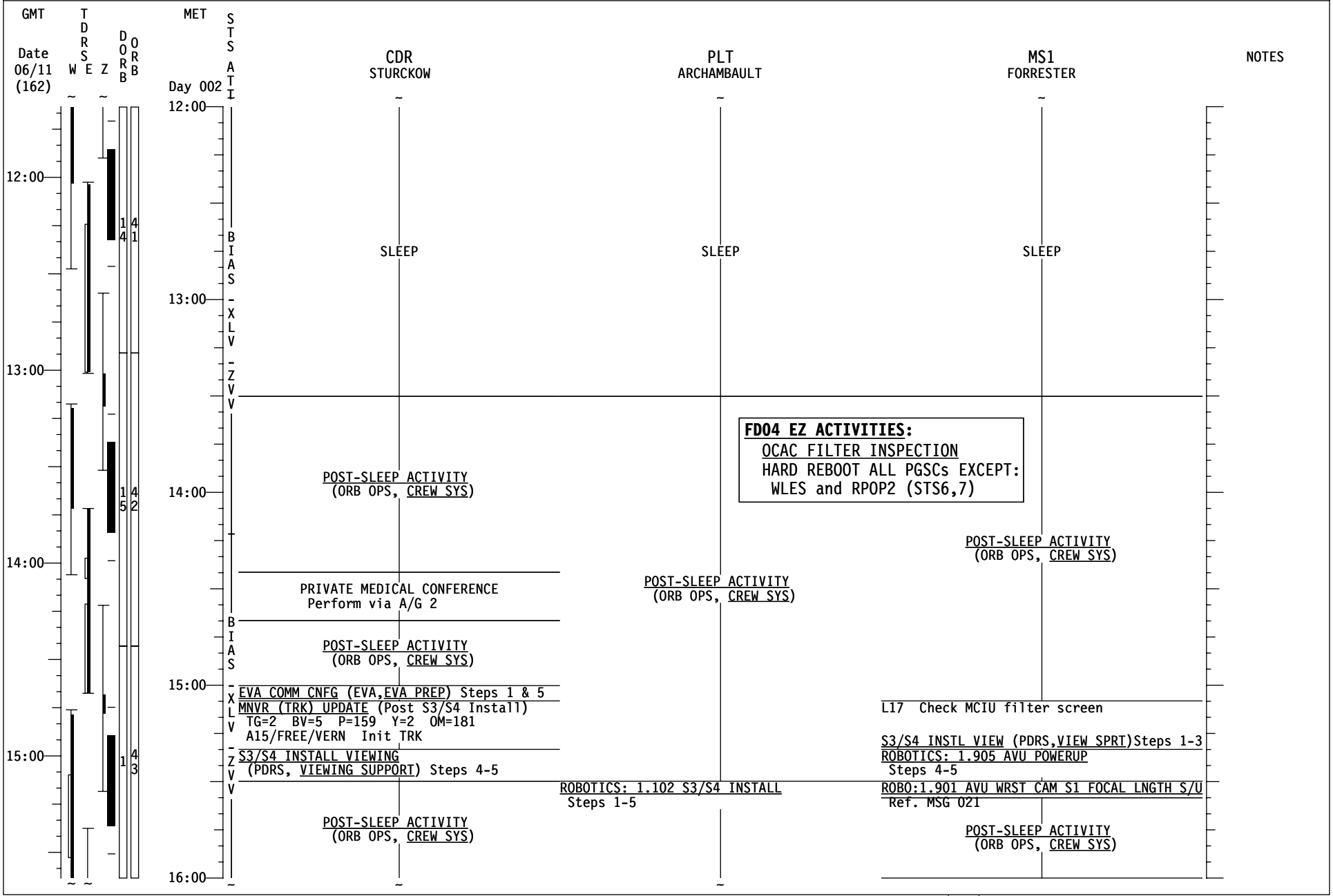
β = 53

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

Group	Crew	Activities (in time order)
STS-117	CDR STURCKOW	P/TV SPRT; N2 TERM; P/TV SPRT; PRE; SLEEP; EXERCISE; PRE SLEEP; PMC S/G; PRE SLEEP; SLEEP
STS-117	PLT/R2/M1 ARCHAMBAULT	PVR; DPLY; SSRMS SPRT; EXERCISE; PRE SLEEP; SLEEP
STS-117	MS1/EV3/R1 FORRESTER	IVA SUPPORT; PRE SLEEP; DOCK; AUDIO; PRE SLEEP; BSA INIT; PRE SLEEP; SLEEP
STS-117	MS2/EV4/M2 SWANSON	PVR; DPLY; CWC XFER; P RPS; RPRS; POST EVA W/H2O METOX; PRE SLEEP; SLEEP
STS-117	MS3/EV2/R1 OLIVAS	SARJ PREP LOCKS; SORTIE C/U & INGRS; P RPS; RPRS; POST EVA W/H2O METOX; PRE SLEEP; SLEEP
STS-117	MS4/EV1 REILLY	SARJ PREP; SORTIE C/U & INGRS; P RPS; RPRS; POST EVA W/H2O METOX; PRE SLEEP; SLEEP
DN	FE-2 WILLIAMS	PREP; CEVIS; PRE; SLEEP; POST EVA W/H2O METOX; PRE SLEEP; SLEEP
EXP-15	ISS CDR ЮРЧИХИН	ВКД STOW; IMS; PREP WORK; CHRG; PREP WORK; D/L; ♣; DPC; PRE SLEEP; SLEEP
EXP-15	FE-1 КОТОВ	ВКД STOW; SOKOL; CLS; VELO; EXER; PREP; WORK; DPC; PRE SLEEP; SLEEP
UP	FE-2 ANDERSON	ADAPT; JRNL; CGBA; PREP; WORK; PMC; PREP WORK; DPC; PRE SLEEP; SLEEP

SSRMS	WS2 PDGF2
DAY/NIGHT	
ORBIT	49 50 51 52 53 54 55 56
STS TDRS	W -171; E -46; Z -275
ORB ATT	BIAS -XLV -ZVV
NOTES	NO EXER; NO IRED/HC-1; ♣ВКД-825-DSCHRG2-INIT

STS-117 (FD04) REPLANNED



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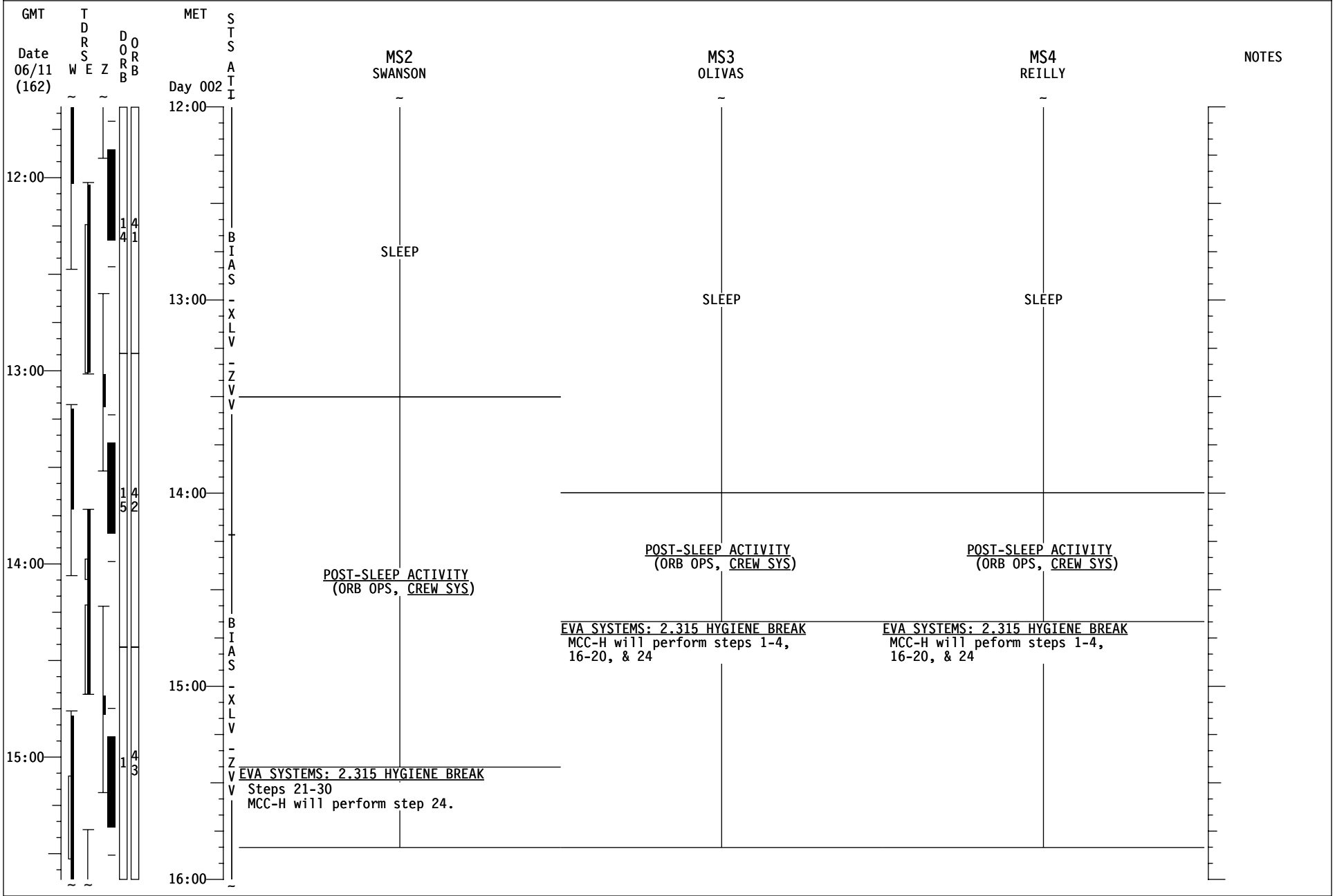

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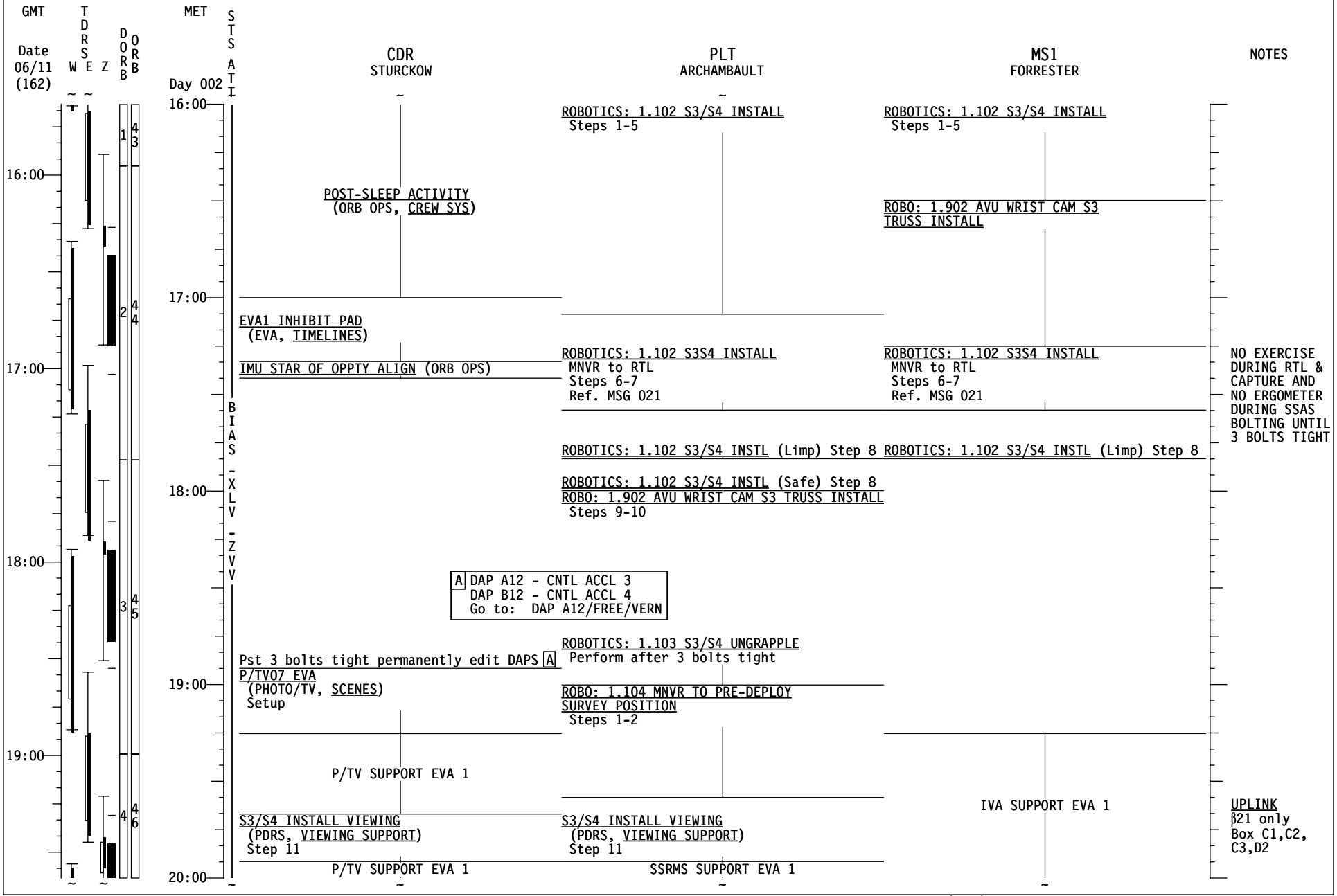

STS-117 (FD04)

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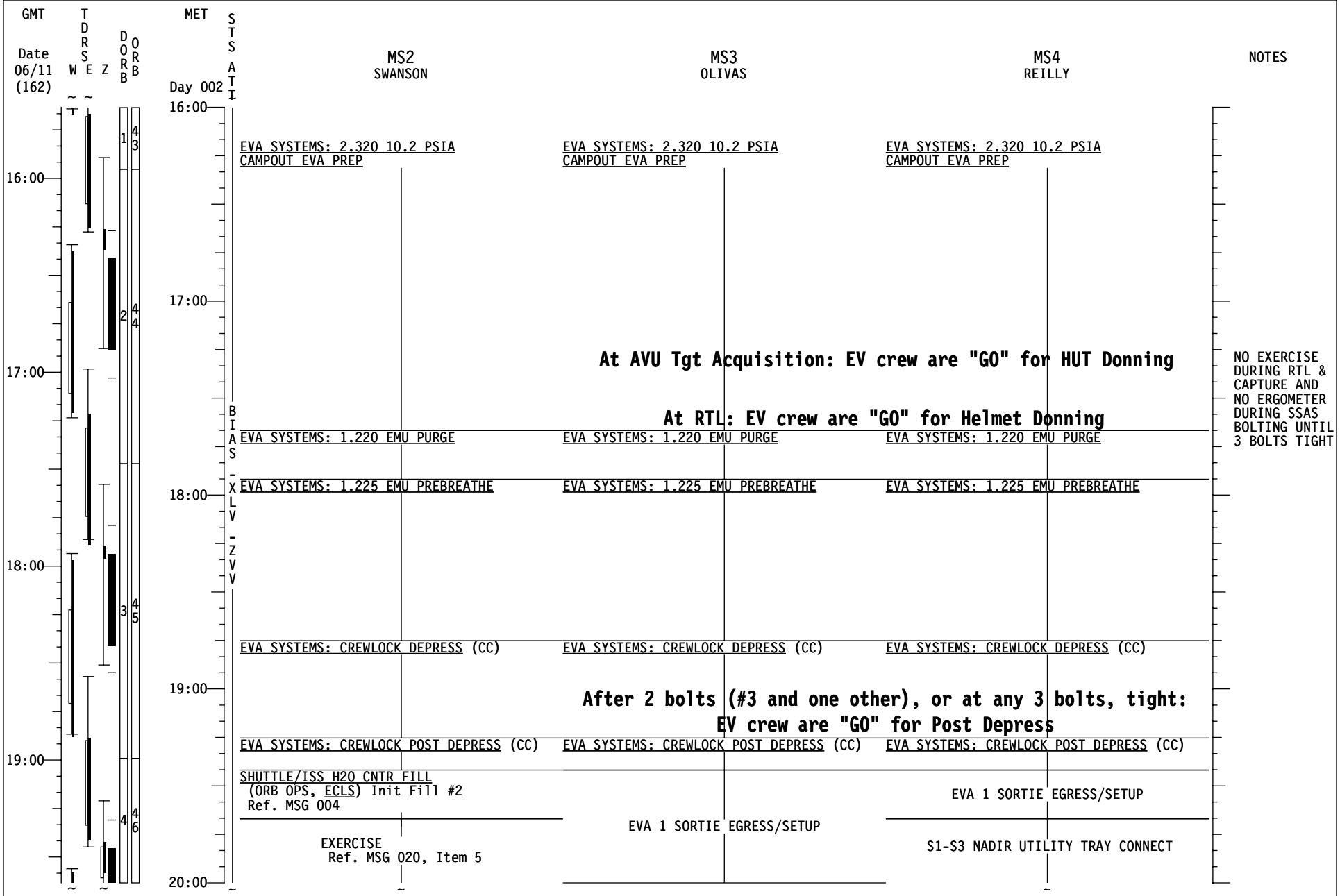

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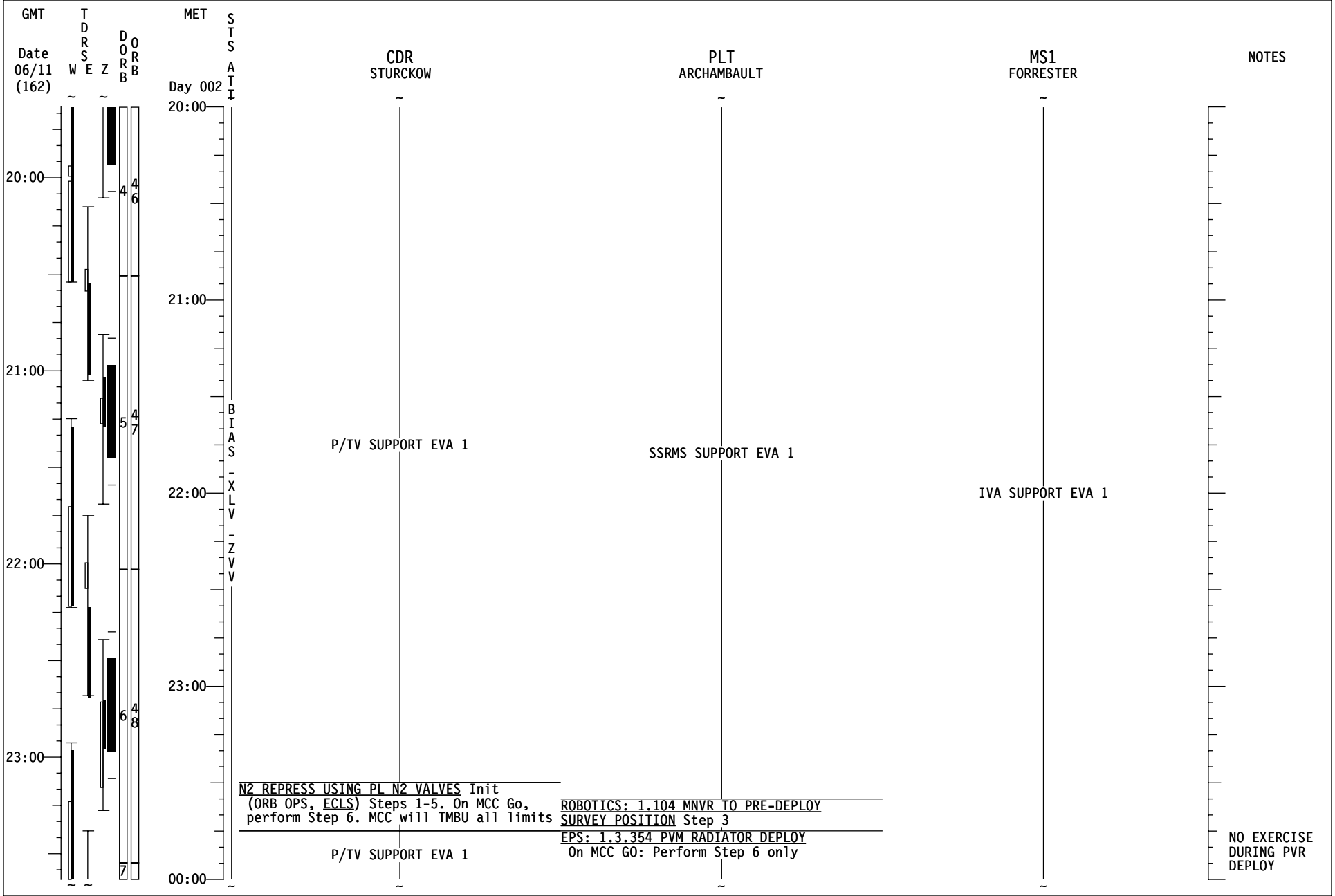

STS-117 (FD04)

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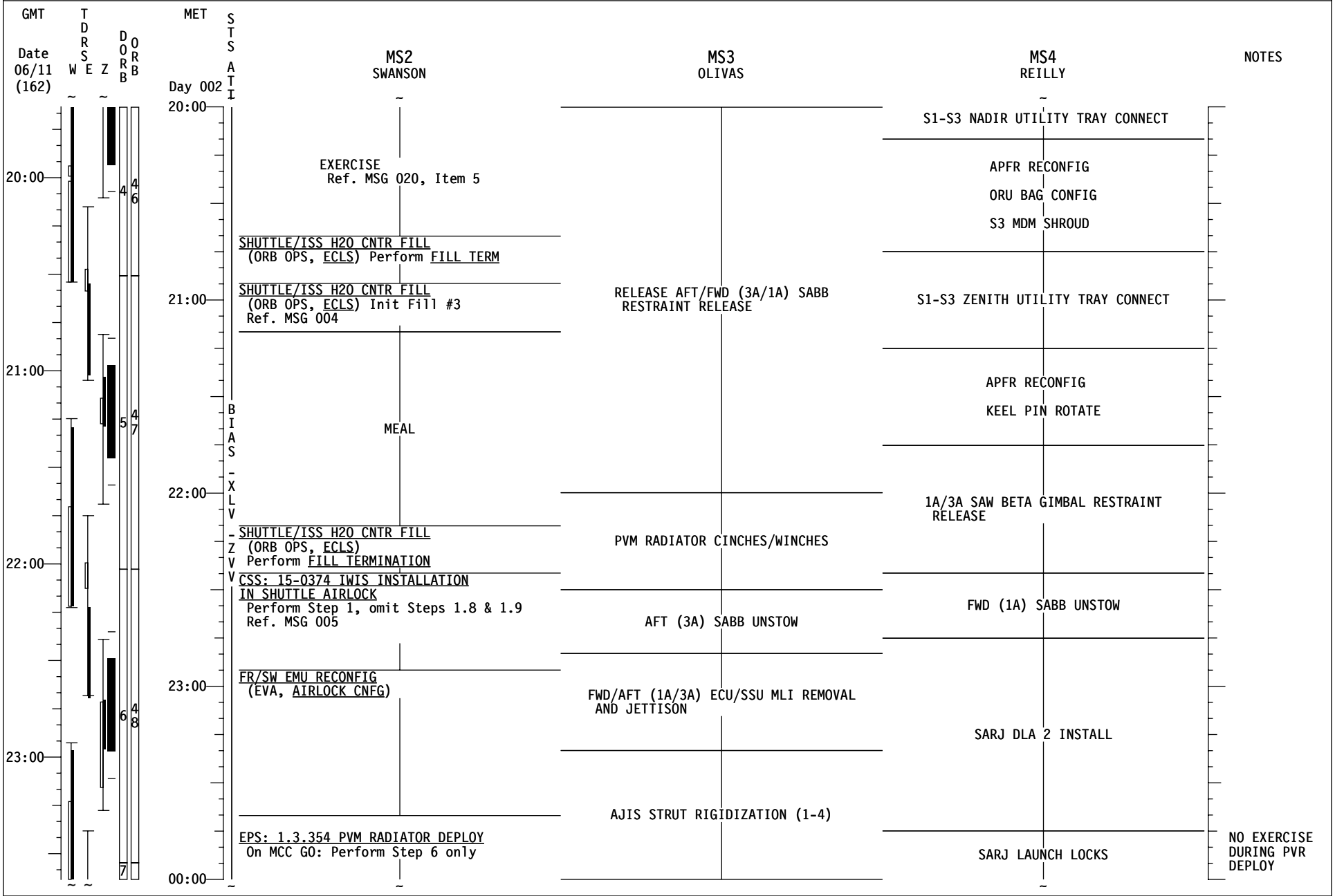
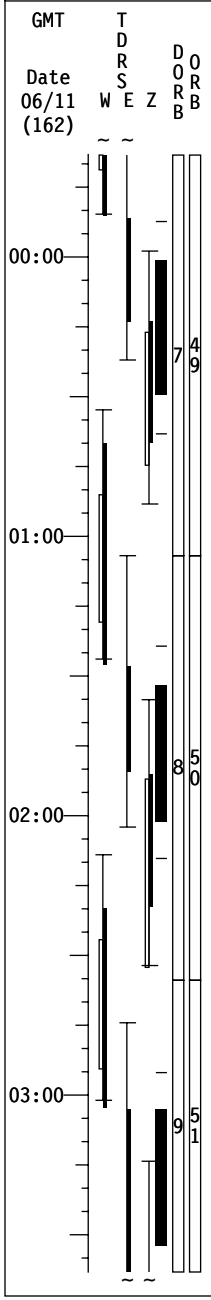


STS-117 (FD04)

REPLANNED



MET
Day 003
STS ATI
00:00
01:00
02:00
03:00
04:00
BIAS-XLV-ZVV

CDR
STURCKOW

P/TV SUPPORT EVA 1

N2 RPRS USING PL N2 VLVS Term
(ORB OPS, ECLS) On MCC Go, Steps 7-12
MCC will TMBU all limits

P/TV SUPPORT EVA 1

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EXERCISE
Ref. MSG 020, Item 5

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
Ref. MSG 020, Item 4

PRIVATE MEDICAL CONFERENCE
Perform via S/G 2

PLT
ARCHAMBAULT

EPS: 1.3.354 PVM RADIATOR DEPLOY
On MCC GO: Perform Step 6 only

SSRMS SUPPORT EVA 1

EXERCISE
Ref. MSG 020, Item 5

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP START: 3/05:30

MS1
FORRESTER

IVA SUPPORT EVA 1

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

JOINT OPS: 6.103 HARDLINE AUDIO
CONFIG (ISS)
Steps 1,2,6,7

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

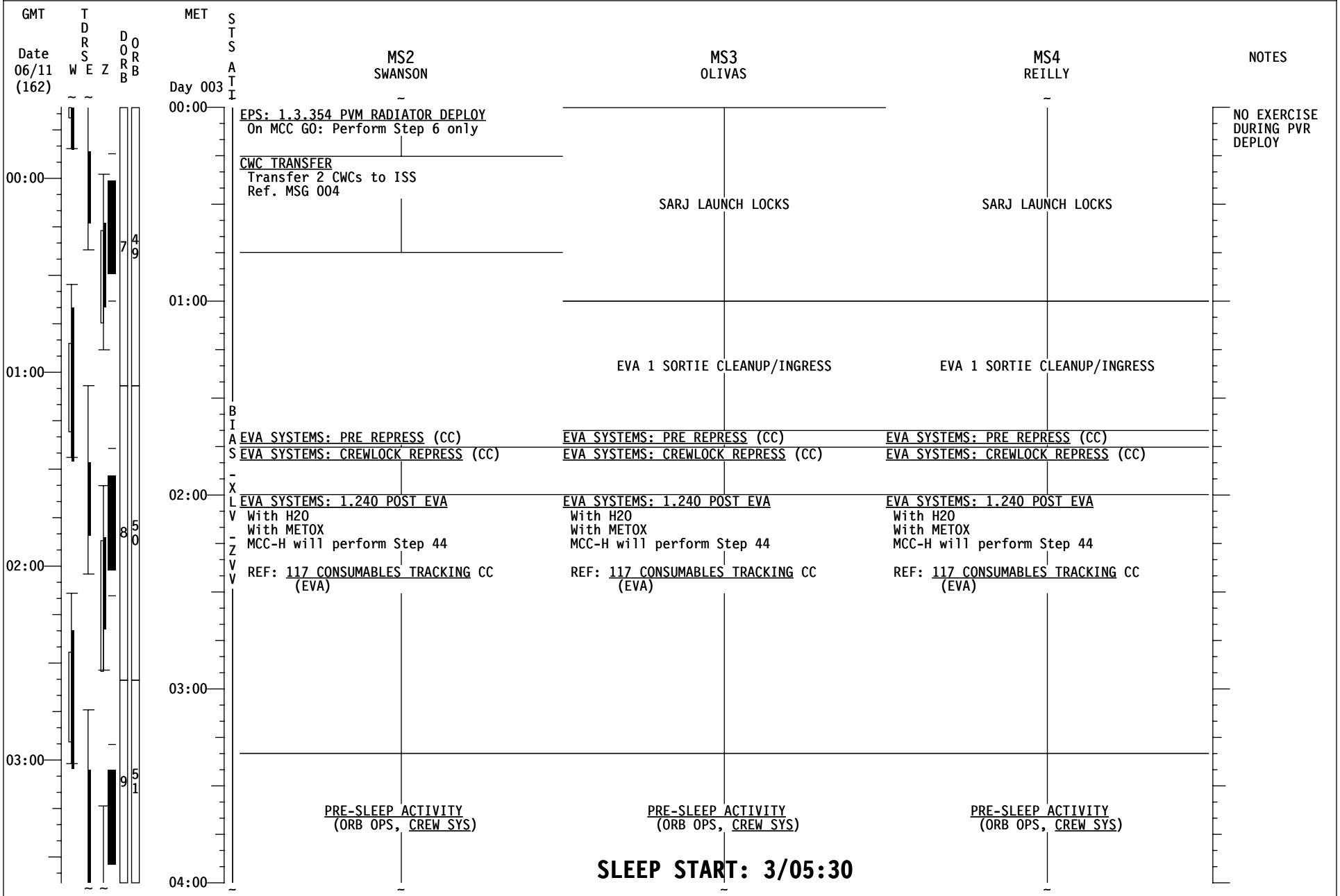
EVA SYSTEMS: 1.605 BSA BATTERY RECHARGE
(Init)
Ref. MSG 020, Item 1

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

NOTES

NO EXERCISE
DURING PVR
DEPLOY

UPLINK
TFL 199



STS-117 (FD04)

REPLANNED

GMT Date 06/11 (162)

MET Day 003

MET	STS ATT	MS2 SWANSON	MS3 OLIVAS	MS4 REILLY	NOTES
00:00		EPS: 1.3.354 PVM RADIATOR DEPLOY On MCC GO: Perform Step 6 only	SARJ LAUNCH LOCKS	SARJ LAUNCH LOCKS	NO EXERCISE DURING PVR DEPLOY
		CWC TRANSFER Transfer 2 CWCs to ISS Ref. MSG 004			
01:00			EVA 1 SORTIE CLEANUP/INGRESS	EVA 1 SORTIE CLEANUP/INGRESS	
	BIAS -XLV -ZVV	EVA SYSTEMS: PRE REPRESS (CC)	EVA SYSTEMS: PRE REPRESS (CC)	EVA SYSTEMS: PRE REPRESS (CC)	
		EVA SYSTEMS: CREWLOCK REPRESS (CC)	EVA SYSTEMS: CREWLOCK REPRESS (CC)	EVA SYSTEMS: CREWLOCK REPRESS (CC)	
02:00		EVA SYSTEMS: 1.240 POST EVA With H2O With METOX MCC-H will perform Step 44 REF: 117 CONSUMABLES TRACKING CC (EVA)	EVA SYSTEMS: 1.240 POST EVA With H2O With METOX MCC-H will perform Step 44 REF: 117 CONSUMABLES TRACKING CC (EVA)	EVA SYSTEMS: 1.240 POST EVA With H2O With METOX MCC-H will perform Step 44 REF: 117 CONSUMABLES TRACKING CC (EVA)	
03:00					
		PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
04:00					

SLEEP START: 3/05:30

Good Morning Atlantis!
Great team effort yesterday getting docked, handing off S3/S4, and getting the EVA crew in campout. We are excited about today's S3/S4 Install and EVA 1. Good luck!

YOUR CURRENT ORBIT IS: 183 X 179 NM

NOTAMS:

MORON (MRN) – CLOSED
WAKE ISLAND (WAK) - CLOSED
GOOSE BAY (YYR) – RWY 08/26 CLOSED
KEFLAVIK (IKF) – UNUSABLE
RIO GALLEGOS (AWG) – UNUSABLE

NEXT 2 PLS OPPORTUNITIES:

EDW22 ORB 49 – 3/00:48 (FEW160 SCT220 230/18P24)
EDW22 ORB 64 – 3/23:34 (FEW120 SCT210 230/16P26)

OMS TANK FAIL CAPABILITY:

L OMS FAIL: NO R OMS FAIL: NO

LEAKING OMS PRPLT BURN:

L OMS LEAK: ALWAYS RETROGRADE
R OMS LEAK: ALWAYS RETROGRADE

OMS QUANTITIES(%)

L OMS	OX = 31.0	R OMS OX = 33.0	
	FU = 30.8		FU = 32.5

SUBTRACT I'CNCT COUNTER FOR CURRENT OMS QUANTITIES

DELTA V AVAILABLE:

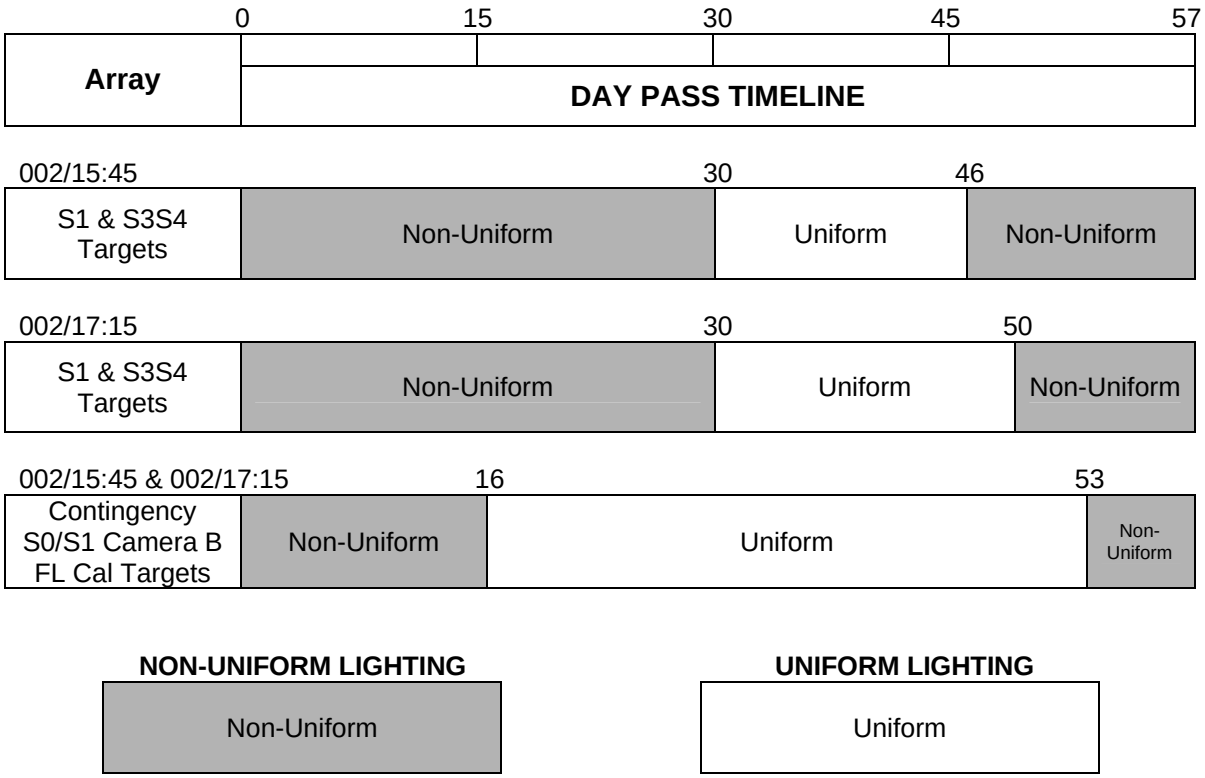
OMS	331 FPS
ARCS (TOTAL ABOVE QTY1)	46 FPS
TOTAL IN THE AFT	377 FPS
ARCS (TOTAL ABOVE QTY2)	80 FPS
FRCS (ABOVE QTY 1)	30 FPS
AFT QTY 1	81 %
AFT QTY 2	43 %

THERE ARE NO FAILURE/IMPACT/WORK AROUNDS FOR TODAY.

The table below indicates the predicted lighting for SVS operations based on the consecutive day passes during the S3S4 Truss Install. In the lighting descriptions and the graphical DAY PASS TIMELINE below, 0 references dawn. The top two bands show lighting predictions for the SRMS Wrist camera (Primary) for the two day passes listed. The bottom band shows lighting predictions for Camera B (Backup), and is applicable to both orbits.

Dawn MET times for day passes in the neighborhood of the S3S4 Truss Install:

002/15:45
002/17:15



NIGHT PASS LIGHTING INFORMATION:

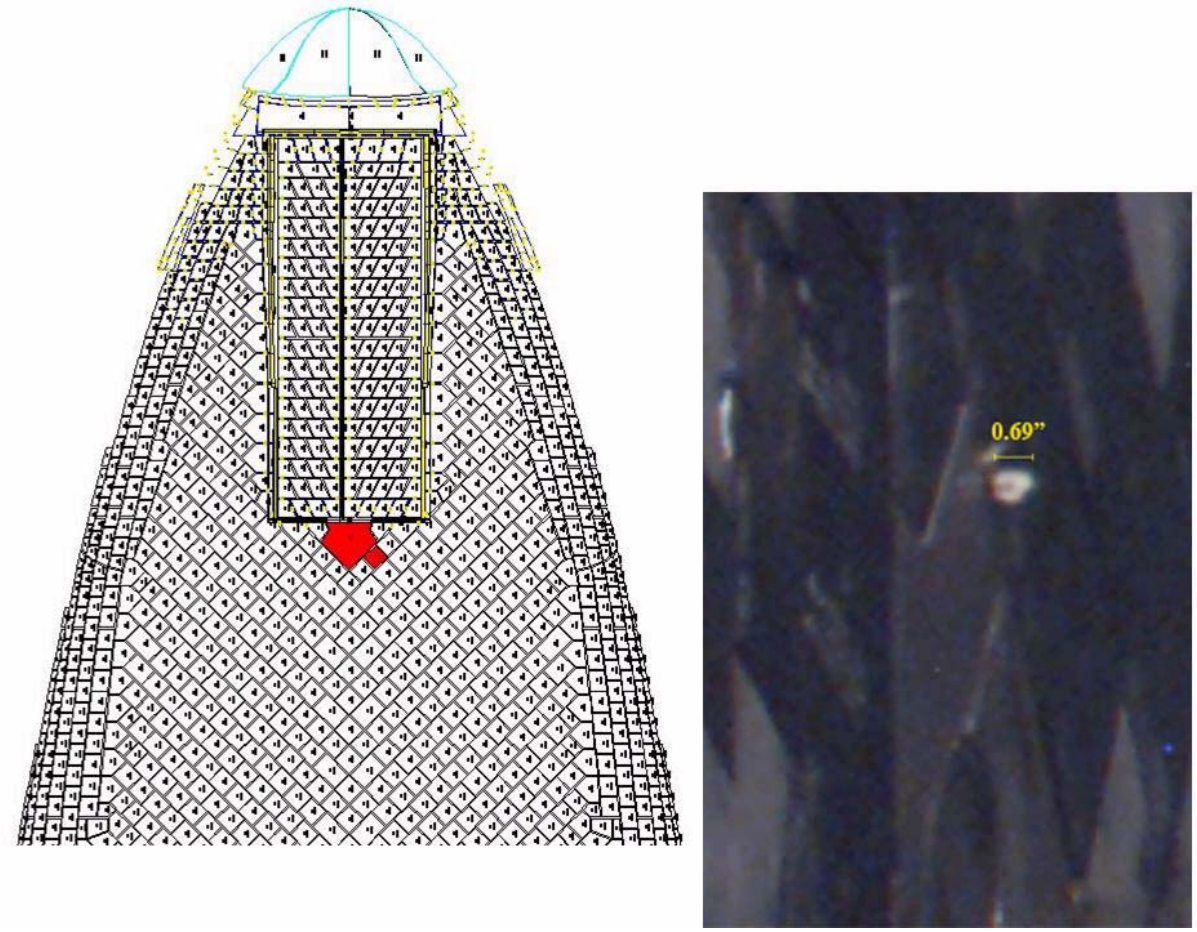
Adequate lighting for SVS without shadowing using SRMS floodlight. Additional lighting may cause shadowing on targets and should be adjusted as required. The S1 Lower Outboard camera light can cause SVS target washout, shadows, and camera glare if pointed directly at the SVS targets or the SVS camera.

FLIGHT NIGHT 3 TESTING RESULTS:

SRMS Wrist Camera performance and SVS database parameters verified in daylight conditions with target #2 (S1_E4) manually excluded as per the install procedure.

MSG 023 (15-0398) - STATUS OF REGIONS OF INTEREST

The Orbiter Project Office held a Focused Inspection Meeting and agreed there is no data that would drive an OBSS based Focused Inspection at this time. Based on additional data review, a non-OBSS based Focused Inspection is still possible. If such an inspection is required, the Orbiter Project Office directed the Debris Assessment Team to have a focused inspection CHIT ready on FD4 to officially start the mission ops planning work to support any non-OBSS based Focused Inspection on FD7. There is only one area (Arrowhead Tadpole Gap Filler) under review at this time. The attached figure shows the gap filler region of interest.



The FD 3 MMT met to review the mission progress. There were only a few items of discussion which included a continuing review of the ascent data, imagery and inspection data, and the Port OMS Pod blanket. The team thanks you for the additional 400mm in-cabin imagery you provided today on the OMS Pod blanket.

Ascent Data Review:
The preliminary ascent data review indicates that ascent was very nominal. There were no SRB hold down post stud hangs indicated in the orbiter acceleration data. Additionally, the SSME, ET, SRB, and ascent trajectory data (alpha, beta, q-bar, altitude, and altitude rates), all indicate that powered flight was nominal with no issues.

Imagery/Debris Assessment Team:
The imagery and debris assessment teams continue to process the FD 2 inspection and FD 3 RPM photography data. The starboard RCC panels 3-10 have been cleared and the rest of the starboard wing, port wing, and nose cap continue to be processed but there are no concerns at this point for the Leading Edge Sub System. The details of these reviews will be presented at tomorrows FD 4 MMT. Additionally, the Wing Leading Edge data, Radar data and ascent imagery continue to be assessed but there are currently no new items of interest.

Port OMS POD Blanket:
The team continues to assess the blanket damage on the Port OMS Pod but have concluded that the torn blanket is the result of aerodynamic loads and not due to a debris impact. As a result there are no concerns with the integrity of the structure below the blanket. Past flight data is being assessed for OMS Pod damage and preliminary indications are that at least eleven flights have encountered tile/blanket damage. STS-41G was the worst with a 6.0 inch by 40.0 inch section of blanket missing in the same general location of the Pod as the torn blanket. Damage was noted post flight on two of the exposed graphite epoxy panels. Aero thermal analysis continues for the cavity under the torn blanket based on the LDRI, RMS, and handheld imagery. Preliminary results indicate that there may be increased heating in the exposed cavity due to the raised blanket corner. Since this could result in localized damage to the graphite epoxy panel, the MMT tasked the EVA community provide options to fold down the raised edge if required. More of the aero thermal analysis results as well as potential EVA options to secure the edge of the blanket will be a topic of discussion at tomorrows MMT.

Figure 1: Port OMS Pod Blanket LDRI View

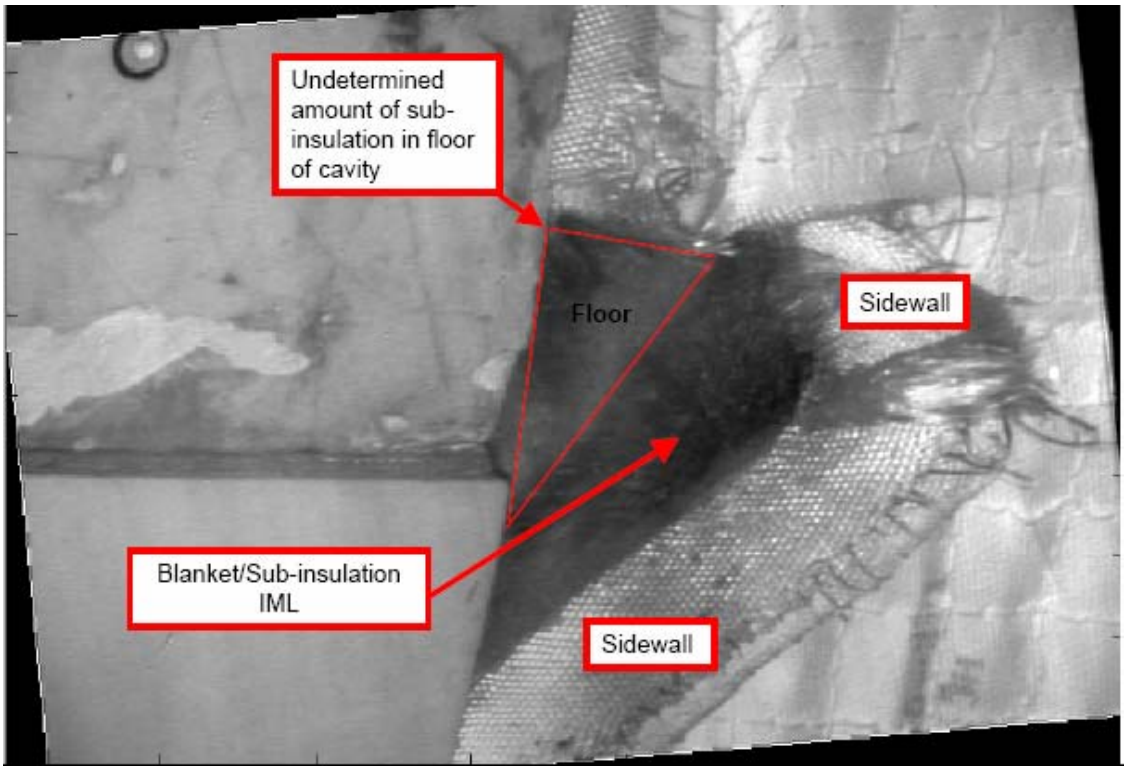


Figure 2: Past Mission OMS Pod Damage (Including STS-41G)