

# STS-117/13A

## FD 05 Execute Package



MSG	Page(s)	Title
025A	1 - 15	<a href="#">FD05 Flight Plan Revision</a> (pdf)
026	16 - 17	<a href="#">FD05 Mission Summary</a> (pdf)
027	18 - 19	<a href="#">FD05 Transfer Message</a> (pdf)
030A	20 - 21	<a href="#">FD5 EVA Status Items</a> (pdf)
028A	---	<a href="#">FD04 MMT Summary</a> (pdf - Electronic Only)

**Approved by FAO:** Linda Delapp

Last Updated: Jun 12 2007 11:27AM GMT  
JEDI (Joint Execute package Development and Integration), v2.04.0003

MSG 025A - FD05 FLIGHT PLAN REVISION

1 MSG INDEX

2

3 MSG NO.      TITLE

4 025            FD05 Flight Plan Revision

5 026            FD05 Mission Summary

6 027            FD05 Transfer Message

7 028            FD04 MMT Summary (Electronic Only)

8 029            PAO Event Summary Message: CBS NEWS, KFOX-TV, KTSM-TV

9 030            FD5 EVA Status Items

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- 12 1. ROBO requires camera B be routed to ISS on video channel 92 (Monitor 2) to support  
13 the pre MT translate survey operation. CCTV monitor 2 will need to be left on overnight.  
14 The following steps need to be added to the flight plan before crew sleep.

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16 In PRE-SLEEP ACTIVITY - FLIGHT DECK LIST perform step 7 with the following deltas

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A3      TV MON 2 - ON

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19            A7      TV PWR CNTR UNIT - MNA

20                      VID OUT MON 2 pb - push

21                                      IN B pb - push

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23            R12    ✓ VPU PWR      - ON (LED on)

24                                      ✓ Green Jumper - ISS

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1 2. Flight Day 5 Exercise Constraints:

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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
SABB DEPLOY TO 1 MAST BAY*	No exercise after SABB latches are open until SAW is deployed at least 1 mast bay	No unisolated exercise allowed after SABB latches are open until SAW is deployed at least 1 mast bay (only CEVIS and TVIS allowed)
S4 SAW DEPLOY	No exercise during SAW latch or deploy/retract motor or EVA driven operations	No exercise during SAW latch or deploy/retract motor or EVA driven operations
MT TRANSLATION*	No exercise allowed during MT translations (latch transition, unlatched with brakes on, UMA translating and MT translations)	Exercise constraints are as follows during MT translations (latch transition, unlatched with brakes on, UMA translating and MT translation):  The following are allowed in conjunction or separately: TVIS/IRED/CEVIS TVIS/IRED/SM ERGOMETER SM Ergometer rate limited to 60 RPM. CEVIS and SM Ergometer not allowed together.

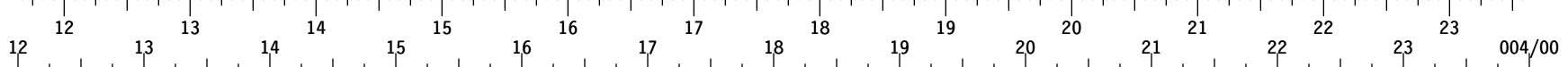
6 \* The exercise constraints for these tasks are not reflected in your timelines since they occur  
7 during crew sleep.

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3. REPLACE PAGES 2-14, 2-16, AND 3-44 THROUGH 3-53.

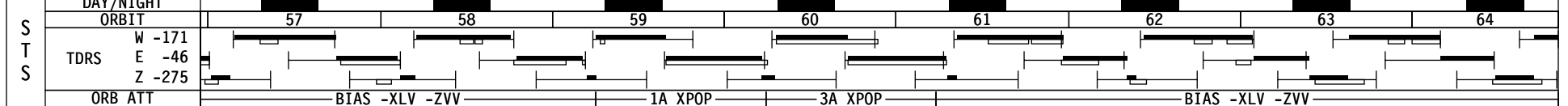
FD05

GMT 06/12/07 (163)  
 β=51  
 MET Day 003



S T S - 1 1 7	CDR STURCKOW	SLEEP	POST SLEEP	1A49% 1A00%	1A49% 1A00%	3A49% 3A00%	3A49% 3A00%	1A00% 1A00%	CXNFCER MTEH/O	MEAL	OFF DUTY	IMXFER OPS CINCT5	EXERCISE	
	PLT/R2/M1 ARCHAMBAULT	SLEEP	POST SLEEP	CINCT4 1A49% 1A00%	POST SLEEP	1A00% 1A00%	CWE4 MUNPCT INVDNCT	3A49% 3A00%	3A00% 3A00%	MEAL	OFF DUTY	SRMS RTRCT VIEW SSRMS WS2 CNFG XLAT	XFER OPS	
	MS1/EV3/R1 FORRESTER	SLEEP	POST SLEEP	1A49% 1A00%	1A49% 1A00%	3A49% 3A00%	3A49% 3A00%	3A00% 3A00%	N2 XFER INIT	MEAL	OFF DUTY	PMDIS	EXERCISE E_LK PREP	
	MS2/EV4/M2 SWANSON	SLEEP	POST SLEEP	SVSRFRMY* POST SLEEP	1A49% 1A00%	POST SLEEP	1A00% 1A00%	MNVRFY* 3A49% 3A00%	EMU SWAP 3A00% 3A00%	PMDIS	MEAL	OFF DUTY	EXERCISE	E_LK PREP
	MS3/EV2/R1 OLIVAS	SLEEP	POST SLEEP	ASPRN 1A49% 1A00%	1A49% 1A00%	3A49% 3A00%	3A49% 3A00%	3A00% 3A00%	EMU SWAP 3A00% 3A00%	MCIU	MEAL	OFF DUTY	SRMS RTRCT VIEW POST EVA 1 TOOL CNFG	EXER CISE
	MS4/EV1 REILLY	SLEEP	POST SLEEP	ASPRN 1A49% 1A00%	1A49% 1A00%	3A49% 3A00%	3A49% 3A00%	3A00% 3A00%	3A00% 3A00%	3A00% 3A00%	MEAL	OFF DUTY	FOOD XFER POST EVA 1 TOOL CNFG	XFER OPS
D N	FE-2 WILLIAMS	SLEEP	POST SLEEP	SVSRFRMY* PREP DPC PREP SSCA 1A49% 1A00%	1A49% 1A00%	3A49% 3A00%	3A49% 3A00%	3A00% 3A00%	SSC 3A00% 3A00%	MIDDAY-MEAL 3A00% 3A00%	PMCAUC	H/O	TVIS H/O	
E X P - 1 5	ISS CDR ЮРЧИХИН	SLEEP	POST SLEEP	PREP WORK DPC PREP 825 PMT	BKД-Пx0-C01-CLSOUT15				MIDDAY-MEAL	DCS PMC CDR	ΦБ CB RCVRV	CEVIS	RED	
	FE-1 KOTOV	SLEEP	POST SLEEP	PREP WORK DPC PREP PMT	Пx0-C01-CLSOUT				BSA INIT Px0 C01 CLSOUT N2 XFER INIT	MIDDAY-MEAL	PMC FE1	RED	SSRMS WS2 CNFG XLAT	CEVIS
U P	FE-2 ANDERSON	SLEEP	POST SLEEP	PREP WORK DPC PREP PMT	PMDIS	ADAPT	BSA INIT	ADAPTATION	MIDDAY-MEAL	ADAPT	H/O	XFER	CDTRACPMCH/O S/U	

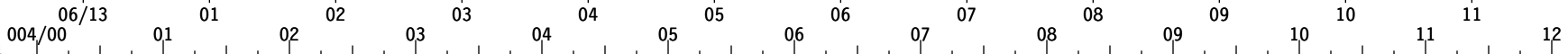
SSRMS WS2 PDGF2



NOTES \*1A CAMERA CONFIG #3A CAMERAS #3A CAMERA CONFIG #TERM  
 NO EXERCISE

FD05

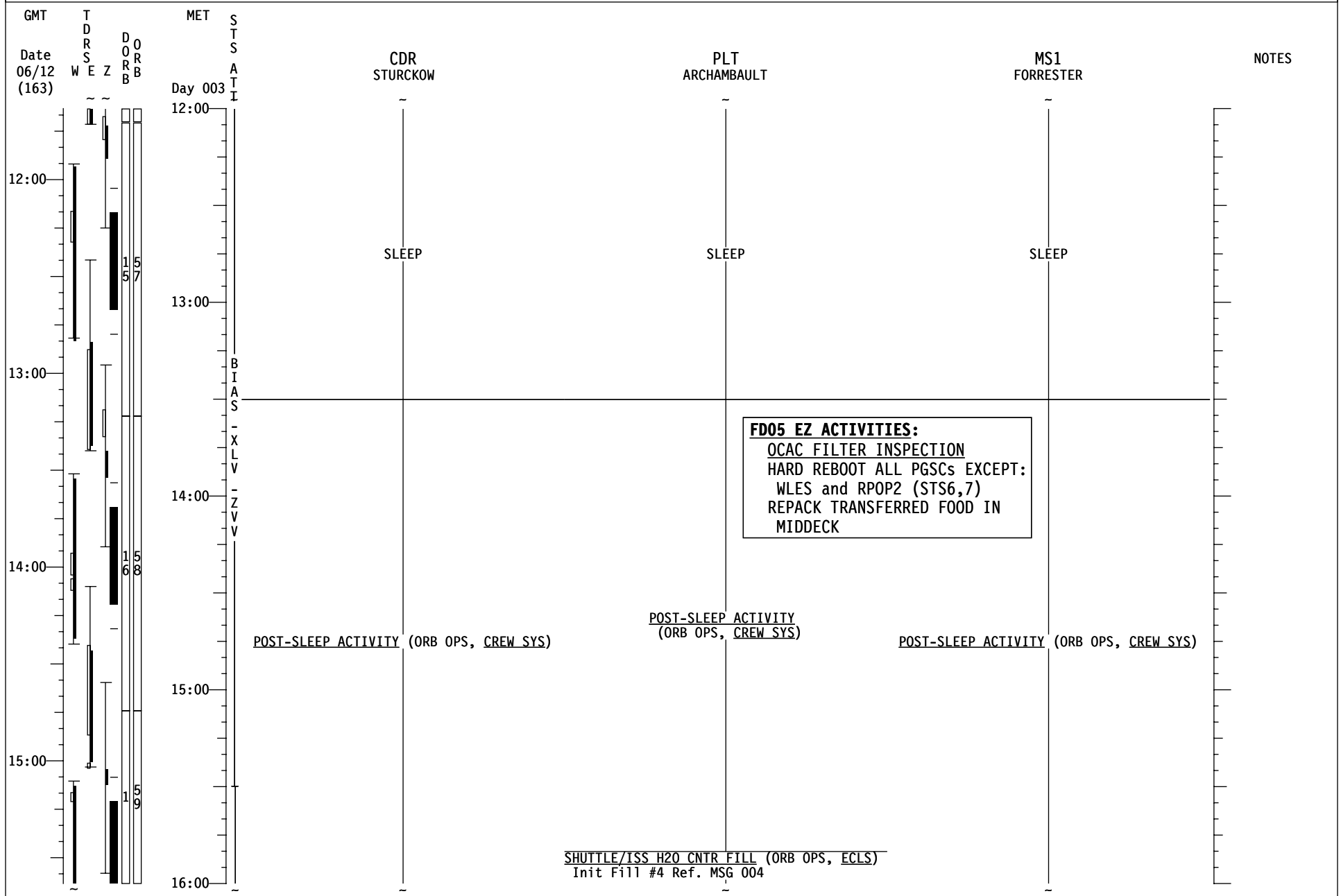
GMT 06/12/07 (163)  
 β=48  
 MET Day 004



S T S - 1 1 7	CDR STURCKOW	CT W 5 XFER OPS	CX F 5 R	P/TV 05 S/U	PE A O E N T	EVA 2 PROC REVIEW	PS R L E E E P	PMC OCA	PRE SLEEP	ISS EXTERNAL SURVEY SLEEP		
	PLT/R2/M1 ARCHAMBAULT	XFER OPS	WCS	EXERCISE	PE A O E N T	EVA 2 PROC REVIEW			PRE SLEEP	SLEEP		
	MS1/EV3/R1 FORRESTER	E LK PREP	TOOL CNFG	PRE SLEEP	PE A O E N T	EVA 2 PROC REVIEW	PRE SLEEP		MASK PB/TOOL CONFIG	PRE SLEEP	SLEEP	
	MS2/EV4/M2 SWANSON	E LK PREP	TOOL CNFG	PRE SLEEP	PE A O E N T	EVA 2 PROC REVIEW	PRE SLEEP		MASK PB/TOOL CONFIG	PRE SLEEP	SLEEP	
	MS3/EV2/R1 OLIVAS	EXER CISE	XFER OPS	E I O L L N B L O U M M	PE A O E N T	EVA 2 PROC REVIEW			PRE SLEEP	SLEEP		
	MS4/EV1 REILLY	EXERCISE	XFER OPS	PE A O E N T	EVA 2 PROC REVIEW	X B F R I E E R E F			PRE SLEEP	SLEEP		
D N	FE-2 WILLIAMS	H/O	TRAC	PE A O E N T	EVA 2 PROC REVIEW	DPC		PRE SLEEP	SLEEP			
E X P - 1 5	ISS CDR ЮРЧИХИН	RED	COX	IMS	EVA 2 PROC REVIEW	DPC		PRE SLEEP	SLEEP			
	FE-1 KOTOV	CEVIS	EXER	EVA 2 PROC REVIEW	DPC			PRE SLEEP	SLEEP			
U P	FE-2 ANDERSON	H/O	XFER	C D PE A O E N T	C PREP WORK	T S C R T D I A O C W	DPC	PRE SLEEP	SLEEP			
SSRMS		WS2 PDGF2		2-3 SRVY		XLATE WS3		WS3 PDGF2				
S T S	DAY/NIGHT	ORBIT										
	ORBIT	64	65	66	67	68	69	70	71	72		
	TDRS	W -171	E -46	Z -275								
ORB ATT		BIAS -XLV -ZVV										
NOTES												

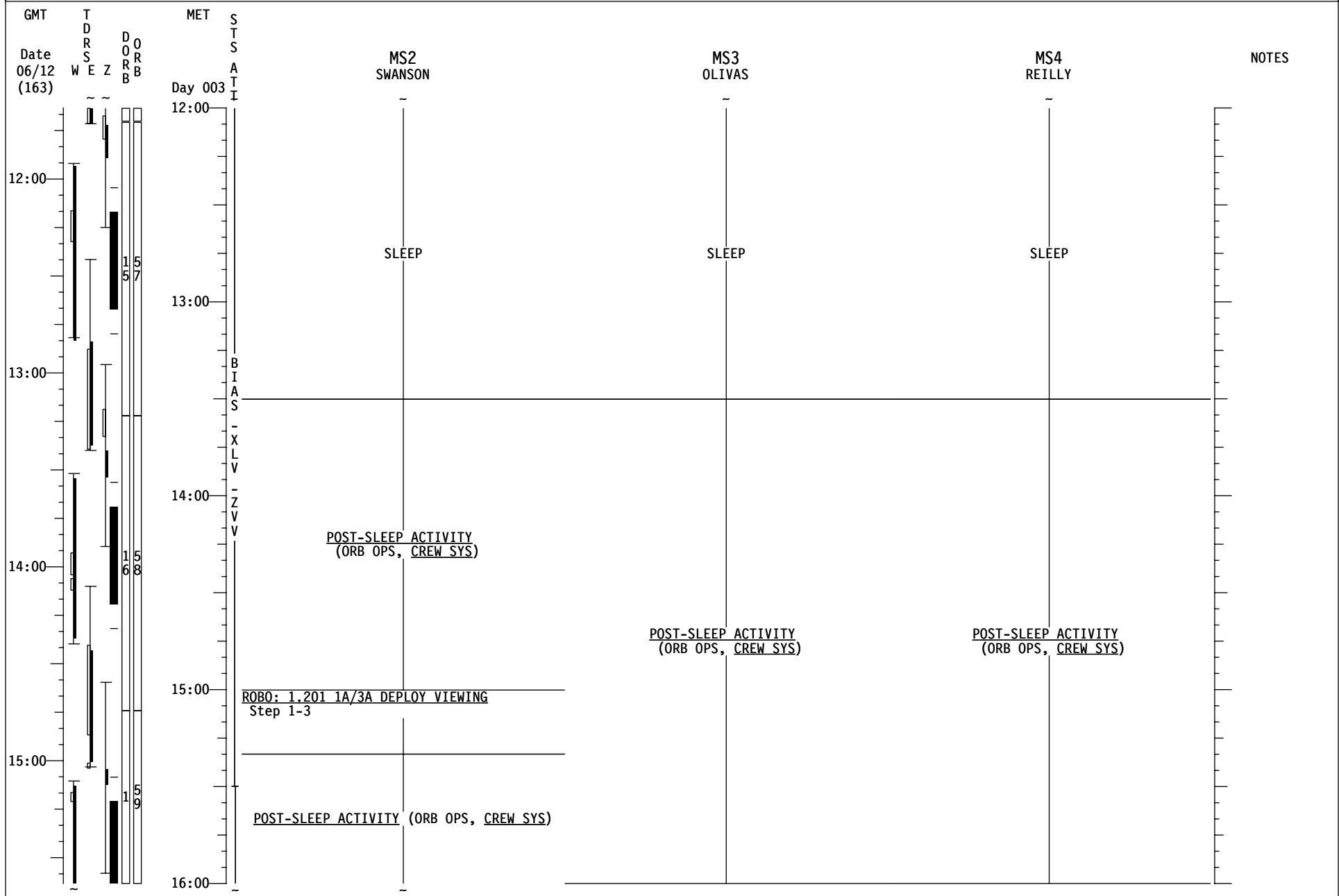
# STS-117 (FD05)

**REPLANNED**



# STS-117 (FD05)

**REPLANNED**



# STS-117 (FD05)

**REPLANNED**

GMT	TDRS W E Z	DORB D O R B	MET	S T S A T I	CDR STURCKOW	PLT ARCHAMBAULT	MS1 FORRESTER	NOTES
Date 06/12 (163)			Day 003					
16:00				1	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) 13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 15.3, 15.7, 15.9 (1A Only)	SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS) Init Fill #4 Ref. MSG 004 13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 15.3, 15.7, 15.9 (1A Only)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) 13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 15.3, 15.7, 15.9 (1A Only)	NO EXERCISE DURING SAW DEPLOY ACTIVITIES
16:00				X P O P		POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)		
17:00				3	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 17.3, 17.7, 17.10 (1A Only)	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 17.3, 17.7, 17.10 (1A Only)	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 17.3, 17.7, 17.10 (1A Only)	
17:00				X P O P		SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS) Perform FILL TERMINATION MNVR (INRTL) UPDATE (3A Deploy) R=303 P=205 Y=53 A12/FREE/VERN Init MNVR	A] GNC 23 ITEM 2 EXEC (Left Page) ITEM 37 EXEC (Reselect jet L5L)	
17:00				3	A 13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 15.3, 15.6-15.9 (3A Only)	I'CNCT: R OMS TO RCS (OPCL, RCS) A 13A ASSY OPS: 1.3.452 SAW DEPLOY B Steps 15.3, 15.6-15.9 (3A Only)	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 15.3, 15.6-15.9 (3A Only)	
18:00				X P O P			B] In Step 15.8 Shuttle takes attitude control.	
18:00				3	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 17.3, 17.6-17.7, 17.9-17.10 (3A Only)	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 17.3, 17.6-17.7, 17.9-17.10 (3A Only)	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 17.3, 17.6-17.7, 17.9-17.10 (3A Only)	
18:00				X P O P		CWC TRANSFER Transfer 1 CWC to ISS Ref. MSG 004	JOINT OPS: 3.102 NITROGEN TRANSFER INIT	
19:00				B I A S		When in ATT and rates dampened: JNT OPS: 3.111 H/O ATT CNTRL ORB TO CMG TA		
19:00				- X L V	MEAL	MEAL	MEAL	
19:00				- Z V V				
20:00				4				



# STS-117 (FD05)

**REPLANNED**

GMT	T D R S E Z	D O R B	MET	S T S	MS2 SWANSON	MS3 OLIVAS	MS4 REILLY	NOTES
Date 06/12 (163)	W	E	Day 003	A T I				
16:00		19			POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) 13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 15.3, 15.7, 15.9 (1A Only)	EVA CREW: TAKE 1 ASPIRIN (325mg) 13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 15.3, 15.7, 15.9 (1A Only)	EVA CREW: TAKE 1 ASPIRIN (325mg) 13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 15.3, 15.7, 15.9 (1A Only)	NO EXERCISE DURING SAW DEPLOY ACTIVITIES
					POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)		POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
					13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 17.3, 17.7, 17.10 (1A Only)	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 17.3, 17.7, 17.10 (1A Only)	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 17.3, 17.7, 17.10 (1A Only)	
17:00		20			ROBO: 1.201 1A/3A DEPLOY VIEWING Step 4			
					ROBO: 1.201 1A/3A DEPLOY VIEWING Step 5			
					13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 15.3, 15.6-15.9 (3A Only)	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 15.3, 15.6-15.9 (3A Only)	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 15.3, 15.6-15.9 (3A Only)	
					EMU SWAP CC (EVA)	EMU SWAP CC (EVA)		
18:00								
					13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 17.3, 17.6-17.7, 17.9-17.10 (3A Only)	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 17.3, 17.6-17.7, 17.9-17.10 (3A Only)	13A ASSY OPS: 1.3.452 SAW DEPLOY Steps 17.3, 17.6-17.7, 17.9-17.10 (3A Only)	
					PODF: 2.003 PMDIS EXPERIMENT OPERATION Crew ID is S3 Omit Step 27			
						L17 Check MCIU filter screen		
19:00		31						
					MEAL	MEAL	MEAL	
19:00								
20:00		42						

# STS-117 (FD05)

**REPLANNED**

GMT	T D R S E Z	D O R B	MET	S T S	CDR	PLT	MS1	NOTES
Date 06/12 (163)	W	Z	Day 003	A T I	STURCKOW	ARCHAMBAULT	FORRESTER	
20:00								
21:00					OFF DUTY	OFF DUTY	OFF DUTY	
22:00					<u>IMU STAR OF OPPTY ALIGN (ORB OPS)</u>	<u>SAW RETRACT VIEWING (PDRS, VIEWING SUPPORT) Steps 1-2</u>	<u>PODF: 2.003 PMDIS EXPERIMENT OPERATION</u> Crew ID is S4 Omit Step 27	<u>UPLINK</u> β18 only Box C1,C2,D1,D2
22:00					<u>TRANSFER OPS</u> Ref. Transfer List & MSG 027	<u>ROBOTICS: 1.202 W2 CONFIGURE FOR TRANSLATION</u>		<u>UPLINK</u> β18 only Box C1,C2,D3
23:00					<u>SHUTTLE/ISS H2O CNTR FILL (ORB OPS, ECLS) Init Fill #5</u> Ref. MSG 004		<u>EXERCISE</u> Ref. MSG 025, Item 2	
23:00					<u>EXERCISE</u> Ref. MSG 025, Item 2	<u>TRANSFER OPS</u> Ref. Transfer List & MSG 027	<u>EVA SYSTEMS: 1.305 EQUIPMENT LOCK PREP</u> REF: <u>STS-117 CNSMABL TRKING CC (EVA)</u>	
00:00								

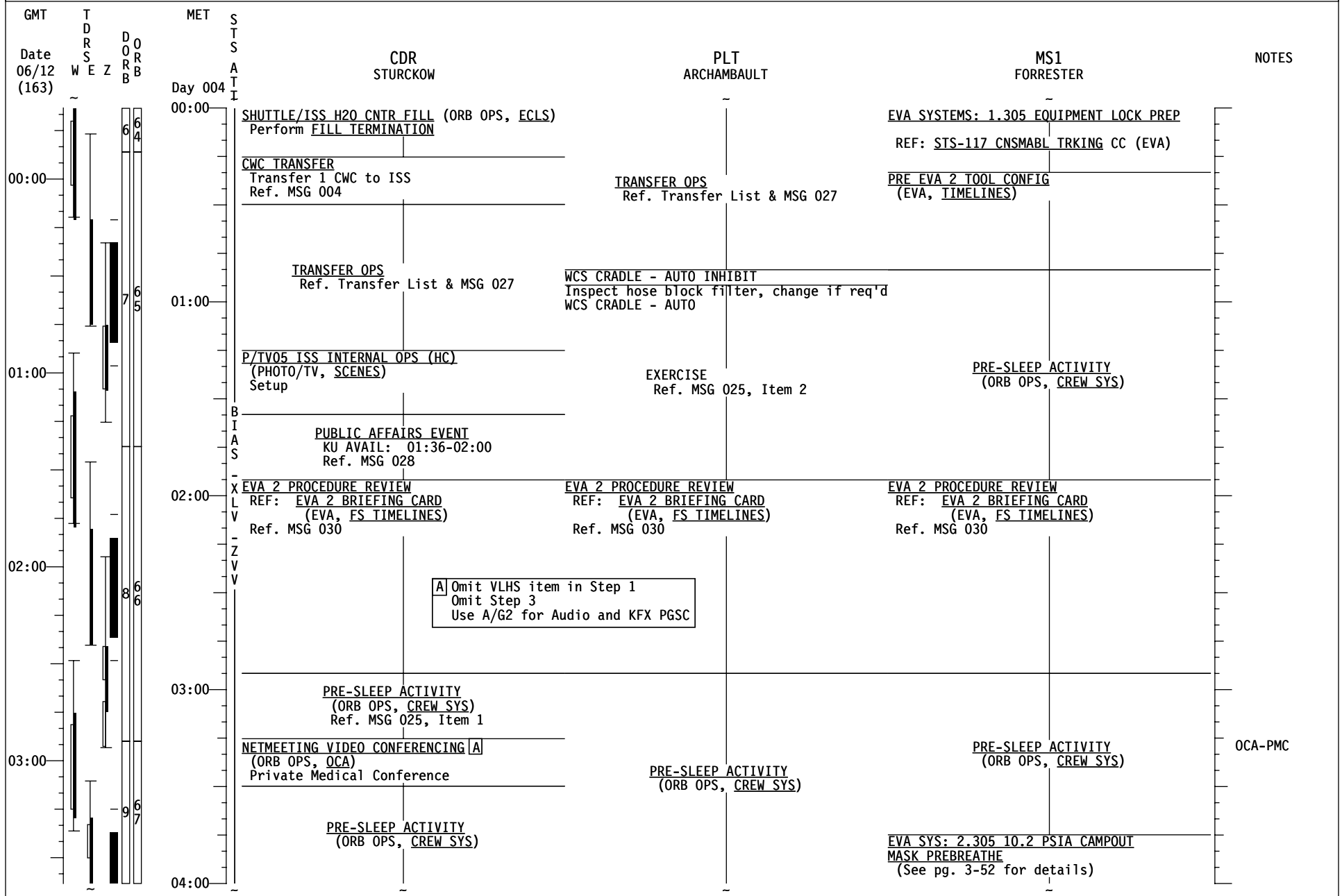
# STS-117 (FD05)

**REPLANNED**

GMT Date 06/12 (163)	T D R S E Z	D O R B	MET Day 003	S T S A T I	MS2 SWANSON	MS3 OLIVAS	MS4 REILLY	NOTES
			20:00					
			21:00		OFF DUTY	OFF DUTY	OFF DUTY	
			22:00					
			22:00		EXERCISE Ref. MSG 025, Item 2	SAW RETRACT VIEWING (PDRS, VIEWING SUPPORT) Steps 1-2	FOOD TRANSFER Ref. Transfer List Items: 610-615 and MSG 027	
			22:00			POST EVA 1 TOOL CONFIG (EVA FS, EVA 1) Ref. MSG 030	POST EVA 1 TOOL CONFIG (EVA FS, EVA 1) Ref. MSG 030	
			23:00					
			23:00		EVA SYSTEMS: 1.305 EQUIPMENT LOCK PREP REF: STS-117 CNSMABL TRKING CC (EVA)	EXERCISE Ref. MSG 025, Item 2	TRANSFER OPS Ref. Transfer List & MSG 027	
			00:00					

# STS-117 (FD05)

**REPLANNED**



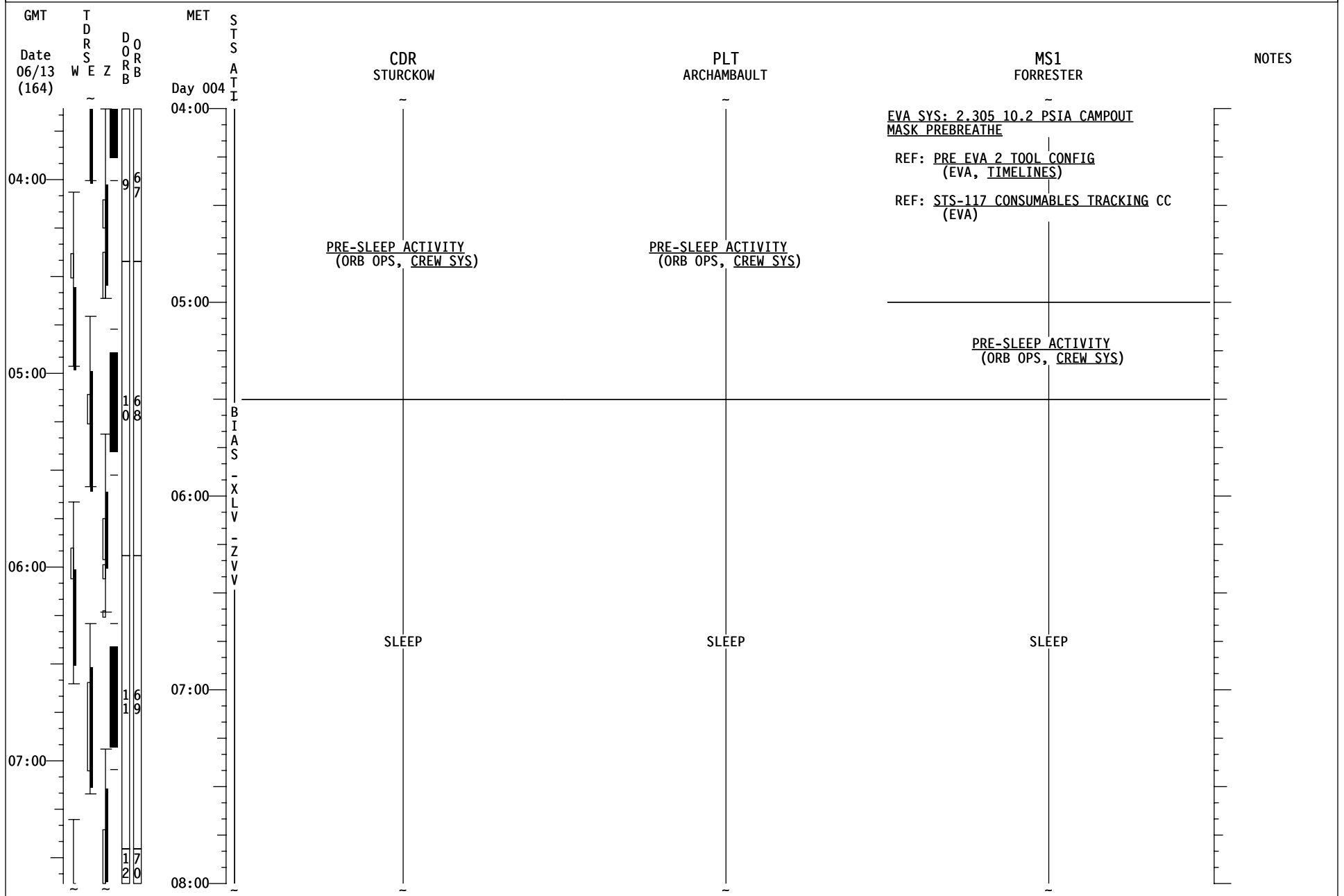
# STS-117 (FD05)

**REPLANNED**

GMT	TDRS WSEZ	DORB DORB	MET	STS ASTI	MS2 SWANSON	MS3 OLIVAS	MS4 REILLY	NOTES
Date 06/12 (163)			Day 004					
00:00		64			EVA SYSTEMS: 1.305 EQUIPMENT LOCK PREP REF: STS-117 CNSMABL TRKING CC (EVA)	EXERCISE Ref. MSG 025, Item 2		
00:00					PRE EVA 2 TOOL CONFIG (EVA, TIMELINES)		EXERCISE Ref. MSG 025, Item 2	
01:00		75				TRANSFER OPS Ref. Transfer List & MSG 027		
01:00					PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	A7U PORT RMS CAMERA - ELBOW TV (ILLUMINATOR OPS) CC (PHOTO/TV) ILLUMINATORS ON - A,D,RMS Elbow	TRANSFER OPS Ref. Transfer List & MSG 027	
02:00						PUBLIC AFFAIRS EVENT KU AVAIL: 01:36-02:00 Ref. MSG 028	PUBLIC AFFAIRS EVENT KU AVAIL: 01:36-02:00 Ref. MSG 028	
02:00					X EVA 2 PROCEDURE REVIEW L REF: EVA 2 BRIEFING CARD (EVA, FS TIMELINES) V Ref. MSG 030	EVA 2 PROCEDURE REVIEW REF: EVA 2 BRIEFING CARD (EVA, FS TIMELINES) Ref. MSG 030	EVA 2 PROCEDURE REVIEW REF: EVA 2 BRIEFING CARD (EVA, FS TIMELINES) Ref. MSG 030	
03:00							TRANSFER BRIEF Call down status to MCC	
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		97			EVA SYS: 2.305 10.2 PSIA CAMPOUT MASK PREBREATHE (See pg. 3.53 for details)			

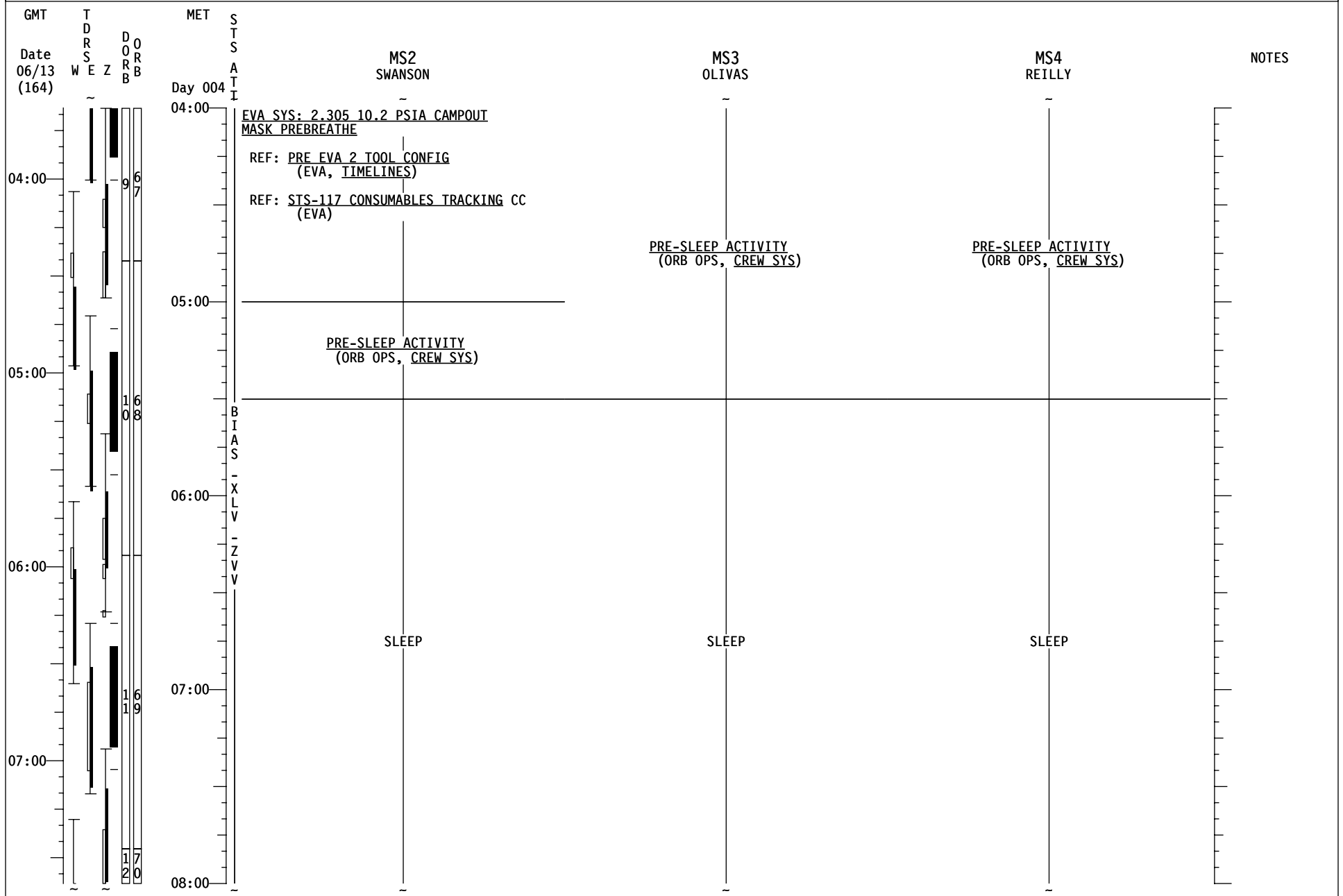
# STS-117 (FD05)

**REPLANNED**



# STS-117 (FD05)

**REPLANNED**



**MSG 026 (15-0402) - FD05 MISSION SUMMARY**

Page 1 of 2

1 Good Morning Atlantis!  
2 Congratulations on an exceptional EVA yesterday! We look forward to another great day in  
3 space with the 1A/3A SAW deploy. Enjoy the well deserved time off today.

4  
5 YOUR CURRENT ORBIT IS: 183 X 179 NM

6  
7 NOTAMS:

8  
9 MORON (MRN) – CLOSED  
10 WAKE ISLAND (WAK) - CLOSED  
11 GOOSE BAY (YYR) – RWY 08/26 CLOSED  
12 KEFLAVIK (IKF) – UNUSABLE  
13 RIO GALLEGOS (AWG) – UNUSABLE

14  
15 NEXT 2 PLS OPPORTUNITIES:

16  
17 EDW22 ORB 64 – 3/23:34 (SCT250 250/18P28)  
18 EDW22 ORB 80 – 4/23:54 (SKC 240/15P25)

19  
20 OMS TANK FAIL CAPABILITY:

21  
22 L OMS FAIL: NO R OMS FAIL: NO

23  
24 LEAKING OMS PRPLT BURN:

25  
26 L OMS LEAK: ALWAYS RETROGRADE  
27 R OMS LEAK: ALWAYS RETROGRADE

28  
29 OMS QUANTITIES(%)

30  
31 L OMS OX = 31.0 R OMS OX = 33.0  
32 FU = 30.8 FU = 32.5

33  
34 SUBTRACT I'CNCT COUNTER FOR CURRENT OMS QUANTITIES

35  
36 DELTA V AVAILABLE:

37  
38 OMS 333 FPS  
39 ARCS (TOTAL ABOVE QTY1) 47 FPS  
40 TOTAL IN THE AFT 380 FPS  
41  
42 ARCS (TOTAL ABOVE QTY2) 81 FPS  
43 FRCS (ABOVE QTY 1) 29 FPS  
44  
45 AFT QTY 1 81 %  
46 AFT QTY 2 43 %



# MSG 026 (15-0402) - FD05 MISSION SUMMARY

Page 2 of 2

<u>SYSTEM</u>	<u>FAILURE</u>	<u>IMPACT</u>	<u>WORK AROUND</u>
COMM/INST	Camera A focus stuck. Camera regained focus capability after a period of time.	Cannot focus camera. Fuzzy video while in this state.	None. Camera A is working at this time. Use alternate camera if failure reoccurs or power camera A off. Wait for 2 hrs then try to focus camera again.
EVA1	EMU 3004 (EV2's EMU) Failed CO2 Sensor	Crew received CO2 sensor message on repress	EMU remains GO for EVA with this sensor down. Crew is prime for CO2 monitoring.
EVA2	EMU 3004 (EV2's EMU) Cooling Suspect	Degraded cooling may have attributed to CO2 sensor failure.	If cooling remains suspect, may require EV2 to use EMU 3006 (EV4's EMU)
EVA3	ISS Crew Lock In-flight Refill Unit (IRU) Pump Failed to Reach Nominal Supply Pressure.	None. IRU quantity indicated adequate water fill.	If pump degrades further, shuttle airlock could be used to recharge EMU water tanks
EVA4	PGT Power Offs during EVA1	PGT unable to sustain operations under moderate to high torque loads	Use new batteries launched on 117.

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**MSG 027 (15-0403) - FD05 TRANSFER MESSAGE**

Page 1 of 8

1 Good morning crew,

2

3 Welcome to another installment of “This is your Transfer List Update”. Today we’ve made a  
4 few minor updates to both lists and also added two new transfer items for return. Have a  
5 great day and enjoy.

6

7 The Transfer List Excel file, FD05\_TransferList\_STS117.xls, is located on the KFX machine  
8 in **C:\OCA-up\transfer**.

9

10 For ISS, the Transfer List Excel file, FD05\_TransferList\_STS117.xls, is located in **K:\OCA-**  
11 **up\transfer**.

12

13 **Transfer Notes**

14

- We’ve added the EVA Transfer Bag as Item 801 to the real-time return section of the return tab. It will be stowed in 5 MLE Bag A, which may displace some foam. Any excess foam may be relocated to Bag F or the airlock. If stowed in the airlock, bundle it together and restrain it to the handrails.

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- As a reminder please use Shuttle Air to Ground 2 for the transfer briefs at the end of the day.

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22

23 **Questions/Answers for the crew**

24

- On FD03 you called down items 7.1 – 7.12 were complete. Were these items unpacked from the 0.5 CTB (ref. Item #7) and stowed by the ISS crew? Or, is the bag just across the Hatch?

25

26

27

- Similarly, have Clay and Suni unpacked items 20.2 – 20.7 from Bag 20?

28

29

- Can you confirm that items 701, 701.1, and 701.2 were completed on FD03? Clay indicated they had been transferred to the Shuttle Middeck.

30

31

32

- During the FD03 Transfer calldown, you reported Clay’s Bracelet-M Device (Transfer List Item #26) was stowed in his Каюта. Was that the TESS in the Lab or a Каюта in the Service Module?

33

34

35

- Item #23 (Blood Collection Kit) should not fit in LAB1O2\_B2 until Return Bag 405 is removed. On FD03 you called down item #23 was complete. Was Return Bag 405 also transferred? Or, did you stow item #23 in a different location?

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**MSG 027 (15-0403) - FD05 TRANSFER MESSAGE**

Page 2 of 8

1 **Choreography (items for transfer today)**

2 **TO ISS:**

3 **Item 12:** A31p 60 GB Hard Drives

4 **Item 30:** ARMS/GLOVES/LEG RINGS 0.5 CTB

5 **Item 31:** [Clay's] ECOK in mesh bag

6  
7 **FROM ISS:**

8 **Item 404, 404.2, 404.3, 404.16:** P/TV Resupply 0.5 CTB and contents (transfer when  
9 ops complete)

10 **Item 410:** LA's old LCVG 0.5 CTB

11 **Item 411:** QDM/Leader Panel 0.5 CTB

12 **Item 411.3 and 411.4:** Pack returning PMDIS and TRAC CDs after Clay's CD copy  
13 activities.

14 **Item 602 and 616:** Nickel Removal Assembly (NiRA) with Cushion

15 **Item 603:** A31p Laptop

16 **Item 606:** 12A.1 CD Transfer Case

17 **Item 609:** Condensate Tank CWC Water Samples

18 **Item 610, 611, 612, 613, 614, 615:** Returning Food 0.5 CTBs

19  
20 **Please incorporate uplink pages as follows:**

21  
22 In **RESUPPLY** tab

23 Replace Page(s): 7

24  
25 In **RETURN** tab

26 Replace Page(s): 1, 2, 3, 5, 8 (note: item 603 was bumped from page 2 to 3. As such,  
27 please replace page 3 even though there were no technical changes).

28  
29 **Changes to the Transfer List are detailed below.**

30 **RESUPPLY**

31 Item 27.2: Updated Qty

32  
33 **RETURN**

34 Item 403: Updated Notes

35 Item 407.5: Updated Notes

36 Item 702: Updated Constraint

37 Item 801: New Item

38 Item 802: New Item

39  
40  
41 Call us with any questions and have a great day!

42  
43 - The Transfer Team

**MSG 030A (15-0406A) - FD5 EVA STATUS ITEMS**

Page 1 of 2

1 Great job on the EVA yesterday! We have a few follow up items for you.

2

3 PGT Battery Plan: We believe the PGT power off anomaly that occurred during the EVA  
4 might be attributed to a low battery voltage when under a load. As a precaution, we are  
5 changing our logistics plan to start using the new PGT batteries you transferred to ISS in  
6 your EVA Systems Transfer Bag. Please make the following pen and ink changes to the  
7 PGT Battery s/n column on your STS-117 Consumables Tracking Cue Card.

8

9 EVA 2 – FD 6

10 EV3: ~~5013~~ **1005**

11 EV4: ~~5014~~ **1006**

12

13 EVA 3 – FD 8

14 EV1: ~~5011~~

15 EV2: ~~5012~~ **1004**

16

17 EVA 4 – FD 10

18 EV3: ~~5013~~ **1005**

19 EV4: ~~5014~~ **1006**

20

21 The change of PGT batteries also affects your STS-117 Battery Recharge Plan. On the cue  
22 card, for FD 6, please charge PGT Batteries s/n 1005 and 1006 instead of 5013 and 5014.

23

24 Because these new batteries have not received a top-off charge since launch, we request  
25 you perform a voltage check as part of Tool Config to verify the voltage is above 36V.

26

27 Questions for Danny:

28 We believe the failure of your EMU CO2 sensor may be related to you being warm during  
29 the EVA. In order to help diagnose the issue, can you tell us when you first noticed your  
30 EMU was running warm? Did any actions (TCV positions, etc.) make things better or worse?  
31 Did the EMU run warm throughout the EVA? Can you tell us what TCV settings you used  
32 during the EVA?

33

34 Regarding the shiny spot on the left heel guide of the APFR, did it appear to you to have  
35 a sharp edge or have any raised burrs?

36

37 P6 WIF Inspection:

38 It has recently been identified that fasteners (circled in photo below) holding the WIF  
39 baseplates onto P6 could be loose. Note that the suspect fasteners are on the baseplate -  
40 not the actual WIF itself. P6 WIFs 1 through 12 are suspect. You are using P6 WIF 11 for  
41 temp stowage of an APFR between EVA 2 and 3.

42

43 In addition to the usual pull test to confirm the APFR is fully secure, please do the following:

44

- 45 ■ Confirm that these 4 bolts are present and visually secure (no gap)
- 46 ■ Firmly push and pull on the installed APFR in order to confirm the 4 bolts and  
47 baseplate is completely secure.
- 48 ■ Call MCC with the results.

48

49 No tethering of the APFR is required after it is installed.

50

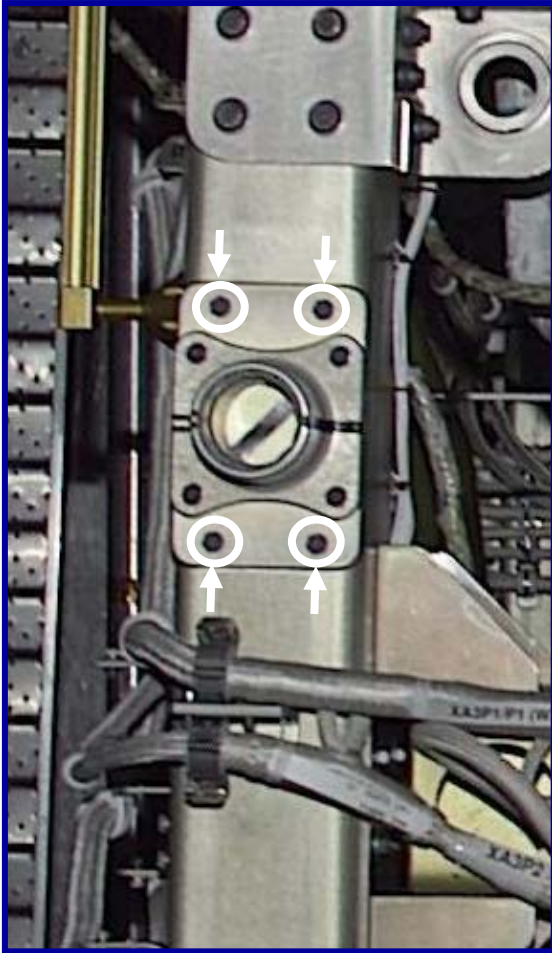
50 If WIF 11 is found to be loose, we will use P6 WIF 4A instead.

51

51 Only temp stowage of APFRs in these WIFs allowed for now - no ingressed APFR ops.

**MSG 030A (15-0406A) - FD5 EVA STATUS ITEMS**

Page 2 of 2



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**MSG 028A (15-0404A) - FD04 MMT SUMMARY**

Page 1 of 3

1 **FD4 MMT Crew Summary**

2

3 The MMT met today to discuss mission progress, review the FD 2 inspection and FD 3 RPM  
4 photography, and discuss the Port OMS Pod blanket. As expected preflight, the MMT  
5 agreed with the recommendation to add two mission extension days and an EVA 4 to  
6 accomplish additional ISS tasks. The team appreciates your hard work and enjoyed  
7 following your progress today with the S3/S4 truss install and EVA 1.

8

9 **Imagery/Debris Assessment Team:**

10 The imagery and debris assessment teams have completed their review of the FD2  
11 inspection data and FD3 RPM photography and have concluded that no Focused Inspection  
12 with OBSS is required. The team has reviewed all the LDRI data and cleared the RCC  
13 (starboard wing, port wing, and Nosecap) for entry.

14

15 The FD3 RPM data review has been completed and all TPS is clear for entry except for two  
16 protruding gap fillers and one tile area near the outboard edge of the port ET door which will  
17 likely be cleared tomorrow. One of these gap fillers is near the arrow head tile directly aft of  
18 the nose landing gear door and the other is on an aft tile forward of the bodyflap.

19 Aerothermal analysis including the possible tripped flow downstream of these gap fillers  
20 continues. Based on the data obtained through FD 4, the team does not currently believe  
21 that any gap filler removal is required. A summary of the gap fillers and minor tile damage  
22 are shown in the figures below.

23

24 There are two areas where adequate data was not obtained for the TPS inspections  
25 including an area around Window 5&6 and the Right Inboard Elevon. These areas had  
26 shadows that obscured the areas of interest and additional imagery for these areas may be  
27 requested using ISS or SRMS assets.

28

29 **Port OMS Pod Blanket:**

30 The aero thermal analysis was discussed today and indicates that the entry thermal  
31 environment will result in localized temperatures inside the exposed cavity that exceed the  
32 OMS pod graphite epoxy structure certification limits. The heating is predicted to be slightly  
33 higher in this area than past flights with similar damage because the blanket extends up into  
34 the flow resulting in increased heat transfer in this cavity. The flow in this area is very  
35 difficult to model, thus certain best estimate engineering assumptions had to be applied in  
36 order to accurately model the heating.

37

38 Based on this preliminary thermal analysis and the limited test data available for this type of  
39 graphite composite structure, the MMT decided that the TPS is suspect for this area and the  
40 blanket will require a repair prior to deorbit/entry. This decision was based on the potential  
41 for thermal structural concerns only, since the team has concluded that if the blanket  
42 dislodged during entry it would not be a debris source for the rudder speedbrake.

43

44 Team 4 has been working to develop a simple method for securing the blanket to its original  
45 position. The theory is that the blanket has a structural memory and will retain whatever  
46 position it is moved to. The preliminary EVA techniques access this area via the SRMS and  
47 WIF extension. The detailed EVA techniques and robotics will be provided as soon as the  
48 team completes their procedure review. Tomorrow the MMT will discuss whether this task  
49 will be added to EVA 3 on flight day 8 or EVA 4 on flight day 10.

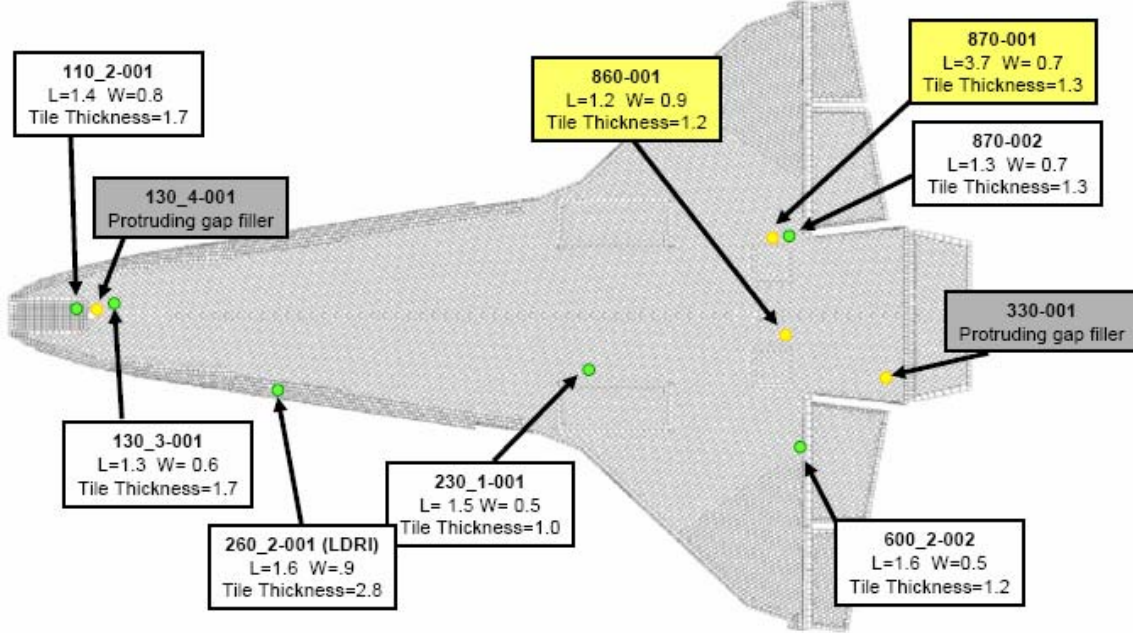
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**MSG 028A (15-0404A) - FD04 MMT SUMMARY**

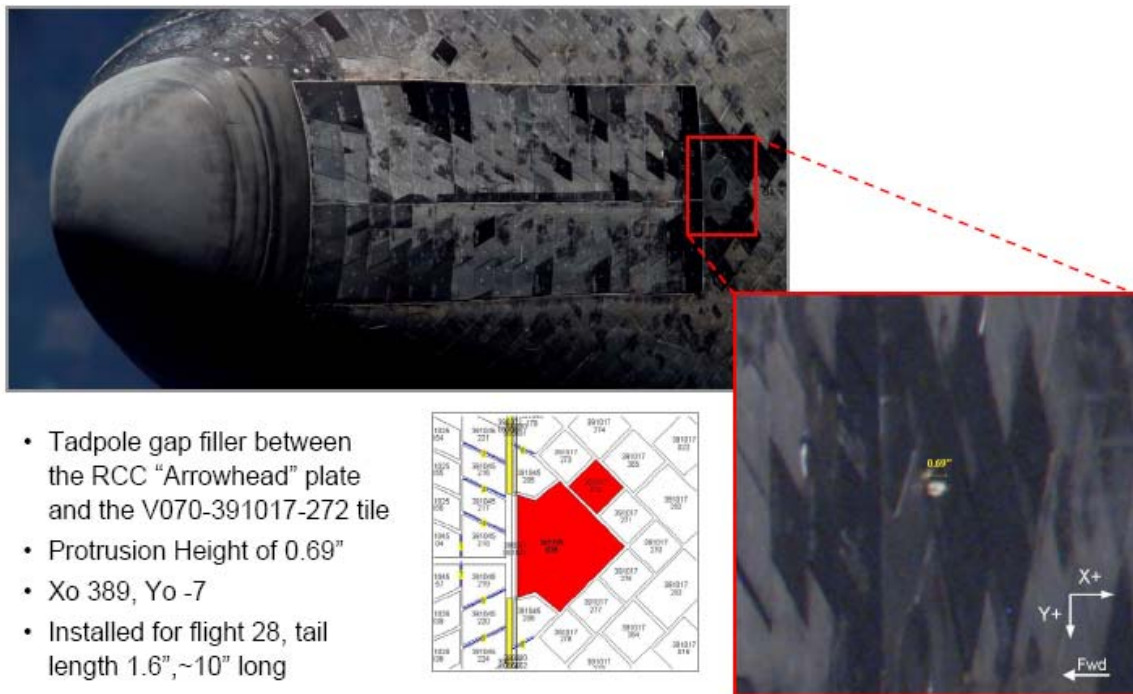
Page 2 of 3

1 **SRB Quick look** - Preliminary data review shows nominal SRB performance and no in-flight  
2 anomalies of the hardware have been identified. Visual inspection shows no major areas of  
3 concern and post flight hardware inspections are proceeding per the standard timeline. We  
4 expect to view the SRB video of the External Tank tomorrow at the MMT. All data obtained  
5 so far indicates that ET-124 performed extremely well.

6  
7 **Figure 1: Tile/Gap Filler Summary.**



8  
9  
10 **Figure 2 - Arrowhead Tile Gap Filler**



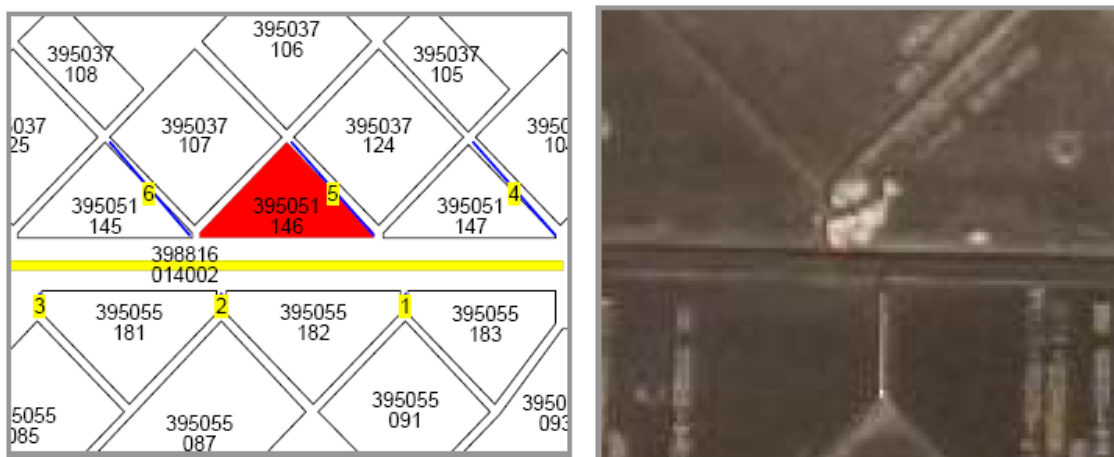
12

1 **Figure 3 : Port ET Door Tile**



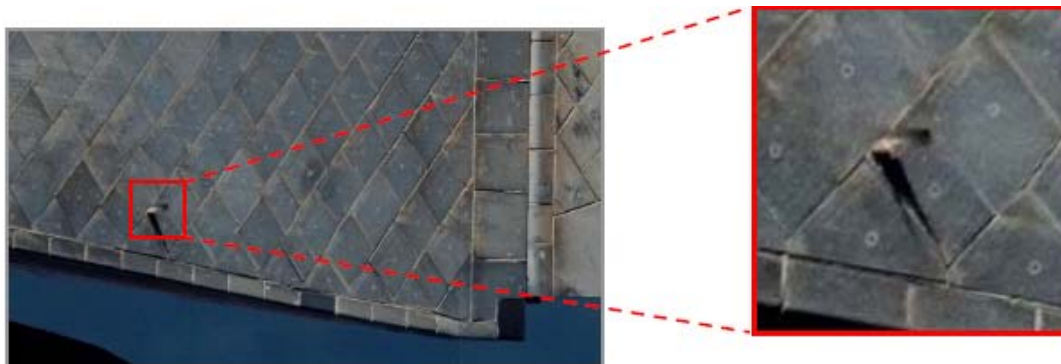
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**Figure 4: Starboard ET Door Tile**



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11

**Figure 5: Gap Filler protruding on Aft Fuselage**



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