STS-114/LF1

FD 03 Execute Package

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019C	1 - 14	FD03 Flight Plan Revision **(pdf)**
020	15 - 16	FD03 Mission Summary **(pdf)**
021A	17 - 19	EVA Checklist Updates **(pdf)**
022	20 - 22	LF1 Robotics Book Pen and Ink Updates **(pdf)**
024	---	Ascent Quick Look Report (07.27.05 1300 CDT) **(pdf - Electronic**
025	23 - 27	RelMo Plots and Burn Pads **(pdf)**

Approved by FAO: *L. DeLapp*

Last Updated: Jul 28 2005 2:24AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*

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MSG NO.	TITLE
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21	EVA Checklist Updates
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24	Ascent Quick Look Report (07.27.05 1300 CDT) (Electronic Only)
25	RelMo Plots and Burn Pads

1. Post Sleep Cryo Config

   R1 CRYO O2, H2 MANF VLV TK2 (two) - OP (tb - OP)

2. On Flight Night 3, ISS wants to be able to do their ACBM survey during crew sleep while LDRI would like to get their status data at the same time. To have both of these video signals available to MCC, an activity has been added to MS1 at MET 2/01:50 to configure the VPU as follows:

   a. Leave the VPU GREEN jumper in the LDRI/ITVC slot (right most slot) so that we will get LDRI on PL 2.

   b. ISS video will be routed to PL3 on the WIB via a VPU patch cable (p/n: SED39136025-301) plugged into the bottom side of the ISS slot and a Balanced video cable (p/n: SED39136025-301) connected from the VPU patch cable to the WIB PL3 port. This is similar to the ISS VPU configuration on page 1-40 in the Photo/TV checklist.

3. For the H2O activities on CDR:

   a. MET 1/13:45 – Perform steps E, G, and I of SUPPLY/WASTE WATER DUMP (ORB OPS,ECLS), p. 5–2. Dump the Waste Tank to 5%. This is expected to take approx. 22 min. MCC will TMBU all limits.

   b. MET 1/23:15 – The two CWCs to be filled today are located at ISS NOD1P2 (in the M-02 bag). Select two CWCs from among those with the following S/Ns: 1007, 1012, 1017, 1018, 1020, 1028, 1038, 1040, 1044, 1046, 1047. Use CWC FILL in SHUTTLE/ISS H2O CONTAINER FILL (ORB OPS,ECLS), p. 5–26. Silver biocide will be the only additive for today's two fills, and the Silver Biocide Syringe Kit (S/N 1003) and Sample/Purge Kit (S/N 1001) were gathered yesterday. The first of the two CWC fills is scheduled for MET 1/23:15, and a sample is required. The second fill may be initiated when the first fill is complete, and it does not require a sample.

      Following each fill, squeeze the CWC and inspect the fitting for cracks and the outer canvas cover for leaks; report the bag's condition to MCC along with its S/N. Following both fills, the two CWCs should be transferred to the FGB Port Wall.

For the H2O activities on MS4:

c. MET 1/16:00 – Perform SHUTTLE CONDENSATE COLLECTION (ORB OPS,ECLS), Setup p. 5–36, using the Y-Y hose and the CWC in MF43G. Verify that the CWC has one of the following S/Ns: 5060, 5086, 6008; report the S/N of the CWC used to MCC.

4. The MCC will remotely uplink the latest HazMat data file to all networked 760XD PGSCs onboard during FD3.

5. Please call down the Serial Number of the failed DSR-20 VTR.

6. MSG 22 (OCA 11-0650) contains Pen and Ink changes to the LF1 Robotics Book which have already been incorporated electronically into the procedures in MPV. These redlines are being provided if you choose to use your hardcopy books.

   The DOUG setup message (OCA 11-0549A, LF-1 DOUG Setup For STS 114 ROBO Ops) was uplinked previously to the ISS. The DOUG setup procedure is in MPV: Uplinked Procedures: POC.

7. The EVA camera setup originally scheduled on MS1 and MS2 during FD3 was deleted from todays plan since the F5 hardware is located on the ISS and there was not enough time to perform the 3 hrs of battery charging required prior to doing the DCS 760 setup. An additional 20 minutes has been added to the EVA camera setup scheduled for FD4.

8. REPLACE PAGES 2-6 THROUGH 2-7 AND 3-20 THROUGH 3-29.

07/27/05 21:08:37 **REPLANNED**

GMT 07/28/05 (209) 03 04 05 06 07 08 09 10 11 12 13 14 002/00

MET Day 001 12 13 14 15 16 17 18 19 20 21 22 23

STS-114

CDR COLLINS	SLEEP	FD03 POST SLEEP	I-CNCT	WAISTE	POST SLEEP	WASTE	TERM	GRPB	PWRUP	NH	NC4	TI	ISS RNDZ	APPROACH W/RPM	MNVR -XLV	GRPB	PWRDN	ATTHO*	HATCH OPEN	SFTY BRIEF	CWC INIT	EXER CISE	
PLT KELLY	SLEEP	SALIVA	POST SLEEP	IMU	CMGHTR	GRPB	PWRUP	ISS RNDZ	APPROACH W/RPM	MNVR -XLV	GRPB	PWRDN	HATCH OPEN	SFTY BRIEF	OBSS GRPL	OBSS	UNBRTH						
MS1 NOGUCHI	SLEEP	POST SLEEP - GIRA	KU CLR D/L	ET VID D/L	EXERCISE	EMURMV	ISS RNDZ	P/TVO2 S/U	PTVO2 OPS	PS/TV04	PS/TV04	OPS/TV05	SFTY BRIEF	PTVO6 S/U SSRMS	♣								
MS2 ROBINSON	SLEEP	POST SLEEP	PGSC FD3 CHECK	ISS RNDZ	EMURMV	EXERCISE	ISS RNDZ	APPROACH W/RPM	PCS S/U	PGSC FD4 S/U	SFTY BRIEF	AUDIO	ISS	PRE EVA XFER									
MS3 THOMAS	SLEEP	POST SLEEP	ISS RNDZ	EXERCISE	ISS RNDZ	APPROACH W/RPM	LEAK CHECK	A/L	PRESS	INGRS	HATCH OPEN	SFTY BRIEF	H/O	OBSS	UNBRTH	CAMR							
MS4 LAWRENCE	SLEEP	SALIVA	LOG	POST SLEEP	APCU1*	POST SLEEP	APCU1*	POST SLEEP	COND	SETUP	ISS RNDZ	APPROACH W/RPM	LEAK CHECK	A/L	PRESS	INGRS	HATCH OPEN	SFTY BRIEF	OBSS GRPL	OBSS	UNBRTH		
MS5 CAMARDA	SLEEP	SALIVA	LOG	POST SLEEP	PGSC FD3 CHECK	ISS RNDZ	APPROACH W/RPM	EXERCISE	RMSHTR	PGSC FD4 S/U	SFTY BRIEF	H/O	OBSS	UNBRTH	CAMR								

ISS

ISS CDR KRIKALEV	SLEEP	POSTSLEEP-ISS	DPC	PREP WORK	COX	PCS	WDW CL	TVIS	DWNLD	CNFG	VRFY	MIDDAY-MEAL	VIDEO PROC	8 OLMM	FILM	DOCK-FILM	⊕	LEAK CHECK	HATCH OPEN	AKM 1M	SMPL	SFTY BRIEF	VOICE	VELO + HC
FE-1 PHILLIPS	SLEEP	POSTSLEEP-ISS	DPC	♦	CRWS	CCAA*	WORK	EXERCISE CEVIS	EXERCISE RED	VRFY	MIDDAY-MEAL	VIDEO TIDMOCR	4 OLMM	D/L	PMA2 ARVL	D/L	LEAK CHECK	HATCH OPEN	SFTY BRIEF	SSRMS SUPPORT			

DAY/NIGHT

ORBIT 25 26 27 28 29 30 31 32

TDRS E -46.0 W -171.0 Z -275.0

ORB ATT -ZLV +YVV — RNDZ — DOCK — BIAS -XLV -ZVV

NOTES

♦C&T-DOCK-COMM-CNFG
*ACT *DEACT
*ACT 2-6A

FLT PLN/114/FLIGHT

⊕P/TV-RPM-CAMRA-DEACT
*STS TO CMG

♣PRE EVA XF

***DOCK 1/20:39**

07/27/05 21:08:37 **REPLANNED**

GMT 07/28/05 (209) FD3 — 15 16 17 18 19 20 21 22 23 07/29 01 02

MET Day 002 — 002/00 01 02 03 04 05 06 07 08 09 10 11 12

STS-114	CDR COLLINS	EXERCISE; CWC TERM; CWC INT 2; FESOFF; VTR PB; FESOFF; PRE SLEEP; CWC TERM; XFER 2 CWC; PRE SLEEP; PMC A/G; PRE SLEEP	SLEEP
STS-114	PLT KELLY	♣; OBSS MNVR TO HANDOFF; OBSS H/O; PRE SLEEP; MNVR TO ACBM INSPT; EXERCISE; PRE SLEEP	SLEEP
STS-114	MS1 NOGUCHI	PRE EVA XFER; VPU*; PRE SLEEP - GIRA	SLEEP
STS-114	MS2 ROBINSON	PRE EVA XFER; PRE SLEEP	SLEEP
STS-114	MS3 THOMAS	OBSS UNBTH CAMR; OBSS H/O; OBSS H/O FROM SSRMS; PRE SLEEP	SLEEP
STS-114	MS4 LAWRENCE	⊕; OBSS MNVR TO HANDOFF; OBSS H/O; LIOH XCHG; MNVR TO ACBM INSPT; PRE SLEEP	SLEEP
STS-114	MS5 CAMARDA	OBSS UNBTH CAMR; OBSS H/O; OBSS H/O FROM SSRMS; SODF; XFER; PRE SLEEP	SLEEP
ISS	ISS CDR KRIKALEV	VELO + HC; IMS; CCAA; DAILY PLN RVW; PREP WORK; ♦; DPC; PRE SLEEP	SLEEP
ISS	FE-1 PHILLIPS	SSRMS SUPPORT; ®; ♥; PREP WORK; DPC; PRE SLEEP	SLEEP

DAY/NIGHT

ORBIT: 33 34 35 36 37 38 39 40

TDRS: E -46.0; W -171.0; Z -275.0

ORB ATT: BIAS -XLV -ZVV

NOTES:
♣OBSS UNBRTH
⊕OBSS UNBRTH
♦SODF-DEPLOY
®IFM-SCOPEMETER-RLCT
♥DAILY PLN RVW
*CONFIG

2-7A

FLT PLN/114/FLIGHT

STS-114 LF1 (FD03)

REPLANNED

GMT Date 07/28 (209) | TDRS E W Z | ORB | MET Day 001 | STS ATI

FD03

CDR COLLINS	PLT KELLY	MS1 NOGUCHI	MS2 ROBINSON	MCC

12:00 — 13:00 — 14:00 — 15:00 — 16:00

03:00 — 04:00 — 05:00 — 06:00

ORB: 25, 26, 27

SLEEP (CDR, PLT, MS1, MS2)

SALIVA COLLECT (ORB OPS, DSO)

FD03 EZ ACTIVITIES
HARD REBOOT PGSCs (not WLES)
TEPC (STATUS CK)(ORB OPS, CREW SYS)
OCAC FILTER INSPECT
L17 Check MCIU Filter Screen
MS4: If PMZ Req'd, PMZ PROTOCOL (ORB OPS, DSO)

-ZLV+YVV

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

I'CNCT RETURN(OPS 2,3) (OPCL, RCS)
SUPPLY/WASTE WATER DUMP [A] (ORB OPS, ECLS)
REF. MSG 019 ITEM 3A

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

POST SLEEP ACTIVITY (ORB OPS, CREW SYS)

GALLEY MORNING CONFIG (ORB OPS, ECLS)

UPDATE H2O WASTE DUMP QTY

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

[A]
Initiate Waste Dump ONLY
Dump Waste Tank to 5%
Duration ~ 22mins
MCC will TMBU all limits

SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS)
Terminate Waste Dump

PRIORITY PWRUP GRP B [B] (ORB PKT, PRIOR PWRDN)

IMU STAR OF OPTY ALIGN (ORB OPS)
CMG HTR: R1 PL AFT MNC - ON

PRIORITY PWRUP GRP B [B] (ORB PKT, PRIOR PWRDN)

TRANSITION TO RNDZ C/L @ MET 1/15:00

RNDZ PET 00:00 (TI) @ MET 1/18:00

[B]
Steps 12,10,9,6,5 & 3 Only
In Step 12: Recover IMU 3
In Step 6: Triple G2, NBAT 1233

PLAYBACK (DIGITAL) (PHOTO/TV, CUE CARD)
TDRW 15:06-15:30
KU CLEARANCE DNLK

TFL 192

RENDEZVOUS TIMELINE (RNDZ, RNDZ TIMELINE)

RENDEZVOUS TIMELINE (RNDZ, RNDZ TIMELINE)

PLAYBACK (DIGITAL) (PHOTO/TV, CUE CARD)
TDRW 15:35-15:53
ET PHOTO DNLK

CHECK PGSC CONFIG

RNDZ

< NH

STS-114 LF1 (FD03)

REPLANNED

GMT Date 07/28 (209) | TDRS E W Z | ORB | MET Day 001 | STS ATI

MS3 THOMAS | MS4 LAWRENCE | MS5 CAMARDA | MCC

FD03

12:00 — 13:00 — 14:00 — 15:00 — 16:00

03:00 — 04:00 — 05:00 — 06:00

ORB: 25, 26, 27

STS ATI: -ZLV+YVV, RNDZ

SLEEP (MS3, MS4, MS5)

SALIVA COLLECT (ORB OPS, DSO) — MS4
FLIGHT SLEEP LOG (ORB OPS, DSO) — MS4
SALIVA COLLECT (ORB OPS, DSO) — MS5
FLIGHT SLEEP LOG (ORB OPS, DSO) — MS5

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) — MS4

TRANSITION TO RNDZ C/L @ MET 1/15:00

RNDZ PET 00:00 (TI) @ MET 1/18:00

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) — MS5

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) — MS3

√MCC:APCU 1 ACT (ASSY OPS, APCU) — MS4

1.101 MPLM ENVIRONMENT CHECK (MPLM, NOMINAL) — MCC

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) — MS4

√MCC:APCU 1 DEACT (ASSY OPS, APCU) — MS4

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) — MS4

CHECK PGSC CONFIG — MS5

STS-114 LF1 (FD 03)

REPLANNED

GMT Date 07/28 (209) | TDRS E W Z | ORB 27 28 29 30 | MET Day 001 | STS ATI | CDR COLLINS | PLT KELLY | MS1 NOGUCHI | MS2 ROBINSON | MCC

07:00 08:00 09:00 10:00

16:00 17:00 18:00 19:00 20:00

< NC4

RNDZ < TI 1/18:01

RENDEZVOUS TIMELINE (RNDZ, RNDZ TIMELINE)

RENDEZVOUS TIMELINE (RNDZ, RNDZ TIMELINE)

APPROACH WITH RPM (CUE CARD)

APPROACH WITH RPM (CUE CARD)

EXERCISE

EMU REMOVAL (EVA, AIRLOCK CONFIG) Step 4 ONLY

RENDEZVOUS TIMELINE (RNDZ, RNDZ TIMELINE)

P/TVO2 DOCK (SETUP) (PHOTO/TV, SCENES)

P/TVO2 DOCK (OPS) (PHOTO/TV, SCENES)

CHECK PGSC CONFIG

RENDEZVOUS TIMELINE (RNDZ, RNDZ TIMELINE)

EMU REMOVAL (EVA, AIRLOCK CONFIG) Step 4 ONLY

EXERCISE

RENDEZVOUS TIMELINE (RNDZ, RNDZ TIMELINE)

APPROACH WITH RPM (CUE CARD)

UPLINK
β 21° + B1
BOX B1
-35<AZ<45
-35<EL<40

STS-114 LF1 (FD 03)

REPLANNED

GMT Date 07/28 (209) | TDRS E W Z | ORB 27 28 29 30 | MET Day 001 | STS ATI RNDZ

MET	MS3 THOMAS	MS4 LAWRENCE	MS5 CAMARDA	MCC
16:00	RENDEZVOUS TIMELINE (RNDZ, RNDZ TIMELINE)	SHUTTLE CONDENSATE COLLECTION (ORB OPS, ECLS) Perform SETUP COND CWC HW stowed in MF43G Report Condensate CWC s/n to MCC REF. MSG 019 ITEM 3C	CHECK PGSC CONFIG	
17:00	EXERCISE			
18:00	RENDEZVOUS TIMELINE (RNDZ, RNDZ TIMELINE)	RENDEZVOUS TIMELINE (RNDZ, RNDZ TIMELINE)	RENDEZVOUS TIMELINE (RNDZ, RNDZ TIMELINE)	
19:00	APPROACH WITH RPM (CUE CARD)	APPROACH WITH RPM (CUE CARD)	APPROACH WITH RPM (CUE CARD)	
20:00				

STS-114 LF1 (FD 03)

REPLANNED

GMT Date 07/28 (209) | TDRS E W Z | ORB 30 31 32 | MET Day 001 | STS ATI

MET	CDR COLLINS	PLT KELLY	MS1 NOGUCHI	MS2 ROBINSON	MCC
20:00	APPROACH WITH RPM (CUE CARD)	APPROACH WITH RPM (CUE CARD)	P/TV02 DOCK (OPS) (PHOTO/TV, SCENES)	APPROACH WITH RPM (CUE CARD)	UPLINK β21°+C1,C2,C3 BOX C1 -19<AZ<52 -67<EL<75 BOX C2 -41<AZ<-10 -25<EL<39 BOX C3 -72<AZ<-36 -4<EL<33 TFL 199
11:00	< CAPTURE 1/20:39	**RETURN TO FLIGHT PLAN @ MET~1/21:00**			
21:00	MNVR (TRK) BIAS -XLV -ZVV TG=2 BV=5 P=155 Y=0 OM=178 Init TRK, DAP: FREE >2 seconds, Then: DAP: A12/AUTO/VERN	MNVR (TRK) BIAS -XLV -ZVV TG=2 BV=5 P=155 Y=0 OM=178 Init TRK, DAP: FREE >2 seconds, Then: DAP: A12/AUTO/VERN	SSV OUT RATE = 2		
12:00	PRIORITY PWRDN GRP B [A] (ORB PKT, PRIOR PWRDN)	PRIORITY PWRDN GRP B [A] (ORB PKT, PRIOR PWRDN)	P/TV04 INGRESS/EGRESS (S/U) (PHOTO/TV, SCENES)	6.107 PCS SETUP - SHUTTLE (JOINT OPS, COMM/DATA)	
22:00	3.111 H/O ATT CONTROL ORB TO CMG (JOINT OPS, MATED OPS)		P/TV04 INGRESS/EGRESS (OPS) (PHOTO/TV, SCENES)		
13:00	2.106 HATCH OPEN & DUCT INSTALL (BYPASS CONFIG) (JOINT OPS, INGRESS STATION)	2.106 HATCH OPEN & DUCT INSTALL (BYPASS CONFIG) (JOINT OPS, INGRESS STATION)	P/TV05 ISS INTERNAL OPS (S/U) (PHOTO/TV, SCENES)	PGSC FD4 SETUP Ref. Inspection Day diagram	
	[A] Step 6 &12 Only, √Steps 5,9 &10 In Step 6: Single G2 In Step 12:IMU 3 STBY-ITEM 23 EXEC 06 S TRK PWR -Z -OFF				
	WELCOME CEREMONY	WELCOME CEREMONY	WELCOME CEREMONY	WELCOME CEREMONY	
23:00	SAFETY BRIEFING	SAFETY BRIEFING	SAFETY BRIEFING	SAFETY BRIEFING	
14:00	SHUTTLE/ISS H2O CONT FILL (ORB OPS, ECLS) INIT #1 Fill Duration: 56 minutes REF. MSG 019 ITEM 3B	1.110 BERTHED OBSS GRAPPLE (ROBOTICS, OBSS OPS)	P/TV06 SSRMS ASSY OPS (NON-EVA) (PHOTO/TV, SCENES) Setup	6.103 HARDLINE AUDIO CONFIG (ISS) (JOINT OPS, COMM/DATA) STEPS 1,2,6,7	UPLINK β21°+C1,C2,C3+D1 BOX C1 -19<AZ<52 -67<EL<75 BOX C2 -41<AZ<-10 -25<EL<39 BOX C3 -72<AZ<-36 -4<EL<33 BOX D1 -80<AZ<5 -90<EL<-54
	EXERCISE	1.111 OBSS UNBERTH (ROBOTICS, OBSS OPS)	PRE EVA TRANSFER (EVA, AIRLOCK CONFIG) Ref. MSG 021 ITEM 7	PRE EVA TRANSFER (EVA, AIRLOCK CONFIG) Ref. MSG 021 ITEM 7	
00:00					

STS-114 LF1 (FD 03)

REPLANNED

GMT Date 07/28 (209) | TDRS E W Z | ORB 30 31 32

MET Day 001 | STS ATI DOCK BIAS-XLV-ZVV

MET	MS3 THOMAS	MS4 LAWRENCE	MS5 CAMARDA	MCC
20:00	APPROACH WITH RPM (CUE CARD)	APPROACH WITH RPM (CUE CARD)	APPROACH WITH RPM (CUE CARD)	
	RETURN TO FLIGHT PLAN @ MET~1/21:00			
21:00	POST DOCKING HATCH LEAK CK (RNDZ, APDS NOMINAL)	POST DOCKING HATCH LEAK CK (RNDZ, APDS NOMINAL)		
	AIRLOCK PREP FOR INGRESS-BYPASS CONFIG (RNDZ, APDS NOMINAL)	AIRLOCK PREP FOR INGRESS-BYPASS CONFIG (RNDZ, APDS NOMINAL)	EXERCISE	
22:00	2.106 HATCH OPEN & DUCT INSTALL (BYPASS CONFIG) (JOINT OPS, INGRESS STATION)	2.106 HATCH OPEN & DUCT INSTALL (BYPASS CONFIG) (JOINT OPS, INGRESS STATION)	A8L √PORT RMS HTR (two) - AUTO PGSC FD4 SETUP Ref. Inspection Day diagram	
	WELCOME CEREMONY	WELCOME CEREMONY	WELCOME CEREMONY	
23:00	SAFETY BRIEFING	SAFETY BRIEFING	SAFETY BRIEFING	
		1.110 BERTHED OBSS GRAPPLE (ROBOTICS, OBSS OPS)		
	OBSS HANDOFF FROM SSRMS TO SRMS (PDRS, NOMINAL) Steps 1-5		OBSS HANDOFF FROM SSRMS TO SRMS (PDRS, NOMINAL) Steps 1-5	
		1.111 OBSS UNBERTH (ROBOTICS, OBSS OPS)		
	OBSS UNBERTH CAMERA SUPPORT		OBSS UNBERTH CAMERA SUPPORT	
00:00				

STS-114 LF1 (FD 03)

REPLANNED

GMT Date 07/28 (209) | TDRS E W Z | ORB | MET Day 002 | STS ATI

CDR COLLINS

EXERCISE

SHUTTLE/ISS H2O CONT FILL
(ORB OPS, ECLS) TERM
Report Barcode & S/N to MCC

SHUTTLE/ISS H2O CONT FILL
(ORB OPS, ECLS) INIT #2
Fill Duration: 56 minutes
REF. MSG 019 ITEM 3B
L1 FLASH EVAP CNTLR PRI B-OFF

PLAYBACK (DIGITAL)
(PHOTO/TV, CUE CARDS)
TDRW 01:10-01:35
DOCKING

BIAS-XLV-ZVV

L1 TOP EVAP HTR DUCT sel - OFF
L1 TOP EVAP HTR NOZ L,R(two) - OFF

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SHUTTLE/ISS H2O CONT FILL
(ORB OPS, ECLS) TERM
Report Barcode & S/N to MCC

CWC TRANSFER
Xfer 2 CWC bags to ISS

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

PLT KELLY

1.111 OBSS UNBERTH
(ROBOTICS, OBSS OPS)

1.112 OBSS MNVR TO HANDOFF
(ROBOTICS, OBSS OPS)
NOTE: NO EXERCISE w/2 arms grpl

1.113 OBSS UNGRAPPLE AT HANDOFF
(ROBOTICS, OBSS OPS)
NOTE: NO EXERCISE w/2 arms grpl

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

1.114 MNVR TO ACBM INSPECT POSN
(ROBOTICS, OBSS OPS)

EXERCISE

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

CONFIG ODS DRAG THROUGHS FOR SLEEP

MS1 NOGUCHI

PRE EVA TRANSFER
(EVA, AIRLOCK CONFIG)
Ref. MSG 021 ITEM 7

VPU OVERNIGHT CONFIG
REF. MSG 019 ITEM 2

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

GALLEY OVERNIGHT CONFIG
(ORB OPS, ECLS)

MS2 ROBINSON

PRE EVA TRANSFER
(EVA, AIRLOCK CONFIG)
Ref. MSG 021 ITEM 7

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

MCC

UPLINK
β 21° +C1,C2,C3
BOX C1
-19<AZ<52
-67<EL<75
BOX C2
-41<AZ<-10
-25<EL<39
BOX C3
-72<AZ<-36
-4<EL<33

STS-114 LF1 (FD 03)

REPLANNED

GMT Date 07/28 (209) | TDRS E W Z | ORB | MET Day 002 | STS ATI

MS3 THOMAS | MS4 LAWRENCE | MS5 CAMARDA | MCC

00:00

1.111 OBSS UNBERTH
(ROBOTICS, OBSS OPS)

1.112 OBSS MNVR TO HANDOFF
(ROBOTICS, OBSS OPS)
NOTE: NO EXERCISE w/2 arms grpl

OBSS UNBERTH CAMERA SUPPORT

OBSS UNBERTH CAMERA SUPPORT

15:00

33

OBSS HANDOFF FROM SSRMS TO SRMS
(PDRS, NOMINAL) Steps 6-7
NOTE: NO EXERCISE w/2 arms grpl

OBSS HANDOFF FROM SSRMS TO SRMS
(PDRS, NOMINAL) Steps 6-7
NOTE: NO EXERCISE w/2 arms grpl

01:00

1.113 OBSS UNGRAPPLE AT HANDOFF
(ROBOTICS, OBSS OPS)
NOTE: NO EXERCISE w/2 arms grpl

16:00

OBSS HANDOFF FROM SSRMS TO SRMS
(PDRS, NOMINAL) Steps 8-9

OBSS HANDOFF FROM SSRMS TO SRMS
(PDRS, NOMINAL) Steps 8-9

PERFORM LiOH EXCHANGE PART A
(CUE CARD)

BIAS-XLV-ZVV

1.114 MNVR TO ACBM INSPECT POSN
(ROBOTICS, OBSS OPS)

SODF TRANSFER
Item #32

02:00

34

17:00

LDRI STATUS CHECK
R12(VPU) "FROM ISS"
R12(WIB) "CCTV PL/3"

03:00

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

√ HUM SEP FOR H2O ACCUMULATION

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

18:00

35

04:00

STS-114 LF1 (FD 03)

REPLANNED

GMT Date 07/28 (209) | TDRS E W Z | ORB | MET Day 002 | STS ATI | CDR COLLINS | PLT KELLY | MS1 NOGUCHI | MS2 ROBINSON | MCC

04:00
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)
06 √UHF MODE - OFF
A/G PRIVATE MEDICAL CONFERENCE

19:00
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)
CONFIG ODS DRAG THROUGHS FOR SLEEP
GALLEY OVERNIGHT CONFIG (ORB OPS, ECLS)

05:00

20:00
BIAS - XLV - ZVV

06:00

21:00
SLEEP
SLEEP
SLEEP
SLEEP

07:00

22:00

08:00

35
36
37
38

STS-114 LF1 (FD 03)

REPLANNED

GMT Date 07/28 (209) | TDRS E W Z | ORB | MET Day 002 | STS ATI | BIAS-XLV-ZVV

MS3 THOMAS | MS4 LAWRENCE | MS5 CAMARDA | MCC

19:00 — 20:00 — 21:00 — 22:00

35 — 36 — 37 — 38

04:00 — 05:00 — 06:00 — 07:00 — 08:00

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

SLEEP

1.504 NODE 1 CBM PREP FOR MATE (S&M, NOMINAL) Steps 1-20

1.504 NODE 1 CBM PREP FOR MATE (S&M, NOMINAL) ACBM SURVEY Steps 21-27

Good Morning Discovery!

Congratulations on a superb OBSS performance!
Your work made it appear that OBSS operations have been standard practice for years!

Great work on the VTR IFM! When you come back to earth, there are quite a few folks down here hoping that you will have time to work on their VTRs!

The ISS crew is anticipating your knock on their door. You don't have to knock loudly, they promised to be awake and waiting!

YOUR CURRENT ORBIT IS: 154 X 150 NM

NOTAMS:

EDWARDS (EDW) – LAKEBED RWYS ELS ONLY - UNCERTIFIED
OCEANA (NTU) – RWY 23L/05R CLOSED
HALIFAX (YHZ) – RWY 06/24 CLOSED
GUAM (GUA) – RWY 06L/24R CLOSED
RIO GALLEGOS (AWG) – NOT APPROVED
ELMENDORF (EDF) – RWY 06/24 CLOSED
TINDAL (PTN) – RWY 14/32 CLOSED

NEXT 2 PLS OPPORTUNITIES:

EDW 22 ORB 33 – 2/00:47
NOR 17 ORB 48 – 2/23:41

OMS TANK FAIL CAPABILITY:

PRE-NH		POST-NC4	
L OMS FAILS:	YES	L OMS FAILS:	NO
R OMS FAILS:	YES	R OMS FAILS:	NO

LEAKING OMS PRPLT BURN:

PRE-NH		POST-NC4	
L OMS LEAK:	ALWAYS BURN OOP	L OMS LEAK:	ALWAYS BURN RETROGRADE
R OMS LEAK:	ALWAYS BURN OOP	R OMS LEAK:	ALWAYS BURN RETROGRADE

PREDICTED POST-TI OMS QUANTITIES(%)

L OMS OX = 35.2 R OMS OX = 36.6
FU = 35.6 FU = 37.3

SUBTRACT I'CNCT COUNTER FOR CURRENT OMS QUANTITIES

DELTA V AVAILABLE:

OMS	326 FPS
ARCS (TOTAL ABOVE QTY1)	27 FPS
TOTAL IN THE AFT	353 FPS
ARCS (TOTAL ABOVE QTY2)	56 FPS
FRCS (ABOVE QTY 1)	35 FPS
AFT QTY 1	85 %
AFT QTY 2	47 %

SYSTEM	FAILURE	IMPACT	WORK AROUND
APU/HYD 1	APU 1 drain line leak.	None; leak is N2 only. Drain line pressure can be seen on BFS SM SYS SUMM 2 (APU 1 PMP LK P).	None.
APU/HYD 2	Momentary loss of APU 2 controller power supply C (instrumentation).	None. Power supply C powers GBX N2 P (SM SPEC 86) and GG BED T (SM SPEC 86 and BFS SM SYS SUMM 2). If power supply C fails, GBX will repress to ~30 psia at APU 2 start and GG BED heater will be on continuously.	If failure repeats expect S86 GG/FU PMP 2 and S86 APU GBX P 2 FDAs; select APU HTR GAS GEN/FU PMP 2 - B AUTO(A AUTO).
COMM/INST 1	DSR-20 VTR entered SAFE mode with ERROR MSG 32.	Cannot record or play back in this error mode.	Utilize spare VTR.
COMM/INST 2	RMS Sideview Camera (RSC) has large smudge in the center of view.	During PDRS/OBSS operations, crew situational awareness is degraded.	Use alternate camera views (Shuttle and ISS) if/when possible.
PDRS	STBD AFT MRL sys 2 release msw possible rigging misalignment.	STBD AFT MRL sys 2 REL indication may not be achieved when the STBD AFT MRL is released using the sys 1 motor. On FD2, the STDB AFT MRL sys 2 REL indication appeared four minutes after the MRLs were released. STBD AFT MRL sys 1 indication was nominal.	None.

MSG 021A - EVA CHECKLIST UPDATES

1. The NOAX cannot be taken out of the cold pack until you are within 36 hours of airlock depress. You may remove it anytime after wakeup on FD04, but we would like you to call down immediately when you remove it from the cold pack, so the control material can be removed on the ground at the same time.

2. Due to late stowage changes, the following locations have changed in TPS DTO PREP (EVA, TOOLS and STOWAGE):

On p. FS 8-49
WAS: 6b. …(MD FLOOR PORT 2)
IS: 6b. …(MD FLOOR PORT 1)

WAS: 6g. Install EVA wipes (3) from CIPA discard container (MID FLOOR STBD 2)
IS: 6g. Install EVA wipes (3) from plastic bag (MID FLOOR STBD 2)

WAS: 6h. …(MD FLOOR PORT 2)
IS: 6h. ...(MD FLOOR PORT 1)

On p. FS 8-49 NOAX Gun Assembly
WAS: 2. …(MD FLOOR PORT 2)
IS: 2. …(MD FLOOR PORT 1)

On p. FS 8-50
WAS: 10. ...(MD FLOOR PORT 2)
IS: 10. ...(MD FLOOR PORT 1)

3. Add the following to GET AHEADS LIST (EVA, TIMELINES) on p. FS 7-52:
FHRC MLI wire tie down.
FPP starboard photo from handrail P6 5307.
Stow 1 PRD and toolboard in A/L toolbox #1 slot 7. (zenith door)
Ref: p. FS 8-39 for toolbox layout.

4. The minimum turn count for the secondary EUTAS compliant bolt has increased to 21 turns. Make the following change to the Cribsheet:
On p. FS 16-6 ESPAD REMOVAL AND INSTALL
(EVA, UNSCHEDULED/CONTINGENCY EVA TASKS), block B:

Work-Around Steps:
WAS: 1. If less than 15 turns, set PGT to manual ratchet mode
2. If less than 15 turns, use ratchet with cheater bar
3. If less than 15 turns, do not remove from FSE

IS: 1. If less than **21** turns, set PGT to manual ratchet mode
2. If less than **21** turns, use ratchet with cheater bar
3. If less than **21** turns, do not remove from FSE

Comments:
The comment should read: **21** turns is sufficient to achieve compliance for installation

5. On p. FS 7-19 GPS ANTENNA R&R (EVA, TIMELINES), step 13 under EV1:

WAS: 13. **PGT[A7, CW2, 30-5] -6Ext-7/16**
IS: 13. **PGT[A6, CW2, 30-5] -6Ext-7/16**

6. On p. FS 7-51 CLEANUP/INGRESS (EVA, TIMELINES), replace step 9 in the EV1 column with the following:

9. Close thermal cover
9a. Perform FHRC MLI tie down task
9b. Wait for IV GO after Leak Check to leave A/L ESP2 area

7. On p. FS 2-7 PRE EVA TRANSFER (EVA, AIRLOCK CONFIG):

Add step 1a and renumber step 1 to 1b:
1a. Retrieve Helmet Light battery S/N 1020 from M-02 Bag; stow in: “1.0 CTB--Suits Pregather”.

In Table 1, under “1.0 CTB – Suits Pregather”:
WAS:
Helmet Light Batts S/Ns 1029, 1035, 1037, 1038

IS:
Helmet Light Batts S/Ns 1029, 1035, 1037, 1038, 1020

In Table 1, under "1.0 CTB - Suits Pregather",
delete "Vent Port Plugs (2)"

After step 9 add:
9a. Stow Helmet Light battery S/N 1029 in Vol H bag for return

8. POST EVA TRANSFER AND RECONFIG (EVA, AIRLOCK CONFIG),

On p. FS 2-9
Change step 8:
From:
EMU 3009, 3010 8. √Vent port plugs installed

To :
EMU 3009, 3010 8. √Metox canisters installed

In Table 1:
Replace "Vent Port Plugs" with "Metox"

On p. FS 2-13
In Table 4:
WAS:
Helmet Light Batteries (four) 1029, 1035, 1037, 1038

IS:
Helmet Light Batteries (three) 1035, 1037, 1038

9. On p. FS CC 2-14 STS-114 LOGISTICS CUE CARD (EVA, AIRLOCK CONFIG):

   Remove battery 1029 from the Post EVA 2 Battery Recharge diagram

10. On p. FS CC 2-15 EMU CONSUMABLES TRACKING CUE CARD (EVA, AIRLOCK CONFIG):

    Under EV1 - Ng, EVA 2 row, Helmet Light Column

    WAS:
    1029/1035
    (both old)
    recharge

    IS:
    1020/1035
    (both old)
    recharge 1035

11. On p. TEMP FS 4-6 EVA PREP (EVA, EVA PREP):

    Was: 82. check COMM mode -- HL
    Is: 82. COMM mode -- PRI
    (Note: EV crew will be hot mic to MCC until mode returned to HL.)

12. On p. 4-7 EMU PURGE (EVA, EVA PREP)

    After step 4 add:
    4a. COMM mode -- HL

13. Due to concerns with the tape adhesive off-gassing on the WVS helmet camera, we would like you to do the following when applying tape to the WVS lenses:

    Place a second piece of tape over the exposed adhesive in front of the WVS lenses. Try to cover all adhesive that is not required to attach the tape to the WVS.

The following pen and ink changes have been made electronically to the Robotics LF1 procedures in MPV. These are for your reference if you choose to use your hardcopy books.

1.111 OBSS Unberth

Step 1, page 1 of 4:

From: Set 'Scale' 'Vernier' Rate Scale: 0.3 (Verify 0.3)
To: Set 'Scale' 'Vernier' Rate Scale: 0.5 (Verify 0.5)

1.210 Berthed MPLM Grapple

Step 4, page 4 of 7:

Delete the following note at the beginning of the step:

> NOTE
> MSS Effector Overlay will not appear on the monitor until the "confirm" command is sent to the LEE.

Rationale: The note is only applicable on the first grapple after an MSS powerup. Since the MSS equipment will not be powered down on Flight Night 3, the note is not applicable.

1.212 MPLM Install

Step 3, page 1 of 10:

Delete line "RHC RATE → COARSE (Verify Coarse on PCS)"
Before line "Enter Mode - FOR OCAS (Verify blue)", add line:
"√Vernier"

Step 5, page 5 of 10:

Delete line "RHC RATE → VERNIER (Verify Vernier on PCS)"

Rationale: Due to the loss of two CMGs, the ISS may not be able to hold attitude if Coarse rates are used.

1.222 MPLM Uninstall

Step 6, page 4 of 6:

Delete line "RHC RATE → COARSE (Verify Coarse on PCS)"
Before line "Enter Mode - Joint OCAS (Verify blue)", add line:
"√Vernier"

1.410 WS4 MBS PDGF 1 Grapple

Step 7.5, page 11 of 13:

Add the following note after the line "**cmd** 'Umbilical' Mate (Verify '**Confirm or Terminate**' prompt)" :

> NOTE
> The following message may annunciate when the Umbilicals are mated:
> '**R2O - MBS CRPCM 1P Output Voltage 2 Stat Err**'
> This message should return to Norm.

1.511 CMG R&R EVA Setup
Step 4, page 6 of 9:
Delete line "Verify that EV crew is complete with Node Light removal and clear of the Z1 area."

Rationale: Due to a timeline change, the EV crew will already be inside when this procedure is performed. The verification is not necessary.

1.711 EVA - ESPAD Install
Step 8, page 9 of 9:
At the end of step 8, add the following line:
Give SRMS Operator GO for OBSS TILE BOARD SURVEY.

2.430 Contingency WS4 MBS PDGF 1 Grapple
Step 2, page 1 of 13
Add the following note after the Warning Block:

> NOTE
> During single joint SP maneuver, monitor clearance between the SSRMS Tip LEE and the Soyuz Array with the Tip Elbow Camera. Minimum clearance is 73 cm.

2.610 Contingency Berthed MPLM Grapple
Step 3, page 2 of 7
Add the following before line "PCS MSS: SSRMS: SSRMS Safing: SSRMS Safing"
"Verify SRMS is at MPLM VIEWING Position"

Step 4, page 4 of 7
Delete the following lines:

> NOTE
> MSS Effector Overlay will not appear on the monitor until the "confirm" command is sent to the LEE.

Rationale: The note is only applicable on the first grapple after an MSS powerup. Since the MSS equipment will not be powered down on Flight Night 3, the note is not applicable.

2.612 Contingency MPLM Install
Step 3, page 1 of 10
Delete line "RHC RATE → COARSE (Verify Coarse on PCS)"
Before line "Enter Mode - FOR OCAS (Verify blue)", add line:
"√Vernier"

Step 5, page 4 of 10
Delete line "RHC RATE → VERNIER (Verify Vernier on PCS)"

Rationale: Due to the loss of two CMGs, the ISS may not be able to hold attitude if Coarse rates are used.

2.621 Contingency Mated MPLM Grapple

Step 1, page 1 of 5

Delete the line "Verify SRMS is at the MPLM VIEWING position."

Change the Camera Config table as follows:

Monitor 1	Monitor 2	Monitor 3	V10
91: OBSS ITVC (~~50~~100, ~~-60~~ -65)	92: Camera B (-10, 40)	22: Base Elbow (110, -5) 24: Tip Elbow (0, 0)	SRMS Elbow (~~145~~ 150, ~~46~~ 45)

Step 3, page 3 of 5

Change the Camera Config table as follows:

Monitor 1	Monitor 2	Monitor 3	V10
91: OBSS ITVC (~~50~~100, ~~-60~~ -65)	25: Tip LEE	24: Tip Elbow (0, 0) 22: Base Elbow (110, -5)	Camera B (-10, 40)

Step 3.1, page 3 of 5

In Note 2 in the Note block, revise the last sentence as follows:
Was: Minimumclearance during maneuver to Pre-Grapple is 88 cm.
Is: Minimum clearance during maneuver to Grapple is 88 cm.

2.622 Contingency MPLM Uninstall

Step 7, page 5 of 10

Delete line "RHC RATE → COARSE (Verify Coarse on PCS)"
Before line "Enter Mode - Joint OCAS (Verify blue)", add line:
"√Vernier"

Change note 2 in the Note block, to read as follows:
JOCAS maneuver will take approximately 6 minutes in Coarse or 12 minutes in Vernier.

Step 9, page 7 of 10

Change the Note block to read:
JOCAS maneuver will take approximately 15 minutes in Coarse or 28 minutes in Vernier.

Step 11, page 9 of 10

Delete the line "RHC RATE → as required (VERNIER within 1.5 m of structure)"

STS-114
Data Debris Collection and Processing
FD02 MMT

July 27, 2005

MS/J. Muratore

Debris Summary as of MET 1/02:00

Imagery

- 66 sec:
  - NLGD – Aft starboard door area of interest
  - Chine area of interest observed at 66 seconds (occurred prior to 66 seconds)
- 129 sec: Post SRB sep debris on stbd side of ET – Tentatively classified as LH2 PAL ramp debris. USA/BAC SE&I Calculations show LH2 liquid level approximately 70 inches below region of foam loss at time of release. ET to independently confirm.
- 138 sec: Bipod spindle/LH2 flange region
- 149 sec: Bipod spindle/LH2 flange region
- ET Umibilical imagery of foam divots in Bipod region – possible 138 and 149 imagery events. Preliminary aero-thermal analysis shows these losses outside of pre-launch high heating areas of concern.
- ET Umbilical additional foam loss analysis in work.

Debris Summary as of MET 1/02:00 (cont)

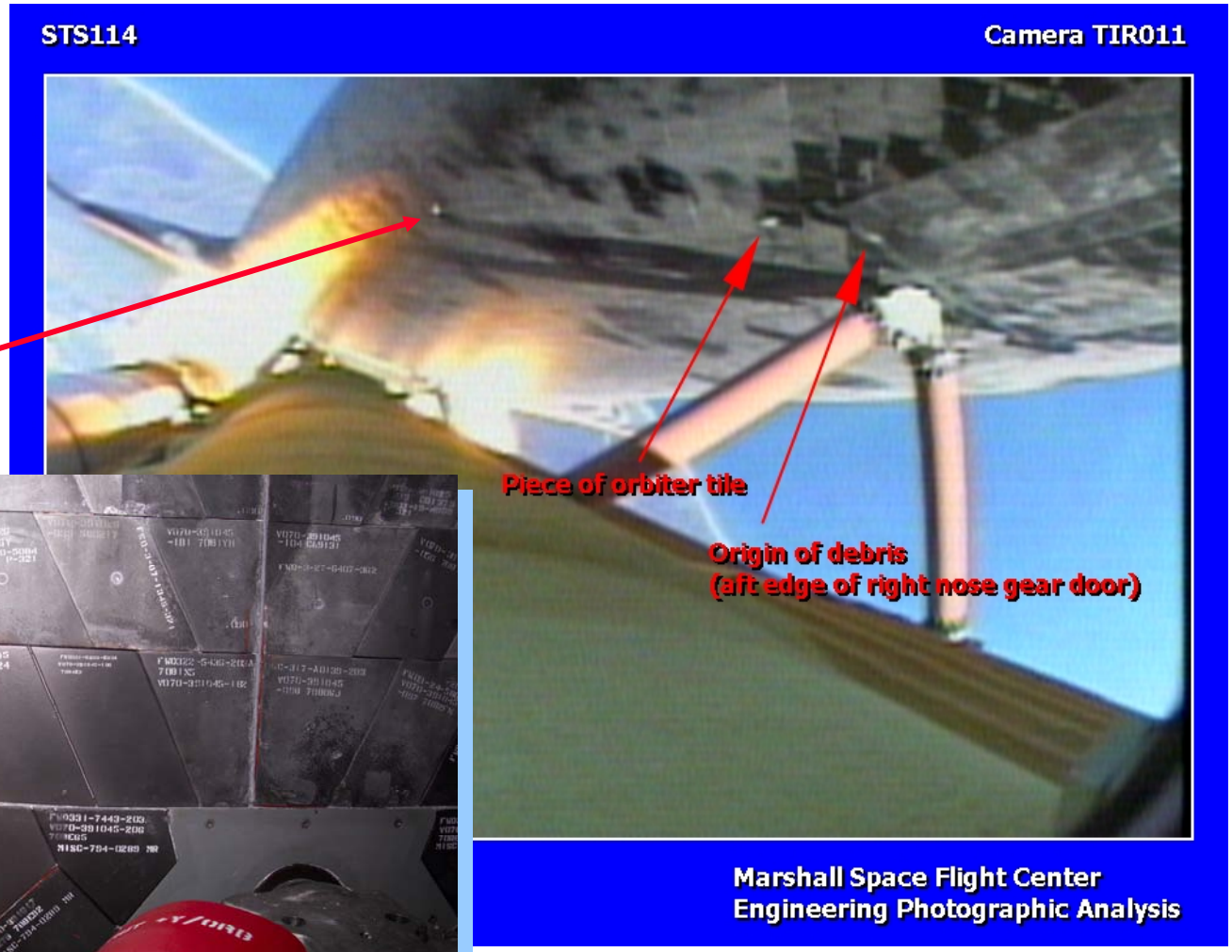
Radar

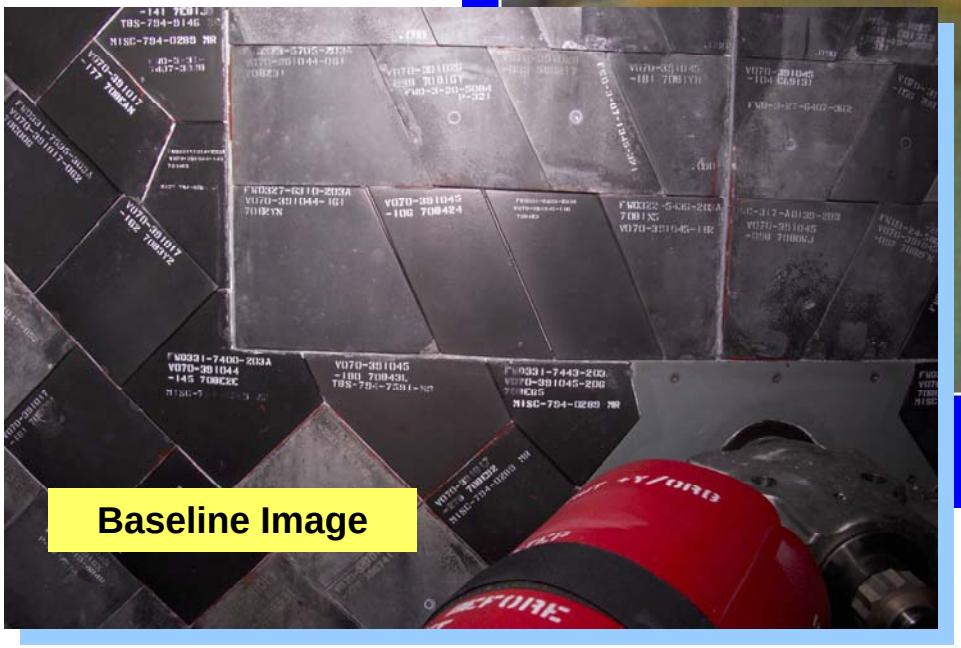
- 1 radar self-corroborated events (under review)
  - C1 – 21 radar contacts, 8 pre-SRB sep
  - X – 5 radar contacts, 1 pre-SRB sep
- No deflection events

WLEIDS

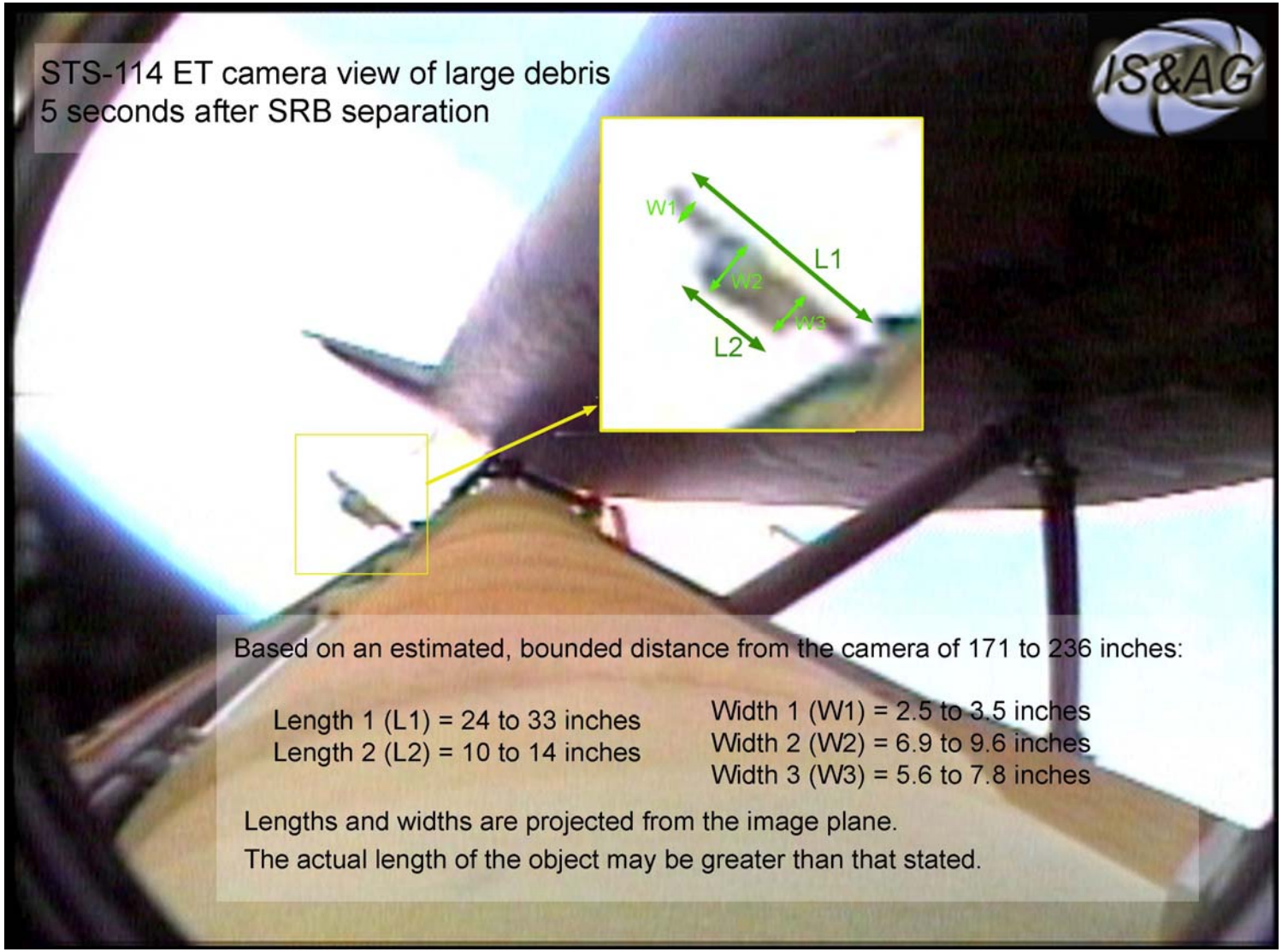
- 4 possible areas of interest (just above threshold)
- No apparent corroborations

Debris Event at 66 Seconds



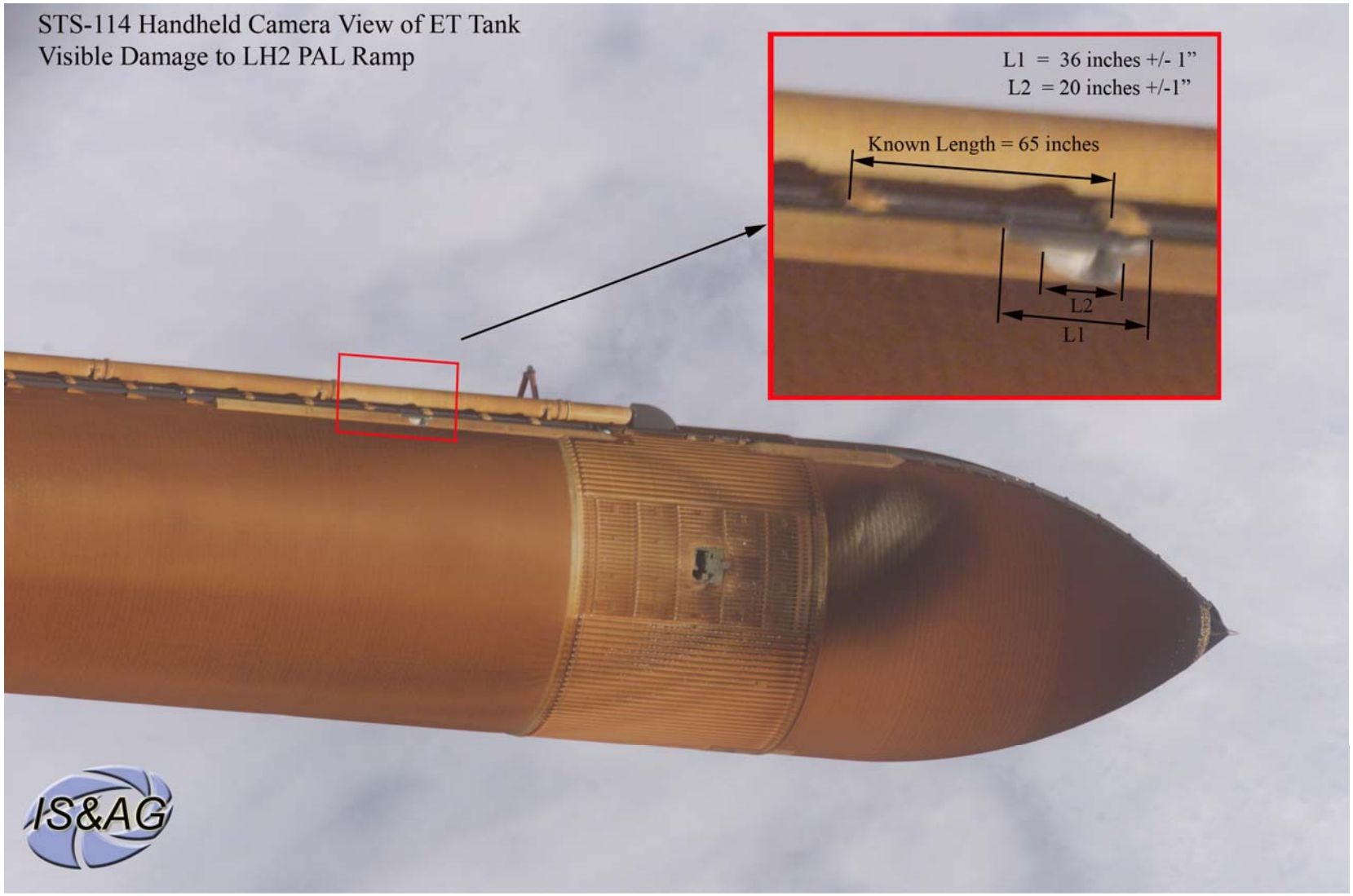


Debris Event at 129 Seconds



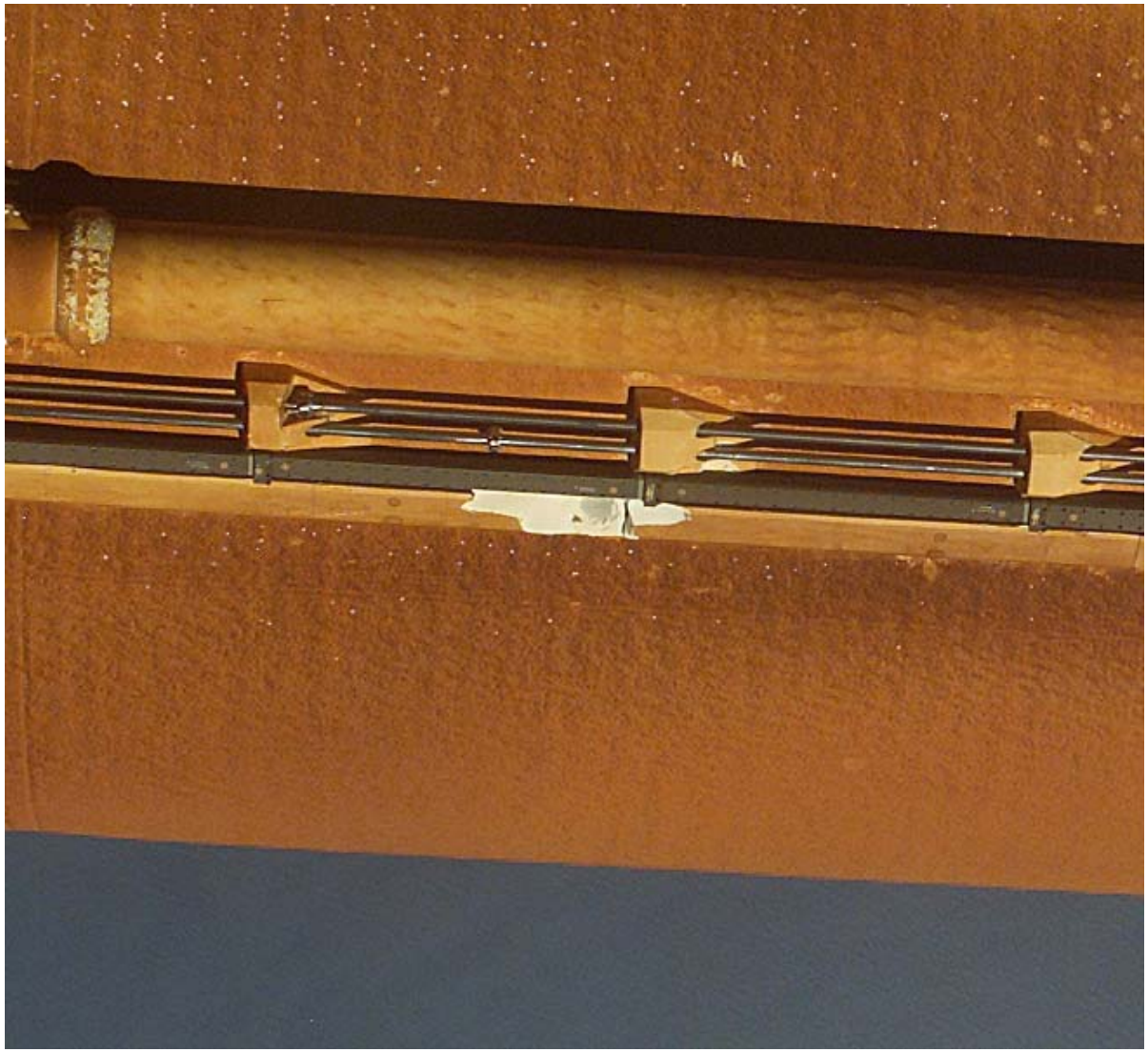
https://photo4.msfc.nasa.gov/STS/mission_media.php?filename=sts114_tir11_debris1.mov

Debris Event at 129 – Crew Handheld Photo of LH2 PAL Ramp



Debris at 129 Seconds -- Clip of Release	Presenter MS/J. Muratore	
	Date July 27, 2005	Page 7

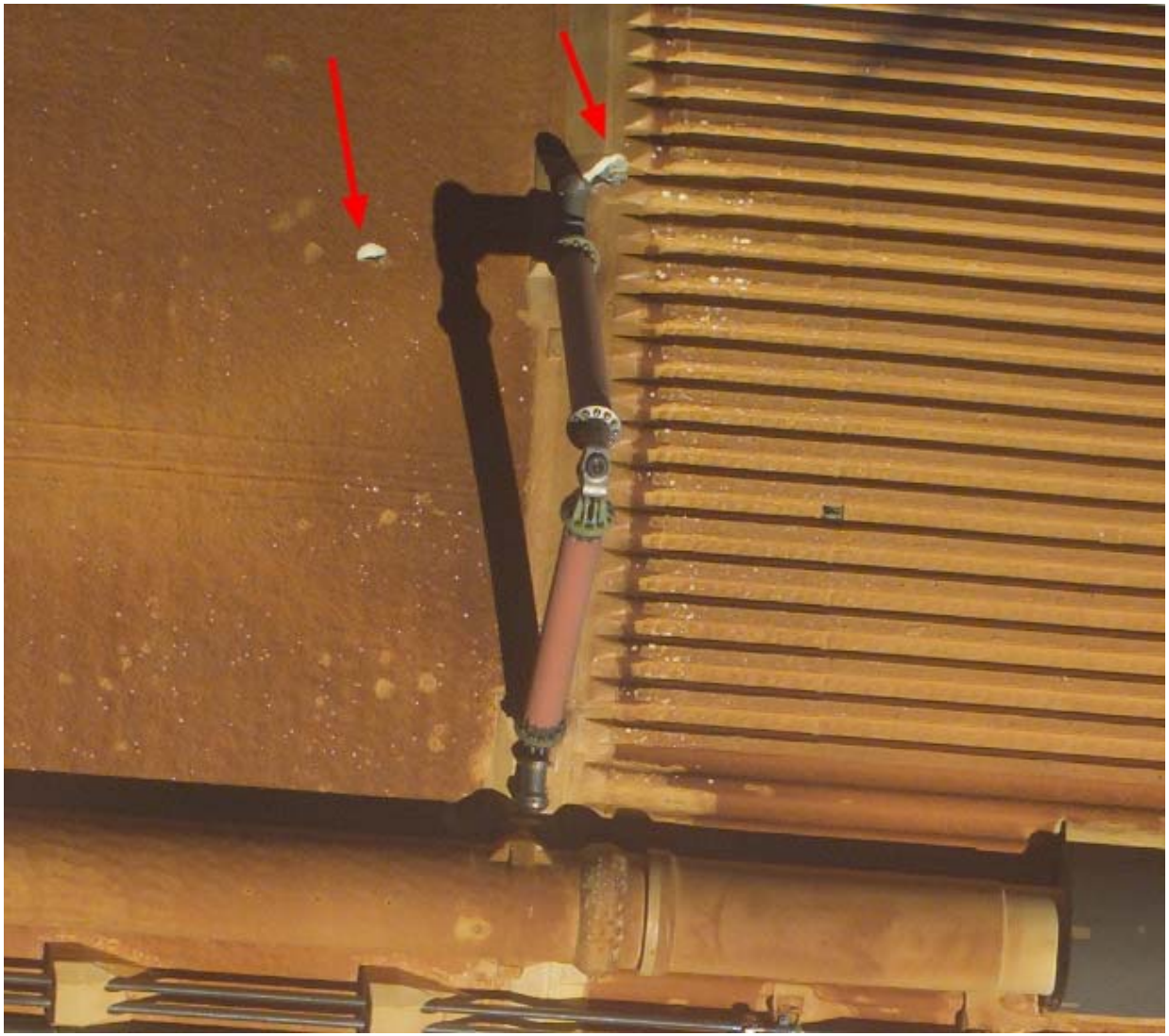
Debris Event at 129 sec - Umbilical Well Photo of LH2 PAL Ramp Damage	Presenter MS/J. Muratore	
	Date July 27, 2005	Page 8



138 Second Event	Presenter MS/J. Muratore	
	Date July 27, 2005	Page 9

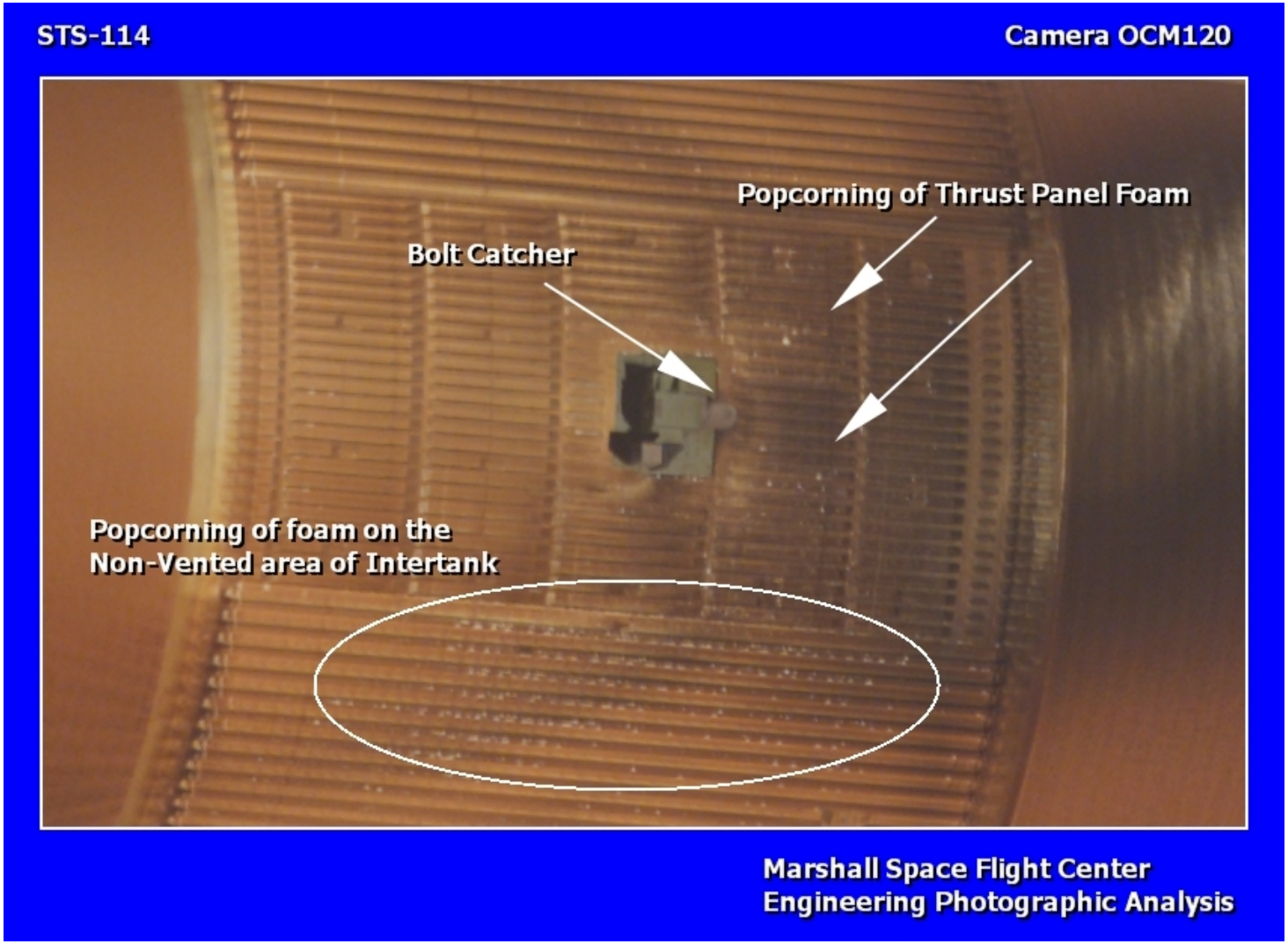
Debris Event at 149 Seconds

Bipod Divots from Umbilical Well Photos

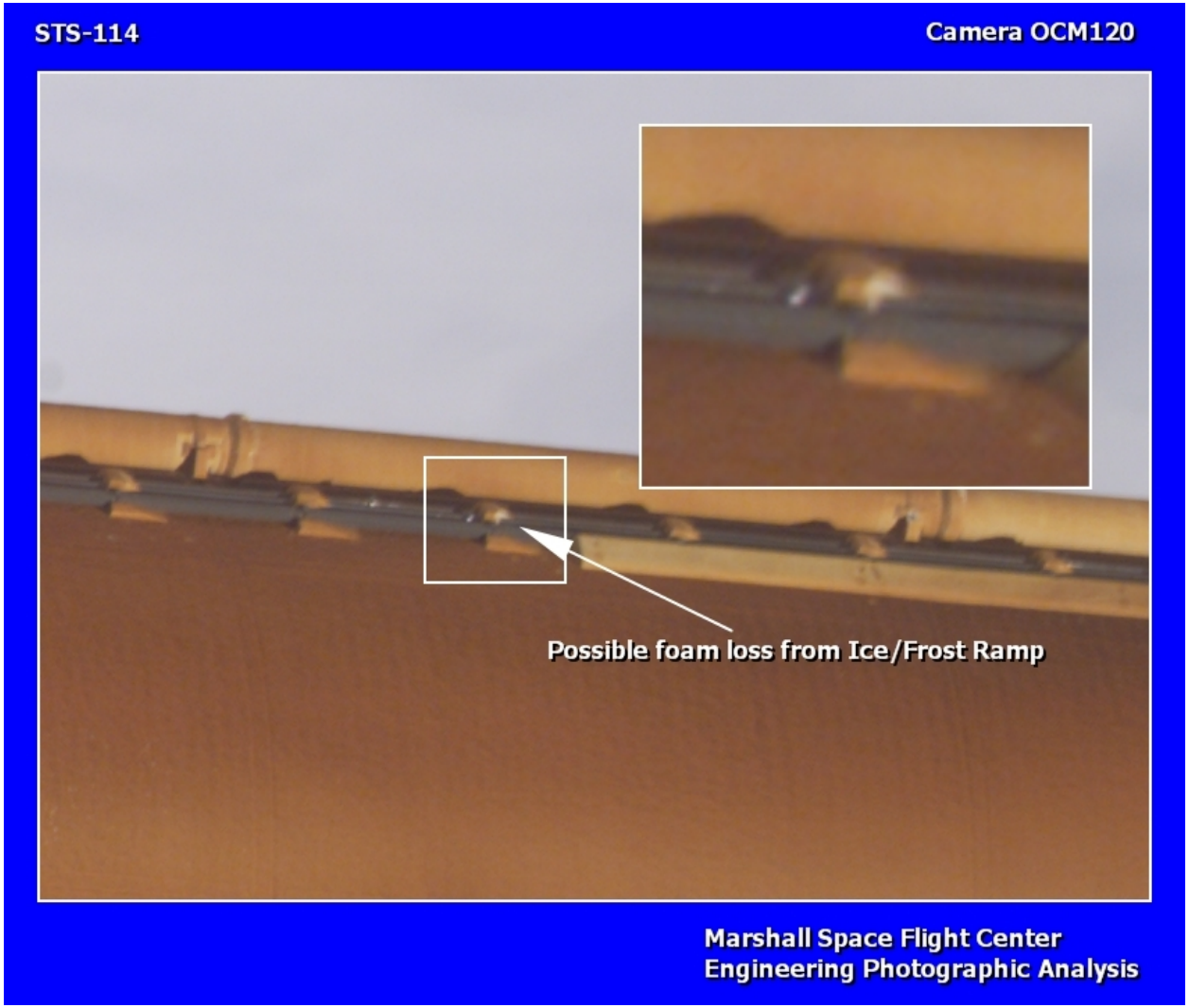


Bipod Divot Close up	Presenter MS/J. Muratore	
	Date July 27, 2005	Page 12

Popcorning


STS-114
Camera OCM120
Popcorning of Thrust Panel Foam
Bolt Catcher
Popcorning of foam on the
Non-Vented area of Intertank
Marshall Space Flight Center
Engineering Photographic Analysis

Ice/Frost Ramp



Forward Work

- Build integrated/corroborated debris table.
- Continued ascent video/film screening.
- Radar 24 hour report.
- WLEIDS report.
- DTA in work for tile and PAL ramp loss cases

Quicklook Integrated Debris Table

Quicklook Integrated Debris Table Page 1 of 2

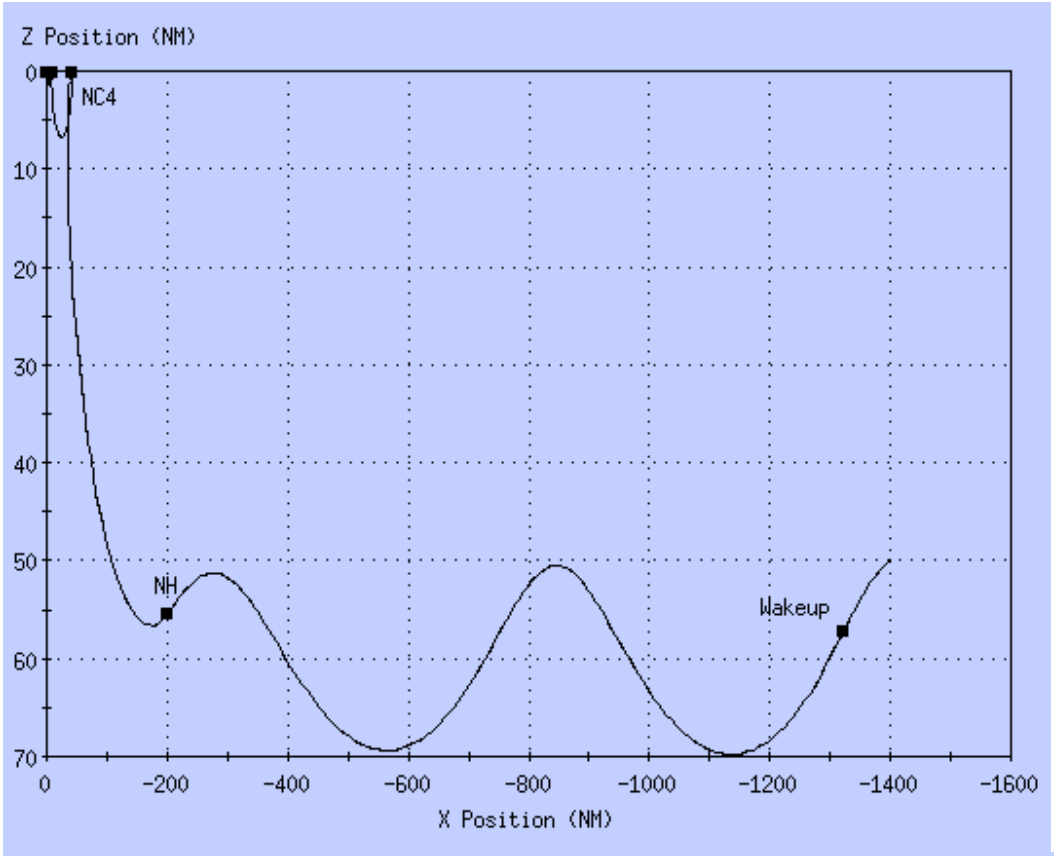
Event Time (seconds)	Initial Detect Loc	Size	Material Characteristic	Impact (Y/N)	Correlation			Comments
					Camera	WLEIDS	Radar	
Prior to 64 sec	NA				LO2 Feedline			Prior to SRB sep. white area is noted on starboard chine area. Potential tile damage at tile # V070-3901044-161.
65						Possible Area of Interest		Port Wing. Sensors associated with panel 9/10 interface. Does not meet all criteria for impact.
66	Orb NLG Door			N	LO2 Feedline		C1,X2	MSFC and JSC report possible tile material or tile repair material loss from aft edge of right NLG Gear Door (V070391044-161). Transported to stbd side of vehicle. Possible tile damage .
77-78						Possible Area of Interest		Stbd Wing. Sensors associated with panel 8/9 interface. Does not meet all criteria for impact.
106.3							X1,X2	Single faint radar contact.
108.5							C1,X2	Single faint radar contact.
121						Possible Area of Interest		Port Wing. Sensors associated with panel 6/7 interface. Does not meet all criteria for impact.

Quicklook Integrated Debris Table

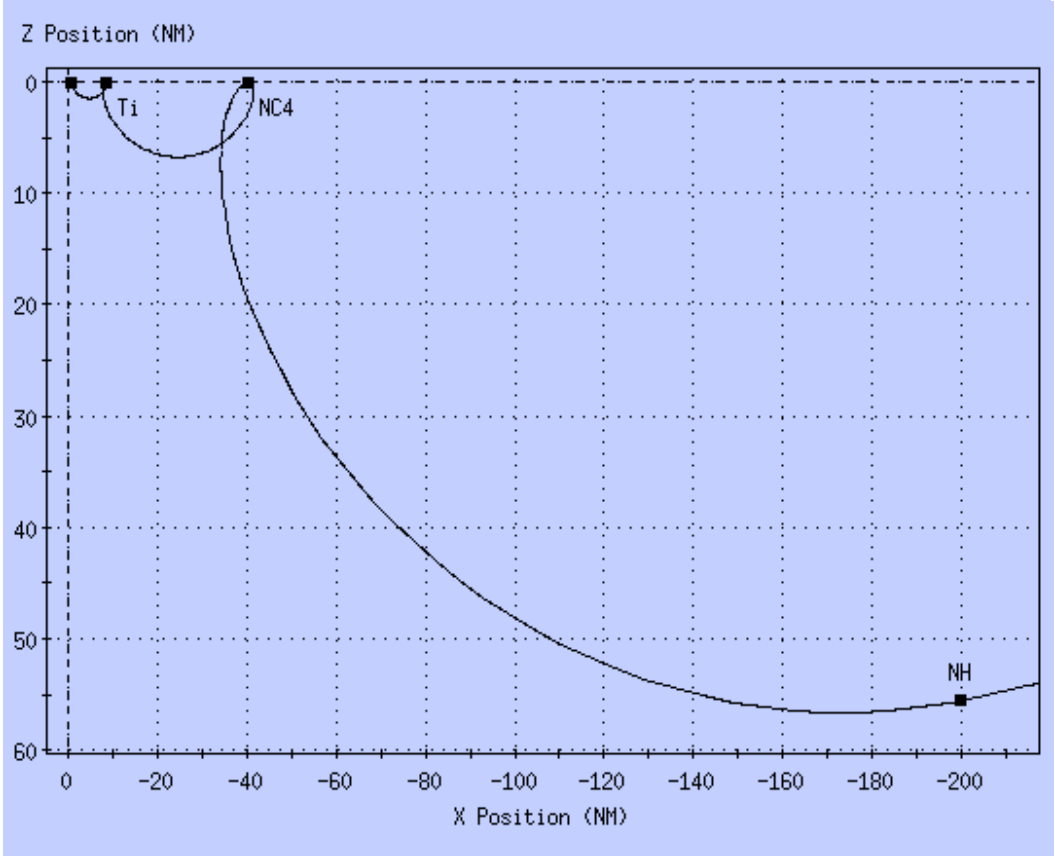
Event Time (seconds)	Initial Detect Loc	Size	Material Characteristic	Impact (Y/N)	Correlation			Comments
					Camera	WLEIDS	Radar	
127						Possible Area of Interest		**Port** Wing. Sensors associated with panel 15/16 interface. Does not meet all criteria for impact.
126.7							C1, X3	Single faint contact.
129	ET	see note		N	LO2 Feedline			Origin on **starboard** side of ET. Trajectory took it well below wing. 900 m/s uncorrected range rate. Longest dimension 24 to 33 in.
129							C1	Multiple faint contacts.
132.2	ORB			N	LO2 Feedline			Yellow/gold object on starboard side of ORB. Coincident with OMS firing. Became two objects. Trajectory well over wing.
136.1							C1	Single Faint dim track.
138		~22 in.			LO2 Feedline			Debris falling aft on left side of ET.
149	ET	~7 in.	Thin dark colored	N	LO2 Feedline			Debris originating from Port Bipod/LH2 flange region. Travels aft between ET and Orbiter.

```
 -----------------------------------------------------
|                                                     |
|            Preliminary MANEUVER TIGS                |
|                                                     |
|                                                     |
|                                                     |
|                   MET                               |
|  NH         001:15:49:31.000                        |
|  NC-4       001:16:36:23.100                        |
|  NCC        001:17:03:22.000                        |
|  TI         001:18:01:04.000  PET = 0:0 ; SS -36 MIN |
|  MC1        001:18:21:04.000                        |
|  MC2        001:18:50:58.000  ET = 0:0              |
|  MC3        001:19:07:58.000  MC2 + 17 MIN          |
|  MC4        001:19:17:58.000  MC2 + 27 MIN          |
|  DOCK       001:20:39:11.000                        |
 -----------------------------------------------------
```

MSG 025 - RELMO PLOTS AND BURN PADS



1



2

Prelim **ORBIT MANEUVER PAD FOR** NH

OMS BOTH	1	X
L	2	
R	3	
RCS SEL	4	
TV ROLL	5	000
TRIM LOAD P	6	(+) 0.7
TRIM LOAD LY	7	(−) 5.7
TRIM LOAD RY	8	(+) 5.7
WT	9	249173
TIG	10	011 15:49:31.0
TGT PEG 7 ΔVX	19	(+) 061.9
TGT PEG 7 ΔVY	20	(+) 000.0
TGT PEG 7 ΔVZ	21	(+) 001.5

RCS SEL: [ ] +X [ ] -X [ ] MULTI-AXIS

BURN ATT		
R	24	303
P	25	030
Y	26	022

ΔVTOT	062.0
TGO	00:39

VGO	X	(+) 059.8
VGO	Y	(+) 000.0
VGO	Z	(+) 016.2

	HA	HP
TGT	187	(+) 150

NOTES

OMS GMBL CK:

	PRE	POST-BURN
L PRI		X
L SEC		
R PRI		X
R SEC		
NONE	X	

RCS I'CNCT:
- [ ] L OMS → RCS
- [ ] R OMS → RCS
- [X] NONE

DOWN MODE OPTIONS:
- [X] 2 OMS → 1 OMS
- [ ] 1 OMS → RCS
- [ ] NONE

OMS HE REG TEST: L,R OMSHE P/VAP ISOL

	GPC	OP	CL
A	X		
B		X	

-X RCS BURNS:

	BURN ATT				LVLH ATT		
P 15				R			
Y 16				P			
OM 17				Y			

ORBIT BURN MONITOR

GPC FILL-INS 1 (3)
- [X] CRIT BURN
- [ ] NON-CRIT BURN

MAX TIG SLIP 5 MIN.
- [ ] DO NOT UPDATE TIG
- [X] UPDATE TIG AFTER 2 MIN.

Prelim ORBIT MANEUVER PAD FOR NC-4

OMS BOTH 1		X
L 2		
R 3		
RCS SEL 4	+X	
	-X	
	MULTI-AXIS	
TV ROLL 5		000
TRIM LOAD P 6		(+) 0.7
LY 7		(-) 5.7
RY 8		(+) 5.7
WT 9		247659
TIG 10		01/16:36:23.1
TGT PEG 7 ΔVX 19		(+) 064.9
ΔVY 20		(+) 000.0
ΔVZ 21		(+) 001.6

BURN ATT R 24	055
P 25	207
Y 26	333

ΔVTOT	064.9
TGO	00:41
VGO X	(+) 062.6
VGO Y	(+) 000.0
VGO Z	(+) 016.9

	HA	HP
TGT	191	(+) 183

NOTES

OMS GMBL CK:

	PRE	POST-BURN
L PRI		X
L SEC		
R PRI		X
R SEC		
NONE	X	

RCS I'CNCT:

- [ ] L OMS → RCS
- [ ] R OMS → RCS
- [X] NONE

DOWN MODE OPTIONS:

- [X] 2 OMS → 1 OMS
- [ ] 1 OMS → RCS
- [ ] NONE

OMS HE REG TEST: L,R OMSHE P/VAP ISOL

	GPC	OP	CL
A		X	
B	X		

-X RCS BURNS:

	BURN ATT				LVLH ATT		
P 15				R			
Y 16				P			
OM 17				Y			

ORBIT BURN MONITOR

GPC FILL-INS 1 (3)

- [X] CRIT BURN
- [ ] NON-CRIT BURN

MAX TIG SLIP 3 MIN.

- [X] DO NOT UPDATE TIG
- [ ] UPDATE TIG AFTER ___ MIN.

Preliminary ORBIT MANEUVER PAD FOR Ti

OMS BOTH 1		
L 2	X	
R 3		
RCS SEL 4		+X / -X / MULTI-AXIS
TV ROLL 5	000	
TRIM LOAD P 6	(+) 0.7	
LY 7	(+) 4.7	
RY 8	(-) 4.8	
WT 9	246084	
TIG 10	011/18:01:04.0	
TGT PEG 7 ΔVX 19	(+) 008.5	
ΔVY 20	(+) 000.1	
ΔVZ 21	(+) 000.0	

BURN ATT

R 24	063	
P 25	231	
Y 26	352	

ΔVTOT	008.5
TGO	00:11
VGO X	(+) 008.0
VGO Y	(+) 001.7
VGO Z	(+) 002.2
	HA / HP
TGT	194 / (+) 185

NOTES

OMS GMBL CK:

	PRE	POST-BURN
L PRI		
L SEC		
R PRI		
R SEC		
NONE	X	X

RCS I'CNCT:

- [ ] L OMS → RCS
- [ ] R OMS → RCS
- [X] NONE

DOWN MODE OPTIONS:

- [ ] 2 OMS → 1 OMS
- [X] 1 OMS → RCS
- [ ] NONE

OMS HE REG TEST: (L)/R OMSHE P/VAP ISOL

	GPC	OP	CL
A			X
B		X	

-X RCS BURNS:

	BURN ATT				LVLH ATT		
P 15				R			
Y 16				P			
OM 17				Y			

ORBIT BURN MONITOR

GPC FILL-INS 1 (3)

- [X] CRIT BURN
- [ ] NON-CRIT BURN

TIG SLIP: If Ti not started by nominal TIG + ___ min. (G34 as req'd), reload original TIG and go to Ti DELAY, 5-25

Max Ti DELAY TIG slip ___ min.

- [ ] DO NOT UPDATE TIG
- [ ] UPDATE TIG AFTER ___ MIN.

Ti DELAY

TGT PEG 7 ΔVX 19	( ) .	
ΔVY 20	( ) .	
ΔVZ 21	( ) .	
NEW Ti (BASETIME)	011/19:32:42.0	