STS-125

FD 04 Execute Package

MSG	Page(s)	Title
016A	1 - 13	FD04 Flight Plan Revision **(pdf)**
017	14 - 15	FD04 Mission Summary **(pdf)**
018	---	FD03 MMT Summary (electronic only)
019	16	IMAX Notes and Questions **(pdf)**
021	17	EVA Pen & Ink Deltas **(pdf)**
022	18	FD04 Crew Choice D/L Opportunities **(pdf)**

Approved *by FAO:*

Last Updated: May 14 2009 8:21AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*

MSG 016A - FD04 FLIGHT PLAN REVISION

MSG INDEX

MSG NO.	TITLE
MSG016	FD04 Flight Plan Revision
MSG017	FD04 Mission Summary
MSG018	FD03 MMT Summary
MSG019	IMAX Notes and Questions
MSG020	Preliminary FD5 Survey Procedure
MSG021	EVA Pen & Ink Deltas
MSG022	FD04 Crew Choice D/L Opportunities

1. Post Sleep Cryo Config:
   R1 O2,H2 MANF VLV TK2 (two) - OP (tb-OP)

2. MSG 021 contains pen & inks for EVA1 and EVA2. Only EVA1 AIRLOCK INGRESS changes need to be made prior to today's EVA. The remaining items can be updated during EVA 2 Procedure Review.

3. The contamination on the WSIPE may have come from debris from MLI around the airlock liberated during ascent. There is thought that the airflow from the airlock depress may cause more particle liberation from the MLI. We would like the IVA crew to monitor airlock depress and report any observed particles. If lighting permits, after airlock depress and prior to the EVA crew arrival at the WSIPE, take 400 mm digital still camera photos of the WSIPE matching those in MSG 014 for comparison.

4. We did not receive all the video down real-time during the HST Survey yesterday. On the CDR, time has been scheduled to playback the video times listed below for the -V3 and SA surveys:

   1) HST -V3 Survey, playback RMS wrist camera for GMT 133/18:30 - 133/19:02
   2) SA Surveys, playback PLB cameras for GMT 133/19:01 - 133/19:21

5. FD5 Port Chine Tile Survey:
   Sixteen tiles on the port chine were missed by the FD1 and FD2 surveys. This was because of sensor limitations and less than optimal overlap in the planned procedures. A portion of all of these tiles was imaged, but an EE camera survey will be performed on FD5 to close the gaps in coverage. EVA has modified the MFR stow configuration at the end of EVA 1 (reference MSG 021) to clear the field of view and increase clearances. MSG 020 is the preliminary survey procedure. A DOUG review has been scheduled the evening of FD4 for you to review this procedure. The final version of the procedure will be in the FD5 execute package.

6. MSG 019 has some notes and questions for you regarding IMAX video.

7. REPLACE PAGES 2-8 THROUGH 2-9 AND 3-32 THROUGH 3-41.

END OF PAGE 1 OF 13, MSG 016A

GMT 05/14/09 (134) β=−10 MET Day 002

12 07 13 08 14 09 15 10 16 11 17 12 18 13 19 14 20 15 21 16 22 17 23 18 003/00

STS-125

CDR/R2 ALTMAN	SLEEP; LOG; POST SLEEP; PMC A/G; POST SLEEP; 10.2M; RSR#; POST SLEEP; FES-I; G2 EXP; PVT*; O3 S/U; PVT*; SUNSET; PRTCT; SUNRS; PRTCT; SUNSET; PRTCT; SUNRS; PRTCT; -ZLV; -XVV; EXERCISE
PLT JOHNSON	SLEEP; POST SLEEP; EVA PREP; P/TV 06 S/U; PP/TV03; PVT; P/TV03; P/TV06 EVA 1 OPS; ICBC2; ICBC3; P/TV06 OPS; ICBC4; P/TV06 EVA 1 OPS
MS1/EV4 GOOD	SLEEP; POST SLEEP; EVA PREP; PURGE; EMU PRE BREATHE; DPRS; PDPS; IVA EVA 1 SUPPORT; EXERCISE
MS2/R1 McARTHUR	SLEEP; LOG; POST SLEEP; OCA*; POST SLEEP; EXERCISE; PVT*; MCIU; RMS MFR SETUP; RMS WFC 3 SUPPORT; RMS SI C&DH SUPPORT; RMS LOCK INSTL SPRT
MS3/EV1 GRUNSFELD	SLEEP; ASPRN; POST SLEEP; EVA PREP; PURGE; EMU PRE BREATHE; DPRS; PDPS; EGRESS & SETUP; WFC 3; SI C&DH; SCM & LOCKS
MS4/EV3 MASSIMINO	SLEEP; POST SLEEP; EVA PREP; PURGE; EMU PRE BREATHE; DPRS; EVA 1 (6:30); IVA EVA 1 SUPPORT; EXERCISE; IVA EVA 1 SUPPORT; WFC 3/SI C&DH/LOCKs
MS5/EV2 FEUSTEL	SLEEP; ASPRN; POST SLEEP; EVA PREP; PURGE; EMU PRE BREATHE; DPRS; PDPS; EGRESS & SETUP; WFC 3; SI C&DH; SCM & LOCKS

HST

HST CMD	SSR ENGNR PLAY BACK; WFC3; PREP; WFC3*; SI C&DH; SICDH; A/T; SI C&DH F/T

STS

DAY/NIGHT	
ORBIT	39; 40; 41; 42; 43; 44; 45; 46; 47
TDRS W	
TDRS E	
TDRS Z	
ORB ATT	-ZLV -XVV; SUN PROTECT; -ZLV -XVV

HST

HST FWD AXIS	-V3 FWD
SA ANGLE	0 deg

NOTES: #RESELECT; *CH 2; *85 DEG; *90 DEG; *A/T; WFPC 2/WFC 3 EXPOSED

FD04

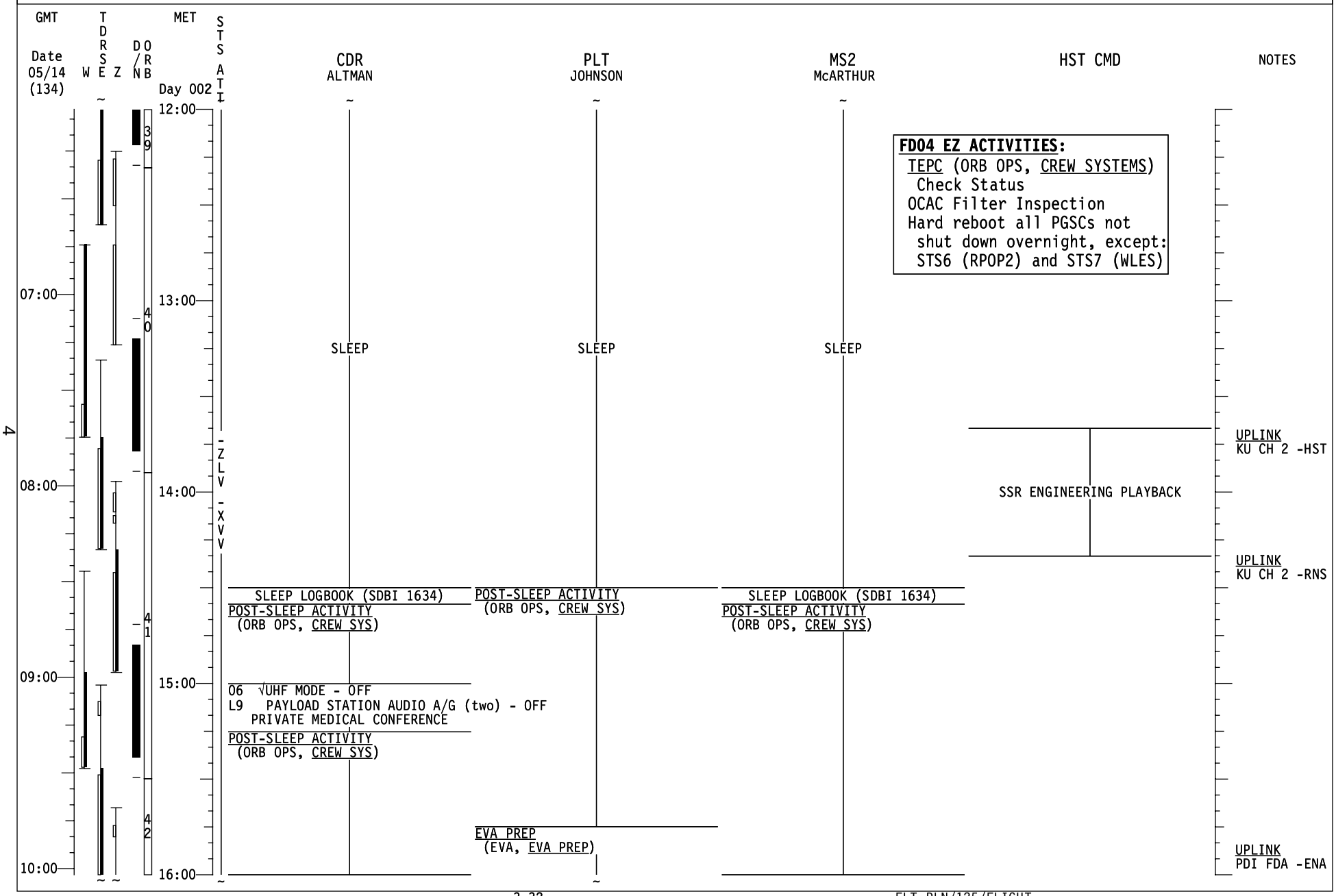
GMT 05/14/09 (134)
β=-10
MET Day 003

		003/00	19 01	20 02	21 03	22 04	23 05	05/15 06	01 07	02 08	03 09	04 10	05 11	06 12
STS-125	CDR/R2 ALTMAN		IMU	G2 CON	10.2M	PLYBCK HST & SA SRVY	DOUG RVW	EVA 2 PROCEDURE RVW	FES-T	PRE SLEEP	PMC A/G	PRE SLEEP	10.2M	SLEEP
STS-125	PLT JOHNSON	P/TV06 EVA 1 OPS	EXERCISE	NLP TERM	HL/PGT BATT INIT	ICBC HDTV	EVA 2 PROCEDURE RVW	FUT MNVR	PRE SLEEP	BATT*	PRE SLEEP			SLEEP
STS-125	MS1/EV4 GOOD	EXER-CISE	PRPS	RPRS	POST EVA W/H2O	EMU SWAP	REBA-I	PRE SLEEP	EVA 2 PROCEDURE RVW	PRE SLEEP				SLEEP
STS-125	MS2/R1 McARTHUR	MFR EGRS	PARK			DOUG RVW	EVA 2 PROCEDURE RVW	PRE SLEEP	PDIP+	PRE SLEEP				SLEEP
STS-125	MS3/EV1 GRUNSFELD	CLOSEOUT & INGRESS	PRPS	RPRS	POST EVA W/H2O	EMU SWAP	REBA-I	D2X	EVA 2 PROCEDURE RVW	PRE SLEEP				SLEEP
STS-125	MS4/EV3 MASSIMINO	IVA EVA 1 SUPPORT		RPRS	POST EVA W/H2O	EVA 2 TOOL CONFIG	EVA 2 PROCEDURE RVW	PRE SLEEP						SLEEP
STS-125	MS5/EV2 FEUSTEL	CLOSEOUT & INGRESS	PRPS	RPRS	POST EVA W/H2O	EVA 2 TOOL CONFIG	EVA 2 PROCEDURE RVW	PRE SLEEP	OCA#	PRE SLEEP				SLEEP
HST	HST CMD	SI C&DH F/T		SI C&DH F/T DUMP	WFC3 FUNCTIONAL TEST		WFC3 F/T DUMP			SSR ENGNR PLAY BACK		BAY 2	ACS PREHT	
STS	DAY/NIGHT													
STS	ORBIT	47	48	49	50	51	52	53	54					
STS	TDRS W E Z													
STS	ORB ATT	-ZLV -XVV												
HST	HST FWD AXIS	-V3 FWD												
HST	SA ANGLE	0 deg												
	NOTES	*INIT +OFF #PL MAX												

3

STS-125 (FD04)

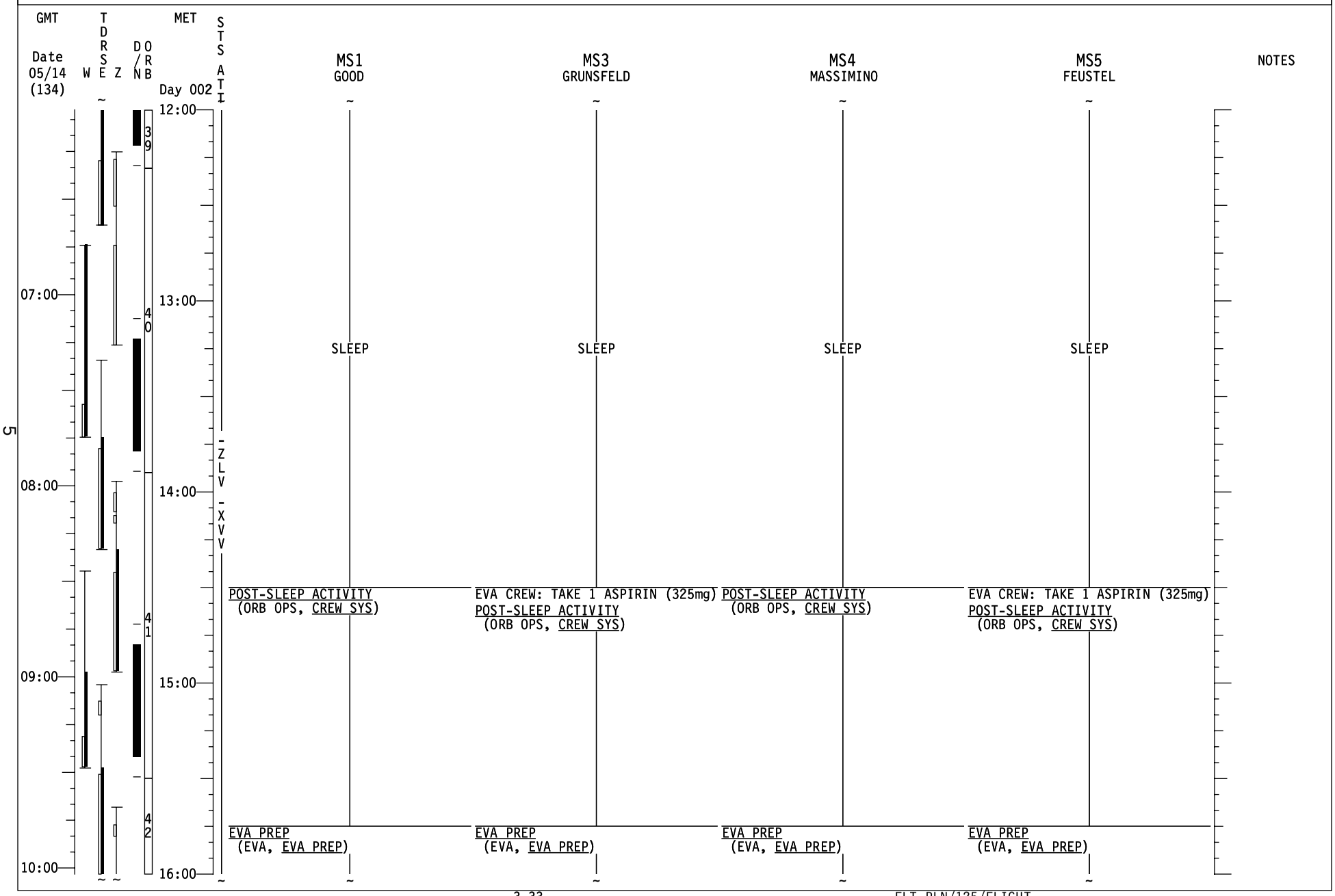
REPLANNED



FD04 EZ ACTIVITIES:
TEPC (ORB OPS, CREW SYSTEMS)
Check Status
OCAC Filter Inspection
Hard reboot all PGSCs not shut down overnight, except: STS6 (RPOP2) and STS7 (WLES)

STS-125 (FD04)

REPLANNED



STS-125 (FD04)

REPLANNED

GMT Date 05/14 (134) | W E Z | TDRS | DO/RN B | MET Day 002 | STS ATT

CDR ALTMAN

16:00
- 10.2 PSI MAINTENANCE (EVA, 10.2 PSI CABIN) Step 3 only
- R5R RESELECT [A]
- POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

17:00
- SUPPLY WATER DUMP USING FES (ORB OPS, ECLS) Step 1 only, using FES PRI B
- G2 SET EXPANSION (ORB OPS, DPS) Configure Dual G2, (1212)

18:00
- PIVOT HST (PL OPS, IN-BAY OPERATIONS) 90 to 85 degrees
- P/TV03 FSS OPS (SETUP & OPS) (P/TV, SCENES) Pivot - Item 2

19:00
- PIVOT HST (PL OPS, IN-BAY OPERATIONS) 85 to 90 degrees
- MNVR (INRTL) (SS Protect) R=294 P=347 Y=348 A10/AUTO/VERN (2/19:13) Init MNVR
- MNVR (TRK) BIAS +ZVV (SR Protect) TG=2 BV=5 P=154 Y=0 OM=358 A10/AUTO/VERN (2/19:37) Init TRK

20:00

PLT JOHNSON

- EVA PREP (EVA, EVA PREP)
- P/TV06 HST EVA (P/TV, SCENES) SETUP
- P/TV03 FSS OPS (SETUP & OPS) (P/TV, SCENES) Pivot - Item 2
- P/TV03 FSS OPS (OPS) (P/TV, SCENES) Depress - Item 4 Ref. MSG 016, Item 3
- P/TV06 HST EVA (OPS) (P/TV, SCENES) EVA 1 - Items 1-6

MS2 McARTHUR

- L10 MUX/VTR/CC PWR - ON (LED ON)
- RECONFIGURE OCA D/L RATE (Ch. 2) (ORB OPS, PGSC) Part D then A, omit Step 4
- POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

[A] GNC 23 RCS
CRT RCS R - ITEM 3 EXEC (*)
JET DES R5R - ITEM 37 EXEC (no*)

EXERCISE

- PIVOT HST (PL OPS, IN-BAY OPERATIONS) 90 to 85 degrees
- L17 Check MCIU filter screen
- MFR SETUP (PDRS, EVA SETUP)
- WFC R&R (PDRS, EVA 1)

HST CMD

- WFC3/WFPC-II CHANGEOUT (INCLUDES PREP & C/O)

NOTES

- UPLINK β21 + Mask Boxes 1,2,3,4

STS-125 (FD04)

REPLANNED

GMT Date 05/14 (134) | W | E | Z | DRS/NB | ORB | MET Day 002 | STS ATL | MS1 GOOD | MS3 GRUNSFELD | MS4 MASSIMINO | MS5 FEUSTEL | NOTES

11:00 — 12:00 — 13:00 — 14:00

16:00 — 17:00 — 18:00 — 19:00 — 20:00

42 — 43 — 44

ZLV-XVV

EVA PREP (EVA, EVA PREP)

EMU PURGE (EVA, EVA PREP)

EMU PREBREATHE (EVA, EVA PREP)

DEPRESS (Cue Card, DEPRESS/REPRESS)

POST DEPRESS (CC, DPRS/RPRS)

IVA EVA 1 SUPPORT

EGRESS/INITIAL SETUP

WFC 3

STS-125 (FD04)

REPLANNED

GMT Date 05/14 (134) | W | TDRSE | Z | D/N | ORB | MET Day 002 | STS ATT | CDR ALTMAN | PLT JOHNSON | MS2 McARTHUR | HST CMD | NOTES

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

15:00 | 16:00 | 17:00 | 18:00

44 | 45 | 46 | 47

SUN PROTECT

-ZLV -XVV

CDR ALTMAN

MNVR (INRTL) (SS Protect)
R=294 P=347 Y=348
A10/AUTO/VERN (2/20:32)Init MNVR

MNVR (TRK) BIAS +ZVV (SR Protect)
TG=2 BV=5 P=154 Y=0 OM=358
A10/AUTO/VERN (2/21:13) Init TRK

MNVR (TRK) -ZLV -XVV
TG=2 BV=3 OM=0
A10/AUTO/VERN (WFC 3 cmplt) Init TRK

EXERCISE

PLT JOHNSON

P/TV06 HST EVA (OPS)
(P/TV, SCENES)
EVA 1 - Items 1-6

P/TV09 ICBC3D (FILMING OPS)
(P/TV, SCENES) Scene 2

P/TV09 ICBC3D (FILMING OPS)
(P/TV, SCENES) Scene 3

P/TV06 HST EVA (OPS)
(P/TV, SCENES)
EVA 1 - Items 1-6

P/TV09 ICBC3D (FILMING OPS)
(P/TV, SCENES) Scene 4

P/TV06 HST EVA (OPS)
(P/TV, SCENES)
EVA 1 - Items 1-6

MS2 McARTHUR

WFC R&R
(PDRS, EVA 1)

SI C&DH
(PDRS, EVA 1)

LOCK INSTALL
(PDRS, EVA 1)

HST CMD

WFC3 ALIVENESS TEST

SI C&DH/SI C&DH-R CHANGEOUT
(INCLUDES PREP & REMOVAL)

SI C&DH/SI C&DH-R CHANGEOUT
(INCLUDES PREP & REMOVAL)

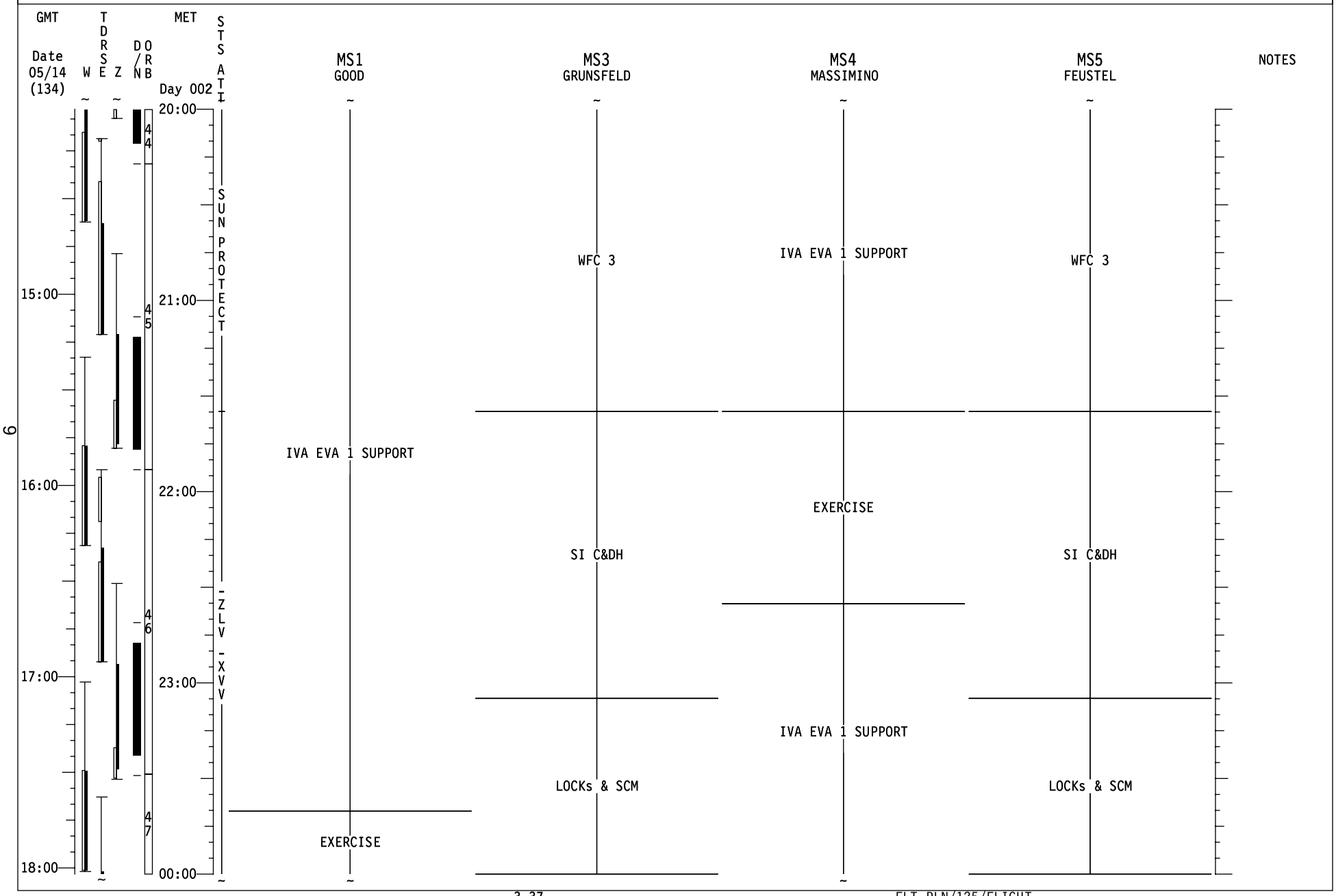
SI C&DH-R ALIVENESS TEST

SI C&DH-R FUNCTIONAL TEST

8

STS-125 (FD04)

REPLANNED



STS-125 (FD04)

REPLANNED

GMT Date 05/14 (134) | W | TDRSE | Z | D/N | ORB | MET Day 003 | STS ATI

CDR ALTMAN	PLT JOHNSON	MS2 McARTHUR	HST CMD	NOTES
	P/TV06 HST EVA (OPS) (P/TV, SCENES) EVA 1 - Items 1-6	EGRESS AT AIRLOCK (PDRS, EVA CLOSEOUT)	SI C&DH-R FUNCTIONAL TEST	
		RMS EXTENDED PARK (PDRS, EXTENDED PARK)		
IMU STAR OF OPPTY ALIGN (ORB OPS, GNC)				
G2 SET CONTRACTION (ORB OPS, DPS) Configure Single G2, (1111)				
10.2 PSI MAINTENANCE (EVA, 10.2 PSI CABIN)				UPLINK β21 + Mask Boxes 1,2 KU CH 2 -HST
PLAYBACK VIA VTR (Cue Card, DIGITAL PLAYBACK) HST and SA Surveys KU TDRW (01:11-01:41) KU TDRE (01:46-02:17) Ref. MSG 016, Item 4	EXERCISE		DUMP SI C&DH-R FT SCIENCE DATA	
	NLP TERMINATION (PL OPS, NLP) Terminate GAPs 1-14			UPLINK KU CH 2 -OCA
	HELMET LIGHT/PGT BATTERY RECHARGE (INIT) (EVA, EMU MAINT/RECHARGE) Ref. STS-125 EVA CONSUMABLES Cue Card			
DOUG REVIEW Ref. MSG 020 and 016, Item 5		DOUG REVIEW Ref. MSG 020 and 016, Item 5		
	ICBC3D STATUS REPORT HD DIGITAL VIA CC (ACTIVATION) (Cue Card, DIGITAL PLAYBACK)		WFC3 FUNCTIONAL TEST AND SAFE WFC3	UPLINK KU CH 3 -DTV PDI FDA -INH
EVA 2 PROCEDURE REVIEW Ref. EVA 2 BRIEF CARD (EVA, TIMELINES) and MSG 021	EVA 2 PROCEDURE REVIEW Ref. EVA 2 BRIEF CARD (EVA, TIMELINES) and MSG 021	EVA 2 PROCEDURE REVIEW Ref. EVA 2 BRIEF CARD (EVA, TIMELINES) and MSG 021		

Time scale: 19:00, 20:00, 21:00, 22:00; 00:00, 01:00, 02:00, 03:00, 04:00

47, 48, 49

-ZLV -XVV

10

STS-125 (FD04)

REPLANNED

GMT Date 05/14 (134) | W | TDRSE | Z | D/N | ORB | MET Day 003 | STS ATT | MS1 GOOD | MS3 GRUNSFELD | MS4 MASSIMINO | MS5 FEUSTEL | NOTES

MS1 GOOD	MS3 GRUNSFELD	MS4 MASSIMINO	MS5 FEUSTEL
EXERCISE	DAILY CLOSEOUT/INGRESS	IVA EVA 1 SUPPORT	DAILY CLOSEOUT/INGRESS
PRE REPRESS (CC, DPRS/RPRS)	PRE REPRESS (CC, DPRS/RPRS)		PRE REPRESS (CC, DPRS/RPRS)
REPRESS (Cue Card, DEPRESS/REPRESS)	REPRESS (Cue Card, DEPRESS/REPRESS)	REPRESS (Cue Card, DEPRESS/REPRESS)	REPRESS (Cue Card, DEPRESS/REPRESS)
POST EVA (EVA, POST EVA)	POST EVA (EVA, POST EVA)	POST EVA (EVA, POST EVA)	POST EVA (EVA, POST EVA)
EMU SWAP (EVA, AIRLOCK CONFIG)	EMU SWAP (EVA, AIRLOCK CONFIG)	EVA 2 TOOL CONFIG (EVA, TIMELINES) Ref. STS-125 EVA CONSUMABLES Cue Card	EVA 2 TOOL CONFIG (EVA, TIMELINES) Ref. STS-125 EVA CONSUMABLES Cue Card
REBA BATTERY RECHARGE (INIT) B (EVA, EMU MAINT/RECHARGE)	REBA BATTERY RECHARGE (INIT) B (EVA, EMU MAINT/RECHARGE)	B Ref. STS-125 EVA CONSUMABLES Cue Card	
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	D2Xs EVA CAMR (P/TV, REF PROC) D2Xs EVA-CAMR ONLY DISASSEMBLY Perform Between EVAs		
EVA 2 PROCEDURE REVIEW Ref. EVA 2 BRIEF CARD (EVA, TIMELINES) and MSG 021	EVA 2 PROCEDURE REVIEW Ref. EVA 2 BRIEF CARD (EVA, TIMELINES) and MSG 021	EVA 2 PROCEDURE REVIEW Ref. EVA 2 BRIEF CARD (EVA, TIMELINES) and MSG 021	EVA 2 PROCEDURE REVIEW Ref. EVA 2 BRIEF CARD (EVA, TIMELINES) and MSG 021

Time scale: 19:00, 20:00, 21:00, 22:00; 00:00, 01:00, 02:00, 03:00, 04:00

STS ATT: -ZLV, -XVV

Z: 47, 48, 49

11

STS-125 (FD04)

REPLANNED

GMT Date 05/14 (134) | W | TDRSE | Z | D/N | ORB | MET Day 003 | STS ATI

CDR ALTMAN | PLT JOHNSON | MS2 McARTHUR | HST CMD | NOTES

04:00

SUPPLY WATER DUMP USING FES
(ORB OPS, ECLS)
Step 2 only, FES PRI B req'd
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

FUTURE LOADED MNVR (Simo Dump)
TG=2 BV=3 OM=270
A10/AUTO/VERN (3/15:45)Init TRK
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

WFC3 FUNCTIONAL TEST AND SAFE WFC3

UPLINK
KU CH 2 -HST

MIDDECK EMU BATTERY RECHARGE (Init)
(EVA, EMU MAINT/RECHARGE) C
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

PDIP 1 KU BAND RATE - OFF
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

23:00 | 05:00

06 √UHF MODE - OFF
L9 PAYLOAD STATION AUDIO A/G (two) - OFF
PRIVATE MEDICAL CONFERENCE
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

DUMP WFC3 FT SCI DATA

C Ref. STS-125 EVA CONSUMABLES Cue Card

-ZLV -XVV

00:00 | 06:00

10.2 PSI MAINTENANCE
(EVA, 10.2 PSI CABIN)

Crew Wake: 3/14:30

UPLINK
KU CH 2 -RNS

01:00 | 07:00

SLEEP | SLEEP | SLEEP

02:00 | 08:00

49 | 50 | 51 | 52

STS-125 (FD04)

REPLANNED

GMT Date 05/14 (134) | W E Z | D/N | ORB | MET Day 003 | STS ATI

MS1 GOOD | MS3 GRUNSFELD | MS4 MASSIMINO | MS5 FEUSTEL | NOTES

04:00 — 05:00 — 06:00 — 07:00 — 08:00

23:00 — 00:00 — 01:00 — 02:00

49 — 50 — 51 — 52

-ZLV -XVV

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

RECONFIGURE OCA D/L RATE [D]
PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

[D] After Crew Choice D/L complete:
L10 √MUX/VTR/CC PWR - ON (LED ON)
RECONFIGURE OCA D/L RATE (PL Max)
(ORB OPS, PGSC) Part C, omit Step 4
L10 MUX/VTR/CC PWR - OFF (LED OFF)

Crew Wake: 3/14:30

SLEEP

Good Morning Atlantis!!!

Great rendezvous!!!

Great Grapple!!!!

Have a great EVA day!!!

YOUR CURRENT ORBIT IS: 305 X 303 NM

NOTAMS:

EDW	LAKEBED RUNWAY 15/33 ELS ONLY. OTHER LAKEBED RWYS RED.
NOR	LAKEBED RUNWAYS GREEN.
GUA	RUNWAY 06R/24L CLOSED.
GDV	RUNWAY 03R/21L CLOSED.
KIN	UNUSABLE.
GSA	UNUSABLE.
AMB	UNUSABLE.
ESN	RUNWAY 03R/21L CLOSED.
NZC	RUNWAY 18L REIL OUT OF SERVICE
VBG	RUNWAY 30 THRESHOLD LIGHTS OUT OF SERVICE
EIP	NOT USABLE. NO AGREEMENT.
BEN	NOT RECOMMENDED/NOT SUPPORTED.
BYD	POLITICALLY NOT RECOMMENDED. RUNWAY 32 THREHOLD DISP. 700M
AAT	POLITICALLY NOT RECOMMENDED.
LRB	POLITICALLY NOT RECOMMENDED. TACAN CH 85 OUT.

NEXT 2 PLS OPPORTUNITIES:

NOR17 ORB 46 – 02/22:50 SKC 200/08P12
EDW04 ORB 61 – 03/22:45 FEW250 030/06P10

OMS TANK FAIL CAPABILITY:

LOMS FAILS: NO
ROMS FAILS: NO

LEAKING OMS PRPLT BURN:

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

OMS QUANTITIES(%) :

L OMS OX = 51.2 R OMS OX = 51.1
FU = 51.2 FU = 51.2

DELTA V AVAILABLE:

OMS	484 FPS
ARCS (TOTAL ABOVE QTY1)	26 FPS
TOTAL IN THE AFT	510 FPS
ARCS (TOTAL ABOVE QTY2)	56 FPS
FRCS (ABOVE QTY 1)	24 FPS
AFT QTY 1	80%
AFT QTY 2	42%

SYSTEM	FAILURE	IMPACT	WORK AROUND
EPS	Forward Starboard Payload Bay Floodlight is failed.	The Forward Starboard Payload Bay Floodlight (A7U) will be left OFF resulting in reduced illumination of the Payload Bay.	Other Payload Bay Floodlights are still available.

MSG 019 - IMAX NOTES AND QUESTIONS

Congrats on your first shot! ICBC scenes 2 and 4 are close on daylight, but we're hopeful.

Canon Priorities: Suit up, RMS + IV ops for WFC, ingress.

24P CANON TEST FEEDBACK FOR CREW:
Thank you for sending the test. Our initial observations are:

1. Overall the 60i material downlinked at the end of FD03 looked markedly better than the 60i material shot on FD02. Was the same camera used for both? The 60i FD03 material was also a lot better than the 24p test shot on the flight deck in low light. Was the 24p shot on a different camera from 60i?

2. There are a lot of pixel hits on the 24p material. We can correct for these, but wonder (a) if the 60i camera is of better quality and (b) if the 60i setting may be covering the pixel drops.

3. Based on the 24p shots we have seen, would recommend not shooting on the flight deck during night passes unless a lot more LED lighting is used. Daylight produces a far superior picture. It would be very useful for us to see something shot in 24p on the flight deck during a daylight pass so we can compare it with 60i flight deck shot (apples to apples).

4. Framing: it looks like you were using the .8x (Canon) lens adaptor on the 24p material. If more than 2 people are to be subjects in a flight deck scene, use the widest angle adapter to avoid cutting subjects in half at the sides of the frame.

5. When shooting exterior scenes through AFD windows at night, the lens should be as close to the window as possible or a shroud should be used. We noted bad reflections in the downlink material.

END OF PAGE 1 OF 1, MSG 019

MSG 021 - EVA PEN & INK DELTAS

To provide RMS clearance views during tile inspection on FD 5, we need you to stow the MFR stanchion at the end of EVA 1. Please make the following updates to your EVA 1 and 2 timelines:

- EVA 1 (EVA, TIMELINES), DAILY CLOSEOUT/INGRESS, pg FS 7-43 under the FF EV column in the AIRLOCK INGRESS block:

  After step 2, add step 2a. Stow MFR Stanchion, √ latched

- EVA 2 (EVA, TIMELINES), EGRESS/DAILY SETUP, pg FS 7-47 under the FF EV column in the EGRESS block:

  Add step 10. Deploy MFR stanchion

During EVA 2 Procedure Review, the EVA Workarounds Cribsheet needs to be updated as follows to avoid over-torquing any OPE contingency bolts. This update is not required prior to EVA 1 as OPEs are not nominally accessed. A ground call will be made if the data is required on EVA 1:

- EVA Cribsheet (EVA, HST CONTINGENCIES), WORKAROUNDS CRIBSHEET, pg FS 16-59
  Under SOPE/NOPE/COPE, block 2, Contingency Bolt Install Steps:

  WAS: 2. PGT: (B2, CW2, 5.5)
  IS: 2. PGT: (B2, CW2, **2.5**)

- EVA Cribsheet (EVA, HST CONTINGENCIES), WORKAROUNDS CRIBSHEET, pg FS 16-60
  Under LOPE, block 2, Contingency Bolt Install Steps:

  WAS: 2. PGT: (B2, CW2, 5.5)
  IS: 2. PGT: (B2, CW2, **2.5**)

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Crew Choice TV Downlink KU Available Opportunities for FD4

TDRS	Start	End	Duration
TDW	3/02:27	02:44	17 min
	3/02:54	03:25	31 min
TDE	3/03:48	03:59	11 min
TDW	3/04:10	04:29	19 min
	3/04:38	05:09	31 min
TDE	3/05:33	05:42	9 min
TDW	3/05:55	06:08	13 min