STS-125

FD 05 Execute Package

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Approved *by FAO:*

Last Updated: May 15 2009 7:58AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*

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1. Post Sleep Cryo Config:
   R1 O2,H2 MANF VLV TK1 (two) - OP (tb-OP)

2. Simo Dump Details
   For the simo dump, MCC will TMBU the limits in steps B and K. The supply water portion of the dump will be 40 minutes. The waste water portion of the dump will be ~30 minutes and will dump the waste tank to 5%.

3. Msg 034 contains pen & inks for EVA2 and EVA3. Only BAY 2 DOOR BOLT RELEASE changes need to be made prior to today's EVA. The remaining items can be updated during EVA 3 Procedure Review.

4. Please provide some more comments on the scoring seen on the A-latch extension (we believe it was the Hybrid extension) - is there any concern for contamination generation or sharp edges? If so, we would like you to use the spare Hybrid extension currently located on Tool Board T of the MFR handle on future EVAs. The Hybrid extension used on EVA 1 would become the spare and would be stowed on the MFR handle.

5. Please use same EHIP/PGT battery charging configuration from Post EVA 1 for Post EVA 2.
   MUP J23 --1 EHIP Charger for Helmet Lights Batteries
   MUP J13 --1 EHIP Charger with PGT adapters for PGT Batteries

   We are working on an updated Consumables CC for EVAs 3-5.

6. Please answer the questions in MSG 031 at your convenience. These are not mandatory and do not affect the rest of the battery recharge plan but may help in later troubleshooting.

7. The rivet John placed in his Sm Trash Bag during EVA 1 needs to be removed and the bag zipped up prior to EVA 2.

8. REPLACE PAGES 2-10 THROUGH 2-11 AND 3-44 THROUGH 3-53.

GMT 05/15/09 (135)
β = −9
MET Day 003

12 07/13 08/14 09/15 10/16 11/17 12/18 13/19 14/20 15/21 16/22 17/23 18 004/00

STS-125	CDR/R2 ALTMAN	SLEEP; POST SLEEP; PMC A/G; R5R*; 10.2M; MNVR; POST SLEEP; MCIU; -ZLV -XVV; TPS INSPECT; G2 EXP; IMU; FES-I; SUNSET; PRTCST; SUNRST; PRTCST; SUNSET; PRTCST; SUNRST; PRTCST; SUNSET; -ZLV -XVV; EXERCISE; FES-T
STS-125	PLT JOHNSON	SLEEP; POST SLEEP; BATT+; EVA PREP; P/TV06 S/U; HL/PGT; REBA-T; P/TV06 EVA 2 OPS; ICBC5; ICBC6; ICBC7; P/TV06 EVA 2 OPS; ICBC8; P/TV06 EVA 2 OPS
STS-125	MS1/EV4 GOOD	SLEEP; ASPRN; POST SLEEP; EVA PREP; PURGE; EMU PRE BREATHE; DPRS; PDPS; EGRESS & SETUP; RSU R&R; BAY 2 BATTERY R&R; CLSOUT
STS-125	MS2/R1 McARTHUR	SLEEP; POST SLEEP; SIMO INIT; OCA#; POST SLEEP; SIMO TERM; TPS INSPECT; EVA SETUP; RMS RSU SUPPORT; RMS BATT 2 SUPPORT; MFR*
STS-125	MS3/EV1 GRUNSFELD	SLEEP; ASPRN; POST SLEEP; EVA PREP; PURGE; EMU PRE BREATHE; DPRS; EVA 2 (6:25); IVA EVA 2 SUPPORT; EXERCISE; IVA EVA 2 SUPPORT; RSU/BAY 2 BATTERY
STS-125	MS4/EV3 MASSIMINO	SLEEP; ASPRN; POST SLEEP; EVA PREP; PURGE; EMU PRE BREATHE; DPRS; PDPS; EGRESS & SETUP; RSU R&R; BAY 2 BATTERY R&R; CLSOUT
STS-125	MS5/EV2 FEUSTEL	SLEEP; ASPRN; POST SLEEP; EVA PREP; PURGE; EMU PRE BREATHE; DPRS; PDPS; EXERCISE; IVA EVA 2 SUPPORT
HST	HST CMD	SSR ENGNR PLAY BACK; RSU; SAFE; ACS*; RSU; RSU; RSU; RSU; ACS*; BAY 2 BATT C/O PREP; BATT#
STS	DAY/NIGHT	
STS	ORBIT	54; 55; 56; 57; 58; 59; 60; 61; 62
STS	TDRS W E Z	
STS	ORB ATT	-ZLV -XVV; -ZLV +YVV; -ZLV -XVV; SUN PROTECT; BIAS -ZLV -XVV
HST	HST FWD AXIS	-V3 FWD
HST	SA ANGLE	0 deg
	NOTES	*RESELECT +CHECK #CH 2; *PWR DN; *PWR ON; A/T# EGRS*; -V3 AFT SHROUD DOOR OPEN

FD05

GMT 05/15/09 (135)
β=-9
MET Day 004

		004/00	19 01	20 02	21 03	22 04	23 05	05/16 06	01 07	02 08	03 09	04 10	05 11	06 12
STS-125	CDR/R2 ALTMAN		SA SLEW (90)	TRK -XSI	G2 CON	10.2M	PHOTO	MNVR RSU	SA SLEW (0)	SSV*	EVA 3 PROCEDURE RVW	R5R*	PRE SLEEP	PMC A/G	PRE SLEEP	10.2M	SLEEP
STS-125	PLT JOHNSON	P/TV06 EVA 2 OPS	EXERCISE	BATT*	HL/PGT BATT INIT	ICBC	HDTV	EVA 3 PROCEDURE RVW	PRE SLEEP	BATT^	PRE SLEEP						SLEEP
STS-125	MS1/EV4 GOOD	CLOSE OUT & INGRESS	PRPS	RPRS	POST EVA W/H2O	LIOH & BATT INSTL	EMU SWAP	REBA-I	PRE	EVA 3 PROCEDURE RVW	PRE SLEEP						SLEEP
STS-125	MS2/R1 McARTHUR	MFR*	PARK							EVA 3 PROCEDURE RVW	PRE SLEEP	PDIP+	PRE SLEEP				SLEEP
STS-125	MS3/EV1 GRUNSFELD	IVA EVA 2 SUPPORT	RPRS	POST EVA W/H2O	LIOH & BATT INSTL	EMU SWAP	REBA-I	D2X		EVA 3 PROCEDURE RVW	PRE SLEEP						SLEEP
STS-125	MS4/EV3 MASSIMINO	CLOSE OUT & INGRESS	PRPS	RPRS	POST EVA W/H2O	EVA 3 TOOL CONFIG	PRE SLEEP			EVA 3 PROCEDURE RVW	PRE SLEEP						SLEEP
STS-125	MS5/EV2 FEUSTEL	IVA EVA 2 SUPPORT	PRPS	RPRS	POST EVA W/H2O	EVA 3 TOOL CONFIG				EVA 3 PROCEDURE RVW	PRE SLEEP	OCA#	PRE SLEEP				SLEEP
HST	HST CMD	BATT#	SA SLEW (90)	BATT*	BATT FUNCTIONAL TEST	SA SLEW (0)	RSU F/T	RATE GYRO CONFIG								SSR ENGNR PLAY BACK	
STS	DAY/NIGHT																
STS	ORBIT	62	63	64	65	66	67	68	69								
STS	TDRS W E Z																
STS	ORB ATT	BIAS -XSI	BIAS -ZLV -XVV														
HST	HST FWD AXIS	-V3 FWD															
HST	SA ANGLE	0 deg	90 deg	0 deg													
	NOTES	*EGRS #A/T	F/T*	*TERM	*PWR OFF	*DESELECT +OFF ^INIT #PL MAX											

3

STS-125 (FD05)

REPLANNED

GMT Date 05/15 (135) | W E Z | D/N | ORB | MET Day 003 | STS ATI

12:00 13:00 14:00 15:00 16:00

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

54 55 56 57

-ZLV -XVV

CDR ALTMAN	PLT JOHNSON	MS2 McARTHUR	HST CMD	NOTES
SLEEP	SLEEP	SLEEP	SSR ENGINEERING PLAYBACK	UPLINK KU CH 2 -HST UPLINK KU CH 2 -RNS
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)		
06 √UHF MODE - OFF L9 PAYLOAD STATION AUDIO A/G (two) - OFF PRIVATE MEDICAL CONFERENCE				UPLINK PDI FDA -ENA
R5R RESELECT A 10.2 PSI MAINTENANCE (EVA, 10.2 PSI CABIN) Step 3 only				
FUT MNVR INIT (Simo Dump) POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	√EMU Battery charging EVA PREP (EVA, EVA PREP)	SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) Initiate Supply/Waste Dump Ref. MSG 028, Item 2		

A GNC 23 RCS

CRT RCS R - ITEM 3 EXEC (*)
JET DES R5R - ITEM 37 EXEC (no*)

FD05 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 (FD05)

REPLANNED

GMT Date 05/15 (135) | W | T D R S E | Z | D/N | O R B | MET Day 003 | STS ATI

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

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

12:00 13:00 14:00 15:00 16:00

54 55 56 57

-ZLV -XVV

SLEEP

EVA CREW: TAKE 1 ASPIRIN (325mg)
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EVA PREP
(EVA, EVA PREP)

STS-125 (FD05)

REPLANNED

GMT Date 05/15 (135) | W | TDRSE | Z | D/N | ORB | MET Day 003 | STS ATT

CDR ALTMAN

- POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)
- L17 Check MCIU filter screen
- MNVR (TRK) -ZLV -XVV TG=2 BV=3 OM=0 A10/AUTO/VERN Init TRK
- TPS INSPECTION Ref. MSG 025 and 024
- G2 SET EXPANSION (ORB OPS, DPS) Configure Dual G2, (1212)
- IMU STAR OF OPPTY ALIGN (ORB OPS, GNC)
- SUPPLY WATER DUMP USING FES (ORB OPS, ECLS) Step 1 only, using FES PRI B
- MNVR (INRTL) (SS Protect) R=283 P=327 Y=5 A10/AUTO/VERN (3/19:15) Init MNVR
- MNVR (TRK) BIAS +ZVV (SR Protect) TG=2 BV=5 P=128 Y=0 OM=12 A10/AUTO/VERN (3/19:36) Init TRK

PLT JOHNSON

- EVA PREP (EVA, EVA PREP)
- P/TV06 HST EVA (P/TV, SCENES) SETUP
- HELMET LIGHT/PGT BATT RCHRG (TERM) (EVA, EMU MAINT/RECHARGE)
- REBA BATTERY RECHARGE (TERM) (EVA, EMU MAINT/RECHARGE)
- P/TV06 HST EVA (OPS) (P/TV, SCENES) EVA 2 - Items 1,7,8
- P/TV09 ICBC3D (FILMING OPS) (P/TV, SCENES) Scene 5 Ref. MSG 032
- P/TV09 ICBC3D (FILMING OPS) (P/TV, SCENES) Scene 6 Ref. MSG 032
- P/TV09 ICBC3D (FILMING OPS) (P/TV, SCENES) Scene 7 Ref. MSG 032

MS2 McARTHUR

- L10 MUX/VTR/CC PWR - (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)
- SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) Terminate Supply/Waste Dump
- TPS INSPECTION Ref. MSG 025 and 024
- DAILY SETUP (PDRS, EVA SETUP)
- RSU (PDRS, EVA 2)

HST CMD

- RSU CHANGEOUT (PREP & A/T)
- SAFE ACS
- ACS REPAIR PIE INSTL PWR DN
- RSU CHANGEOUT (PREP & A/T)

NOTES

- UPLINK β21 + Mask Boxes 1,2,3,4

STS-125 (FD05)

REPLANNED

GMT Date 05/15 (135) — W E Z — T D R S — D/N O R B — MET Day 003 — STS ATI

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

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

11:00 / 12:00 / 13:00 / 14:00

57 / 58 / 59

- ZLV+YVV
- 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)

EGRESS/DAILY SETUP

RSU R&R

IVA EVA 2 SUPPORT

EXERCISE

STS-125 (FD05)

REPLANNED

GMT Date 05/15 (135) | W | TDRSE | Z | D/N | ORB | MET Day 003 | 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

59 — 60 — 61 — 62

SUN PROTECT

BIAS -ZLV -XVV

CDR
- MNVR (INRTL) (SS Protect)
  R=283 P=327 Y=5
  A10/AUTO/VERN (3/20:43) Init MNVR
- MNVR (TRK) BIAS +ZVV (SR Protect)
  TG=2 BV=5 P=128 Y=0 OM=12
  A10/AUTO/VERN (3/21:12) Init TRK
- MNVR (INRTL) (SS Protect)
  R=283 P=327 Y=5
  A10/AUTO/VERN (3/22:19) Init MNVR
- MNVR (TRK) BIAS -ZLV -XVV
  TG=2 BV=3 OM=10
  A10/AUTO/VERN (RSU cmplt) Init TRK
- EXERCISE
- SUPPLY WATER DUMP USING FES
  (ORB OPS, ECLS)
  Step 2 only, FES PRI B req'd

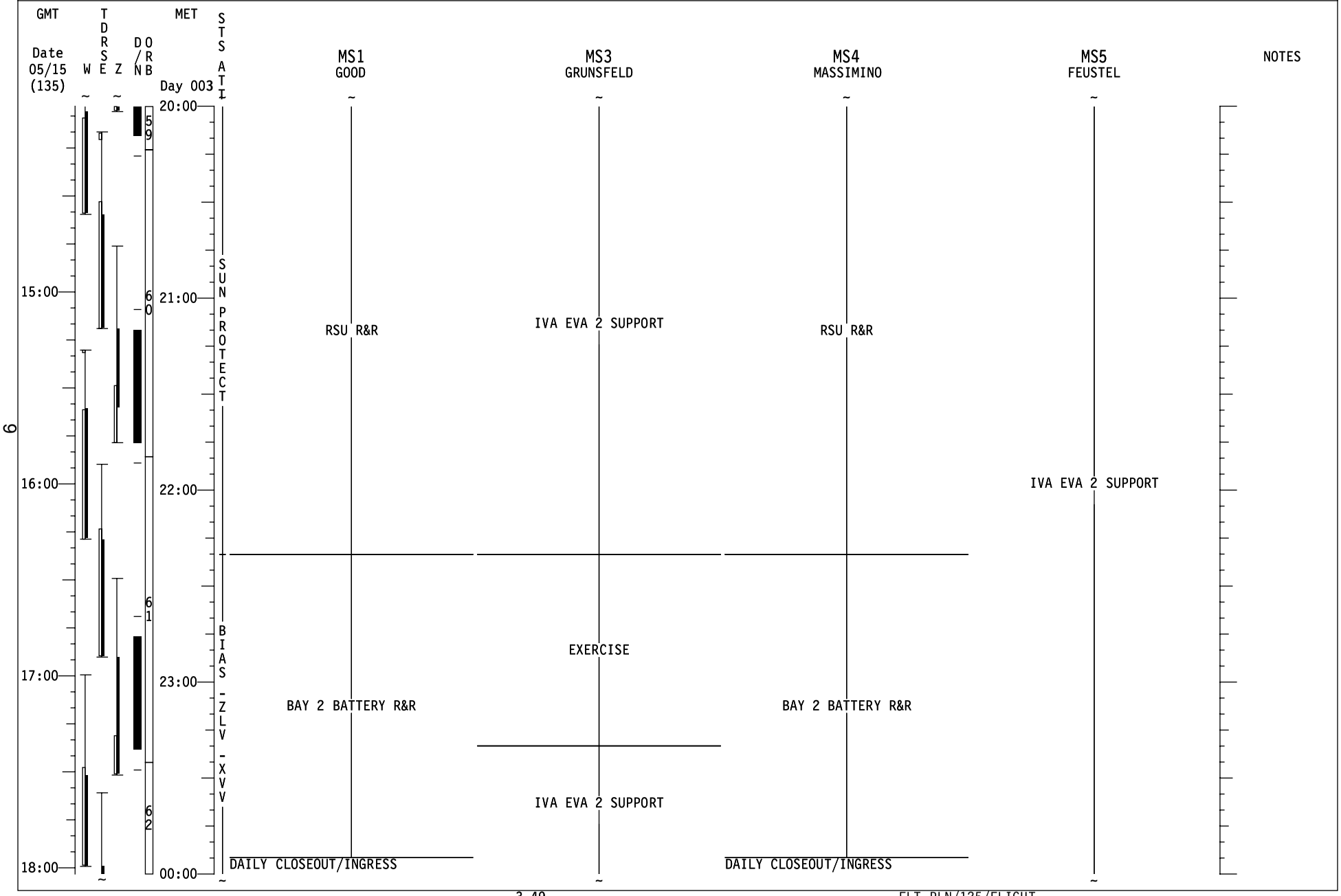
PLT
- P/TV09 ICBC3D (FILMING OPS)
  (P/TV, SCENES) Scene 7 Ref. MSG 032
- P/TV06 HST EVA (OPS)
  (P/TV, SCENES)
  EVA 2 - Items 1,7,8
- P/TV09 ICBC3D (FILMING OPS)
  (P/TV, SCENES) Scene 8 Ref. MSG 032
- P/TV06 HST EVA (OPS)
  (P/TV, SCENES)
  EVA 2 - Items 1,7,8

MS2
- RSU
  (PDRS, EVA 2)
- BAY 2 BATTERY R&R
  (PDRS, EVA 2)
- EGRESS AT AIRLOCK
  (PDRS, EVA CLOSEOUT)

HST CMD
- RSU CHANGEOUT (PREP & A/T)
- RSU CHANGEOUT (PREP & A/T)
- RSU CHANGEOUT (PREP & ALIVENESS TEST)
- ACS REPAIR PIE INSTALLATION
- PWR ON (PIE A/T)
- PREP FOR BATTERY CHANGEOUT (BAY 2)
- BATTERY ALIVENESS TEST (BAY 2)

STS-125 (FD05)

REPLANNED



STS-125 (FD05)

REPLANNED

GMT Date 05/15 (135) | W | TDRSE | Z | D/N | ORB | MET Day 004 | STS ATI

CDR ALTMAN

- SINGLE (DUAL) SA SLEW (PL OPS, IN-BAY OPERATIONS) 0 to 90 degrees Dual Array Slew
- MNVR (TRK) BIAS -XSI (Battery Charge) TG=4 BV=5 P=151 Y=0 OM=5 A10/AUTO/VERN (4/00:56) Init TRK
- G2 SET CONTRACTION (ORB OPS, DPS) Configure Single G2, (1111)
- 10.2 PSI MAINTENANCE (EVA, 10.2 PSI CABIN)
- -V2 SOLAR ARRAY PHOTO Ref. MSG 033
- MNVR (TRK) BIAS -XVV (RSU FT) TG=2 BV=3 OM=25 A10/AUTO/VERN (4/01:59) Init TRK
- SINGLE (DUAL) SA SLEW (PL OPS, IN-BAY OPERATIONS) 90 to 0 degrees Dual Array Slew
- SSV PWR - OFF
- EVA 3 PROCEDURE REVIEW Ref. EVA 3 BRIEF CARD (EVA, TIMELINES) and MSG 010 and 034

BIAS -XSI

BIAS -ZLV -XVV

PLT JOHNSON

- P/TV06 HST EVA (OPS) (P/TV, SCENES) EVA 2 - Items 1,7,8
- EXERCISE
- MIDDECK EMU BATTERY RECHARGE (TERM) (EVA, EMU MAINT/RECHARGE)
- HELMET LIGHT/PGT BATTERY RECHARGE (INIT) (EVA, EMU MAINT/RECHARGE) Ref. STS-125 EVA CONSUMABLES Cue Card and MSG 028, Item 5
- ICBC3D STATUS REPORT
- HD DIGITAL VIA CC (ACTIVATION) (Cue Card, DIGITAL PLAYBACK)
- EVA 3 PROCEDURE REVIEW Ref. EVA 3 BRIEF CARD (EVA, TIMELINES) and MSG 010 and 034

MS2 McARTHUR

- EGRESS AT AIRLOCK (PDRS, EVA CLOSEOUT)
- RMS EXTENDED PARK (PDRS, EXTENDED PARK)
- EVA 3 PROCEDURE REVIEW Ref. EVA 3 BRIEF CARD (EVA, TIMELINES) and MSG 010 and 034

HST CMD

- BATTERY ALIVENESS TEST (BAY 2)
- SLEW SOLAR ARRAYS TO 90 DEGREES
- BATTERY FUNCTIONAL TEST (BAY 2)
- BATTERY FUNCTIONAL TEST (BAY 2)
- SLEW SOLAR ARRAYS TO 0 DEGREES
- RSU FUNCTIONAL TEST
- CONFIG NEW RATE GYRO COMPLEMENT

NOTES

- UPLINK β21 + Mask Boxes 1,2
- UPLINK KU CH 3 -DTV

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

STS-125 (FD05)

REPLANNED

GMT Date 05/15 (135) | W E Z | DRS TDRS | DOY/NB | MET Day 004 | STS ATI

MS1 GOOD

DAILY CLOSEOUT/INGRESS

PRE REPRESS (CC, DPRS/RPRS)
REPRESS
(Cue Card, DEPRESS/REPRESS)
POST EVA
(EVA, POST EVA)

EMU BATTERY INSTALLATION & LiOH CHANGEOUT
(EVA, EMU MAINT/RECHARGE) [B]

EMU SWAP
(EVA, AIRLOCK CONFIG)

REBA BATTERY RECHARGE (INIT) [B]
(EVA, EMU MAINT/RECHARGE)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
EVA 3 PROCEDURE REVIEW
Ref. EVA 3 BRIEF CARD
(EVA, TIMELINES)
and MSG 010 and 034

MS3 GRUNSFELD

IVA EVA 2 SUPPORT

REPRESS
(Cue Card, DEPRESS/REPRESS)
POST EVA
(EVA, POST EVA)

[B] Ref. STS-125 EVA CONSUMABLES Cue Card

EMU BATTERY INSTALLATION & LiOH CHANGEOUT
(EVA, EMU MAINT/RECHARGE) [B]

EMU SWAP
(EVA, AIRLOCK CONFIG)

REBA BATTERY RECHARGE (INIT) [B]
(EVA, EMU MAINT/RECHARGE)
D2Xs EVA CAMR
(P/TV, REF PROC)
D2Xs EVA-CAMR ONLY DISASSEMBLY
Perform Between EVAs
EVA 3 PROCEDURE REVIEW
Ref. EVA 3 BRIEF CARD
(EVA, TIMELINES)
and MSG 010 and 034

MS4 MASSIMINO

DAILY CLOSEOUT/INGRESS

PRE REPRESS (CC, DPRS/RPRS)
REPRESS
(Cue Card, DEPRESS/REPRESS)
POST EVA
(EVA, POST EVA)

EVA 3 TOOL CONFIG
(EVA, TIMELINES)
Ref. STS-125 EVA CONSUMABLES
Cue Card and MSG 034

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EVA 3 PROCEDURE REVIEW
Ref. EVA 3 BRIEF CARD
(EVA, TIMELINES)
and MSG 010 and 034

MS5 FEUSTEL

IVA EVA 2 SUPPORT

PRE REPRESS (CC, DPRS/RPRS)
REPRESS
(Cue Card, DEPRESS/REPRESS)
POST EVA
(EVA, POST EVA)

EVA 3 TOOL CONFIG
(EVA, TIMELINES)
Ref. STS-125 EVA CONSUMABLES
Cue Card and MSG 034

EVA 3 PROCEDURE REVIEW
Ref. EVA 3 BRIEF CARD
(EVA, TIMELINES)
and MSG 010 and 034

NOTES

STS-125 (FD05)

REPLANNED

GMT Date 05/15 (135) | W | TDRSE | Z | D/N | ORB | MET Day 004 | STS ATI

CDR ALTMAN	PLT JOHNSON	MS2 McARTHUR	HST CMD	NOTES
EVA 3 PROCEDURE REVIEW Ref. EVA 3 BRIEF CARD (EVA, TIMELINES) and MSG 010 and 034	EVA 3 PROCEDURE REVIEW Ref. EVA 3 BRIEF CARD (EVA, TIMELINES) and MSG 010 and 034	EVA 3 PROCEDURE REVIEW Ref. EVA 3 BRIEF CARD (EVA, TIMELINES) and MSG 010 and 034		
R5R DESELECT C PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)		
	MIDDECK EMU BATTERY RECHARGE (Init) (EVA, EMU MAINT/RECHARGE) D PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)			
		PDIP 1 KU BAND RATE - OFF PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)		UPLINK KU CH 2 -RNS PDI FDA -INH
06 √UHF MODE - OFF L9 PAYLOAD STATION AUDIO A/G (two) - OFF PRIVATE MEDICAL CONFERENCE PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)				
10.2 PSI MAINTENANCE (EVA, 10.2 PSI CABIN)				
SLEEP	SLEEP	SLEEP		

BIAS-ZLV-XVV

C GNC 23 RCS

CRT RCS R - ITEM 3 EXEC (*)
JET DES R5R - ITEM 37 EXEC (*)

NOTE
Expect DAP RECONFIG message.
DAP will mode to FREE.

C3 DAP: AUTO

D Ref. STS-125 EVA CONSUMABLES Cue Card

Crew Wake: 4/14:30

Time scale: 23:00, 00:00, 01:00, 02:00; 04:00, 05:00, 06:00, 07:00, 08:00

64, 65, 66, 67

12

STS-125 (FD05)

REPLANNED

GMT Date 05/15 (135) | W E Z | D/N | ORB | MET Day 004 | STS ATI

04:00 — 05:00 — 06:00 — 07:00 — 08:00

23:00 — 00:00 — 01:00 — 02:00

64 65 66 67

BIAS-ZLV-XVV

MS1 GOOD	MS3 GRUNSFELD	MS4 MASSIMINO	MS5 FEUSTEL	NOTES
EVA 3 PROCEDURE REVIEW Ref. EVA 3 BRIEF CARD (EVA, TIMELINES) and MSG 010 and 034	EVA 3 PROCEDURE REVIEW Ref. EVA 3 BRIEF CARD (EVA, TIMELINES) and MSG 010 and 034	EVA 3 PROCEDURE REVIEW Ref. EVA 3 BRIEF CARD (EVA, TIMELINES) and MSG 010 and 034	EVA 3 PROCEDURE REVIEW Ref. EVA 3 BRIEF CARD (EVA, TIMELINES) and MSG 010 and 034	
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)	
			RECONFIGURE OCA D/L RATE [E]	
			PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
			[E] 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: 4/14:30				
SLEEP	SLEEP	SLEEP	SLEEP	

MSG 029A - FD05 MISSION SUMMARY

Good Morning Atlantis!!!

Thanks for all the hard work yesterday to make EVA 1 such an outstanding success!

We are all looking forward to today's EVA!

Have a great day!!!

HST Program Words:
Your astonishing feats during EVA Day 1 have already vastly improved the observatory's scientific capabilities. The SI C&DH replacement passed its aliveness and functional tests and was subsequently used to command and process the data from the WFC3 functional tests. WFC3 completed its aliveness test but we had a minor issue during the functional test. There was a glitch on an unused, but limit checked, digital to analog output line that caused WFC3 to suspend. Testing has resumed and is going well, should have some good news during post sleep.

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	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
NKT	CLOSED 15 MAY 1500Z UNTIL 18 MAY 1400Z
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:

EDW04 ORB 61 – 03/22:46 FEW250 7 030/06P10
EDW04 ORB 76 – 04/22:44 SKC 7 060/08P14

OMS TANK FAIL CAPABILITY:

LOMS FAILS: NO
ROMS FAILS: NO

END OF PAGE 1 OF 2, MSG 029A

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	495 FPS
ARCS (TOTAL ABOVE QTY1)	25 FPS
TOTAL IN THE AFT	520 FPS
ARCS (TOTAL ABOVE QTY2)	55 FPS
FRCS (ABOVE QTY 1)	23 FPS
AFT QTY 1	80%
AFT QTY 2	42%

SYSTEM #	FAILURE	IMPACT	WORK AROUND
EVA 1	Loss of 1 of 3 EHIP/PGT Battery Chargers	Loss of ability to charge greater than 2 PGT batteries simultaneously Post EVA	Additional battery charging activities will be required Post EVA 4 & 5, with an updated Battery Charging CC
EVA 2	Unable to install 1 of 3 -V2 Door LOCKS	ASLR installed on middle door bolt.	ASLR bolt must be driven when opening or closing -V2 aft shroud doors

END OF PAGE 2 OF 2, MSG 029A

MSG 031 - EVA EHIP/PGT CHARGER QUESTIONS

Due to the problems with the EHIP/PGT battery charger, there will be impacts to the PGT battery charging plan. From the baseline plan, we need all three EHIP chargers POST EVA 3 and 4. We are working the details for a new PGT recharge plan that will include an additional round of charging the morning of EVA 4 (FD7) and the morning of EVA 5 (FD8). The suspect charger should be stowed as-is for return and eventual ground trouble shooting.

Additional questions to aid in trouble shooting while it's fresh in your memory:

1. You called down that the suspect EHIP charger was S/N 21 but we are showing that belongs to the EHIP PGT adapter that slides into the side for charging. Can you take another look at the charger in question and confirm the serial number? We think it's one of the following three serial numbers: 01, 11 or 14, which is located on the "end" of the charger.

2. What is the serial number of the EHIP charger that you are using as backup?

3. Did you see a "TEMP FAULT" light or any other lights on the EHIP charger before removing power?

4. Was the suspect EHIP charger plugged into MUP J23 on one of the split ends of the Y-Cable?

5. How long after the charge init did you smell the odor?

6. Did you do the 15 min LED check and see that everything was nominal?

7. What area of the suspect charger was warmer than expected?

END OF PAGE 1 OF 1, MSG 031

ICBC

Per the Flight Day 05 Flight Plan, all ICBC planned scenes will occur in the dark. If they occur during daylight, please shoot the nominal EVA2 scenes per P/TV09. If they occur during darkness, please shoot alternates (1 addition) as follows:

Scene 5 ALTERNATE: -V3 Door Open opportunities on EVAs 3,4,5.

Scene 6 ALTERNATE: RSU-3: RMS EV rolls over FF EV, places boots in foot restraint/ ingress PFR in aft shroud (EVA C/L, p. FS 7-51, RMS EV Step 8). 40mm 30 seconds.

Scene 7 ALTERNATE: RSU-3: RMS EV thread RSU3-R on PIK STIK into aft shroud (EVA C/L, p. FS 7-52, RMS EV Step 22). 60mm 30 sec.

Scene 7A ADDITION: RSU-3: RMS EV using PGT to install RSU-3R (EVA C/L, p. FS 7-52, RMS EV Steps 24-25). 40mm 30 seconds.

If RSU3 R&R ops are also during darkness, there is one further alternate:

RSU-1: RMS EV mnvr and transfer RSU-1 to FF EV (EVA C/L, p. FS 7-53, RMS EV Step 17). 40mm 30 seconds.

Scene 8: Bay 2 Battery install. This is an important scene and currently there is no alternate per the present timeline. The back up Bay 3 Battery opportunity Scene 15 on FD08 is currently scheduled in darkness.

CANON Priorities for FD05

Suit up, RMS & IV ops on flight deck, ingress. Reminder to keep heads no higher than two thirds up in frame.

24P Feedback for Canon Photography

- Don't open the f/stop too much when shooting exteriors, it makes the earth detail blow out and the bleed over from the over-exposed areas degrades the rest of the image. Also, the increased depth of field improves the sharpness. Watch the zebra stripes, they will show you the over-exposed areas.

- Get as close to the window you are shooting through as possible as this will reduce the effects of the scratches on the window we saw in your downlink. Watch for reflections on the window, especially when shooting during night passes. Getting the lens as close to the window as possible will also help reduce the reflections.

- In general, check the cleanliness of the lens before shooting. Lots of things/people were floating up and hitting the lens in the downlink, this is especially apparent in close shots, as in the airlock area.

- Interior shooting - watch getting only the backside of people.

- Interior lighting is looking good and focus and framing are looking better with each downlink.

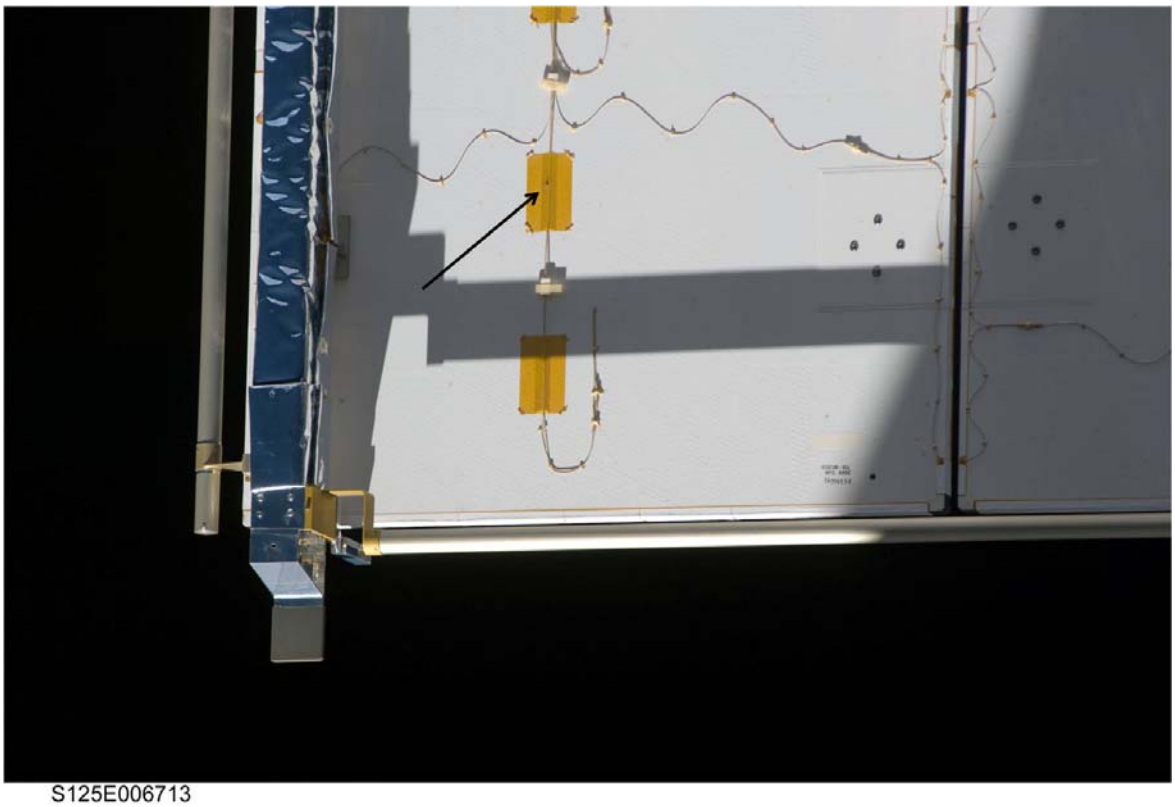
END OF PAGE 1 OF 1, MSG 032

MSG 033 - PHOTO REQUEST OF -V2 SOLAR ARRAY

After the SA Slew to 90 degrees at MET 4/00:35 (but prior to the SA Slew back to 0 degrees), additional close-up imaging of the back side of -V2 Solar Array is requested, specifically the lower left hand region that is shown in the attached photograph (region of interest identified with an arrow). Using the 400mm, or longer focal length lens, additional imagery should be taken of this site to allow for verification if there is any wire damage in this area.

Background:

A possible SA3 damage site was identified in the photographs taken on FD3. The location of this damage is the back side of the –V2 SA, immediately adjacent to and possibly involving a wire run on the back of the panel. The wire run routes solar array power from a string within the –E SPA to the solar array diode box and into HST. Since SA3 was installed, several SA shorting events have involved the –E SPA. Damage to the wire may correspond to intermittent solar array short to structure events observed on orbit.



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END OF PAGE 1 OF 1, MSG 033

MSG 034 - DELTAS TO EVA 2 AND 3 TIMELINES

Review MSG 21 from FD4 to confirm all EVA 2 P&Is have been incorporated and make the following “pen & ink” changes to the EVA checklists:

- Add CMTL to both TOOL CONFIG & POST TOOL CONFIG for EVA 2 and subs. Stowage location is in the airlock at your discretion, report location. For reference, the TOOL CONFIGs for EVA 2 and 3 are found on pages:

EVA2	FS-45	FS-46
EVA3	FS-66	FS-67

Since the GET AHEAD: BAY 2 DOOR BOLT RELEASE was not performed, please change the following step in EVA 2:

- EVA 2 (EVA, TIMELINES), BAY 2 BATTERY R&R, pg FS 7-58 under the RMS EV column in the Bay 2 BATTERY RETRIEVAL block:

  WAS: 6. Disengage J-bolts (2-upper and lower), 6 turns
  IS: 6. Disengage J-bolts (6), 6 turns

Due to the installation of the ASLR on EVA 1, please make the following changes to EVA 3 during Procedure Review. This update is not required prior to EVA 2:

- EVA 3 (EVA, TIMELINES), COS, pg FS 7-69 under the FF EV column in the AFT FIXTURE SETUP block:

  WAS: 10. If in sun protect att, disengage lower two LOCKs (2)
  -Release locking pin rotate main handle
  -Rotate LOCK arm out of bathtub
  IS: 10. If in sun protect att, **disengage bottom LOCK (1)**
  -Release locking pin rotate main handle
  -Rotate LOCK arm out of bathtub

- EVA 3 (EVA, TIMELINES), COS, pg FS 7-69 under the RMS EV column in the OPEN - V2 DOORS block:

  Add steps:
  5a. **PGT [A4, CCW3, 23.5] short adj (turns)**
  5b. Disengage ASLR on lower middle latch, 9 turns
  -Remove PIP pin, rotate ASLR; reinstall PIP pin

END OF PAGE 1 OF 2, MSG 034

- EVA 3 (EVA, TIMELINES), ACS PART 1, pg FS 7-81 under the RMS EV column in the CLOSE - V2 DOORS block:

  Add note & steps:

  (Add after step 7.) NOTE: ASLR/LOCKs can be closed in any order; FF EV can close the bottom LOCK if desired

  7a. **PGT [B4, CW2, 23.5] short adj**
  7b. Engage ASLR on lower middle latch
  - reinstall PIP pin
  7c. Engage ASLR bolt, 9 turns

  Change steps:

  WAS: 9. Engage LOCKs (3)
  -Rotate LOCK arm into bathtub
  -Pull pin; engage main handle down
  -Verify green visible on main handle lock pin

  IS: 9. Engage LOCKs **(2)**
  -Rotate LOCK arm into bathtub
  -Pull pin; engage main handle down
  -Verify green visible on main handle lock pin

  Add step:

  10. Re-torque ASLR & Handle Latch Bolt

- Similar changes due to ASLR on -V2 doors also apply to Alt EVA 5 timeline but will be uplinked in a future execute package.

END OF PAGE 2 OF 2, MSG 034

MSG 035 - FD05 CREW CHOICE D/L OPPORTUNITIES

Crew Choice TV Downlink KU Available Opportunities for FD5

TDRS	Start	End	Duration
TDE	4/01:17	02:15	58 min
TDW	4/02:58	03:24	26 min
TDE	4/03:32	03:57	25 min
TDW	4/04:41	05:08	27 min
TDE	4/05:21	05:40	19 min

END OF PAGE 1 OF 1, MSG 035