STS-124 / 1J

FD 02 Execute Package

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Approved by FAO: *Jaime Marshik*

Last Updated: Jun 1 2008 9:35AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*

MSG INDEX

MSG NO.	TITLE
002	FD02 Flight Plan Revision
003	FD02 Mission Summary
004	FD02 PAO Event Summary - WCCO RADIO, KARE-TV, KBTX-TV

1. Cryo Config

For today's cryo config, O2 and H2 tank 5 will be active with dual heaters.

R1 O2, H2 MANF VLV TK1 (two) - OP (tb-OP)
TK 3 HTRS A,B (four) - OFF

A15 CRYO TK 5 HTRS O2, H2 A,B (four) - AUTO

2. Umbilical Well TPS Imagery

We were unable to locate any of the Umbilical Well TPS images on any of the PGSCs on the network overnight. Please confirm with MCC the PGSC and location to which these images were copied. We have allotted time on MS1 in case this procedure needs to be rerun.

3. SRMS PLB Survey

During the SRMS PLB Survey today, please perform the following steps to turn on the RSC illuminator and verify the SPEE power path through the SRMS.

R12(OBSS) √RSC PWR - ON
SPEE PWR - ON, wait 10 sec, then OFF, wait 10 sec, then ON

Configure SRMS as necessary during PLB Survey to verify illuminator on (it should be on HIGH), or with SRMS at Pre-cradle, rotate WR to -115 deg and view using Camera B or C. Inform MCC when positive verification has been made.

After illuminator verification is complete, perform the following SPEE power cycles to configure the RSC illuminator to OFF. This will configure the RSC illuminator to the expected setting for OBSS handoff on FD4.

R12(OBSS) SPEE PWR - OFF, wait 10 sec, then ON (medium power), wait 10 sec, then OFF, wait 10 sec, then ON (low power), wait 10 sec, then OFF

4. PDRS Corrections

On FS1-9 of PDRS/RMS EE RCC Wing Survey, at top of step 6, there is a typo. Correct YAW & ROLL values per below.

Change YAW from 153 to 15
Change ROLL from 54 to 354

5. WLES & XFER PREP

FYI, the WLES batch file has been installed on STS-7 (WLES) and STS-6 (RPOP2). Aki, there are no changes to the FD02 XFER PREP message in your Transfer Book.

6. HAZMAT
   The MCC has remotely uplinked the latest HazMat data file to all networked PGSCs onboard.

7. Post Sleep LiOH Can Changeout
   Reminder for this morning's LiOH can changeout, remove the tape on the bottom of the fresh LiOH cans prior to installation. The tape can be fixed to the old cans before stowing them.

8. Waste Water Dump Survey
   As a reminder, the RMS will be used to view the waste water dump spray pattern during the dump today to verify nominal spray pattern. The dump is scheduled to occur during Ku downlink but record the dump as well in the event Ku is unavailable.

   After verifying that the RMS is in position, perform a waste water only dump using SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) p 5-2. MCC will TMBU limits in steps B and K.

   Waste water will be dumped for ~10 minutes.

9. FCMS Words
   Due to a nuance with the onboard network, the FCMS data file may not automatically be copied to the KFX laptop at the end of the procedure. If you receive an error message stating "There was a problem copying the file. Try copying the file manually," notify MCC and we will downlink the file from the WINDECOM laptop.

10. NC 2 Burn Config
    Due to the L OMS TVC problem, NC2 will be cross fed left pod to R OME. In addition, the NC2 burn is being declared critical requiring a Dual G2 config with a stringing of 1221 to protect R OMS ignition.

11. REPLACE PAGES 2-4, 2-5, & 3-8 THROUGH 3-19.

06/01/08 04:28:03 **REPLANNED**

GMT 06/01/08 (153) — 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 001/00

MET Day 000

FD02

| STS-124 | | |

06/01/08 04:28:03 **REPLANNED**

GMT 06/01/08 (153) 22 23 06/02 01 02 03 04 05 06 07 08 09
MET Day 001 001/00 01 02 03 04 05 06 07 08 09 10 11 12

STS-124

FD02 CDR KELLY	M-DUMP	WAISTE	WASTE	TERM	I'CNCT*	NC3Δ +X RCS BURN	-ZLV	-XVV	FUTMVR	PRE SLEEP	PMC A/G	PRE SLEEP	SLEEP												
PLT HAM	NOZ VIEW			RNDZ TOOLS C/O		+X RCS BURN	PRE SLEEP						SLEEP												
MS1 NYBERG	*NOZ VIEW			RNDZ TOOLS C/O		EXERCISE		PRE SLEEP					SLEEP												
MS2 GARAN	EVA PRP FOR XFER ISS						PRE SLEEP						SLEEP												
MS3 FOSSUM	EVA PRP FOR XFER ISS			EXERCISE			PRE SLEEP						SLEEP												
MS4 HOSHIDE	⊕	OMS POD SURV	FILTER CLEANING			PLAY BACK OPS		PRE SLEEP					SLEEP												
MS5 CHAMITOFF	EVA PRP FOR XFER ISS						PRE SLEEP	PMC A/G	PRE SLEEP				SLEEP												

STS

DAY/NIGHT																									
ORBIT	17			18				19				20				21			22			23			24
TDRS W -171																									
TDRS E -46																									
TDRS Z 275																									
ORB ATT	-ZLV+YVV					NC3							-ZLV -XVV												

NOTES
*DOCK RING EXT
⊕DOCK RING EXT
*I'CNCT RETURN

STS-124 FD02

GMT Date 06/01 (153) | W E Z | DO/NB | MET Day 000 | STS ATT

12:00 — -ZLV -XVV

10:00 — 13:00 — SLEEP

11:00 — 14:00 — INTL MNVR

12:00 — 15:00 — -ZLV -XVV

13:00 — 16:00

CDR KELLY | PLT HAM | MS1 NYBERG | Notes

FD02 EZ ACTIVITIES:
√OCAC FILTER
HARD REBOOT ALL PGSCs EXCEPT:
STS-7(WLES),STS-6(RPOP2),&
OCA ROUTER.

FLIGHT SLEEP LOG (ORB OPS, SDBI)

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)
√HUM SEP for H2O Accumulation

MNVR (TRK) -ZLV -XVV
TG=2 BV=3 OM=0
A1/AUTO/VERN Init TRK

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

STS-124 FD02

GMT Date 06/01 (153) | W | T D R S E | Z | D O / R N B | MET Day 000 | STS ATT

MS2 GARAN | MS3 FOSSUM | MS4 HOSHIDE | MS5 CHAMITOFF | Notes

12:00 — 13:00 — 14:00 — 15:00 — 16:00

10:00 — 11:00 — 12:00 — 13:00

STS ATT: -ZLV -XVV INRTL MNVR -ZLV -XVV

DO/RNB: 9 10 11

MS2 GARAN	MS3 FOSSUM	MS4 HOSHIDE	MS5 CHAMITOFF
SLEEP	SLEEP	SLEEP	SLEEP
FLIGHT SLEEP LOG (ORB OPS, SDBI)			
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)
		DCS FILE XFER (P/TV,D2Xs) ET HANDHELD PHOTO	
		PLAYBACK (DIGITAL) (PHOTO/TV, CUE CARD) ET HANDHELD VIDEO D/L	

STS-124 FD02

GMT Date 06/01 (153) | W E Z | DO/N RB | MET Day 000 | STS ATI

CDR KELLY

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

G2 SET EXPANSION (ORB OPS, DPS)
Config Dual G2, NBAT 1221,Ref. MSG 002:Item 10

ON-ORBIT OMS BURN (ORB OPS, OMS)

< NC2 TIG (17:21)

MNVR (TRK) -ZLV -XVV
TG=2 BV=3 OM=0
A1/AUTO/VERN Init TRK

G2 SET CONTRACTION (ORB OPS, DPS)
Configure Single G2, NBAT 1111

O2 REPRESS INIT A

GAP ACTIVATION (Locker: MF43E)
(ASSY OPS, PAYLOADS)
Activate GAPs 1-7

IMU STAR OF OPTY ALIGN (ORB OPS, GNC)

O2 REPRESS TERM on MCC GO B

EXERCISE

PLT HAM

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

ON-ORBIT OMS BURN (ORB OPS, OMS)

A OCAC PWR - OFF
C5 DIRECT O2 vlv - OP

B C5 DIRECT O2 vlv - CL
OCAC PWR - ON

RMS PWRUP (PDRS, RMS PWRUP)

RMS CHECKOUT (PDRS, RMS C/O)

RMS EE RCC WING SURVEY (PDRS, UNDOCKED OPS)
Ref. MSG 002: Item 4

MS1 NYBERG

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

UMBILICAL WELL TPS CAMERA IMAGERY D/L (ORB OPS, PGSC)
Ref. MSG 002: Item 2

A8L PORT RMS HTR (two)-AUTO

RMS PWRUP (PDRS, RMS PWRUP)

RMS CHECKOUT (PDRS, RMS C/O)

RMS EE RCC WING SURVEY (PDRS, UNDOCKED OPS)
Ref. MSG 002: Item 4

Notes

UPDATE
ORBITAL MNVR PAD

STS-124 FD02

GMT Date 06/01 (153) | W E Z | D/N | O R B | MET Day 000 | STS ATI

MET: 16:00, 17:00, 18:00, 19:00, 20:00

STS ATI: -ZLV, -XVV, NC2, -ZLV, -XVV

D/N: 11, 12, 13, 14

MS2 GARAN

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EMU CHECKOUT PREP
(EVA, A/L CONFIG)

EMU CHECKOUT
(EVA, CHECKOUTS)
Perform for 2 EMUs
MCC will TMBU s/w limits.

MS3 FOSSUM

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

CYCLE ERGOMETER OPS
(ORB OPS, CREW SYS)
Perform ERGOMETER SETUP

EMU CHECKOUT PREP
(EVA, A/L CONFIG)

EMU CHECKOUT
(EVA, CHECKOUTS)
Perform for 2 EMUs
MCC will TMBU s/w limits.

RMS EE RCC WING SURVEY
(PDRS, UNDOCKED OPS)
Ref. MSG 002: Item 4

MS4 HOSHIDE

PLAYBACK (DIGITAL)
(PHOTO/TV, CUE CARD)
ET HANDHELD VIDEO D/L

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SHUTTLE/ISS H2O CONT FILL
(ORB OPS, ECLS)
Perform EQUIP PREP and
WATER TRANSFER HOSE PURGE.

GALLEY OVRNITE CNFG(ORB OPS,ECLS)
EVA SYS: 1.305 EQUIP LK PREP
Steps 1-3
Fill 6 Drink Bags

√All EVA drink bag fills complete,THEN:
GALLEY MORNING CONFIG (ORB OPS,ECLS)

EXERCISE

MIDDECK XFER PREP
Ref. FD02 XFER PREP proc in Transfer Book.

MS5 CHAMITOFF

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

CYCLE ERGOMETER OPS
(ORB OPS, CREW SYS)
Perform ERGOMETER SETUP

EMU CHECKOUT PREP
(EVA, A/L CONFIG)

EMU CHECKOUT
(EVA, CHECKOUTS)
Perform for 2 EMUs
MCC will TMBU s/w limits.

EXERCISE

Notes

STS-124 FD02

GMT Date 06/01 (153) | W E Z | DO/NB | MET Day 000 | STS ATT

CDR KELLY

- I'CNCT: L OMS TO RCS (OPCL, RCS)
- CRYO O2 TK HTR SNSR CK (ORB OPS, EPS)
- C A14 RCS/OMS HTR L POD -A OFF -B AUTO R POD -A OFF -B AUTO
- RCS/OMS POD HTR RECONFIG C
- R2 BLR CNTLR/HTR (three) - B
- FC PURGE - MANUAL (ORB OPS, EPS)
- MIDDECK DUCT CONFIG (RNDZ, APDS)
- -ZLV -XVV
- MEAL
- PUBLIC AFFAIRS EVENT KU TDRE: 22:46-23:09
- FC MONITORING SYS (FCMS) OPS (ORB OPS, EPS) Ref. MSG 002: Item 9
- MNVR (TRK) -ZLV +YVV (WASTE DUMP) See Page 3-14

PLT HAM

- RMS EE RCC WING SURVEY (PDRS, UNDOCKED OPS) Ref. MSG 002: Item 4
- RMS PLB SURVEY Ref MSG 002: Item 3
- MEAL
- PUBLIC AFFAIRS EVENT KU TDRE: 22:46-23:09
- C/L CAMR INSTALL (PHOTO/TV, C/L CAMR) (Locker: ML60B)

MS1 NYBERG

- RMS EE RCC WING SURVEY (PDRS, UNDOCKED OPS) Ref. MSG 002: Item 4
- RMS PLB SURVEY Ref MSG 002: Item 3
- MEAL
- PUBLIC AFFAIRS EVENT KU TDRE: 22:46-23:09
- C/L CAMR INSTALL (PHOTO/TV, C/L CAMR) (Locker: ML60B)
- DOCKING MECH INITIALIZATION
- DOCKING MECH POWERUP
- DOCKING RING EXTENSION
- DOCKING MECH POWERDOWN (RNDZ, APDS)

Notes

STS-124 FD02

GMT Date 06/01 (153) | W | TDRS E | Z | DO/N | ORB | MET Day 000 | STS ATT | MS2 GARAN | MS3 FOSSUM | MS4 HOSHIDE | MS5 CHAMITOFF | Notes

20:00 / 21:00 / 00:00

ORB: 14, 15, 16

STS ATT: -ZLV -XVV

MS2 GARAN

- EXERCISE
- MIDDECK DUCT CONFIG (RNDZ, APDS)
- MEAL
- PUBLIC AFFAIRS EVENT KU TDRE: 22:46-23:09
- EVA PREP FOR TRANSFER TO ISS (EVA, AIRLOCK CONFIG)

MS3 FOSSUM

- RMS EE RCC WING SURVEY (PDRS, UNDOCKED OPS) Ref. MSG 002: Item 4
- MEAL
- PUBLIC AFFAIRS EVENT KU TDRE: 22:46-23:09
- EVA PREP FOR TRANSFER TO ISS (EVA, AIRLOCK CONFIG)

MS4 HOSHIDE

- MIDDECK XFER PREP Ref. FD02 XFER PREP proc in Transfer Book.
- ANALOG PAO CC (P/TV, SONY PD100)
- MEAL
- PUBLIC AFFAIRS EVENT KU TDRE: 22:46-23:09
- DOCKING MECH INITIALIZATION
- DOCKING MECH POWERUP
- DOCKING RING EXTENSION
- DOCKING MECH POWERDOWN (RNDZ, APDS)

MS5 CHAMITOFF

- EXERCISE
- MEAL
- PUBLIC AFFAIRS EVENT KU TDRE: 22:46-23:09
- EVA PREP FOR TRANSFER TO ISS (EVA, AIRLOCK CONFIG)

STS-124 FD02

GMT Date 06/01 (153) | W E Z | DRS/NB | MET Day 001 | STS ATT

CDR KELLY

- 00:00 — MNVR (TRK) -ZLV +YVV (WASTE DUMP)
  TG=2 BV=3 OM=270
  A1/AUTO/VERN Init TRK
- SUPPLY/WASTE WATER DUMP
  (ORB OPS, ECLS) Init Waste Dump
  Ref. MSG 002: Item 8
- SUPPLY/WASTE WATER DUMP
  (ORB OPS, ECLS)
  Terminate Waste Dump
- I'CNCT RETURN (OPS 2,3) (OPCL, RCS)
- -ZLV+YVV
- 01:00
- 02:00
- ON-ORBIT +X RCS BURN
  (ORB OPS, RCS)
- NC3
- < NC3 TIG (02:33)
- MNVR (TRK) -ZLV -XVV
  TG=2 BV=3 OM=0
  A1/AUTO/VERN Init TRK
- FUTURE LOADED MNVR -ZLV +YVV (SIMO DUMP)
  TG=2 BV=3 OM=270
  A1/AUTO/VERN (1/13:35) Init TRK
- 03:00
- -ZLV-XVV
- PRE-SLEEP ACTIVITY
  (ORB OPS, CREW SYS)
- 06 √UHF MODE - OFF
  PRIVATE MEDICAL CONFERENCE
- 04:00

PLT HAM

- SUPPLY/WASTE H2O DUMP NOZZLE SURVEY
  (PDRS, EXTERIOR SURVEYS)
  Ref. MSG 002: Item 8
- RNDZ TOOLS CHECKOUT
  (RNDZ, RNDZ TOOLS)
  (Locker: MF570)
- ON-ORBIT +X RCS BURN
  (ORB OPS, RCS)
- PRE-SLEEP ACTIVITY
  (ORB OPS, CREW SYS)

MS1 NYBERG

- DOCKING RING EXT
  See Page 3-12
- SUPPLY/WASTE H2O DUMP NOZZLE SURVEY
  (PDRS, EXTERIOR SURVEYS)
  Ref. MSG 002: Item 8
- RNDZ TOOLS CHECKOUT
  (RNDZ, RNDZ TOOLS)
  (Locker: MF570)
- EXERCISE
- PRE-SLEEP ACTIVITY
  (ORB OPS, CREW SYS)

Notes

- UPDATE H2O WASTE DUMP QTY
- UPDATE TFL 192
- UPDATE TFL 188
- UPDATE ORBITAL MNVR PAD

STS-124 FD02

GMT Date 06/01 (153) | W | T D R S E | Z | D O / R N B | MET Day 001 | STS ATI

MS2 GARAN | MS3 FOSSUM | MS4 HOSHIDE | MS5 CHAMITOFF | Notes

00:00 — 01:00 — 02:00 — 03:00 — 04:00

22:00 — 23:00 — 00:00 — 01:00

17 — 18 — 19

-ZLV+YVV — NC3 — -ZLV-XVV

MS2 GARAN

EVA PREP FOR TRANSFER TO ISS (EVA, AIRLOCK CONFIG)

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

MS3 FOSSUM

EVA PREP FOR TRANSFER TO ISS (EVA, AIRLOCK CONFIG)

EXERCISE

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

MS4 HOSHIDE

DOCKING RING EXT
See Page 3-13

P/TV08 EXTERNAL SURVEY
(PHOTO/TV, SCENES) OMS POD SURVEY
SETUP, Step 1
OPS, Item 1

FILTER CLEANING
(IFM, SCHEDULED MAINTENANCE)
(Locker: MA16G)

PLAYBACK (DIGITAL)
(PHOTO/TV, CUE CARD)
SURVEYS
KU TDRW: 01:14-01:22
KU TDRE: 01:36-02:08

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

MS5 CHAMITOFF

EVA PREP FOR TRANSFER TO ISS (EVA, AIRLOCK CONFIG)

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

06 √UHF MODE - OFF
PRIVATE MEDICAL CONFERENCE

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

STS-124 FD02

GMT Date 06/02 (154)	W	TDRS E	Z	DO/NB	MET Day 001	STS ATI	CDR KELLY	PLT HAM	MS1 NYBERG	Notes
02:00				19	04:00	-ZLV -XVV	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
03:00				20	05:00					
04:00				21	06:00		SLEEP	SLEEP	SLEEP	
05:00				22	07:00					
					08:00					

WAKE UP AT 1/13:30

STS-124 FD02

GMT Date 06/02 (154) | W E Z | D/N | ORB | MET Day 001 | STS ATI

MS2 GARAN | MS3 FOSSUM | MS4 HOSHIDE | MS5 CHAMITOFF | Notes

02:00 03:00 04:00 05:00

04:00 05:00 06:00 07:00 08:00

19 20 21 22

-ZLV -XVV

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

WAKE UP AT 1/13:30

SLEEP

Good Morning Discovery!!!

Your launch yesterday was spectacular!!!!

Your smooth execution of post insertion impressed us all! What a great way to start a mission!

YOUR CURRENT ORBIT IS: 178 X 166 NM

NOTAMS:

EDW – LAKEBED RUNWAY 15/33 ELS ONLY. OTHER LAKEBED RWYS RED.
NOR – LAKEBED RUNWAYS GREEN.
NTU – NGU TACAN CH CHANGED TO 86Y.
YJT – TACAN CH 78 DME ONLY.
HAW – RWY 31 CLOSED. RWY 13 TODA 8,994'.
WAK – CLOSED. NOT USABLE.
IKF – NOT USABLE. NO AGREEMENT.
BEN – NOT RECOMMENDED/NOT SUPPORTED.
ZZA – FIRST 600M (~2,000') OF RWY 30L NOT AVAILABLE.
10,200' REMAINING.

NEXT 2 PLS OPPORTUNITIES:

EDW22 ORB 17 – 1/00:59
EDW22 ORB 33 – 2/01:19

OMS TANK FAIL CAPABILITY:

L OMS FAILS: NO
R OMS FAILS: NO

LEAKING OMS PRPLT BURN:

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

OMS QUANTITIES(%)

L OMS OX = 30.1 R OMS OX = 30.2
FU = 29.7 FU = 30.2

DELTA V AVAILABLE:

OMS	275 FPS
ARCS (TOTAL ABOVE QTY1)	24 FPS
TOTAL IN THE AFT	299 FPS
ARCS (TOTAL ABOVE QTY2)	53 FPS
FRCS (ABOVE QTY 1)	31 FPS
AFT QTY 1	83 %
AFT QTY 2	45 %

SYSTEM	FAILURE	IMPACT	WORK AROUND
EPS	Shortly after MECO the FC3 O2 flow meter began behaving erratically for about an hour. FC3 O2 flow is currently reading the expected value (SPEC 69, FC 3 O2 FLOW).	If the erratic behavior returns, there will be a loss of insight in FC3 O2 flow.	None. MCC has additional insight into the health of FC3. Onboard FDA has been inhibited.
GNC	During ascent, Left OMS Secondary TVC positions failed to null in both pitch and yaw. The most likely cause is a failure in the L OMS Secondary TVC power supply.	L OMS Secondary TVC is failed resulting in loss of redundancy. Possible L OMS GMBL messages during NC2 burn (expect two messages during gimbal check).	Left OMS has been parked through EOM CG. Remaining on-orbit OMS burns will be single engine using Right OMS. D/O burn will be dual engine using active Left OMS Primary TVC.

END OF PAGE 2 OF 2, MSG 003