STS-125

FD 03 Execute Package

MSG	Page(s)	Title
008A	1 - 13	FD03 Flight Plan Revision **(pdf)**
009A	14 - 15	FD03 Mission Summary **(pdf)**
010	16	Deltas to EVA C/L for EVA 1 and EVA 3 **(pdf)**
011	17	FD03 Crew Choice D/L Opportunities **(pdf)**
012	18 - 22	Rendezvous Execute Package Inputs **(pdf)**

Approved *by FAO:*

Last Updated: May 13 2009 8:19AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*

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MSG INDEX

MSG NO.	TITLE
MSG008	FD03 Flight Plan Revision
MSG009	FD03 Mission Summary
MSG010	Deltas to EVA C/L for EVA 1 and EVA 3
MSG011	FD03 Crew Choice D/L Opportunities
MSG012	Rendezvous Execute Package Inputs

1. Post Sleep Cryo Config:
   R1 O2,H2 MANF VLV TK2 (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 45 minutes. The waste water portion of the dump will be ~25 minutes and will dump the waste tank to 5%.

3. Since the PGT Checkout was inadvertently left out of the summary timeline, we would like to verify that the checkout was completed successfully.

4. Please make the following change to the RAPID SAFING WITHOUT HST (PL OPS, CONTINGENCY OPERATIONS), pg 5-25, step 6:

   Add back the following actions that were deleted by MSG 004:
   A6U PL RETEN LOGIC PWR SYS 1(2) – OFF
   R13L PL BAY MECH PWR SYS 1(2) – OFF

   Rationale: These steps were deleted in error. They ensure that power is removed from the alternate side in order to protect against any error in the subsequent PL RETEN LAT action driving the pivoter which remains selected on the alternate AMSB from step 4.

5. REPLACE PAGES 2-6 THROUGH 2-7 and 3-20 THROUGH 3-29.

END OF PAGE 1 OF 13, MSG 008A

FD03 05/13/09 03:05:23 **REPLANNED**

GMT 05/13/09 (133)
β = −10
MET Day 001

12 07 13 08 14 09 15 10 16 11 17 12 18 13 19 14 20 15 21 16 22 17 23 18 002/00

STS-125

CDR/R2 ALTMAN	SLEEP (MNVR)	LOG; POST SLEEP; 10.2M; GRPB; PWRUP; HST RNDZ OPS (NH^ NC4^); 10.2M; HST RNDZ OPS (Ti^); HST RBAR APPROACH; HST BERTH
PLT JOHNSON	SLEEP	LOG; POST SLEEP; R5R*; GRPB; PWRUP; HST RNDZ OPS; HST RBAR APPROACH; P/TV04 HST BERTH; ICBC1; P/TV04 BERTH
MS1/EV4 GOOD	SLEEP	POST SLEEP; MDDK PREP; EXERCISE; HST RNDZ OPS; HST RBAR APPROACH; HST BERTH
MS2/R1 McARTHUR	SLEEP	SIMO INIT; POST SLEEP; WASTE; TERM; POST SLEEP; SPLY; TERM; OCA#; POST SLEEP; EXERCISE; MCIU; HST RNDZ OPS; HST RBAR APPROACH; HST BERTH
MS3/EV1 GRUNSFELD	SLEEP	POST SLEEP; MDDK PREP; EVA 1 TOOL CONFIG; D2X CAMR S/U; EXERCISE; HST RBAR APPROACH; HST BERTH
MS4/EV3/R2 MASSIMINO	SLEEP	LOG; POST SLEEP; MDDK PREP; EVA 1 TOOL CONFIG; EXERCISE; HST RNDZ OPS; HST RBAR APPROACH*; HST BERTH
MS5/EV2 FEUSTEL	SLEEP	LOG; POST SLEEP; OCA#; POST SLEEP; HST RNDZ OPS; MDDK PREP; EXERCISE; P/TV 04 S/U; P/TV04 HST RNDZ; PGSC; WLES; P/TV04 HST BERTH

HST

HST CMD	♣; LOAD MACROS & SPCS; FHST; PREP FOR HGA RTRCT; HGA RTRCT; SA SLEW (90); FGE*; HV; REDUC; PSP BY-PASS; CNFG*; FWD; HST TO CPTR ATT; AFT; PSEA; HST; DRIFT; PI

STS

DAY/NIGHT	
ORBIT	24; 25; 26; 27; 28; 29; 30; 31; 32
TDRS W	
TDRS E	
TDRS Z	
ORB ATT	-ZLV -XVV; BIAS -YLV -ZVV; RNDZ; FREE
HST FWD AXIS	RNDZ; CAPTURE; RMS
SA ANGLE	SUN TRACK; 90 deg

NOTES

♣H/W CNTRL #CH 2 *RESELECT *OFF *CAPTURE OPS

GRAPPLE

*1/22:54

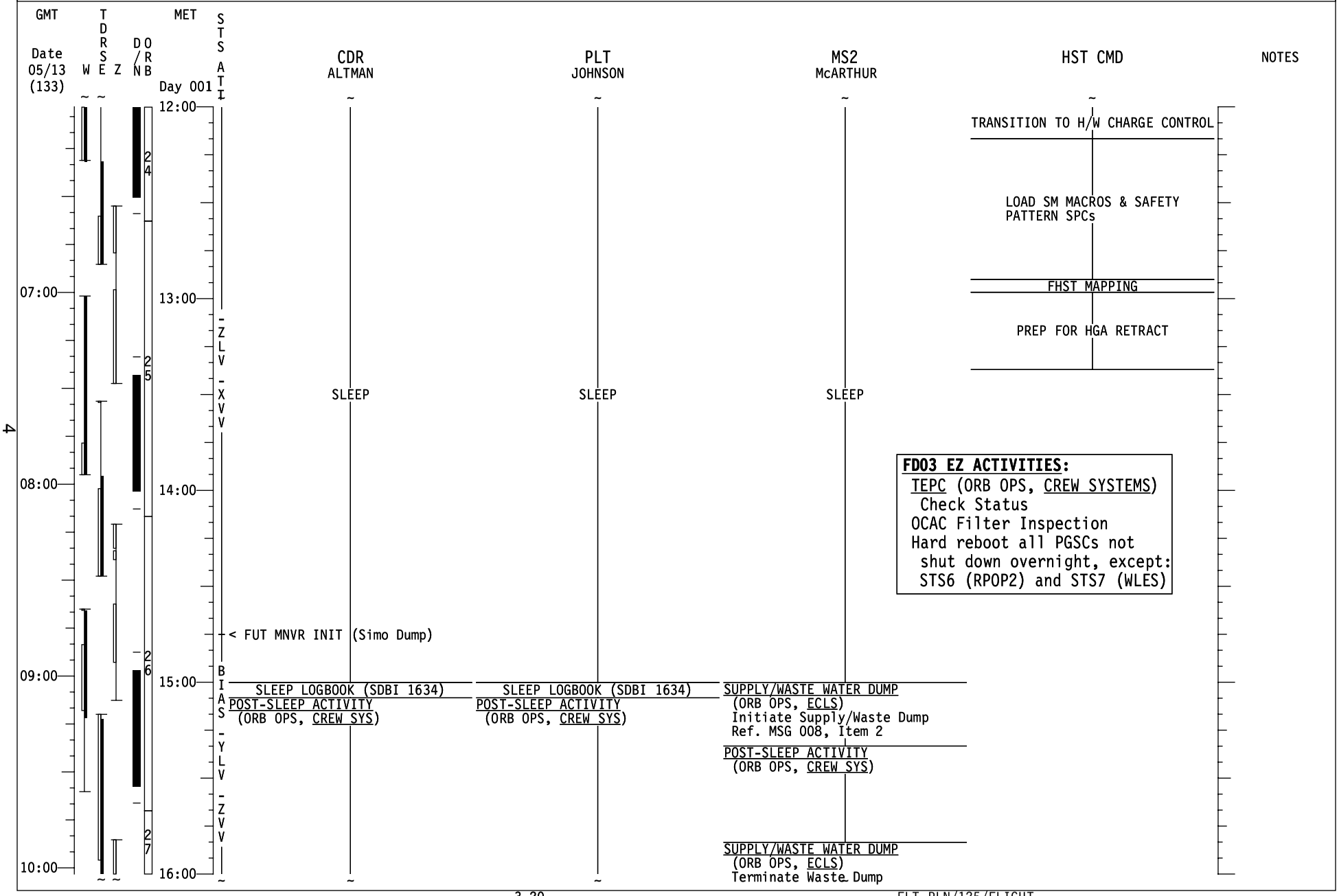
GMT 05/13/09 (133) β=-10 MET Day 002

002/00 | 19 01 | 20 02 | 21 03 | 22 04 | 23 05 | 05/14 06 | 01 07 | 02 08 | 03 09 | 04 10 | 05 11 | 06 12

STS-125	CDR/R2 ALTMAN	TRK -XSI; EXT PWR ACT; IMU; GRPB PWRDN; EXERCISE; -ZLV -XVV; SA SLEW (0); EVA 1 PROCEDURE RVW; PRE SLEEP; 10.2M; PRE SLEEP; PMC A/G; PRE SLEEP; SLEEP
STS-125	PLT JOHNSON	P/TV05 -V3 SURVEY; 03 S/U; P/TV 03 SA SLEW; EVA 1 PROCEDURE RVW; HDTV; PLYBK; OPS; ICB; HCDTCV; PRE SLEEP; SLEEP
STS-125	MS1/EV4 GOOD	GRPB PWRDN; EVA 1 PROCEDURE RVW; PRE SLEEP; SLEEP
STS-125	MS2/R1 McARTHUR	BERTHED HST SURVEY; PARK; EVA 1 PROCEDURE RVW; PRE SLEEP; PDIP*; PRE SLEEP; SLEEP
STS-125	MS3/EV1 GRUNSFELD	EXT PWR ACT; PI*; SA SLEW (0); EVA 1 PROCEDURE RVW; PRE SLEEP; SLEEP
STS-125	MS4/EV3/R2 MASSIMINO	BERTHED HST SURVEY; PARK; EVA 1 PROCEDURE RVW; PRE SLEEP; SLEEP
STS-125	MS5/EV2 FEUSTEL	EVA 1 PROCEDURE RVW; PRE SLEEP; OCA#; PRE SLEEP; SLEEP
HST	HST CMD	HST EXTRNL PWR ACT; OTA1; FGE*; OTA2; OTA3; SPA; SA SLEW (0); KU BAND C/O; SSR ENGNR PLAY BACK
STS	DAY/NIGHT	
STS	ORBIT	32; 33; 34; 35; 36; 37; 38; 39
STS	TDRS W E Z	
STS	ORB ATT	BIAS -XSI; -ZLV -XVV
HST	HST FWD AXIS	-V3 FWD
HST	SA ANGLE	90 deg; 0 deg
	NOTES	*ON; *CONFIG; *OFF #PL MAX

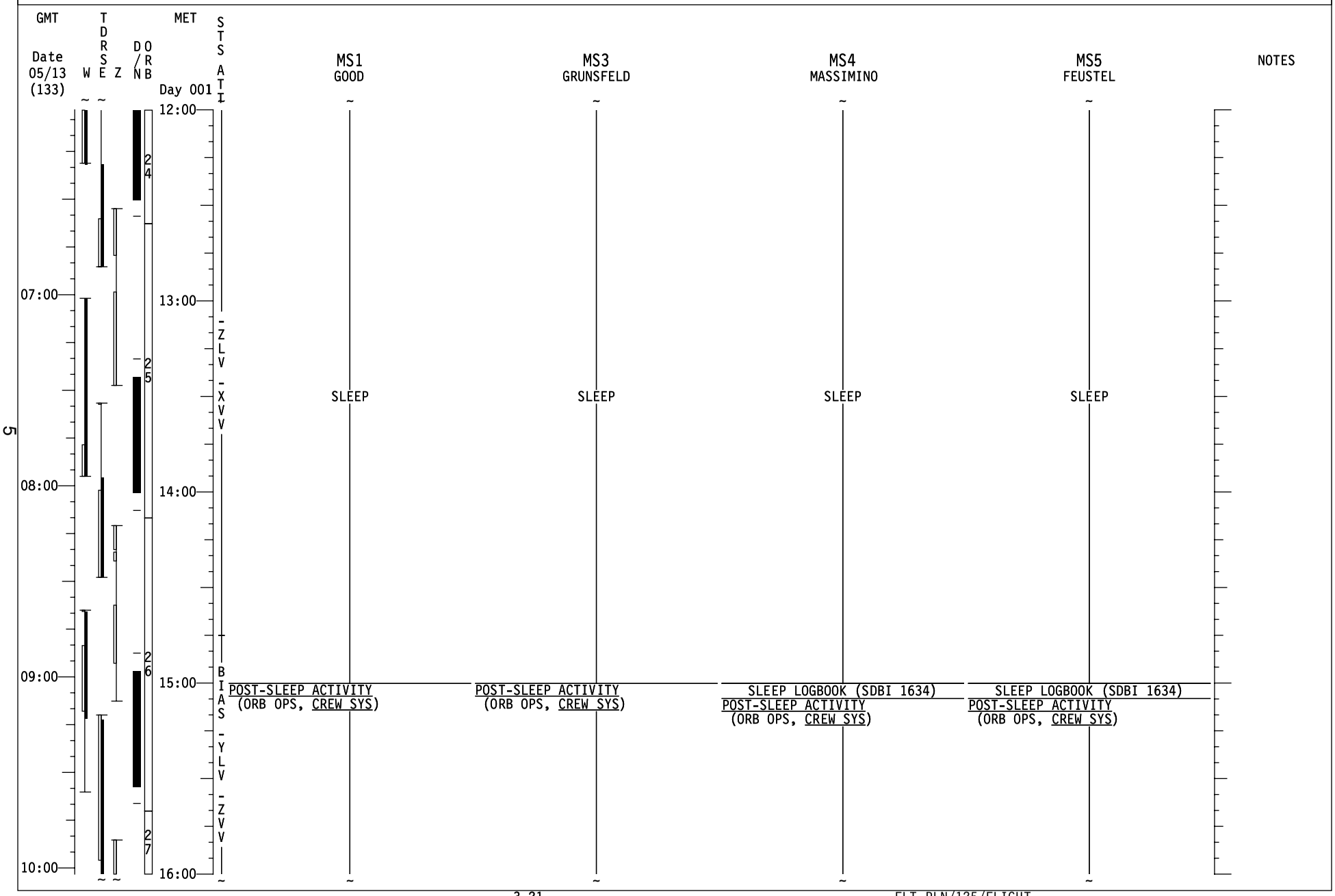
STS-125 (FD03)

REPLANNED



STS-125 (FD03)

REPLANNED



STS-125 (FD03)

REPLANNED

GMT Date 05/13 (133) | W | TDRS E | Z | DO/RN | ORB | MET Day 001 | STS ATT

CDR ALTMAN

16:00
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

17:00
10.2 PSI MAINTENANCE
(EVA, 10.2 PSI CABIN)
PRIORITY PWRUP GROUP B
(ORB PKT, PRIOR PWRDN)
Steps 12 (Recover IMU 3),10, 9,6 (Triple G2, 1233),5
RENDEZVOUS TIMELINE
(RNDZ, RENDEZVOUS T/L)

18:00
< NH TIG 1/18:15:18

19:00
< NC4 TIG 1/19:01:43

20:00

PLT JOHNSON

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

R5R RESELECT A
PRIORITY PWRUP GROUP B
(ORB PKT, PRIOR PWRDN)
Steps 12 (Recover IMU 3),10, 9,6 (Triple G2, 1233),5
RENDEZVOUS TIMELINE
(RNDZ, RENDEZVOUS T/L)

MS2 McARTHUR

SUPPLY/WASTE WATER DUMP
(ORB OPS, ECLS)
Terminate Waste Dump
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SUPPLY/WASTE WATER DUMP
(ORB OPS, ECLS)
Terminate Supply Dump
L10 MUX/VTR/CC PWR - ON (LED ON)
RECONFIGURE OCA D/L RATE (Ch. 2)
(ORB OPS, PGSC)
Part D then A, Steps 1-4
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

EXERCISE

L17 Check MCIU filter screen
RENDEZVOUS TIMELINE
(RNDZ, RENDEZVOUS T/L)

HST CMD

SERIAL RETRACTION OF HGAs

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

SLEW SOLAR ARRAYS TO 90 DEGREES

TURN OFF FGEs
DEACTIVATE HV PROTECT FUNCTION

NOTES

UPLINK
TFL 206

STS-125 (FD03)

REPLANNED

GMT Date 05/13 (133) | W E Z | D/N | O R B | MET Day 001 | STS ATI

BIAS - YLV - ZVV

RNDZ

MS1 GOOD	MS3 GRUNSFELD	MS4 MASSIMINO	MS5 FEUSTEL	NOTES
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)	
			L10 MUX/VTR/CC PWR - ON (LED ON) RECONFIGURE OCA D/L RATE (Ch. 2) (ORB OPS, PGSC) Part D then A, Steps 1-4 POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
			RENDEZVOUS TIMELINE (RNDZ, RENDEZVOUS T/L)	
MIDDECK PREP (EVA, EVA PREP)	MIDDECK PREP (EVA, EVA PREP)	MIDDECK PREP (EVA, EVA PREP)	MIDDECK PREP (EVA, EVA PREP)	
	EVA 1 TOOL CONFIG (EVA, TIMELINES) Ref. STS-125 EVA CONSUMABLES Cue Card	EVA 1 TOOL CONFIG (EVA, TIMELINES) Ref. STS-125 EVA CONSUMABLES Cue Card		
EXERCISE			EXERCISE	
RENDEZVOUS TIMELINE (RNDZ, RENDEZVOUS T/L)				

STS-125 (FD03)

REPLANNED

GMT Date 05/13 (133) | W | TDRS E | Z | DON/ORB | MET Day 001 | STS ATI

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

29 — 30 — 31 — 32

RNDZ — FREE

CDR

- 10.2 PSI MAINTENANCE (EVA, 10.2 PSI CABIN)
- RENDEZVOUS TIMELINE (RNDZ, RENDEZVOUS T/L)
- < Ti TIG 1/20:40:00
- HST RBAR APPROACH (Cue Card)
- HST BERTH (PDRS, NOM HST RETRV)
- LATCH AND MATE HST (PL OPS, RETRIEVAL OPERATIONS)

PLT

- RENDEZVOUS TIMELINE (RNDZ, RENDEZVOUS T/L)
- HST RBAR APPROACH (Cue Card)
- P/TV04 RETRIEVE/BERTH (OPS) (P/TV, SCENES) HST Berth - Items 2-5
- P/TV09 ICBC3D (FILMING OPS) (P/TV, SCENES) Scene 1
- P/TV04 RETRIEVE/BERTH (OPS) (P/TV, SCENES) HST Berth - Items 2-5

MS2

- RENDEZVOUS TIMELINE (RNDZ, RENDEZVOUS T/L)
- HST RBAR APPROACH (Cue Card)
- HST BERTH (PDRS, NOM HST RETRV)
- LATCH AND MATE HST (PL OPS, RETRIEVAL OPERATIONS)

HST CMD

- DEACTIVATE HV PROTECT FUNCTION
- NON-ESSENTIAL LOAD REDUCTION
- TRANSITION TO PSP-BYPASS
- CONFIG FOR CAPTURE ATTITUDE OPS
- LGA SWITCH AFT TO FWD
- HST TO CAPTURE ATT & DISABLE SAFEMODE TESTS
- LGA SWITCH FWD TO AFT
- PSEA KA MONITORING DISABLED
- HST TO DRIFT MODE
- SWITCH LGAs FOR PI OPS

NOTES

- UPLINK β21 + Mask Boxes 1,2,5
- UPLINK PDI FDA -ENA

RNDZ PET 00:00 (Ti)
AT MET 1/20:40

GRAPPLE 1/22:54 - RETURN TO FLIGHT PLAN

STS-125 (FD03)

REPLANNED

GMT Date 05/13 (133) | W E Z | D/N | ORB 29 30 31 32 | MET Day 001 | STS ATI RNDZ FREE

MS1 GOOD

- RENDEZVOUS TIMELINE (RNDZ, RENDEZVOUS T/L)
- HST RBAR APPROACH (Cue Card)
- HST BERTH (PDRS, NOM HST RETRV)
- LATCH AND MATE HST (PL OPS, RETRIEVAL OPERATIONS)

MS3 GRUNSFELD

- EVA 1 TOOL CONFIG (EVA, TIMELINES) Ref. STS-125 EVA CONSUMABLES Cue Card
- D2Xs EVA CAMR (P/TV, REF PROC) D2Xs EVA - CAMR ONLY
- EXERCISE
- HST RBAR APPROACH (Cue Card)
- HST BERTH (PDRS, NOM HST RETRV)
- LATCH AND MATE HST (PL OPS, RETRIEVAL OPERATIONS)

MS4 MASSIMINO

- EVA 1 TOOL CONFIG (EVA, TIMELINES) Ref. STS-125 EVA CONSUMABLES Cue Card
- EXERCISE
- RENDEZVOUS TIMELINE (RNDZ, RENDEZVOUS T/L)
- HST RBAR APPROACH (Cue Card)
- HST BERTH (PDRS, NOM HST RETRV)
- LATCH AND MATE HST (PL OPS, RETRIEVAL OPERATIONS)

MS5 FEUSTEL

- EXERCISE
- P/TV04 RETRIEVE/BERTH (SETUP) (PHOTO/TV, SCENES)
- P/TV04 RETRIEVE/BERTH (OPS) (P/TV, SCENES) RNDZ - Item 1
- POST RNDZ PGSC CONFIG Configure PGSCs
- WLES RNDZ/DEPLOY RECOVERY (ORB OPS, WLE SENSORS)
- P/TV04 RETRIEVE/BERTH (OPS) (P/TV, SCENES) HST Berth - Items 2-5

NOTES

RNDZ PET 00:00 (Ti)
AT MET 1/20:40

GRAPPLE 1/22:54 - RETURN TO FLIGHT PLAN

STS-125 (FD03)

REPLANNED

GMT Date 05/13 (133) | W E Z | DORNB | MET Day 002 | STS ATI

If rates > 0.2, DAP: A10/INRTL/VERN

GMT	CDR ALTMAN	PLT JOHNSON	MS2 McARTHUR	HST CMD	NOTES
00:00	MNVR (TRK) BIAS -XSI (Batt Chrg) TG=4 BV=5 P=151 Y=0 OM=348 (HST BERTH Step 7) Init TRK, A10/AUTO/VERN	P/TV05 HST SURVEY (OPS) (P/TV, SCENES) -V3 Survey - Items 1-3 When complete, load image card into PGSC and notify MCC.	HST SURVEY (PDRS, PHOTO SURVEYS)		UPLINK β21 + Mask Boxes 1,2
	ACTIVATE HST EXTERNAL PWR (PL OPS, RETRIEVAL OPERATIONS)			ACTIVATE HST EXTERNAL POWER	
	IMU ALIGN - S TRK (ORB OPS, GNC)				
01:00	PRIORITY PWRDN GROUP B (ORB PKT, PRIOR PWRDN) Steps 5,6 (Single G2, 1111), 12 (IMU 3 STBY-ITEM 23 EXEC)			ENABLE STAGE 1 OTA HEATER GROUPS FGEs ON	
	EXERCISE			ENABLE STAGE 2 OTA HEATER GROUPS	
02:00	MNVR (TRK) -ZLV -XVV TG=2 BV=3 OM=0 A10/AUTO/VERN (2/02:02) Init TRK		RMS EXTENDED PARK (PDRS, EXTENDED PARK)	ENABLE STAGE 3 OTA HEATER GROUPS OPEN SPA TRIM RELAYS	
		P/TV03 FSS OPS (SETUP) (P/TV, SCENES)			
	SINGLE (DUAL) SA SLEW (PL OPS, IN-BAY OPERATIONS) 90 to 0 degrees Dual Array Slew	P/TV03 FSS OPS (OPS) (P/TV, SCENES) SA Slew - Item 3		SLEW SOLAR ARRAYS TO 0 DEGREES	
03:00	EVA 1 PROCEDURE REVIEW Ref. EVA 1 BRIEF CARD (EVA, TIMELINES) and MSG 010	EVA 1 PROCEDURE REVIEW Ref. EVA 1 BRIEF CARD (EVA, TIMELINES) and MSG 010	EVA 1 PROCEDURE REVIEW Ref. EVA 1 BRIEF CARD (EVA, TIMELINES) and MSG 010		UPLINK PDI FDA -INH
04:00	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	HD DIGITAL VIA CC (ACTIVATION) (Cue Card, DIGITAL PLAYBACK) HST Grapple/IMAX Handheld KU TDRE (03:40-04:00)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)		UPLINK KU CH 3 -DTV

STS-125 (FD03)

REPLANNED

GMT Date 05/13 (133) | W E Z | DRS TDRS | DO/N ORB | MET Day 002 | STS ATI

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

19:00 | 20:00 | 21:00 | 22:00

00:00 | 01:00 | 02:00 | 03:00 | 04:00

32 | 33 | 34

BIAS-XSI

ZLV-XVV

MS1 GOOD

PRIORITY PWRDN GROUP B
(ORB PKT, PRIOR PWRDN)
Steps 5,6 (Single G2, 1111),
12 (IMU 3 STBY-ITEM 23 EXEC)

EVA 1 PROCEDURE REVIEW
Ref. EVA 1 BRIEF CARD
(EVA, TIMELINES)
and MSG 010

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

MS3 GRUNSFELD

ACTIVATE HST EXTERNAL PWR
(PL OPS, RETRIEVAL OPERATIONS)

PI CONFIG
(PL OPS, RETRIEVAL OPERATIONS)
Step 5 only

SINGLE (DUAL) SA SLEW
(PL OPS, IN-BAY OPERATIONS)
90 to 0 degrees
Dual Array Slew

EVA 1 PROCEDURE REVIEW
Ref. EVA 1 BRIEF CARD
(EVA, TIMELINES)
and MSG 010

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

MS4 MASSIMINO

HST SURVEY
(PDRS, PHOTO SURVEYS)

RMS EXTENDED PARK
(PDRS, EXTENDED PARK)

EVA 1 PROCEDURE REVIEW
Ref. EVA 1 BRIEF CARD
(EVA, TIMELINES)
and MSG 010

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

MS5 FEUSTEL

EVA 1 PROCEDURE REVIEW
Ref. EVA 1 BRIEF CARD
(EVA, TIMELINES)
and MSG 010

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

STS-125 (FD03)

REPLANNED

GMT Date 05/13 (133) | W | TDRS E | Z | DON/ORB | MET Day 002 | STS ATT

CDR ALTMAN

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

10.2 PSI MAINTENANCE
(EVA, 10.2 PSI CABIN)

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

06 √UHF MODE - OFF
L9 PAYLOAD STATION AUDIO A/G (two) - OFF
PRIVATE MEDICAL CONFERENCE

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

PLT JOHNSON

ICBC3D STATUS REPORT
HD DIGITAL VIA CC (ACTIVATION)
(Cue Card, DIGITAL PLAYBACK)
PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SLEEP

MS2 McARTHUR

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

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

SLEEP

HST CMD

KU-BAND ON ORBIT CHECKOUT

NOTES

UPLINK
KU CH 3 -DTV

UPLINK
KU CH 2 -RNS

UPLINK
KU CH 2 -HST

UPLINK
KU CH 2 -RNS

Crew Wake: 2/14:30

Z-LV-XVV

STS-125 (FD03)

REPLANNED

GMT Date 05/13 (133) | W | T D R S E | Z | D/N | O R B | MET Day 002 | 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

34 — 35 — 36 — 37

-ZLV -XVV

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

RECONFIGURE OCA D/L RATE [B]

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

[B] 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: 2/14:30

SLEEP | SLEEP | SLEEP | SLEEP

Good Morning Atlantis!!!

There are no flight plan changes for today!

We planned our flight, let’s fly our plan!!!!

Have a great day!!!

IMAX: Spectacular launch! Thanks for the great news on ICBC door and setup for a beautiful first scene today. Please advise when you'd like to do the Canon test - we'll be standing by.

YOUR CURRENT ORBIT IS: 298 X 123 NM

NOTAMS:

EDW	LAKEBED RUNWAY 15/33 ELS ONLY. OTHER LAKEBED RWYS RED.
NOR	LAKEBED RUNWAYS GREEN.
GUA	06R/24L CLOSED.
GDV	RWY 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 30 – 01/21:10 SCT250 VRB06
NOR17 ORB 45 – 02/21:08 SKC 200/08P12

OMS TANK FAIL CAPABILITY (Pre NH):

L OMS FAILS: YES
R OMS FAILS: YES

OMS TANK FAIL CAPABILITY (Post NH):

LOMS FAILS: NO
ROMS FAILS: NO

LEAKING OMS PRPLT BURN (Pre NH):

L OMS LEAK: ALWAYS BURN OUT-OF-PLANE
R OMS LEAK: ALWAYS BURN OUT-OF-PLANE

LEAKING OMS PRPLT BURN (Post NH):

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

OMS QUANTITIES(%) (Pre NH):

L OMS OX = 82.4 R OMS OX = 80.4
FU = 82.0 FU = 80.5

OMS QUANTITIES(%) (Post NH):

L OMS OX = 53.1 R OMS OX = 51.1
FU = 53.1 FU = 51.3

DELTA V AVAILABLE:	Pre NH	Post NH
OMS	781 FPS	474 FPS
ARCS (TOTAL ABOVE QTY1)	55 FPS	30 FPS
TOTAL IN THE AFT	836 FPS	504 FPS
ARCS (TOTAL ABOVE QTY2)	83 FPS	59 FPS
FRCS (ABOVE QTY 1)	39 FPS	29 FPS
AFT QTY 1	87 %	82%
AFT QTY 2	49 %	44%

SYSTEM	FAILURE	IMPACT	WORK AROUND
HYD	Hydraulic system 3 right outboard elevon return line temperature transducer is erratic.	None.	The FDA limit has been removed. This parameter is on SM 87 HYD THERMAL as LINE TEMPS 3 ELEVON ROB.

END OF PAGE 2 OF 2, MSG 009A

MSG 010 - DELTAS TO EVA C/L FOR EVA 1 AND EVA 3

During camera scans of the payload bay, folks noticed that the MEB-R Cover MLI on the ASIPE lid had partially lifted from its matching Velcro footprint. During the initial setup activities for EVA 1, we'd like for John to re-engage the MLI Velcro on all sides for ideal thermal protection.

Please make the following changes to your EVA Checklists:

1. Due to the pre-flight configuration change of the pre-routed PLB safety tether, please add the following step to the beginning of EVA 1:

   - EVA 1 (EVA, TIMELINES), EGRESS/INITIAL SETUP, pg FS 7-26 under the FF EV column in the EGRESS block:

     Add step 4.1: Relocate pre-routed orbiter safety tether to fwd slider
     - Engage crew hook slide lock – L

     You are NOT required to relocate the pre-routed safety tether hook back to the aft slider in between EVAs or after EVA 5 for landing. This is exactly the same config we flew on STS-109, where the aft slider landed without a safety tether hook attached.

2. In order to make sure there is no lost time during EVA 3, please add the following star block to the ACS Part I power down task:

   - EVA 3 (EVA, TIMELINES), pg FS 7-79, step 5, under the IV column:

     WAS:
     5. √MCC ACS pwr dwn complete
     (GO to retract sticky pad plungers)

     IS:
     5. √MCC ACS pwr dwn complete
     (GO to retract sticky pad plungers)
     * If NO COMM perform: DEADFACE ACS *
     * (PL OPS, ORU/ORI OPS) *

END OF PAGE 1 OF 1, MSG 010

MSG 011 - FD03 CREW CHOICE D/L OPPORTUNITIES

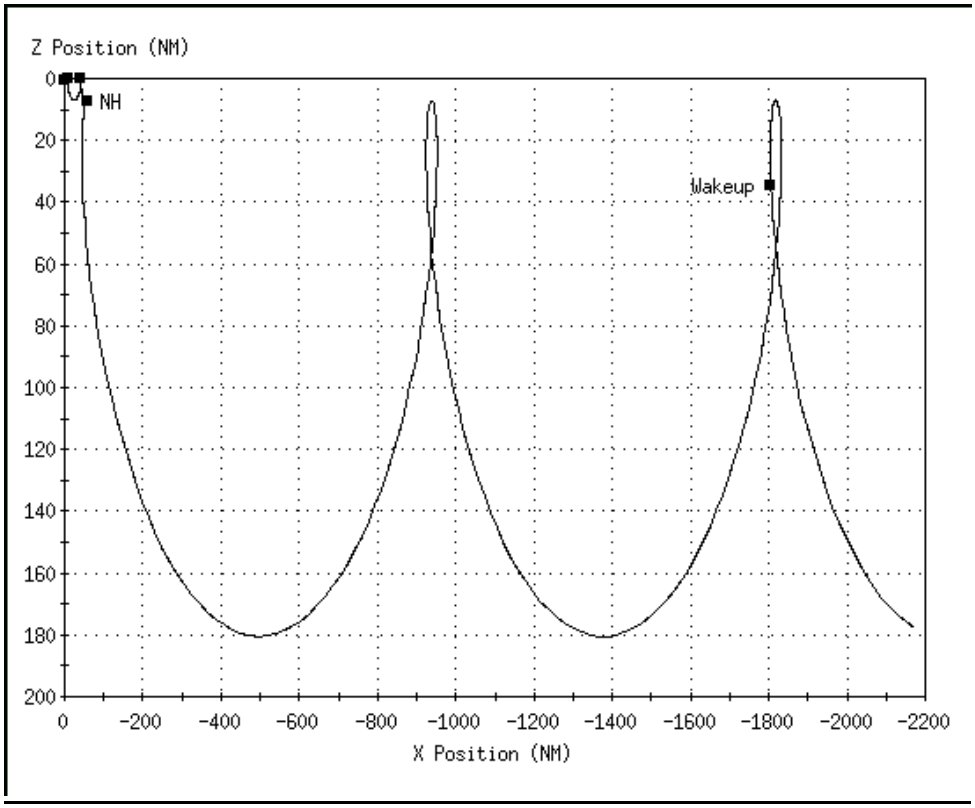
Crew Choice TV Downlink KU Available Opportunities for FD3

TDRS	Start	End	Duration
TDE	2/01:44	02:18	34 min
TDW	2/02:28	02:44	16 min
	2/02:55	03:25	30 min
TDE	2/03:40	04:00	20 min
	(First few minutes may not be available due to attitude deadbands)		
TDW	2/04:11	04:29	18 min
	2/04:39	05:10	31 min
TDE	2/05:34	05:43	9 min
TDW	2/05:56	06:10	14 min

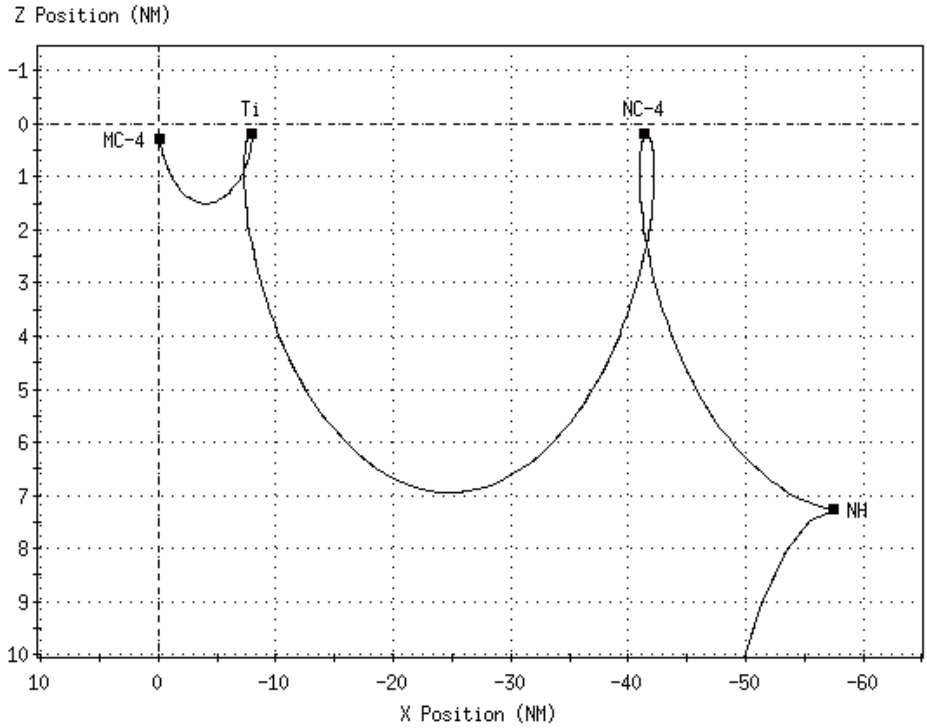
END OF PAGE 1 OF 1, MSG 011

```
                         FLIGHT NOTE
 ------------------------------------------------------------
|                                                            |
|      TO: FD, CAPCOM, FAO, RENDEZVOUS, PROP, GC             |
|      FROM: FDO                                             |
|      SUBJECT: MANEUVER TIGS                                |
|                                                            |
|                                                            |
|      COPIES:  1                                            |
|                                                            |
|                 MET                                        |
|  NH        001:18:15:17.900                                |
|  NC-4      001:19:01:42.800                                |
|  NCC       001:19:39:54.000                                |
|  TI        001:20:40:00.000  PET = 0:0 ; SS - 33 MIN       |
|  MC1       001:21:00:00.000                                |
|  MC2       001:21:33:06.000  ET = 0:0                      |
|  MC3       001:21:50:06.000  MC2 + 17 MIN                  |
|  MC4       001:22:00:06.000  MC2 + 27 MIN                  |
|  GRAPPLE   001:22:54:00.000                                |
|                                                            |
|                                                            |
|                                                            |
 ------------------------------------------------------------
```

Long Range Relative Motion



Short Range Relative Motion



PRELIMINARY ORBIT MANEUVER PAD FOR NH (Page 3-2)

ΔVTOT	308.5	
TGO	03:17	
VGO X	(+)297.5	
VGO Y	(+)000.0	
VGO Z	(+)081.5	
HA	303	
HP	(+)297	
TGT		

BURN ATT

R 24	318
P 25	027
Y 26	303

OMS BOTH 1	X
L 2	
R 3	
RCS SEL 4	
TV ROLL 5	000
TRIM LOAD P 6	(+)0.5
LY 7	(-)5.7
RY 8	(+)5.7
WT 9	25289
TIG 10	01/18:15:17.9
TGT PEG 7 ΔVX 19	(+)306.7
ΔVY 20	(+)000.0
ΔVZ 21	(+)033.3

+X -X MULTI-AXIS

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	
NONE	X

DOWN MODE OPTIONS:

2 OMS → 1 OMS	
1 OMS → RCS	
NONE	X

ORBIT BURN MONITOR

GPC FILL-INS 1 (3)

CRIT BURN	X
NON-CRIT BURN	

OMS HE REG TEST: NONE

	L GPC	L OP	L CL	R GPC	R OP	R CL
A	X			X		
B		X			X	

-X RCS BURNS:

	BURN ATT	LVLH ATT
P 15 R	N / A	N / A
Y 16 P	N / A	N / A
OM 17 Y	N / A	N / A

DO NOT UPDATE TIG

UPDATE TIG AFTER ___ MIN.

MAX TIG SLIP ___ MIN.

NOTES

TREAT LOSS OF GPC 3 AS SECOND GIMBAL FAIL ON THE RIGHT

PRELIMINARY ORBIT MANEUVER PAD FOR NC-4 (Page 3-4)

BURN IN CURRENT ATTITUDE

OMS BOTH 1		
L 2		
R 3		
RCS SEL 4	X	+X / -X / MULTI-AXIS
TV ROLL 5	N/A	
TRIM LOAD P 6	( )N/A	
LY 7	( )N/A	
RY 8	( )N/A	
WT 9	24526 1	
TIG 10	01/19:01:42.8	
TGT PEG 7 ΔVX 19	(+)001.0	
ΔVY 20	(+)000.0	
ΔVZ 21	(+)000.0	

ΔVTOT	001.0	
TGO	00:04	
VGO X	(+)000.0	
VGO Y	(+)000.0	
VGO Z	(-)001.0	
HA	303	
HP	(+)298	
TGT		

BURN ATT R 24	N/A	
P 25	N/A	
Y 26	N/A	

NOTES

OMS GMBL CK: PRE		
L PRI		
L SEC		
R PRI		
R SEC		
NONE	X	
POST-BURN		
	X	

RCS I'CNCT: L OMS → RCS		
R OMS → RCS		
NONE	X	

DOWN MODE OPTIONS: 2 OMS → 1 OMS		
1 OMS → RCS		
NONE	X	

OMS HE REG TEST:	X NONE	
L GPC	A	
L OP		
L CL		
R GPC	A	
R OP		
R CL		
	B	

-X RCS BURNS: BURN ATT P 15	N/A	
Y 16	N/A	
OM 17	N/A	
LVLH ATT R	N/A	
P	N/A	
Y	N/A	

ORBIT BURN MONITOR GPC FILL-INS 1 (3)		
CRIT BURN	X	
NON-CRIT BURN		

DO NOT UPDATE TIG		
UPDATE TIG AFTER ___ MIN.		
MAX TIG SLIP ___ MIN.		

NOTES

PRELIMINARY ORBIT MANEUVER PAD FOR Ti (Page 3-6)

OMS BOTH	1	
L	2	X
R	3	
RCS SEL	4	
TV ROLL	5	000
TRIM LOAD P	6	(+)0.5
LY	7	(+)5.0
RY	8	(-)5.0
WT	9	245233
TIG	10	01/20:40:00.0
TGT PEG 7 ΔVX	19	(+)008.8
ΔVY	20	(+)000.1
ΔVZ	21	(+)000.0

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

BURN ATT

R	24	034
P	25	221
Y	26	050

ΔVTOT		008.8
TGO		00:11
VGO	X	(+)008.4
VGO	Y	(+)001.8
VGO	Z	(+)002.3

	HA	HP
TGT	303	(+)303

OMS GMBL CK:

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

NOTES

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

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

OMS HE REG TEST: [ ] NONE

	L GPC	L OP	L CL	R GPC	R OP	R CL
A		X				
B			X			

-X RCS BURNS:

		BURN ATT		LVLH ATT
P	15	N/A	R	N/A
Y	16	N/A	P	N/A
OM	17	N/A	Y	N/A

ORBIT BURN MONITOR:

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

Ti DELAY

TGT PEG 7 ΔVX	19	(-)
ΔVY	20	(-)
ΔVZ	21	(-)

NEW Ti (BASETIME) 01/22:15:54.0

TIG SLIP: If Ti not started by nominal TIG + __ min go to Ti DELAY, 5-17

Max Ti DELAY TIG slip __ min.
- [ ] DO NOT UPDATE TIG
- [ ] UPDATE TIG AFTER __ MIN.

NOTES

END OF PAGE 5 OF 5, MSG012