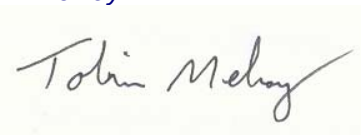
STS-132 / ULF4

Entry Execute Package

MSG	Page(s)	Title
108	1 - 8	FD13 - EOM+3 Summary Timeline
109A	9 - 13	FD13 - Detailed Timeline
110A	14	Deorbit Prep Updates
111A	15 - 16	Entry Checklist Deltas
112A	17	Entry FIW Summary
113	18 - 19	Entry Summary
114A	---	Entry Summary Blank (electronic only)
115	---	Deorbit Star Pairs Blank (electronic only)
116	---	Sunday Funnies (electronic only)

Approved by FAO:
T. Melroy



Last Updated: May 25 2010 10:03 AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v3.0*

MSG 108 - FD13 EOM + 3 SUMMARY TIMELINE

05/25/10 04:23:00

REPLANNED

FD12

GMT 05/25/10 (145) 19 20 21 22 23 05/26 01 02 03 04 05 06

MET Day 011 011/00 01 02 03 04 05 06 07 08 09 10 11 12

STS-132

CDR	Ham	PMC A/G; PRE SLEEP; SLEEP; POST SLEEP; PMC A/G; POST SLEEP
PLT	Antonelli	PRE SLEEP; SLEEP; LOG; POST SLEEP
MS1	Reisman	PRE SLEEP; SLEEP; LOG; POST SLEEP
MS2	Good	PRE SLEEP; SLEEP; POST SLEEP
MS3	Bowen	PRE SLEEP; SLEEP; LOG; POST SLEEP
MS4	Sellers	PRE SLEEP; SLEEP; LOG; POST SLEEP

DAY/NIGHT

ORBIT: 175 176 177 178 179 180 181 182

TDRS W E Z

GND: DFR -WSS; DFR -MLA; DFR -MLA -WSS; DFR -MLA -WSS; DFR -WSS

ORB ATT: -ZLV -XVV

NOTES

1

MSG 108 - FD13 EOM + 3 SUMMARY TIMELINE

05/25/10 04:23:00 **REPLANNED**

FD13 EOM

GMT 05/26/10 (146)

MET Day 011

ORBIT	TIG
KSC 186	11/17:22
KSC 187	11/18:57

STS-132	12	13	14	15	16	17	18	19	20	21	22	23	012/00
CDR Ham	POST SLEEP; GRPB; PWRUP; IMU ALIGN & VERIF; TRK-XSI	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT BACKOUT	DEORBIT BACKOUT ^MNVR +ZLV -XVV	DEORBIT BACKOUT	WSS L-1 COMM CHK; MNVR -ZLV	PRE SLEEP	PRE SLEEP
PLT Antonelli	POST SLEEP; MARS*; GRPB; PWRUP; WATCH; POST SLEEP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT BACKOUT	DEORBIT BACKOUT	DEORBIT BACKOUT	WATCH; MACTIU*	PRE SLEEP	PRE SLEEP
MS1 Reisman	POST SLEEP	WATCH; OCAC; STOW; AIR^	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT BACKOUT	DEORBIT BACKOUT	DEORBIT BACKOUT	WATCH; OCAC; SETUP	PRE SLEEP	PRE SLEEP
MS2 Good	POST SLEEP	TEPC; PWRDN	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT BACKOUT	DEORBIT BACKOUT	DEORBIT BACKOUT	TEPCON	PRE SLEEP	PRE SLEEP
MS3 Bowen	POST SLEEP	WATCH; GIRA; STOW	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT BACKOUT	DEORBIT BACKOUT	DEORBIT BACKOUT	WATCH; GIRA INSTALL	PRE SLEEP	PRE SLEEP
MS4 Sellers	POST SLEEP	WATCH; PGSC STOW PART II; MDDK#	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT BACKOUT	DEORBIT BACKOUT	DEORBIT BACKOUT	WATCH; MDDK#	PRE SLEEP	PRE SLEEP

DEORBIT# LANDING*

DAY/NIGHT

ORBIT: 183 | 184 | 185 | 186 | 187 | 188 | 189 | 190

TDRS W E Z

GND: —WSS —WSS —WSS

ORB ATT: IMU -XSI COMM ENTRY +ZLV -XVV -ZLV -XVV

NOTES:
*POWER ON
^SAMPLE
#STATUS CHECK
#D/O TIG 11/17:22
*KSC LANDING 11/18:28
*FILTER CK
#STATUS CHECK

MSG 108 - FD13 EOM + 3 SUMMARY TIMELINE

05/25/10 04:23:00 **REPLANNED**

FD13 EOM

GMT 05/26/10 (146) 19 20 21 22 23 05/27 01 02 03 04 05 06

MET Day 012 012/00 01 02 03 04 05 06 07 08 09 10 11 12

STS-132 3

CDR Ham	PMC A/G; PRE SLEEP	SLEEP; POST SLEEP; PMC A/G; POST SLEEP
PLT Antonelli	PRE SLEEP	SLEEP; LOG; POST SLEEP
MS1 Reisman	PRE SLEEP	SLEEP; LOG; POST SLEEP
MS2 Good	PRE SLEEP	SLEEP; POST SLEEP
MS3 Bowen	PRE SLEEP	SLEEP; LOG; POST SLEEP
MS4 Sellers	PRE SLEEP	SLEEP; LOG; POST SLEEP

DAY/NIGHT

ORBIT 190 191 192 193 194 195 196 197 198

TDRS W E Z

GND -WSS —WSS —WSS

ORB ATT -ZLV -XVV

NOTES

MSG 108 - FD13 EOM + 3 SUMMARY TIMELINE

05/25/10 04:23:00 **REPLANNED**

FD14 EOM+1

GMT 05/27/10 (147)

MET Day 012

07 08 09 10 11 12 13 14 15 16 17 18 12 13 14 15 16 17 18 19 20 21 22 23 013/00

STS-132

ORBIT	TIG
KSC 202	12/17:46
NOR 203	12/19:19
KSC 203	12/19:23
EDW 204	12/20:52
NOR 204	12/20:54
EDW 205	12/22:29

Crew	Activities
CDR Ham	POST SLEEP; GRPC; PWRUP; IMU ALIGN & VERIF; TRK -XSI; DEORBIT PREP; DEORBIT BACKOUT; ^MNVR -ZLV -YVV; WASTE; INIT; MCIU*; WASTE TERM; MVR_-ZLV; PRE SLEEP; PMC A/G
PLT Antonelli	POST SLEEP; GRPC; PWRUP; MADS*; WATCH; POST; SLEEP; DEORBIT PREP; DEORBIT BACKOUT; WATCH; PRE SLEEP
MS1 Reisman	POST SLEEP; WATCH; OCAC; STOW; AIR^; DEORBIT PREP; DEORBIT BACKOUT; WATCH; OCAC; SETUP; PRE SLEEP
MS2 Good	POST SLEEP; TEPC; PWRDN; DEORBIT PREP; DEORBIT BACKOUT; TEPC ON; PRE SLEEP
MS3 Bowen	POST SLEEP; WATCH; GIRA; STOW; DEORBIT PREP; DEORBIT BACKOUT; WATCH; GIRA INSTALL; PRE SLEEP
MS4 Sellers	POST SLEEP; WATCH; MDDK#; DEORBIT PREP; DEORBIT BACKOUT; WATCH; MDDK#; PRE SLEEP

DEORBIT # LANDING *

DAY/NIGHT

ORBIT: 198 199 200 201 202 203 204 205 206

TDRS: W E Z

GND: —WSS —WSS —WSS

ORB ATT: -ZLV -XVV | IMU | -XSI | COMM | ENTRY | -ZLV -YVV | -ZLV -XVV

NOTES:
*POWER ON
^SAMPLE
#STATUS CHECK

#D/O TIG 12/17:46

***KSC LANDING 12/18:53**

*FILTER CK
#STATUS CHECK

4

MSG 108 - FD13 EOM + 3 SUMMARY TIMELINE

05/25/10 04:23:00 **REPLANNED**

FD14 EOM+1

GMT 05/27/10 (147) 19 20 21 22 23 05/28 01 02 03 04 05 06

MET Day 013 013/00 01 02 03 04 05 06 07 08 09 10 11 12

STS-132

CDR Ham	PRE SLEEP	SLEEP		POST SLEEP	PMC A/G; POST SLEEP; GRPC; PWRUP; ♣
PLT Antonelli	PRE SLEEP	SLEEP	LOG	POST SLEEP	GRPC; PWRUP; MADS*; WATCH
MS1 Reisman	PRE SLEEP	SLEEP	LOG	POST SLEEP	
MS2 Good	PRE SLEEP	SLEEP		POST SLEEP	
MS3 Bowen	PRE SLEEP	SLEEP	LOG	POST SLEEP	
MS4 Sellers	PRE SLEEP	SLEEP	LOG	POST SLEEP	

DAY/NIGHT

ORBIT: 206 207 208 209 210 211 212 213 214

TDRS W E Z

GND: WSS WSS WSS

ORB ATT: -ZLV -XVV

NOTES: ♣IMU ALIGN; *POWER ON

MSG 108 - FD13 EOM + 3 SUMMARY TIMELINE

05/25/10 04:23:00 **REPLANNED**

FD15 EOM+2

GMT 05/28/10 (148) — MET Day 013 — 014/00

STS-132

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

CDR Ham	IMU ALIGN &	AVE RGIF	TRK -XSI	DEORBIT PREP							DEORBIT BACKOUT	^MNVR -ZLV -XVV	MCIU*			PRE SLEEP	PMC A/G	♣
PLT Antonelli	POST SLEEP			DEORBIT PREP							DEORBIT BACKOUT		WATCH			PRE SLEEP		
MS1 Reisman	⊕	WATCH	OCTAC	STOW	AIR^	DEORBIT PREP					DEORBIT BACKOUT		WATCH	OCATCH	SETUP	PRE SLEEP		
MS2 Good	POST SLEEP		TEPCO	PWRDN	DEORBIT PREP						DEORBIT BACKOUT			TEPCON		PRE SLEEP		
MS3 Bowen	POST SLEEP	WATCH	GIRA	STOW	DEORBIT PREP						DEORBIT BACKOUT		WATCH	GIRA INSTALL		PRE SLEEP		
MS4 Sellers	POST SLEEP	WATCH	MADTCH#	DEORBIT PREP							DEORBIT BACKOUT		WATCH	MADTCH#		PRE SLEEP		

DEORBIT # — LANDING *

ORBIT	TIG
KSC 217	13/16:35
KSC 218	13/18:11
EDW 219	13/19:41
NOR 219	13/19:43
EDW 220	13/21:17
NOR 220	13/21:19

DAY/NIGHT

ORBIT: 214 | 215 | 216 | 217 | 218 | 219 | 220 | 221 | 222

TDRS W E Z

GND: —WSS —WSS —WSS

ORB ATT: -XSI — COMM — ENTRY — -ZLV -XVV

NOTES:
⊕POST SLEEP
^SAMPLE
#STATUS CHECK

#D/O TIG 13/16:35
***KSC LANDING 13/17:42**

*FILTER CK
#STATUS CHECK
♣PRE SLEEP

MSG 108 - FD13 EOM + 3 SUMMARY TIMELINE

05/25/10 04:23:00

REPLANNED

FD15 EOM+2

GMT 05/28/10 (148)

MET Day 014

014/00 19 20 21 22 23 05/29 01 02 03 04 05 06 01 02 03 04 05 06 07 08 09 10 11 12

STS-132

CDR Ham	PRE SLEEP	SLEEP	POST SLEEP	PMC A/G	POST SLEEP
PLT Antonelli	PRE SLEEP	SLEEP	LOG	POST SLEEP
MS1 Reisman	PRE SLEEP	SLEEP	LOG	POST SLEEP
MS2 Good	PRE SLEEP	SLEEP	POST SLEEP
MS3 Bowen	PRE SLEEP	SLEEP	LOG	POST SLEEP
MS4 Sellers	PRE SLEEP	SLEEP	LOG	POST SLEEP

DAY/NIGHT

ORBIT: 222 | 223 | 224 | 225 | 226 | 227 | 228 | 229 | 230

TDRS W E Z

GND: -WSS —WSS —WSS

ORB ATT: -ZLV -XVV

NOTES

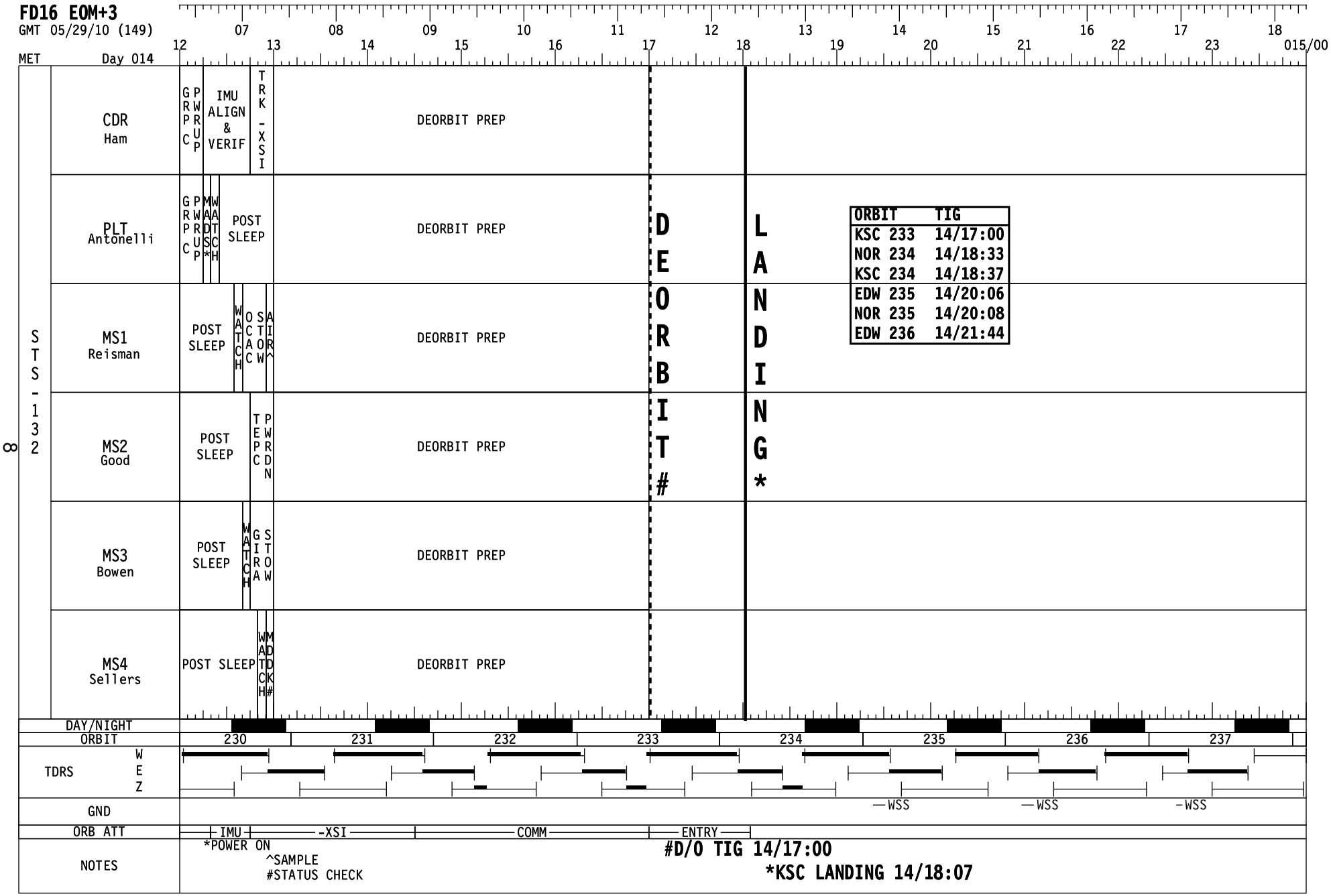
MSG 108 - FD13 EOM + 3 SUMMARY TIMELINE

05/25/10 04:23:00 **REPLANNED**

FD16 EOM+3

GMT 05/29/10 (149)

MET Day 014



ORBIT	TIG
KSC 233	14/17:00
NOR 234	14/18:33
KSC 234	14/18:37
EDW 235	14/20:06
NOR 235	14/20:08
EDW 236	14/21:44

MSG 109A - FD13 DETAILED TIMELINE STS-132 FD (13) **REPLANNED**

GMT Date 05/26 (146) | W | TDRSE | Z | D/N | DORB | ORB | MET Day 011 | STS ATT | CDR HAM | PLT ANTONELLI | MS1 REISMAN | NOTES

08:00 — 09:00 — 10:00 — 11:00 — 12:00

03:00 — 04:00 — 05:00 — 06:00

14 180 — 15 181 — 16 182

SLEEP — SLEEP — SLEEP

FD13 EZ ACTIVITIES BEFORE LEAVING FLIGHT PLAN:
√OCAC FILTER
Stow CSA-CP
TEPC (STATUS CHECK)
(ORB OPS, CREW SYSTEMS)

-ZLV -XVV

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)
√Hum Seps for H2O Accumulation

SLEEP LOGBOOK (SDBI 1634)
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

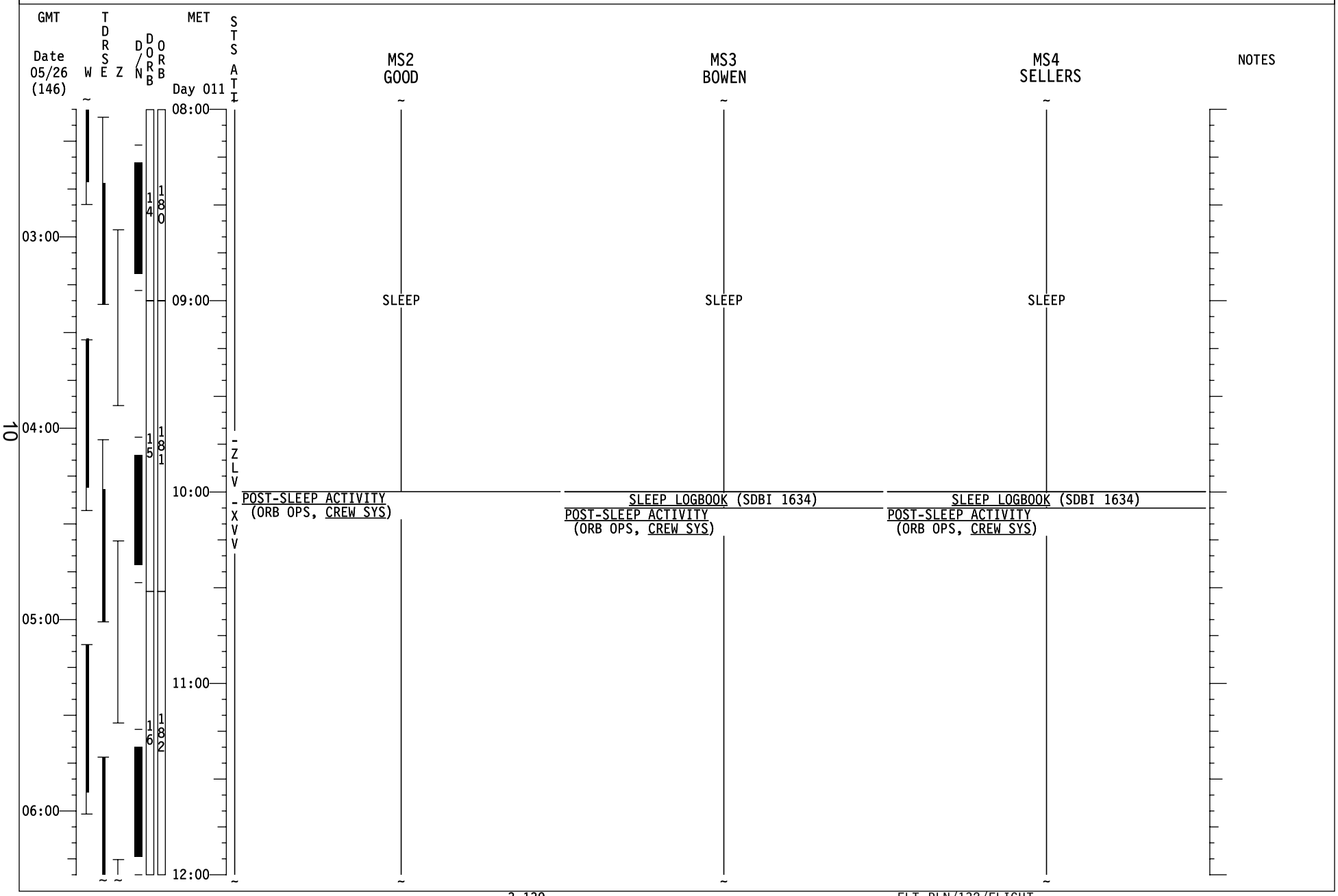
SLEEP LOGBOOK (SDBI 1634)
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

06 √UHF MODE - OFF
PRIVATE MEDICAL CONFERENCE

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

6

MSG 109A - FD13 DETAILED TIMELINE STS-132 FD (13) **REPLANNED**



MSG 109A - FD13 DETAILED TIMELINE STS-132 FD (13) **REPLANNED**

GMT Date 05/26 (146) | W | TDRSE | Z | D/N | DORB | ORB | MET Day 011 | STS ATT

CDR HAM	PLT ANTONELLI	MS1 REISMAN	NOTES
POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
	A6L MADS STRAIN GAGE - PCM ENA		
PRIORITY PWRUP GRP B (ORB PKT, PRIOR PWRDN) Step 12(IMU3),10,9,7,6(Dual G2),5,2	PRIORITY PWRUP GRP B (ORB PKT, PRIOR PWRDN) Step 12(IMU3),10,9,7,6(Dual G2),5,2		
MNVR IMU STAR ALIGN ATT A (pg 3-142) A1/AUTO/VERN Init MNVR (12:35)	DOFF ACTIWATCH (ORB OPS, SDBI)		
IMU ALIGN - S TRK (ORB OPS, GNC)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)		
MNVR IMU VERIF ATT B (pg 3-142) A1/AUTO/VERN Init MNVR			
IMU ALIGN - S TRK (ORB OPS, GNC)		DOFF ACTIWATCH (ORB OPS, SDBI)	
		OCAC STOWAGE (ORB OPS, CREW SYS)	
MNVR (TRK) -XSI ATT (COLD SOAK) TG=4 BV=5 P=184 Y=0 OM=90 A1/AUTO/VERN Init TRK (13:09)		AIR SMPL Rcd MET & loc. on bottle	

GO TO DEORBIT PREP @ 11/13:22

07:00 08:00 09:00 10:00 | 12:00 13:00 14:00 15:00 16:00 | 1 2 3 | 183 184 185 | IMU -XSI COMM

11

MSG 109A - FD13 DETAILED TIMELINE STS-132 FD (13) **REPLANNED**

GMT Date 05/26 (146) | W | TDRSE | Z | D/N | DORB | ORB | MET Day 011 | STS ATT

MS2 GOOD | MS3 BOWEN | MS4 SELLERS | NOTES

12:00 — POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

07:00 — 1 183 — IMU

13:00 — TISSUE EQUIVALENT PROPORTIONAL COUNTER (ORB OPS, CREW SYSTEMS) Powerdown

DOFF ACTIWATCH (ORB OPS, SDBI)

GIRA STOWAGE (ORB OPS, ECLS)

DOFF ACTIWATCH (ORB OPS, SDBI)

PGSC NETWORK (B.TEARDOWN) (ORB OPS, PGSC) Stow remaining PGSCs

GLACIER STATUS CHECK (Cue Card)

CGBA STATUS CHECK (Cue Card)

GO TO DEORBIT PREP @ 11/13:22

08:00

14:00 — XSI

2 184

09:00

15:00

3 185 — COMM

10:00

16:00

12

MSG 109A - FD13 DETAILED TIMELINE

REPLANNED

13

A IMU STAR ALIGN PAD

ID: -Y: 21 PROCYON
MET (11/12:17 TO 11/13:06)

ID: -Z: 29 ALKAID
MET (11/12:18 TO 11/13:10)

ANG DIFF: 87.4

DUAL S TRKR ALIGNMENT	2nd ATTITUDE (SINGLE S TRKR) -Z: 21	-Y: 29
R 202	R 109	289
P 312	P 328	308
Y 24	Y 20	10

REQD ID:

-Y: ____, -Z: ____, ANG ERR ____,____ ____

ANG:	1	2	3
ΔX	( )__,__ __	( )__,__ __	( )__,__ __
ΔY	( )__,__ __	( )__,__ __	( )__,__ __
ΔZ	( )__,__ __	( )__,__ __	( )__,__ __

EXECUTION TIME: ___/___:___:___ MET

B IMU VERIFICATION STAR ALIGN PAD

ID: -Y: 56 SUHAIL
MET (11/12:33 TO 11/13:23)

ID: -Z: 48 ZUBENESCHEMALI
MET (11/12:42 TO 11/13:26)

ANG DIFF: 85.2

DUAL S TRKR ALIGNMENT	2nd ATTITUDE (SINGLE S TRKR) -Z: 56	-Y: 48
R 240	R 152	324
P 220	P 221	226
Y 25	Y 10	12

REQD ID:

-Y: ____, -Z: ____, ANG ERR ____,____ ____

ANG:	1	2	3
ΔX	( )__,__ __	( )__,__ __	( )__,__ __
ΔY	( )__,__ __	( )__,__ __	( )__,__ __
ΔZ	( )__,__ __	( )__,__ __	( )__,__ __

EXECUTION TIME: ___/___:___:___ MET

DEORBIT CHECKLIST UPDATES:

ORBIT OPS DELTAS

PAGE	PROCEDURE	ACTION
3-8	POST-SLEEP ACTIVITY, MIDDECK ACTIVITY LIST (ORB OPS, CREW SYS)	Add step: 7. If Entry day: √Escape Pole Starboard Pip Pin's Hitch Pin installed

NOMINAL DEORBIT PREP CHECKLIST DELTAS

PAGE	TIG	CHANGE
1-33	- 02:55	In Block 7: WAS: A7U PL BAY FLOOD MID STBD - ON PORT - ON IS: A7U PL BAY FLOOD MID STBD - OFF PORT - OFF

DEORBIT PREP BACKOUT DELTAS

PAGE	ET	CHANGE
2-15	00:05	In Block 1: WAS: A7U PL BAY FLOOD MID STBD - ON PORT - ON IS: A7U PL BAY FLOOD MID STBD - OFF PORT - OFF

END OF PAGE 1 OF 1, MSG 110A

ENTRY CHECKLIST DELTAS

PAGE	PROCEDURE	ACTION
5-8	NH3 ACT (ENT, POST LDG)	Use the following NH3 Controller: L1 NH3 CNTLR A – PRI/GPC
5-22	NH3 RECONFIG (ENT, ASP EXT PWR UP)	Use the following NH3 Controller: L1 NH3 CNTLR B – SEC/ON

THIS TABLE MAY BE CUT AND PASTED OVER THE OLD OMS He PRESS/ΔV/BURN TIME TABLE, ENT PG FS 2-6

OMS He PRESS/ΔV/BURN TIME

OMS% GAGE	OMS He Press	OMS ΔV	RCS ΔV	RCS BURN MIN:SEC
33.9	2730	177	147	4:44
32	2650	166	138	4:26
30	2570	154	128	4:07
28	2490	142	118	3:48
26	2410	130	108	3:29
24	2330	118	99	3:10
22	2250	106	89	2:51
20	2170	94	79	2:31
18	2090	82	69	2:12
16	2010	70	59	1:53
14	1930	58	49	1:34
12	1850	46	39	1:14
10	1770	34	29	0:55
8	1690	22	18	0:35
6	1610	10	8	0:15

NOTE: Uses assumed vehicle weight of **219,125** lb

MSG 112A - ENTRY FIW SUMMARY

SYSTEM	FAILURE	IMPACT	WORK AROUND
OMS	A higher than expected Tk P increase was seen when using Left OMS He Press A, possibly resulting from a regulator overshoot or a failed open primary regulator.	The Left OMS He Press A is still a usable pressure path, even if the primary regulator is failed open.	Use He Press B leg for future LOMS burns, as this path has performed nominally.
RCS	L3D jet heater	If the FU injector temperature cools to 20 deg F or the OX injector temperature cools to 30 deg F, RCS RM will annunciate the jet as FAIL LEAK and it will be auto-deselected.	Jet was placed in last priority and is not expected to be used for the remainder of the mission.

END OF PAGE 1 OF 1, MSG 112A

MSG 113 - ENTRY SUMMARY

ORBIT IS 194 X 181 NM (POST SIMPLEX RADIAL BURN)
DEORBIT DELTA V WILL BE APPROXIMATELY 332 FPS, 27 DEG OUT OF PLANE

AT THE DEORBIT BURN, YOU WILL HAVE (%):
L OX = 34.0 R OX = 34.3
L FU = 34.0 R FU = 33.9

THE PREDICTED POST DEORBIT BURN OMS QUANTITIES ARE AS FOLLOWS (%):
L OX = 6.6 R OX = 7.0
L FU = 7.0 R FU = 6.7

FORWARD RCS DUMP: FUEL TO 0 %

CG AT EI: X = 1082.0
CG AT M2.5: X = 1080.9
Y = -0.1

ATMOS ITEM: 22
ELEV. SCHED: AUTO
BODY BENDING FILTER: ALT

SITE: **KSC** ORB: **186**	SITE: **KSC** ORB: **187**
CROSS RANGE WILL BE 609 NM L	CROSS RANGE WILL BE 315 NM R
ROLL REVERSAL HISTORY:	ROLL REVERSAL HISTORY:
V= 12200 FPS	V= 18000 FPS
V= 6300 FPS	V= 9400 FPS
V= 3300 FPS	V= 4100 FPS
DEORBIT TIG: 11/17:22	DEORBIT TIG: 11/18:57
LANDING APPROX: 11/18:28	LANDING APPROX: 11/20:03
WX FCST:SCT030 BKN100 BKN250	WX FCST SCT030 BKN100 BKN250
WIND FCST:	WIND FCST:
50K 280/20	50K 280/20
38K 310/20	38K 310/20
28K 300/25	28K 300/25
20K 290/10	20K 290/10
12K 330/15	12K 330/15
7K 330/15	7K 330/15
3K 340/20	3K 340/20
1K 320/15	1K 320/15
SFC 330/12p18	SFC 330/12p18
ALTIMETER: 29.86	ALTIMETER: 29.86
DENSITY ALTITUDE: 1403 FT	DENSITY ALTITUDE: 1403 FT
HAC PROCEDURES:	HAC PROCEDURES:
R OVHD TO KSC33	R OVHD TO KSC33
TURN ANGLE 320 DEG	TURN ANGLE 280 DEG

END OF PAGE 1 OF 2, MSG 113

MSG 113 - ENTRY SUMMARY

```
 AIM POINT: CI                          |  AIM POINT: CI
 SPEEDBRAKE: NOM                        |  SPEEDBRAKE: NOM
 TD 2500 FT AT 195 KTS                  |  TD 2500 FT AT 195 KTS
 3K SPEEDBRAKE: 15%                     |  3K SPEEDBRAKE: 15%
 NAV AIDS STATUS: GREEN                 |  NAV AIDS STATUS: GREEN
-----------------------------------------------------------------------
CONUS NOTAMS:
    EDW -     LAKEBED RWYS 15/33 GREEN. 18L RED.
    NOR -     LAKEBED RWYS GREEN.

24 HOUR DELAYED DEORBIT: SITE KSC ORBIT 202 TIG 12/17:46 MET

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END OF PAGE 2 OF 2, MSG 113