STS-116 / 12A.1

FD 13 Execute Package

MSG	Page(s)	Title
134A	1 - 36	FD13 - EOM+1 Flight Plan Revision **(pdf)**
135A	37 - 38	FD13 Mission Summary **(pdf)**
137	39 - 40	FD13 Water Summary Message **(pdf)**
138B	41	FD13 EECOM Updates **(pdf)**
140	42	FD13 SpaceHab Viewport Violations **(pdf)**
136	---	FD12 MMT Summary **(pdf - Electronic Only)**
139	---	FD13 PAO Event Summary **(pdf - Electronic Only)**
141	---	Sunday Funnies **(pdf - Electronic Only)**

Approved by FAO: *Terry Clancy*

Last Updated: Dec 21 2006 11:20AM GMT
JEDI *(**J**oint **E**xecute package **D**evelopment and **I**ntegration), v2.04.0003*

MSG INDEX

MSG NO.	TITLE
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MSG 137	FD13 Water Summary Message
MSG 138	FD13 EECOM Updates
MSG 139	FD13 PAO Event Summary
MSG 140	FD13 SpaceHab Viewport Violations
MSG 141	Sunday Funnies
MSG 142	Entry Day Fluid Loading (to be uplinked on Orbit 1)

1. ANDE DEPLOY WINDOW INFORMATION

   For **ANDE** deploy, the following times can be entered on pg. 487 Step 1of ANDE DEPLOY: (ASSY OPS, PAYLOAD):

   DEPLOY WINDOW OPEN MET = 011/16:35:00 *(Sunrise + 12 mins. and Ku-band Coverage)*
   DEPLOY WINDOW CLOSE MET = 011/17:07:00 *(Sunset - 10 minutes)*

2. FINAL EMAIL OPS

   Prior to stowing the Ku antenna, we will downlink your personal mail folders so that you can have access to them when you return to Houston. Please move all messages that you want to keep from your "Inbox", "Sent Items" and "Work Related" folders to your personal folder in Outlook. During the Ku pass at MET 11/19:00, we will downlink your personal folders and your mail OST files and perform one last mail synch on the ground (to send outgoing messages). The OSTs will not be uplinked after this.

3. UPDATE FOR WLE SENSOR

   The WLE Sensors are not certified for use during entry. Therefore, the WLE team will need to command the sensors to idle prior to teardown via OCA. Please contact the MCC for a GO before proceeding with DEACTIVATION AND TEARDOWN (ORB OPS, WLE SENSORS) at MET 11/21:15 for MS1.

4. SPACEHAB VIEWPORT VIOLATIONS

   MSG 140 contains the SPACEHAB viewport violations for today. Please post this next to the viewport. There are no callouts in the FLIGHT PLAN referencing these times.

5. REPLACE PAGES 2-43 THROUGH 2-48 AND 3-138 THROUGH 3-166

12/21/06 04:59:51 **REPLANNED**

GMT 12/21/06 (355) 02 03 04 05 06 07 08 09 10 11 12 13

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

STS-116

FD12

CDR/R2 POLANSKY	MNVR, PRESLP, FES*, -ZLV, -XVV, IMU, PMC A/G	PRE SLEEP	SLEEP	POST SLEEP
PLT/IV OEFELEIN		PRE SLEEP	SLEEP	SDBI POST SLEEP
MS1/R1 PATRICK	PTV11	PRE SLEEP	SLEEP	SDBI POST SLEEP
MS2/EV1 CURBEAM		PRE SLEEP	SLEEP	POST SLEEP
MS3/EV2 FUGLESANG	RAFT DEPLOY	PRE SLEEP	SLEEP	POST SLEEP
MS4 HIGGINBOTHAM	RAFT DEPLOY	PRE SLEEP - SHAB	SLEEP	POST SLEEP - SHAB
MS5 REITER		PRE SLEEP	SLEEP	POST SLEEP

DAY/NIGHT

ORBIT 174 175 176 177 178 179 180 181 182

TDRS W -171 E -46 Z -275

ORB ATT -ZLV -XVV

NOTES *ON

12/21/06 04:59:51 **REPLANNED**

GMT 12/21/06 (355) 14 15 16 17 18 19 20 21 22 23 12/22 01

MET Day 011 12 13 14 15 16 17 18 19 20 21 22 23 012/00

STS-116

FD13

CDR/R2 POLANSKY	POST SLEEP; W/B*; POST SLEEP; EECOM; CABIN STOW; FCS C/O; RCS H/F; PILOT OPS; CABIN STOW; GRPB PWRUP; CABIN STOW; MNVR; SEP^ MULT AXIS; GRPB PWRDN; MEAL; PAO EVENT; L-1 COMM; D/O BRIEF; IMU; CABIN STOW; EXERCISE; OFF DUTY; FES-I; L-1 COMM; OFF DUTY; FES-T; PRE SLEEP
PLT/IV OEFELEIN	POST SLEEP; CABIN STOW; FCS C/O; RCS H/F; PILOT OPS; FTR LD; FES*; EXERCISE; FTR LD; MEAL; PAO EVENT; D/O BRIEF; CABIN STOW; L-1 COMM; MNVR; FTR LD; CABIN STOW; OFF DUTY; PRE SLEEP
MS1/R1 PATRICK	POST SLEEP; CABIN STOW; SSV DEACT; CABIN STOW; PTV11; FES*; MPM^; PAO P/TV S/U; MEAL; PAO EVENT; D/O BRIEF; EXERCISE; CABIN STOW; WLES DEACT; OFF DUTY; PRE SLEEP
MS2/EV1 CURBEAM	POST SLEEP; FCS C/O; RCS H/F; EXERCISE; CABIN STOW; MEAL; PAO EVENT; D/O BRIEF; SIMO INIT; CABIN STOW; SIMO TERM; CABIN STOW; ERG STOW; OFF DUTY; PRE SLEEP
MS3/EV2 FUGLESANG	POST SLEEP; CABIN STOW; EXERCISE; ANDE DEPLOY; ENTRY VIDEO; MEAL; PAO EVENT; D/O BRIEF; CABIN STOW; ERG STOW; OFF DUTY; KU STO; PRE SLEEP
MS4 HIGGINBOTHAM	POST SLEEP - SHAB; EXERCISE; CABIN STOW; ANDE DEPLOY; CABIN STOW; MEAL; PAO EVENT; D/O BRIEF; FILTER CLEAN; LAUNCH ENTRY SUIT CK; RCMBNT SEAT S/U; OFF DUTY; PRE SLEEP - SHAB
MS5 REITER	POST SLEEP; CABIN STOW; EXERCISE; CABIN STOW; MEAL; PAO EVENT; D/O BRIEF; CABIN STOW; LAUNCH ENTRY SUIT CK; RCMBNT SEAT S/U; OFF DUTY; PRE SLEEP

DAY/NIGHT

ORBIT 182 183 184 185 186 187 188 189 190

TDRS W -171 E -46 Z -275

ORB ATT -ZLV -XVV -ZLV -XVV +ZLV +YVV +ZLV -XVV -ZLV -XVV

NOTES *HEATER ACT *OFF *ON ^STOW

12/21/06 04:59:51 **REPLANNED**

GMT 12/22/06 (356) 02 03 04 05 06 07 08 09 10 11 12 13

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

STS-116

FD13

CDR/R2 POLANSKY	PRE SLEEP; PMC A/G; PRE SLEEP	SLEEP	POST SLEEP	
PLT/IV OEFELEIN	PRE SLEEP	SLEEP	SDBI	POST SLEEP
MS1/R1 PATRICK	PRE SLEEP	SLEEP	SDBI	POST SLEEP
MS2/EV1 CURBEAM	PRE SLEEP	SLEEP	POST SLEEP	
MS3/EV2 FUGLESANG	PRE SLEEP	SLEEP	POST SLEEP	
MS4 HIGGINBOTHAM	PRE SLEEP - SHAB	SLEEP	POST SLEEP - SHAB	
MS5 REITER	PRE SLEEP; PMC A/G; PRE SLEEP	SLEEP	POST SLEEP	

DAY/NIGHT

ORBIT 190 191 192 193 194 195 196 197 198

TDRS W -171 E -46 Z -275

ORB ATT -ZLV -XVV

NOTES

GMT 12/22/06 (356) 14 15 16 17 18 19 20 21 22 23 12/23 01

MET Day 012 12 13 14 15 16 17 18 19 20 21 22 23 013/00

STS-116

FD14

CDR/R2 POLANSKY	POST SLEEP	PMC A/G	GRPB	PWRUP	IMU ALIGN & VERIF	-XSI	DEORBIT PREP	DEORBIT PREP	KSC LANDING	DEORBIT PREP BACKOUT	GRPC	PWRDN	PRE SLEEP
PLT/IV OEFELEIN	POST SLEEP	GRPB	PWRUP	WATCH	FMK	STOW	DEORBIT PREP	DEORBIT PREP	KSC LANDING	DEORBIT PREP BACKOUT	GRPC	PWRDN	WATCH	PRE SLEEP
MS1/R1 PATRICK	POST SLEEP	WATCH	GSTRAW	OSTACW	TEPC	DEORBIT PREP	DEORBIT PREP	KSC LANDING	DEORBIT PREP BACKOUT	WATCH	PRE SLEEP
MS2/EV1 CURBEAM	POST SLEEP	PGSC	DEACT	PRNTR	STOW	DEORBIT PREP	DEORBIT PREP	KSC LANDING	DEORBIT PREP BACKOUT	PRE SLEEP
MS3/EV2 FUGLESANG	POST SLEEP	SHAB ENTRY PREP	DEORBIT PREP	DEORBIT PREP	KSC LANDING	DEORBIT PREP BACKOUT	PRE SLEEP
MS4 HIGGINBOTHAM	POST SLEEP - SHAB	SHAB ENTRY PREP	DEORBIT PREP	DEORBIT PREP	KSC LANDING	DEORBIT PREP BACKOUT	PRE SLEEP
MS5 REITER	POST SLEEP	DEORBIT PREP	DEORBIT PREP	KSC LANDING	DEORBIT PREP BACKOUT	PRE SLEEP

DEORBIT BURN*

B/U D/O BURN

Orbit	TIG
~~K202~~	~~EOM 12/18:01~~
E203	12/19:32
N203	12/19:33
K203	12/19:38
E204	12/21:07
N204	12/21:09

DAY/NIGHT

ORBIT 198 199 200 201 202 203 204 205 206

TDRS W -171 E -46 Z -275

ORB ATT -ZLV -XVV IMU -XSI COMM ENTRY

NOTES *MIDODRINE

EOM + 1

12/21/06 04:59:51

REPLANNED

GMT 12/23/06 (357) 02 03 04 05 06 07 08 09 10 11 12 13

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

STS-116

FD14

CDR/R2 POLANSKY	PMC A/G	PRE SLEEP	SLEEP	POST SLEEP	PMC A/G; GRPC; PWRUP; ♣
PLT/IV OEFELEIN	PRE SLEEP		SLEEP	SDBI; POST SLEEP	GRPC; PWRUP; AIRC; WATCH
MS1/R1 PATRICK	PRE SLEEP		SLEEP	SDBI; POST SLEEP	
MS2/EV1 CURBEAM	PRE SLEEP		SLEEP	POST SLEEP	
MS3/EV2 FUGLESANG	PRE SLEEP		SLEEP	POST SLEEP	
MS4 HIGGINBOTHAM	PRE SLEEP		SLEEP	POST SLEEP	
MS5 REITER	PRE SLEEP		SLEEP	POST SLEEP	

DAY/NIGHT

ORBIT: 206 207 208 209 210 211 212 213 214

TDRS: W -171, E -46, Z -275

ORB ATT

NOTES: ♣IMU ALIGN

EOM + 1

12/21/06 04:59:51

REPLANNED

GMT 12/23/06 (357) 14 15 16 17 18 19 20 21 22 23 12/24 01

MET Day 013 12 13 14 15 16 17 18 19 20 21 22 23 014/00

STS-116

FD15

CDR/R2 POLANSKY	IMU ALIGN & AVERIF	-XSI	DEORBIT PREP	
PLT/IV OEFELEIN			DEORBIT PREP	
MS1/R1 PATRICK	POST SLEEP	WATCH	DEORBIT PREP	
MS2/EV1 CURBEAM	POST SLEEP		DEORBIT PREP	
MS3/EV2 FUGLESANG	POST SLEEP		DEORBIT PREP	
MS4 HIGGINBOTHAM	POST SLEEP		DEORBIT PREP	
MS5 REITER	POST SLEEP		DEORBIT PREP	

DEORBIT BURN*

KSC LANDING

B/U D/O BURN

B/U D/O BURN

B/U D/O BURN

Orbit	TIG
K217	EOM+1 13/16:44
N218	13/18:16
K218	13/18:20
E219	13/19:49
N219	13/19:51
E220	13/21:25
N220^	13/21:29

^Night Landing

DAY/NIGHT

ORBIT 214 215 216 217 218 219 220 221 222

TDRS W -171 E -46 Z -275

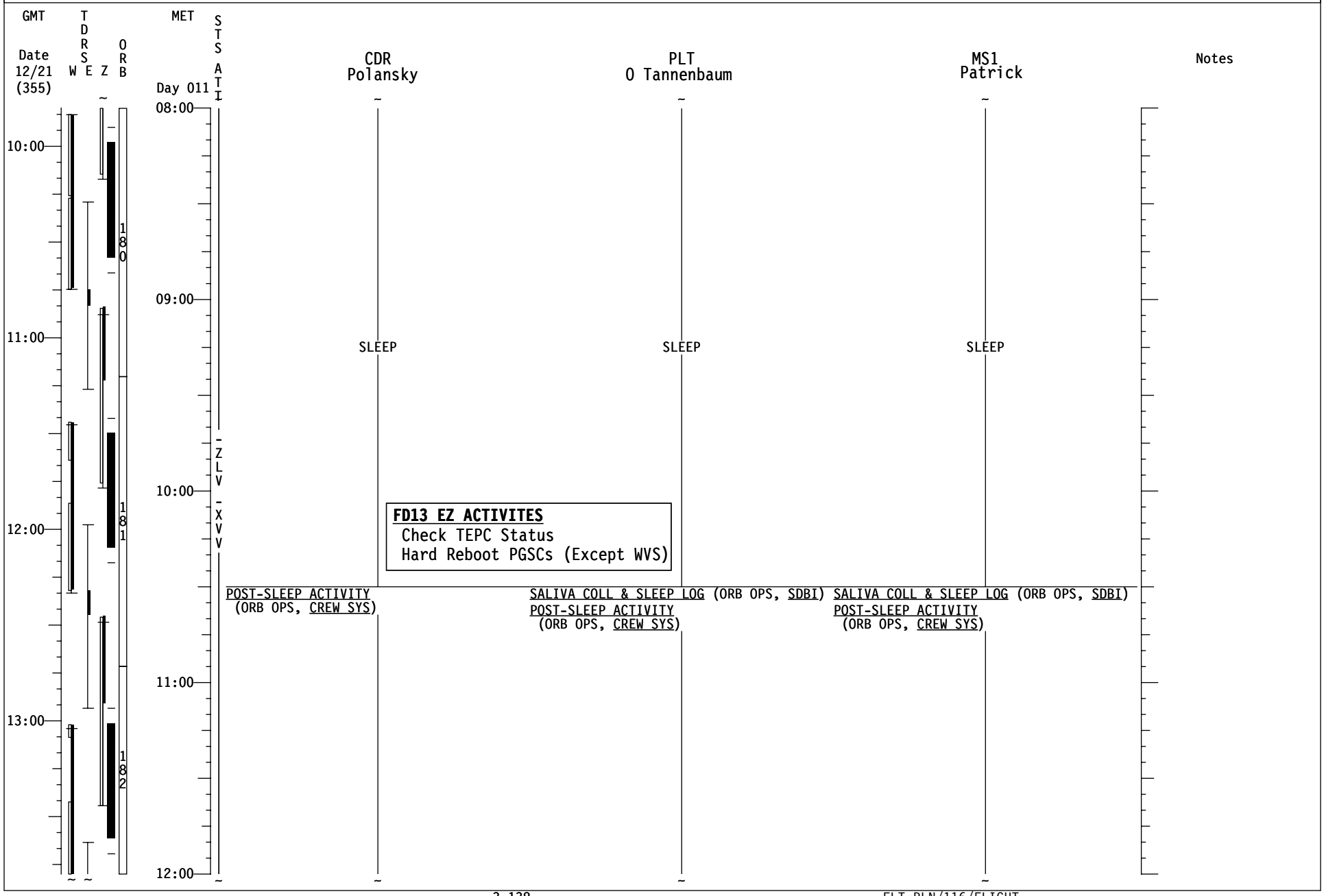
ORB ATT

NOTES

*MIDODRINE

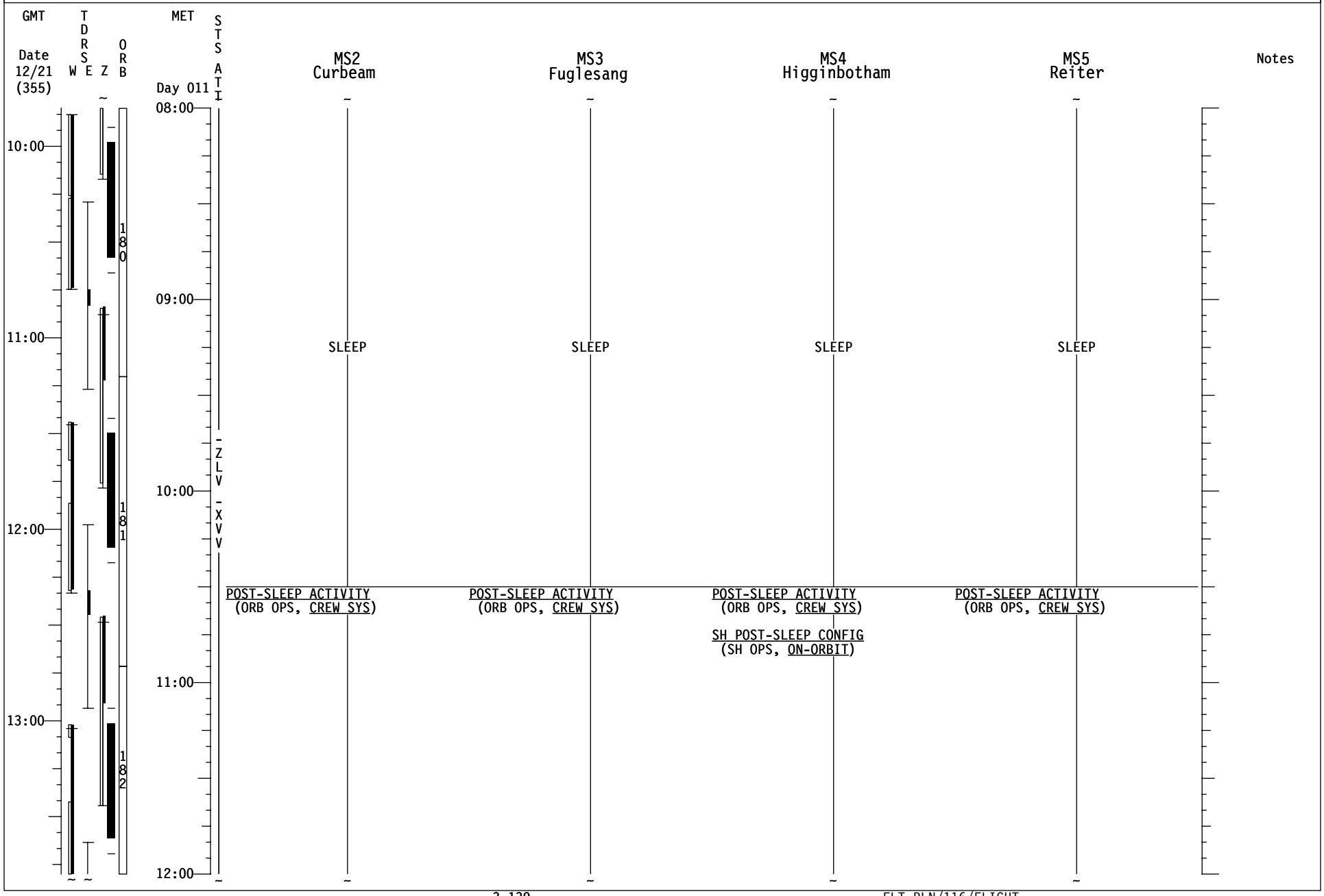
STS-116 FD13

REPLANNED



STS-116 FD13

REPLANNED



STS-116 FD13

REPLANNED

GMT Date 12/21 (355) | TDRS W E Z | ORB | MET Day 011 | STS ATI

CDR Polansky | PLT O Tannenbaum | MS1 Patrick | Notes

12:00

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) — CDR

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) — PLT

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) — MS1

FD13 CABIN STOW ACTIVITES
- Remove loose items stored in A/L
- Perform SEAT INSTALLATION
- Perform ENTRY STOWAGE (FLTS W/RETN NET) (REF DATA, ENT STOW)

W/B STEAM VENT HTR ACT [A]

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)

[A] R2 √BLR CNTLR/HTR(three) -B
PWR (three) -ON

14:00

EECOM UPDATES REF MSG 138

13:00

CABIN CONFIG/STOW — CDR

CABIN CONFIG/STOW — PLT

FCS CHECKOUT (ORB OPS, GNC) — CDR

FCS CHECKOUT (ORB OPS, GNC) — PLT

TFL 161

-ZLV -XVV

14:00

CABIN CONFIG/STOW — MS1

RCS HOT FIRE TEST (ORB OPS, RCS) — CDR

RCS HOT FIRE TEST (ORB OPS, RCS) — PLT

TFL 184

PILOT WITH RHC (ORB OPS, PGSC) — CDR

PILOT WITH RHC (ORB OPS, PGSC) — PLT

15:00

SSV DEACTIVATION (PHOTO/TV, SSV) — MS1

CABIN CONFIG/STOW — MS1

CABIN CONFIG/STOW — CDR

FUTR LOADED MNVR ANDE (DEPLOY)
TG=2 BV=5 P=189 Y=3 OM=70 A1/AUTO/VERN Init TRK(16:15) — PLT

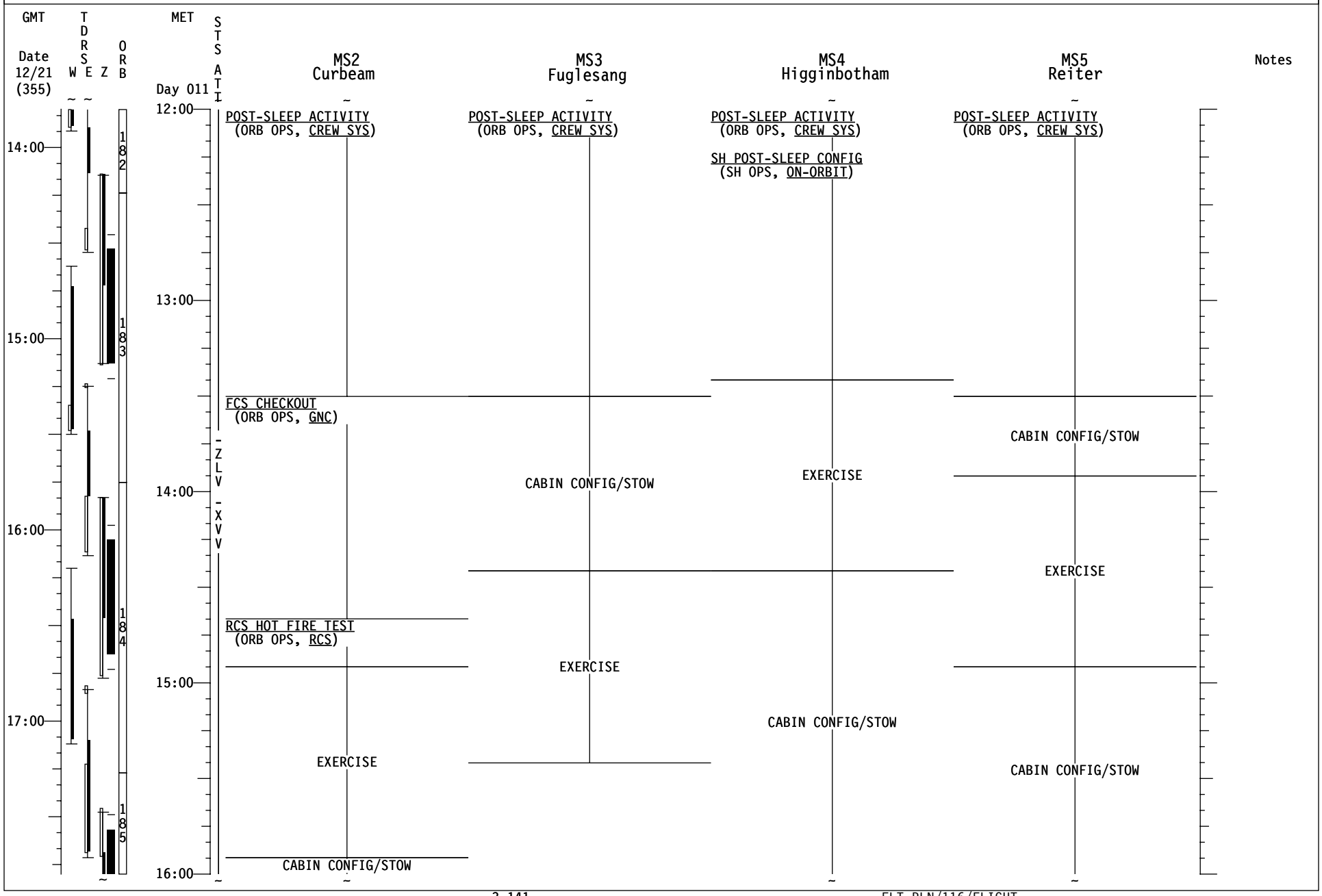
16:00

14:00 | 15:00 | 16:00 | 17:00

182 | 183 | 184 | 185

STS-116 FD13

REPLANNED



STS-116 FD13

REPLANNED

GMT Date 12/21 (355) | TDRS W E Z | ORB | MET Day 011 | STS ATI | CDR Polansky | PLT O Tannenbaum | MS1 Patrick | Notes

18:00 — 185

19:00 — 186

20:00 — 187

21:00

16:00 — ANDE

17:00 — -ZLV -XVV

18:00 — +ZLV +YVV

19:00

20:00

CDR Polansky

CABIN CONFIG/STOW

PRIORITY PWRUP GRP B
(ORB PKT, PRIOR PWRDN)
Steps 10,9,6(Dual G2) & 5

CABIN CONFIG/STOW

ON MCC GO:MNVR (TRK) -ZLV -XVV [A]
ON-ORBIT MULTI-AXIS RCS BURN
(ORB OPS, RCS)

< ANDE SEP TIG (17:05)

PRTY PWRDN GRP B
(ORB PKT, PRIOR PWRDN)
Steps 5,6(Single G2),9,10

MEAL

PUBLIC AFFAIRS EVENT
KU TDRW (17:53-18:32)
REF MSG 139

LANDING-1 COMM C/O (ORB OPS, COMM/INST)
MLA AOS: 18:34 LOS: 18:42

DEORBIT PREP BRIEFING

IMU STAR OF OPPTY ALIGN (ORB OPS, GNC)

CABIN CONFIG/STOW

PLT O Tannenbaum

L1 FLASH EVAP CNTLR PRI A -OFF

EXERCISE

[A] TG=2 BV=3 OM=0
A1/AUTO/VERN (16:55) INIT TRK

FUTURE LOADED MNVR +ZLV +YVV
TG=2 BV=5 P=270 Y=0 OM=270
A1/AUTO/VERN (17:50) Init TRK

MEAL

PUBLIC AFFAIRS EVENT
KU TDRW (17:57-18:32)
REF MSG 139

DEORBIT PREP BRIEFING

CABIN CONFIG/STOW

MS1 Patrick

CABIN CONFIG/STOW

P/TV11 DEPLOYABLE PAYLOADS (P/TV,SCENES)
Perform OPS

ON MCC GO:L1 FLASH EVAP CNTLR PRI A -ON
RMS PWRDN(PDRS,RMS PWRDN)Steps 3,5-7
ANALOG PAO CC
(PHOTO/TV, SONY PD100)

MEAL

PUBLIC AFFAIRS EVENT
KU TDRW (17:57-18:32)
REF MSG 139

DEORBIT PREP BRIEFING

EXERCISE

Notes

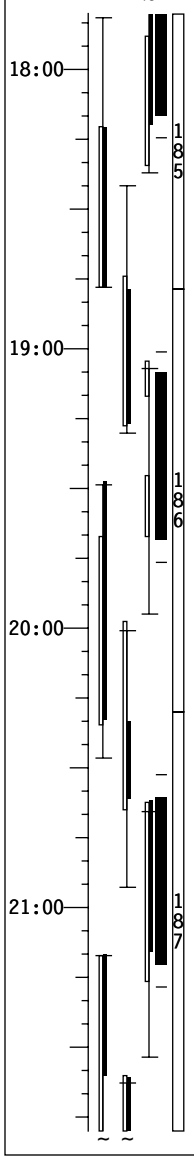
UPLINK
β21 + Box F1
-150<AZ<30
-90<EL<-25

UPLINK
β21 + Mask

STS-116 FD13

REPLANNED

GMT Date 12/21 (355) | TDRS W E Z | ORB | MET Day 011 | STS ATI | MS2 Curbeam | MS3 Fuglesang | MS4 Higginbotham | MS5 Reiter | Notes



MET	STS ATI	MS2 Curbeam	MS3 Fuglesang	MS4 Higginbotham	MS5 Reiter	Notes
16:00	ANDE			CABIN CONFIG/STOW		
			ICU-ANDE DEPLOY (ASSY OPS, PAYLOAD) REF MSG 134, Item 1	ICU-ANDE DEPLOY (ASSY OPS, PAYLOAD) REF MSG 134, Item 1		
		CABIN CONFIG/STOW			CABIN CONFIG/STOW	
			ENTRY VIDEO (PHOTO/TV, MINI-CAM) Perform SETUP			
				CABIN CONFIG/STOW		
17:00	-ZLV -XVV					
		MEAL	MEAL	MEAL	MEAL	
18:00						
		PUBLIC AFFAIRS EVENT KU TDRW (17:53-18:32) REF MSG 139	PUBLIC AFFAIRS EVENT KU TDRW (17:53-18:32) REF MSG 139	PUBLIC AFFAIRS EVENT KU TDRW (17:53-18:32) REF MSG 139	PUBLIC AFFAIRS EVENT KU TDRW (17:53-18:32) REF MSG 139	
	+ZLV +YVV					
19:00		DEORBIT PREP BRIEFING	DEORBIT PREP BRIEFING	DEORBIT PREP BRIEFING	DEORBIT PREP BRIEFING	
		SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) Initiate Supply/Waste Dump REF MSG 137		FILTER CLEANING (IFM, SCHEDULED MAINTENANCE) REF MSG 122		UPDATE H2O SPLY & WASTE DUMP QTY
			CABIN CONFIG/STOW		CABIN CONFIG/STOW	
		CABIN CONFIG/STOW				
20:00						

STS-116 FD13

REPLANNED

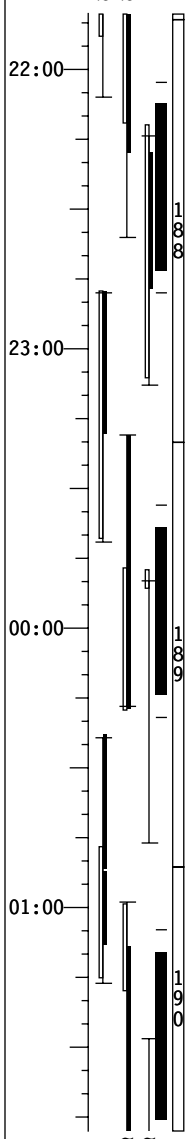
GMT Date 12/21 (355) | TDRS W E Z | ORB 188 189 190 | MET Day 011 | STS ATT +ZLV -XVV -ZLV -XVV

CDR Polansky	PLT O Tannenbaum	MS1 Patrick	Notes
CABIN CONFIG/STOW	CABIN CONFIG/STOW LANDING-1 COMM C/O (ORB OPS, COMM/INST) WSSH AOS: 20:06 LOS: 20:13	EXERCISE	
	MNVR (TRK) +ZLV -XVV A FUTURE LOADED MNVR -ZLV -XVV TG=2 BV=3 OM=0 A1/AUTO/VERN (21:50) Init TRK	A TG=2 BV=5 P=270 Y=0 OM=180 A1/AUTO/VERN INIT TRK	
EXERCISE		CABIN CONFIG/STOW	
	CABIN CONFIG/STOW		
OFF DUTY		DEACTIVATION AND TEARDOWN (ORB OPS, WLE SENSORS) REF MSG 134, Item 3	
SUPPLY WATER DUMP USING FES F LANDING-1 COMM C/O (ORB OPS, COMM/INST) DFR AOS: 21:39 LOS: 21:47			F SUPPLY WATER DUMP USING FES (ORB OPS, ECLS) On MCC GO: Step 1 using FES PRI A REF MSG 137
	OFF DUTY	OFF DUTY	
OFF DUTY			
	FD13 ENTRY COOLING CONFIG PRIOR TO PRESLEEP R12 √VPU PWR -OFF (LED off) Minimize use of P/TV equipment Dim cabin lighting to 25%		
SUPPLY WATER DUMP USING FES G PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	G SUPPLY WATER DUMP USING FES (ORB OPS, ECLS) On MCC GO: Step 2 w/FES PRI A reqd REF MSG 137

STS-116 FD13

REPLANNED

GMT Date 12/21 (355) | TDRS W E Z | ORB | MET Day 011 | STS ATI | MS2 Curbeam | MS3 Fuglesang | MS4 Higginbotham | MS5 Reiter | Notes



MET	MS2 Curbeam	MS3 Fuglesang	MS4 Higginbotham	MS5 Reiter
20:00	CABIN CONFIG/STOW SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) Terminate Supply/Waste Dump REF MSG 137	CABIN CONFIG/STOW	LAUNCH ENTRY SUIT CHECK Verify Fit	LAUNCH ENTRY SUIT CHECK Verify Fit
	CABIN CONFIG/STOW			
21:00	CYCLE ERGOMETER OPS (ORB OPS, CREW SYS) Perform RECONFIG/STOW	CYCLE ERGOMETER OPS (ORB OPS, CREW SYS) Perform RECONFIG/STOW	RECUMBENT SEAT KIT INSTALL (ORB OPS, RSK INSTALL CC)	RECUMBENT SEAT KIT INSTALL (ORB OPS, RSK INSTALL CC)
22:00	OFF DUTY	OFF DUTY	OFF DUTY	OFF DUTY
23:00				
00:00	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	KU ANT STOW (ORB OPS,COMM/INST) Deactivate CCTV PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS) SH PRE-SLEEP CONFIG (SH OPS, ON-ORBIT)	PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

STS-116 FD13

REPLANNED

GMT Date 12/22 (356) | TDRS W E Z | ORB | MET Day 012 | STS ATI | CDR Polansky | PLT O Tannenbaum | MS1 Patrick | Notes

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

190 191 192 193

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

-ZLV-XVV

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

06 √UHF MODE - OFF
PRIVATE MEDICAL CONFERENCE

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

SLEEP

STS-116 FD13

REPLANNED

GMT Date 12/22 (356) | TDRS W E Z | ORB | MET Day 012 | STS ATI | MS2 Curbeam | MS3 Fuglesang | MS4 Higginbotham | MS5 Reiter | Notes

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

190 191 192 193

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

-ZLV -XVV

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

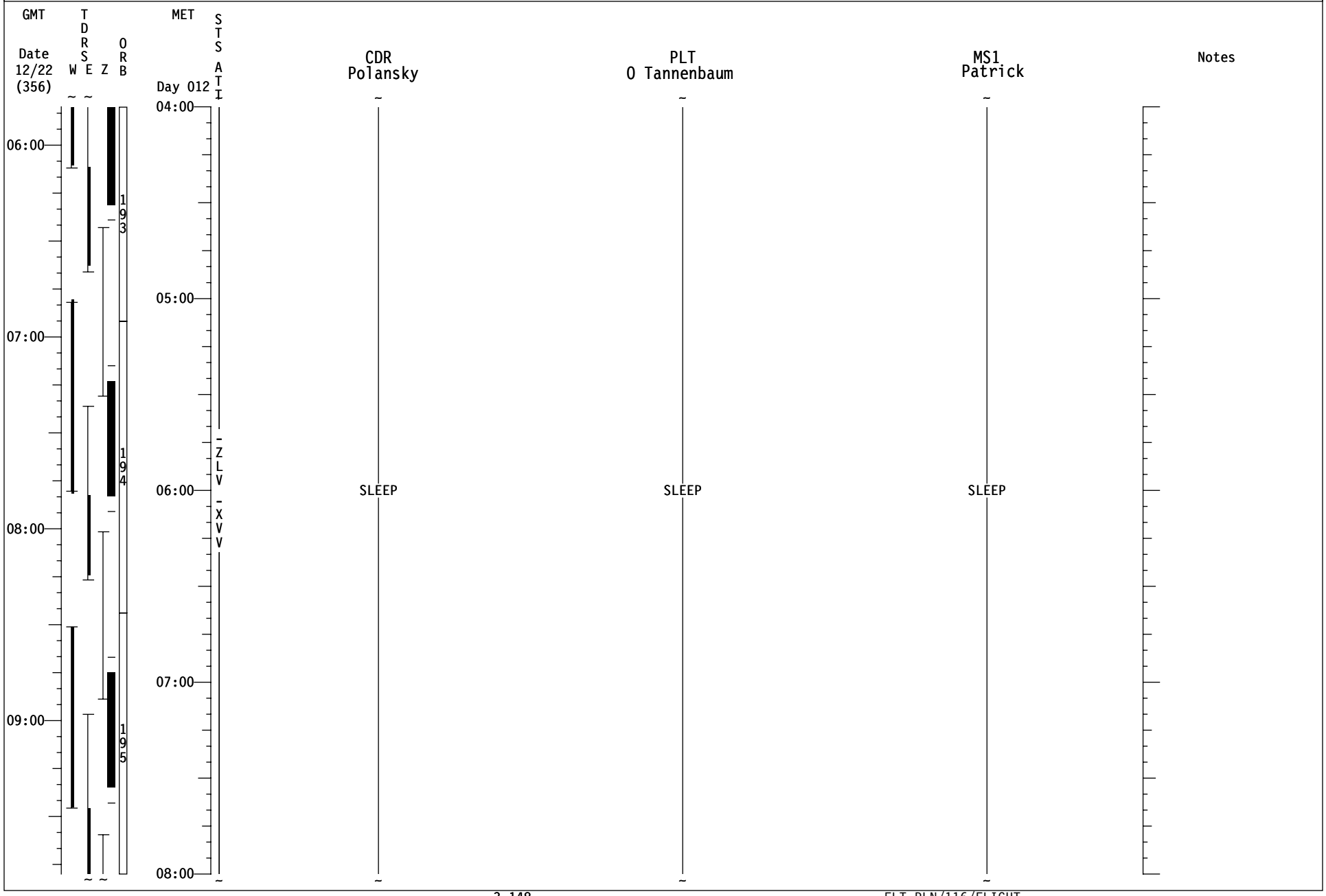
SH PRE-SLEEP CONFIG (SH OPS, ON-ORBIT)

06 √UHF MODE - OFF
PRIVATE MEDICAL CONFERENCE

SLEEP

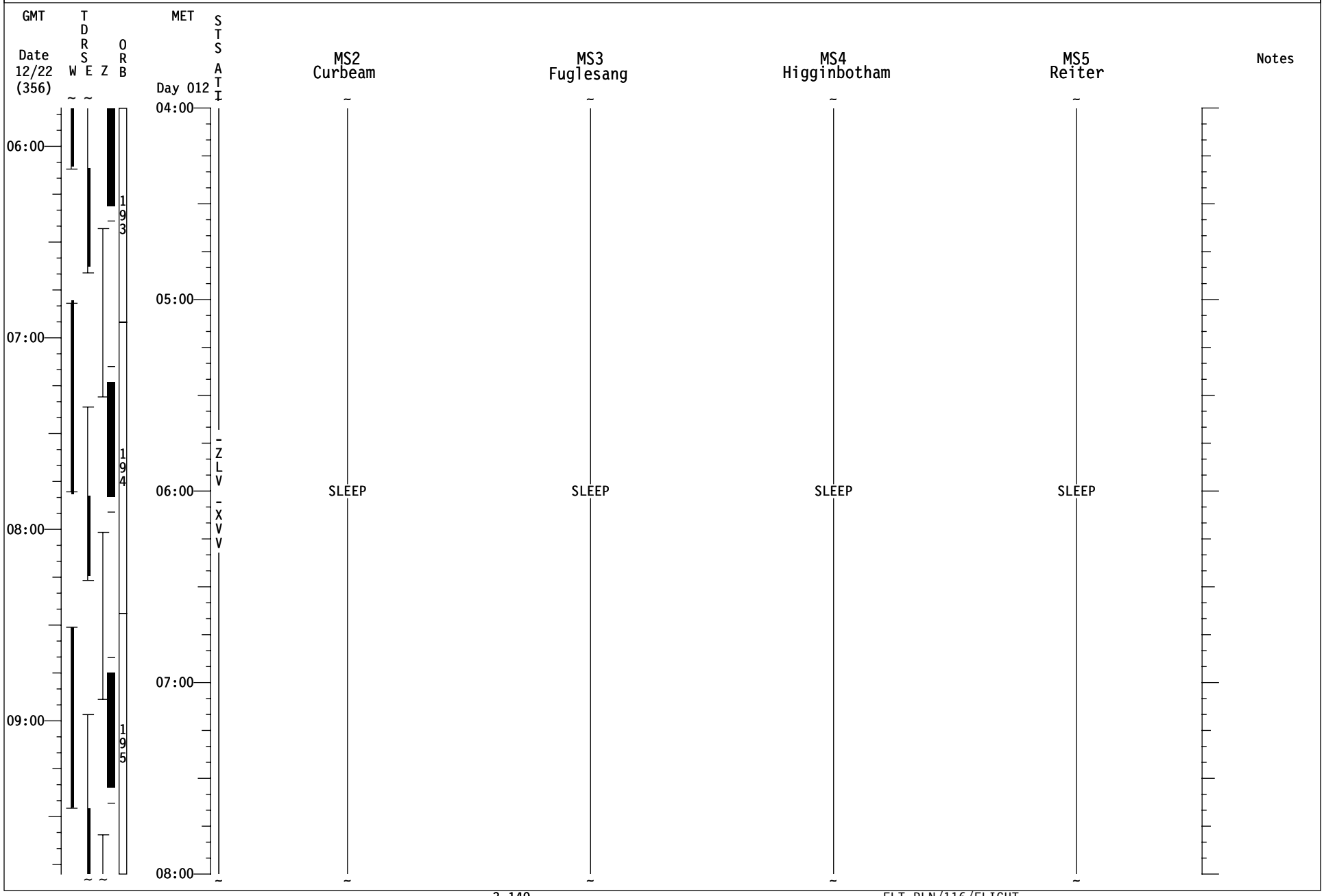
STS-116 FD13

REPLANNED



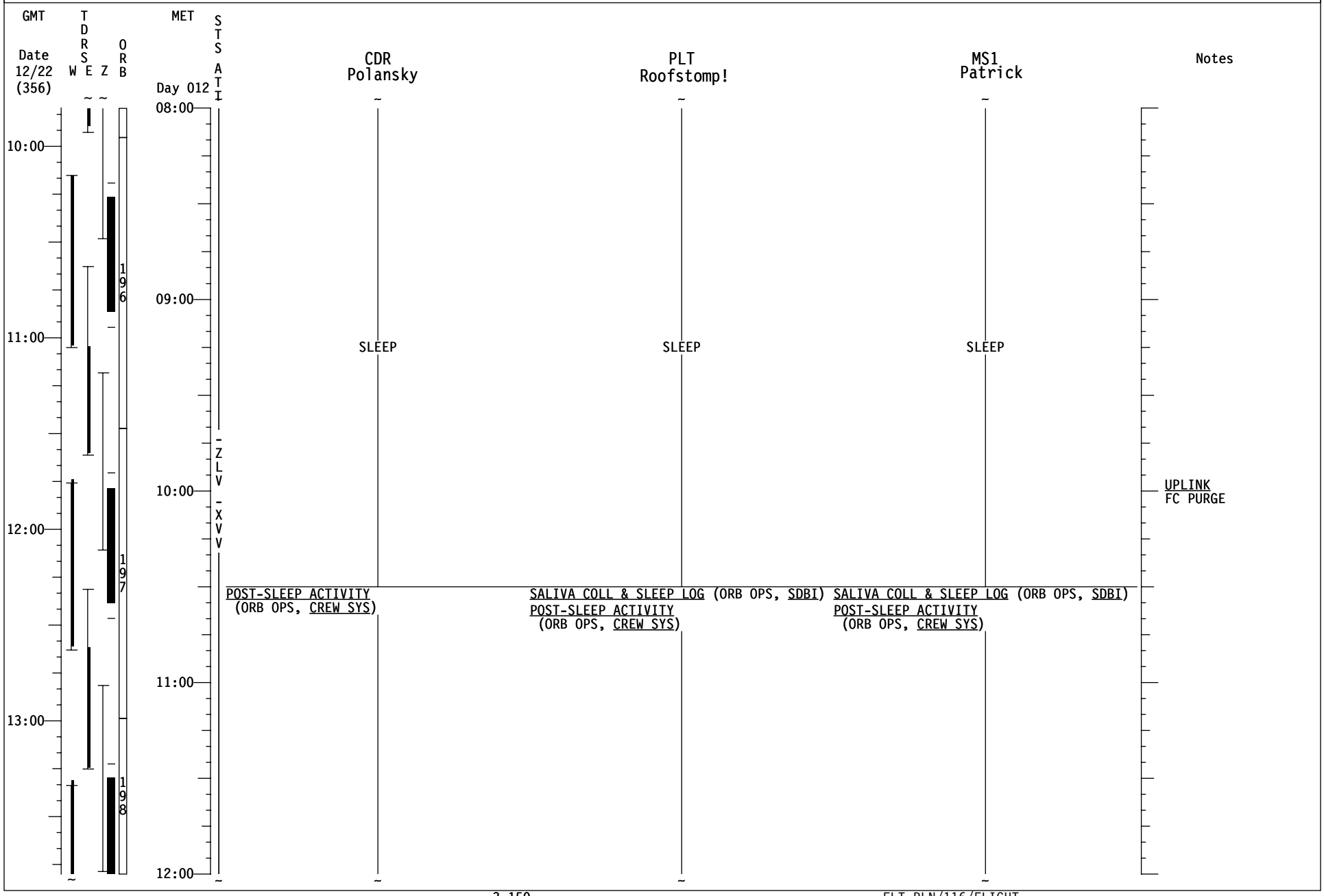
STS-116 FD13

REPLANNED



STS-116 FD14

REPLANNED



STS-116 FD14

REPLANNED

GMT Date 12/22 (356) | TDRSE W | Z | ORB | MET Day 012 | STS ATI | MS2 Curbeam | MS3 Fuglesang | MS4 Higginbotham | MS5 Reiter | Notes

08:00
09:00
10:00
11:00
12:00
13:00

196
197
198

-ZLV-XVV

SLEEP | SLEEP | SLEEP | SLEEP

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)

SH POST-SLEEP CONFIG (SH OPS, ON-ORBIT)

STS-116 FD14

REPLANNED

GMT Date 12/22 (356) | TDRS W E Z | ORB 198 199 200 201

MET Day 012 | STS ATI -ZLV -XVV IMU -XSI

MET	CDR Polansky	PLT Roofstomp!	MS1 Patrick	Notes
12:00	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
			FD14 EZ ACTIVITES BEFORE LEAVING FLT PLN FLUID LOADING PREP Fill drink containers per MSG 142 Check TEPC Status Stow CSA-CP	
	06 √UHF MODE - OFF PRIVATE MEDICAL CONFERENCE			
	PRTY PWRUP GRP B (ORB PKT, PRIOR PWRDN) Dual G2 (In step 12, Recover IMU 3)	PRTY PWRUP GRP B (ORB PKT, PRIOR PWRDN) Dual G2 (In step 12, Recover IMU 3)		
13:00	MNVR IMU STAR ALIGN ATT A (pg.3-166) A1/AUTO/VERN Init MNVR (13:01) IMU ALIGN - S TRK (ORB OPS, GNC) MNVR IMU VERIF ATT B (pg.3-166) A1/AUTO/VERN Init MNVR IMU ALIGN - S TRK (ORB OPS,GNC),Step 5	AIR SAMPLE; Rcd MET and loc. on bottle SLEEP-WAKE ACTIGRAPHY (ORB OPS, SDBI) Step B	SLEEP-WAKE ACTIGRAPHY (ORB OPS, SDBI) Step B GIRA STOWAGE (ORB OPS, ECLS)	
			OCAC STOWAGE (ORB OPS, CREW SYS)	
	MNVR (TRK) -XSI ATT TG=4 BV=5 P=184 Y=0 OM=270 A1/AUTO/VERN (13:45)Init TRK	FORMALDEHYDE MONITOR KIT (ORB OPS, CREW SYS) Perform Steps 7-11	TISSUE EQUIVALENT PROPORTIONAL COUNTER (TEPC) (ORB OPS, CREW SYSTEMS) Perform POWERDOWN	
14:00				
	GO TO DEORBIT PREP AT 12/14:01			
15:00	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	
16:00				

STS-116 FD14

REPLANNED

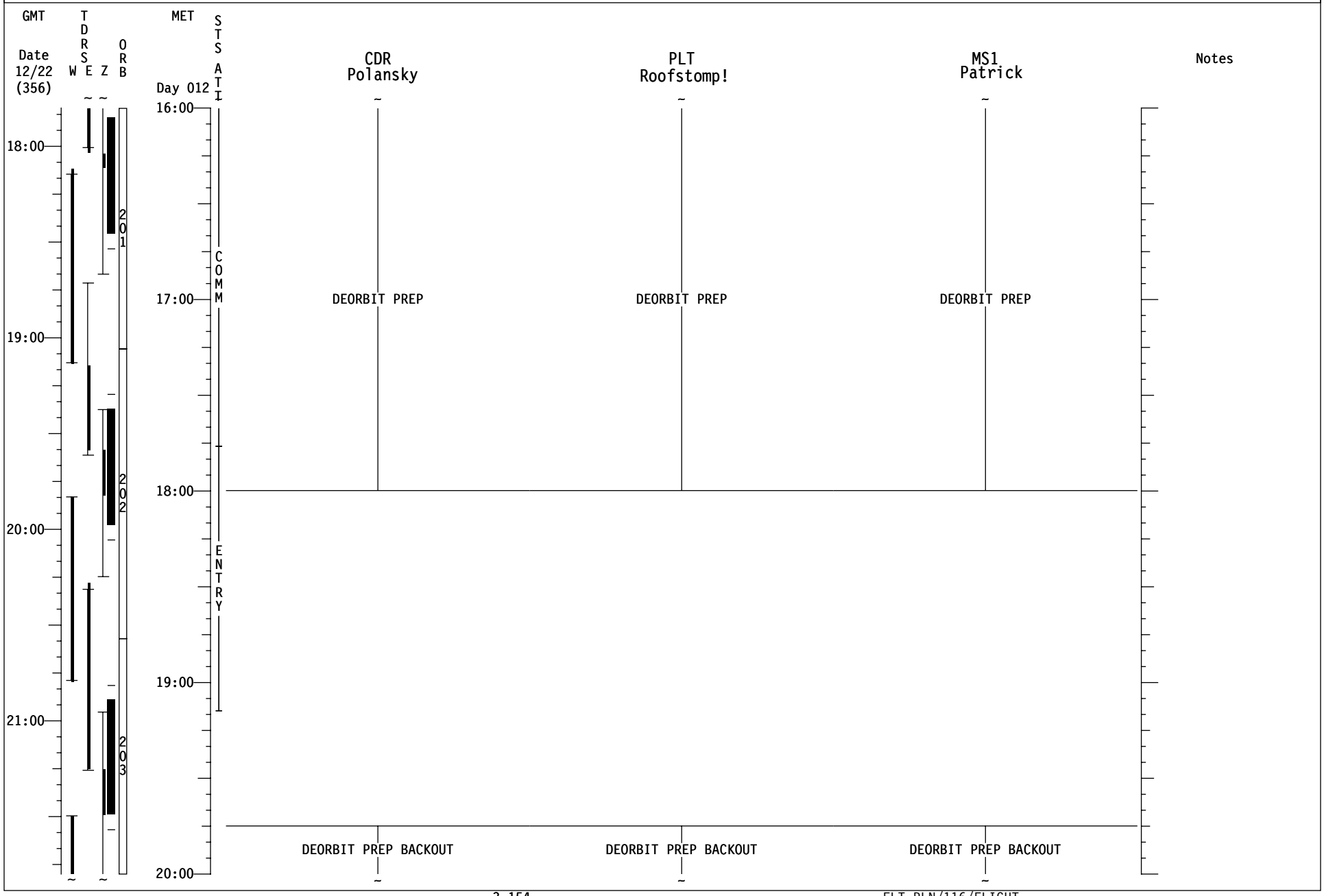
GMT Date 12/22 (356) | TDRS W E Z | ORB 198 199 200 201 | MET Day 012 | STS ATI -ZLV -XVV IMU -XSI

MET	MS2 Curbeam	MS3 Fuglesang	MS4 Higginbotham	MS5 Reiter	Notes
12:00	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) SH POST-SLEEP CONFIG (SH OPS, ON-ORBIT)	POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
13:00		SPACEHAB ENTRY PREP MODULE CLOSEOUT TUNNEL CONFIG BOOSTER FAN BYPASS TEARDOWN FOR SHAB ENTRY SYSTEM CONFIG (SH OPS, ENTRY PREP)	SPACEHAB ENTRY PREP MODULE CLOSEOUT TUNNEL CONFIG BOOSTER FAN BYPASS TEARDOWN FOR SHAB ENTRY SYSTEM CONFIG (SH OPS, ENTRY PREP)		
	PGSC DEACT (ORB OPS, PGSC)				
	COLOR PRINTER STOW (ORB OPS, PGSC)				
14:00					
15:00	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	
16:00					

GO TO DEORBIT PREP AT 12/14:01

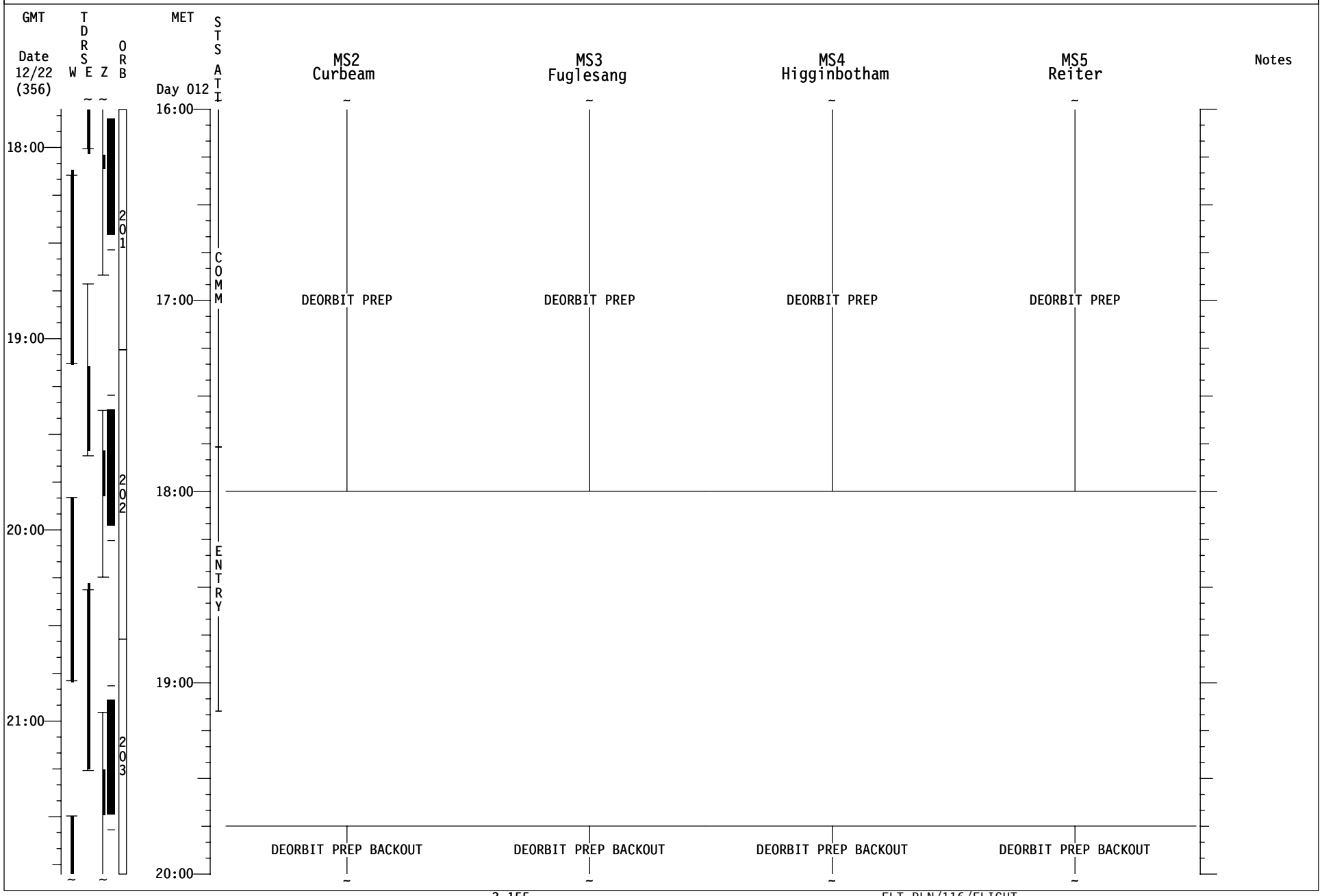
STS-116 FD14

REPLANNED



STS-116 FD14

REPLANNED



STS-116 FD14

REPLANNED

GMT Date 12/22 (356) | T D R S W E Z | O R B | MET Day 012 | S T S A T T

CDR Polansky | PLT Roofstomp! | MS1 Patrick | Notes

20:00 — 21:00 — 22:00 — 23:00 — 00:00 — 01:00

ORB 203 — 204 — 205 — 206

DEORBIT PREP BACKOUT (CDR, PLT, MS1)

FD14 ENTRY COOLING CONFIG PRIOR TO PRESLEEP
R12 √VPU PWR -OFF (LED off)
Minimize use of P/TV equipment
Dim cabin lighting to 25%

PRIORITY PWRDN GROUP C (ORB PKT, PRIOR PWRDN) Omit step 10 (CDR, PLT)

SLEEP-WAKE ACTIGRAPHY (ORB OPS, SDBI) Step A (PLT, MS1)

SLEEP-WAKE ACTIGRAPHY (ORB OPS, SDBI) Step A (CDR, PLT)

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS) (CDR, PLT, MS1)

STS-116 FD14

REPLANNED

GMT Date 12/22 (356) | T D R S W E Z | O R B | MET Day 012 | S T S A T T

MS2 Curbeam | MS3 Fuglesang | MS4 Higginbotham | MS5 Reiter | Notes

22:00 — 203
23:00 — 204
00:00 — 205
01:00 — 206

20:00 — DEORBIT PREP BACKOUT
21:00 — DEORBIT PREP BACKOUT
22:00 — PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)
23:00 — PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)
00:00 — PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS)

STS-116 FD14

REPLANNED

GMT Date 12/23 (357) | T D R S W E Z | O R B | MET Day 013 | STS ATT

CDR Polansky | PLT Roofstomp! | MS1 Patrick | Notes

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

206 207 208

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

06 √UHF MODE - OFF
PRIVATE MEDICAL CONFERENCE

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

PRE-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

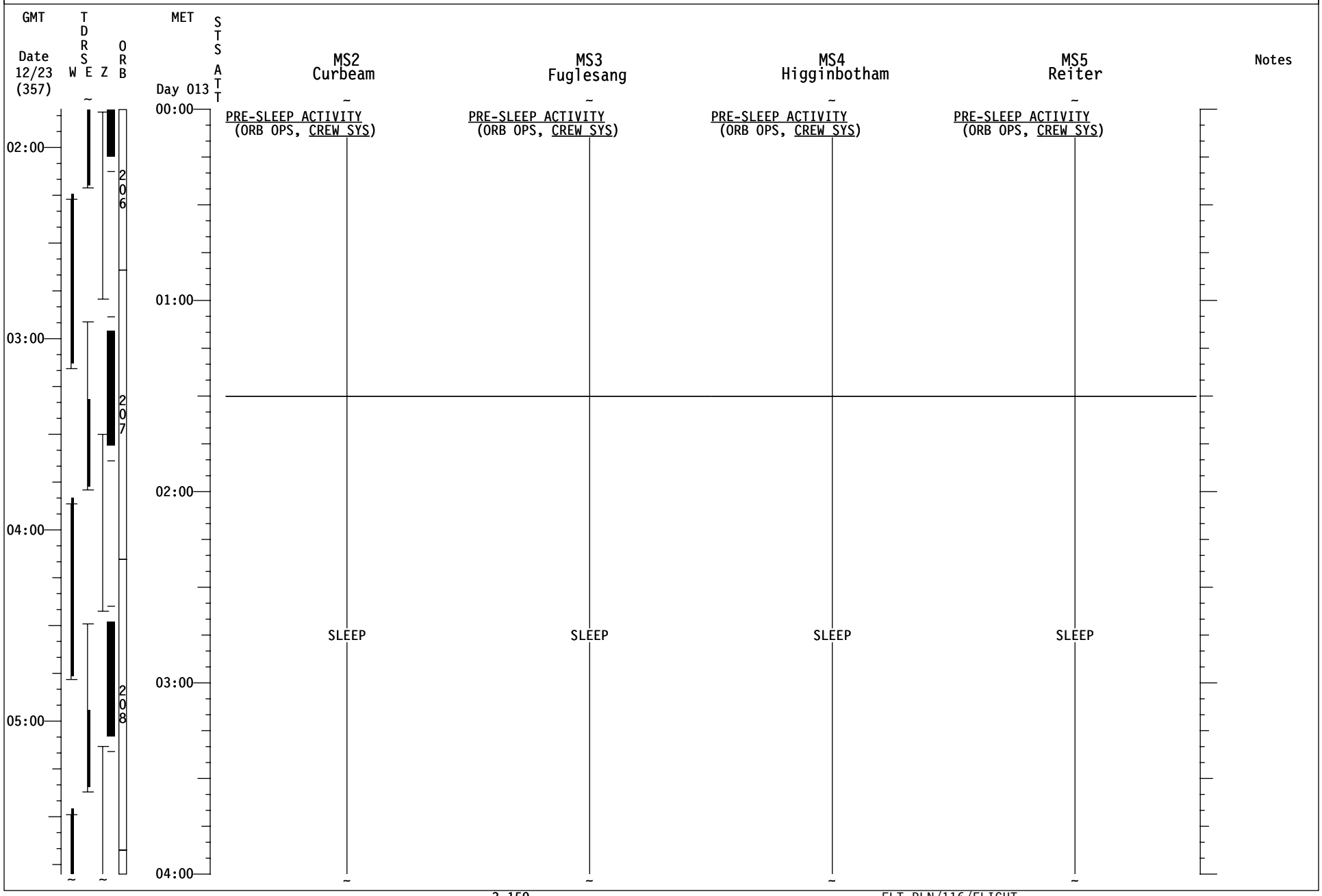
SLEEP

SLEEP

SLEEP

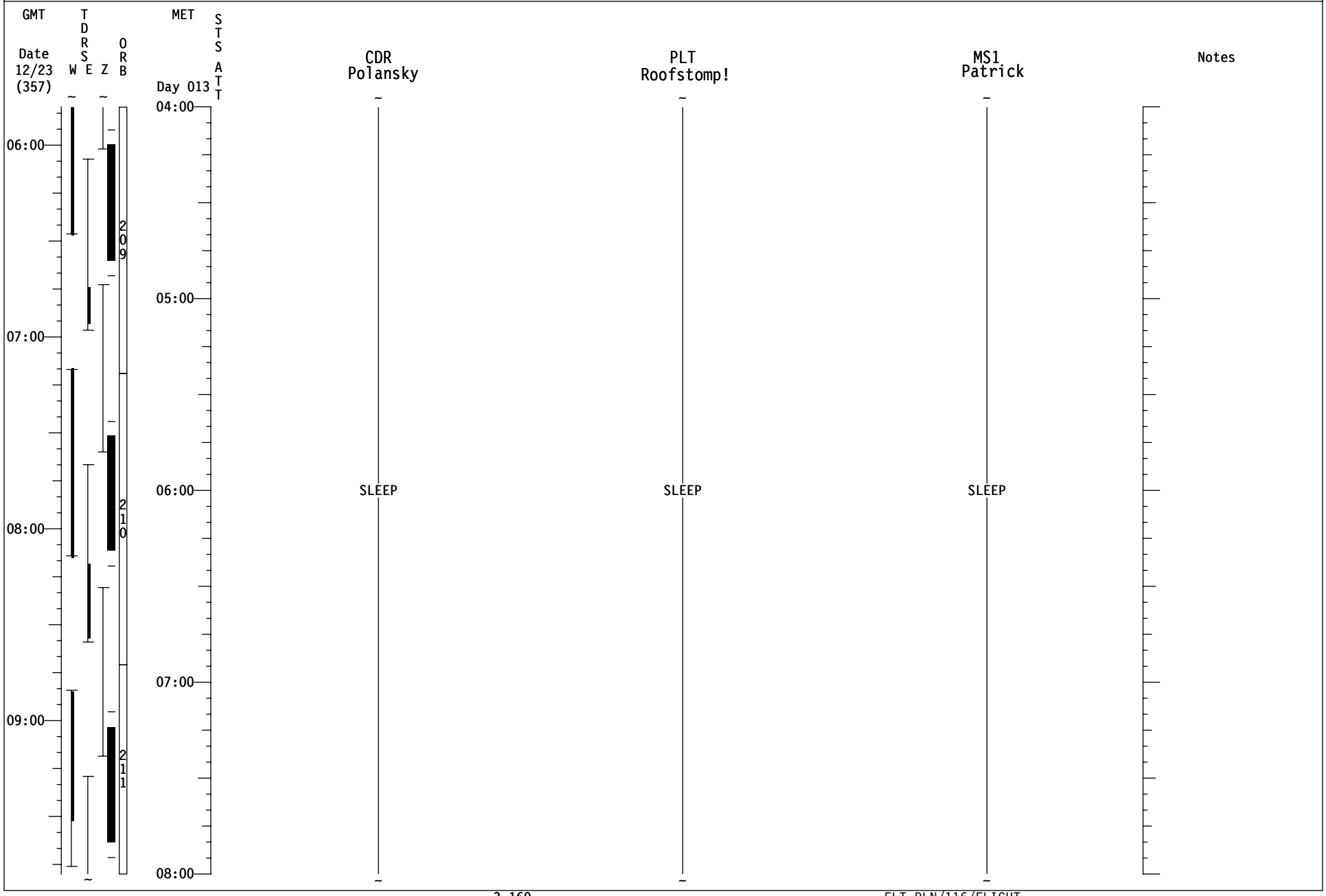
STS-116 FD14

REPLANNED



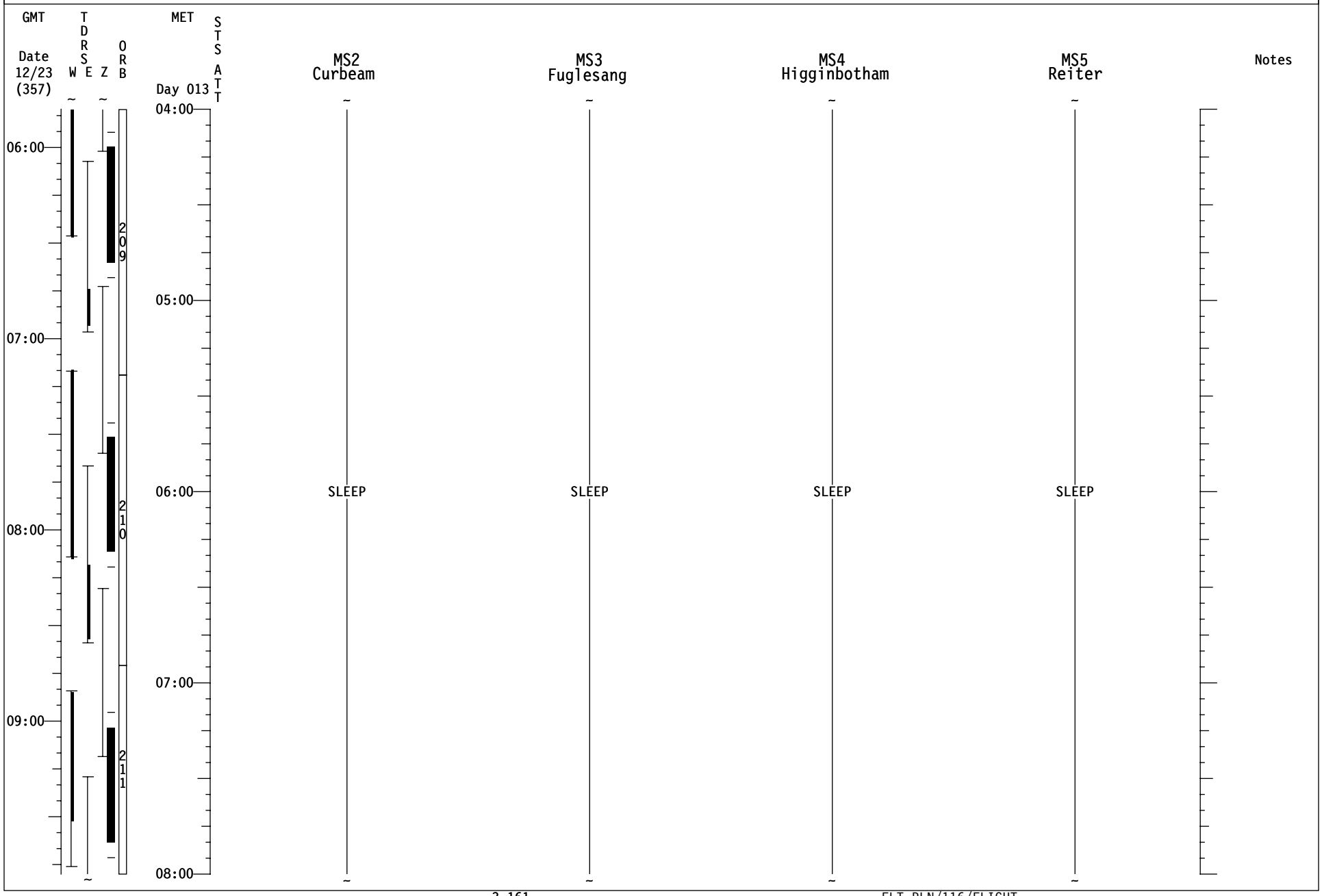
STS-116 FD14

REPLANNED



STS-116 FD14

REPLANNED



12/21/06 04:59:51

STS-116 FD15

REPLANNED

GMT Date 12/23 (357) | TDRS W E Z | ORB | MET Day 013 | STS ATT

CDR Polansky | PLT Billy Go-Around | MS1 Patrick | Notes

08:00

10:00

11:00

12:00

13:00

09:00

10:00

11:00

12:00

211

212

213

214

SLEEP | SLEEP | SLEEP

UPLINK
FC PURGE

POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SALIVA COLL & SLEEP LOG (ORB OPS, SDBI)
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

SALIVA COLL & SLEEP LOG (ORB OPS, SDBI)
POST-SLEEP ACTIVITY
(ORB OPS, CREW SYS)

FD15 EZ ACTIVITES BEFORE LEAVING FLT PLN
FLUID LOADING PREP
Fill drink containers per MSG 142
Check TEPC Status
L17 Check MCIU filter screen
Stow CSA-CP

C For PRIORITY PWRUP GROUP 2, in step 4, leave
FLASH EVAP CNTLR PRI A,B, SEC (three) - OFF

06 √UHF MODE - OFF
PRIVATE MEDICAL CONFERENCE

PRIORITY PWRUP GROUP C C
(ORB PKT, PRIOR PWRDN)

PRIORITY PWRUP GROUP C C
(ORB PKT, PRIOR PWRDN)

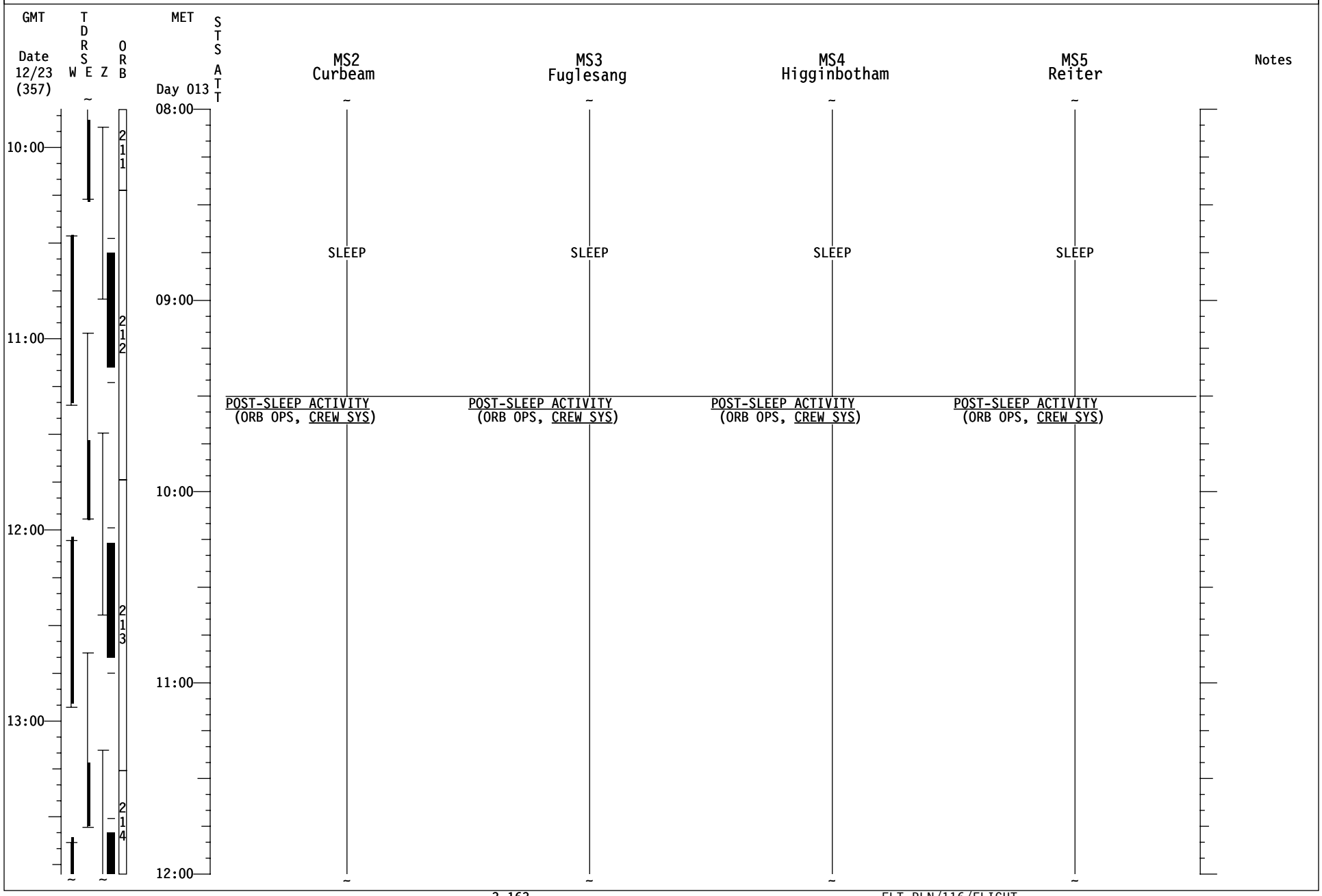
MNVR IMU STAR ALIGN ATT A (pg.3-166)
A1/AUTO/VERN Init MNVR (11:50)
IMU ALIGN - S TRK (ORB OPS, GNC)
MNVR IMU VERIF ATT B (pg.3-166) 3-162
A1/AUTO/VERN Init MNVR
IMU ALIGN - S TRK (ORB OPS,GNC),Step 5

AIR SAMPLE; Rcd MET and loc. on bottle
SLEEP-WAKE ACTIGRAPHY (ORB OPS, SDBI)
Step B

FLT PLN/116/FLIGHT

STS-116 FD15

REPLANNED



STS-116 FD15

REPLANNED

GMT Date 12/23 (357) | TDRS W E Z | ORB | MET Day 013 | STS ATT

CDR Polansky	PLT Billy Go-Around	MS1 Patrick	Notes
MNVR IMU STAR ALIGN ATT [A] (pg.3-166) A1/AUTO/VERN Init MNVR (11:50) IMU ALIGN - S TRK (ORB OPS, GNC) MNVR IMU VERIF ATT [B] (pg.3-166) A1/AUTO/VERN Init MNVR IMU ALIGN - S TRK (ORB OPS,GNC),Step 5		POST-SLEEP ACTIVITY (ORB OPS, CREW SYS)	
MNVR (TRK) -XSI ATT TG=4 BV=5 P=184 Y=0 OM=270 A1/AUTO/VERN (12:36)Init TRK		SLEEP-WAKE ACTIGRAPHY (ORB OPS, SDBI) Step B	
DEORBIT PREP	DEORBIT PREP	DEORBIT PREP	

GO TO DEORBIT PREP AT 13/12:44

ORB: 214, 215, 216

STS-116 FD15

REPLANNED

GMT Date 12/23 (357) | T D R S W E Z | O R B | MET Day 013 | S T S A T T

MS2 Curbeam | MS3 Fuglesang | MS4 Higginbotham | MS5 Reiter | Notes

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

GO TO DEORBIT PREP AT 13/12:44

13:00

14:00 — DEORBIT PREP

15:00

16:00

14:00 — 214

15:00 — 215

17:00 — 216

A IMU STAR ALIGN PAD

ID: -Y: 31, CASTOR
MET (12/12:59 TO 12/13:43)

-Z: 12, CANOPUS
MET (12/13:11 TO 12/14:00)

ANG DIFF: 86.0

DUAL S TRKR ALIGNMENT		2nd ATTITUDE (SINGLE S TRKR) -Z: 31 -Y: 12	
R	145	R	061	228
P	176	P	181	161
Y	353	Y	339	348

REQD ID:

-Y: _____, -Z: _____, ANG ERR____,____ ____

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

EXECUTION TIME: ____/___:___:___MET

B IMU VERIFICATION STAR ALIGN PAD

ID: -Y: 20, ARCTURUS
MET (12/13:22 TO 12/14:17)

-Z: 51, ATRIA
MET (12/13:28 TO 12/14:16)

ANG DIFF: 92.4

DUAL S TRKR ALIGNMENT		2nd ATTITUDE (SINGLE S TRKR) -Z: 20 -Y: 51	
R	320	R	227	066
P	333	P	327	350
Y	300	Y	314	296

REQD ID:

-Y: _____, -Z: _____, ANG ERR____,____ ____

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

If any ΔX, ΔY, OR ΔZ > 0.1 Check MCC

EXECUTION TIME: ____/___:___:___MET

Good Morning Discovery!!!!

Thank you for the very efficient inspection yesterday and for the flawless deploys. The customer is extremely happy with how well the deploys went. The pictures that MEPSI took of the shuttle are great.

In appreciation of your outstanding work ACO wrote and dedicates this poem to the STS 116 crew.

Ode to Deploy

We three birds of DoD are;
Bearing cool patches we traverse afar,
sunrise and apogee, sunset and perigee,
Following yonder Shuttle.

O MEPSI of wonder, RAFT of light,
ANDE with mighty beauty bright,
Westward trailing, still prevailing,
Guide us to thy perfect heights.

YOUR CURRENT ORBIT IS: 183 X 168 NM

NOTAMS:

EDWARDS (EDW) – LAKEBED 15/33 GREEN (LAKEBED 18L UNUSABLE)
WHITE SANDS (NOR) – LAKEBED 17 & 23 GREEN
AMBERLY (AMB) -CLOSED
ANDERSEN (GUA) -06L/24R CLOSED, ALTERNATE 06R/24L
GANDER TACAN (YQX-74X) - AZIMUTH OUT OF SERVICE DME AVAILABLE
KEFLAVIK (IKF) – UNUSABLE
ORMOND BEACH TACAN (OMN-73X) - AZIMUTH OUT OF SERVICE
OCEANA (NTU) – 32R/14L CLOSED
RIO GALLEGOS (AWG) – UNUSABLE
SALSBURY TACAN (SBY-49X) - AZIMUTH OUT OF SERVICE
WAKE ISLAND (WAK) - CLOSED

NEXT 2 PLS OPPORTUNITIES:

EDW22 ORB 188 – 11/20:54 (FEW060 BKN150 BKN200, 260/10P16)
NOR17 ORB 203 – 12/19:38 (BKN100 BKN200, 150/5P8)

OMS TANK FAIL CAPABILITY:

L OMS FAIL: NO
R OMS FAIL: NO

LEAKING OMS PRPLT BURN:

L OMS LEAK: ALWAYS RETROGRADE
R OMS LEAK: ALWAYS RETROGRADE
OMS QUANTITIES(%)

L OMS OX = 42.4 R OMS OX = 43.7
FU = 42.5 FU = 44.2

SUBTRACT I'CNCT COUNTER FOR CURRENT OMS QUANTITIES

DELTA V AVAILABLE:

OMS	390 FPS
ARCS (TOTAL ABOVE QTY1)	27 FPS
TOTAL IN THE AFT	417 FPS
ARCS (TOTAL ABOVE QTY2)	57 FPS
FRCS (ABOVE QTY 1)	27 FPS
AFT QTY 1	81 %
AFT QTY 2	43 %

THERE ARE NO FAILURE/IMPACT/WORK AROUNDS FOR TODAY.

MSG 137 – FD13 Water Summary Message

Today there will be a period of FES Inhibit for the Payload deploy. A Simo Dump with a purge of the Supply and Waste Water Dump lines will be performed as well as a Supply H2O Dump using the FES.

Payload Deploys
The FES will be inhibited by taking it to the OFF position per the timeline. Prior to taking the FES back ON, EECOM will verify that the Freon Loop temperatures are within an acceptable range for FES startup; therefore you will see an "ON MCC Call" prior to that switch throw in the Detailed Timeline.

FES Dump Details
The FES Dump duration will be approximately 2 hours. The following details are required for the dump:

> At MET 11/21:30, initiate SUPPLY WATER DUMP USING FES (ORB OPS, ECLS), p. 5-9, Step 1 DUMP INITIATION, using FES PRI A.
>
> At MET 11/23:30, terminate the FES dump on MCC call using Step 2, DUMP TERMINATION; FES PRI A is req'd.

Simo Dump Details
At MET 11/19:20 Perform SUPPLY/WASTE WATER DUMP (ORB OPS, ECLS) p. 5-2, Steps A, and C through J. In step J perform step J2. Terminate the supply water dump per step H, deleting step H7 (leaving SPLY H2O DUMP ISOL VLV - CL). Terminate waste dump replacing step I with the attached deltas.

> Dump Supply Water for 15 minutes.
>
> The Waste Tank will be dumped to 5%.
> Waste dump valve open duration will be 25 minutes
>
> MCC will TMBU all limits.

Deltas to Step I of the WASTE H2O DUMP TERMINATION:

Prior to waste dump, gather tools required to purge the Waste H2O Dump line:

Tools Reqd:

CHCK	Free Fluid Nozzle
MF28H	8' Y/Y Hose (used for condensate collection)
MISC	Towel

Perform the following steps in place of Step I WASTE DUMP TERMINATION

I. WASTE H2O DUMP TERMINATION

ML31C 1. WASTE H2O DUMP ISOL VLV – CL (tb-CL)

CRT 2. √QTY 1 not decr

CRT
ML31C

```
* If WASTE H2O QTY 1 decr:                    *
*     Cycle WASTE H2O DUMP ISOL VLV           *
*     If not successful,                      *
*       WASTE H2O DUMP VLV – CL (tb-CL)       *
*                                             *
```

3. Hold towel around Free Fluid Nozzle top to soak up water and connect one end of Y/Y hose to Free Fluid Nozzle QD.

WCS
Outbd Wall

4. Hold towel around Free Fluid Nozzle top to soak up water and connect free end of Y/Y Hose to CONT H2O X-TIE WASTE QD (upper QD with yellow Velcro and "WASTE" label).

CRT

5. When 'S66 WASTE H2O TEMP' msg, WASTE H2O NOZ T A,B (two) exceed 250 (~8 min bakeout time), continue

ML31C

6. WASTE H2O DUMP VLV – CL (tb-CL), wait 60 sec
7. – OP (tb-OP), wait 60 sec
8. – CL (tb-CL)
9. VLV ENA/NOZ HTR – OFF
10. √VLV tb – bp

CRT

11. √WASTE H2O NOZ T A,B (two) – not incr

ML86B:A

```
* If WASTE H2O NOZ T A,B (two) incr:  *
*     cb MNA WASTE H2O DUMP            *
*       VLV/NOZ HTR – op               *
```

WCS

12. Disconnect Y/Y Hose from CONT H2O X-TIE WASTE QD and Free Fluid Nozzle. Stow tools.

NOTE
The Waste H2O Dump Isolation Valve will remain closed thru EOM.

ML86B:C cb MNA EXT ARLK HTR LINE ZN 1,2 (two) - op
MNB EXT ARLK HTR LINE ZN 1,2 (two) - cl

MNA EXT ARLK HTR VEST Z1/2/3 - op

Rationale: These heaters are currently in an out of sequence configuration in order to perform a functional heater checkout. The circuit breaker steps listed above will return the heaters to a nominal configuration for D/O Prep.

Make the following changes to the Pre and Post Sleep checklists.

PRE-SLEEP ACTIVITY (ORB OPS, CREW SYS) pg 3-2, step 5.
Insert the following switch throw between the "(PCS Active)" and "Expect possible 'S66 CAB N2 FLO 1(2)' statements.

O2 REG INLET SYS 2 vlv - CL

POST-SLEEP ACTIVITY (ORB OPS, CREW SYS) pg 3-9, step 7.
Insert the following switch throw between the "(PCS Active)" statement and the L2 O2/N2 CNTLR VLV SYS 1(2) - AUTO switch throw.

O2 REG INLET SYS 2 vlv - OP

Please adjust the O2 Sys 2 Flow H/W C&W upper limit as follows. Notify MCC when complete.

R13U		
PARAMETER NAME	C/W CH	UPPER LIMIT
CAB O2 FLOW 2	024	4.20 V/4.20 lb/hr

MCC will TMBU the software limit.

Rationale: During the PCS configuration on FD11, the O2 Sys 2 flow sensor did not produce a Master Alarm when the 14.7 Cabin Reg Inlet Sys 2 valve was opened. The repress data indicates that the O2 Sys 2 flow sensor is biased low and the H/W C&W upper limit needs to be adjusted to compensate for the bias.

MSG 140 - FD13 SpaceHab Viewport Violations

MET	Constraint	Action
11/18:05 - 11/18:40	Sun In FOV	If Viewport open, HTR - OFF
11/18:40 - 11/19:35	Deep Space	If Viewport open, HTR - ON
11/19:35 - 11/20:10	Sun In FOV	If Viewport open, HTR - OFF
11/20:10 - 11/21:05	Deep Space	If Viewport open, HTR - ON
11/21:05 - 11/21:40	Sun In FOV	If Viewport open, HTR - OFF
11/21:40 - 11/21:55	Deep Space	If Viewport open, HTR – ON

FD12 Crew MMT Summary

Today the MMT met for an hour and primarily discussed the entry strategy as well as landing weather. Overall, the orbiter continues to perform well and there were no significant orbiter issues discussed.

Imagery Review - The imagery teams continue to review data obtained from the SRB cameras. This video review uncovered an event at 124.8 seconds (SRB Sep). The left-hand SRB aft camera captured video of debris striking the Orbiter TPS in the vicinity of the LH2 umbilical. The debris size is estimated at 2 inches x 6 inches x +/- 1 inch. The debris appears to originate from the left SRB aft Booster Sep Motor and may be BTA closeout insulation around the Booster Sep Motor nozzle. The Damage Assessment reviewed the analysis of the RPM photography and associated thermal/structural analysis for this area one more time prior to the MMT today. The team concluded that the TPS is still clear for entry and the damage in this area has substantial positive thermal and structural margins.

Entry Strategy - Entry Flight Director/ Norm Knight presented the entry strategy in terms of systems deltas and deorbit opportunity management. As you know all three sites (KSC/EDW/NOR) will be activated with the plan to land on EOM. Consumables support three deorbit attempts per day. For EOM, there is only a KSC opportunity on Orbit 202 while there are KSC/EDW/NOR opportunities on Orbit 203, and EDW/NOR opportunities on Orbit 204. There is one additional EDW opportunity on Orbit 205 that will only be considered if the 1st opportunity to KSC (Orbit 202) is waved off early prior to suit donning.

<u>APU Plan</u>: The current plan is to use APU 3 for FCS C/O. APU 2 then APU 1 will be the pre-TIG starters on entry day for attempt two weather conditions. If you are attempt one APU, you will start only APU 2 at TIG-5 minutes. Per the pre mission plans, the APU Heaters will be powered off at ~Deorbit TIG-10 minutes for the GGVM heater concern. There is no concern for APU operations during entry without heaters. You can expect deorbit prep back-out and entry checklist procedure deltas to be uplinked by the Entry Team on FD 13 for these heater actions.

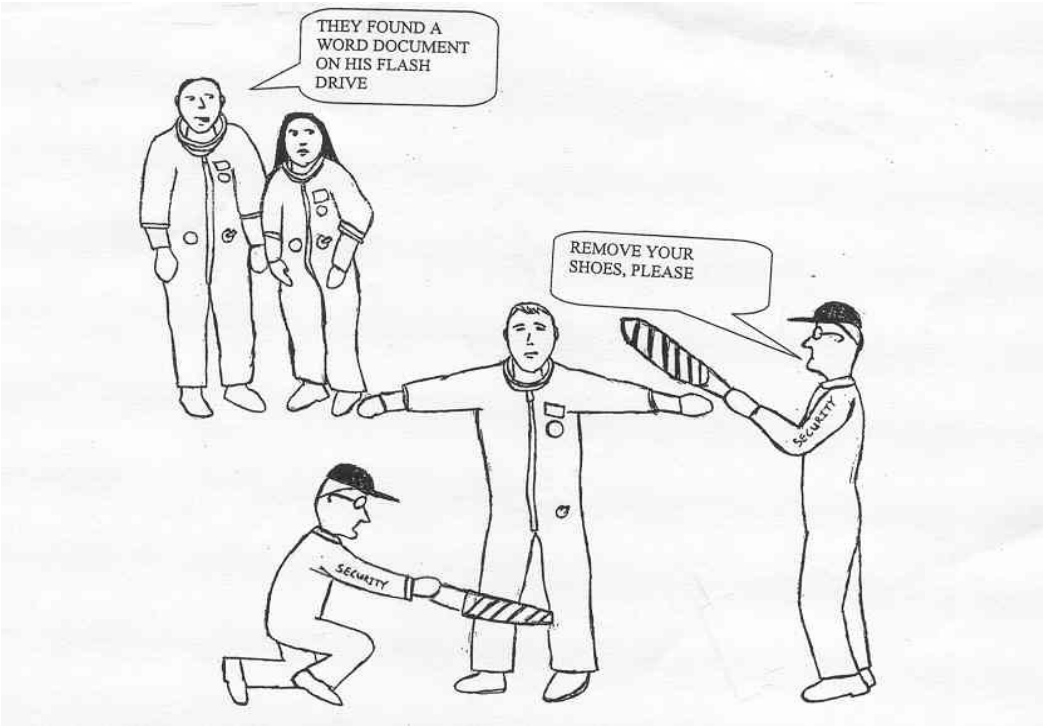
<u>FES Operations</u>: Given the previous orbit failures of FES PRI B during the topping mode, the entry plan is to use FES PRI A. Some slight Deorbit Prep Checklist and Orbit Ops Checklist Rad Bypass/FES Checkout procedure deltas will be uplinked with the entry messages on FD 13.

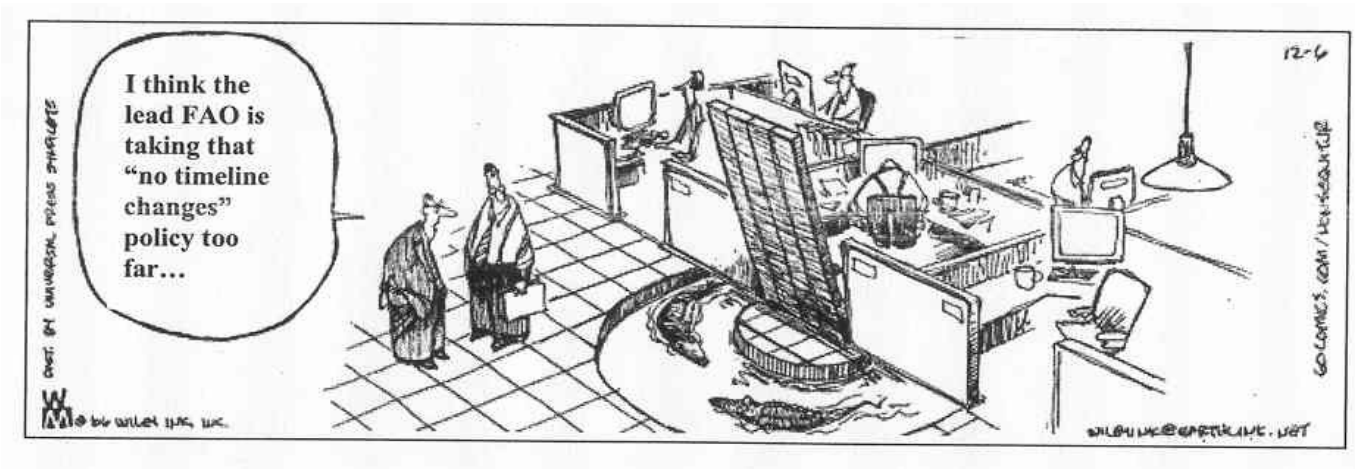
<u>GPS:</u> GPS continues to perform well and the plan has not changed from pre-flight. GPS will be taken to auto in MM201 during the entry shift on FD 13 and during deorbit prep on an MCC call after Block 12. GPS will be inhibited prior to the Deorbit burn and then the MCC will call to take it to AUTO after C-band tracking confirmation of navigation performance.

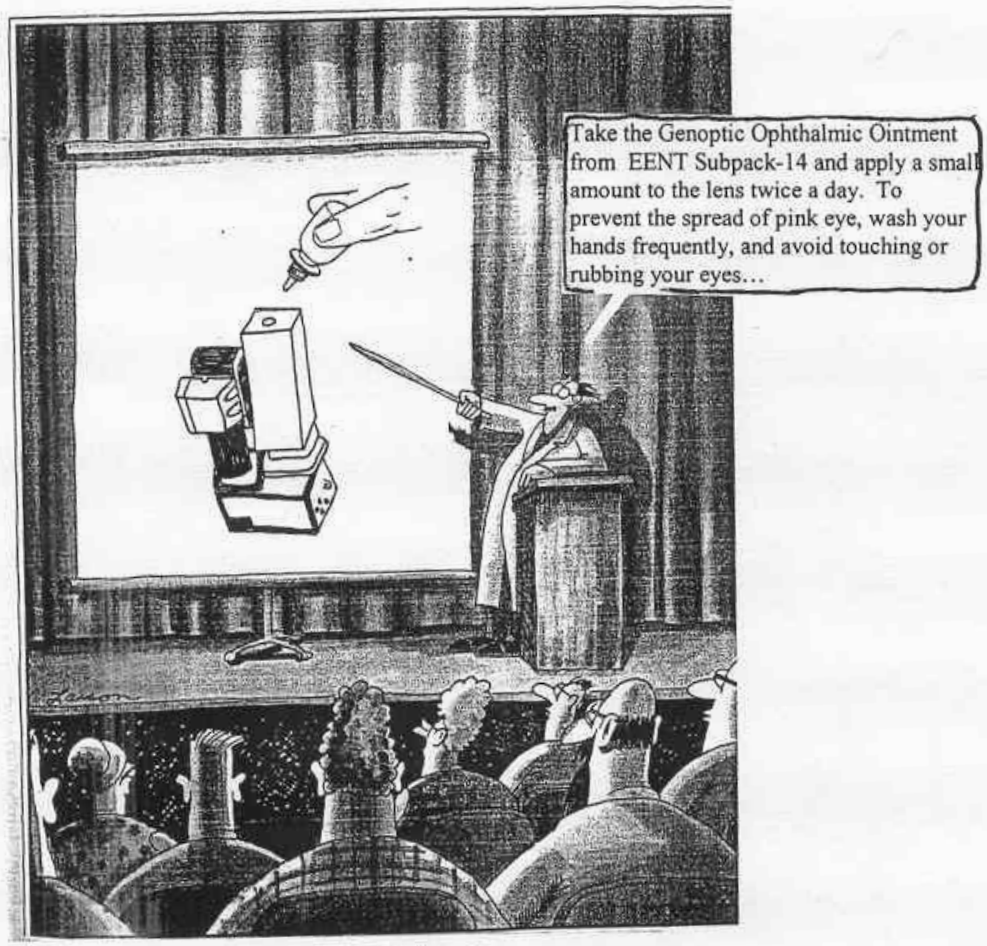
Entry Weather - The Spaceflight Meteorology Group and the Entry Team continues to monitor the weather and associated forecasting models. Overall, the weather forecast has not changed significantly since yesterday. Both KSC and EDW continue to have marginal forecasts for EOM. For KSC, there is a chance of rainshowers and broken clouds at 5000 feet. At Edwards the crosswinds (310/12G18) are forecast to be out of limits, gusting to 18 knots although the EDW winds might swing to the west and decrease as the day progresses such that the second EDW rev may be better. NOR weather is GO for a landing on EOM. There was 0.16 inches of rain at NOR on FD 11 but the lakebed remains green and the runways are in good condition.

Northrup Landing - KSC is making plans to send additional GSE and personnel to NOR prior to FD14 (EOM) landing opportunities. At NOR, the ground team is planning to open the hatch, per nominal KSC/EDW ops, but there is no crew transport vehicle. There will be a stairway truck with a small white room at the top. The current plan is to tow off the runway as soon as possible in order to get Discovery to power and purge units which will be stationed at the staging area.

From what I see now, that will cut through the murkiest storm they can dish up. What I'm trying to say is, Rudolph, with your nose so bright, won't you guide Discovery tonight?
Now Rudolph! Now Roman! Now Billy O and Joanie! On, Nick! On, Beamer! On, Christer and Suni!
To the top of the launch pad! Over the top of the cloud wall! Now dash away! Dash away! Dash away all!"


THEY FOUND A WORD DOCUMENT ON HIS FLASH DRIVE
REMOVE YOUR SHOES, PLEASE
SECURITY
SECURITY


I think the lead FAO is taking that "no timeline changes" policy too far…
12-6



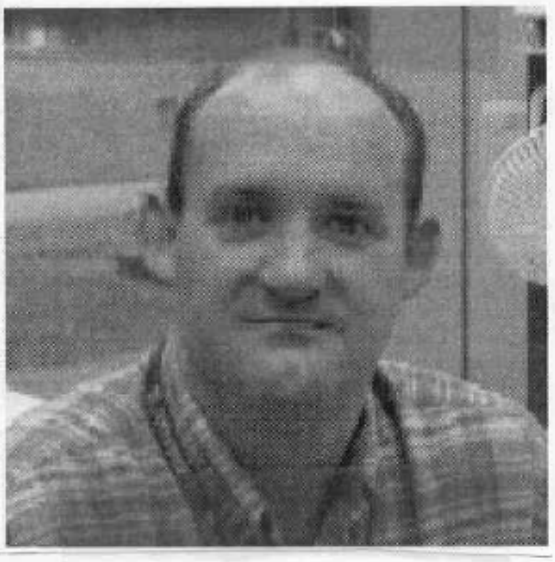
Once the ETVCG was brought into ISS, every precaution had to be taken to ensure the health of the crew.

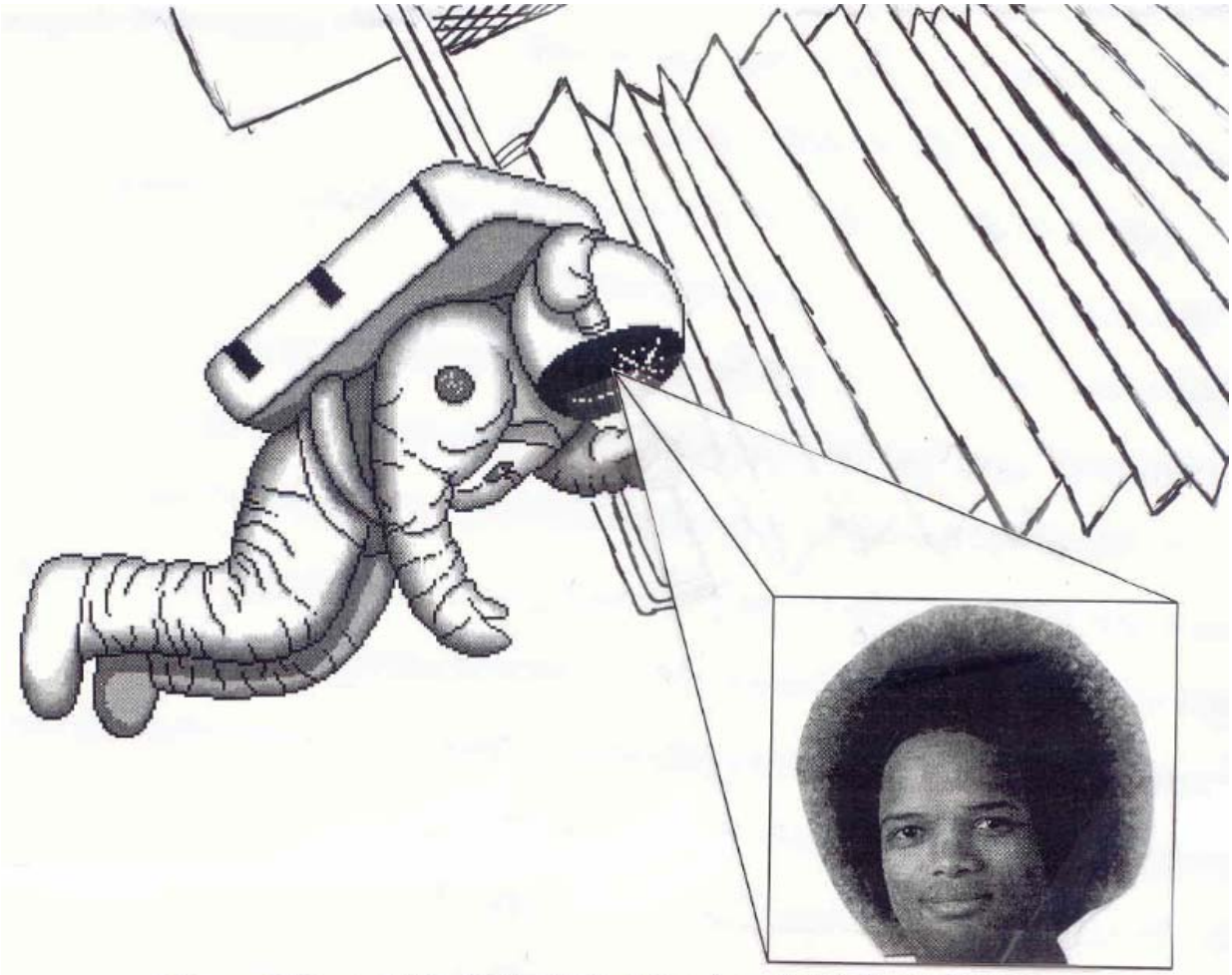
With the Wake-Up Music snarl the morning of FD05, the crew decided to create their own music.

SHUTTLE CHRISTMAS VACATION
Condensate's full.
Cousin Billy-O

DAVE PHALCON BEFORE STARTING STS-116

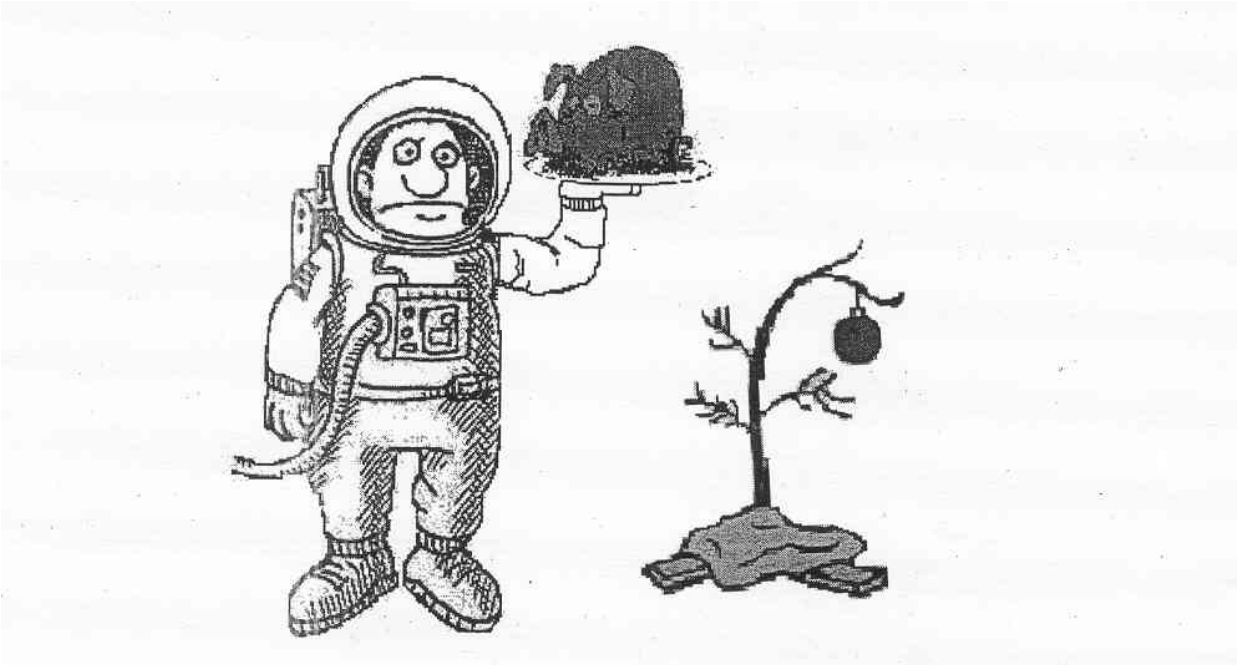
DAVE PHALCON DURING STS-116





Meanwhile, outside ISS: "Uh, Houston, I think we have a buildup of static electricity out here."

NASA asks the crew to get the Solar Arrays to wiggle.
They took it a bit too far…

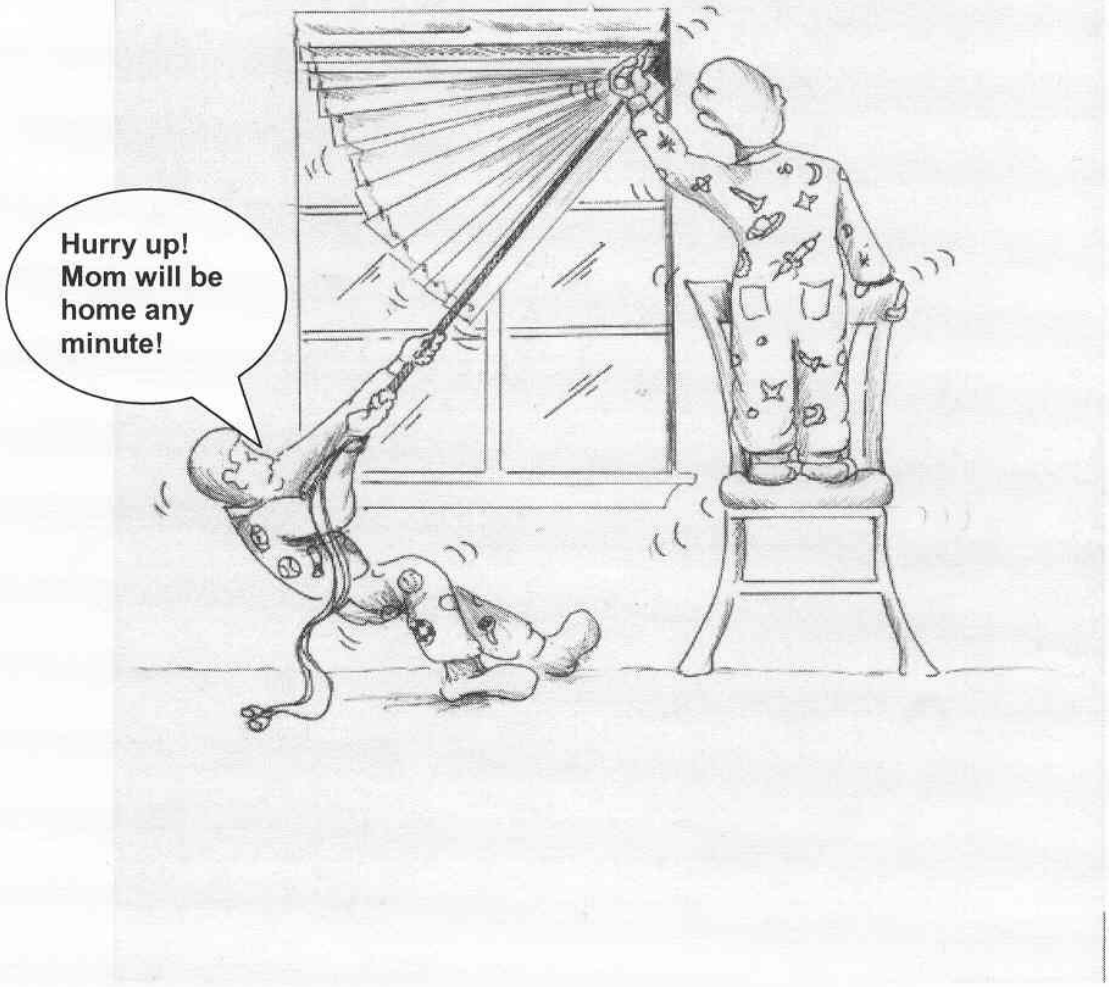


With the excitement of having his time in orbit extended, MS3 thought he heard Houston call up to "Prepare the Christmas HAM with the Deorbit PIG".

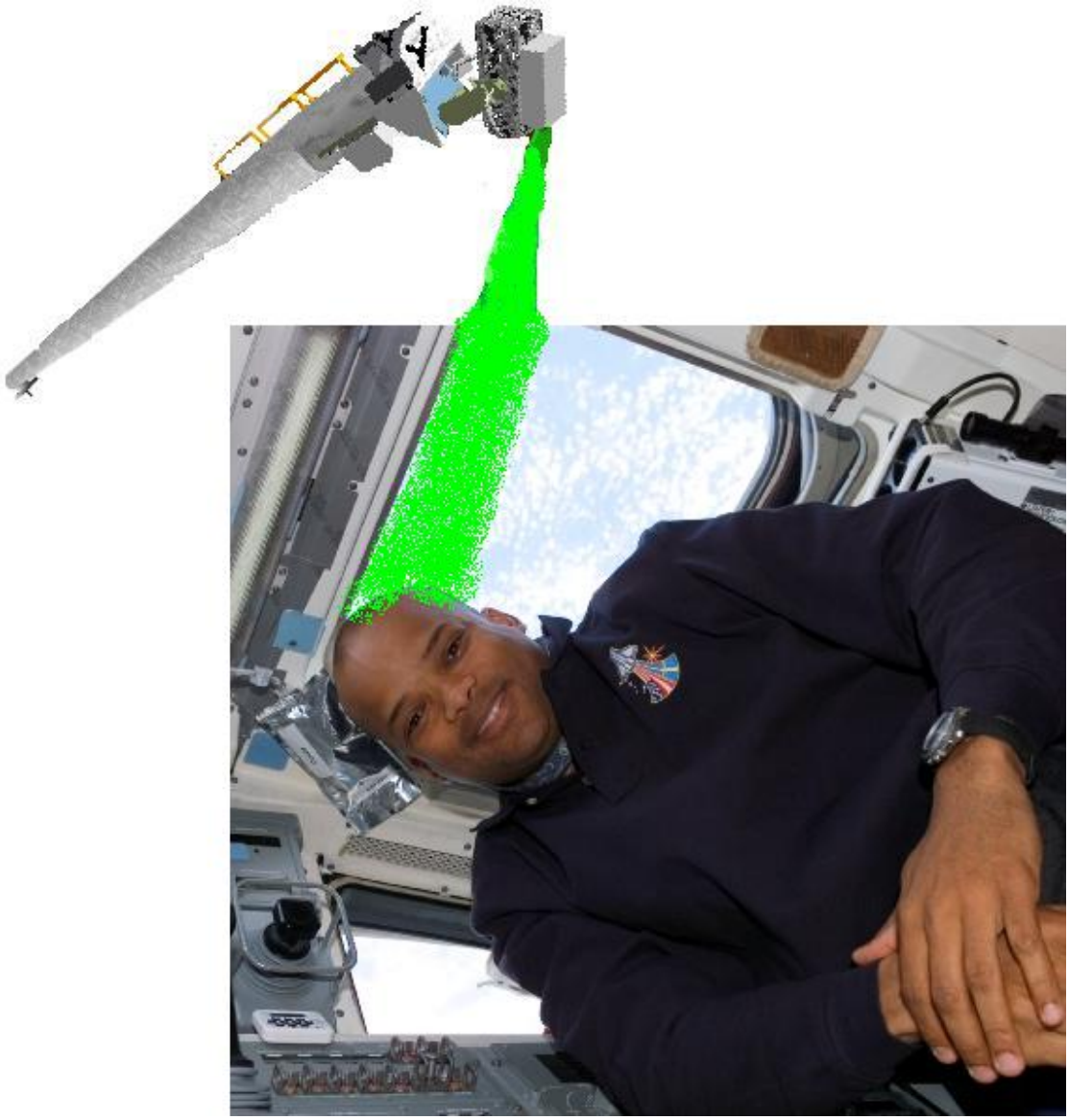
Hold still Gromit while I retract the SAW!

Flights Attempt to
Restrain the
Excitable EVA Team

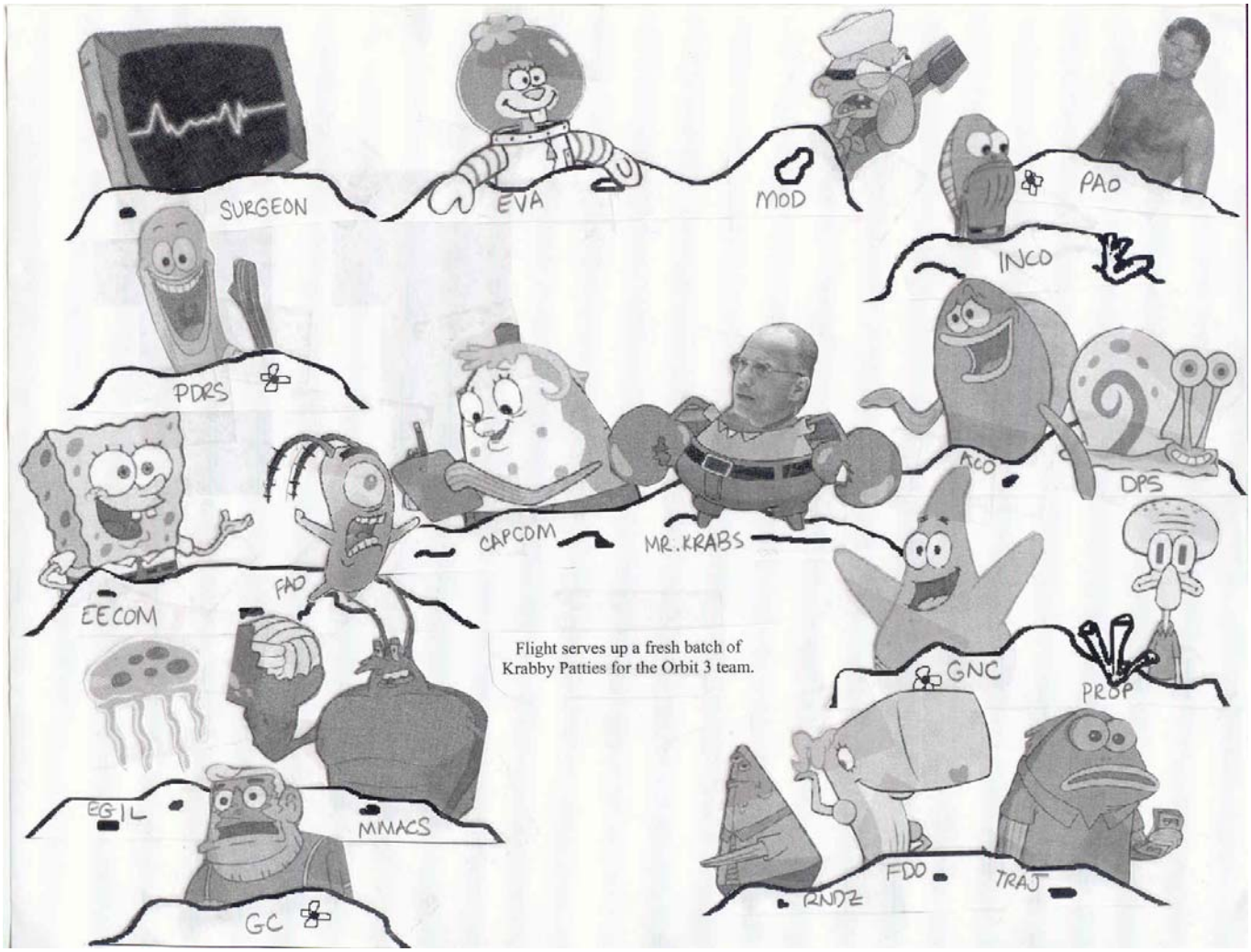
Even after reviewing the video from Billy-O′s ZAMBONI® performance, MCC added a half-flyaround to FD11.



Little did we know Curbeam's training started so early.

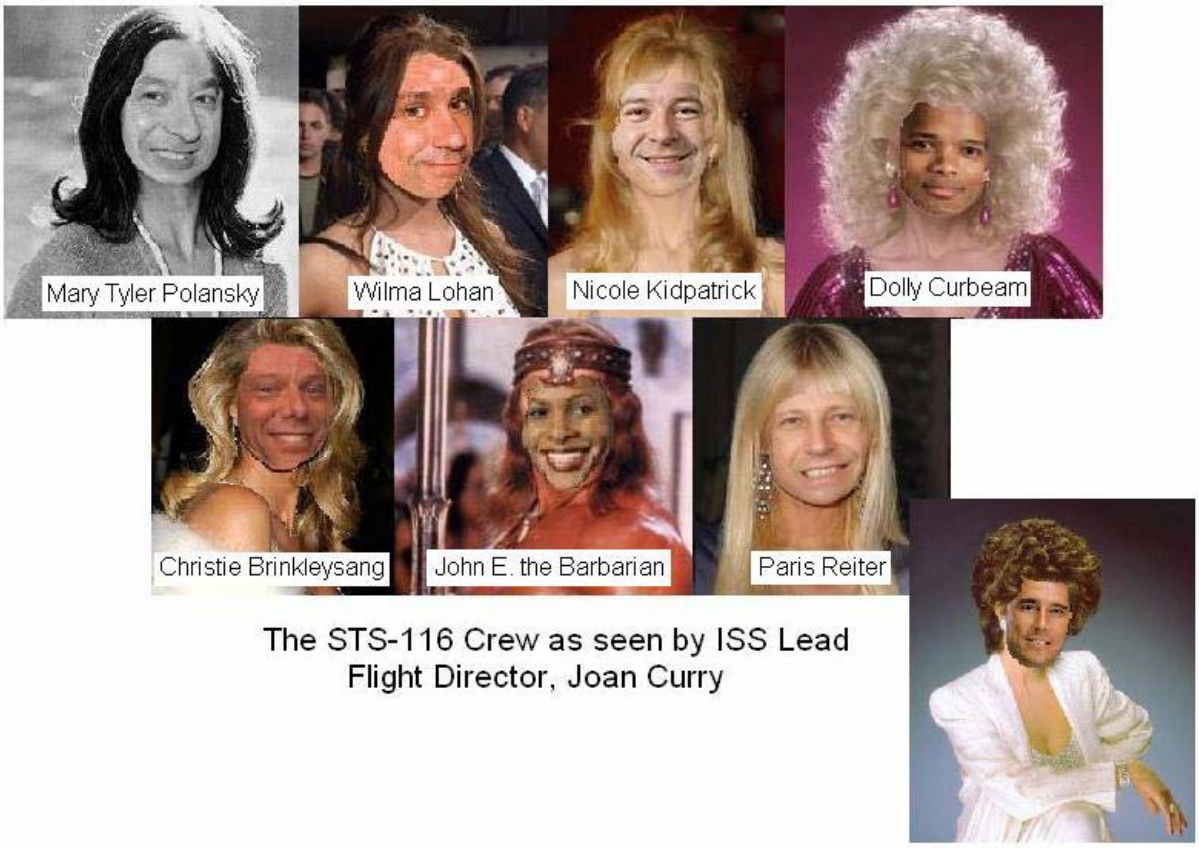


The Flight Day 12 Late Inspection was able to confirm that, in fact, Beamer does <u>not</u> have any hair.



Flight serves up a fresh batch of Krabby Patties for the Orbit 3 team.

EXCELLENTIAM
ISSION OPERATIONS
ways be aware that suddenly an
expectedly we may find ourse
n a role where our perfo
has ultimate consequenc
RESPONSIB
TEAMWO
VIGIL



The STS-116 Crew as seen by ISS Lead Flight Director, Joan Curry

It’s that time of year again! Yes, time for the jolly new jingles from Mission Control of the new CD entitled “Jolly New Jingles from Mission Control”. This intriguing collection includes such memorable tunes as:

Billy O the Zamboni Man
Holly Jolly Christer
It’s the Most Wonderful Time not to YERO
Silver Biocide
Joy to the Worldmap
Have Yourself a Merry Little Landing
Away in a Space Harbor
From Heaven Above to Earth I Come
Here We Go A-WSSH-sailing
All I Want for Christmas is a Full Wheel Stop
Joy to the Flight Control Team
Discovery We have Heard on High
Jolly Ol' Discovery
Come On, Land That Shuttle
O Little Town of Cape Canaveral
Baby, It's Cold Outside - The WLES Pops

But WAIT! This special collection comes with your very own limited edition songs for that special visit to White Sands entitled:

Away in the Desert
Landing in a Sandy Wonderland
Oh Little Town of Alamogordo....
Here We Go A-WSSH-sailing
It Came Upon a Desert Clear
All I Want for Christmas is a Full Wheel Stop

Featuring songs with a memorable rendition of songs such as:

<u>Jingle Bells sung by FAO:</u>
Discovery, Discovery
Where will landing be
White Sands, Edwards, KSC
Norm will choose with glee

<u>POCC’s own:</u>
Come rest ye merry Astronauts.
Let nothing block your way.
For the orbiter Discovery
in White Sands lands this day.
Come rest ye merry Astronauts.
Let nothing block your way.

FDO's "Land White Sands":
Oh, the weather at KSC is frightful,
But at White Sands its so delightful,
And since we have to land,
Land White Sands, land White Sands, land White Sands.
Winds at Edwards aren't stopping,
And the fuel cells need a topping;
The time to deorbit has come,
Land White Sands, land White Sands, land White Sands.

When Shuttle finally comes to rest,
How we'll hate landing out West;
But if FDO targets right
We'll be home before Friday night.

The mission objectives completed,
And we've said goodbye to Sunita,
As long as we've got land.
Land White Sands, land White Sands, land White Sands.

And ACO's "Do you Hear What I hear?":
Said the night wind to the flight controller,
Do you see what I see?
Way up in the sky, flight controller,
Do you see what I see?
A star, a Shuttle, orbiting in the night
With a tail as big as a kite (repeat)

Said the flight controller to the Entry Flight,
Do you hear what I hear?
Ringing through the sky, Entry Flight,
Do you hear what I hear?
A sonic boom, and another sonic boom, high above the trees
With a voice as big as the the sea (repeat)

Said the Entry Flight to the mighty Shuttle Commander,
Do you know what I know?
In your Shuttle warm, mighty Shuttle Commander,
Do you know what I know?
A landing team, a landing team, shivers in the cold--
Let us bring them Discovery and SPACEHAB (repeat)

Said the Shuttle Commander to the people everywhere,
Listen to what I say!
I see White Sand, everywhere,
Listen to what I say!
The landing strip, the landing strip, quiet in the night
It will bring us gravity and a beacon of light (repeat)
Not only does this package include all of the above, it also includes the Sing-Along-Song-Book for 101 ways to rendition the 12 days of Christmas, with Lyrics from:

MSG 141 - SUNDAY FUNNIES

ACO's Fourteen Days of STS-116:
On the fourteenth day of STS-116,
my true love sent to me
Fourteen runway lights at White Sands,
Thirteen PAO events,
Twelve deployable satellites,
Eleven goodbye hugs,
Ten solar array retractions,
Nine Transfer bags,
Eight solar array wiggles,
Seven peeks out the window,
Six power channel connections,
Five solar array bulges,
Four EVA gloves,
Three rendezvous burns,
Two wing inspections,
And a night launch from KSC.

FAO's 12+1 Day Count-down of Christmas in Space:
12 Execute packages
11 Transfer messages
10 crew members
9 Inspection hours
8 Flight Directors
7 Docked Days
P6 SAW retraction
5 First Time Flyers
4 EVAs
3 CAPE deployables
2 CWC fills
and a night launch at KSC

And POCC's 12 days:
On the twelfth day of Christmas,
My true SHOD gave to me,
Twelve fantastic flight days,
Eleven pounds a gaining
10 crewmembers a-floating
Nine ORUS (on the ICC)
Eight days of docking
7 CWCS a-sloshing
Six feisty flight directors,
Five GOLDEN Arrays
4 EVAS,
three landing gear (down and locked),
two ESA astronauts
and a cool night launch that I'd see…

This collection is offered for a limited time only… so act fast, and order your "Jolly New Jingles from Mission Control" packet today!