

Flight Data File Crew Activity Plan

STS 51-F

Spacelab 2

Mission Operations Directorate
Operations Division

Final, Revision A
July 2, 1985

<u>EVENT:</u>	<u>CDT</u>		
Launch	15:30	Fri	July 12
Proximity Operation	19:10	Sun	July 14
Press Conference	12:20	Thu	July 18
Landing - EDW	14:42	Fri	July 19



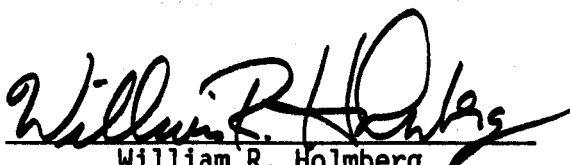
National Aeronautics and
Space Administration

Lyndon B. Johnson Space Center
Houston, Texas

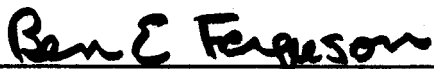
MISSION OPERATIONS DIRECTORATE

STS 51-F CREW ACTIVITY PLAN
SPACELAB 2FINAL, REVISION A
July 2, 1985

PREPARED BY:


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 Book Manager

APPROVED BY:



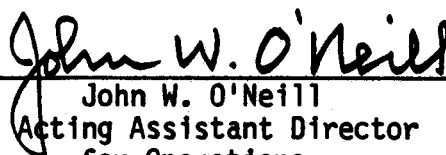
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 for Operations

This document is under the configuration control of the Crew Procedures Control Board (CPCB). All proposed changes must be submitted on standard JSC form 482 to DH4/FDF Manager, Bldg 4, Room 352, 713-483-2868.

Comments concerning this document may be addressed to DH4/William R. Holmberg or Terri L. Waite, Bldg 4, Rm 337, 713-483-5871.

Changes to the distribution list should be submitted in writing to DH4/Gwen Butler, Bldg 4, Rm 373, 713-483-5224.

Includes 482		
No:	CAP-347	CAP-389
	CAP-386	CAP-392
	CAP-387	CAP-393
	CAP-388	

ACKNOWLEDGMENTS

The following people contributed significantly in preparing the STS 51-F Crew Activity Plan:

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STS 51-F CREW ACTIVITY PLAN

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REV A 07/02/85

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B11.....	6-18	CAP/51-F/O/FIN

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INTRODUCTION

The STS 51-F Crew Activity Plan (CAP) is the flight data file article that contains the on-orbit timeline. It does not contain the detailed timelines that are covered in the Ascent, Post Insertion, PDRS Operations, Proximity Operations, Deorbit Prep, and Entry checklists. A detailed IPS VFT timeline is provided in a separate section within the CAP. This timeline is in Phase Elapsed Time (PET) referenced to orbital sunrise, with 90 minutes per page. For continuity, the entire flight is shown in the summary level timeline.

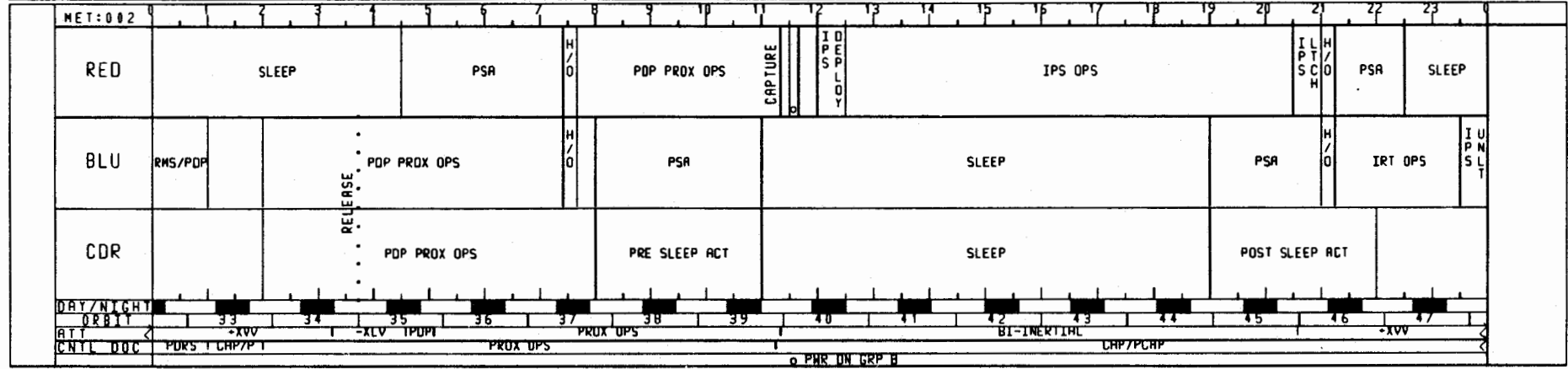
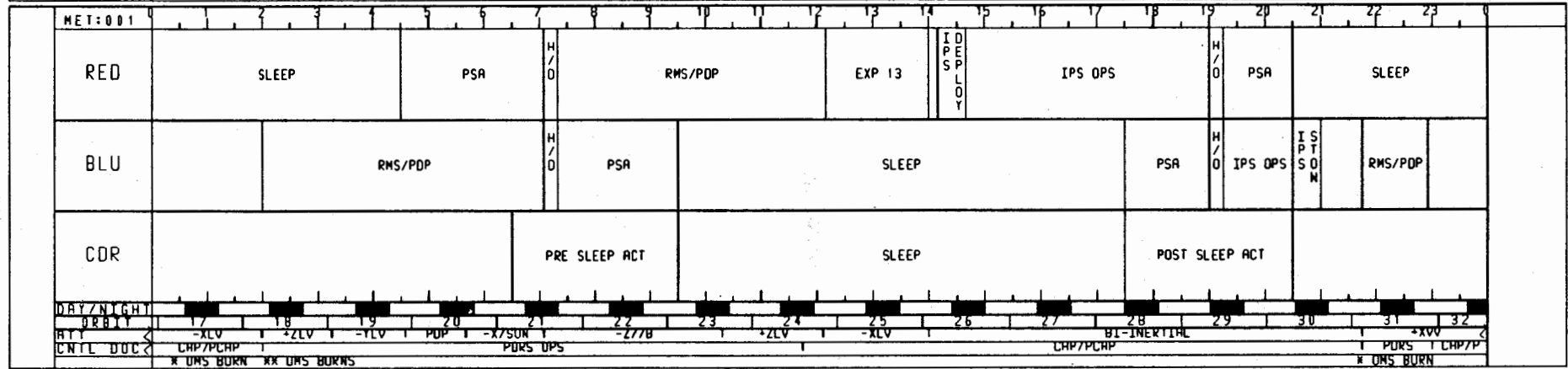
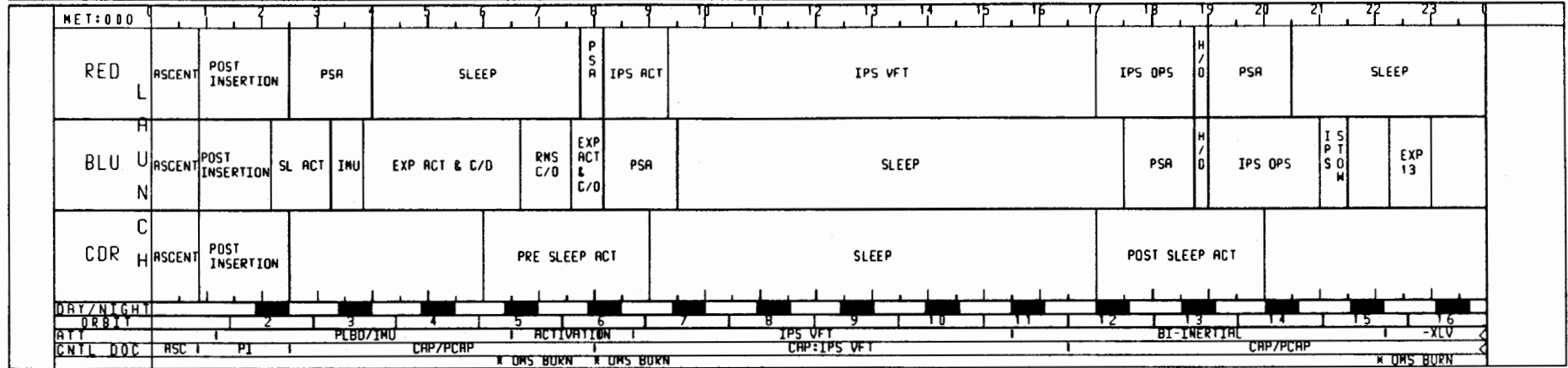
This on-orbit timeline satisfies the objectives specified in the Flight Definition and Requirements Directive and the requirements of the STS 51-F Flight Requirements Document (February 1985).

The flight profile (Cycle 3 trajectory data) used for this Crew Activity Plan is for a launch date of July 12, 1985.

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OVERVIEW

FLIGHT STS 51-F EDITION FINAL, REV A PUB. DATE 7/02/85



MET:003																										
RED	SLEEP						PSA			H/O	IPS OPS						ILPTSC H	IRT OPS		H/O	PSA		SLEEP			
BLU	ILPTSC H	IRT OPS		IUNSLT	IPS OPS						H/O	PSA		SLEEP						PSA		H/O	IRT OPS	IUNSLT	ILPTSC H	POP GLOW A
CDR	PRE SLEEP ACT						SLEEP						POST SLEEP ACT													
DAY/NIGHT																										
DEBIT	48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63																									
ATT	-XVV																									
CNTL DOC	BI-INERTIAL LMP/PCMP																									

MET:004																										
RED	SLEEP						PSA			H/O	IPS OPS						ILPTSC H	IRT OPS		H/O	PSA		SLEEP			
BLU	IRT OPS	POP GLOW B	IUNSLT	IPS OPS						IPS CCP	DEPLOY	H/O	PSA		SLEEP						PSA		H/O	IPS UNLT	ISTOW	IRT OPS
CDR	PRE SLEEP ACT						SLEEP						POST SLEEP ACT													
DAY/NIGHT																										
DEBIT	64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79																									
ATT	-XVV																									
CNTL DOC	BI-INERTIAL LMP/PCMP																									

MET:005																														
RED	SLEEP						PSA			H/O	IPS OPS						FCS C/O	IPS OPS		ILPTSC H	IRT OPS	H/O	PSA	PCDNF	PSA		SLEEP			
BLU	IRT OPS	DEPLOY	IPS OPS						ILPTSC H	PDRTH	IUNSLT	IPS OPS	H/O	PSA		SLEEP						PSA		H/O	IRT OPS	PCDNF	IRT OPS	IUNSLT	ILPTSC H	IRT OPS
CDR	PRE SLEEP ACT						SLEEP						POST SLEEP ACT																	
DAY/NIGHT																														
DEBIT	79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94																													
ATT	-XVV																													
CNTL DOC	BI-INERTIAL LMP/PCMP																													

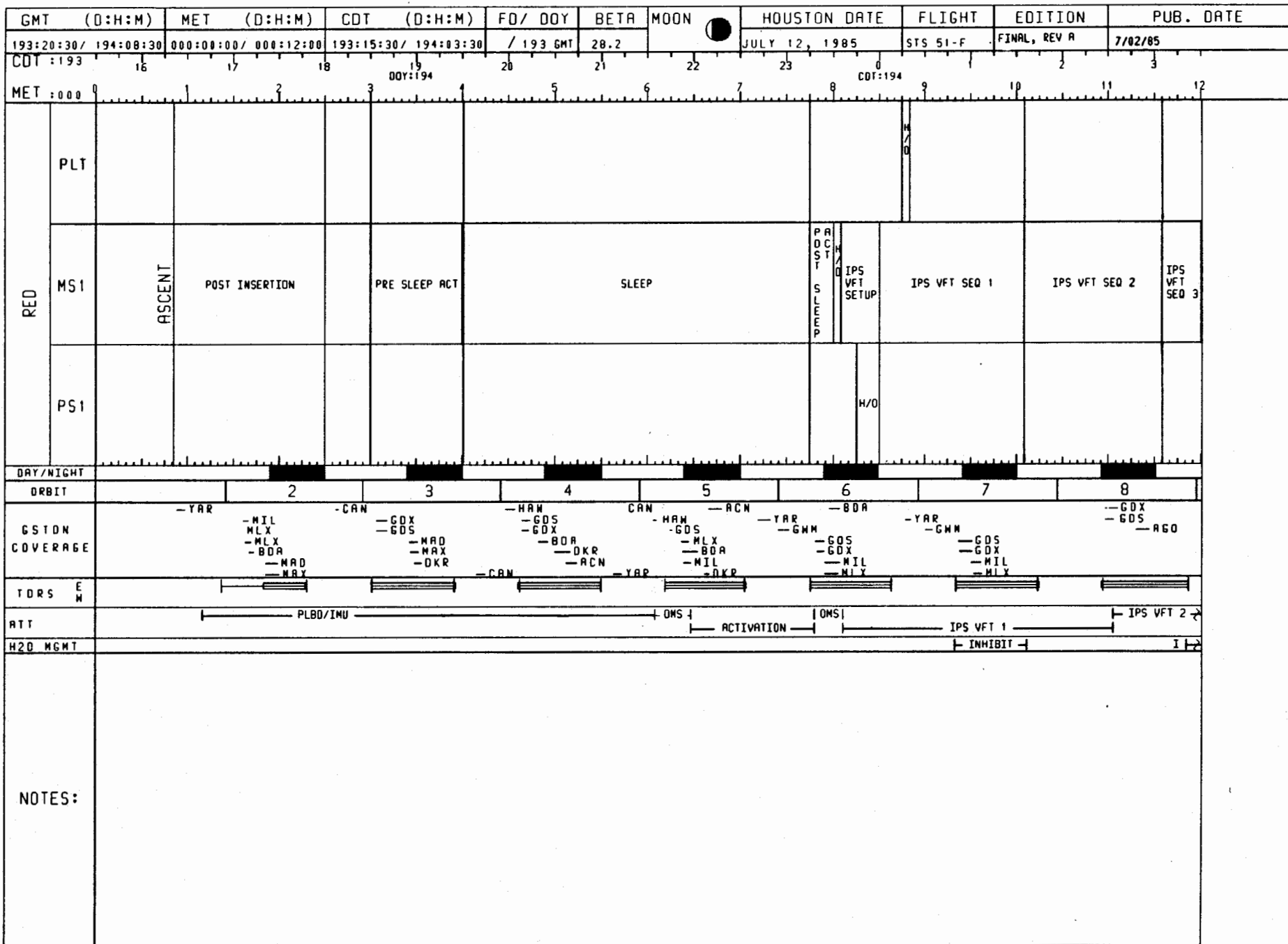
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RED	SLEEP						PSA	HIST PT SD W	EXP DEACT	SL DEACT	CABIN STOW	DEORBIT PREP											
BLU	IRT OPS	IUN SLT	IPS OPS					PSA	SLEEP						PSA	DEORBIT PREP	TIG	EDW LANDING					
CDR	PRE SLEEP ACT			SLEEP						POST SLEEP ACT			DEORBIT PREP										
DAY/NIGHT	[Day/Night Cycle]																						
ORBIT	95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110																						
ATT	+XVV BI-INERTIAL -ZLV TAIL SUN IMU DEORBIT																						
CNTL DOC	CAP/PCAP CAP O PAR UP GRP B * DMS BURN O RCS HOT FIRE O/D PREP																						

MET:007	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23																						
RED																							
BLU																							
CDR																							
DAY/NIGHT	[Day/Night Cycle]																						
ORBIT	111 112 113 114 115 116 117 118 119 120 121 122 123 124 125																						
ATT																							
CNTL DOC																							

MET:008	0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23																						
RED																							
BLU																							
CDR																							
DAY/NIGHT	[Day/Night Cycle]																						
ORBIT	126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141																						
ATT																							
CNTL DOC																							

SUMMARY TIMELINE

SUMMARY TIMELINE



GMT (D:H:M)		MET (O:H:M)		CDT (D:H:M)		FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
193:20:30 / 194:00:30		000:00:00 / 000:12:00		193:15:30 / 194:03:30		/ 193 GMT	28.2		JULY 12, 1985	STS 51-F	FINAL, REV A	7/02/85
CDT: 193		16	17	18	19	20	21	22	23	24	25	26
MET: 000		0	1	2	3	4	5	6	7	8	9	10
BLUE	MS2			UNSTOW CABIN	MEAL	CAMR ASSY						
	MS3	ASCENT	POST INSERTION	SL ACTIVATION	IPS ACT	11 ACT	3 ACT	7 ACT				SLEEP
	PS2											
CDR		POST INSERTION									PRE SLEEP ACT	SLEEP
DAY/NIGHT												
ORBIT		2	3	4	5	6	7	8				
GSTON COVERAGE	-YAR	-MIL -MLX -BDA -MAD -MAX	-CAN -GOX -GOS -MAD -MAX -DKR	-HAW -GOS -GOX -BDA -DKR -ACN	CAN -HAW -GOS -MLX -BDA -MIL -DKR	-ACN -YAR -GMM -GOS -GOX -MIL -MLX	-BDA -YAR -GMM -GOS -GOX -MIL -MLX	-GOS -GOX -MIL -MLX	-R60			
TDRS E M												
ATT			PLBD/INU			ACTIVATION		IPS VFT 1				IPS VFT 2
H2O NGMT								INHIBIT				
NOTES:												

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
194:08:30 / 194:20:30		000:12:00 / 001:00:00		194:03:30 / 194:15:30		/ 194 GMT	25.8		JULY 13, 1985	STS 51-F	FINAL, REV A	7/02/85
CDT : 194												
MET : 000												
RED	PLT											
	MS1	IPS VFT SEQ 3	IPS VFT REV 4	IPS VFT SEQ 5	IPS VFT SEQ 6	SOLAR	SOLAR	SOLAR	PRE SLEEP ACT	SLEEP		
	PS1					SOLAR	SOLAR					
DAY/NIGHT												
ORBIT												
GSTDN COVERAGE												
TDRS												
ATT												
H2O MGMT												
NOTES:												

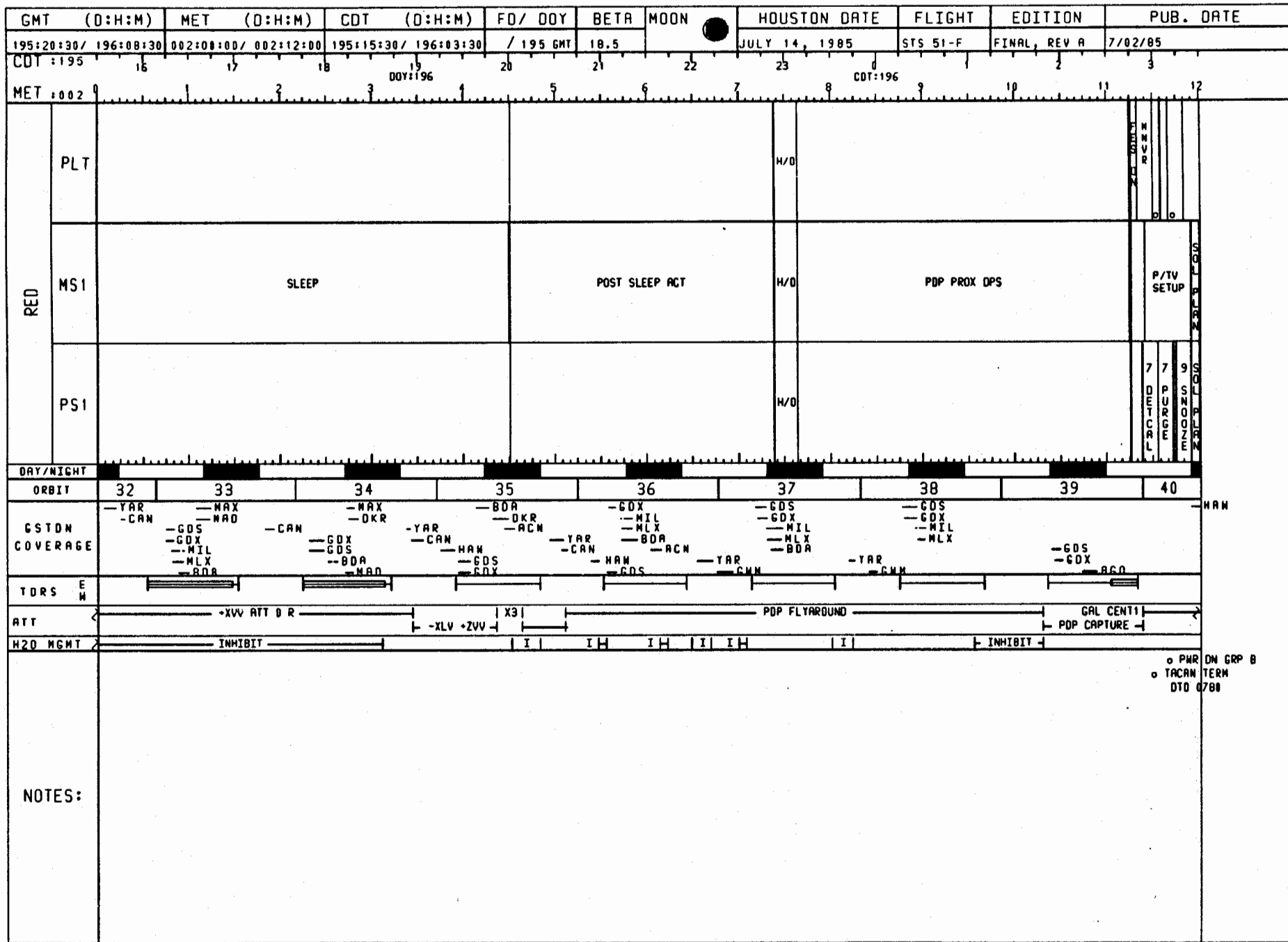
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194:08:30 / 194:20:30	000:12:00 / 001:00:00	194:03:30 / 194:15:30	/ 194 GMT	25.8	●	JULY 13, 1985	STS 51-F	FINAL, REV A	7/02/85
MET : 000 12 13 14 15 16 17 18 19 20 21 22 23 0									
BLUE	MS2								
	MS3	SLEEP							
	PS2								
CDR	SLEEP								
DAY/NIGHT									
ORBIT									
GSTDN COVERAGE									
TDRS E M									
ATT									
H2O MGMT									
NOTES:	▲ 13 ULTRA								

GMT (D:H:M)	MET (D:H:M)	CDT (D:H:M)	FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE	
194:20:30 / 195:08:30	001:00:00 / 001:12:00	194:15:30 / 195:03:30	/ 194 GMT	23.3	☉	JULY 13, 1985	STS 51-F	FINAL, REV A	7/02/85	
CDT: 194 16 17 18 19 20 21 22 23 24 MET: 001 0 1 2 3 4 5 6 7 8 9 10 11 12 DOY: 195										
RED	PLT					H/O				
	MSI	SLEEP				POST SLEEP ACT	1 D R A W	H/O	PDRS OPS	
	PSI					1 D R A W	H/O			
DAY/NIGHT										
ORBIT	17	18	19	20	21	22	23	24		
GSTON COVERAGE	-MIL -MLX -BDA -MAD -MAX	-GDX -GDS -MIL -MLX -BDA -MAD -MAX	-CAN -HAW -GDS -GDX -BDA -MAX -MAD	-DKR -YAR -CAN -HAW -GDS -GDX -BDA -MAX -MAD	-MLX -MIL -DKR -ACN -HAW -GDS -GDX -BDA -MAX -MAD	-GDX -MIL -MLX -BDA -ACN -YAR -GDM	-GDS -GDX -MIL -MLX -BDA -YAR -GDM	-AGO -GDS -GDX -MIL -MLX -BDA -YAR -GDM	-AGO -GDS -GDX	
YDRS E H										
ATT	-DMS	-XLV +YVV	+ZLV +XVV	-YLV -ZVV	PDP RMS OPS	-Z//B	-Z//B ROTR	+ZLV -XVV		
H2O MGMT	INHIBIT					D I O	DUMP			
NOTES:										• STONED IPS SURVEY

GMT (D:H:M)	MET (O:H:M)	CDT (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE	
194:20:30 / 195:08:30	001:00:00 / 001:12:00	194:15:30 / 195:03:30	/ 194 GMT	23.3	☉	JULY 13, 1985	STS 51-F	FINAL, REV A	7/02/85	
CDT:194	16	17	18	19	20	21	22	23	24	
MET:001	1	2	3	4	5	6	7	8	9	
CDT:195										
CDT:195										
BLUE	MS2	MS3	PS2	COR						
	NVVR OMSBURN NVVR 13 ULTRRA 13 ULTRRA NVVR OMSBURN	13 ULTRRA 13 ULTRRA P/TV SETUP	13 ULTRRA 14 NVCB 13 ULTRRA 14 NVCB 13 ULTRRA PRE OMS				1 DRAW 2 H/O 1 DRAW			
				PORS OPS				H/O	PRE SLEEP ACT	SLEEP
								H/O		
									PRE SLEEP ACT	SLEEP
DRY/NIGHT	[Bar chart showing dry/night periods]									
ORBIT	17	18	19	20	21	22	23	24		
GSTON COVERAGE	MIL MLX BDA MAD MAX	GDX GDS MIL MLX BDA MAD MAX CAN	CAN HAW DKR YAR MLX MIL BDA MAD MAX	GOS GDX HAW DKR ACN YAR GOS GDX BDA MAD MAX	YAR MLX MIL BDA MAD MAX CAN	GDX GDS MIL MLX BDA MAD MAX CAN	GOS GDX MIL MLX BDA MAD MAX CAN	AGO GOS GDX MIL MLX BDA MAD MAX	AGO GOS GDX MIL MLX BDA MAD MAX	
TORS	[Bar chart showing TORS events]									
ATT	[Bar chart showing ATT events]									
H2O MGMT	[Bar chart showing H2O MGMT events]									
NOTES:										

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FO/DOY	BETA	MODN	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
195:08:30 / 195:20:30		001:12:00 / 002:00:00		195:03:30 / 195:15:30		/ 195 GMT	20.9		JULY 14, 1985	STS 51-F	FINAL, REV A	7/02/85
CDT: 195												
MET: 001												
RED	PLT	13 ULTRA	13 ULTRA	13 ULTRA	13 ULTRA	13 ULTRA	MNVR	MEAL	13 ULTRA	13 ULTRA	13 ULTRA	13 ULTRA
	MS1	RMS3 PWRDN	13 ULTRA	13 ULTRA	13 ULTRA	13 ULTRA	13 ULTRA	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR
	PS1	13 ULTRA	13 ULTRA	9 SNOOZE	13 ULTRA	9 ACT	13 ULTRA	13 ULTRA	SOLAR	SOL PLAN	SOLAR	SOL PLAN
DAY/NIGHT												
ORBIT												
GSTDN COVERAGE												
TORS												
ATT												
H2O MGMT												
NOTES:	<ul style="list-style-type: none"> o MNVR o TACAN INIT 070 0700 o FILTER CLEANING MIDDECK (MCS) o FILTER CLEANING MIDDECK (OVERHEAD) o FILTER CLEANING MIDDECK FLOOR 											

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE				
195:08:30/ 195:20:30		001:12:00/ 002:00:00		195:03:30/ 195:15:30		/ 195 GMT	20.9		JULY 14, 1985	STS 51-F	FINAL, REV A	7/02/85				
CDT : 195 4 5 6 7 8 9 10 11 12 13 14 15																
MET : 001 12 13 14 15 16 17 18 19 20 21 22 23 0																
BLUE	MS2							2 MON	H/D	MNVR	MNVR	P/TV SETUP	MNVR	OMS BURN	MEAL	PCG ACT
	MS3	SLEEP							H/D	SOL PLAN	SOLAR	HEAD CHECK	PRE OPS	P/TV ACT	PDRS OPS	PDRS OPS
	PS2							H/D	SOL PLAN	SOLAR	LTCHE PER	7 PURGE	9 SNOOZE			
CDR	SLEEP						POST SLEEP ACT									
DAY/NIGHT																
ORBIT																
GSTDN COVERAGE																
TDRS																
ATT																
H2O MGMT																
NOTES:																



GMT (D:H:M)	MET (D:H:M)	CDT (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE	
195:20:30 / 196:08:30	002:00:00 / 002:12:00	195:15:30 / 196:03:30	/ 195 GMT	18.5		JULY 14, 1985	STS 51-F	FINAL, REV A	7/02/85	
CDT :195	16	17	18	19	20	21	22	23	0	
			DOY:196					CDT:196		
MET :002	0	1	2	3	4	5	6	7	8	
									9	
									10	
									11	
									12	
BLUE	MS2	PCB ALT	AFT CNTLR					2 MOON		
	MS3	PDRS OPS	PDP PROX OPS				PRE SLEEP ACT		SLEEP	
	PS2		1 4 M V C - B							
CDR			PDP PROX OPS				PRE SLEEP ACT		SLEEP	
DAY/NIGHT	[Day/Night Cycle Diagram]									
ORBIT	32	33	34	35	36	37	38	39	40	
ESTDN COVERAGE	-YAR -CAN	-MAX -MAD	-MAX -DKR	-BDA -DKR	-GDX -MIL -MLX -BDA	-GDS -GDX -MIL -MLX -BDA	-GDS -GDX -MIL -MLX	-GDS -GDX -MIL -MLX		
TDRS E M	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]
ATT	+XVV ATT 0 R			-XLV +ZVV	X3	POP FLYAROUND			GAL CENTI	
H2O MGMT	INHIBIT			I	IH	IH	II	IH	I	INHIBIT
NOTES:										

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE			
196:08:30/ 196:20:30		002:12:00/ 003:00:00		196:03:30/ 196:15:30		/ 196 GMT	16.2		JULY 15, 1985	STS 51-F	FINAL, REV A	7/02/85			
CDT :196															
MET :002															
RED	P.L.T	MNV R	MEAL	13 SOL PLN	14 SOL PLN	15 SOL PLN	16 SOL PLN	17 SOL PLN	18 SOL PLN	19 SOL PLN	20 SOL PLN	21 SOL PLN	22 SOL PLN	23 SOL PLN	0
	MS1	SOL PLN	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR
	PS1	SOL PLN	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR
DAY/NIGHT															
ORBIT															
GSTDN COVERAGE															
TORS E M															
ATT															
H2O MGMT															
NOTES:															

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FO/DOY		BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE			
196:08:30 / 196:20:30		002:12:00 / 003:00:00		196:03:30 / 196:15:30		/ 196 GMT		16.2		JULY 15, 1985	STS 51-F	FINAL, REV A	7/02/85			
CDT :196																
MET :002																
BLUE	M52									H/O	2 H/O N	FLTR IFM	FLTR IFM	MNV R	MNV R	
	M53	SLEEP								H/O	P/TV SETUP	P/TV ACT	P T S O L A R P L A N 2	I P S U N L T	S O L A R	I P S L T C M
	PS2									H/O	1 4 N V C - 8		S O L P L A N	P D S T X V V	S O L A R	P R E X V V
CDR	SLEEP										POST SLEEP ACT					
DAY/NIGHT																
ORBIT																
GSTDN CDVERAGE																
TDRS E W																
ATT																
H2O MGMT																
NOTES:																

■ FILTER CLEANING FLIGHT DECK (STBD SIDE)
 ■ FILTER CLEANING FLIGHT DECK (PORT SIDE)

GMT (O:H:M)		MET (O:H:M)		CDT (O:H:M)		FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE						
196:20:30 / 197:08:30		003:00:00 / 003:12:00		196:15:30 / 197:03:30		/ 196 GMT	13.8		JULY 15, 1985	STS 51-F	FINAL, REV A	7/02/85						
CDT:196		DOT:197		CDT:197														
MET:003																		
RED	PLT											H/O						
	MSI	SLEEP										POST SLEEP ACT	H/O	SOL PLAN	SOLAR	PT SOLAR 1	SOL PLAN	SOLAR
	PSI												H/O	SOL PLAN	SOLAR		SOL PLAN	SOLAR
DAY/NIGHT																		
DRBIT		48	49	50	51	52	53	54	55									
GSTDN COVERAGE		BDA -MAX -RAD	-MIL -MLX -BDA	-GDS -GDX -BDA	-HAW -GDS -GDX	-ACN -YAR -GMM	-BDA -YAR -GMM	-GDS -GDX -AGO									-HAW -AGO	
TORS																		
ATT		+XVV +20 ROLL		+XVV/BI TRAN1		GC/TDRS 1	GC/TDRS2	A754	A754	CCFD	GAL CENT3							
H2O MGMT		INHIBIT																
NOTES:																		

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE	
196:20:30/ 197:08:30		003:00:00/ 003:12:00		196:15:30/ 197:03:30		/ 196 GMT	13.8		JULY 15, 1985	STS 51-F	FINAL, REV A	7/02/85	
CDT :196		MET :003		DOY:197				COT:197					
BLUE	MS2	P/TV SETUP	P/TV ACT	2 CHECK		MNVR	MNVR	MNVR	MEAL	MNVR	MNVR	2 H/O	
	MS3	IPSLTCH		SOLAR PLAN	IP SUNLT	SOLAR PLAN	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	H/O PRE SLEEP ACT	
	PS2	PREXVV	14 NVC-B	SOLAR PLAN	POSTXVV	SOLAR PLAN	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	H/O	
CDR						PRE SLEEP ACT				SLEEP			
DAY/NIGHT		ORBIT		BSTDN COVERAGE		TORS		ATT		H2O MGMT			
		48 49 50 51 52 53 54 55		BDA -MAX -MAD -MIL -MLX -BDA -MAX -YAR -CAN -GDX -GOS -CAN		-GOS -GDX -BDA -DKR -ACN -YAR -CAN -HAM		-HAM -ACN -YAR -GOS -GDX -MLX -BDA -MIL -DKR -CAN		-BDA -YAR -GOS -GDX -MIL -MLX -GMM		-GOS -GDX -MIL -MLX -GMM -AGD	
		*XVV +20 ROLL *XVV/BI TRAN1		GC/TORS 1 CCFD		GC/TORS2 A754		CCFD GAL CENT3		INHIBIT			
NOTES:		MNVR											

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FO/ OGY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE		
197:08:30/ 197:20:30		003:12:00/ 004:00:00		197:03:30/ 197:15:30		/ 197 GMT	11.5		JULY 16, 1985	STS 51-F	FINAL, REV A	7/02/85		
CDT : 197 4 5 6 7 8 9 10 11 12 13 14 15														
MET : 003 12 13 14 15 16 17 18 19 20 21 22 23 0														
RED	PLT	MNVVR	MNVVR	MNVVR	MNVVR	MEAL	MNVVR	MNVVR	MNVVR	MNVVR	MNVVR	H/O		
	MSI	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	IPS L TCH	H/O	PRE SLEEP ACT	SLEEP
	PSI	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	PRE XVV	14 NVC-B	H/O	
DAY/NIGHT														
ORBIT														
ORBIT 56 57 58 59 60 61 62 63														
GSTN COVERAGE -HAN -AGO -HAN -AGO -ACN -ACN -MAX -ACN -MAX -CAN -AGO -BDA -MAD -MAY -YAR -CAN -YAR -CAN -YAR -CAN -MLX -MIL -BDA -MAD -MAY -MLX -MIL -BDA -MAX -MAD														
TORS E N														
ATT														
ATT CCFD GAL CENT3 COMA/VIRGO GAL CENT3 COMA/VIRGO GAL CENT3 VELA GAL CENT4 +XVV -20 ROLL X8 VIEW IRT OBS														
H2O MGMT														
H2O MGMT INHIBIT														
NOTES:														

GMT (D:H:M)	MET (D:H:M)	CDT (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE							
197:08:30 / 197:20:30	003:12:00 / 004:00:00	197:03:30 / 197:15:30	/ 197 GMT	11.5		JULY 16, 1985	STS 51-F	FINAL, REV A	7/02/85							
MET : 003 12 13 14 15 16 17 18 19 20 21 22 23 0																
BLUE	MS2									2 H/O M O N	M N V R	M N V R	M N V R	M N V R	M N V R	
	MS3	SLEEP				POST SLEEP ACT				H/O	IPS UNLT	SOLAR	IPS LTCH	POP GLOW A		
	PS2									H/O 14 NVC-B	UNLT PREP	SOLAR	LTCH PREP	S O L A R		
CDR	SLEEP				POST SLEEP ACT											
DAY/NIGHT																
ORBIT	56	57	58	59	60	61	62	63								
OSTON COVERAGE	-HAN -AGO	-HAN -AGO	-ACN -AGO	-DKR -HAD -MAX	-CAN -AGO	-YAR -CAN	-MLX -MIL -BDA -HAD -MAX	-YAR -CAN	-MLX -MIL -BDA -HAD -MAX	-YAR -CAN						
TDRS E W																
ATT	CCFD GAL CENT3	COMA/VIRGO GAL CENT3	COMA/VIRGO GAL CENT3	VELA GAL CENT4	+XVV -20 ROLL			X8 VIEW	IRT OBS							
H2O MGMT																
NOTES:																

GMT (D:H:M)	MET (D:H:M)	CDT (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE			
197:20:30 / 198:08:30	004:00:00 / 004:12:00	197:15:30 / 198:03:30	/ 197 GMT	9.2	●	JULY 16, 1985	STS 51-F	FINAL, REV A	7/02/85			
CDT : 197	16	17	18	19 DOY:198	20	21	22	23	0 CDT:198			
MET : 004	1	2	3	4	5	6	7	8	9			
RED	PLT							H/O	MNV R	MNV R	MNV R	
	MS1	SLEEP						POST SLEEP ACT		H/O	SOL PLANN	SOLAR
	PS1									H/O	SOL PLANN	SOLAR
DAY/NIGHT												
ORBIT	64	65	66	67	68	69	70	71				
GSTON COVERAGE	-GDX -MAD -GDS -MIL -MLX -BDA MIL -MAY	-CAN -HAW -GDS -BDA -MAD	-MAX -OKR -YAR -CAN -HAW -GDS -BDA -MAD	-BDA -MIL -DKR -ACN -YAR -GDS -GDX	-GDS -GDX -MIL -MLX -BDA -ACN -HAW	-GMM -GOS -GDX -MIL -MLX -BDA -YAP	-GDX -AGO	-GDS -GDX -AGO	-HAW			
TDRS												
ATT	IRT OBS POP GLOW	VELA	VELA	A754 GC/TDRS 1	A754 GC/TDRS 2	COMA/VIRGO	GAL CENT3	GAL CENT3	COMA/VIRGO			
H2O MGMT	INHIBIT											
NOTES:												
	IMU ALIGN											

GMT (D:H:M)	MET (D:H:M)	CDT (D:H:M)	FO/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
197:20:30 / 198:08:30	004:00:00 / 004:12:00	197:15:30 / 198:03:30	/ 197 GMT	9.2		JULY 16, 1985	STS 51-F	FINAL, REV A	7/02/85
CDT:197	16	17	18	19	20	21	22	23	24
			DOY:198					CDT:198	
MET:004	0	2	3	5	6	7	8	9	10
	MS2			MEAL				P/TV ACT	
BLUE	MS3	PDP GLOW B	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR
	PS2	5 MISC	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR
CDR					PRE SLEEP ACT				SLEEP
DAY/NIGHT									
ORBIT	64	65	66	67	68	69	70	71	
GSTON COVERAGE	-GDS -MAD -MIL -MLX -BDA MIL -MAX	-CAN -HAM -GDS -GDX -BDA -MAD	-MAX -DKR -YAR -CAN -HAM -GDS -GDX	-BDA -MIL -YAR -CAN -HAM -GDS -GDX	-GDS -GDX -MIL -MLX -BDA -ACN -YAR	-GMM -GDS -GDX -MIL -MLX -BDA -ACN -YAR	-GDX -AGO	-GDS -GDX -AGO	-HAM
TORS E M									
ATT	IRT OBS IRT OBS VELR	VELR	VELR	A754	A754	COMA/VIRGO	GAL CENT3	GAL CENT3	
H2D NGMT		INHIBIT		GC/TORS 1	GC/TORS 2				I
NOTES:	MNVR								

GMT (O:H:M)	MET (O:H:M)	CDT (O:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE			
198:08:30 / 198:20:30	004:12:00 / 005:00:00	198:03:30 / 198:15:30	/ 198 GMT	6.9		JULY 17, 1985	STS 51-F	FINAL, REV A	7/02/85			
CDT : 198												
MET : 004												
PLT	MNVVR	MNVVR	MEAL	MNVVR	MNVVR	MNVVR	MNVVR	MNVVR	FLTR IFM	FLTR IFM	H/O	
MSI	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	P/TV SETUP	P/TV ACT	H/O	PRE SLEEP ACT	SLEEP
PSI	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	SOLAR	PRE XVV		H/O		
DAY/NIGHT												
ORBIT	71	72	73	74	75	76	77	78	79			
GSTON COVERAGE	-AGD	-HAM -AGD -ACN	-AGD -ACN -DKR	-GWN -AGD -DKR -MAD -MAX	-AGD -GWN -CAN	-AGD -MAX -MAD -YAR -CAN	-MLX -MAX -MAD -MIL -BOA	-BOA -MAX -MAD -MIL -MIL	-YAR -CAN -MIL -MIL	-MIL -MLX -BOA -YAR -CAN -GDX -GDS		
TORS	E M											
ATT	GAL CENT3 CCFD	GAL CENT3 COMA/VIRGO	GAL CENT3 CCFD	GAL CENT4 VELA	+XVV -20 ROLL						+XVV +20 ROLL	
H2D MGMT	INHIBIT											
NOTES:	IMU ALIGN ● FILTER CLEANING FLIGHT DECK (STBD SIDE) ● FILTER CLEANING FLIGHT DECK (PORT SIDE)											

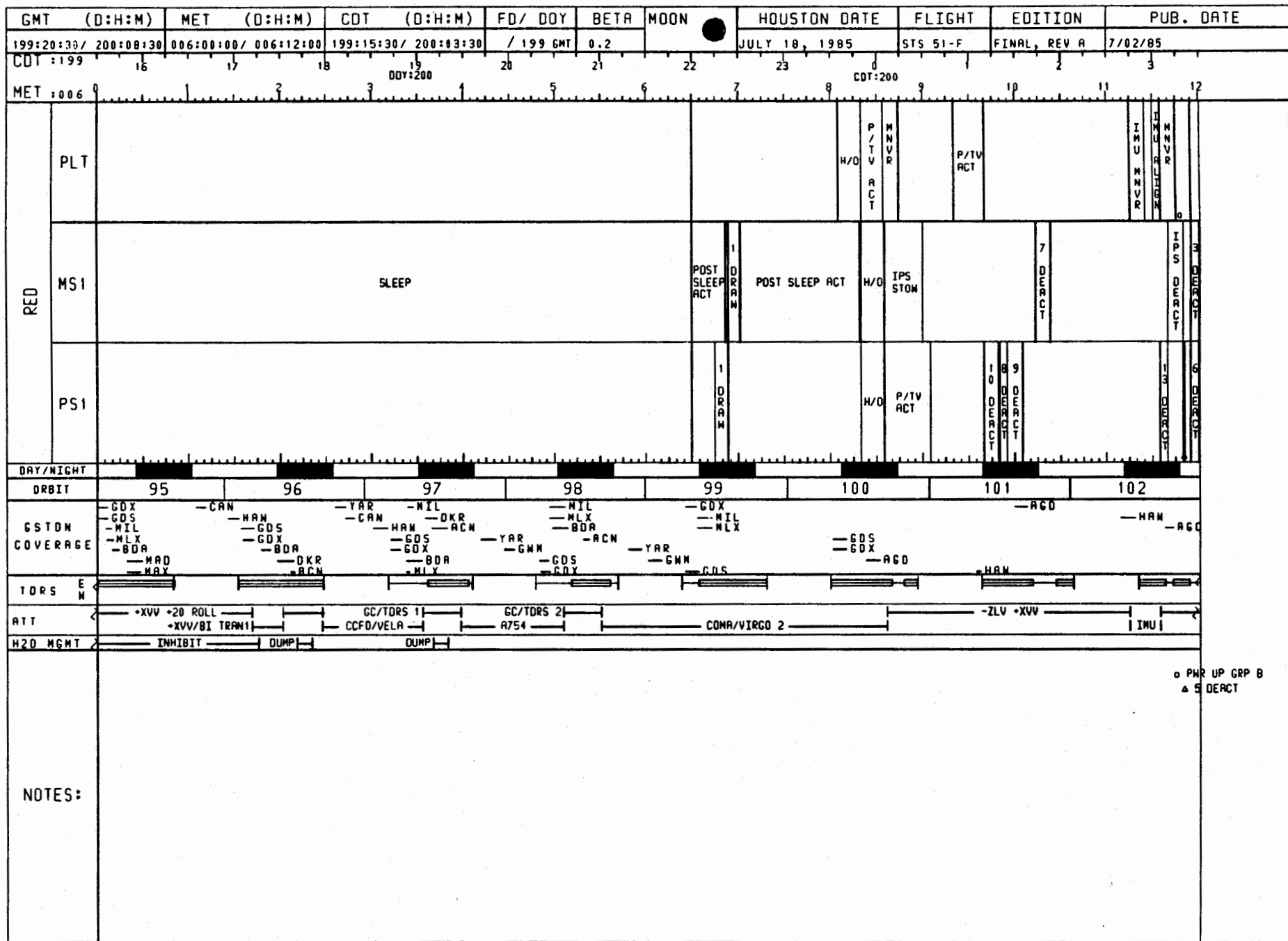
GMT (D:H:M)	MET (D:H:M)	CDT (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
198:08:30 / 198:20:30	004:12:00 / 005:00:00	198:03:30 / 198:15:30	/ 198 GMT	6.9	●	JULY 17, 1985	STS 51-F	FINAL, REV A	7/02/85
CDT :198									
MET :004									
BLUE	MS2								
	MS3	SLEEP				POST SLEEP ACT			
	PS2								
CDR	SLEEP				POST SLEEP ACT				
DAY/NIGHT	[Day/Night Cycle Diagram]								
ORBIT	71	72	73	74	75	76	77	78	79
GSTDN COVERAGE	[Coverage Diagram: AGO, HAN, ACN, GNM, OKR, MAD, MAX, YAR, CAN, NLX, BDA, MIL, SOX, GDS]								
TORS	[Torsion Diagram: E, W]								
ATT	[Attitude Diagram: GAL CENT3, COMA/VIRGD, VELR, +XVV -20 ROLL, X8 VIEW, +XVV +20 ROLL]								
H2O MGMT	[Water Management Diagram: INHIBIT]								
NOTES:	[Notes Section]								

GMT (O:H:M)	MET (D:H:M)	CDT (O:H:M)	FO/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE	
198:20:30/ 199:08:30	005:00:00 / 005:12:00	198:15:30/ 199:03:30	/ 198 GMT	4.6	●	JULY 17, 1985	STS 51-F	FINAL, REV A	7/02/85	
CDT: 198 DOY: 199 CDT: 199										
MET: 005										
RED	PLT					H/D		M N V R	M N V R	M N V R
	MS1	SLEEP				POST SLEEP ACT		H/D	SOL PLAN	SOLAR
	PS1							H/D	SOL PLAN	SOLAR
DAY/NIGHT										
ORBIT										
GSTON COVERAGE										
TORS										
ATT										
H2O MGMT										
NOTES:										

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FO/DOY		BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE
198:20:30/199:08:30		005:00:00/005:12:00		198:15:30/199:03:30		/198 GMT		4.6		JULY 17, 1985	STS 51-F	FINAL, REV A	7/02/85
CDT:198		DOY:199		CDT:199									
MET:005													
BLUE	MS2	MNV R		MEAL		MNV R		MNV R		MNV R		H/D MON	
	MS3	IOPEL SOEY 2		SOLAR		SOLAR		SOLAR		SOLAR		H/D PRE SLEEP ACT	
	PS2	14 NVC-B UNLTPREP		SOLAR		SOLAR		SOLAR		SOLAR		H/D	
CDR						PRE SLEEP ACT				SLEEP			
DAY/NIGHT													
ORBIT		79	80	81	82	83	84	85	86	87			
ESTON COVERAGE		-CAN -GOS -GOX -BDA -MAD -MAX -DKR		-YAR -CAN -HAW -GOS -GOX -BDA -DKR		-ACN -YAR -CAN -HAW -GOS -GOX -MIL		-MLX -BDA -DKR -ACN -YAR -GOS -GOX -MIL -BDA -GOS -GWM		-GOX -MIL -MLX -BDA -YAR -GOS -GWM		-AGO -GOS -GOX -AGO -HAW	
TDRS		E M											
ATT		+XVV +20 ROLL +XVV/BI TRM1		GC/TDRS 1 VELA		GC/TDRS 2 A754		A754		CCFD		CONR/VIRGO GAL CENT3	
H2O MGMT		INHIBIT											
NOTES:													

GMT (D:H:M)	MET (D:H:M)	CDT (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE											
199:08:30 / 199:20:30	005:12:00 / 006:00:00	199:03:30 / 199:15:30	/ 199 GMT	2.4	●	JULY 18, 1985	STS 51-F	FINAL, REV A	7/02/85											
CDT : 199																				
MET : 005 12 13 14 15 16 17 18 19 20 21 22 23 0																				
RED	PLT	MNVR	MNVR	MNVR	MEAL	MNVR	MNVR	MNVR	FCS C/D	P/TV SETUP	MNVR	MNVR	MNVR	MNVR	FLTR IFM	H/O				
	MSI	SOLAR	SOL PLAN	SOLAR	SOLAR	SOL PLAN	SOLAR	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	H/O	PRE SLEEP ACT	P/TV ACT	PRE SLEEP ACT	SLEEP	
	PSI	SOLAR	SOL PLAN	SOLAR	SOLAR	SOL PLAN	SOLAR	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	PRE XVV	H/O						
DAY/NIGHT																				
ORBIT																				
GSTDN COVERAGE																				
TORS																				
ATT																				
H2D MGMT																				
NOTES:	<ul style="list-style-type: none"> ○ MNVR ○ APU HTR ACT ○ PWR UP GRP B ● FILTER CLEANING MIDDECK FLOOR ● FILTER CLEANING MIDDECK (MCS) ● FILTER CLEANING MIDDECK (OVERHEAD) ● P/TV07-CREW CONFERENCE 																			

GMT (D:H:M)	MET (O:H:M)	CDT (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE						
199:08:30 / 199:20:30	005:12:00 / 006:00:00	199:03:30 / 199:15:30	/ 199 GMT	2.4	●	JULY 18, 1985	STS 51-F	FINAL, REV A	7/02/85						
MET : 0.05 12 13 14 15 16 17 18 19 20 21 22 23 0															
BLUE	MS2					1 DRAW	2 MON	1 DRAW	H/D	P/TV ACT	P/TV SETUP	MNVR	MNVR	MEAL	P/TV ACT
	MS3	SLEEP				POST SLEEP ACT	1 DRAW	POST SLEEP ACT	H/D	P/TV ACT	SOL PLAN	IP SUNLT	SOLAR	IP SLTCH	
	PS2					1 DRAW			H/D		SOL PLAN	POST XVV	SOLAR	PRE XVV	14 NVC-B
CDR	SLEEP		POST SLEEP ACT												
DAY/NIGHT															
ORBIT	87	88	89	90	91	92	93	94							
GSTDN COVERAGE											GOS GDX				
TORS															
ATT															
H2O MGMT															
NOTES:	<p>8 P/TV07-CREW CONFERENCE o PHR DOWN GROUP B</p>														



GMT (D:H:M)	MET (D:H:M)	CDT (O:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE					
199:20:30 / 200:08:30	006:00:00 / 006:12:00	199:15:30 / 200:03:30	/ 199 GMT	0.2	●	JULY 18, 1985	STS 51-F	FINAL, REV A	7/02/85					
CDT :199	16	17	18	19	20	21	22	23	24					
MET :006	0	1	2	3	4	5	6	7	8	9	10	11	12	
BLUE	MS2	2 CHECK	MNV RV	MNV RV	MNV RV	MNV RV	MNV RV	MNV RV	MNV RV	MNV RV	MNV RV	MNV RV	MNV RV	
	MS3	SOL PLAN	IP SUNLT	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	H/O	PRE SLEEP ACT	SLEEP	
	PS2	SOL PLAN	POST XVV	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	SOL PLAN	SOLAR	H/O			
CDR				PRE SLEEP ACT				SLEEP						
DAY/NIGHT	[Night]		[Night]		[Night]		[Night]		[Night]		[Night]		[Night]	
ORBIT	95	96	97	98	99	100	101	102						
GSTON COVERAGE	-GDX -GDS -MIL -MLX -BDA -MAD -MAX	-CAN -HAW -GDS -GOX -BDA -DKR -ACN	-YAR -CAN -HAW -GDS -GOX -BDA -MLX	-MIL -DKR -ACN -YAR -GWN -GDS -GOX	-MIL -MLX -BDA -ACN -YAR -GWN -GDS -GOX	-GOX -MIL -MLX -GDS -GOX -ACN	-AGC -HAW -AGC	-HAW -AGC						
TORS	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	[Bar]	
ATT	+XVV +20 ROLL +XVV/BI TRAN1		GC/TDRS 1 CCFD/VELA	GC/TDRS 2 A754	COMR/VIRGD 2			-ZLV +XVV		IMU				
H2O MGMT	INHIBIT		DUMP	DUMP										
NOTES:														

GMT (D:H:M)		MET (D:H:M)		CDT (D:H:M)		FD/DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE	
200:08:30 / 200:20:30		006:12:00 / 007:00:00		200:03:30 / 200:15:30		/ 200 GMT	-1.8	●	JULY 19, 1985	STS 51-F	FINAL, REV A	7/02/85	
MET : 200													
MET : 006 12 13 14 15 16 17 18 19 20 21 22 23 0													
RED	P L T	CABIN STOW	MEAL	OMS BURN	MNVR	RFI SCRE HOT	MNVR	FD C2 PAR MS SR EG	DEORBIT BURN (6/22:09)				EDW LANDING (6/23:12)
	MS1	SL DEACTIVATION	P/TV SETUP	P/TV ACT	CABIN STOW			DEORBIT PREP					
	PS1	PCG DEACT		2 MON									
DAY/NIGHT													
ORBIT													
103 104 105 106 107 108 109 110													
GSTDN COVERAGE													
-HAN -AGO -ACN -GWN -AGO -ACN -DKP -HAD -MAX -CAN -AGO -HAD -MAX -YAR -CAN -MIL -BDA -MAX -HAD -MIL -BDA -MAX -HAD -YAR -CAN -GDS -MAX -MIL -MLX -MIL -BDA -MIL -HAD													
TDRS E M													
ATT													
-ZLV +XVV OMS -ZLV +XVV TAIL SUN IMU DEORBIT BURN													
H2D MGMT													
o MNVR													
NOTES:													

GMT (D:H:M)	MET (D:H:M)	CDT (D:H:M)	FD/ DOY	BETA	MOON	HOUSTON DATE	FLIGHT	EDITION	PUB. DATE																														
200:08:30 / 200:20:30	006:12:00 / 007:00:00	200:03:30 / 200:15:30	/ 200 GMT	-1.8	●	JULY 19, 1985	STS 51-F	FINAL, REV A	7/02/85																														
CDT : 200																																							
MET : 006																																							
<table border="1"> <tr> <td>MS2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>MS3</td> <td></td> <td>SLEEP</td> <td></td> <td>POST SLEEP ACT</td> <td></td> <td>DEORBIT PREP</td> <td></td> <td></td> <td></td> </tr> <tr> <td>PS2</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>DEORBIT BURN (6/22:09)</td> <td>EDW LANDING (6/23:12)</td> </tr> </table>										MS2										MS3		SLEEP		POST SLEEP ACT		DEORBIT PREP				PS2								DEORBIT BURN (6/22:09)	EDW LANDING (6/23:12)
MS2																																							
MS3		SLEEP		POST SLEEP ACT		DEORBIT PREP																																	
PS2								DEORBIT BURN (6/22:09)	EDW LANDING (6/23:12)																														
CDR																																							
SLEEP																																							
POST SLEEP ACT																																							
DRY/NIGHT																																							
ORBIT																																							
103 104 105 106 107 108 109 110																																							
GSTDN COVERAGE																																							
-HAW -AGO -ACM -GMM -AGO -ACM -DKR -MAD -MAX -MAD -MAX -CAN -AGO -MAD -MAX -MIL -BDA -MIL -GDS -MAX -MIL -BDA -MAD -MAX -MIL -BDA -MAD -MAX -YAR -CAN -YAR -CAN -MIL -BDA -MIL -GDS -MAX -MIL -BDA -MAD -MAX -MIL -BDA -MAD -MAX -YAR -CAN -YAR -CAN -MIL -BDA -MIL -GDS -MAX																																							
TDRS E W																																							
ATT																																							
-ZLV +XVV OMS -ZLV +XVV TAIL SUN IMU DEORBIT BURN																																							
H2O MGMT																																							
NOTES:																																							

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DETAILED TIMELINE

**DETAILED
TIMELINE**

TDR EM
 YARTT
 M M N I L L B D
 L X X A
 M T
 M A X T
 C A N N
 G G D D S
 T T
 D K R T
 C A N N
 H A M
 T T
 G G D D S
 T T
 B O A R
 S A R A
 MET DAY 000
 00:00
 01:00
 02:00
 03:00
 04:00
 05:00
 ORB 2
 ORB 3
 ORB 4

BLUE TEAM
 MS2

STS 51-F (BLUE FD 01)
 MS3 PS2

CDR

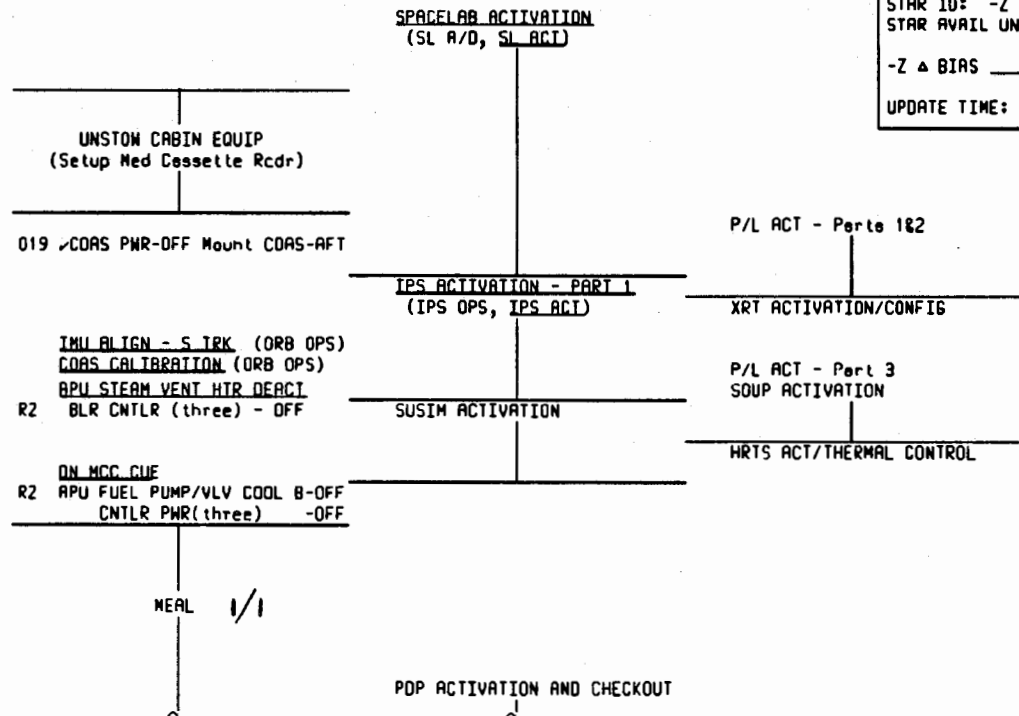
MCC

Activities prior to 0/02:30 are in the ASCENT and POST INSERTION Checklists

EZ CAP ACTIVITIES FOR TODAY:
 FOOD PREP/POST (Cue Card)
 Do at earliest convenience:
 PCS 1 (2) CONFIG (ORB OPS, ECLS)
 Config Sys 1 (5 Min/2 Cwh)
 LAMP & FIRE SUPPR TEST
 (ORB OPS, EPS) (10 Min)

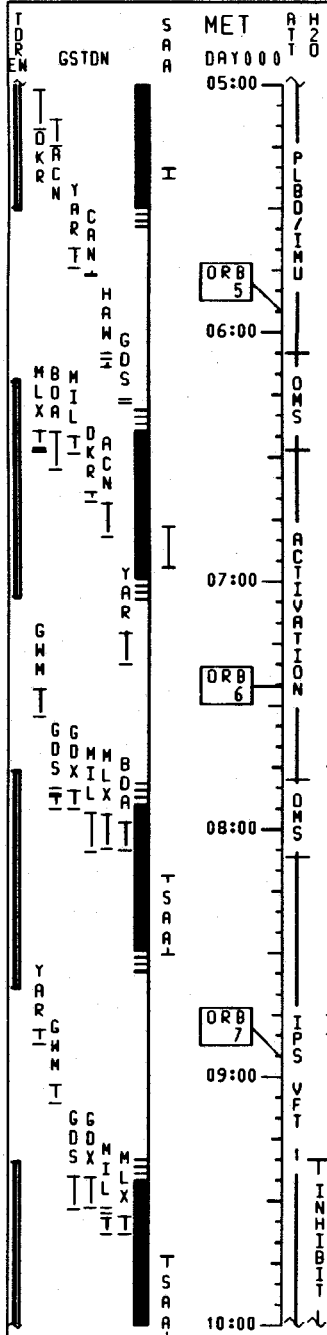
IMU ALIGN LOG
 RECD ID:
 -Y 27, -Z 30 ANG ERR . . .
 1 2 3
 ANG:
 ΔX () . . . () . . . () . . .
 ΔY () . . . () . . . () . . .
 ΔZ () . . . () . . . () . . .
 EXECUTION TIME:
 _ / _ : _ : _

COAS CALIBRATION LOG
 STAR ID: -Z 30, ANTARES
 STAR AVAIL UNTIL: 0 4 : 0 0
 -Z Δ BIAS , ,
 UPDATE TIME: _ / _ : _ : _



UPLINK
 REFSMAT
 NORMALIZAT'N
 TV05 (TORS E)
 (GND CNTL-PLB
 & CABIN)

INFORM CREW
 GO FOR APU
 COOL OFF
 UPDATE
 OMS BURN PAD

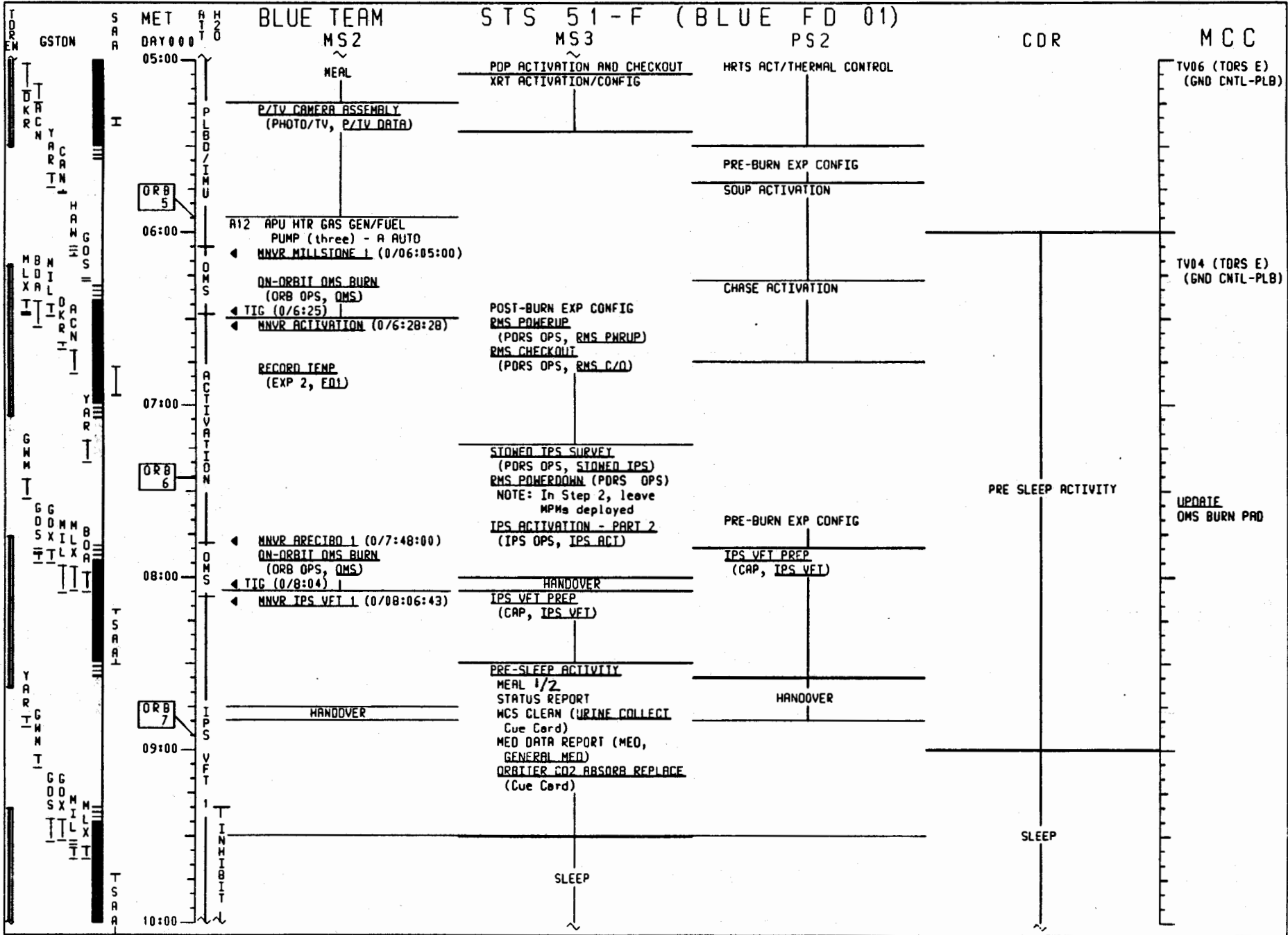


EZ CAP ACTIVITIES FOR TODAY:
 EXERCISE
 FOOD PREP/PAST (Cue Card)
 EC PURGE-AUTO (Cue Card)
 KU-RD ANT CABLE POSITIONING
 (Orb Ops, COMM/INST)

PAST SLEEP ACTIVITY
 MESSAGE REVIEW
 BREAKFAST 1/2
 HANDOVER
 IPS VFT PREP
 (CAP, IPS VET)
 HANDOVER

HANDOVER

IPS VFT SEQ 1



RED TEAM

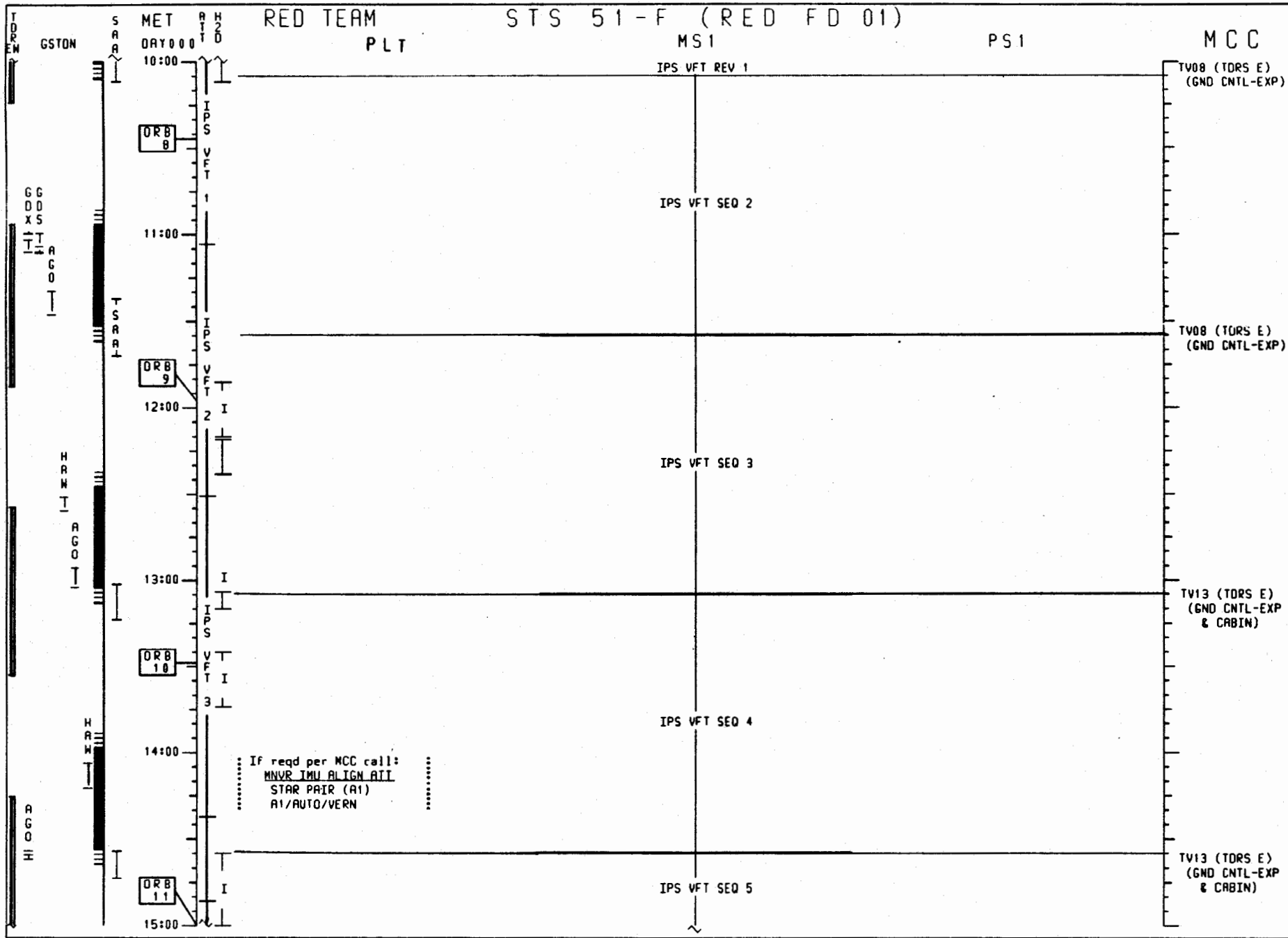
STS 51-F (RED FD 01)

PLT

MS1

PS1

MCC

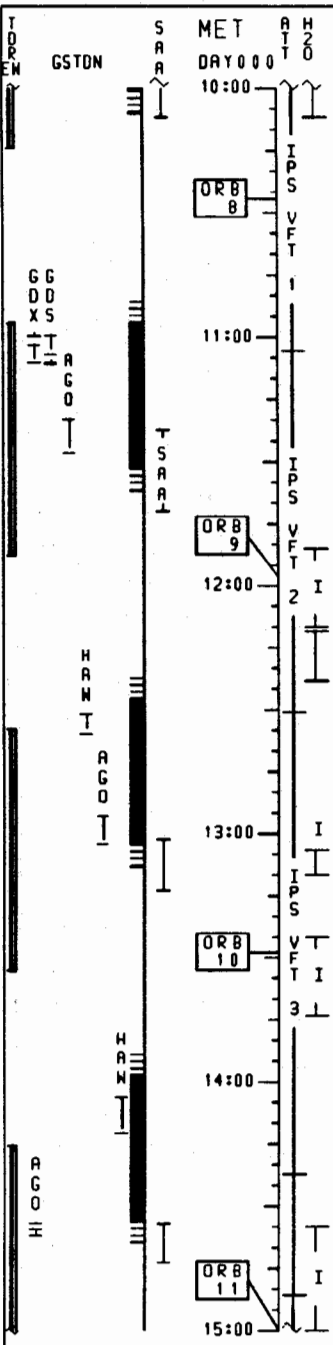


BLUE TEAM
MS2

STS 51-F (BLUE FD 01)
MS3 PS2

COR

MCC



IMU ALIGN LOG
REOD ID:

-Y , -Z ANG ERR
 1 2 3

ANG:
ΔX () . () . () .
ΔY () . () . () .
ΔZ () . () . () .

EXECUTION TIME:
_ / _ : _ : _

SLEEP

SLEEP

RED TEAM

STS 51-F (RED FD 01)

PLT

MS1

PS1

MCC

MET

DAY 000

15:00

16:00

17:00

18:00

19:00

20:00

ORB 12

ORB 13

ORB 14

IPS VFT SEQ 5

IPS VFT SEQ 6

IPS SOLAR OBS

IPS SOLAR OBS

◀ MNR CRAB/PERS (0/17:01:12)

EXP 13/SFHE QUIET (ORB OPS)

EXP 13/SFHE QUIET (ORB OPS)
IPS SOLAR OBS PLANNING

EXP 13/SFHE QUIET (ORB OPS)
IPS SOLAR OBS PLANNING

IPS SOLAR OBS

IPS SOLAR OBS

XRT CALIBRATION

P/TV04 SETUP (OMS BURN)
(PHOTO/TV, P/TV SCENES)
SETUP INTENSIFIER

HANDOVER

HANDOVER

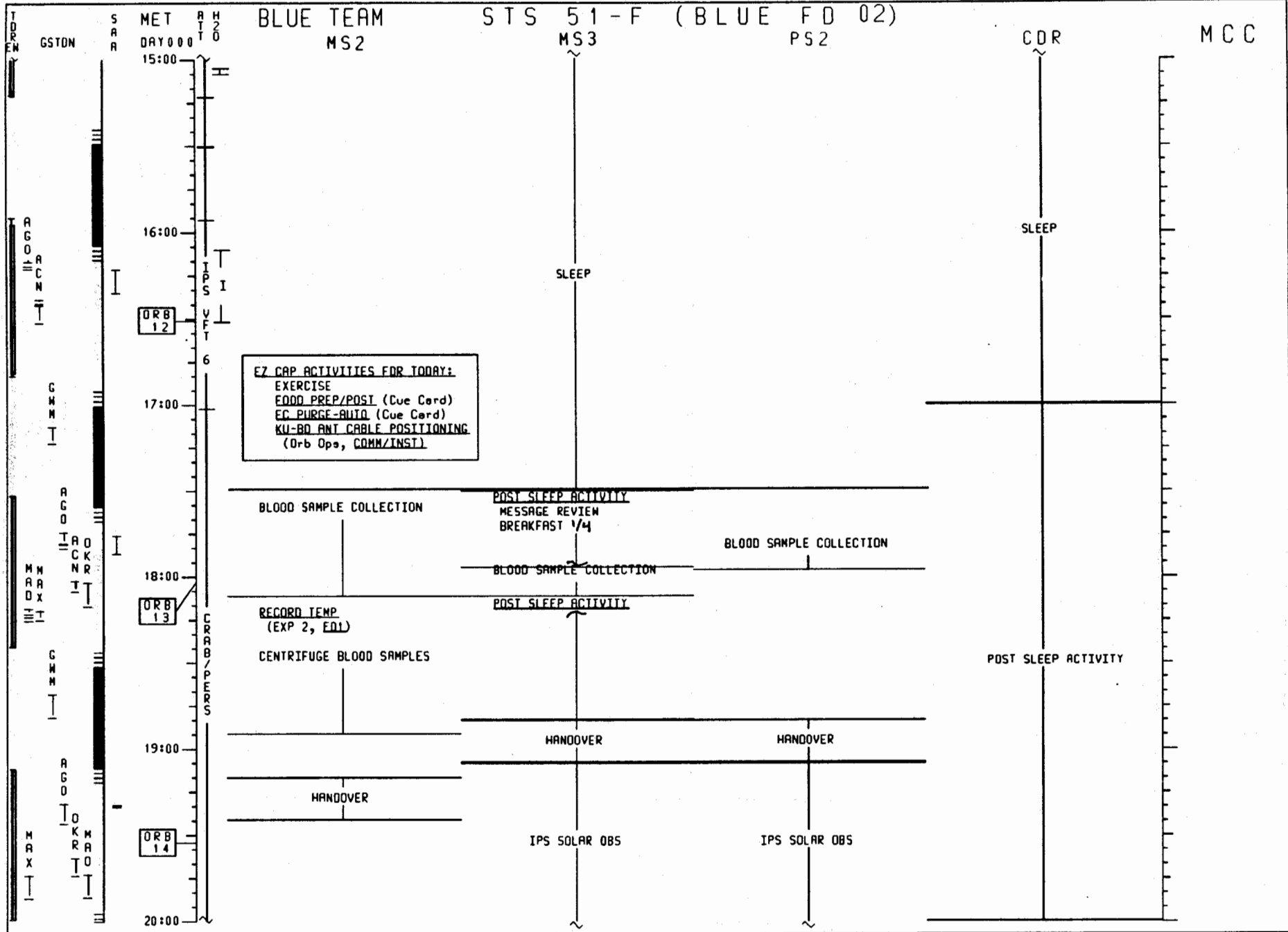
HANDOVER

PRE-SLEEP ACTIVITY

MEAL 1/4
STATUS REPORT
MCS CLEAN (URINE COLLECT
Cue Card)
MED DATA REPORT (MED,
GENERAL MED)
ORBITER CO2 ABSORB REPLACE
(Cue Card)

TV13 (TORS E)
(GND CNTL-EXP
& CABIN)

IPR
GSDN
SAR
H2O
H
IPSI
IPSI
GMM
GMM
AGD
ADCKR
MAX
MAX
AGD
ADCKR
MAX



TDR EN
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 B D A R
 M M A R
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 M M A R
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 Y A R R
 C A N I
 M I L D
 A
 M M A R
 D X

S A R A
 MET DAY 000
 20:00
 21:00
 22:00
 23:00
 001 00:00
 01:00

H 2 0
 C A R B B / P E S S
 O M S
 I
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 X L V
 Y V V
 I
 I
 O M S
 I N H I B I T

RED TEAM PLT

STS 51-F (RED FD 01)

MS1

PS1

MCC

PRE-SLEEP ACTIVITY

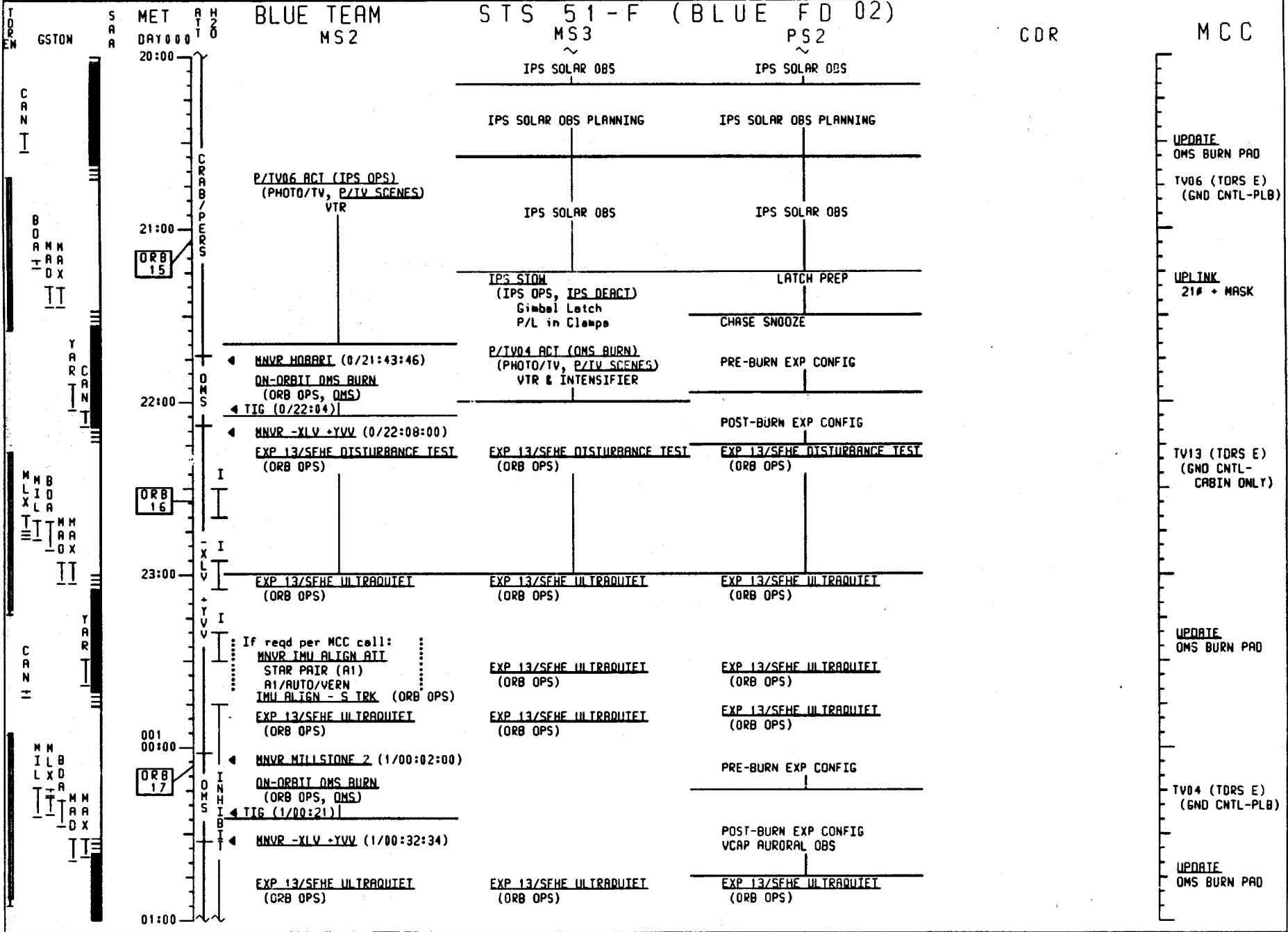
ORB 15

ORB 16

ORB 17

SLEEP

IMU ALIGN LOG
 REQ ID:
 -Y _____ -Z _____ ANG ERR _____
 1 2 3
 ANG:
 ΔX () . () . () .
 ΔY () . () . () .
 ΔZ () . () . () .
 EXECUTION TIME:
 _ / _ : _ : _



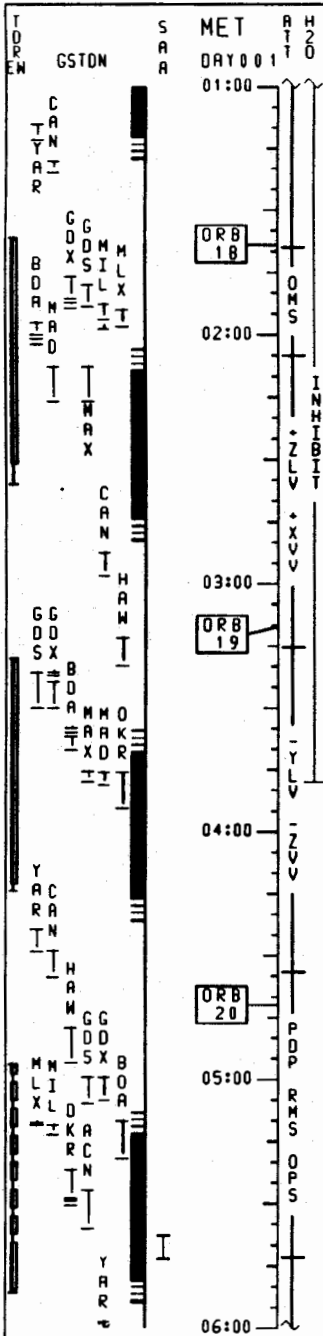
RED TEAM
PLT

STS 51-F (RED FD 02)

MS1

PS1

MCC



E7 CAP ACTIVITIES FOR TODAY:
EXERCISE
EODD PREP/POST (Cue Card)
EC PURGE-AUTO (Cue Card)
KU-RD ANT CABLE POSITIONING
(Orb Ops, COMM/INST)

POST SLEEP ACTIVITY
MESSAGE REVIEW
BREAKFAST 2/2

BLUE TEAM
MS2

STS 51-F (BLUE FD 02)
MS3 PS2

CDR

MCC

MET DAY 001
01:00
02:00
03:00
04:00
05:00
06:00

EXP 13/SEHE ULTRAQUIET
(ORB OPS)

EXP 13/SEHE ULTRAQUIET
(ORB OPS)
P/TV03 SETUP (PDP)
(PHOTO/TV, P/TV SCENES)

EXP 13/SEHE ULTRAQUIET
(ORB OPS)

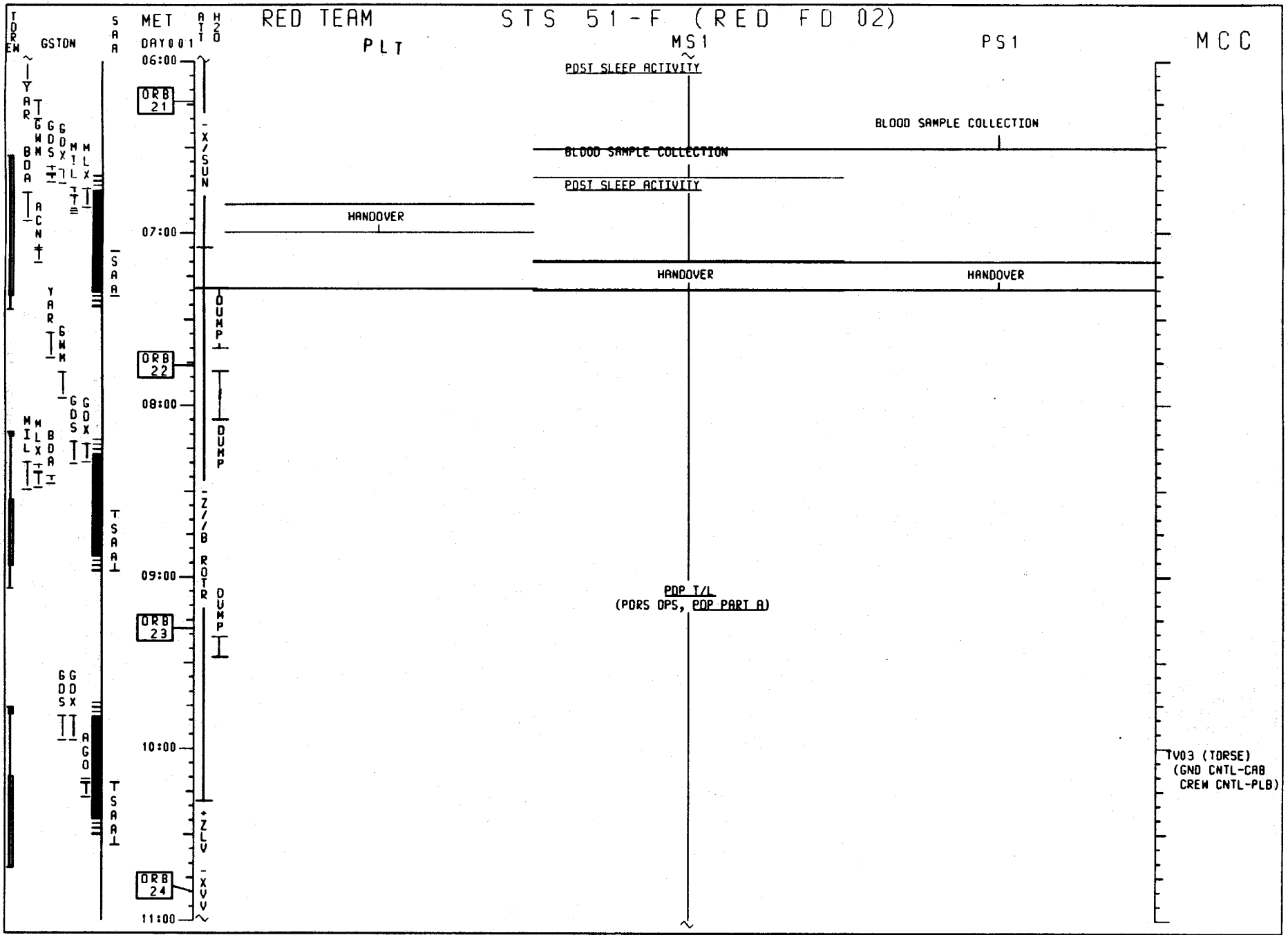
PRE-BURN EXP CONFIG

◀ MNR ROBERVAL (1/01:39:00)
ON-ORBIT OMS BURN
(ORB OPS FS, OMS)
◀ TIG (1/1:58) and (1/1:59)

PDP T/I
(PDRS OPS, PDP PART A)

TV04 (TDRS E)
(GND CNTL-PLB)
TV03 (TDRS E)
(GND CNTL-CAB
CREW CNTL-PLB)

ORBN
GSTON
SARA
CANN
TYAR
BOAR
GOOD
SIL
MLXT
BOAR
MAX
CANN
HAM
BOAR
MARK
DORR
YARR
NARR
HAM
GOOD
SIL
BOAR
MLXT
ORBN
YARR



BLUE TEAM
MS2

STS 51-F (BLUE FD 02)
MS3 PS2

CDR

MCC

MET DAY 001
06:00
ORB 21
07:00
ORB 22
08:00
ORB 23
09:00
ORB 24
10:00
11:00

A H 2 0
X S U N
D U M P
Z / / B
R O T
D U M P
Z L V

BLOOD SAMPLE COLLECTION

ORB 21

PDP T/L
(PDRS OPS, PDP PART A)

RECORD TEMP
(EXP 2, ED1)

HANDOVER

CENTRIFUGE BLOOD SAMPLES

HANDOVER

HANDOVER

PRE-SLEEP ACTIVITY

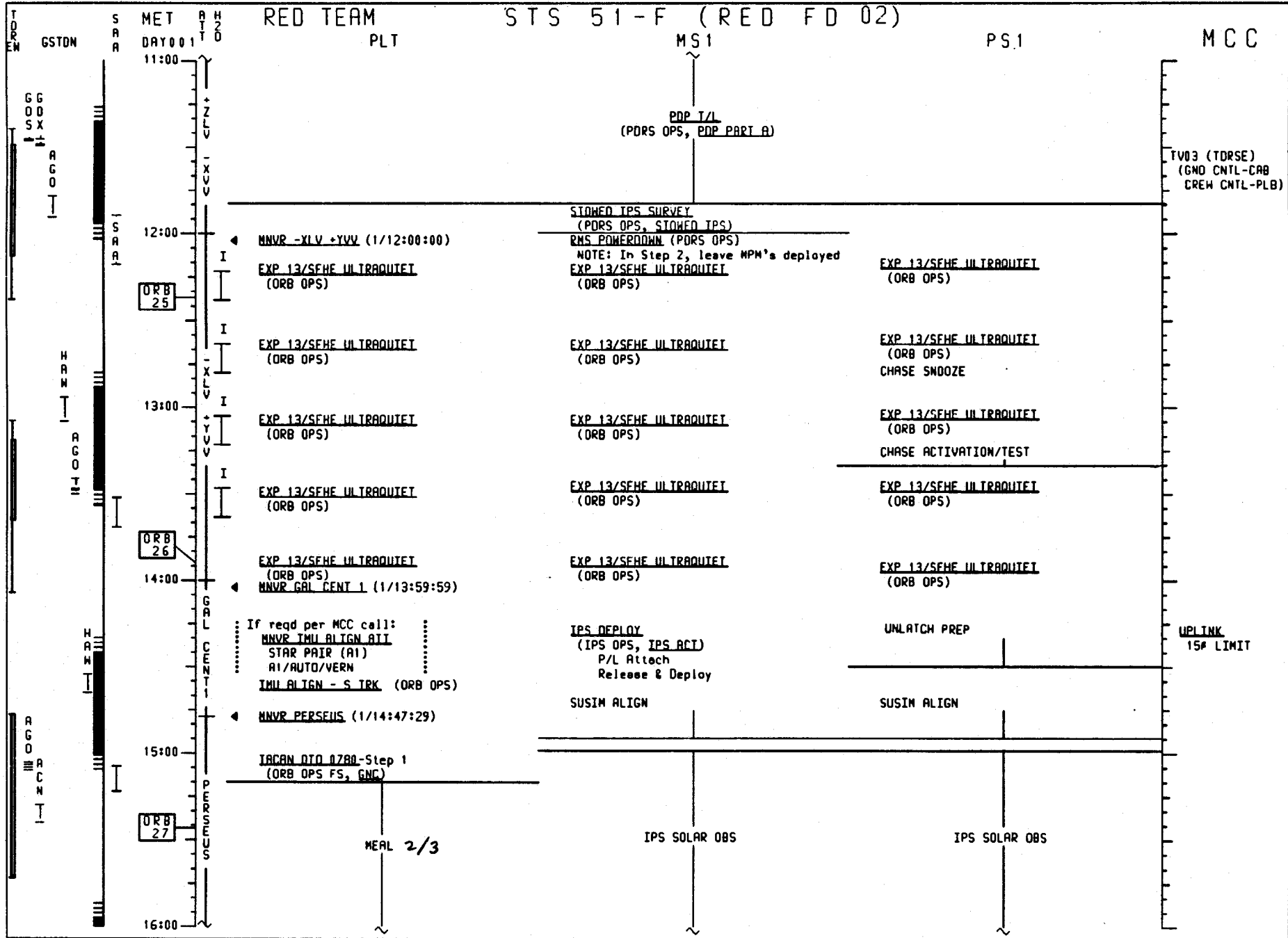
MEAL 2/2
STATUS REPORT
MCS CLEAN (URINE COLLECT
Cue Card)
MED DATA REPORT (MED,
GENERAL MED)
ORBITER CO2 ABSORB REPLACE
(Cue Card)

PRE SLEEP ACTIVITY

SLEEP

SLEEP

DR EN
GSTDN
Y A R
B O A
A C N
Y A R
M M L B
I L X A
G O D X
G O D X
T S A R
T S A R
T S A R
T S A R

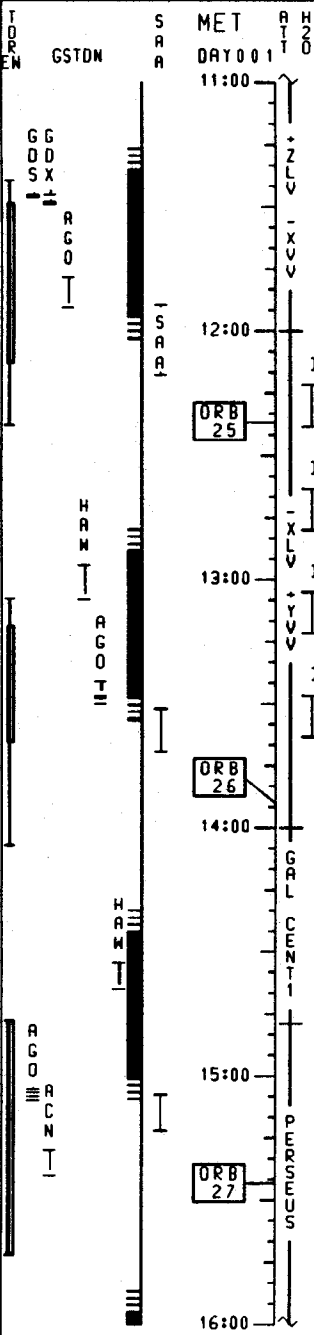


BLUE TEAM
MS2

STS 51-F (BLUE FD 02)
MS3 PS2

CDR

MCC



ORB 25

ORB 26

ORB 27

SLEEP

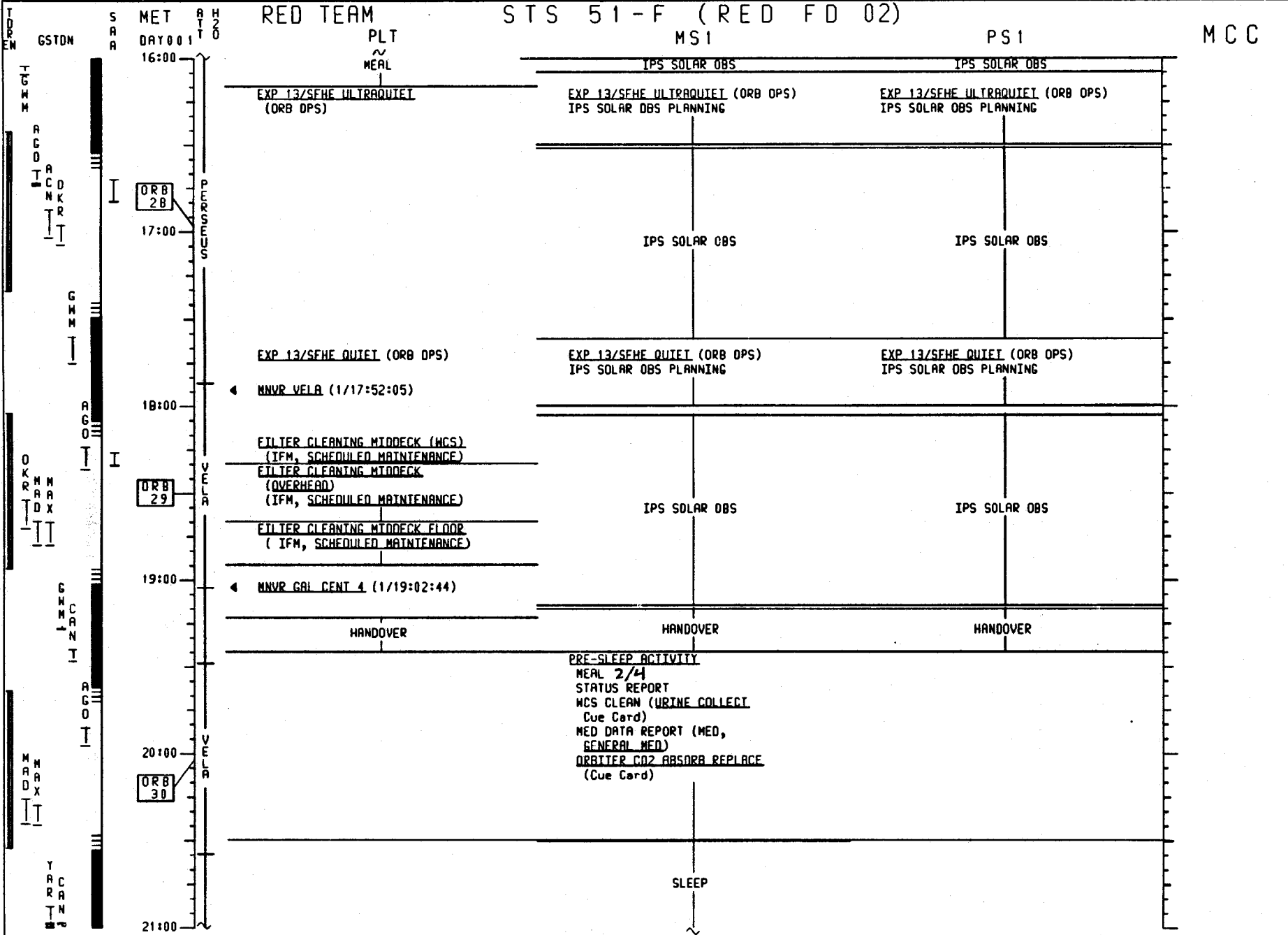
SLEEP

IMU ALIGN LOG
 REOD ID:
 -Y _____ -Z _____ ANG ERR _____
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 ANG:
 ΔX () . () . () .
 ΔY () . () . () .
 ΔZ () . () . () .
 EXECUTION TIME:
 ____ / ____ : ____ : ____

RED TEAM

STS 51-F (RED FD 02)

MCC



BLUE TEAM
MS2

STS 51-F (BLUE FD 03)
MS3 PS2

CDR

MCC

MET DAY 001
16:00
17:00
18:00
19:00
20:00
21:00

EZ CAP ACTIVITIES FOR TODAY:
EXERCISE
FOOD PREP/POST (Cue Card)
EC PURGE-AUTO (Cue Card)
KU-AD ANT CABLE POSITIONING
(Orb Ops, COMM/INST)

SLEEP

SLEEP

POST SLEEP ACTIVITY
MESSAGE REVIEW
BREAKFAST 2/4

POST SLEEP ACTIVITY

RECORD TEMP
(EXP 2, EQ1)

HANDOVER

HANDOVER

HANDOVER

◀ MNVR VELA (1/19:28:34)

IPS SOLAR OBS PLANNING

IPS SOLAR OBS PLANNING

IPS SOLAR OBS

IPS SOLAR OBS

◀ MNVR GAL CENT 4 (1/20:34:48)

IPS STOP
(IPS OPS, IPS DEACT)
Gimbal Latch
P/L in Clamps

IPS EXP LATCH PREP

XRT GAS PURGE

P/TV03 SETUP (PDP)
(PHOTO/TV, P/TV SCENES)

UPLINK
21# * MASK

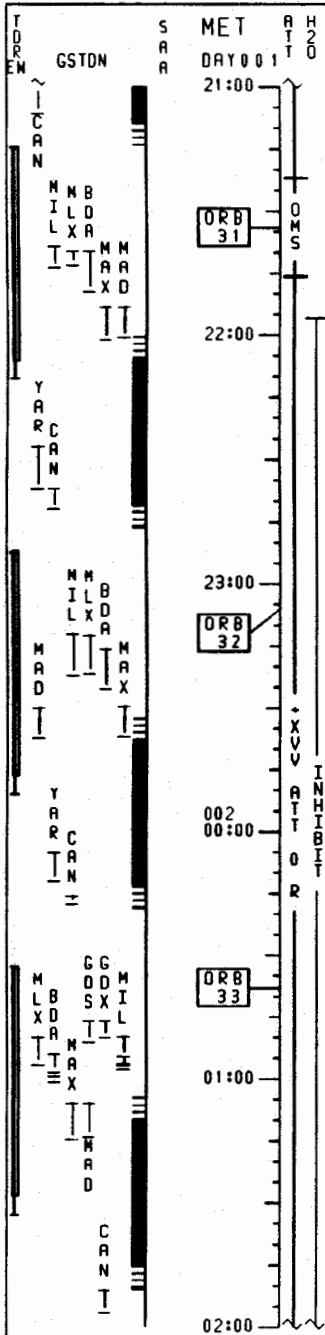
TO
EN
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RCCO
ITC
RCD
NKR
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GMM
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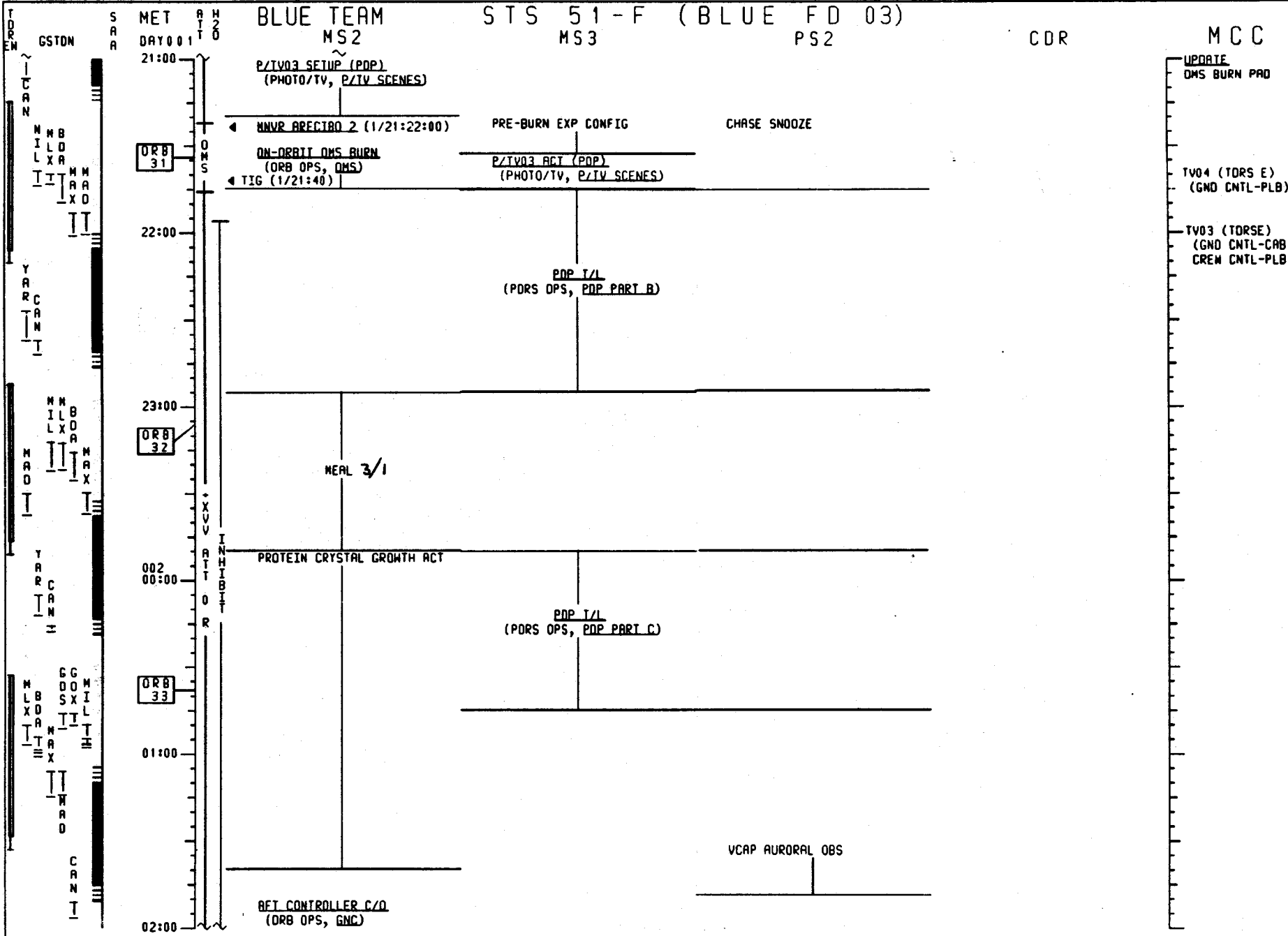
RED TEAM
PLT

STS 51-F (RED FD 02)

PS1

MCC





MET DAY 001
21:00
22:00
23:00
002 00:00
01:00
02:00

BLUE TEAM
MS2
STS 51-F (BLUE FD 03)
MS3
PS2

P/TVO3 SETUP (PDP)
(PHOTO/TV, P/TV SCENES)

MNVR ARECTRO 2 (1/21:22:00) PRE-BURN EXP CONFIG CHASE SNOOZE

ON-ORBIT OMS BURN (ORB OPS, OMS) P/TVO3 ACT (PDP)
(PHOTO/TV, P/TV SCENES)
TIG (1/21:40)

POP T/L (PDORS OPS, POP PART B)

MEAL 3/1

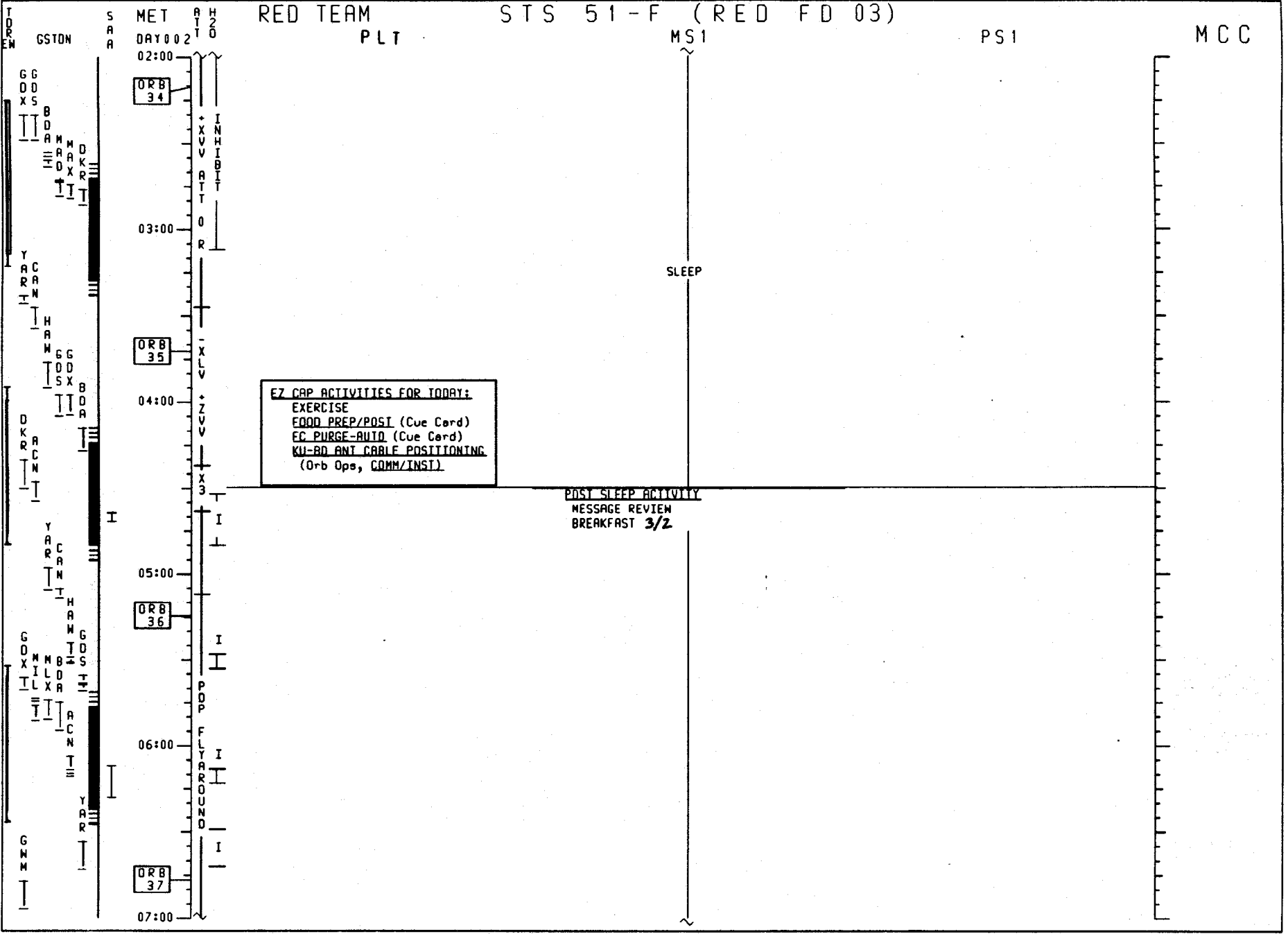
PROTEIN CRYSTAL GROWTH ACT

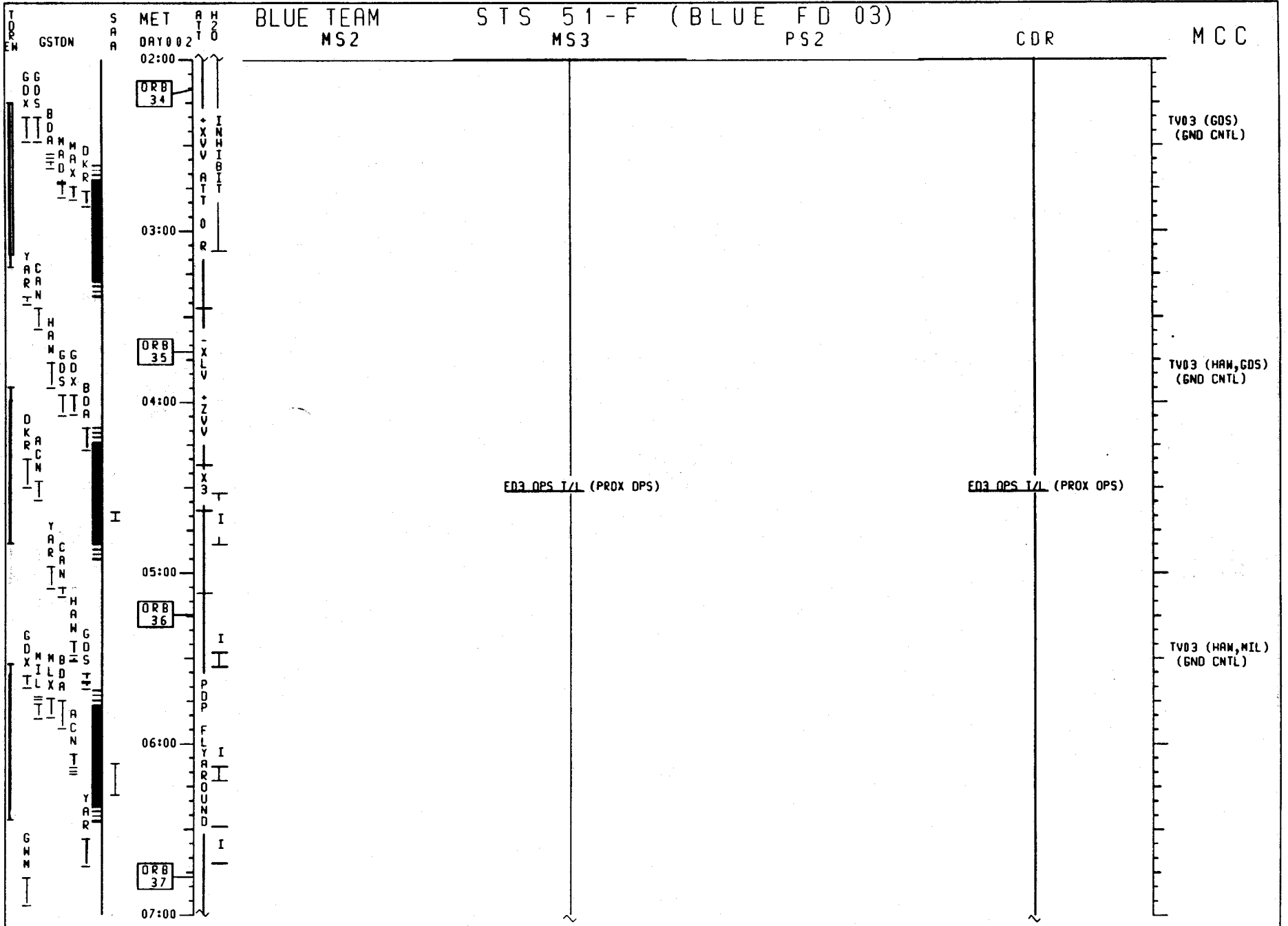
POP T/L (PDORS OPS, POP PART C)

VCAP AURORAL OBS

RET CONTROLLER C/D (ORB OPS, GNC)

MCC
UPDATE
OMS BURN PAD
TV04 (TORS E)
(GND CNTL-PLB)
TV03 (TORSE)
(GND CNTL-CAB
CREM CNTL-PLB)



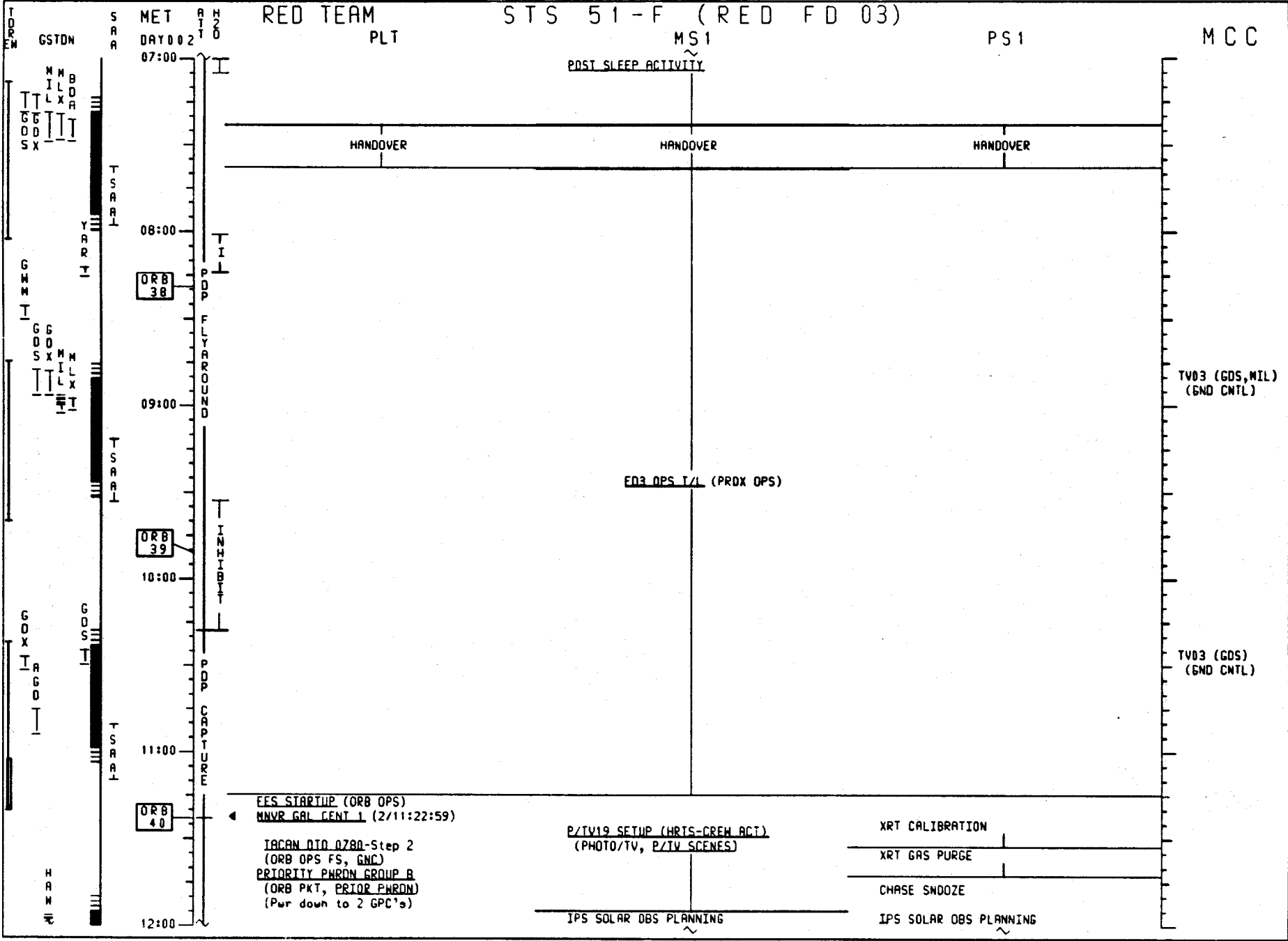


BLUE TEAM
MS2

STS 51-F (BLUE FD 03)
MS3 PS2

CDR

MCC



BLUE TEAM
MS2

STS 51-F (BLUE FD 03)
MS3 PS2

CDR

MCC

MET DAY 002
07:00
08:00
09:00
10:00
11:00
12:00

ED3 OPS T/L (PROX OPS)

ED3 OPS T/L (PROX OPS)

TV03 (GDS, MIL)
(GND CNTL)

RECORD TEMP
(EXP 2, EQL)

PRE-SLEEP ACTIVITY
MEAL 3/3
STATUS REPORT
NCS CLEAN (URINE COLLECT
Cue Card)
MED DATA REPORT (MED,
GENERAL MED)
ORBITER CO2 ABSORB REPLACE
(Cue Card)

PRE SLEEP ACTIVITY

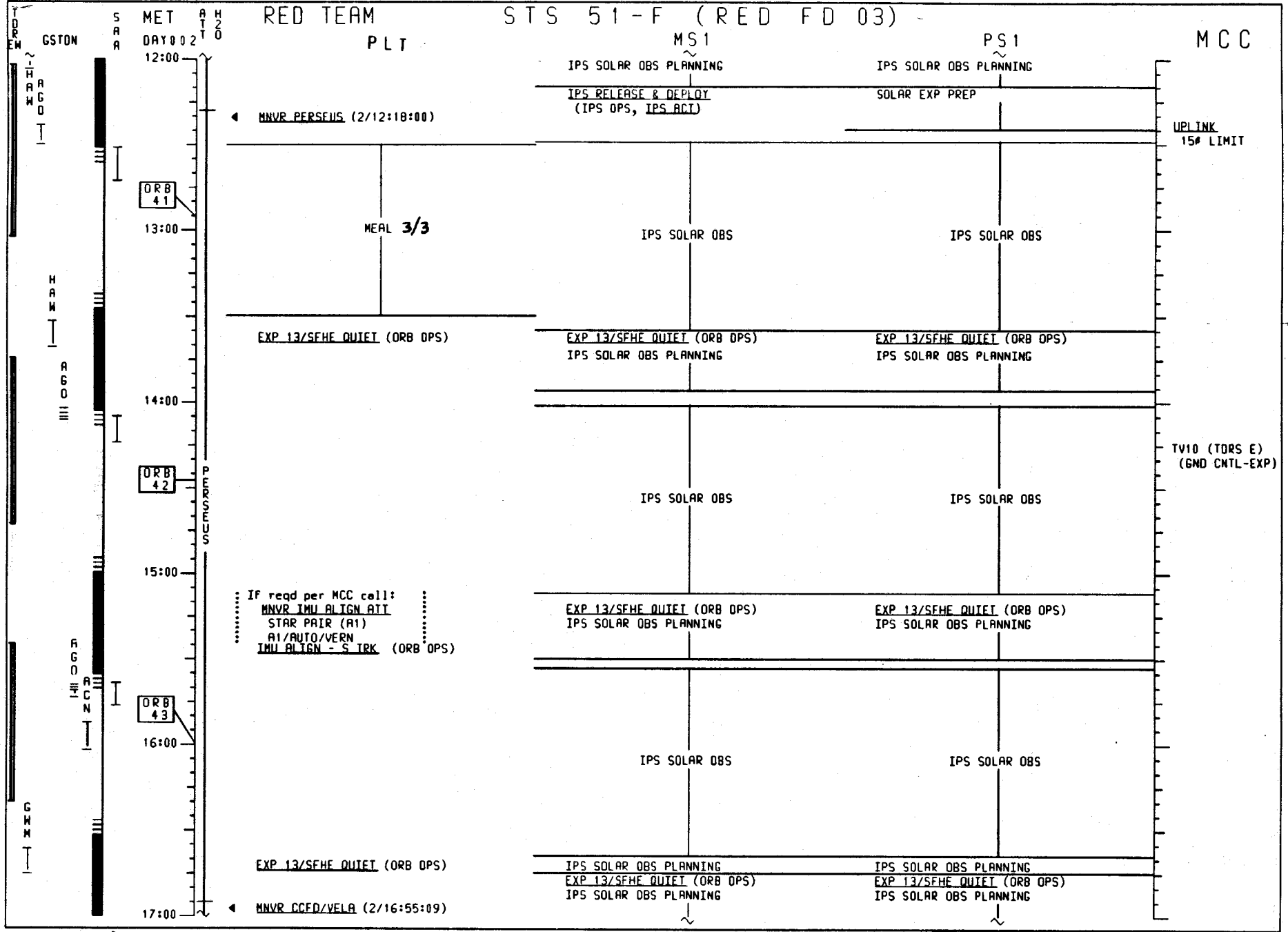
SLEEP

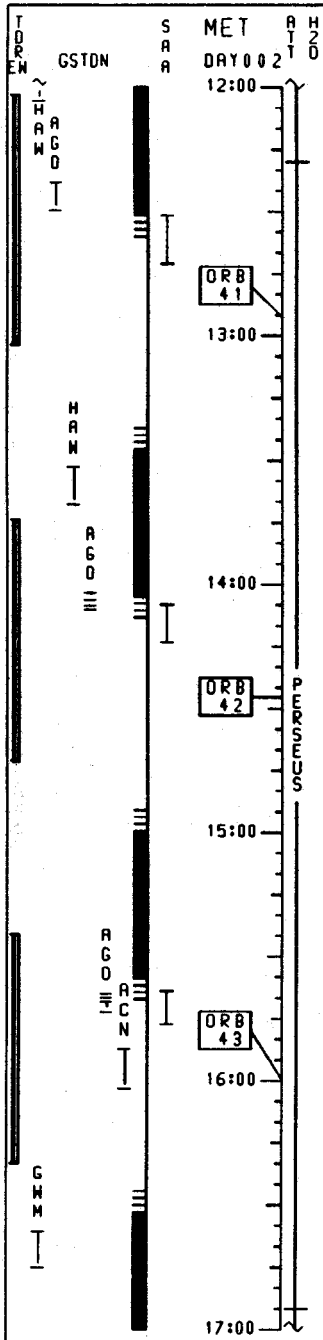
SLEEP

ORB 38

ORB 39

ORB 40





BLUE TEAM
MS2

STS 51-F (BLUE FD 03)
MS3 PS2

CDR

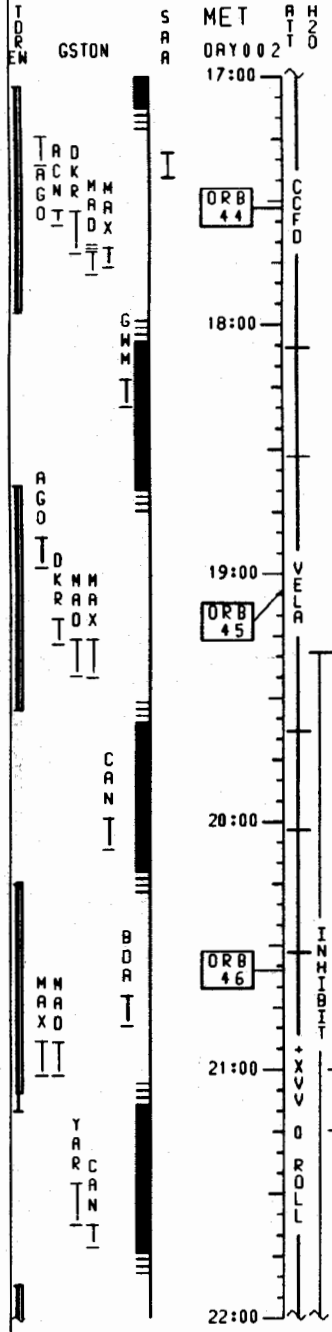
MCC

MET DAY 002
12:00
13:00
14:00
15:00
16:00
17:00

SLEEP

SLEEP

IMU ALIGN LOG
 REOD ID:
 -Y ____, -Z ____, ANG ERR __. __.
 1 2 3
 ANG:
 ΔX () . () . () .
 ΔY () . () . () .
 ΔZ () . () . () .
 EXECUTION TIME:
 __ / __ : __ : __



MET DAY 002
A H 2 0
S A R A
G M M
C A N T
B O A R D
Y A R C A N T
I N H I B I T
X V V R O L L

PLT

MS1

PS1

17:00
18:00
19:00
20:00
21:00
22:00

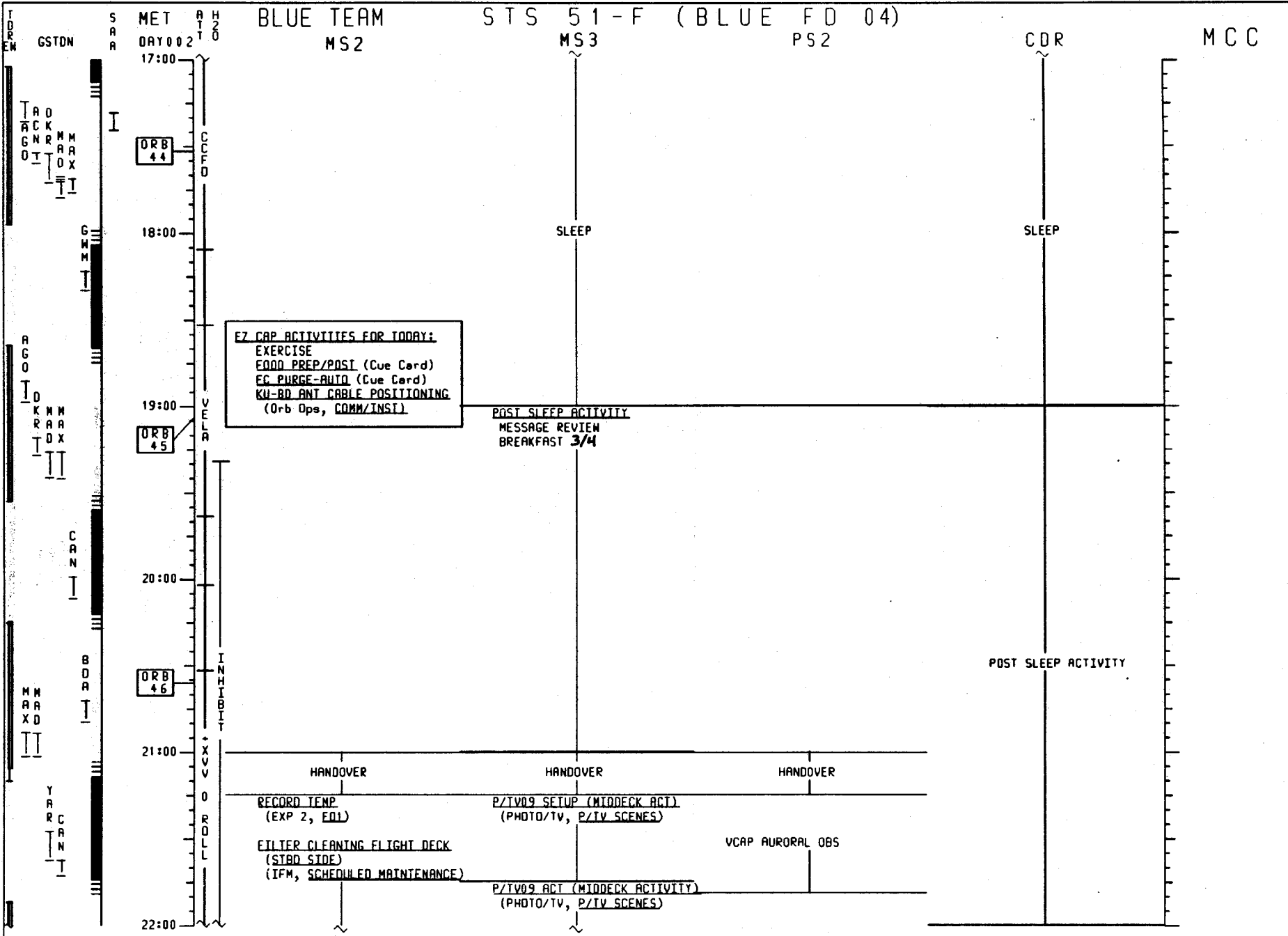
ORB 44

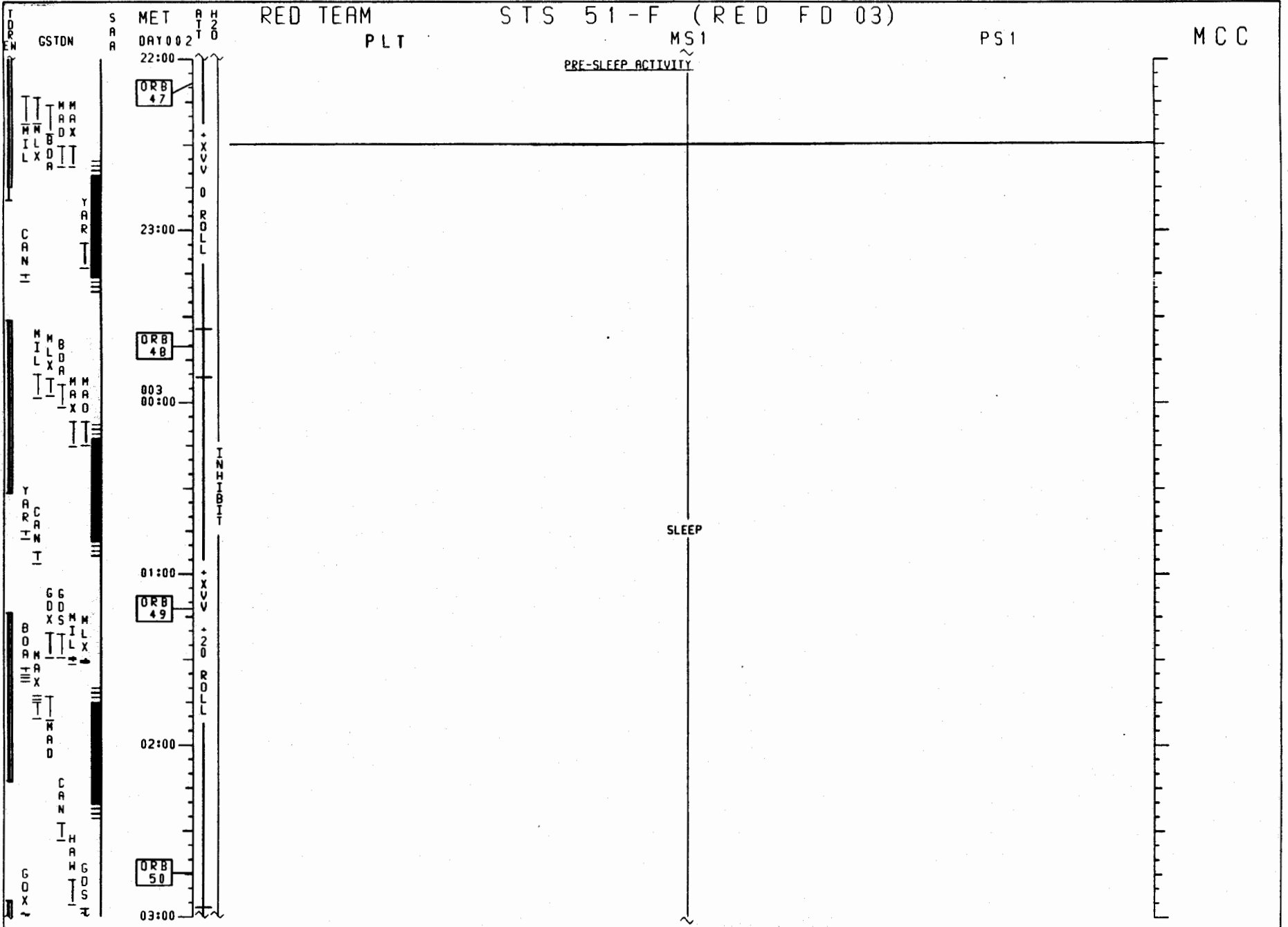
ORB 45

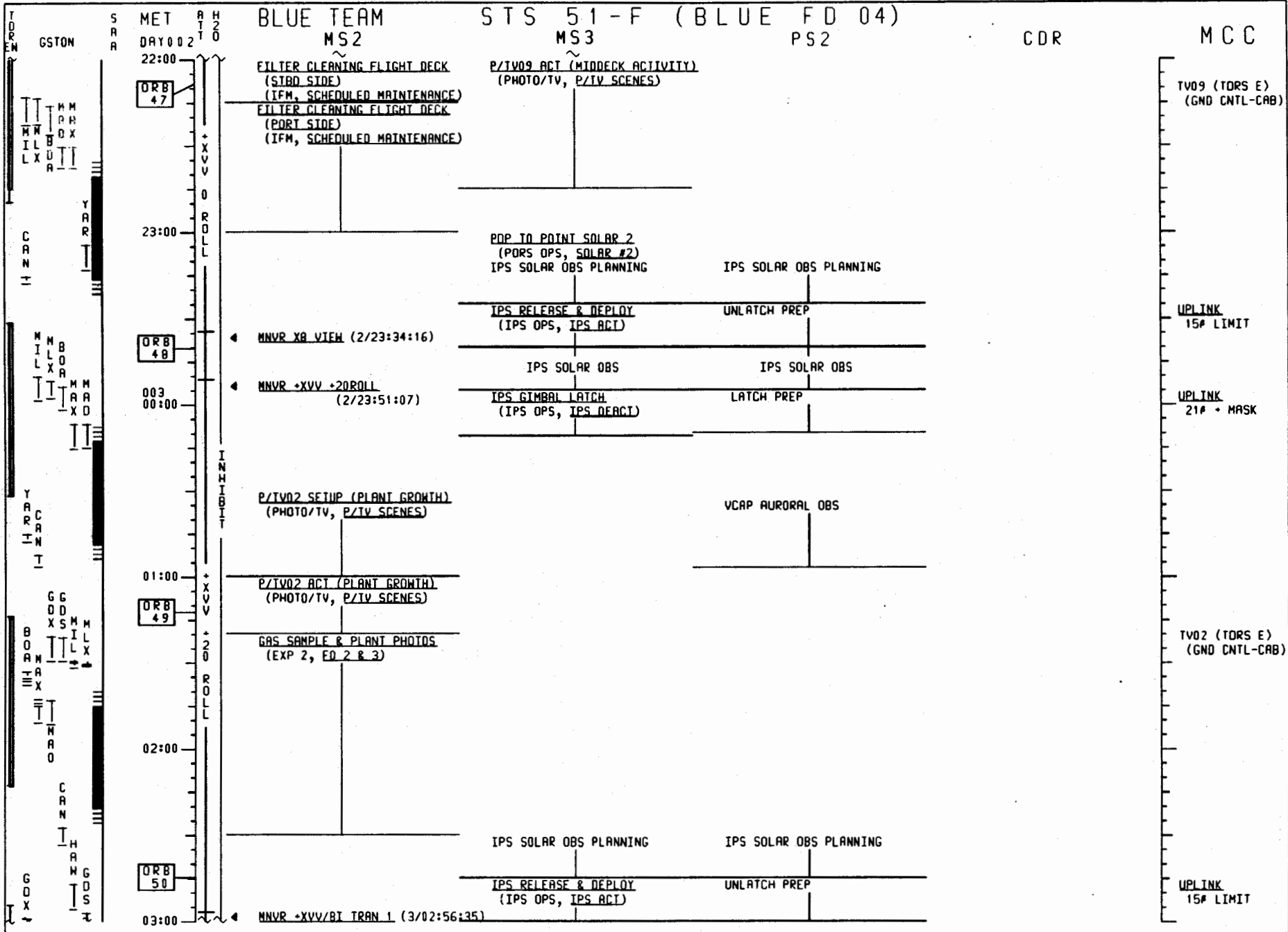
ORB 46

IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
IPS SOLAR OBS	IPS SOLAR OBS
IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
IPS SOLAR OBS	IPS SOLAR OBS
EXP 13/SEHE QUIET (ORB OPS) IPS SOLAR OBS PLANNING	EXP 13/SEHE QUIET (ORB OPS) IPS SOLAR OBS PLANNING
XRT CALIBRATION	
IPS SOLAR OBS	IPS SOLAR OBS
IPS GIMBAL LATCH (IPS OPS, IPS DEACT)	LATCH PREP
HANDOVER	HANDOVER
PRE-SLEEP ACTIVITY MEAL 3/4 STATUS REPORT MCS CLEAN (URINE COLLECT Cue Card) MED DATA REPORT (MED, GENERAL MED) ORBITER CO2 ABSORB REPLACE (Cue Card)	

UPLINK
21# + MASK







MET DAY 003
03:00
04:00
05:00
06:00
07:00
08:00

PLT

MS1

PS1

MCC

TOP EN
GSTDN
CCSX
D K R C N
B O A
YARR
CAN
HAM
GG
MIL
TKR
AR
CYARR
GMM
G
DM
XIL
TL
B L O A
GDS
YARR
GMM
GG
DD
SX
MM
IL
LX

ORB 51

ORB 52

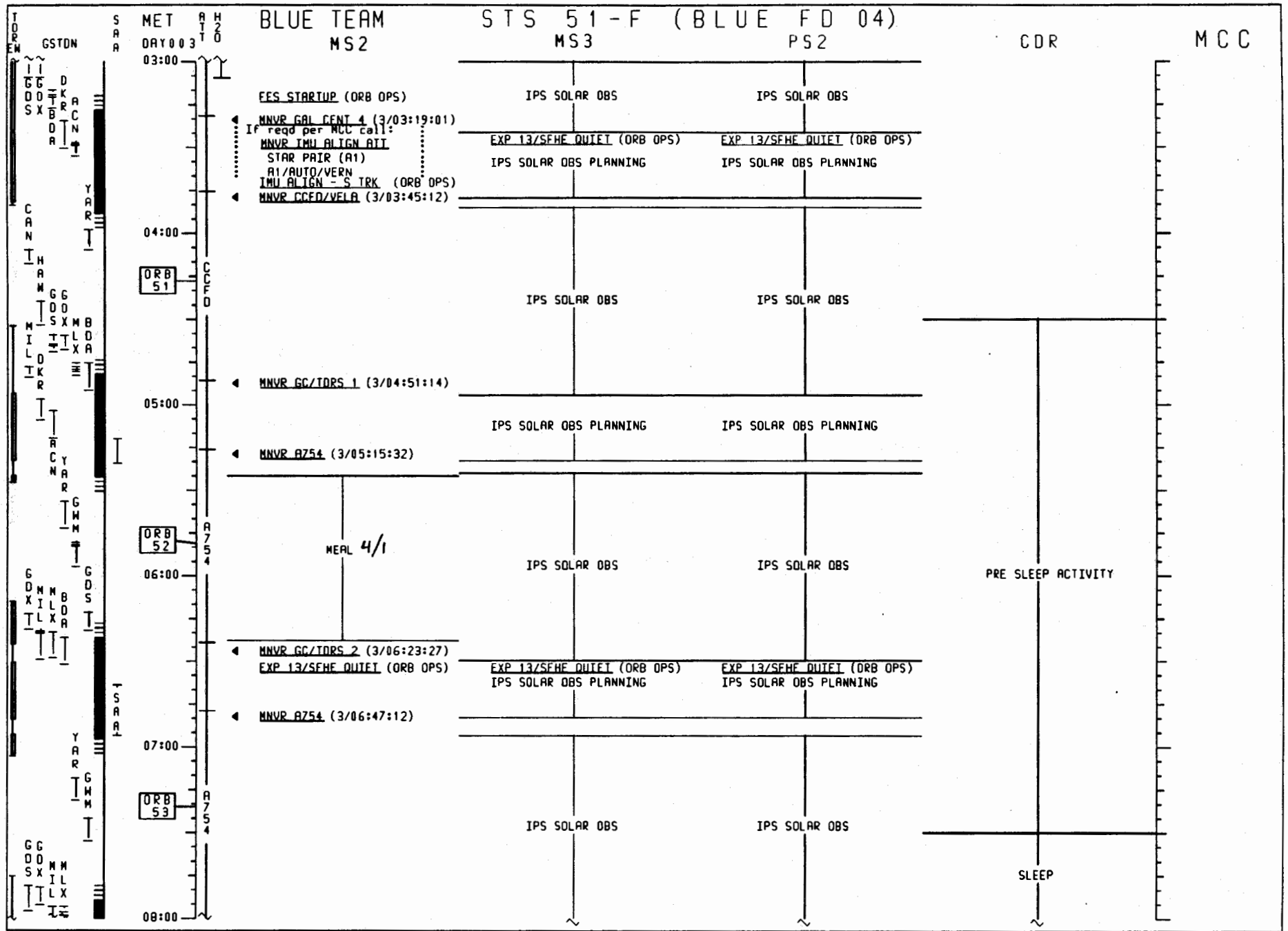
ORB 53

IMU ALIGN LOG
REQD ID:
-Y __, -Z __ ANG ERR __. __
 1 2 3
ANG:
ΔX () . . . () . . . () . . .
ΔY () . . . () . . . () . . .
ΔZ () . . . () . . . () . . .
EXECUTION TIME:
_ / _ : _ : _

EZ CAP ACTIVITIES FOR TODAY:
EXERCISE
FOOD PREP/POST (Cue Card)
EC PURGE-AUTO (Cue Card)
KU-BD ANT CABLE POSITIONING
(Orb Ops, COMM/INST)

POST SLEEP ACTIVITY
MESSAGE REVIEW
BREAKFAST 4/2

SLEEP



RED TEAM

STS 51-F (RED FD 04)

PLT.

MS1

PS1

MCC

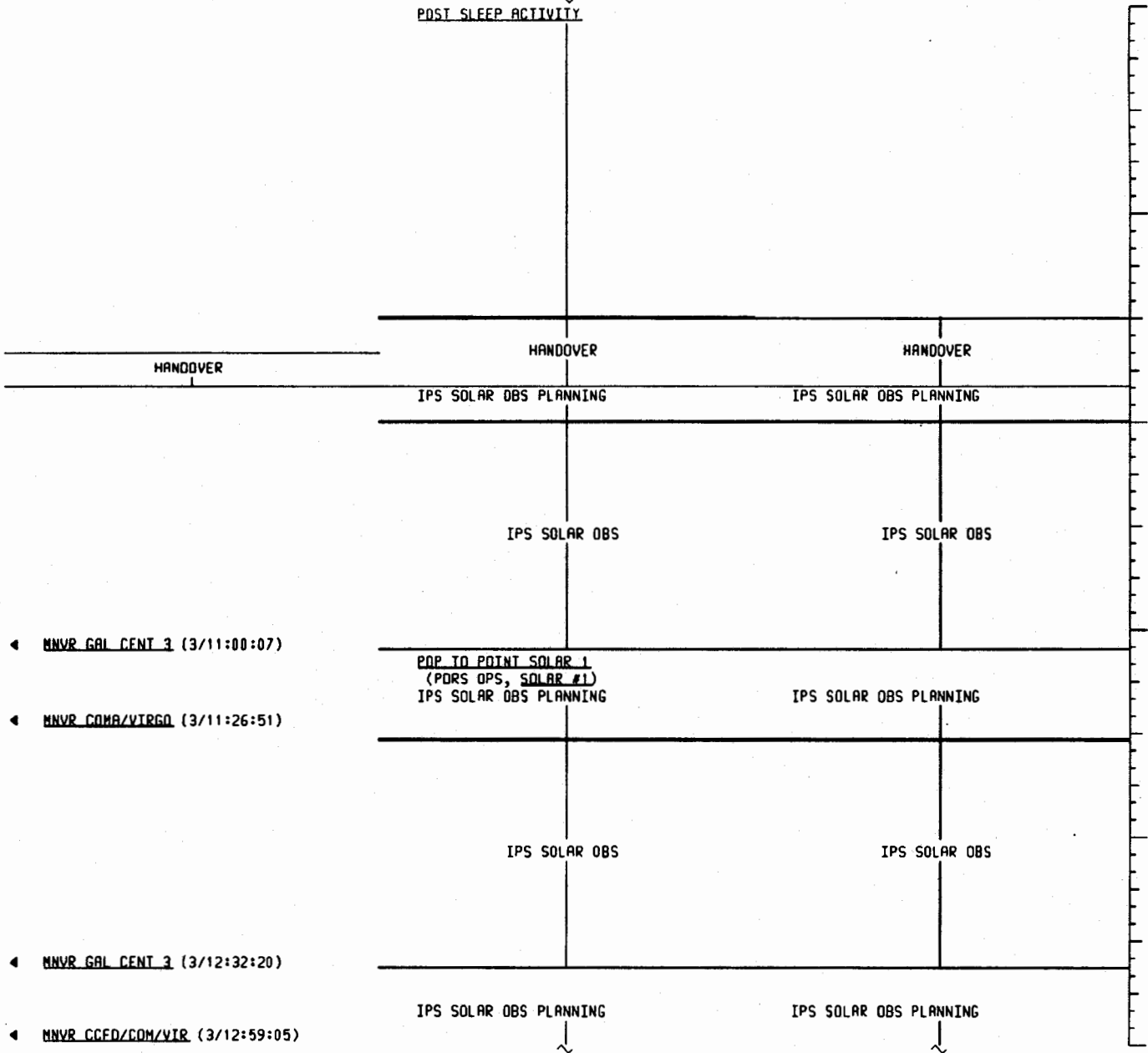
T O R E M
 G S T D N
 M I L L X
 G G O O S X
 A G O
 H A M H
 A G O
 H A M H

S A R A
 T S A R A
 T S A R A
 H A M H
 T S A R A

MET DAY 003
 08:00
 09:00
 10:00
 11:00
 12:00
 13:00

A T H Z O
 F C C D
 C O M A / V I R G O

ORB 54
 ORB 55
 ORB 56



BLUE TEAM
MS2

STS 51-F (BLUE FD 04)
MS3 PS2

COR

MCC

TDRM
 GSTDN
 SRA
 MET DAY 003
 A T H 2 0
 08:00
 ORB 54
 09:00
 RECORD TEMP (EXP 2, FD1)
 HANDOVER
 10:00
 ORB 55
 PRE-SLEEP ACTIVITY
 MEAL 4/2
 STATUS REPORT
 MCS CLEAN (URINE COLLECT
 Cue Card)
 MED DATA REPORT (MED,
 GENERAL MED)
 ORBITER CO2 ABSORB REPLACE
 (Cue Card)
 11:00
 12:00
 ORB 56
 SLEEP
 13:00
 HAWN

← MNR CCED/COM/VIR 2
 (3/08:03:00)

IPS SOLAR OBS	IPS SOLAR OBS
IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
IPS SOLAR OBS	IPS SOLAR OBS
RECORD TEMP (EXP 2, FD1)	
HANDOVER	HANDOVER
PRE-SLEEP ACTIVITY MEAL 4/2 STATUS REPORT MCS CLEAN (URINE COLLECT Cue Card) MED DATA REPORT (MED, GENERAL MED) <u>ORBITER CO2 ABSORB REPLACE</u> (Cue Card)	
SLEEP	

SLEEP
 SLEEP

RED TEAM

STS 51-F (RED FD 04)

MCC

PLT

MS1

PS1

TORN
GSTDN
HMMI
AGC
ANNK
HARK
HDX
GXX
AGG

SAR
MET
DAY 003
13:00
14:00
15:00
16:00
17:00
18:00

ATT
H20
TCC
D
COMA/VIRGO
COMA/VIRGO
COMA/VIRGO
VEGA

ORB 57
ORB 58
ORB 59

H

◀ MNVR GAL CENT 3 (3/14:04:33)
 If reqd per MCC call:
 MNVR IMU ALIGN ATT
 STAR PAIR (A1)
 A1/AUTO/VERN
 IMU ALIGN - S TRK (ORB OPS)
 ▶ MNVR COMA/VIRGO (3/14:31:19)

MEAL 4/3

◀ MNVR GAL CENT 3 (3/15:36:47)
 EXP 13/SEHE QUIET (ORB OPS)

◀ MNVR COMA/VIRGO (3/16:03:33)

◀ MNVR GAL CENT 3 (3/17:09:00)

◀ MNVR VELA (3/17:33:56)

IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
IPS SOLAR OBS	IPS SOLAR OBS
EXP 13/SEHE QUIET (ORB OPS)	EXP 13/SEHE QUIET (ORB OPS)
IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
IPS SOLAR OBS	IPS SOLAR OBS
EXP 13/SEHE QUIET (ORB OPS)	EXP 13/SEHE QUIET (ORB OPS)
IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
IPS SOLAR OBS	IPS SOLAR OBS
IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
IPS SOLAR OBS	IPS SOLAR OBS

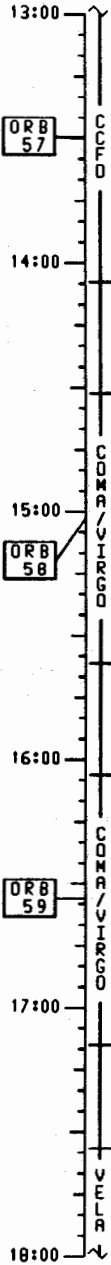
BLUE TEAM
MS2

STS 51-F (BLUE FD 04)
MS3 PS2

CDR

MCC

MET DAY 003



IMU ALIGN LOG
 REOD IO:

-Y	-Z	ANG ERR	
1	2	3	

ANG:
 ΔX () . () . () .
 ΔY () . () . () .
 ΔZ () . () . () .
 EXECUTION TIME:
 - - / - : - : -

SLEEP

SLEEP

POST SLEEP ACTIVITY

RED TEAM
PLT

STS 51-F (RED FD 04)

MS1

PS1

MCC

MET DAY 003
18:00
19:00
20:00
21:00
22:00
23:00

ORB 60

ORB 61

ORB 62

ORB 63

VEHICLE
INHIBIT

◀ MNVR GAL CENT 4 (3/18:41:13)
L1 FLASH EVAP CNTLR PRI A,B(1-2)-OFF(18:59)
◀ MNVR BI/XVV TRAN3 (3/19:04:12)

◀ MNVR -XVV -20ROLL (3/19:35:39)

IPS SOLAR OBS
EXP 13/SEHF QUIET (OPB OPS)
IPS SOLAR OBS PLANNING

IPS SOLAR OBS
EXP 13/SEHF QUIET (OPB OPS)
IPS SOLAR OBS PLANNING

IPS SOLAR OBS
IPS SOLAR OBS
IPS LUNAR LATCH (IPS OPS, IPS REACT)
LATCH PREP

UPLINK
21# - MASK
VCAP AURORAL OBS

HANDOVER

PPF-SLEEP ACTIVITY
MEAL 4/4
STATUS REPORT
MCS CLEAN (URINE COLLECT
Cue Card)
MED DATA REPORT (MED,
GENERAL MED)
ORBITER CO2 ABSORB REPLACE
(Cue Card)

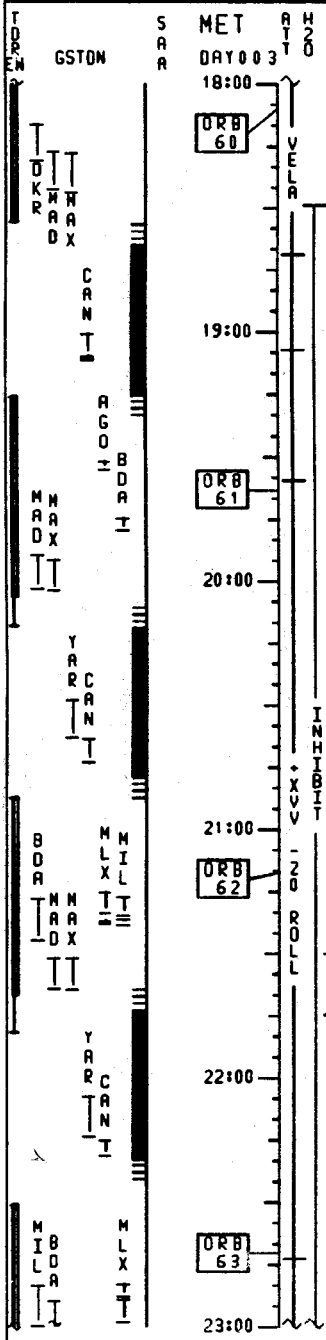
TOP EN
GSTON
OKR
M R A X
C A N N I
A G O R
H O B A T
M R A O X
Y A R C A N T
B O R A
M R A O X
Y A R C A N T
M I L L A
M L X T T

BLUE TEAM
MS2

STS 51-F (BLUE FD 05)
MS3 PS2

CDR

MCC



ORB 60

ORB 61

ORB 62

ORB 63

SLEEP

POST SLEEP ACTIVITY

POST SLEEP ACTIVITY
MESSAGE REVIEW
BREAKFAST 4/4

EZ CAP ACTIVITIES FOR TODAY:
 EXERCISE
 FOOD PREP/POST (Cue Card)
 EC PURGE-AUTO (Cue Card)
 KUI-RO ANT CABLE POSITIONING
 (Orb Ops, COMM/INST)
 PCS 1 (2) CONETG (ORB OPS, ECLS)
 Config Sys 2 (5 Min/2 Can)
 Perform midflight
 RCS REGULATOR RECONETGURE
 07/08 He PRESS A(three)-CL(tb-CL)
 B(three)-GPC(tb-OP)
 Perform midflit/A.M.(10 Min)
 HEATER RECONETG - B (ORB OPS, EPS)
 Perform midflit/A.M.(5 Min)
 CAB TEMP CNTL RECONETG
 MD44F Pin CAB TEMP CNTL actuator
 linkage to actuator 2
 L1 CAB TEMP CNTLR - 2
 Perform midflight (5 Min)

HANDOVER

HANDOVER

HANDOVER

RECORD TEMP
(EXP 2, EDL)

VCAP AURORAL OBS

OPR CMD TO PT THERMAL 1
(PDRS OPS, THERM 1)
IPS RELEASE & DEPLOY
(IPS OPS, IPS ACT)

UNLATCH PREP

MNVR XB VIEW (3/22:43:41)

IPS SOLAR OBS

IPS SOLAR OBS

LATCH PREP

VTR (TDRS E)

UPLINK
15# LIMIT

RED TEAM

STS 51-F (RED FD 04)

PLT

MS1

PS1

MCC

MET

DAY 003

23:00

004
00:00

ORB
64

01:00

ORB
65

02:00

03:00

ORB
66

04:00

PREF-SLEEP ACTIVITY

SLEEP

IMU ALIGN LOG

READ ID:

-Y _____, -Z _____ ANG ERR _____

 1 2 3

ANG:

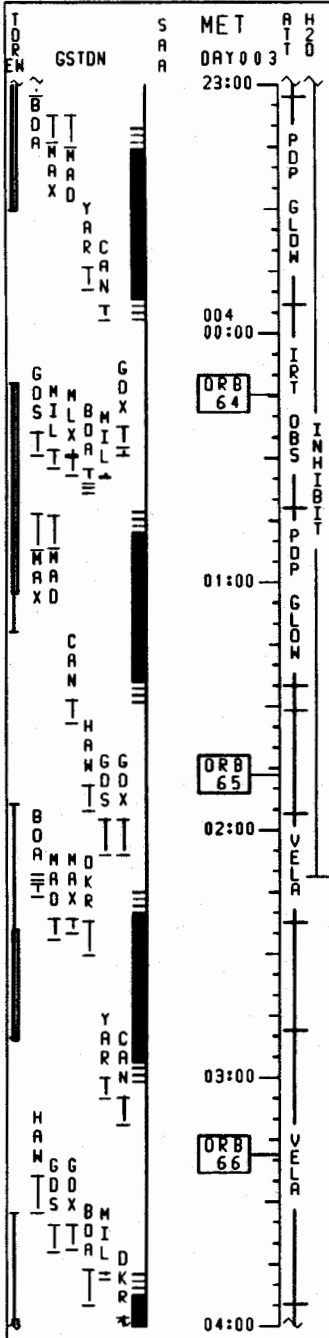
ΔX () . . . () . . . () . . .

ΔY () . . . () . . . () . . .

ΔZ () . . . () . . . () . . .

EXECUTION TIME:

__ / __ : __ : __



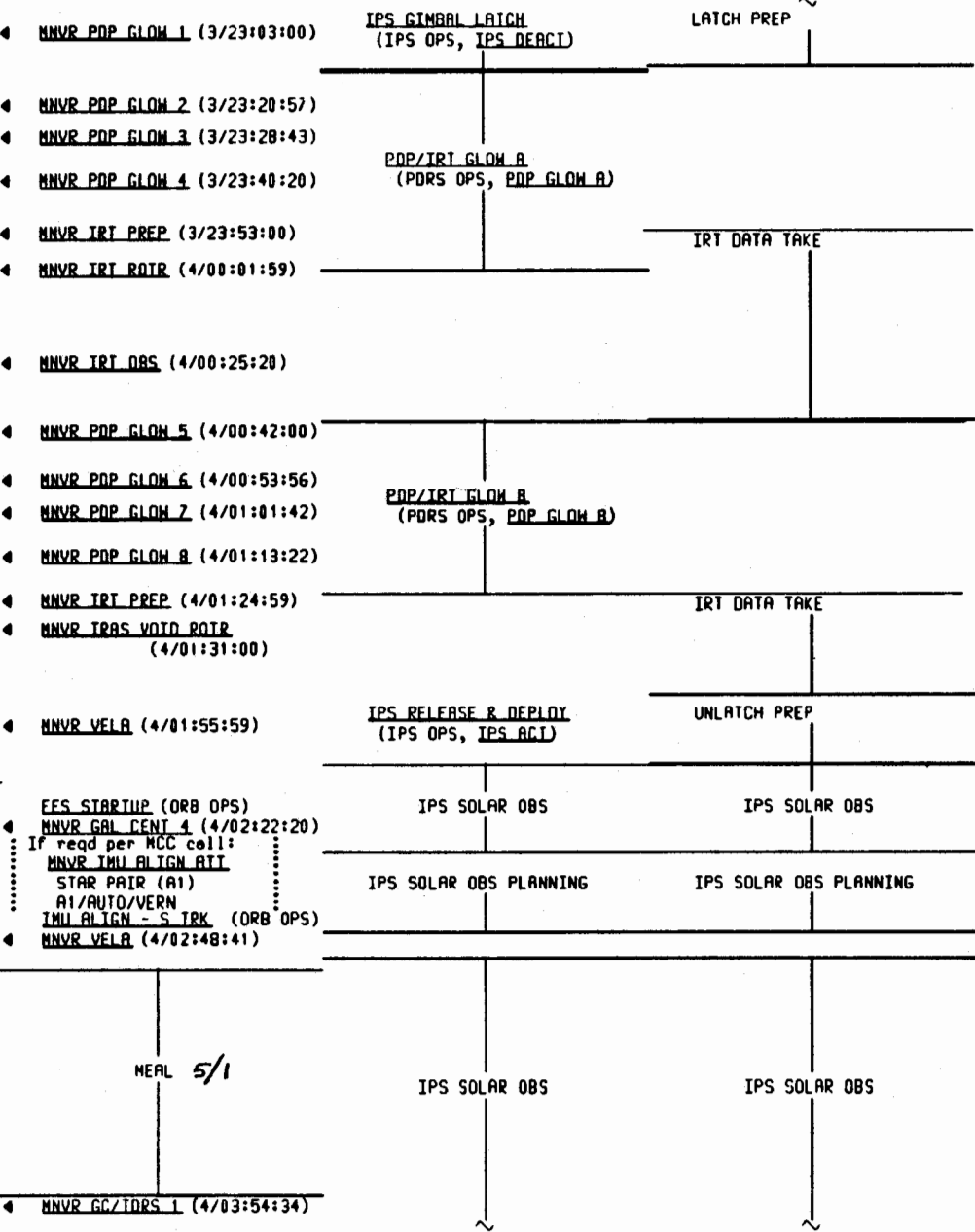
BLUE TEAM
MS2

STS 51-F (BLUE FD 05)
MS3 PS2

CDR

MCC

MET DAY 003 23:00
004 00:00
01:00
02:00
03:00
04:00



ORB 64

ORB 65

ORB 66

UPLINK
150 LIMIT

MEAL 5/1

TPDR EM
GSTON
BY BOARD
Toward
YARC ANT
GOM SIL TX
GOM SIL RX
GOM SIL TX
GOM SIL RX
Toward
CANT
HAWK
GOM SIL TX
GOM SIL RX
BD AR TX
BD AR RX
Toward
YARC ANT
HAWK
GOM SIL TX
GOM SIL RX
BD AR TX
BD AR RX

RED TEAM
PLT

STS 51-F (RED FD 05)

PS1

MCC

MET DAY 004
04:00
05:00
06:00
07:00
08:00
09:00

A 754
A 754
C 0800

A 20

TDREN
GSTON
S A A
I
D K R C N
Y
R R Y
G H H
H H H
G O X
I L X
M
P O B
N Z C D
R D Y
G H H
G O X
I L X
M
R D B
A
T S A A
G O X
I L X
M
A
G O O
I
T S A A

MS1

SLEEP

EZ CAP ACTIVITIES FOR TODAY:
 EXERCISE
 EOOD PREP/POSTI (Cue Card)
 EC PURGE-AUTO (Cue Card)
 KU-AD ANT CABLE POSITIONING
 (Orb Ops, COMM/INST)

POST SLEEP ACTIVITY
 MESSAGE REVIEW
 BREAKFAST 5/2

TDR EN
 GSDN
 D K R C N
 Y R R
 G M M
 H A M
 G O X I L X
 M L X
 A C B O A
 Y R R
 G M M
 G O O X I L X
 M L X
 B B O A
 T T
 G O O X I
 A G O
 T S R A I
 T S R A I

MET DAY 004
 04:00
 05:00
 06:00
 07:00
 08:00
 09:00
 A 7 5 4
 A 7 5 4
 C O M B V I R G O
 A H 2 0
 T S R A I
 T S R A I

BLUE TEAM
MS2

STS 51-F (BLUE FD 05)
MS3

PS2

CDR

MCC

Time	MS2	MS3	PS2
04:00	EXP 13/SEHE QUIET (ORB OPS)	EXP 13/SEHE QUIET (ORB OPS) IPS SOLAR OBS PLANNING	EXP 13/SEHE QUIET (ORB OPS) IPS SOLAR OBS PLANNING
04:19:01	◀ MNVR A754 (4/04:19:01)		
05:00		IPS SOLAR OBS	IPS SOLAR OBS
05:26:47	◀ MNVR GC/TDRS 2 (4/05:26:47) EXP 13/SEHE QUIET (ORB OPS)	EXP 13/SEHE QUIET (ORB OPS) IPS SOLAR OBS PLANNING	EXP 13/SEHE QUIET (ORB OPS) IPS SOLAR OBS PLANNING
05:50:41	◀ MNVR A754 (4/05:50:41)		
06:00		IPS SOLAR OBS	IPS SOLAR OBS
07:08:13	◀ MNVR COMB/VIRGO (4/07:08:13)		
08:00		IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
08:00	P/TV06 ACT (IPS OPS) (PHOTO/TV, P/TV SCENES) VTR	IPS SOLAR OBS	IPS SOLAR OBS
08:00		IPS CCP STOW (IPS OPS, CONT OPS)	IPS SOLAR OBS PLANNING
09:00		IPS DEPLOY (IPS OPS, IPS ACT) P/L Attech Release & Deploy	

PRE SLEEP ACTIVITY
 SLEEP

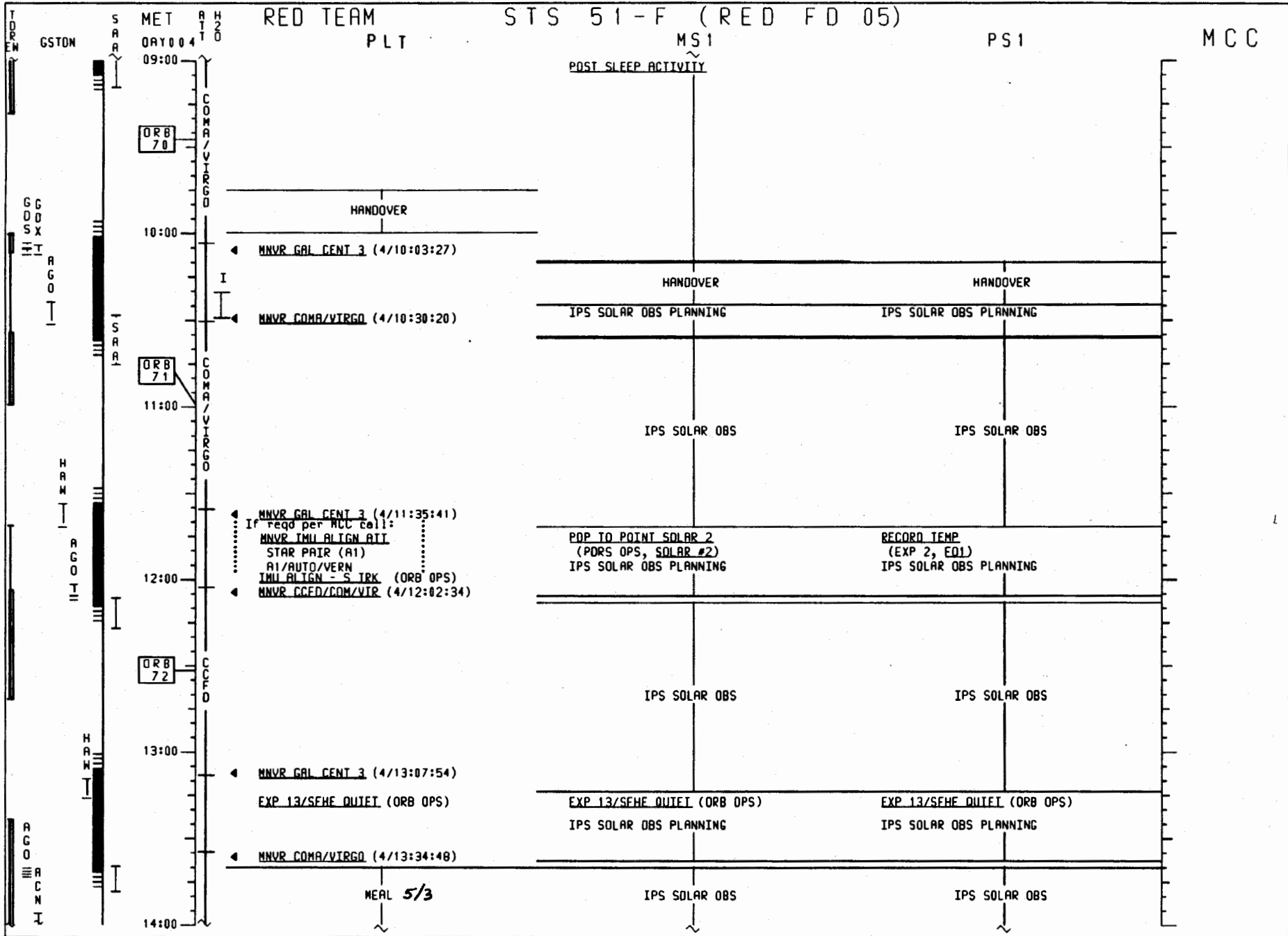
UPLINK
 150 LIMIT

RED TEAM
PLT

STS 51-F (RED FD 05)

PS1

MCC



BLUE TEAM
MS2

STS 51-F (BLUE FD 05)
MS3 PS2

CDR

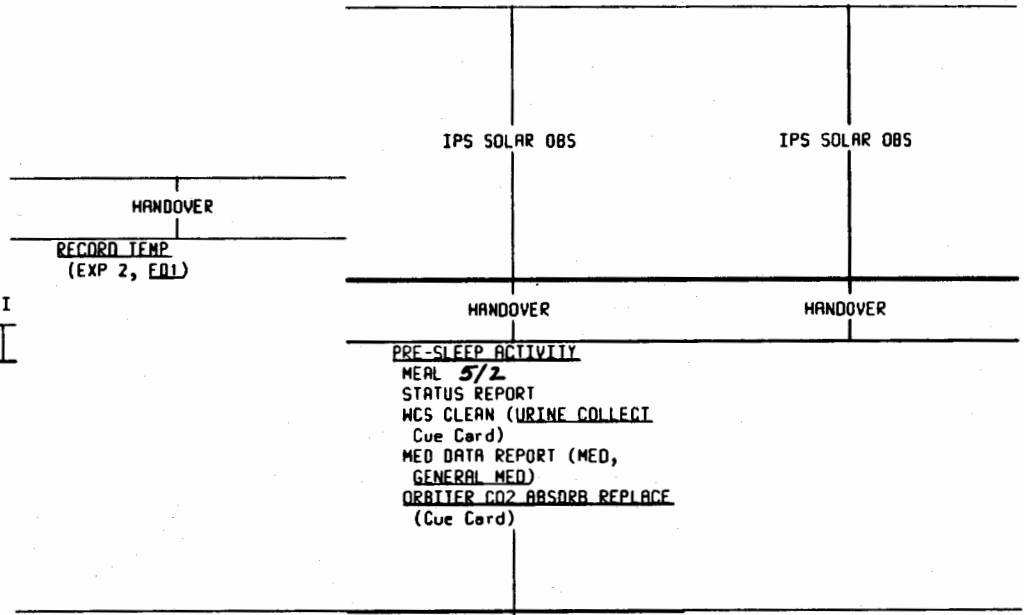
MCC

MET DAY 004
09:00
09:00
10:00
11:00
12:00
13:00
14:00

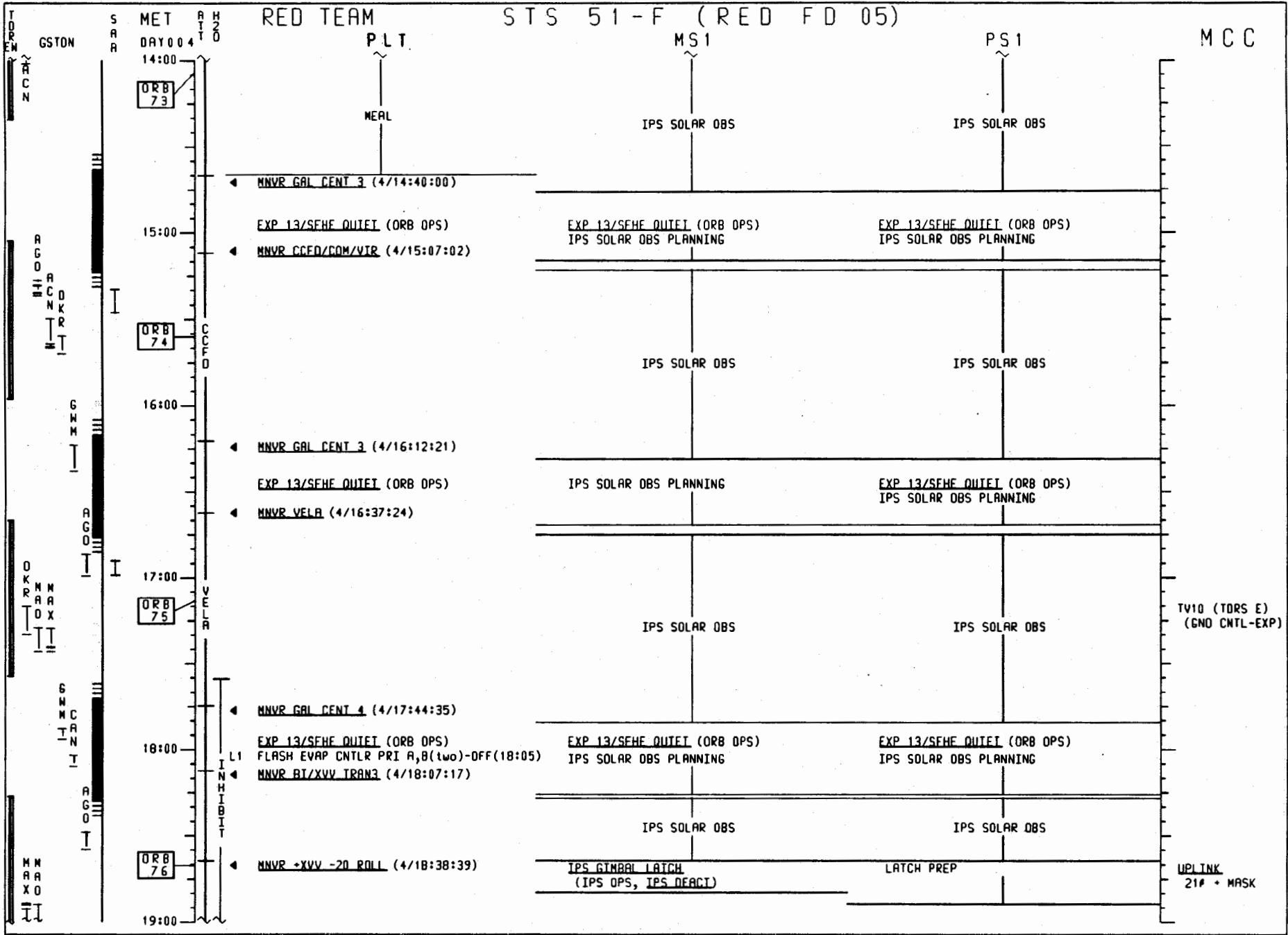
ORB 70

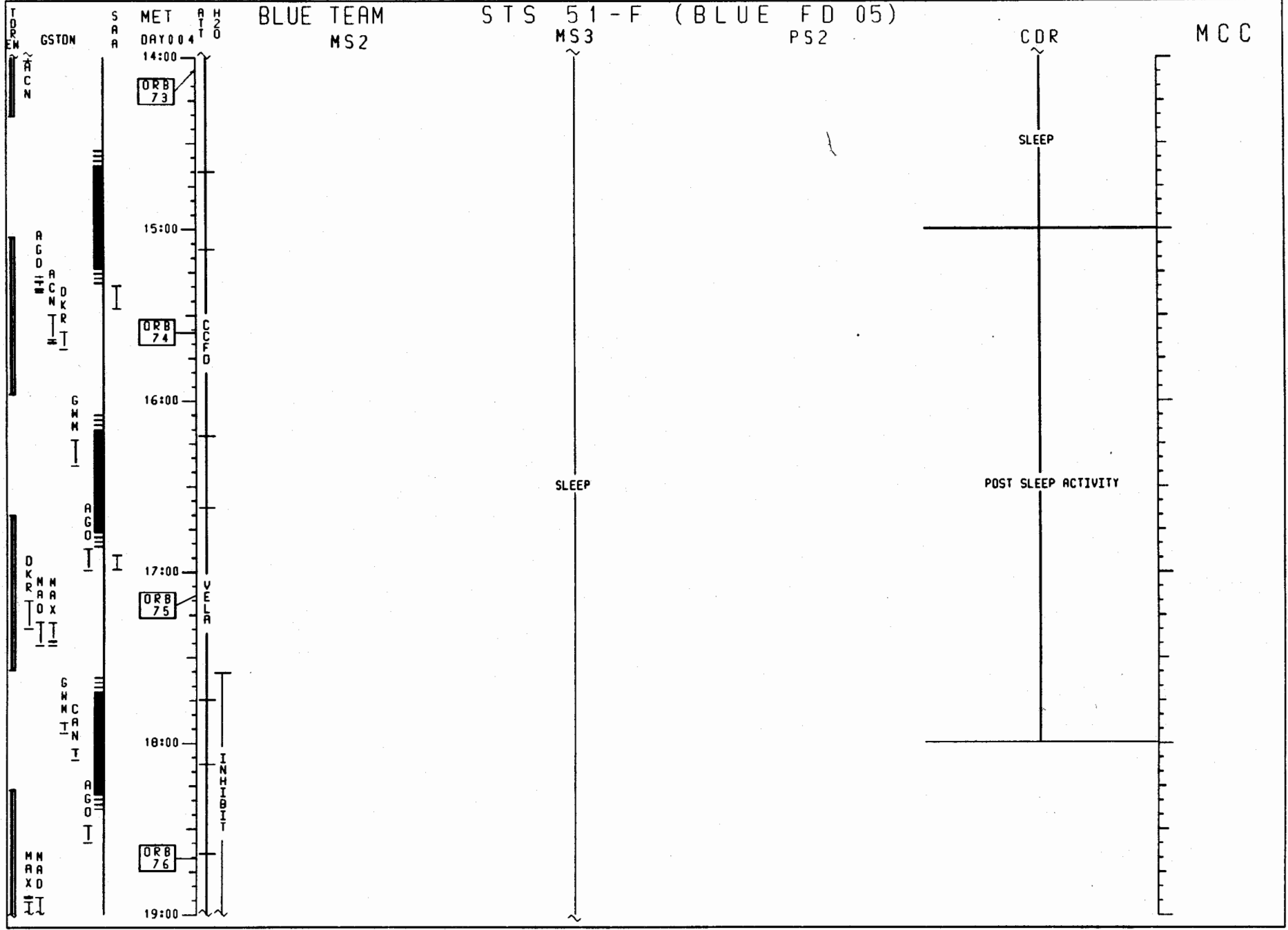
ORB 71

ORB 72



IMU ALIGN LOG
 REOD ID:
 -Y , -Z ANG ERR
 1 2 3
 ANG:
 ΔX () . () . () .
 ΔY () . () . () .
 ΔZ () . () . () .
 EXECUTION TIME:
 _ / _ : _ : _





RED TEAM

STS 51-F (RED FD 05)

PLT

MS1

PS1

MCC

MET DAY 004 19:00
 20:00
 21:00
 22:00
 23:00
 005 00:00

ROLL
 INHIBIT
 ROLL
 ROLL

+XUV
 +20
 +20
 +XUV
 +20

FILTER CLEANING FLIGHT DECK
 (STAR SIDE)
 (IFM, SCHEDULED MAINTENANCE)

P/TV09 SETUP (MIDDECK ACT.)
 (PHOTO/TV, P/TV SCENES)

ORB 77

FILTER CLEANING FLIGHT DECK
 (PORT SIDE)
 (IFM, SCHEDULED MAINTENANCE)

P/TV09 ACT (MIDDECK ACTIVITY)
 (PHOTO/TV, P/TV SCENES)

HANDOVER

HANDOVER

HANDOVER

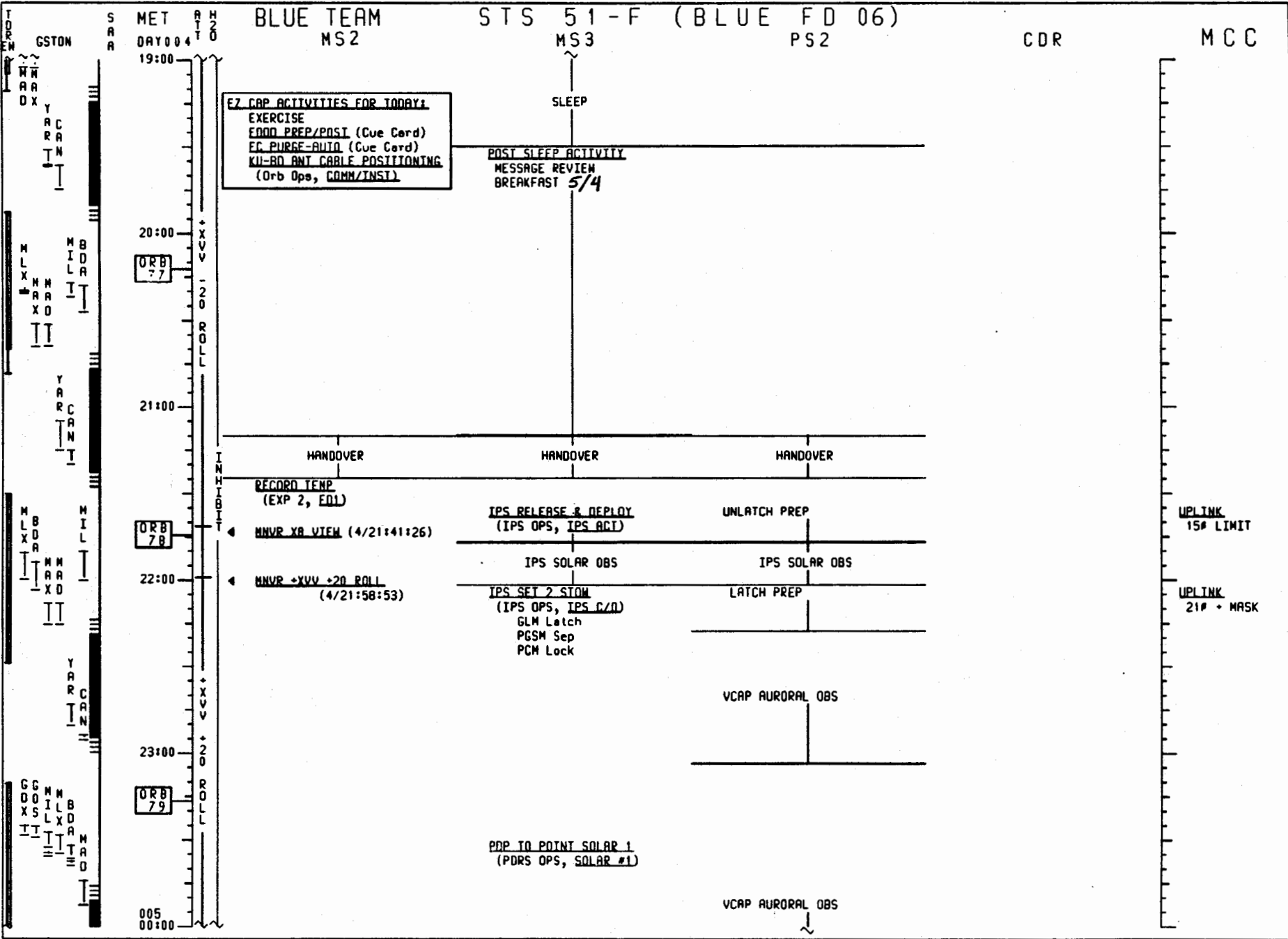
ORB 78

PRE-SLEEP ACTIVITY
 MEAL 5/4
 STATUS REPORT
 WCS CLEAN (URINE COLLECT
 Cue Card)
 MED DATA REPORT (MED,
 GENERAL MED)
ORBITER CO2 ABSORBER REPLACE
 (Cue Card)

ORB 79

SLEEP

TV09 (TDRS E)
(GND CNTL-CAB)

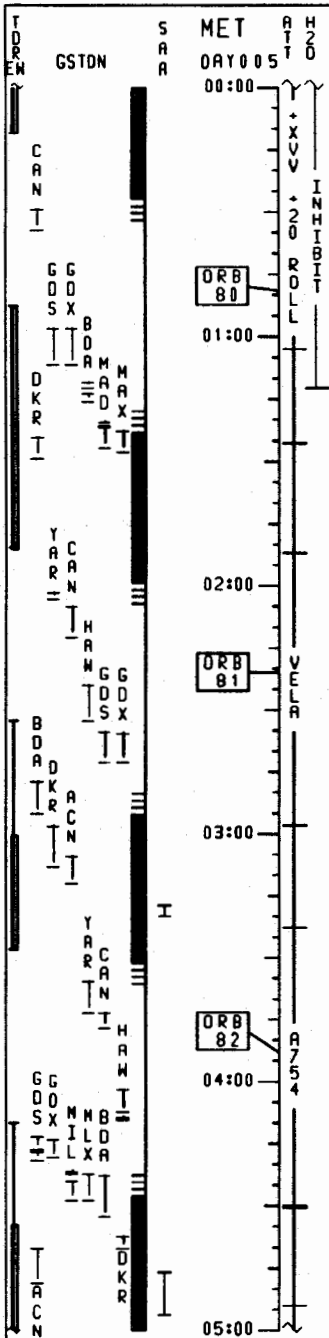


PLT

MS1

PS1

MCC



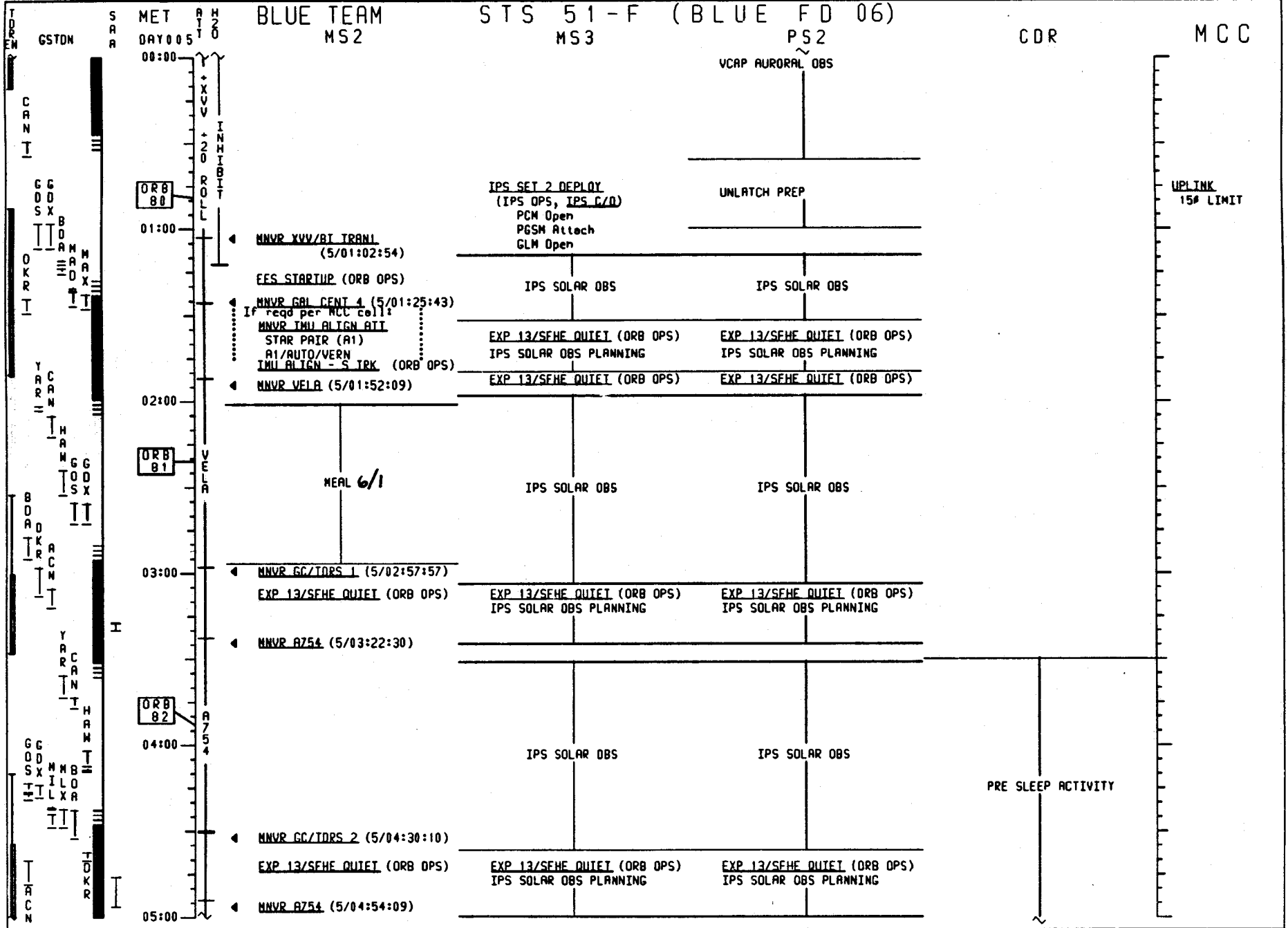
ORB 80

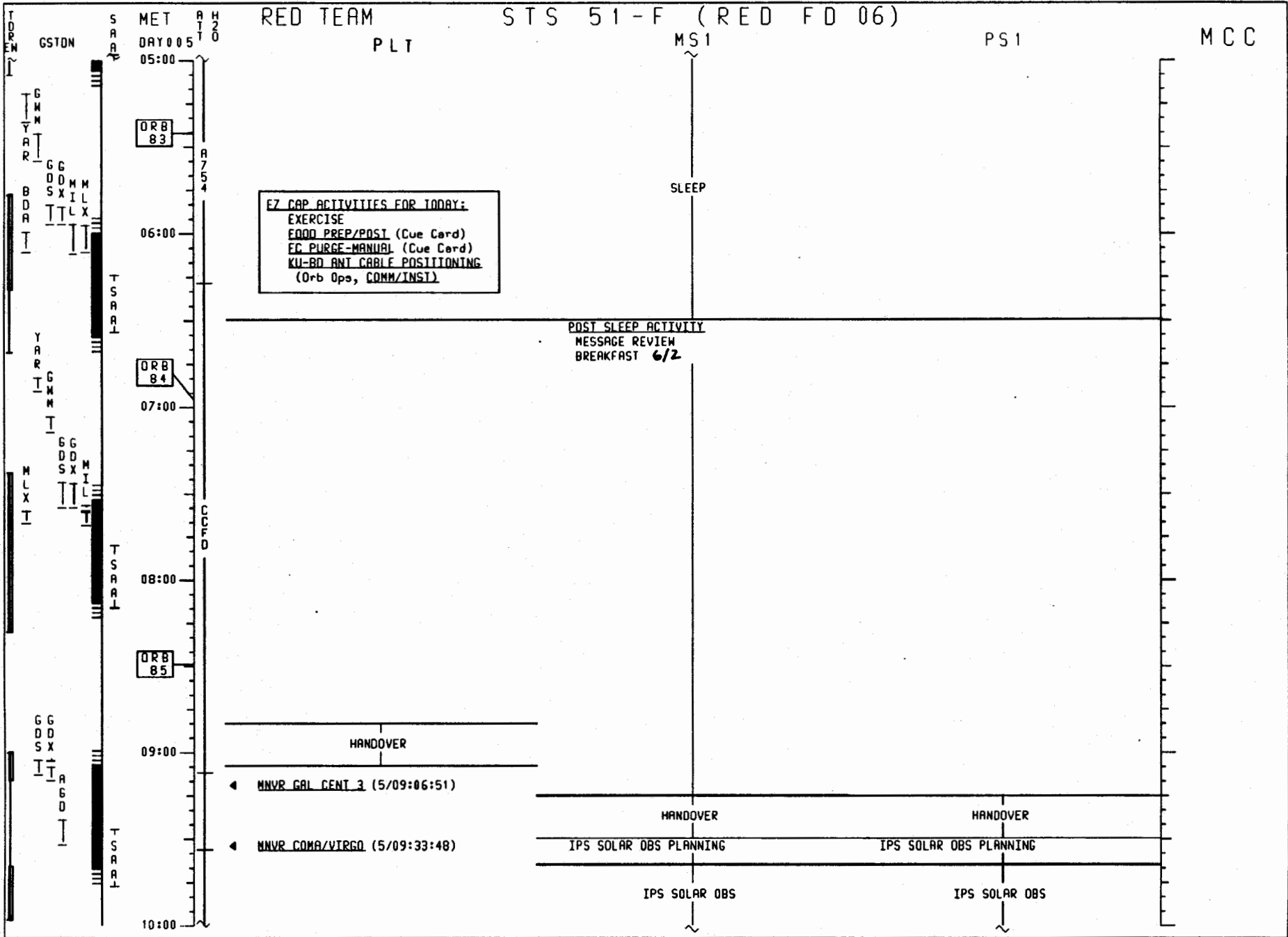
ORB 81

ORB 82

IMU ALIGN LOG
 REQD ID:
 -Y____, -Z____ ANG ERR ____
 1 2 3
 ANG:
 ΔX () . () . () .
 ΔY () . () . () .
 ΔZ () . () . () .
 EXECUTION TIME:
 ____ / ____ : ____ :

SLEEP



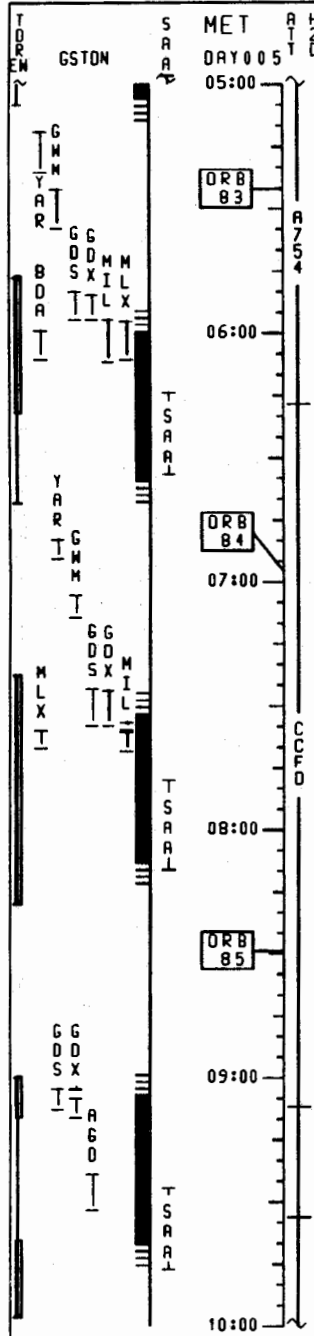


BLUE TEAM
MS2

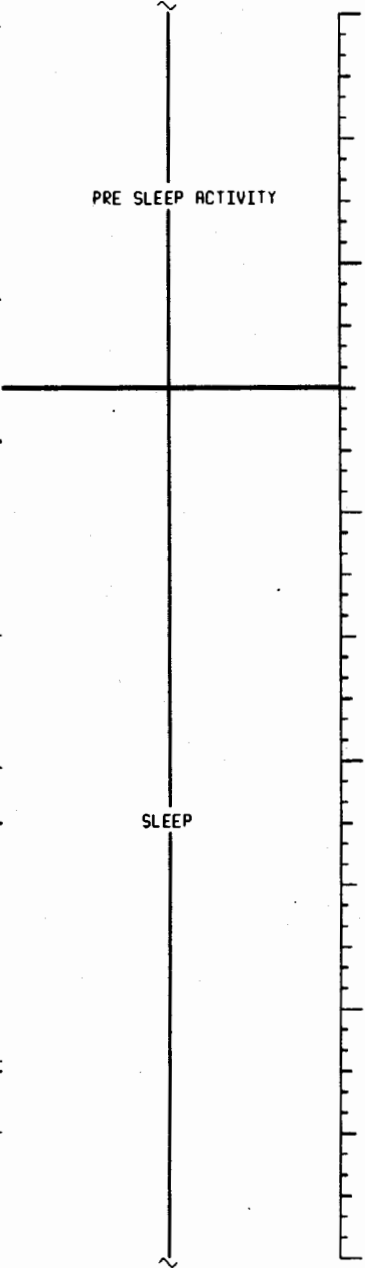
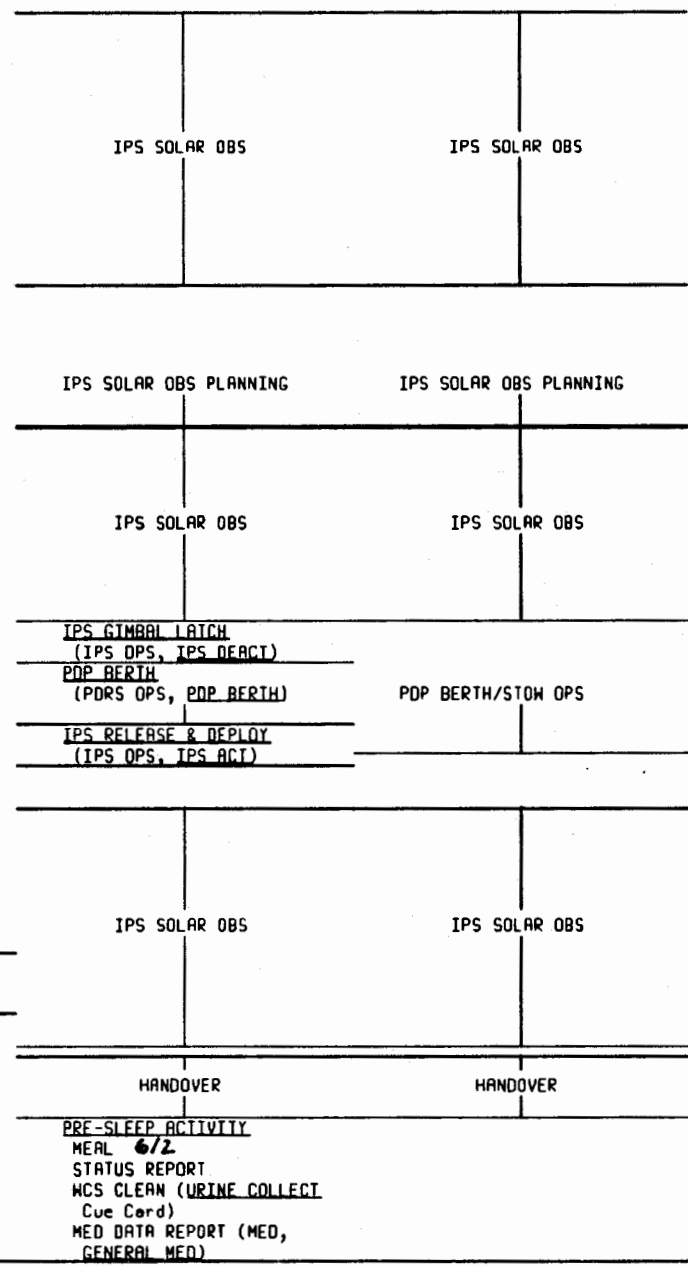
STS 51-F (BLUE FD 06)
MS3 PS2

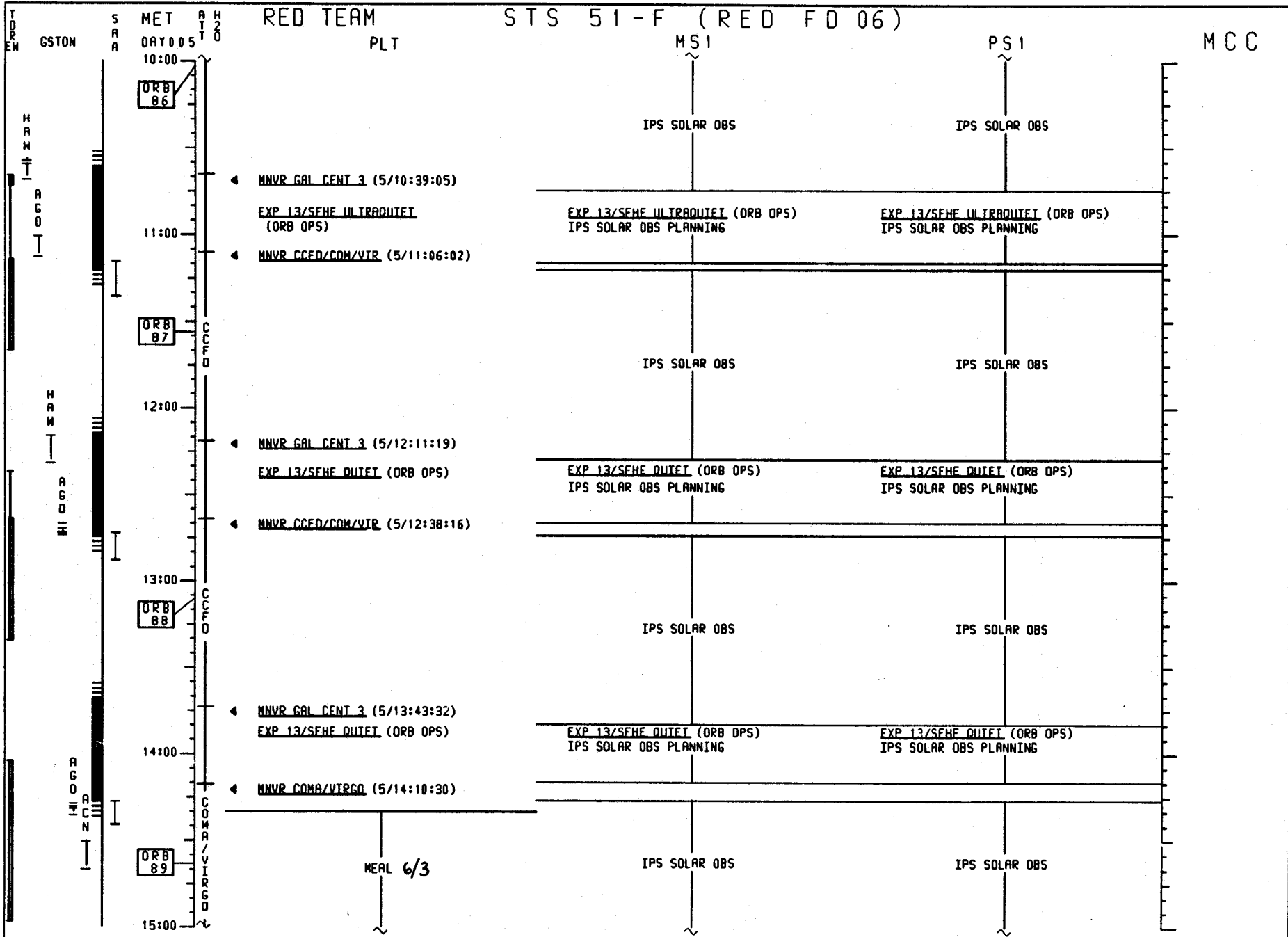
CDR

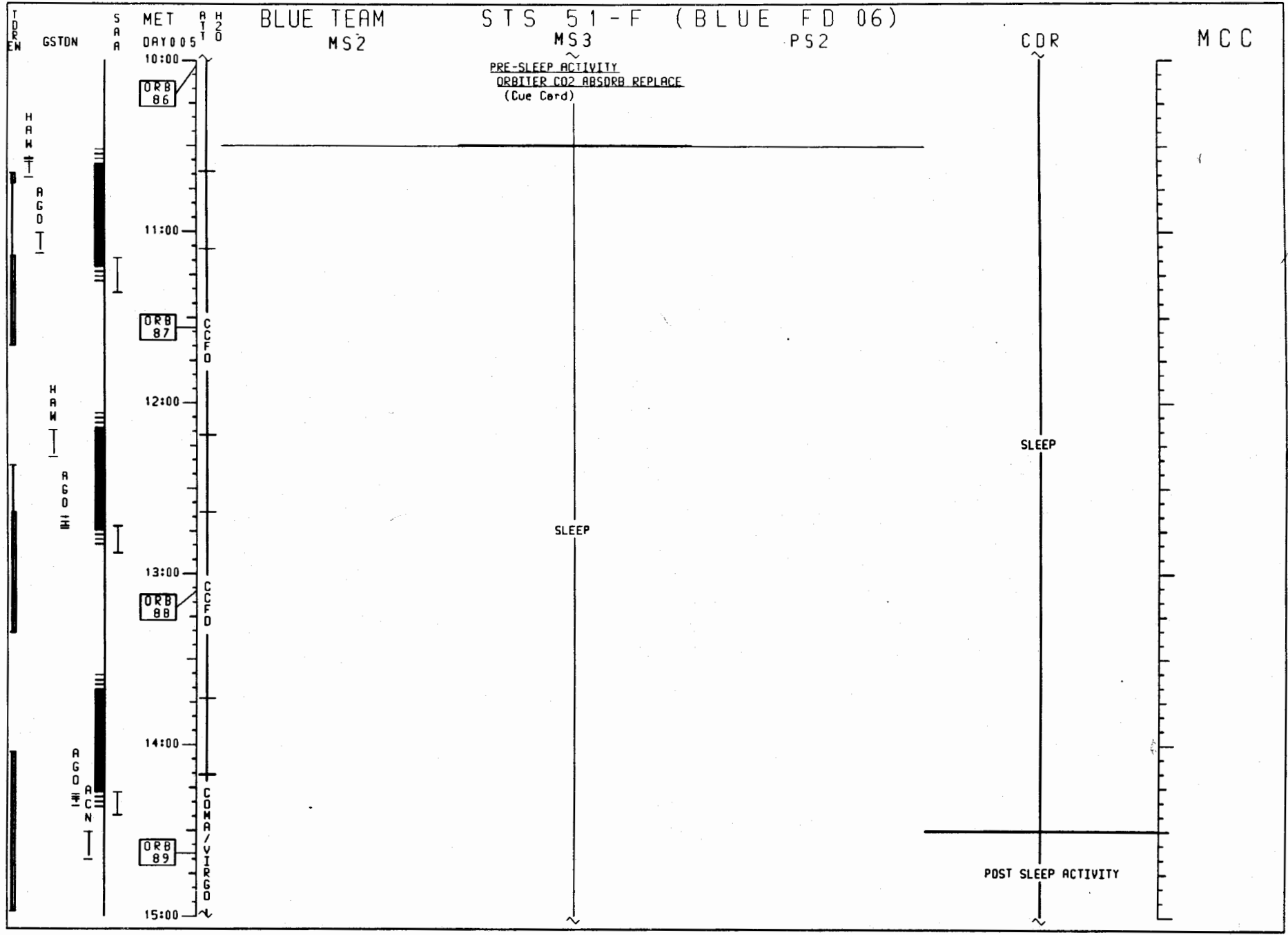
MCC

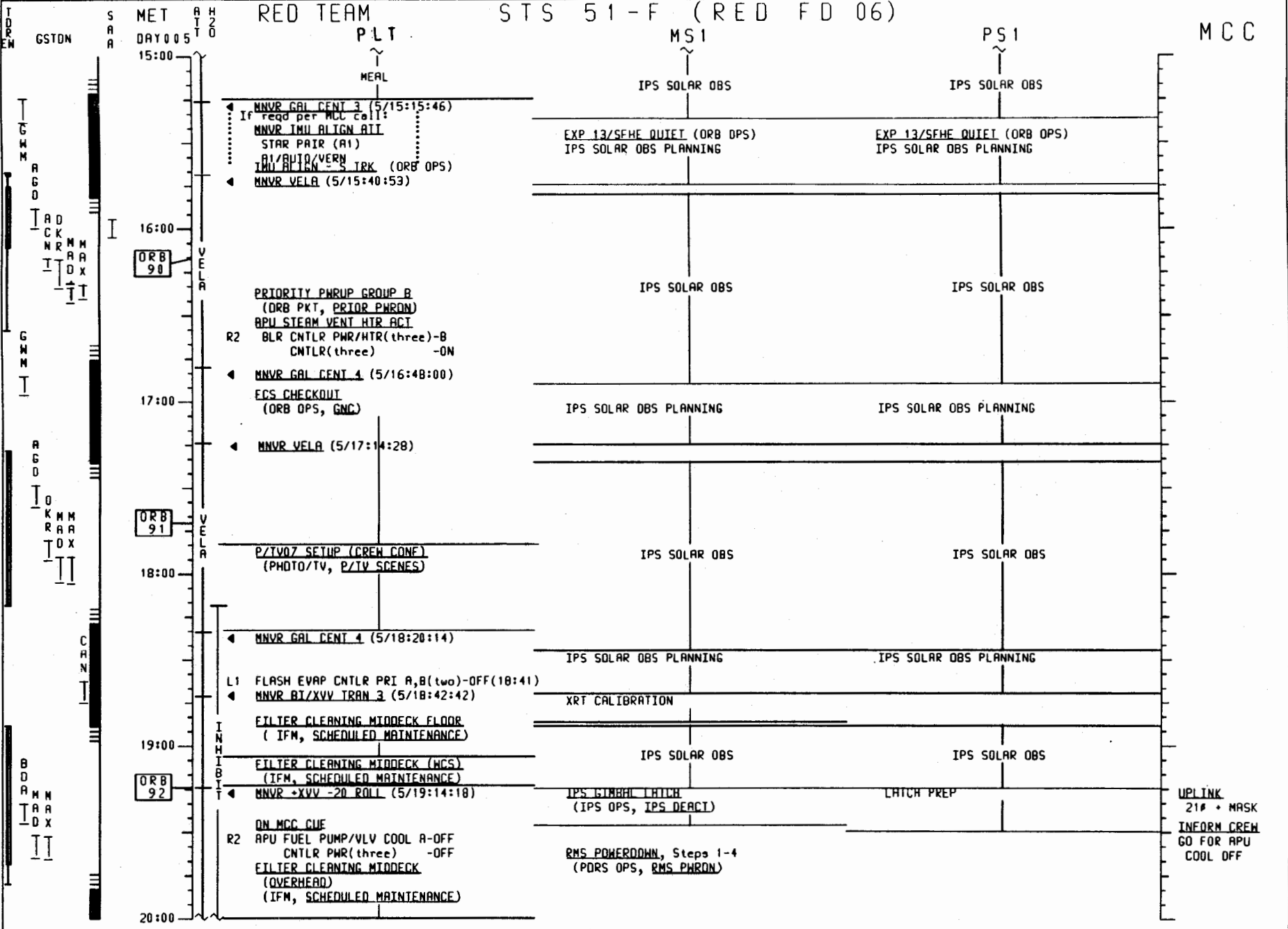


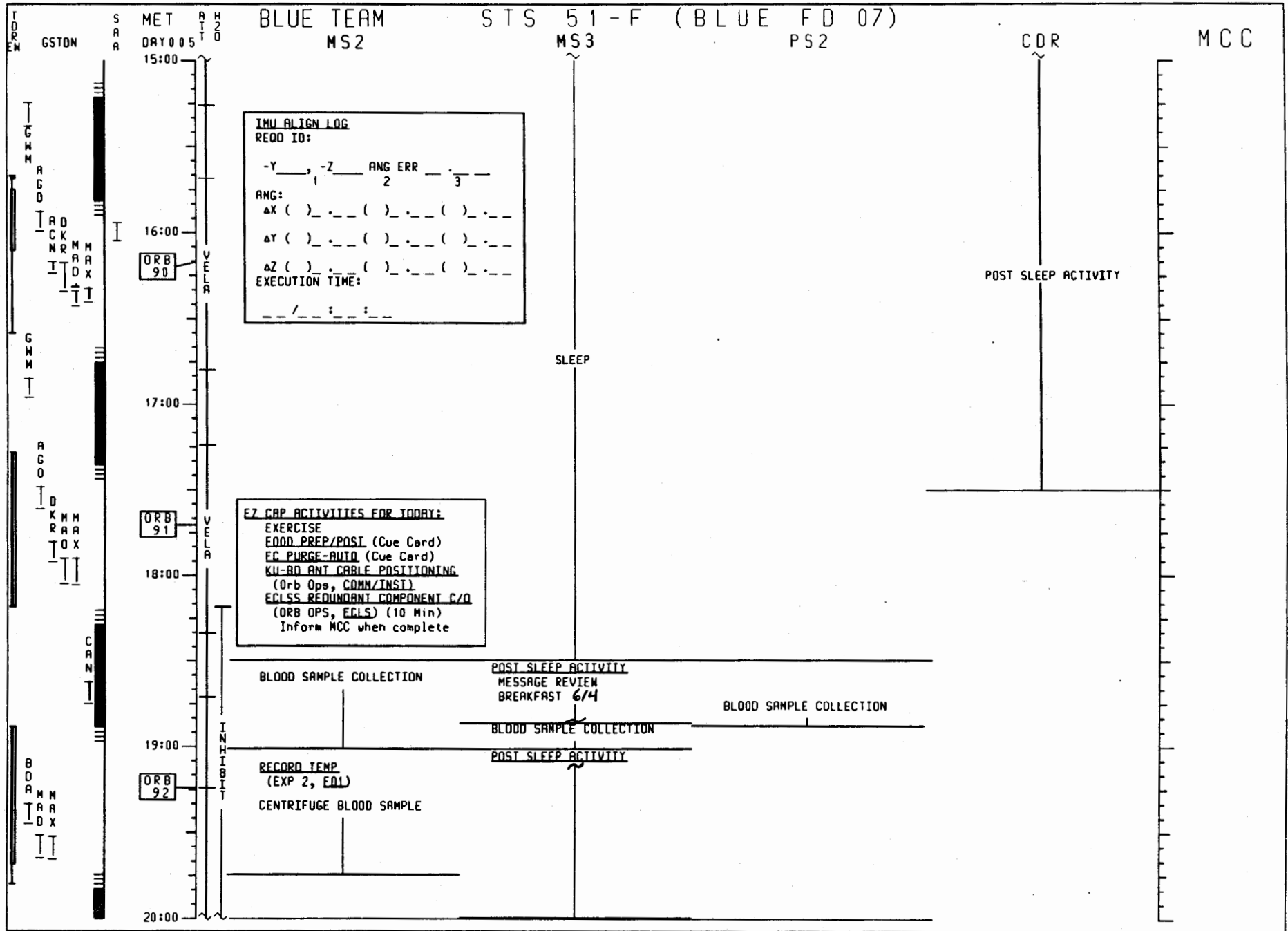
← MNVR CCED/COM/VIR
(5/06:17:01)











BLUE TEAM
MS2

STS 51-F (BLUE FD 07)
MS3 PS2

CDR

MCC

MET DAY 005
15:00
16:00
17:00
18:00
19:00
20:00

IMU ALIGN LOG
REQD ID:
-Y ____, -Z ____, ANG ERR ____,
1 2 3
ANG:
ΔX () () ()
ΔY () () ()
ΔZ () () ()
EXECUTION TIME:
- / : : -

ORB 90

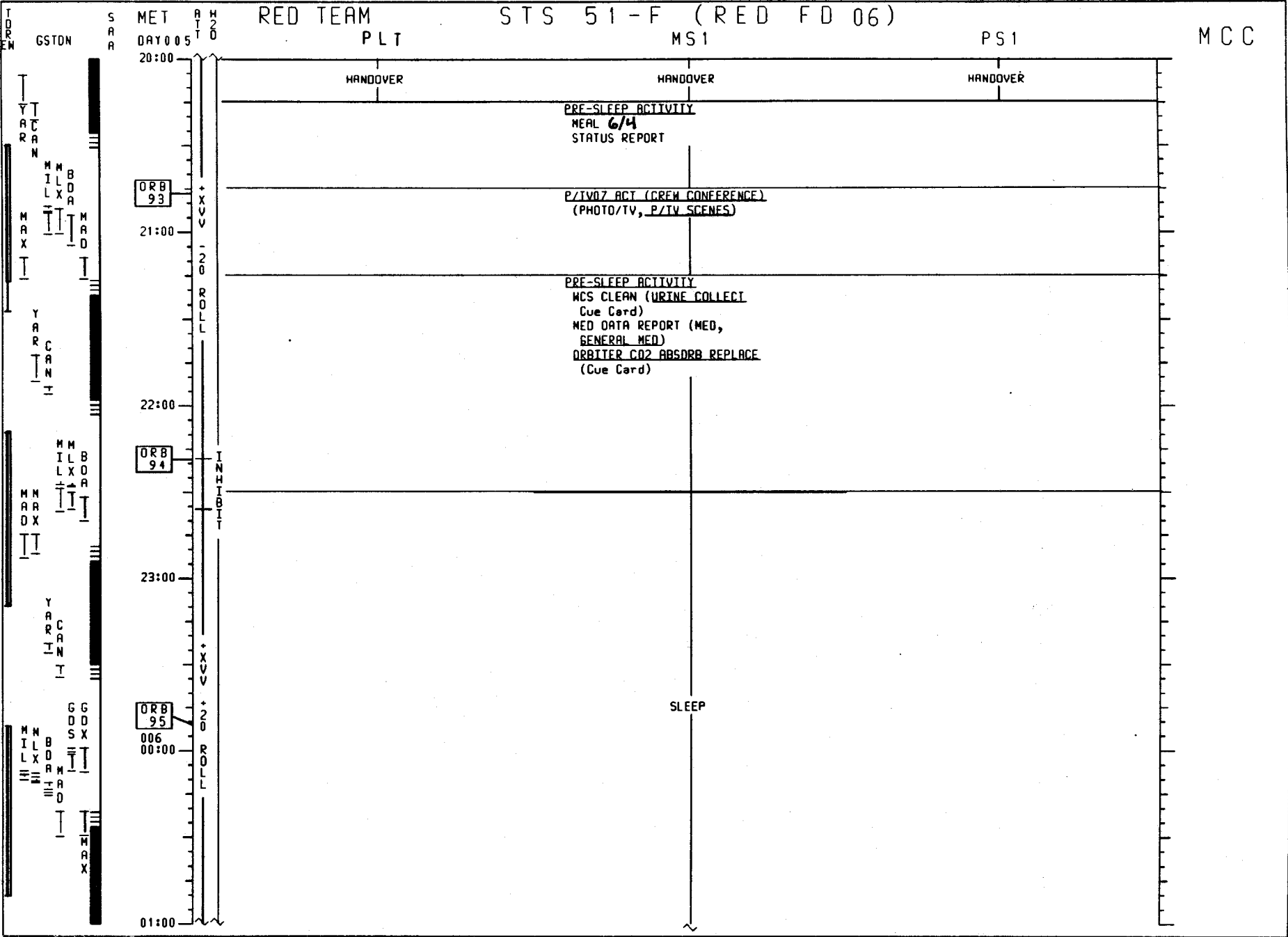
EZ CAP ACTIVITIES FOR TODAY:
EXERCISE
FOOD PREP/POST (Cue Card)
EC PURGE-AUTO (Cue Card)
KV-AD ANT CABLE POSITIONING
(Orb Ops, COMM/INST)
ECLSS REDUNDANT COMPONENT C/O
(ORB OPS, ECLS) (10 Min)
Inform MCC when complete

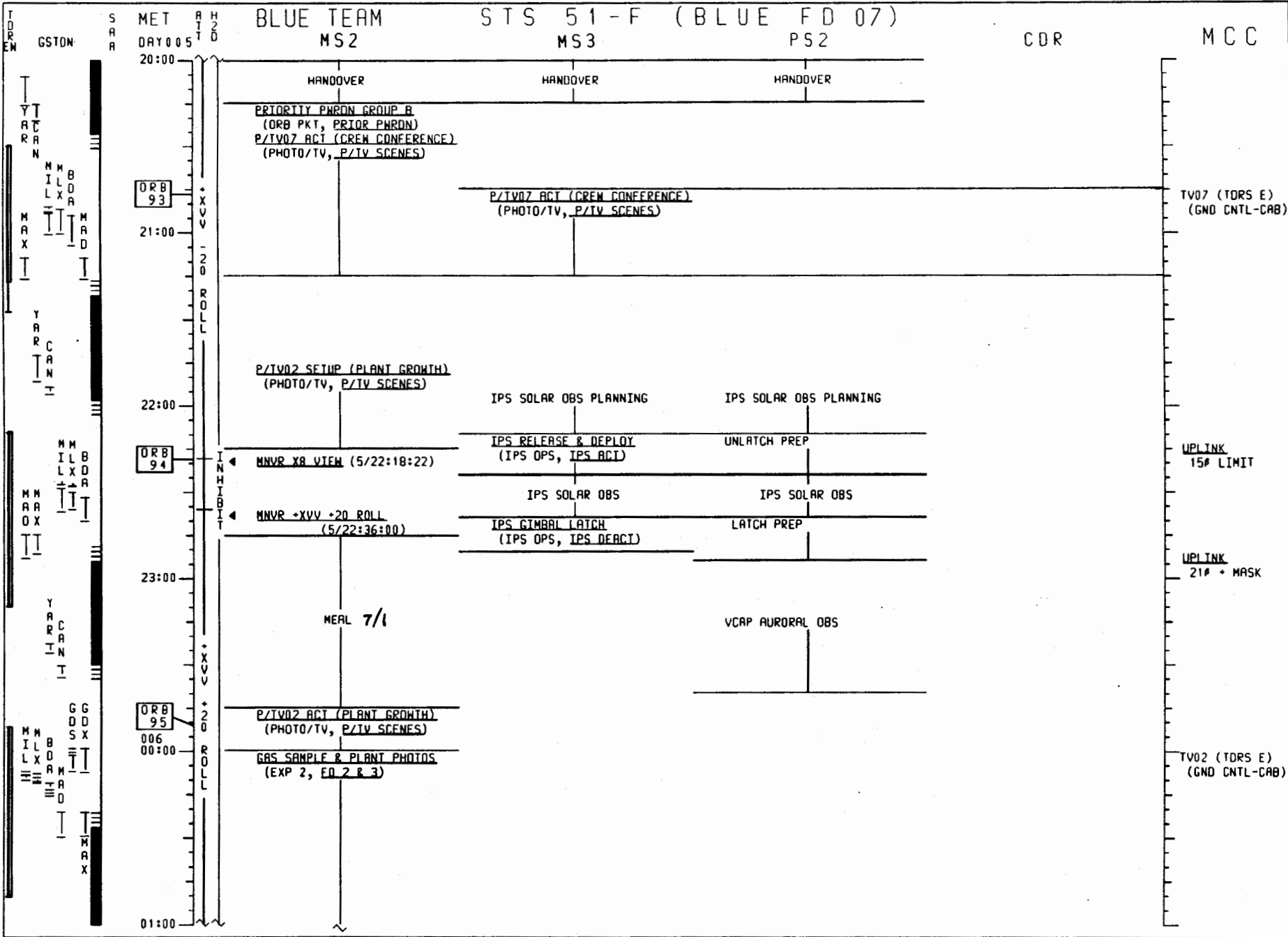
ORB 91

BLOOD SAMPLE COLLECTION
POST SLEEP ACTIVITY
MESSAGE REVIEW
BREAKFAST 6/4
BLOOD SAMPLE COLLECTION
BLOOD SAMPLE COLLECTION
19:00
POST SLEEP ACTIVITY
RECORD TEMP
(EXP 2, ED1)
CENTRIFUGE BLOOD SAMPLE
20:00

ORB 92

POST SLEEP ACTIVITY





BLUE TEAM
MS2

STS 51-F (BLUE FD 07)
MS3 PS2

CDR

MCC

MET DAY 006
01:00
02:00
03:00
04:00
05:00
06:00

INHIBIT
DUMPER
CCFD/VELA
A754

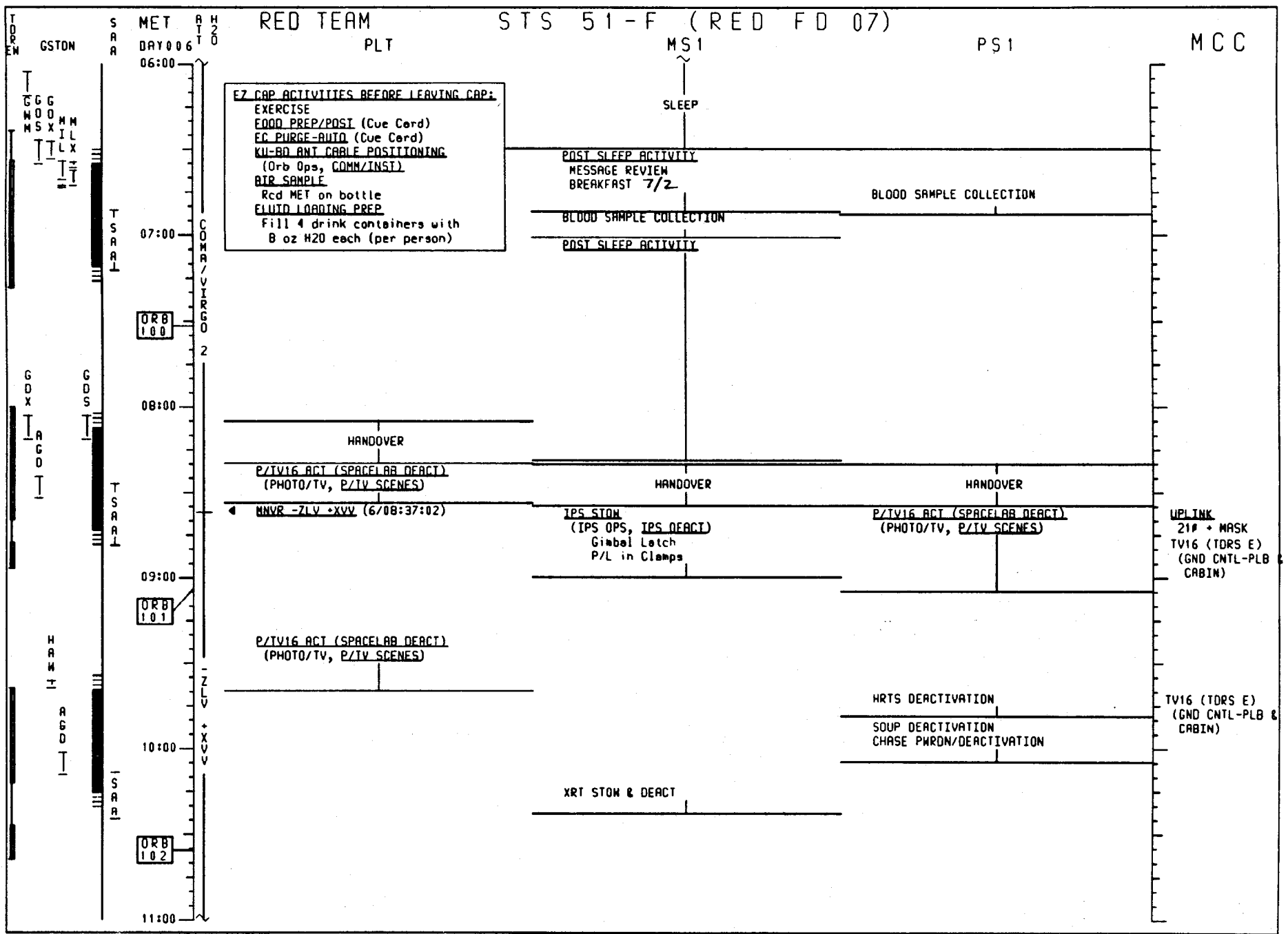
GAS SAMPLE & PLANT PHOTOS
ORB 96
MNVR XVV/AT TRANI (6/01:41:59)
EES STARTUP (ORB OPS)
MNVR GAL CENT4 (6/02:01:23)
SUPPLY WATER DUMP (ORB OPS)
(dump for 10 min)
If reqd per MCC call:
MNVR IMU ALIGN ATT
STAR PAIR (A1)
A1/AUTG/VERN
IMU ALIGN - S IRK (ORB OPS)
MNVR CGED/VELA (6/02:27:52)
ORB 97
MNVR G3/TORS 1 (6/03:33:37)
SUPPLY WATER DUMP (ORB OPS)
(dump for 10 min)
ORB 98
MNVR GC/TORS 2 (6/05:05:51)
EXP 13/SEHE QUIET (ORB OPS)
MNVR COMA/VIRGO 2 (6/05:30:54)
ORB 99
P/TV01 SETUP (BLOOD DRAW)
(PHOTO/TV, P/TV SCENES)

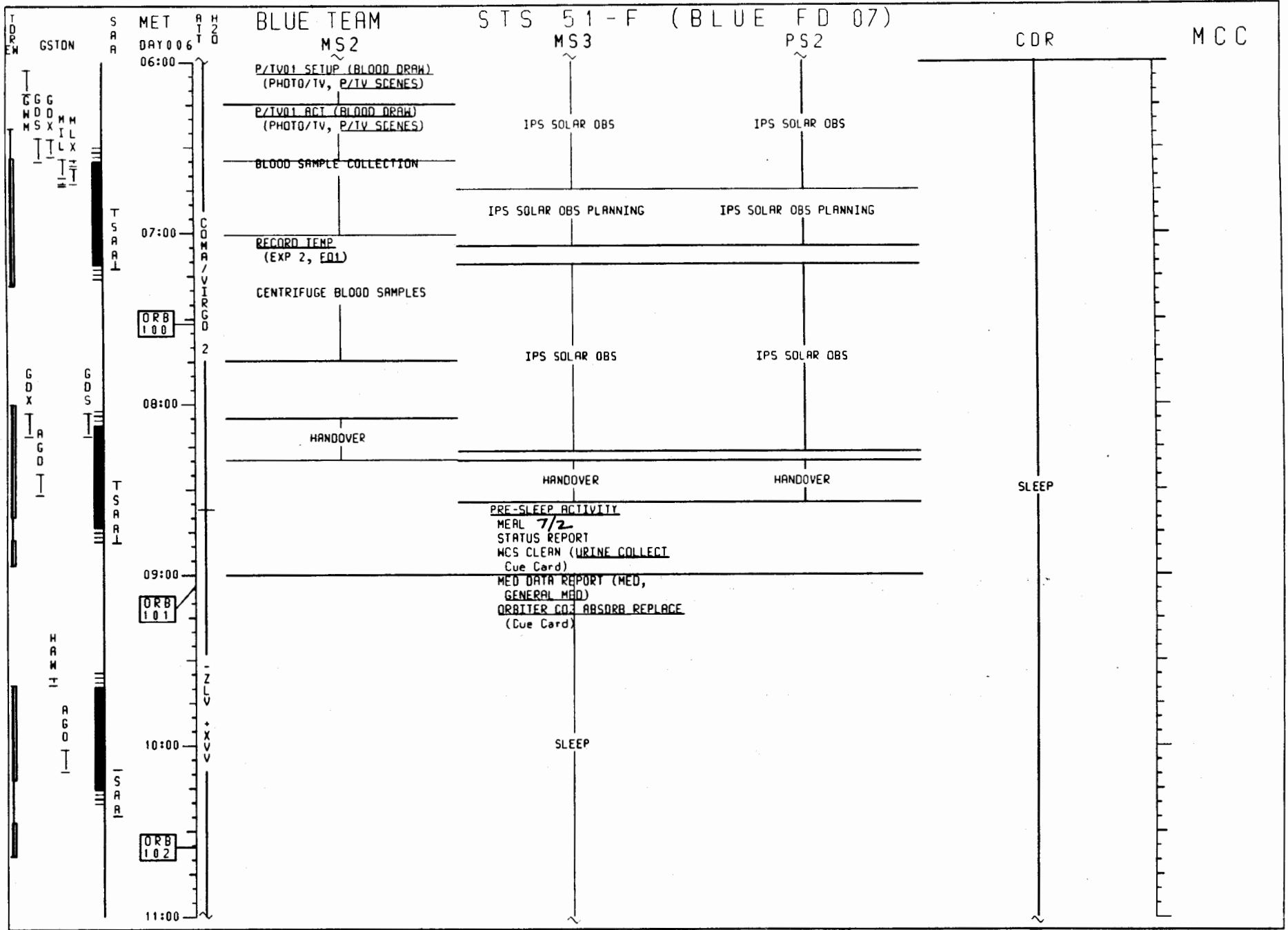
IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
IPS RELEASE & DEPLOY (IPS OPS, IPS ACT)	UNLATCH PREP
IPS SOLAR OBS	IPS SOLAR OBS
EXP 13/SEHE QUIET (ORB OPS)	EXP 13/SEHE QUIET (ORB OPS)
IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
IPS SOLAR OBS	IPS SOLAR OBS
EXP 13/SEHE QUIET (ORB OPS)	EXP 13/SEHE QUIET (ORB OPS)
IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
IPS SOLAR OBS	IPS SOLAR OBS
EXP 13/SEHE QUIET (ORB OPS)	EXP 13/SEHE QUIET (ORB OPS)
IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
IPS SOLAR OBS	IPS SOLAR OBS
EXP 13/SEHE QUIET (ORB OPS)	EXP 13/SEHE QUIET (ORB OPS)
IPS SOLAR OBS PLANNING	IPS SOLAR OBS PLANNING
IPS SOLAR OBS	IPS SOLAR OBS

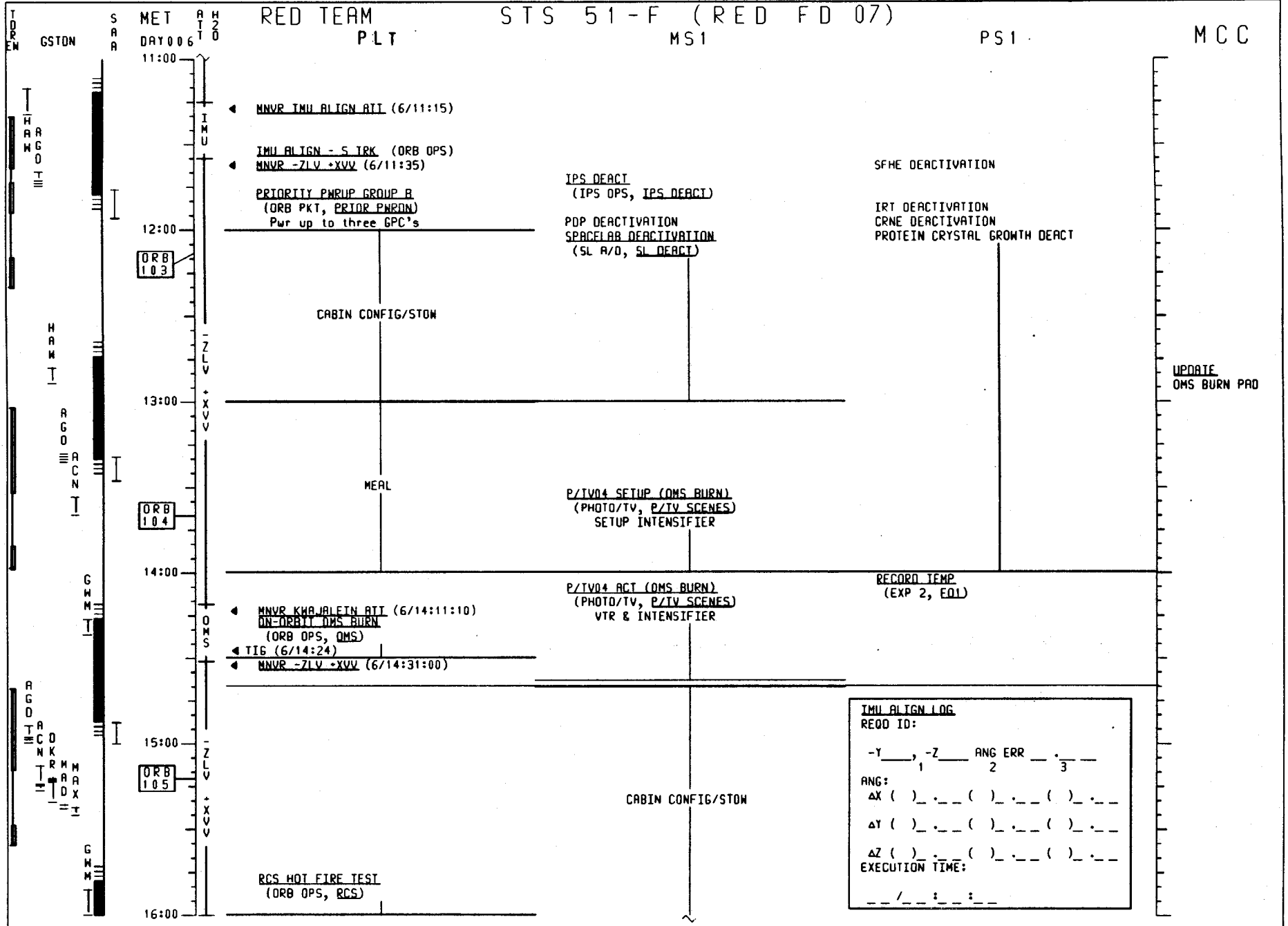
UPLINK
15A LIMIT

PRE SLEEP ACTIVITY

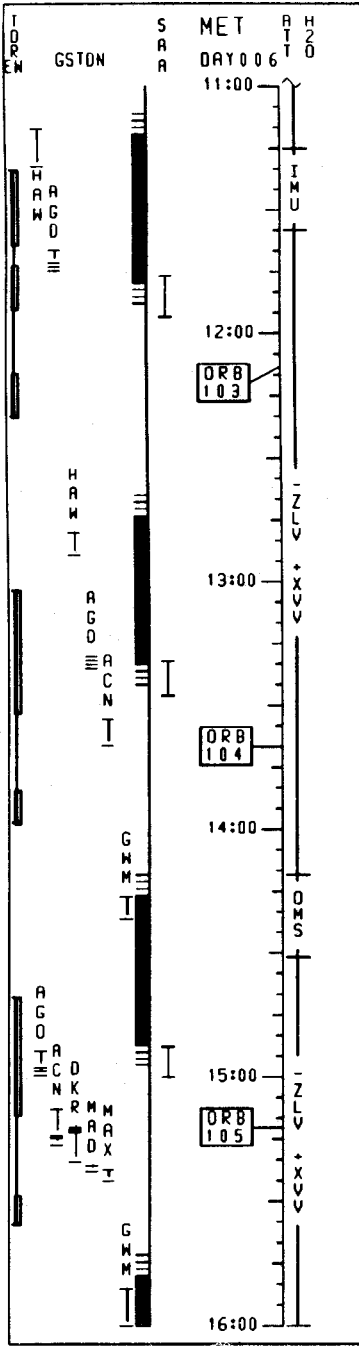
DRM
GSTM
SAR
T CAN
H CAN
GDDX
BDDA
KRR
ACNT
YARR
HANN
GDDX
MMI
DOL
AXL
DOKR
ACNT
YARR
GMM
GDDX
MMI
BDDA
ACNT
YARR







IMU ALIGN LOG
 REQD ID:
 -Y ___ , -Z ___ ANG ERR ___ . ___
 1 2 3
 ANG:
 ΔX () . ___ () . ___ () . ___
 ΔY () . ___ () . ___ () . ___
 ΔZ () . ___ () . ___ () . ___
 EXECUTION TIME:
 ___ / ___ : ___ : ___



BLUE TEAM
MS2

STS 51-F (BLUE FD 07)
MS3 PS2

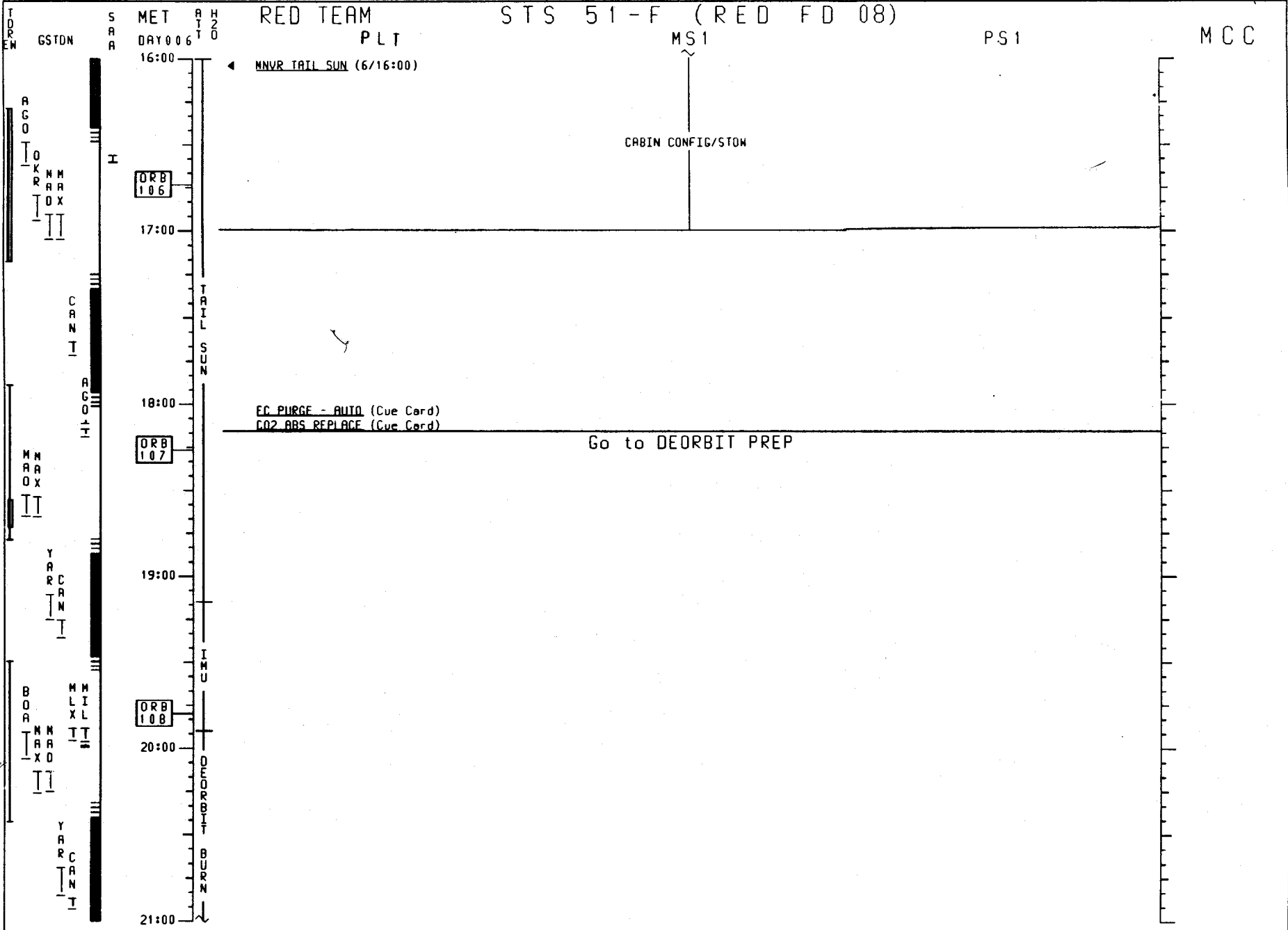
CDR

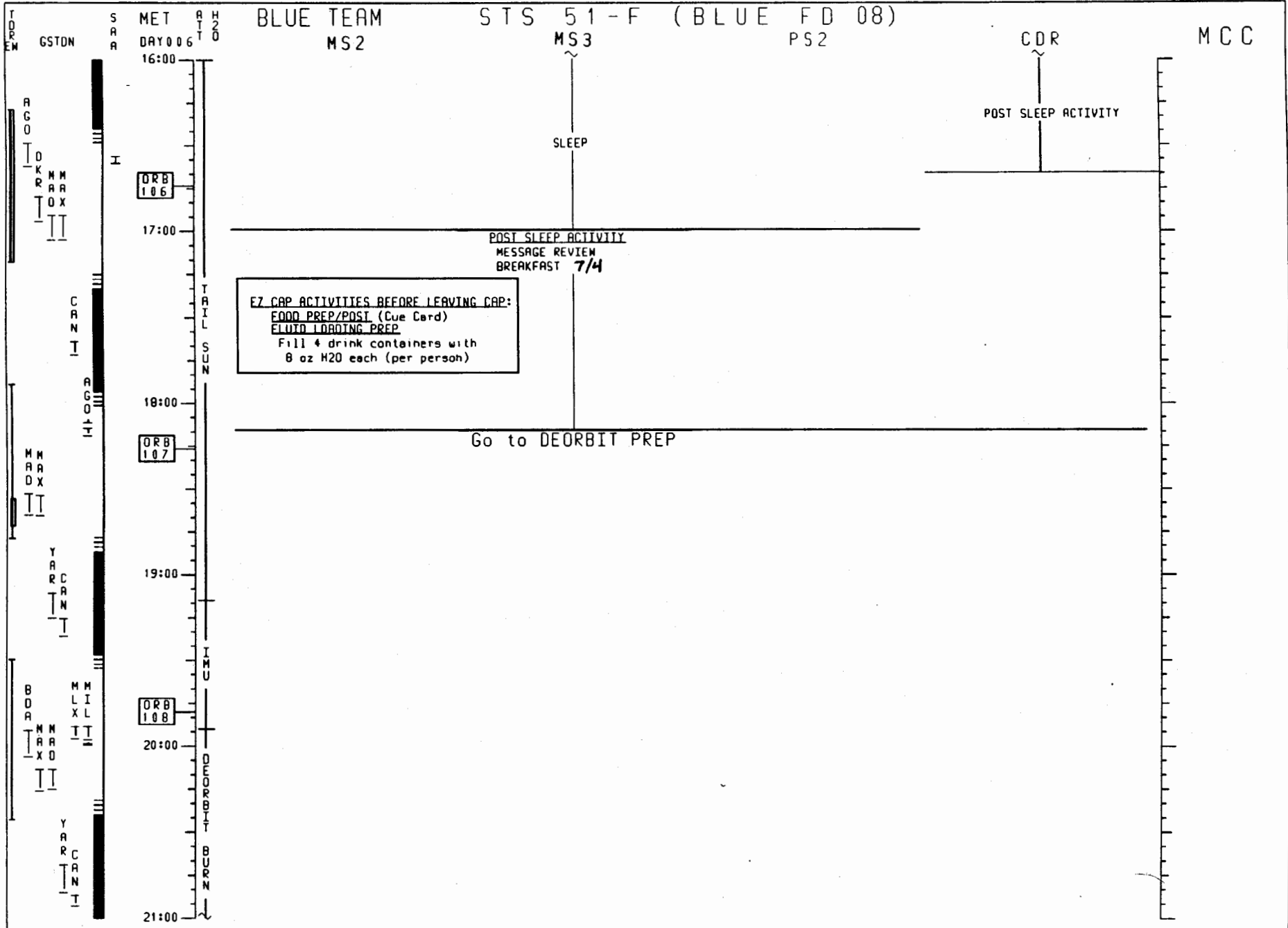
MCC

SLEEP

SLEEP

POST SLEEP ACTIVITY



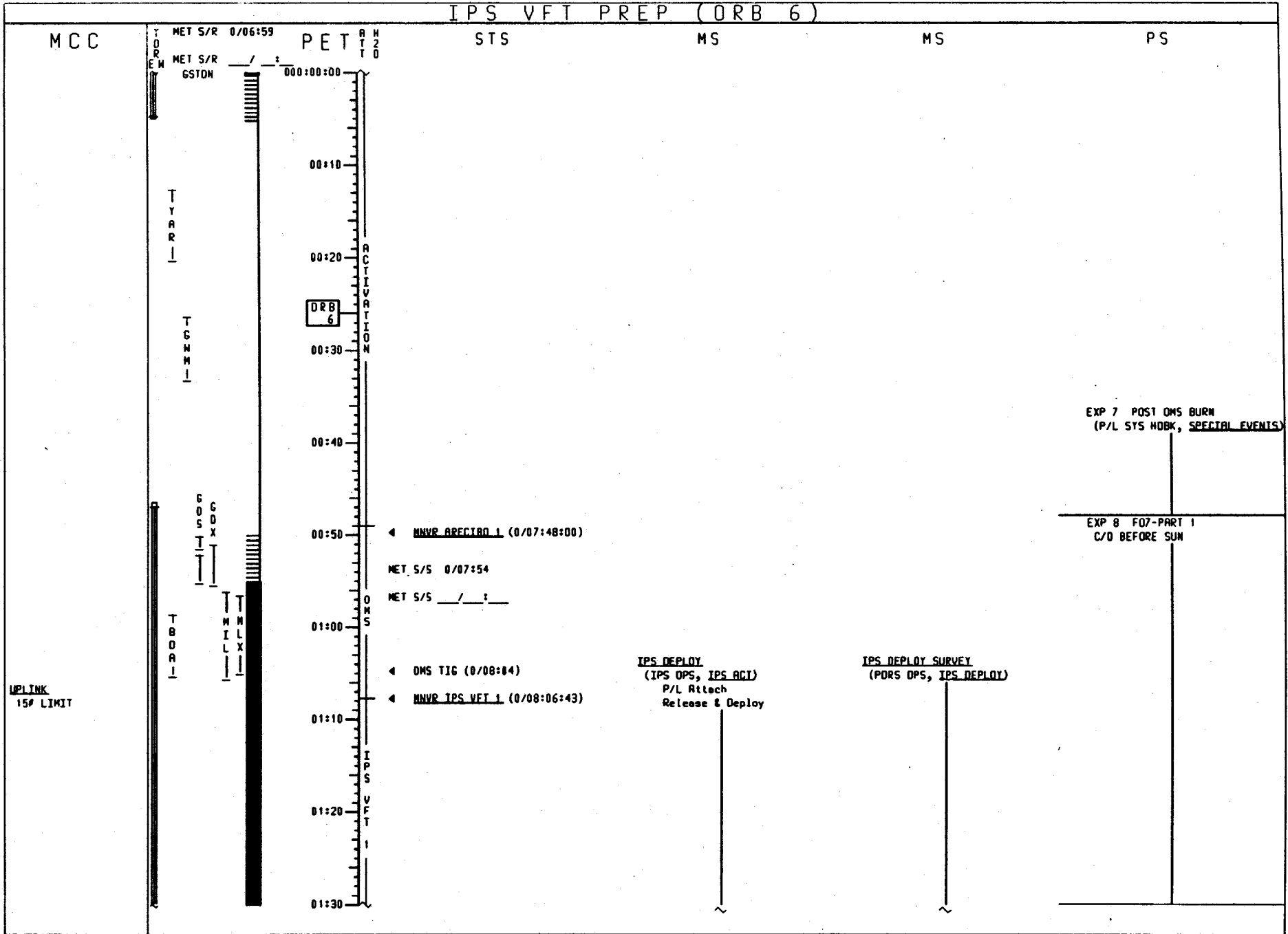


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IPS VFT

IPS VFT

IPS VFT PREP (ORB 6)



IPS VFT - SEQ 1 (ORB 6)

MCC

TDR
EM

MET S/R 0/08:29

MET S/R
65TON

PET

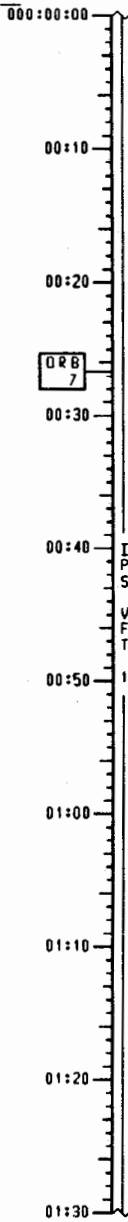
AH
T
D

STS

MS

MS

PS



Initial ATT: IPS VFT 1

IPS DEPLOY

IPS DEPLOY SURVEY

IPS INIT ACQUISITION-DTO 1105
(IPS OPS, PING OPS)

IPS CREW FAMILIARIZATION

IPS GYRO DRIFT-DTO 1110
(IPS OPS, VET PROC)

EXP 8 F07-PART 2
DEPLOY WL SYSTEM

✓ SS sequence complete

EXP 7 F05-ACTIVATION
PART 1B, SEC 8

EXP 8 COPOINT WITH OSP PREP

BMC
DISP U/D ADDR
ITEM 19 102750
STORE U/O COPOINT
ITEM 21 177634
STORE L/R COPOINT
ITEM 21 177704
COPOINT EXP 8
ITEM 23 002A

MET S/S 0/09:25

MET S/S / :
CHANGE VTR TAPE

Y
A
R

G
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M

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G
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S
I
I
M
I
L
L
X
M
L
L
X

IPS VFT - SEQ 2 (ORB 7)

MCC

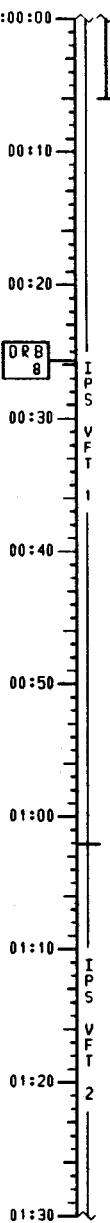
T O R M
E W
MET S/R 0/10:01
MET S/R / :
GSTDN

PET
A H
T T
D O

STS

MS

PS



Initial ATT: IPS VFT 1

IPS GYRO DRIFT-DTO 1110

EXP 8 MAN SR SEQ

EXP 8 COPOINT WITH IPS B/S TRACKER
(OFFSET TEST)
(EXP 8, COPOINT UPDATE)

✓ NL FOCUS
TORS LOS - VTR ON

EXP 8 COPOINT WITH IPS B/S TRACKER
(OFFSET TEST)
(EXP 8, COPOINT UPDATE)

CHANGE VTR TAPE

IPS INIT ACQUISITION-DTO 1105
(IPS OPS, PING OPS)
FRANT STAR

[BAU] ITEM SR/SS EWR
EXP 8 FAM
Sample sequences:
5, 35 He
100 He, MAG
MAN TF FOCUS
TF CAL (NDM-32)

P/TV13 SETUP (CREW DISTURBANCE-SOUP TV)
(PHOTO/TV, P/TV SCENES)

✓ EXP 8 SS OK

MET S/S 0/10:56

MET S/S / :

4 HNVR IPS VFT 2 (0/11:03:11)

EXP 7 FOS-ACTIVATION
PART 2, SEC C

G O O S
X S
= =
= =

T
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O
I

IPS VFT - SEQ 3 (ORB 8)

MCC

TOR
E/W

MET S/R 07/11:32

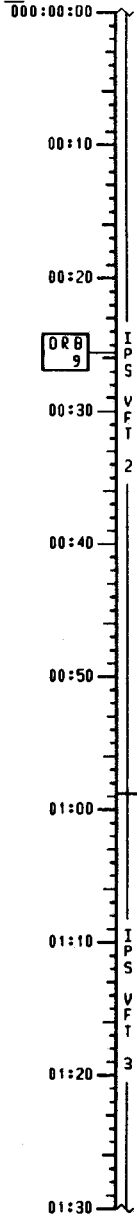
MET S/R
GSDON

PET
A H
T 2
T 0

STS

MS

PS



Initial ATT: IPS VFT 2

CHANGE VTR TAPE

A7U ✓ PLB Lights off (FPEG)
 MET S/S 07/12:27
 MET S/S / / :
 CHANGE VTR TAPE
 ◀ MMVR IPS VFT 3 (07/12:30:49)

L1 FLASH EVAP CNTRL PRI A,B(two) - OFF

IPS INIT ACQUISITION-DTO 1105
 (IPS OPS, PING OPS)

SCAN MODE TEST-DTO 1109
 (IPS OPS, VET PROC)

IPS CREW FAMILIARIZATION

P/IV13 ACT (CREW DISTURBANCE-SOUP TV)
 (PHOTO/TV, P/TV SCENES)

✓ EXP 8 SR OK

EXP 8 FD7-PART 3
 DEPLOY FINE GUIDER

Setup II Nikon in port aft window

IPS CREW FAMILIARIZATION
 (Test EXP 8 Fine GDR at 4 lbs)

EXP 14 F04
 FPEG INITIAL EMISSION TEST

TV13 (TDRS E)
 (GND CNTRL-EXP
 & CABIN)

H A M

T A C O I

IPS VFT - SEQ 4 (ORB 9)

MCC

TDR

MET S/R 0/13:03

PET

A H
T T
D 0

STS

MS

PS

MET S/R
GSTON

/ / :
000:00:00



Initial ATT: IPS VFT 3

IPS DISTURBANCE TEST-DT0 1106
(IPS OPS, VET PROC)
Performance #1

EXP 9 F04 PART 8
CEM WAVELENGTH CAL

Change DAP 8 to B10
Pulses

EXP 8 F07-PART 4
IPS STABILITY TEST

ORB
10

IPS CREW FAMILIARIZATION

I
P
S
V
F
T
3

CHANGE VTR TAPE
MET S/S 0/13:58
MET S/S / / :
IMU MNVR and IMU ALIGN per CAP if reqd

RMS POWERDOWN
(PDRS OPS, RMS PWRON)
Note: Do not slow MPMs

T
H
A
M
I

MEAL 1/3

← MNVR IPS VFT 4 (0/13:22:12)

IPS VFT - SEQ 5 (ORB 10)

MCC

T
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M
E
H
P
C
O

MET S/R 0/14:34

MET S/R / :
GSTON

PET 10

A
H
2
0

I
P
S
V
F
T
4

I
P
S
V
F
T
5

I
P
S
V
F
T
4

G
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C
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1

I

I
P
S
V
F
T
6

Initial ATT: IPS VFT 4

Change DAP B to B10 Pulses

Change DAP B to B6

ORB 11

ROTATION IPS VFT 5 (On MS call)

MNVR IPS VFT 4 (On MS call)

MET S/S 0/15:29

MET S/S / :
CHANGE VTR TAPE
MNVR GAL CENT 1 (0/15:30:10)

EXP 13 F04 QUIET RUN

MNVR IPS VFT 6 (0/15:55:44)

STS

MS

PS

IPS DISTURBANCE TEST-010 1106
(IPS OPS, VFT PROC)
Performance #2

EXP 8 F07-PART 4
IPS STABILITY TEST

✓ Setup P/TV 13

BUMPER TEST-010 1107
(IPS OPS, VFT PROC)

P/TV 13 VTR RECORD
Record bumper point of contact and EXP 8 HL TV on split screen
BMC ITEM 10
Close door at loss of sun

VTR OFF

EXP 13 F04 QUIET RUN

EXP 13 F04 QUIET RUN

MCC

MET S/R 07/16:05

MET S/R
GSTON

PET

R H
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STS

MS

PS

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T
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000:00:00

00:10

00:20

00:30

00:40

00:50

01:00

01:10

01:20

01:30

Initial ATT: IPS VFT 6

Change DAP 8 to 810
Pulses

CHANGE VTR TAPE
EES STARTUP (ORB OPS)

ORB
12

I
P
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V
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6

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C
E
M
T

I

IPS DISTURBANCE TEST-DTO 1106
(IPS OPS, VET PROC)
Performance #3

EXP 8 F07-PART 4
IPS STABILITY TEST

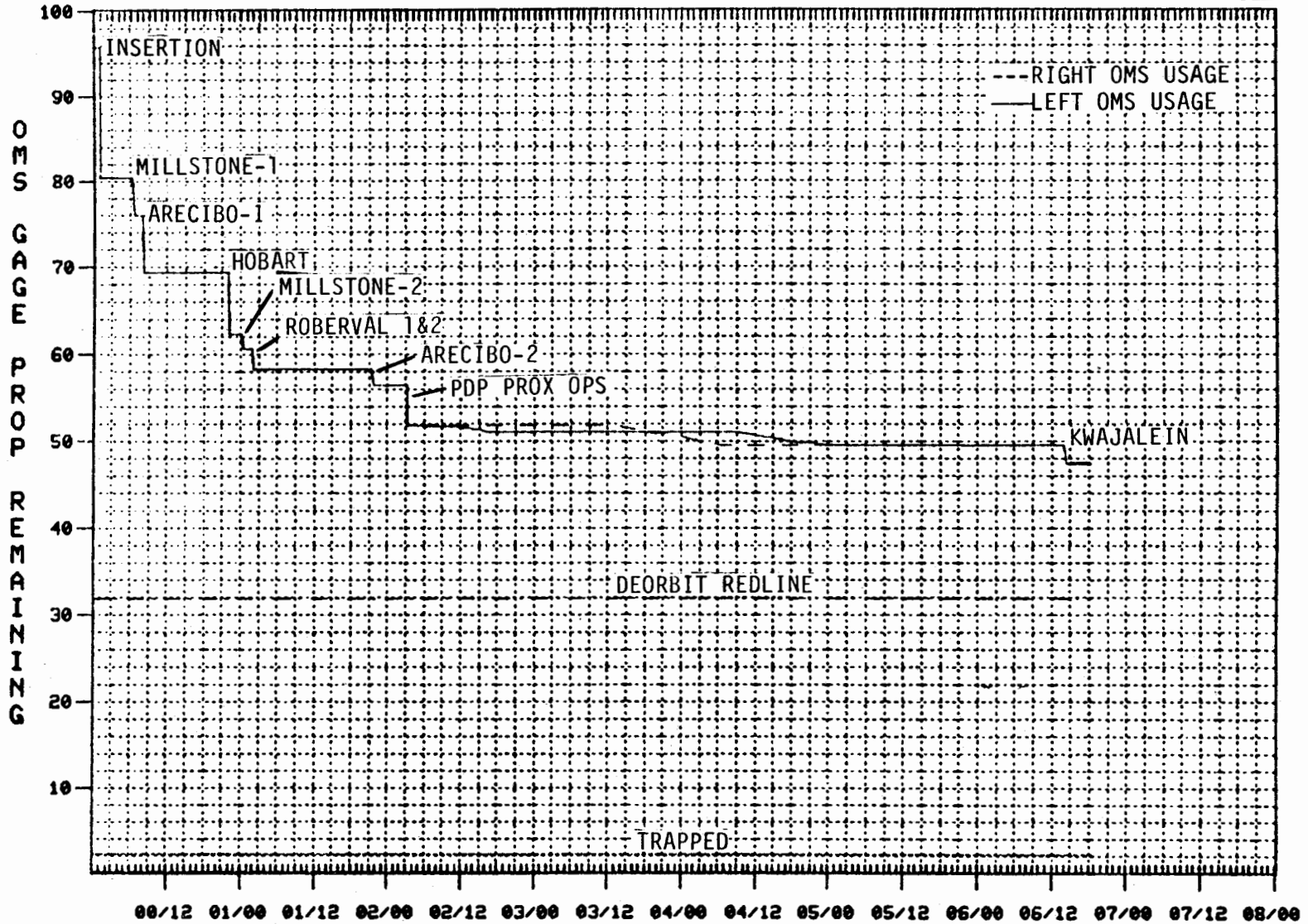
RETURN TO CAP AND PCAP

CONSUMABLES CURVES

**CONSUMABLES
CURVES**

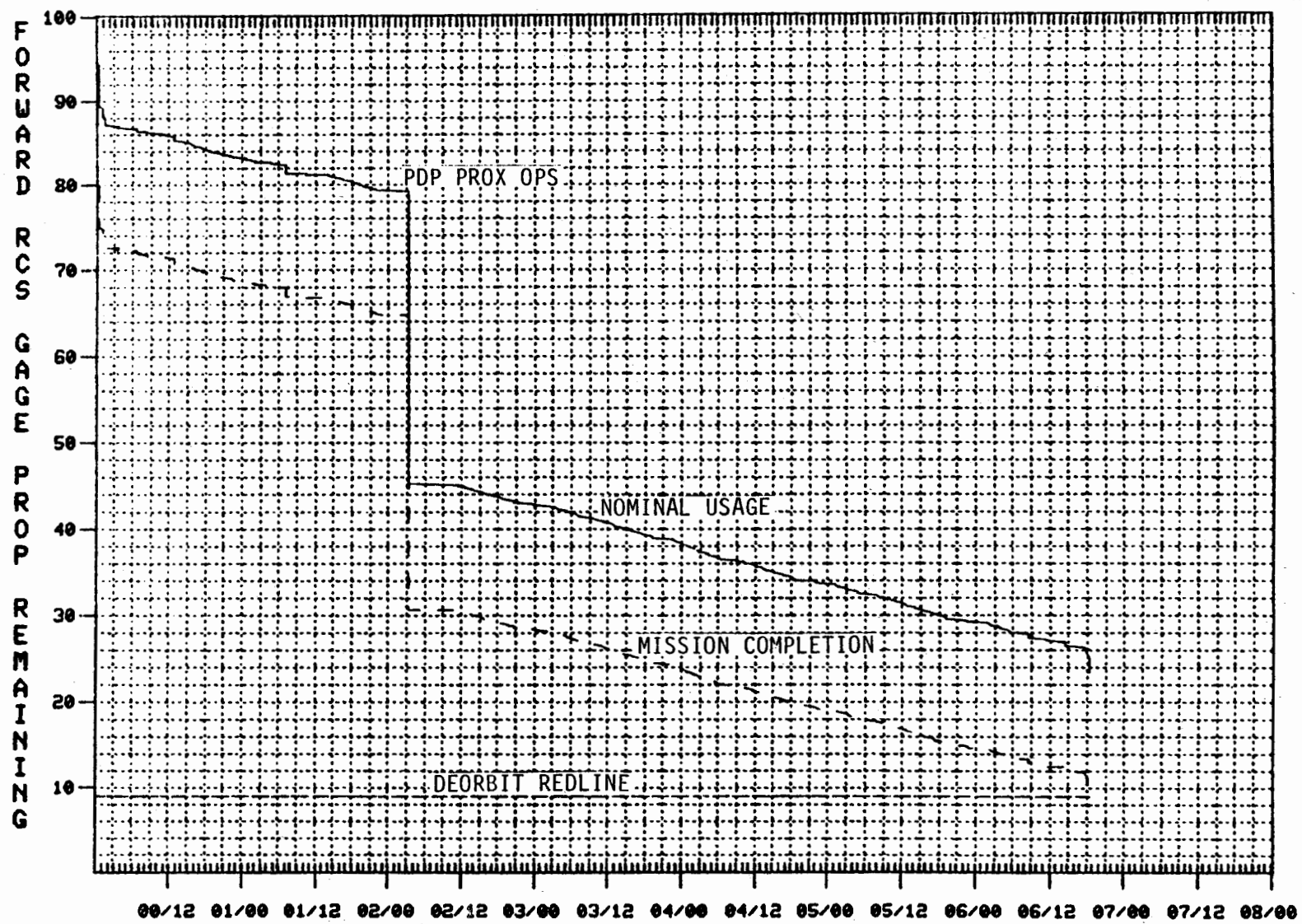
B. A. BIRD/MDTSCO
DATA SUBMITTAL J-752 ADD 5
JSC-20450 (CAP) 4/1/85
CHECKED BY *P.M. Kuller*

51-F OMS PROP REMAINING(% GAGE)



MISSION ELAPSED TIME IN DAYS/HOURS

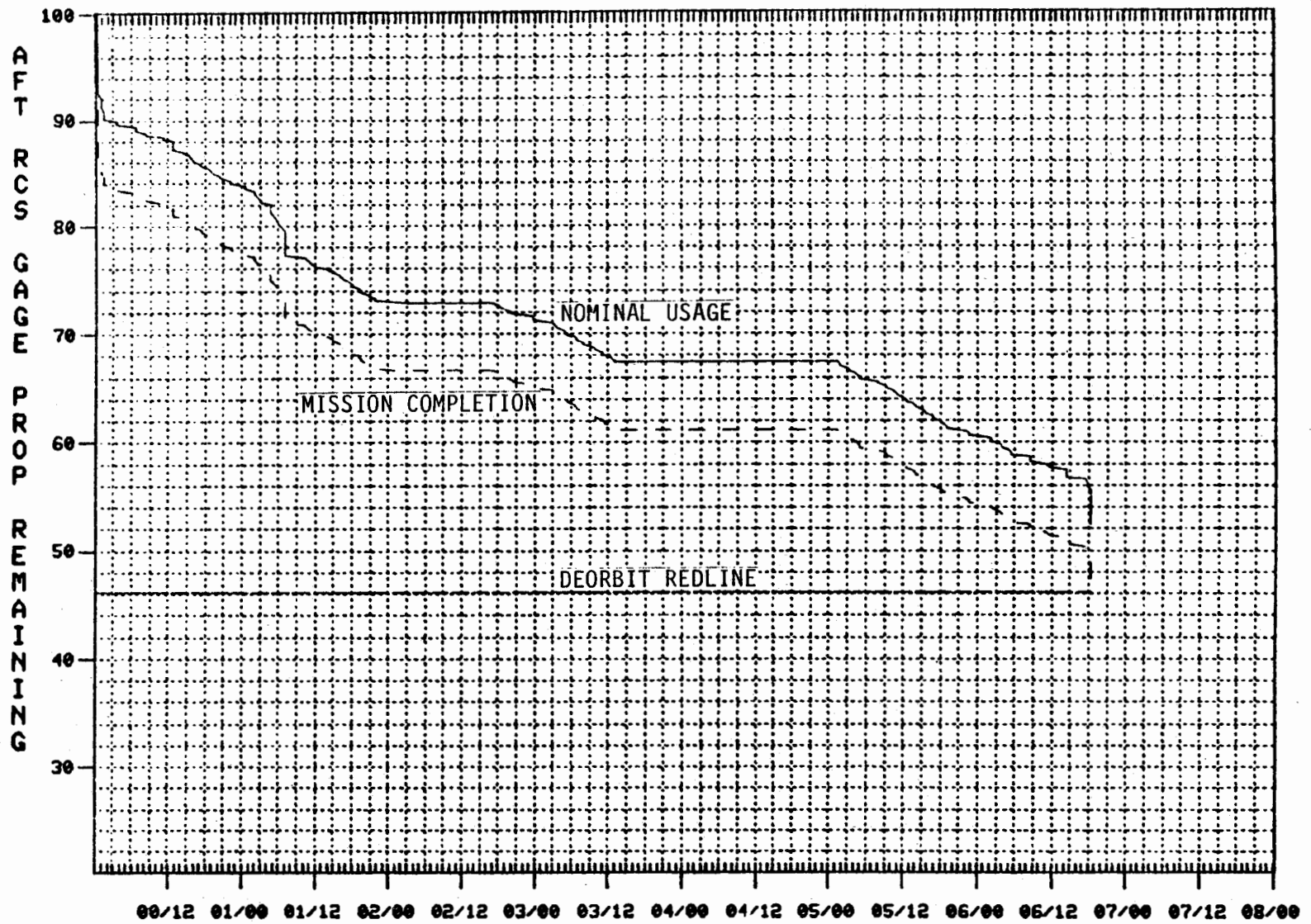
51-F FORWARD RCS PROP REMAINING(% GAGE)



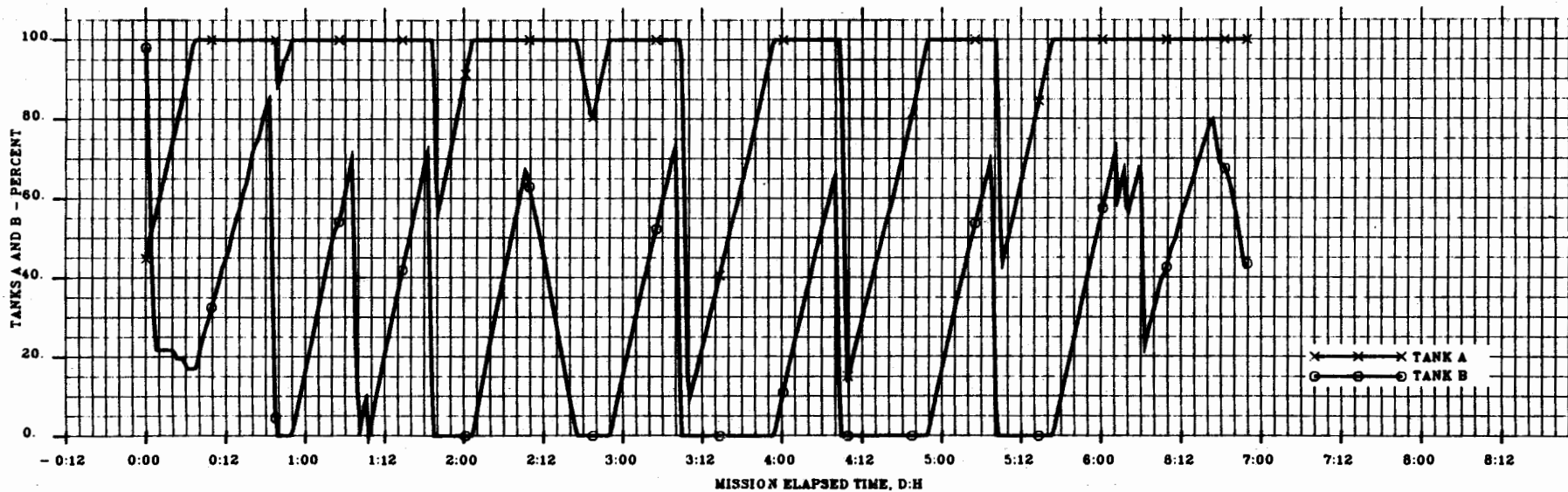
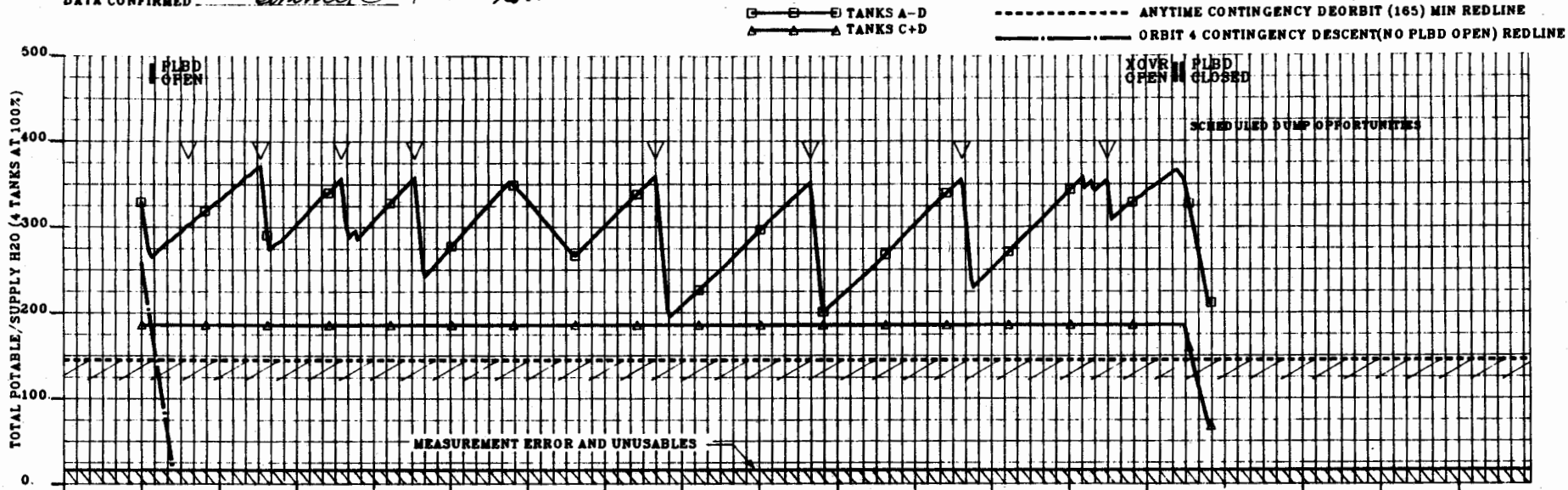
MISSION ELAPSED TIME IN DAYS/HOURS

B. A. BIRD/MDTSCO
DATA SUBMITTAL J-752 ADD 5
JSC-20450 (CAP) 4/1/85
CHECKED BY P.M. Kulesa

51-F AFT RCS PROP REMAINING(% GAGE)

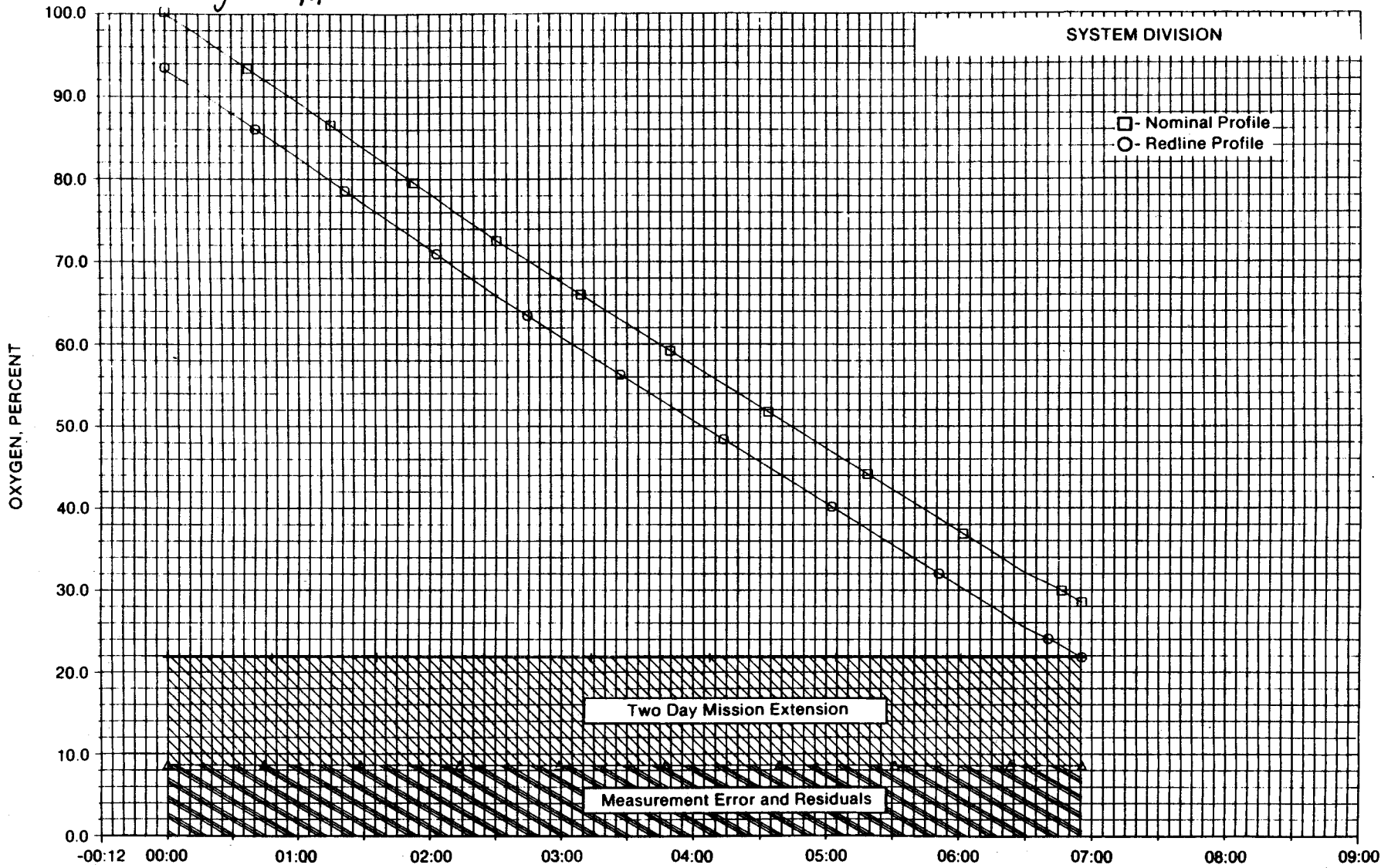


Emmit C. Fisher, Jr.



E. Fisher/DF6
Data Source
Date confirmed *g Clark 6/6/85*

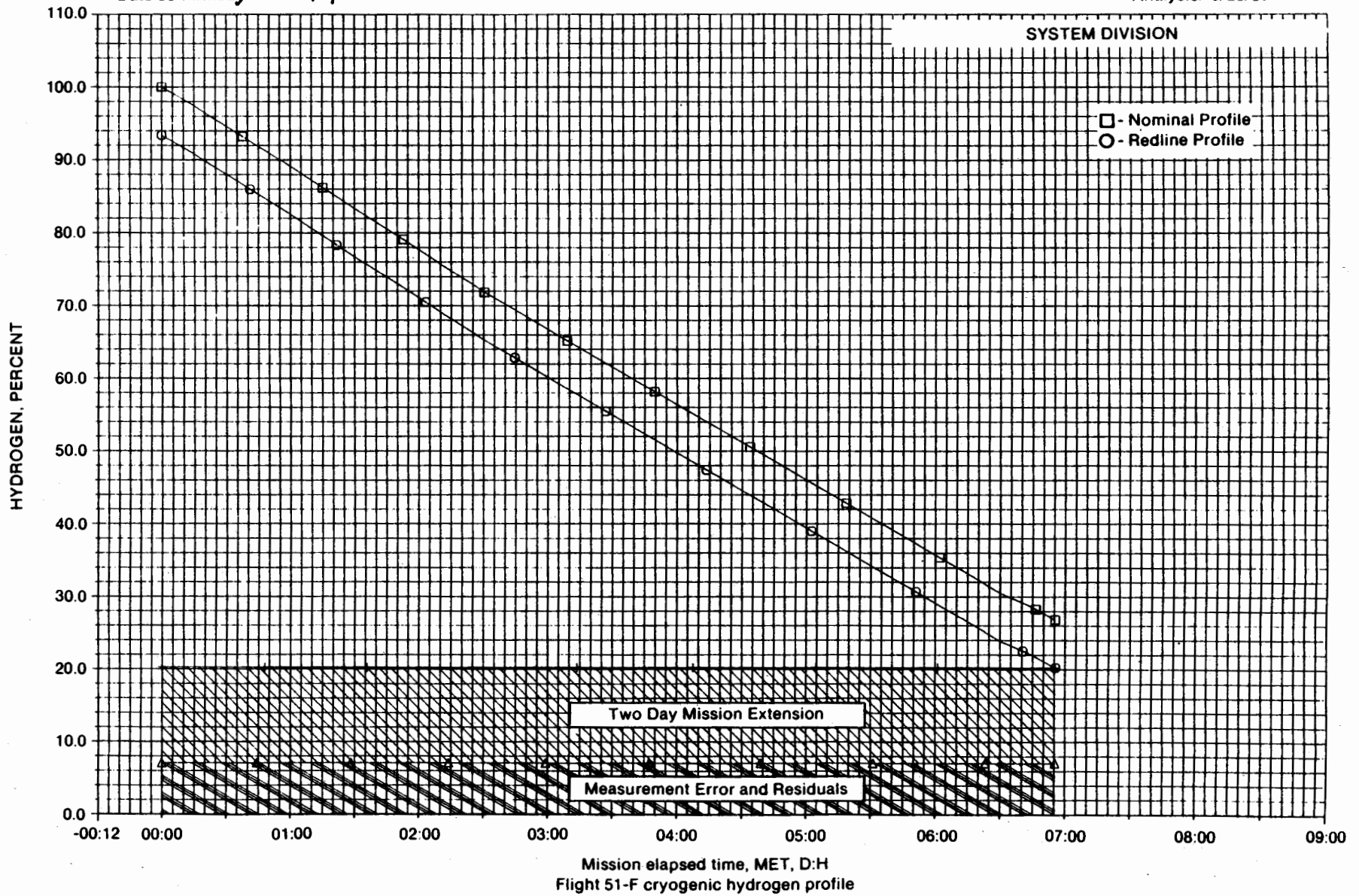
Trajectory: OFP Cycle 3
CAP: Basic 4/01/85
Analysis: 5/28/85



Mission elapsed time, MET, D:H
Flight 51-F cryogenic oxygen profile

E. Fisher/DF6
Data Source
Date confirmed *9. Clark 6/6/85*

Trajectory: OFP Cycle 3
CAP: Basic 4/01/85
Analysis: 5/28/85



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The STS 51-F DAP Book section will not be included in flight copies.

The Attitude Timeline will be included in flight copies.

STS 51-F DAP BOOK

DAP A CONFIGURATIONS..... 6-2
DAP B CONFIGURATIONS..... 6-3
51-F DAP BOOK..... 6-4

DAP BOOK

DAP A CONFIGURATIONS

	A1*	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A97	A98	A99
<u>TRANSLATION</u>														
PULSE ft/sec	0.10	0.10	0.10	0.10	0.10	0.10		0.01	0.01	0.05	0.01	0.05	0.10	0.05
<u>ROTATION</u>														
DSC RT														
NORM °/sec	0.200	0.400	0.200	0.200	0.200	0.200		0.933	0.129	0.200	0.500	0.200	0.065	0.065 (v)
VERN °/sec	0.200	0.400	0.200	0.008	0.200	0.200		0.933	0.129	0.200	0.200	0.200	0.065	0.065 (v)
PULSE														
NORM °/sec	0.10	0.10	0.30	0.10	0.10	0.10		0.04	0.10	0.10	0.04	0.25	0.10	0.10
VERN °/sec	0.010	0.010	0.010	0.010	0.050	0.010		0.010	0.010	0.010	0.01	0.010	0.010	0.010
COMP														
NORM °/sec	.00	.00	.00	.00	.00	.00		.00	.00	.00	.00	.00	.00	.00
VERN °/sec	.000	.000	.000	.000	.000	.000		.000	.000	.000	.000	.000	.000	.000
<u>DEADBAND</u>														
ATT														
NORM (deg)	5.00	1.00	5.00	1.00	5.00	5.00		5.00	2.00	2.00	4.00	2.00	2.00	5.00
VERN (deg)	1.000	1.000	1.000	0.070	1.000	1.000		5.000	2.000	1.000	2.00	0.500	0.500	.500
RATE														
NORM °/sec	0.20	0.20	0.20	0.20	0.20	0.20		0.20	0.20	0.20	0.20	0.20	0.20	0.20
VERN °/sec	.020	.020	.020	.010	.020	.020		.020	.020	.020	.020	.020	.020	.020
<u>JET OPT</u>														
P	1	1	3	1	1	3		3	3	1	3	1	1	3
Y	1	1	3	3	1	3		3	3	1	3	1	1	3
<u>CNTL ACCEL</u>														
	0	0	0	0	0	0		0	0	0	0	0	0	0

*I-loaded OPS-2 DAP Configuration

DAP B CONFIGURATIONS

	B1*	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B97	B98	B99
<u>TRANSLATION</u>															
PULSE ft/sec	0.02	0.02	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.02	0.02		0.01	0.05	0.01
<u>ROTATION</u>															
DSC RT NORM %/sec	0.500	0.200	0.200	0.200	0.200	0.067	0.200	0.933	0.129	0.500	0.500		0.200	0.065	0.065(v)
VERN %/sec	0.200	0.200	0.200	0.008	0.016	0.067	0.200	0.933	0.129	0.200	0.042(v)		0.200	0.065	0.065(v)
PULSE NORM %/sec	0.04	0.04	0.04	0.04	0.04	0.10	0.04	0.24	0.10	0.04	0.04		0.04	0.04	0.04
VERN %/sec	0.002	0.002	0.002	0.002	0.002	0.010	0.002	0.002	0.010	0.001(v)	0.002		0.002	0.002	0.002
COMP NORM %/sec	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00		.00	.00	.00
VERN %/sec	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000		.000	.000	.000
<u>DEADBAND</u>															
ATT NORM (deg)	3.00	3.00	3.00	0.30	3.00	2.00	2.00	20.00	20.00	3.00	3.00		2.00	1.00	5.00
VERN (deg)	1.000	1.000	1.000	0.100	0.033	2.000	1.000	20.000	20.000	2.000	2.000		0.50	0.500	0.500
RATE NORM %/sec	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.50	0.50	0.20	0.20		0.20	0.20	0.20
VERN %/sec	.020	.020	.020	.010	.020	.020	.020	.500	.500	.020	.020		.020	.020	.020
<u>JET OPT</u>															
P	1	3	1	1	3	3	1	3	3	3	3		1	1	3
Y	1	3	1	3	3	3	1	3	3	3	3		1	1	3
<u>CNTL ACCEL</u>															
	0	0	0	0	0	0	0	0	0	0	1		0	0	0

*I-loaded OPS-2 DAP Configuration

DAP BOOK



CAP/51-F/O/FIN

CAP/51-F/O/FIN

UNIV PTG	
TGT ID = 1	Orbiting Vehicle
= 2	Earth ctr
= 3	Earth tgt
	Input LAT (± 90)
	LON (± 180 , + = East)
	ALT (-3444 to 20,000 nm)
= 4	Sun ctr
= 5	Celestial tgt
	Input RA (0-359.99)
	DEC (± 90)
= 11-110	Nav Stars
BODY VECT = 1	+X*
= 2	-X*
= 3	-Z*
= 4	PTC (~2 below +X)*
= 5	Optional
	Input P (0-359.99)
	Y (270-359.99, 0-90)
* input OM \rightarrow	OM (0-359.99)
MON AXIS = 1	+X
2	-X

G20 DAP CONFIG			
CNTL ACCEL = 0	Orbiter alone	JET OPT = 1	Normal
= 1	PDP on RMS	= 2	Nose only
	over portside	= 3	Tail only

TOP

DAP

PURPOSE

- A1 - NOMINAL
IMU ALIGN
LOSS OF VERN
(NOSE & TAIL)
- A2 - PTC
- A3 - RCS HOT FIRE
- A4 - GG
- A5 - IMU ROTATION
- A6 - LOSS OF VERN
(TAIL ONLY)
- A7 - (Blank)
- A8 - RMS POP
- A9 - Z//B
- A10 - PROX OPS
- A11 - SPACELAB OPS
- A97 - ROLL MNVR
- A98 - AUTO PROX OPS
- A99 - VAR MAN PROX OPS

CAP/51-F/O/FIN

A1

TOP

DAPA1

A1

PURPOSE:

NOMINAL
IMU ALIGN
LOSS OF VERN
(NOSE & TAIL)

0.1 0

1 TRANSLATION
PULSE

0.2 0 0

2 ROTATION
DSC RT NORM

0.2 0 0

3 VERN

0.1 0

4 PULSE NORM

0.0 1 0

5 VERN

.0 0 0

6 COMP NORM

.0 0 0

7 VERN

DEADBAND

5.0 0

8 ATT NORM

1.0 0 0

9 VERN

0.2 0

10 RATE NORM

.0 2 0

11 VERN

1

12 JET OPT P

1

13 Y

0

14 CNTL ACCEL

CAP/51-F/O/FIN

CAP/51-F/O/FIN

A2

TOP

TOP

A1

DAP A2

PURPOSE:

PTC

A2

0.1 0

1 TRANSLATION PULSE

0.4 0 0

2 DSC RT NORM
3 VERN

0.4 0 0

4 PULSE NORM

0.1 0 0

5 VERN

0.0 1 0

6 COMP NORM

.0 0 0

7 VERN

DEADBAND

1.0 0

8 ATT NORM

1.0 0 0

9 VERN

0.2 0

10 RATE NORM

.0 2 0

11 VERN

1

12 JET OPT P

1

13 Y

0

14 CNTL ACCEL

CAP/51-F/0/FIN

CAP/51-F/0/FIN

A3

TOP

TOP

A2

DAP A3

A3

PURPOSE:

RCS HOT FIRE

0.1 0

1 TRANSLATION PULSE

0.2 0 0

2 DSC RT NORM

0.2 0 0

3 VERN

0.3 0 0

4 PULSE NORM

0.0 1 0

5 VERN

.0 0 0

6 COMP NORM

.0 0 0

7 VERN

DEADBAND

5.0 0

8 ATT NORM

1.0 0 0

9 VERN

0.2 0

10 RATE NORM

.0 2 0

11 VERN

3

12 JET OPT P

3

13 Y

0

14 CNTL ACCEL

CAP/51-F/0/FIN

CAP/51-F/0/FIN

A4

TOP

TOP

A3

DAP A4

PURPOSE:

GG

A4

0.1 0 1 TRANSLATION PULSE

0.2 0 0 2 DSC RT NORM
 0.0 0 8 3 VERN
 0.1 0 0 4 PULSE NORM
 0.0 1 0 5 VERN
 .0 0 0 6 COMP NORM
 .0 0 0 7 VERN

1.0 0 8 DEADBAND ATT NORM
 0.0 7 0 9 VERN

0.2 0 10 RATE NORM
 .0 1 0 11 VERN

1 12 JET OPT P
 3 13 Y

0 14 CNTL ACCEL

CAP/51-F/O/FIN

CAP/51-F/O/FIN

A5

TOP

TOP

A4

DAP A5

PURPOSE:

IMU ROTATION

A5

0.1 0 1 TRANSLATION PULSE

0.2 0 0 2 DSC RT NORM
 0.2 0 0 3 VERN
 0.1 0 0 4 PULSE NORM
 0.0 5 0 5 VERN
 .0 0 0 6 COMP NORM
 .0 0 0 7 VERN

5.0 0 8 DEADBAND ATT NORM
 1.0 0 0 9 VERN

0.2 0 10 RATE NORM
 .0 2 0 11 VERN

1 12 JET OPT P
 1 13 Y

0 14 CNTL ACCEL

CAP/51-F/O/FIN

CAP/51-F/O/FIN

A6

TOP

TOP

A5

DAP A6

PURPOSE:

LOSS OF VERN
(TAIL ONLY)

0.1 0

1 TRANSLATION
PULSE

0.2 0 0

2 ROTATION
DSC RT NORM

0.2 0 0

3 VERN

0.1 0 0

4 PULSE NORM

0.0 1 0

5 VERN

.0 0 0

6 COMP NORM

.0 0 0

7 VERN

DEADBAND

5.0 0

8 ATT NORM

1.0 0 0

9 VERN

0.2 0

10 RATE NORM

.0 2 0

11 VERN

3

12 JET OPT P

3

13 Y

0

14 CNTL ACCEL

CAP/51-F/O/FIN

CAP/51-F/O/FIN

A7

TOP

TOP

A6

DAP A7

PURPOSE: (Blank)

A7

1 TRANSLATION
PULSE

ROTATION

2 DSC RT NORM

3 VERN

4 PULSE NORM

5 VERN

6 COMP NORM

7 VERN

DEADBAND

8 ATT NORM

9 VERN

10 RATE NORM

11 VERN

12 JET OPT P

13 Y

14 CNTL ACCEL

CAP/51-F/O/FIN

CAP/51-F/O/FIN

A8

TOP

TOP

A7

DAP A8

PURPOSE:

RMS PDP

A8

0.0 1 1 TRANSLATION PULSE

0.9 3 3 2 DSC RT NORM
 0.9 3 3 3 VERN
 0.0 4 4 PULSE NORM
 0.0 1 0 5 VERN
 .0 0 0 6 COMP NORM
 .0 0 0 7 VERN

5.0 0 8 DEADBAND ATT NORM
 5.0 0 9 VERN

0.2 0 10 RATE NORM
 .0 2 0 11 VERN

3 12 JET OPT P
 3 13 Y

0 14 CNTL ACCEL

CAP/51-F/0/FIN

CAP/51-F/0/FIN

A9

TOP

TOP

A8

DAP A9

PURPOSE:

Z//B

A9

0.0 1 1 TRANSLATION PULSE

0.1 2 9 2 ROTATION DSC RT NORM
 0.1 2 9 3 VERN
 0.1 0 4 PULSE NORM
 0.0 1 0 5 VERN
 .0 0 6 COMP NORM
 .0 0 0 7 VERN

2.0 0 8 DEADBAND ATT NORM
 2.0 0 9 VERN

0.2 0 10 RATE NORM
 .0 2 0 11 VERN

3 12 JET OPT P
 3 13 Y

0 14 CNTL ACCEL

CAP/51-F/0/FIN

CAP/51-F/0/FIN

A10

TOP

TOP

A9

DAP A10

PURPOSE:

PROX OPS

A10

0.0 5 1 TRANSLATION PULSE

0.2 0 0 2 ROTATION DSC RT NORM
 0.2 0 0 3 VERN
 0.1 0 0 4 PULSE NORM
 0.0 1 0 5 VERN
 .0 0 0 6 COMP NORM
 .0 0 0 7 VERN

2.0 0 8 DEADBAND ATT NORM
 1.0 0 0 9 VERN

0.2 0 10 RATE NORM
 .0 2 0 11 VERN

1 12 JET OPT P
 1 13 Y

0 14 CNTL ACCEL

CAP/51-F/O/FIN

CAP/51-F/O/FIN

A11

TOP

TOP

A10

DAP A11.

PURPOSE: SPACELAB OPS

0.0 1 1 TRANSLATION PULSE

0.5 0 0 2 ROTATION DSC RT NORM
 0.2 0 0 3 VERN
 0.0 4 4 PULSE NORM
 0.0 1 0 5 VERN
 .0 0 0 6 COMP NORM
 .0 0 0 7 VERN

4.0 0 8 DEADBAND ATT NORM
 2.0 0 0 9 VERN

0.2 0 10 RATE NORM
 .0 2 0 11 VERN

3 12 JET OPT P
 3 13 Y

0 14 CNTL ACCEL

CAP/51-F/O/FIN

CAP/51-F/O/FIN A

A97

TOP

TOP

A11

DAP A97

PURPOSE:

ROLL MNVR

A97

0.0	5	1	TRANSLATION	
			PULSE	
0.2	0	2	ROTATION	
			DSC RT	NORM
0.2	0	3		VERN
0.2	5	4	PULSE	NORM
0.0	1	5		VERN
.0	0	6	COMP	NORM
.0	0	7		VERN
2.0	0	8	DEADBAND	
			ATT	NORM
0.5	0	9		VERN
0.2	0	10	RATE	NORM
.0	2	11		VERN
1		12	JET OPT	P
1		13		Y
0		14	CNTL ACCEL	

CAP/51-F/O/FIN

CAP/51-F/O/FIN

A98

TOP

TOP

A97

DAP A98

PURPOSE:

AUTO PROX OPS

A98

0.1	0	1	TRANSLATION	
			PULSE	
0.0	6	2	ROTATION	
			DSC RT	NORM
0.0	6	3		VERN
0.1	0	4	PULSE	NORM
0.0	1	5		VERN
.0	0	6	COMP	NORM
.0	0	7		VERN
2.0	0	8	DEADBAND	
			ATT	NORM
0.5	0	9		VERN
0.2	0	10	RATE	NORM
.0	2	11		VERN
1		12	JET OPT	P
1		13		Y
0		14	CNTL ACCEL	

CAP/51-F/O/FIN

CAP/51-F/O/FIN

A99

TOP

TOP

A98

DAP A99

PURPOSE:

VAR MAN PROX OPS

A99

0.0 5 1 TRANSLATION PULSE

0.0 6 5(v) 2 DSC RT NORM
 0.0 6 5(v) 3 VERN
 0.1 0 4 PULSE NORM
 0.0 1 0 5 VERN
 .0 0 0 6 COMP NORM
 .0 0 0 7 VERN

5.0 0 8 DEADBAND ATT NORM
 0.5 0 0 9 VERN

0.2 0 10 RATE NORM
 .0 2 0 11 VERN

3 12 JET OPT P
 3 13 Y

0 14 CNTL ACCEL

CAP/51-F/O/FIN

CAP/51-F/O/FIN

TOP

TOP

A99

DAP

PURPOSE

- B1 - NOMINAL
PRCS IMU ALIGN
OMS & RCS BURNS
- B2 - LOSS OF VERN
(TAIL ONLY)
- B3 - LOSS OF VERN
(NOSE & TAIL)
GG MNVR
- B4 - PAM DEPLOY
FRISBEE DEPLOY
- B5 - COAS CAL
- B6 - IPS VFT
- B7 - PROX OPS
- B8 - RMS PDP
- B9 - Z//B
- B10 - VAR VFT
- B11 - IRT OBS
- B12 - (Blank)
- B97 - ROLL MNVR
- B98 - AUTO PROX OPS
- B99 - VAR MAN PROX OPS

CAP/51-F/O/FIN

CAP/51-F/O/FIN

B1

TOP

TOP

DAP B1

PURPOSE:

NOMINAL
PRCS IMU ALIGN
OMS & RCS BURNS

B1

TRANSLATION				
PULSE	15		<u>0.0</u>	<u>2</u>
ROTATION				
DSC RT	NORM	16	<u>0.5</u>	<u>0</u> <u>0</u>
	VERN	17	<u>0.2</u>	<u>0</u> <u>0</u>
PULSE	NORM	18	<u>0.0</u>	<u>4</u>
	VERN	19	<u>0.0</u>	<u>0</u> <u>2</u>
COMP	NORM	20	<u>.0</u>	<u>0</u> <u>0</u>
	VERN	21	<u>.0</u>	<u>0</u> <u>0</u>
DEADBAND				
ATT	NORM	22	<u>3.0</u>	<u>0</u> <u>0</u>
	VERN	23	<u>1.0</u>	<u>0</u> <u>0</u>
RATE				
	NORM	24	<u>0.2</u>	<u>0</u>
	VERN	25	<u>.0</u>	<u>2</u> <u>0</u>
JET OPT				
	P	26		<u>1</u>
	Y	27		<u>1</u>
CNTL ACCEL				
		28		<u>0</u>

CAP/51-F/O/FIN

CAP/51-F/O/FIN

B2

TOP

TOP

B1

DAP B2

PURPOSE:

LOSS OF VERN
(TAIL ONLY)

B2

TRANSLATION				
PULSE	15		<u>0.0</u>	<u>2</u>
ROTATION				
DSC RT	NORM	16	<u>0.2</u>	<u>0</u> <u>0</u>
	VERN	17	<u>0.2</u>	<u>0</u> <u>0</u>
PULSE	NORM	18	<u>0.0</u>	<u>4</u>
	VERN	19	<u>0.0</u>	<u>0</u> <u>2</u>
COMP	NORM	20	<u>.0</u>	<u>0</u> <u>0</u>
	VERN	21	<u>.0</u>	<u>0</u> <u>0</u>
DEADBAND				
ATT	NORM	22	<u>3.0</u>	<u>0</u> <u>0</u>
	VERN	23	<u>1.0</u>	<u>0</u> <u>0</u>
RATE				
	NORM	24	<u>0.2</u>	<u>0</u>
	VERN	25	<u>.0</u>	<u>2</u> <u>0</u>
JET OPT				
	P	26		<u>3</u>
	Y	27		<u>3</u>
CNTL ACCEL				
		28		<u>0</u>

CAP/51-F/O/FIN

CAP/51-F/O/FIN

B3

TOP

B2

DAP B3

PURPOSE:

LOSS OF VERN
(NOSE & TAIL)
GG MNVR

CAP/51-F/O/FIN

TOP

B3

DAP B4

PURPOSE:

PAM DEPLOY
FRISBEE DEPLOY

CAP/51-F/O/FIN

TOP

TOP

B3

TRANSLATION
PULSE

15 0.0 2

ROTATION

DSC RT	NORM	16	0.2	0	0
	VERN	17	0.2	0	0
PULSE	NORM	18	0.0	4	
	VERN	19	0.0	0	2
COMP	NORM	20	.0	0	0
	VERN	21	.0	0	0

DEADBAND

ATT	NORM	22	3.0	0	
	VERN	23	1.0	0	0

RATE	NORM	24	0.2	0	
	VERN	25	.0	2	0

JET OPT	P	26		1	
	Y	27		1	

CNTL ACCEL 28 0

CAP/51-F/O/FIN

B4

TOP

B4

TRANSLATION
PULSE

15 0.0 2

ROTATION

DSC RT	NORM	16	0.2	0	0
	VERN	17	0.0	0	8
PULSE	NORM	18	0.0	4	
	VERN	19	0.0	0	2
COMP	NORM	20	.0	0	0
	VERN	21	.0	0	0

DEADBAND

ATT	NORM	22	0.3	0	
	VERN	23	0.1	0	0

RATE	NORM	24	0.2	0	
	VERN	25	.0	1	0

JET OPT	P	26		1	
	Y	27		3	

CNTL ACCEL 28 0

CAP/51-F/O/FIN

B5

TOP

B4

DAP B5

PURPOSE:
COAS CAL

B5

TRANSLATION			
PULSE		15	0.0 2
ROTATION			
DSC RT	NORM	16	0.2 0 0
	VERN	17	0.0 1 6
PULSE	NORM	18	0.0 4
	VERN	19	0.0 0 2
COMP	NORM	20	.0 0 0
	VERN	21	.0 0 0
DEADBAND			
ATT	NORM	22	3.0 0
	VERN	23	0.0 3 3
RATE			
	NORM	24	0.2 0
	VERN	25	.0 2 0
JET OPT			
	P	26	3
	Y	27	3
CNTL ACCEL		28	0

CAP/51-F/O/FIN

CAP/51-F/O/FIN

B6

TOP

TOP

B5

DAP B6

PURPOSE:
IPS VFT

B6

TRANSLATION			
PULSE		15	0.0 1
ROTATION			
DSC RT	NORM	16	0.0 6 7
	VERN	17	0.0 6 7
PULSE	NORM	18	0.1 0
	VERN	19	0.0 1 0
COMP	NORM	20	.0 0 0
	VERN	21	.0 0 0
DEADBAND			
ATT	NORM	22	2.0 0
	VERN	23	2.0 0 0
RATE			
	NORM	24	0.2 0
	VERN	25	.0 2 0
JET OPT			
	P	26	3
	Y	27	3
CNTL ACCEL		28	0

CAP/51-F/O/FIN

CAP/51-F/O/FIN

B7

TOP

B6

DAP B7

PURPOSE:
PROX OPS

CAP/51-F/O/FIN

TOP

B7

DAP B8

PURPOSE:
RMS PDP

CAP/51-F/O/FIN

TOP

TOP

B7

TRANSLATION
PULSE 15 0.0 1

ROTATION
DSC RT NORM 16 0.2 0 0
VERN 17 0.2 0 0
PULSE NORM 18 0.0 0 4
VERN 19 0.0 0 2
COMP NORM 20 0.0 0 0
VERN 21 .0 0 0

DEADBAND
ATT NORM 22 2.0 0
VERN 23 1.0 0 0

RATE NORM 24 0.2 0
VERN 25 .0 2 0

JET OPT P 26 1
Y 27 1

CNTL ACCEL 28 0

CAP/51-F/O/FIN

B8

TOP

B8

TRANSLATION
PULSE 15 0.0 1

ROTATION
DSC RT NORM 16 0.9 3 3
VERN 17 0.9 3 3
PULSE NORM 18 0.2 4 4
VERN 19 0.0 0 2
COMP NORM 20 .0 0 0
VERN 21 .0 0 0

DEADBAND
ATT NORM 22 2.0 0 0
VERN 23 2.0 0 0

RATE NORM 24 0.5 0
VERN 25 .5 0 0

JET OPT P 26 3
Y 27 3

CNTL ACCEL 28 0

CAP/51-F/O/FIN

B9

TOP

B8

DAP B9

PURPOSE:

Z//B

B9

TRANSLATION				
PULSE	15	0.0	1	

ROTATION				
DSC RT	NORM	16	0.1	2 9
	VERN	17	0.1	2 9
PULSE	NORM	18	0.1	0
	VERN	19	0.0	1 0
COMP	NORM	20	.0	0 0
	VERN	21	.0	0 0

DEADBAND				
ATT	NORM	22	2	0.0 0
	VERN	23	2	0.0 0 0

RATE	NORM	24	0.5	0
	VERN	25	.5	0 0

JET OPT	P	26		3
	Y	27		3

CNTL ACCEL		28		0
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CAP/51-F/O/FIN

CAP/51-F/O/FIN

B10

TOP

TOP

B9

DAP B10

PURPOSE:

VAR VFT

B10

TRANSLATION				
PULSE	15	0.0	2	

ROTATION				
DSC RT	NORM	16	0.5	0 0
	VERN	17	0.2	0 0
PULSE	NORM	18	0.0	4
	VERN	19	0.0	0 1 (v)
COMP	NORM	20	.0	0 0
	VERN	21	.0	0 0

DEADBAND				
ATT	NORM	22	3.0	0
	VERN	23	2.0	0 0

RATE	NORM	24	0.2	0
	VERN	25	.0	2 0

JET OPT	P	26		3
	Y	27		3

CNTL ACCEL		28		0
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CAP/51-F/O/FIN

CAP/51-F/O/FIN

B11

TOP

TOP

B10

DAP B11

PURPOSE:

IRT OBS

B11

TRANSLATION
PULSE

15 0.0 2

ROTATION

DSC RT	NORM	16	0.5	0	0
	VERN	17	0.0	4	2(v)
PULSE	NORM	18	0.0	4	
	VERN	19	0.0	0	2
COMP	NORM	20		0	0
	VERN	21	.0	0	0

DEADBAND

ATT	NORM	22	3.0	0	
	VERN	23	2.0	0	0

RATE	NORM	24	0.2	0	
	VERN	25	.0	2	0

JET OPT	P	26		3	
	Y	27		3	

CNTL ACCEL 28 1

CAP/51-F/0/FIN

CAP/51-F/0/FIN

B12

TOP

TOP

B11

DAP B12

PURPOSE: (Blank)

B12

TRANSLATION
PULSE

15

ROTATION

DSC RT	NORM	16	.	.	.
	VERN	17	.	.	.
PULSE	NORM	18	.	.	.
	VERN	19	.	.	.
COMP	NORM	20	.	.	.
	VERN	21	.	.	.

DEADBAND

ATT	NORM	22	.	.	.
	VERN	23	.	.	.

RATE	NORM	24	.	.	.
	VERN	25	.	.	.

JET OPT	P	26	.	.	.
	Y	27	.	.	.

CNTL ACCEL 28 .

CAP/51-F/0/FIN

CAP/51-F/0/FIN

B97

TOP

TOP

B12

DAP B97

PURPOSE:

ROLL MNVR

B97

TRANSLATION				
PULSE	15		0.0	1

ROTATION				
DSC RT	NORM	16	0.2	0 0
	VERN	17	0.2	0 0
PULSE	NORM	18	0.0	4
	VERN	19	0.0	2 2
COMP	NORM	20	.0	0 0
	VERN	21	.0	0 0

DEADBAND				
ATT	NORM	22	2.0	0
	VERN	23	0.5	0 0

RATE	NORM	24	0.2	0
	VERN	25	0.2	0

JET OPT	P	26		1
	Y	27		1

CNTL ACCEL		28		0
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CAP/51-F/O/FIN

CAP/51-F/O/FIN

B98

TOP

TOP

B97

DAP B98

PURPOSE:

AUTO PROX OPS

B98

TRANSLATION				
PULSE	15		0.0	5

ROTATION				
DSC RT	NORM	16	0.0	6 5
	VERN	17	0.0	6 5
PULSE	NORM	18	0.0	4
	VERN	19	0.0	2 2
COMP	NORM	20	.0	0 0
	VERN	21	.0	0 0

DEADBAND				
ATT	NORM	22	1.0	0
	VERN	23	0.5	0 0

RATE	NORM	24	0.2	0
	VERN	25	0.2	0

JET OPT	P	26		1
	Y	27		1

CNTL ACCEL		28		0
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CAP/51-F/O/FIN

CAP/51-F/O/FIN

B99

TOP

TOP

B98

DAP B99

PURPOSE:

VAR MAN PROX OPS

B99

TRANSLATION
PULSE

15 0.0 1

ROTATION

DSC RT NORM 16 0.0 6 5(v)

VERN 17 0.0 6 5(v)

PULSE NORM 18 0.0 4

VERN 19 0.0 2

COMP NORM 20 0.0 0

VERN 21 0.0 0

DEADBAND

ATT NORM 22 5.0 0

VERN 23 0.5 0 0

RATE NORM 24 0.2 0

VERN 25 0.2 0

JET OPT P 26 3

Y 27 3

CNTL ACCEL 28 0

CAP/51-F/0/FIN

CAP/51-F/0/FIN

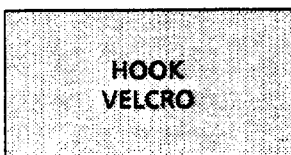
TOP

B99

CAP/51-F/0/FIN

TOP

TOP
BACK COVER 'DAP BOOK'



CAP/51-F/0/FIN



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ATTITUDE TIMELINE

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 0/00:37:55	MNVR R+ 54.00 P+ 63.00 Y+ 33.00	* AUTO *	DSC 0.500 DB AT 3.50 DB RT 0.30	SUN θ 87 φ 28		OMS 2 (INFO ONLY)
2 0/01:10:00 20:28	MNVR R+304.00 P+ 27.00 Y+350.00	A1 AUTO NORM	DSC 0.200 DB AT 5.00 DB RT 0.20	SUN θ 129 φ 159		PLBD OPENING (TDRS)
3 0/03:23:00	CHANGE DAP B TO B5 FOR COAS CAL	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
4 0/03:23:00	PERFORM IMU/COAS AT SUNSET IN CURRENT ATTITUDE	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02		-ZST:30 -YST:27	IMU/COAS PAIR A1
5 0/03:48:00	SELECT DAP A1	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
6 0/06:05:00	CHANGE DAP B TO B1 AND SELECT DAP B	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
7 0/06:05:00 10:29	MNVR R+240.00 P+ 33.00 Y+345.00 PER MCC CALL	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN θ 135 φ 220		MILLSTONE 1
8 0/06:28:28	SELECT DAP A1	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
9 0/06:28:28 38:48	MNVR R+270.00 P+165.00 Y+337.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN θ 96 φ 153		ACTIVATION
10 0/07:48:00	SELECT DAP B1	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
11 0/07:48:00 57:54	MNVR R+240.00 P+ 50.00 Y+ 14.00 PER MCC CALL	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN θ 107 φ 208		ARECIBO 1
12 0/08:06:43	SELECT DAP A1	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			

ATTITUDE
TIMELINE

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 0/08:06:43 19:41	MNVR R+ 82.00 P+ 57.00 Y+ 32.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 88 φ 3		IPS VFT 1
2 0/11:03:11 04:59	MNVR R+ 67.00 P+ 56.00 Y+ 47.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 74 φ 18		IPS VFT 2
3 0/12:30:49 34:59	MNVR R+ 63.00 P+100.00 Y+ 19.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 90 φ 2		IPS VFT 3
4 0/14:22:12 29:59	MNVR R+ 70.00 P+191.00 Y+ 5.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 60 φ 0		IPS VFT 4
5 0/14:58:00	CHANGE DAP B TO B6 AND SELECT DAP B	B6 AUTO VERN	DSC 0.067 DB AT 2.00 DB RT 0.02			
6 0/14:58:00	ROT BV=2(180.00, 0.00)	B6 AUTO VERN	DSC 0.067 DB AT 2.00 DB RT 0.02		ROT R+ 70 START P+191 ATT Y+ 5	IPS VFT 5 ROTR
7 0/15:12:00	SELECT DAP A1	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
8 0/15:12:00 16:41	MNVR R+ 70.00 P+191.00 Y+ 5.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 60 φ 0		IPS VFT 4
9 0/15:30:10 43:13	MNVR R+234.00 P+173.00 Y+ 57.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 27 φ 152		GAL CENT 4
10 0/15:55:44 16:03:33	MNVR R+105.00 P+311.00 Y+ 22.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 69 φ 19		IPS VFT 6
11 0/17:01:12	CHANGE DAP A TO A11 AND SELECT DAP A	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02			
12 0/17:01:12 11:32	MNVR R+ 53.00 P+198.00 Y+331.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 91 φ 23		CRAB/PERS

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 0/21:43:46	CHANGE DAP B TO B1 AND SELECT DAP B	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
2 0/21:43:46 57:02	MNVR R+226.00 P+ 80.00 Y+ 50.00 PER MCC CALL	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 68 φ 206		HOBART
3 0/22:08:00	SELECT DAP A11	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02			
4 0/22:08:00 16:19	TRK TGT=2 BV=2(180.00, 0.00) OM=270.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH 0 180 φ 0	LVLH R+ 90 P+ 90 Y+ 0	-XLV +YVV
5 1/00:02:00	SELECT DAP B1	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
6 1/00:02:00 15:11	MNVR R+232.00 P+ 15.00 Y+316.00 PER MCC CALL	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 156 φ 259		MILLSTONE 2
7 1/00:32:34 42:38	TRK TGT=2 BV=2(180.00, 0.00) OM=270.00	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH 0 180 φ 0	LVLH R+ 90 P+ 90 Y+ 0	-XLV +YVV
8 1/01:39:00 51:58	MNVR R+241.00 P+ 31.00 Y+336.00 PER MCC CALL	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 144 φ 222		ROBERVAL
9 1/02:00:00	GO TO PDRS BOOK	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
10 1/02:05:03	SELECT DAP A11	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02			
11 1/02:05:03 07:01	TRK TGT=2 BV=5(270.00, 0.00) OM= 0.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH 0 90 φ 180	LVLH R+ 0 P+ 0 Y+ 0	+ZLV +XVV ATTACHED
12 1/03:15:12	SELECT NORM JETS	A11 AUTO NORM	DSC 0.500 DB AT 4.00 DB RT 0.20			

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 1/03:19:12 19:12 SEL VERN5	TRK TGT=2 BV=5(0.00,270.00) OM=270.00	A11 AUTO NORM	DSC 0.500 DB AT 4.00 DB RT 0.20	EARTH 0 90 270	LVLH R+ 0 P+270 Y+ 90	-YLV -ZVV
2 1/04:34:00	CHANGE DAP TO A0, B0 AND SELECT DAP A NORM JETS	A0 AUTO NORM	DSC 0.933 DB AT 5.00 DB RT 0.20			
3 1/04:34:00 SEL VERN5	ROT BV=5(357.05,359.95)	A0 AUTO NORM	DSC 0.933 DB AT 5.00 DB RT 0.20		ROT R+ 0 START P+134 ATT Y+335	PDP RMS OPS ROTR
4 1/05:42:50	CHANGE DAP A TO A11 AND SELECT DAP A NORM JETS	A11 AUTO NORM	DSC 0.500 DB AT 4.00 DB RT 0.20			
5 1/05:42:50 47:22 SEL VERN5	MNVR R+ 77.00 P+ 45.00 Y+301.00	A11 AUTO NORM	DSC 0.500 DB AT 4.00 DB RT 0.20	SUN 0 180 185		-X/SUN
6 1/07:05:00	SELECT NORM JETS	A11 AUTO NORM	DSC 0.500 DB AT 4.00 DB RT 0.20			
7 1/07:05:00 10:02 SEL VERN5	MNVR R+100.00 P+107.00 Y+ 62.00	A11 AUTO NORM	DSC 0.500 DB AT 4.00 DB RT 0.20	SUN 0 50 233		-Z//B ATT
8 1/07:19:00	CHANGE DAP TO A9, B9 AND SELECT DAP A	A9 AUTO VERN	DSC 0.129 DB AT 2.00 DB RT 0.02			
9 1/07:19:00	ROT BV=5(90.00,295.00)	A9 AUTO VERN	DSC 0.129 DB AT 2.00 DB RT 0.02		ROT R+100 START P+107 ATT Y+ 62	-Z//B ROTR
10 1/10:10:22	CHANGE DAP A TO A11 AND SELECT DAP A NORM JETS	A11 AUTO NORM	DSC 0.500 DB AT 4.00 DB RT 0.20			
11 1/10:10:22 23:59 SEL VERN5	TRK TGT=2 BV=5(270.00, 0.00) OM=100.00	A11 AUTO NORM	DSC 0.500 DB AT 4.00 DB RT 0.20	EARTH 0 90 100	LVLH R+100 P+100 Y+ 0	+ZLV -XVV
12 1/12:00:00	SELECT DAP A11 VERN JETS	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02			

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 1/12:00:00 10:00	TRK TGT=2 BV=2(180.00, 0.00) OM=270.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH 0 180 0 0	LVLH R+ 90 P+ 90 Y+ 0	-XLV +YVV
2 1/13:59:59 14:12:51	MNVR R+293.00 P+310.00 Y+ 9.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 80 0 189		GAL CENT 1
3 1/14:47:29 59:53	MNVR R+ 69.00 P+166.00 Y+ 11.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 64 0 351		PERSEUS
4 1/17:52:05 18:04:03	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 62 0 10		VELA
5 1/19:02:44 10:18	MNVR R+234.00 P+173.00 Y+ 57.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 27 0 150		GAL CENT 4
6 1/19:28:34 36:08	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 62 0 10		VELA
7 1/20:34:48 42:22	MNVR R+234.00 P+173.00 Y+ 57.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 27 0 150		GAL CENT 4
8 1/21:22:00	CHANGE DAP B TO B1 AND SELECT DAP B	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
9 1/21:22:00 35:19	MNVR R+152.00 P+285.00 Y+296.00 PER MCC CALL	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN 0 131 0 335		ARECIBO 2
10 1/21:45:00	GO TO PDRS BOOK	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
11 1/21:45:50	SELECT DAP A11	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02			
12 1/21:45:50 46:54	TRK TGT=2 BV=5(267.00, 0.00) OM= 0.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH 0 93 0 180	LVLH R+ 0 P+ 3 Y+ 0	+XVV ATT 0 R

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 2/02:00:00	GO TO PROX OPS BOOK	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02			
2 2/02:57:00	CHANGE DAP TO A10, B7 AND SELECT DAP B	B7 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
3 2/03:27:00 34:15	TRK TGT=2 BV=2(100.00, 0.00) OM= 0.00	B7 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH 0 100 0 0	LVLH R+ 0 P+ 90 Y+ 0	-XLV +2VV PDP RELEASE
4 2/04:22:00	CHANGE DAP TO A97, B97 AND SEL DAP A NORM JETS	A97 AUTO NORM	DSC 0.200 DB AT 2.00 DB RT 0.20			
5 2/04:22:00	LVLH ROT FREE ROTATION ABOUT +X AXIS RATE=0.750	A97 LVLH NORM	DSC 0.750 DB AT 2.00 DB RT 0.20			X3 ROTR
6 2/04:38:00	TRK TGT=2 BV=2(100.00, 0.00) OM= 0.00	A97 AUTO NORM	DSC 0.200 DB AT 2.00 DB RT 0.20	EARTH 0 100 0 0	LVLH R+ 0 P+ 90 Y+ 0	X3 ROTR END
7 2/04:59:00	CHANGE DAP TO A98, B98 AND SEL DAP A NORM JETS	A98 AUTO NORM	DSC 0.065 DB AT 2.00 DB RT 0.20			
8 2/05:03:00	TRK TGT=1 BV=3(90.00, 0.00) OM= 0.00	B98 AUTO VERN	DSC 0.200 DB AT 0.50 DB RT 0.02	EARTH 0 100 0 0	LVLH R+ 0 P+ 90 Y+ 0	PDP -Z AXIS TARGET TRACK
9 2/05:07:00	START PDP FLY AROUND	A98 AUTO NORM	DSC 0.065 DB AT 2.00 DB RT 0.20			
10 2/10:10:00	CHANGE DAP TO A10, B7 AND SEL DAP B VERN JETS	B7 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			EST YBAR PREPARE FOR PDP CAPTURE
11 2/11:22:59	CHANGE DAP A TO A11 WITH CNTL ACCEL=1 SELECT DAP A	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02			
12 2/11:22:59 33:43	MNVR R+293.00 P+310.00 Y+ 9.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 81 0 190		GAL CENT 1

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 2/12:18:00 30:24	MNVR R+ 69.00 P+166.00 Y+ 11.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 64 0 351		PERSEUS
2 2/16:55:09 17:07:07 CREW CTR FD	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 63 0 11	TOLERANCE IS 5 DEG IN ALL AXES	CCFD/VELA
3 2/18:05:42 13:16	MNVR R+234.00 P+173.00 Y+ 57.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 26 0 149		GAL CENT 4
4 2/18:31:47 39:21	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 63 0 11		VELA
5 2/19:37:55 45:29	MNVR R+234.00 P+173.00 Y+ 57.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 26 0 148		GAL CENT 4
6 2/20:01:56 11:35	MNVR R+110.00 P+229.00 Y+354.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 64 0 344		BI/+XVV TRAN1
7 2/20:31:34 32:23	TRK TGT=2 BV=5(267.00, 0.00) OM= 0.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH 0 93 0 180	LVLH R+ 0 P+ 3 Y+ 0	+XVV 0 ROLL
8 2/23:34:16 35:22	MNVR R+109.00 P+228.00 Y+357.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 61 0 344		X8 VIEW
9 2/23:51:07 55:46	TRK TGT=2 BV=5(267.00, 20.00) OM=359.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH 0 93 0 160	LVLH R+ 20 P+ 3 Y+ 0	+XVV +20 ROLL
10 3/02:56:35 58:42	MNVR R+115.00 P+242.00 Y+320.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 99 0 345		+XVV/BI TRAN1
11 3/03:19:01 30:37	MNVR R+234.00 P+173.00 Y+ 57.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 26 0 148		GAL CENT 4
12 3/03:45:12 52:46 CREW CTR FD	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 63 0 11	TOLERANCE IS 5 DEG IN ALL AXES	CCFD/VELA

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 3/04:51:14 05:00:19	MNVR R+236.00 P+185.00 Y+ 30.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 30 0 181		GC/TDRS 1
2 3/05:15:32 24:59	MNVR R+123.00 P+303.00 Y+ 14.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 73 0 1		A754
3 3/06:23:27 33:28	MNVR R+239.00 P+203.00 Y+ 14.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 46 0 196		GC/TDRS 2
4 3/06:47:12 57:13	MNVR R+123.00 P+303.00 Y+ 14.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 73 0 1		A754
5 3/08:03:00 06:59 CREW CTR FD	MNVR R+147.00 P+328.00 Y+ 38.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 66 0 338	TOLERANCE IS 5 DEG IN ALL AXES	CCFD COMA/VIRGO 2
6 3/11:00:07 07:37	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 24 0 170		GAL CENT 3
7 3/11:26:51 33:55	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 58 0 360		COMA/VIRGO
8 3/12:32:20 39:24	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 24 0 170		GAL CENT 3
9 3/12:59:05 13:06:09 CREW CTR FD	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 58 0 360	TOLERANCE= 3 IN R,+P,Y 5 IN -P	CCFD COMA/VIRGO
10 3/14:04:33 11:37	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 23 0 170		GAL CENT 3
11 3/14:31:19 38:23	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 58 0 360		COMA/VIRGO
12 3/15:36:47 43:51	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 23 0 170		GAL CENT 3

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 3/16:03:33 10:37	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 58 φ 360		COMA/VIRGO
2 3/17:09:00 16:04	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 23 φ 170		GAL CENT 3
3 3/17:33:56 42:51	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 64 φ 11		VELA
4 3/18:41:13 48:47	MNVR R+234.00 P+173.00 Y+ 57.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 26 φ 147		GAL CENT 4
5 3/19:04:12 15:05	MNVR R+ 86.00 P+228.00 Y+358.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 59 φ 8		BI/+XVV TRAN3
6 3/19:35:39 35:46	TRK TGT=2 BV=5(267.00, 340.00) OM= 1.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH 0 93 φ 200	LVLH R+340 P+ 3 Y+ 0	+XVV -20 ROLL
7 3/22:43:41 43:45	MNVR R+ 86.00 P+232.00 Y+345.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 72 φ 10		X0 VIEW
8 3/23:03:00 14:43	MNVR R+302.00 P+132.00 Y+353.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 96 φ 115		PDP GLOW 1
9 3/23:20:57 23:00	MNVR R+278.00 P+134.00 Y+357.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 91 φ 139		PDP GLOW 2
10 3/23:28:43 32:59	MNVR R+228.00 P+143.00 Y+356.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 87 φ 190		PDP GLOW 3
11 3/23:40:20 43:59	MNVR R+185.00 P+141.00 Y+346.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 97 φ 232		PDP GLOW 4
12 3/23:53:00 4/00:00:31	MNVR R+142.00 P+177.00 Y+ 71.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 23 φ 204		IRT OBS PREP

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 4/00:01:59	CHANGE DAP B TO B11 AND SELECT DAP B	B11 AUTO VERN	DSC 0.042 DB AT 2.00 DB RT 0.02			
2 4/00:01:59	ROT BV=5(0.00, 270.00)	B11 AUTO VERN	DSC 0.042 DB AT 2.00 DB RT 0.02		ROT R+142 START P+177 ATT Y+ 71	IRT OBS ROTR (A-C)
3 4/00:25:20	SELECT DAP A11 CHECK CNTL ACCEL=1	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02			
4 4/00:25:20 28:16	TRK TGT=2 BV=5(223.00, 14.00) OM=346.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH θ 135 φ 160	LVLH R+ 20 P+ 45 Y+ 0	IRT OBS D
5 4/00:42:00 49:54	MNVR R+238.00 P+312.00 Y+ 6.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 85 φ 245		PDP GLOW 5
6 4/00:53:56 55:59	MNVR R+262.00 P+315.00 Y+ 3.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 89 φ 221		PDP GLOW 6
7 4/01:01:42 05:59	MNVR R+312.00 P+324.00 Y+ 5.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 93 φ 170		PDP GLOW 7
8 4/01:13:22 16:59	MNVR R+355.00 P+321.00 Y+ 14.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 83 φ 128		PDP GLOW 8
9 4/01:24:59 29:12	MNVR R+351.00 P+292.00 Y+332.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 103 φ 131		IRT OBS PREP
10 4/01:31:00	SELECT DAP B11 CHANGE VERN DSC RT TO 0.083	B11 AUTO VERN	DSC 0.083 DB AT 2.00 DB RT 0.02			
11 4/01:31:00	ROT BV=5(0.00, 90.00)	B11 AUTO VERN	DSC 0.083 DB AT 2.00 DB RT 0.02		ROT R+351 START P+292 ATT Y+332	IRAS VOID ROTR
12 4/01:55:59	SELECT DAP A11 CHECK CNTL ACCEL=1	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02			

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 4/01:55:59 02:06:00	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 64 φ 12		VELA
2 4/02:22:20 29:54	MNVR R+234.00 P+173.00 Y+ 57.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 26 φ 146		GAL CENT 4
3 4/02:48:41 56:15	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 64 φ 12		VELA
4 4/03:54:34 04:03:39	MNVR R+236.00 P+185.00 Y+ 30.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 37 φ 181		GC/TDRS 1
5 4/04:19:01 28:28	MNVR R+123.00 P+303.00 Y+ 14.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 74 φ 2		A754
6 4/05:26:47 36:48	MNVR R+239.00 P+203.00 Y+ 14.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 45 φ 197		GC/TDRS 2
7 4/05:50:41 06:00:42	MNVR R+123.00 P+303.00 Y+ 14.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 74 φ 2		A754
8 4/07:08:13 15:00	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 59 φ 359		COMA/VIRGO
9 4/10:03:27 10:31	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 23 φ 170		GAL CENT 3
10 4/10:30:20 37:24	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 59 φ 359		COMA/VIRGO
11 4/11:35:41 42:45	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 23 φ 170		GAL CENT 3
12 4/12:02:34 09:38 CREW CTR FD	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 59 φ 359	TOLERANCE= 3 IN R,+P,Y 5 IN -P	CCFD COMA/VIRGO

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 4/13:07:54 14:58	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 23 0 170		GAL CENT 3
2 4/13:34:48 41:52	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 59 0 359		COMA/VIRGO
3 4/14:40:08 47:12	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 23 0 170		GAL CENT 3
4 4/15:07:02 14:06 CREW CTR FD	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 59 0 359	TOLERANCE= 3 IN R,+P,Y 5 IN -P	CCFD COMA/VIRGO
5 4/16:12:21 19:25	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 22 0 170		GAL CENT 3
6 4/16:37:24 46:19	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 64 0 12		VELA
7 4/17:44:35 52:09	MNVR R+234.00 P+173.00 Y+ 57.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 26 0 145		GAL CENT 4
8 4/18:07:17 18:33	MNVR R+ 82.00 P+230.00 Y+354.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 63 0 14		BI/+XVV TRAN3
9 4/18:38:39 39:07	TRK TGT=2 BV=5(267.00,340.00) OM= 1.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH 0 93 0 200	LVLH R+340 P+ 3 Y+ 0	+XVV -20 ROLL
10 4/21:41:26 43:20	MNVR R+102.00 P+229.00 Y+356.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 61 0 354		X8 VIEW
11 4/21:58:53 22:03:59	TRK TGT=2 BV=5(267.00, 20.00) OM=359.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH 0 93 0 160	LVLH R+ 20 P+ 3 Y+ 0	+XVV +20 ROLL
12 5/01:02:54 04:53	MNVR R+106.00 P+241.00 Y+313.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 105 0 356		+XVV/BI TRAN1

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 5/01:25:43 38:08	MNVR R+234.00 P+173.00 Y+ 57.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 25 0 144		GAL CENT 4
2 5/01:52:09 59:43	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 65 0 12		VELA
3 5/02:57:57 03:07:02	MNVR R+236.00 P+185.00 Y+ 30.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 36 0 181		GC/TDRS 1
4 5/03:22:30 31:57	MNVR R+123.00 P+303.00 Y+ 14.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 75 0 2		A754
5 5/04:30:10 40:11	MNVR R+239.00 P+203.00 Y+ 14.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 44 0 197		GC/TDRS 2
6 5/04:54:09 05:04:10	MNVR R+123.00 P+303.00 Y+ 14.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 75 0 2		A754
7 5/06:17:01 21:00 CREW CTR FD	MNVR R+147.00 P+328.00 Y+ 38.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 68 0 338	TOLERANCE IS 5 DEG IN ALL AXES	CCFD COMA/VIRGO 2
8 5/08:00:00	AFTER PDP BERTH CHANGE CNTL ACCEL TO 0 IN ACTIVE DAP	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02			
9 5/09:06:51 14:21	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 22 0 170		GAL CENT 3
10 5/09:33:48 40:52	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 59 0 358		COMA/VIRGO
11 5/10:39:05 46:09	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 22 0 170		GAL CENT 3
12 5/11:06:02 13:06 CREW CTR FD	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 59 0 358	TOLERANCE= 3 IN R,+P,Y 5 IN -P	CCFD COMA/VIRGO

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 5/12:11:19 18:23	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 22 φ 170		GAL CENT 3
2 5/12:38:16 45:20 CREW CTR FD	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 59 φ 358	TOLERANCE= 3 IN R,+P,Y 5 IN -P	CCFD COMA/VIRGO
3 5/13:43:32 50:36	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 22 φ 170		GAL CENT 3
4 5/14:10:30 17:34	MNVR R+103.00 P+ 22.00 Y+ 64.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 60 φ 358		COMA/VIRGO
5 5/15:15:46 22:50	MNVR R+248.00 P+199.00 Y+ 39.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 22 φ 170		GAL CENT 3
6 5/15:40:53 49:48	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 65 φ 13		VELA
7 5/16:48:00 55:34	MNVR R+234.00 P+173.00 Y+ 57.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 25 φ 143		GAL CENT 4
8 5/17:14:28 22:02	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 65 φ 13		VELA
9 5/18:20:14 27:48	MNVR R+234.00 P+173.00 Y+ 57.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 25 φ 143		GAL CENT 4
10 5/18:42:42 54:16	MNVR R+ 78.00 P+230.00 Y+353.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 63 φ 19		BI/+XVV TRAN3
11 5/19:14:18 14:41	TRK TGT=2 BV=5(267.00,340.00) OM= 1.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH 0 93 φ 200	LVLH R+340 P+ 3 Y+ 0	+XVV -20 ROLL
12 5/22:18:22 20:07	MNVR R+ 98.00 P+230.00 Y+356.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN 0 60 φ 359		X8 VIEW

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 5/22:36:00 41:42	TRK TGT=2 BV=5(267.00, 20.00) OM=359.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH θ 93 φ 160	LVLH R+ 20 P+ 3 Y+ 0	+XVV +20 ROLL
2 6/01:41:59 44:42	MNVR R+101.00 P+238.00 Y+310.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 107 φ 0		+XVV/BI TRAN1
3 6/02:01:23 14:10	MNVR R+234.00 P+173.00 Y+ 57.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 25 φ 142		GAL CENT 4
4 6/02:27:52 35:26 CREW CTR FD	MNVR R+114.00 P+294.00 Y+ 20.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 65 φ 13	TOLERANCE IS 5 DEG IN ALL AXES	CCFD/VELA
5 6/03:33:37 42:42	MNVR R+236.00 P+185.00 Y+ 30.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 35 φ 180		GC/TDRS 1
6 6/03:58:12 04:07:39	MNVR R+123.00 P+303.00 Y+ 14.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 75 φ 3		A754
7 6/05:05:51 15:52	MNVR R+239.00 P+203.00 Y+ 14.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 43 φ 198		GC/TDRS 2
8 6/05:30:54 39:53	MNVR R+147.00 P+328.00 Y+ 37.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 70 φ 338		COMA/VIRGO 2
9 6/08:37:02 42:03	TRK TGT=2 BV=3(90.00, 0.00) OM=180.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH θ 90 φ 0	LVLH R+180 P+ 0 Y+ 0	-ZLV +XVV
10 6/11:15:00 28:38	MNVR R+327.00 P+210.00 Y+353.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	SUN θ 63 φ 118	-ZST:27 -YST:30	IMU ALIGN PAIR A2
11 6/11:35:00 45:41	TRK TGT=2 BV=3(90.00, 0.00) OM=180.00	A11 AUTO VERN	DSC 0.200 DB AT 2.00 DB RT 0.02	EARTH θ 90 φ 0	LVLH R+180 P+ 0 Y+ 0	-ZLV +XVV
12 6/14:11:10	CHANGE DAP B TO B1 AND SELECT DAP B	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			

Attitude Timeline

MET	MNVR OPTION		DAP	E/S	REMARKS	EVENT
1 6/14:11:10 20:43	MNVR R+275.00 P+230.00 Y+350.00 PER MCC CALL	B1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN θ 66 φ 182		KWAJALEIN
2 6/14:31:00	CHANGE DAP A TO A1 AND SELECT DAP A	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02			
3 6/14:31:00 45:00	TRK TGT=2 BV=3(90.00, 0.00) OM=180.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	EARTH θ 90 φ 0	LVLH R+180 P+ 0 Y+ 0	-ZLV +XVV
4 6/16:00:00 08:04	TRK TGT=4 BV=5(184.00, 0.00) OM=250.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN θ 176 φ 174	INRTL R+ 3 P+ 31 Y+305	TAIL SUN
5 6/19:09:00 19:02	MNVR R+351.00 P+ 39.00 Y+ 65.00	A1 AUTO VERN	DSC 0.200 DB AT 1.00 DB RT 0.02	SUN θ 60 φ 98	-ZST:17 -YST:26	IMU ALIGN
6 6/19:29:00 33:29	MNVR R+117.00 P+ 34.00 Y+354.00	B1 AUTO NORM	DSC 0.500 DB AT 3.00 DB RT 0.20	SUN θ 131 φ 336	-ZST:32 -YST:50	IMU VERIF
7 6/19:54:00 59:16	MNVR R+ 81.00 P+185.00 Y+348.00	B1 AUTO NORM	DSC 0.500 DB AT 3.00 DB RT 0.20	SUN θ 72 φ 350		DEORBIT BURN ATT
8 6/22:09:18	OMS IGNITION	* AUTO *	DSC 0.500 DB AT 3.50 DB RT 0.30			DEORBIT BURN

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LX/Office Copy
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